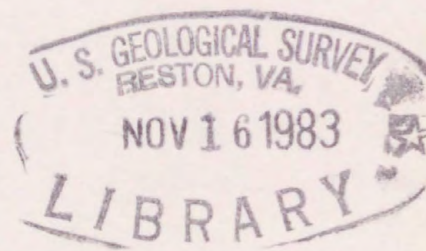


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Water Resources Data Missouri Water Year 1982



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT MO-82-1

Prepared in cooperation with the Missouri Department of
Natural Resources, Division of Geology and Land Survey and
Division of Environmental Quality; Missouri State Highway
Commission; and with other State and Federal agencies

CALENDAR FOR WATER YEAR 1982

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Water Resources Data Missouri

Water Year 1982

by L.A. Waite, D.O. Hatten, and P.W. Cross



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT MO-82-1

Prepared in cooperation with the Missouri Department of Natural Resources, Division of Geology and Land Survey and Division of Environmental Quality; Missouri State Highway Commission; and with other State and Federal agencies

UNITED STATES DEPARTMENT OF THE INTERIOR

JAMES G. WATT, Secretary

GEOLOGICAL SURVEY

Dallas L. Peck, Director

For information on the water program in Missouri write to:
District Chief, Water Resources Division
U.S. Geological Survey
Rolla Center - Mail Stop 200
Rolla, Missouri 65401

PREFACE

This hydrologic-data report of Missouri 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. In addition to the authors, who 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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Kathy L. Jenkins typed the text of the report.

This report was prepared in cooperation with the State of Missouri and with other agencies under the general supervision of Daniel P. Bauer, District Chief, Missouri.

REPORT DOCUMENTATION PAGE	1. REPORT NO. USGS/WRD/HD-83/079	2.	3. Recipient's Accession No.			
4. Title and Subtitle Water Resources Data for Missouri Water Year 1982	5. Report Date September 1983					
	6. USGS-WRD-M083-1					
7. Author(s)	8. Performing Organization Rept. No.					
9. Performing Organization Name and Address U.S. Geological Survey Water Resources Division 1400 Independence Road, MS 200 Rolla, Missouri 65401	10. Project/Task/Work Unit No.					
	11. Contract(C) or Grant(G) No. (C) (G)					
	13. Type of Report & Period Covered Annual, Oct. 1, 1981 to Sept. 30, 1982					
12. Sponsoring Organization Name and Address U.S. Geological Survey Water Resources Division 1400 Independence Road MS 200 Rolla, Missouri 65401	14.					
15. Supplementary Notes Prepared in cooperation with the State of Missouri and other agencies.						
16. Abstract (Limit: 200 words) Water resources data for the 1982 water year for Missouri consist of records of stage, discharge, and water quality of lakes and reservoirs; contains records for water discharge at 112 gaging stations; stage and contents at 9 lakes and reservoirs; water quality at 30 gaging stations (including 1 lake) and data for 47 crest-stage, and 17 water-quality partial record stations.						
17. Document Analysis: a. Descriptors *Missouri, *Hydrologic data, *Surface water, *Water Quality, Gaging Stations, Streamflow, Flow rates, Lakes, Reservoirs, Chemical analysis, Sediments, Water temperature, Water analysis, Water levels, Data collection, Sites. b. Identifiers/Open-Ended Terms c. COSATI Field/Group						
18. Availability Statement No restriction on distribution This report may be purchased from: National Technical Information Service Springfield, VA 22161	19. Security Class (This Report) unclassified	21. No. of Pages 341	22. Price			
	20. Security Class (This Page) unclassified					

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(Letter after station name designates type of data: (d) discharge, (c) chemical,
(b) biological, (m) microbiological, (t) water temperature, and (s) sediment)

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WATER RESOURCES DATA FOR MISSOURI, 1982

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 Missouri 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 Missouri. 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 MISSOURI." This volume contains records for water discharge at 112 gaging stations; stage and contents at 9 lakes and reservoirs; water quality at 30 gaging stations (including 1 lake); and data for 47 crest-stage, and 17 water-quality partial-record stations. These data represent that part of the National Water Data System operated by the U.S. Geological Survey and cooperating State, local, and Federal agencies in Missouri. System operated by the U.S. Geological Survey and cooperating State, local, and Federal agencies in Missouri.

Records of discharge and stage of streams, and contents or stage of lakes and reservoirs were first published in a series of U.S. Geological Survey Water-Supply Papers entitled, "Surface Water Supply of the United States." Through September 30, 1960, these Water-Supply Papers were in an annual series and then in a 5-year series for 1961-65 and 1966-70. Records of chemical quality, water temperatures, and suspended sediment were published from 1941 to 1970 in an annual series of Water-Supply Papers entitled, "Quality of Surface Waters of the United States." Records of ground-water levels were published from 1935 to 1974 in a series of Water-Supply Papers entitled, "Ground Water Levels in the United States." Water-Supply Papers may be consulted in the libraries of the principal cities in the United States or may be purchased from the Branch of Distribution, U.S. Geological Survey, 1200 South Eads Street, Arlington, VA 22202.

For water years 1961 through 1974, streamflow data were released by the Geological Survey in annual reports on a State-boundary basis. Water-quality records for water years 1964 through 1974 were similarly released either in separate reports or in conjunction with streamflow records.

Beginning with the 1975 water year, water data for streamflow, water quality, and ground water are published in official Survey reports on a State-boundary basis. These official Survey reports carry an identification number consisting of the two-letter State abbreviation, the last two digits of the water year, and the volume number. For example, this volume is identified as "U.S. Geological Survey Water-Data Report MO-81-1". For archiving and general distribution, the reports for water years 1971-74 also are identified as water-data reports. These water-data reports are for sale, in paper copy or in microfilm by the National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22161.

Additional information, including current prices, for ordering specific reports may be obtained from the district chief at the address given on the back of the title page or by telephone (703) 860-6867.

COOPERATION

The U.S. Geological Survey and organizations of the State of Missouri have had cooperative agreements for the systematic collection of streamflow records since 1921, and for water-quality records since 1964. Organizations that assisted in collecting data through cooperative agreement with the Survey are:

Missouri Department of Natural Resources,
Fred Lafser, director.

Division of Geology and Land Survey,
Dr. Wallace B. Howe, director.

Division of Environmental Quality,
Robert J. Schreiber, Jr., director

Missouri State Highway and Transportation Commission,
Robert N. Hunter, chief engineer.

Missouri Department of Conservation,
Larry R. Gale, director.

Department of Highways & Traffic, St. Louis County,
Richard F. Daykin, director.

City of Springfield, Department of Public Works, Sanitary Services,
Robert R. Schaefer, superintendent.

City Utilities of Springfield,
R. David Plank, manager, Engineering Division.

WATER RESOURCES DATA FOR MISSOURI, 1982

The following Federal agencies assisted in collection of records published in this report by furnishing funds or services:

Corps of Engineers, U.S. Army, in collecting records for
77 gaging stations and 4 water-quality stations.

NOAA, National Weather Service, U.S. Department of Commerce.

National Park Service, Midwest Region

The following organizations aided in collecting records:

Little River Drainage District;
Union Electric Company of Missouri; Missouri Park Board.

PHYSIOGRAPHIC CONDITIONS

Missouri has three distinct physiographic divisions - a Plains and Prairie division in the north and west; the Bootheel division, a lowland in the southeast; and between them the Ozark uplift or Ozarks division (fig. 1).

The Plains and Prairie division includes most of the area north of the Missouri River and a large part of the area south of the river in the western part of the state. Elevations range from about 450 to 1,000 feet above sea level.¹ The area has numerous wide, flat valleys cut by rivers.

The Ozarks division is a wooded, rugged area of deep, narrow valleys with sharp ridges separating the valleys. Elevations range from about 1,000 to 1,600 feet above sea level.

The Bootheel division is a relatively flat region composing an area of about 3,000 square miles. Elevations range from about 200 to 300 above sea level. The area is well drained and contains excellent farmland.

HYDROLOGIC CONDITIONS

Precipitation was greater than normal, except for the Bootheel division, during the 1982 water year. Rainfall amounts up to 12.6 inches occurred August 12, 13, 1982, in the Kansas City area, causing flood peaks at many locations to exceed estimated 100-year recurrence intervals. Precipitation data for the six divisions in Missouri are shown in the following table:

Table 1.--Precipitation and departures from normal, in inches

Division (fig. 1)	October-March		April-September		1982 Water Year	
	Precipitation	Departure from normal	Precipitation	Departure from normal	Precipitation	Departure from normal
Northwest Prairie	14.23	+3.08	32.11	+6.26	46.34	+9.34
Northeast Prairie	17.10	+3.64	29.76	+5.84	46.86	+9.48
West Central Plains	16.99	+3.61	28.63	+1.56	45.62	+5.17
West Ozarks	18.32	+2.75	23.92	-1.76	42.24	+ .99
East Ozarks	21.00	+2.59	26.37	+2.03	47.37	+4.62
Bootheel	20.54	-2.23	25.73	-2.81	46.27	-5.04

¹National Geodetic Vertical Datum of 1929 (NGVD of 1929): A geodetic datum derived from a general adjustment of the first-order level nets of both the United States and Canada, formerly called "Mean Sea Level." NGVD of 1929 is referred to as sea level in this report.

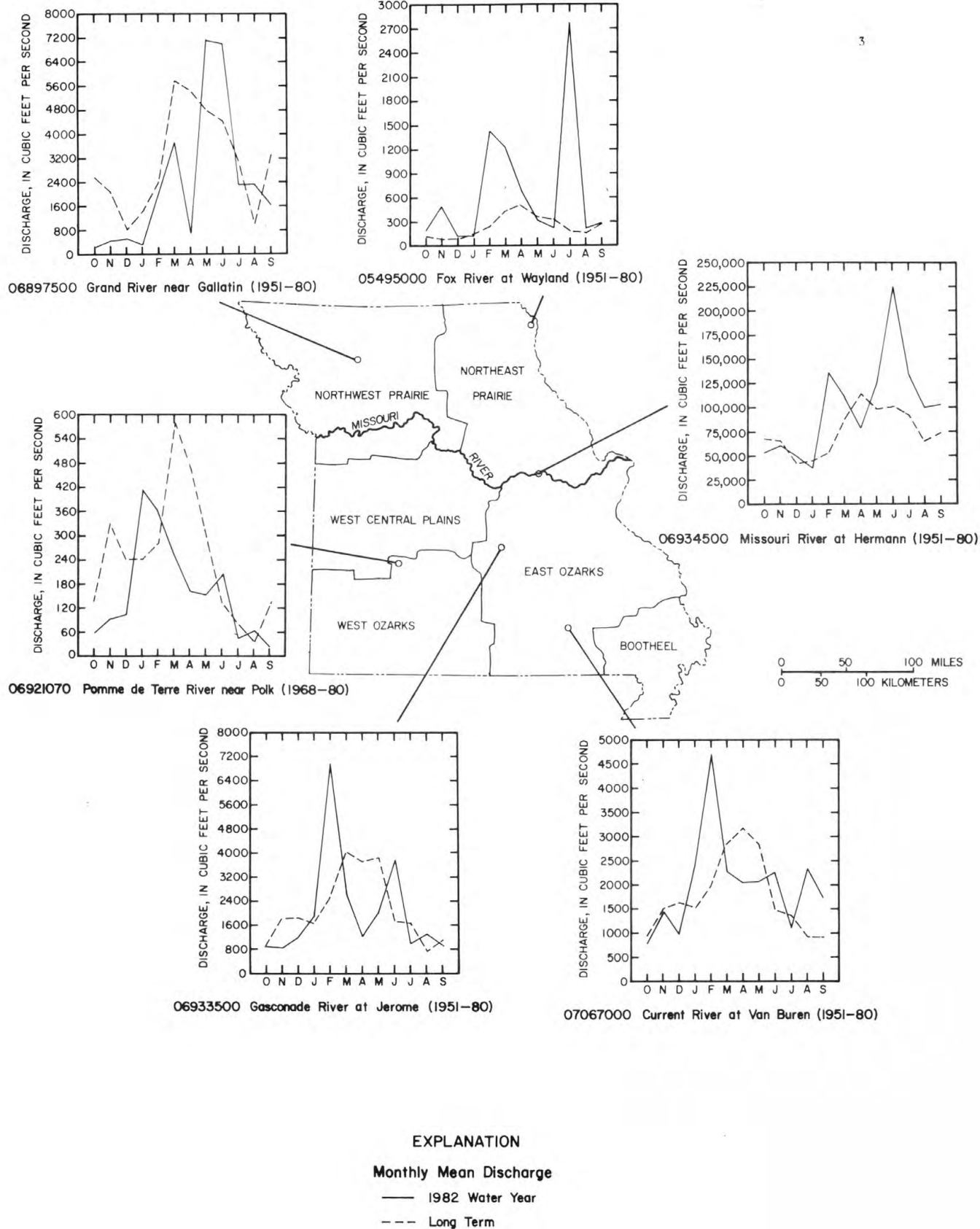


Figure 1.--Comparison of 1982 water-year streamflow to long-term means.

WATER RESOURCES DATA FOR MISSOURI, 1982

Streamflow

Streamflow generally reflects precipitation patterns, unless a stream is regulated. Figure 1 shows monthly mean discharges during the 1982 water year at representative stations plotted against long-term monthly mean discharges. Streamflow during many months was above long-term means reflecting the above-normal precipitation. Drainage basins in Missouri and basins where mean annual discharges were greater than long-term annual discharges are shown in figure 2.

The Kansas City area received up to 12.6 inches of rain on Aug. 12, 13, 1982 which caused significant flooding. Peak discharges were determined during and after these floods at 12 current or discontinued streamflow stations and 17 miscellaneous sites. Flood peaks and volumes at many locations exceeded estimated 100-year recurrence-interval floods.

Listed in table 2 are 17 selected gaging stations comparing the peak discharge for the period of record and the peak discharge for the 1982 water year. The 7-day low flow for the 1982 water year is compared to the 7-day 2-year low flow for selected stations in table 3. The 7-day, 2-year low flow is the 7-day average minimum flow with a recurrence interval of 2 years.

Table 2.--Comparisons of peak discharge for the 1982 water year with those for period of record for selected stations

Station identification		Peak discharge 1982 water year		Peak discharge period of record	
		ft ³ /s	Date	ft ³ /s	Date
05508000	Salt River near New London	22,100	June 12	107,000	Apr. 22, 1973
05587500	Mississippi River at Alton, Ill	363,000	Mar. 24	535,000	Apr. 29, 1973
06818000	Missouri River at St. Joseph	159,000	June 17	397,000	Apr. 22, 23, 1952
06893000	Missouri River at Kansas City	201,000	June 10	537,000	July 14, 1951
06893890	East Fork Little Blue River near Blue Springs	11,000	Aug. 13	6,100 ¹	Sept. 13, 1977
06894000	Little Blue River near Lake City	42,300	Aug. 13	7,000 ¹	Aug. 13, 1977
06895500	Missouri River at Waverly	208,300	June 11	549,000	July 16, 1951
06897500	Grand River near Gallatin	46,300	May 31	69,100	June 24, 1947
06905500	Chariton River near Prairie Hill	23,600	June 9	31,900	Apr. 23, 1973
06909000	Missouri River at Boonville	278,000	June 11	550,000	July 17, 1951
06934500	Missouri River at Hermann	298,900	June 11	676,000	June 6, 7, 1903
07010000	Mississippi River at St. Louis	546,000	June 12	1,019,000	June 10, 11, 1903
07016500	Bourbeuse River at Union	13,100	Feb. 18	33,100	July 1, 1957
07018500	Big River at Byrnesville	17,100	Feb. 1	42,000	July 1, 1957
07019000	Meramec River near Eureka	41,800	Feb. 20	120,000	June 11, 1945
07020500	Mississippi River at Chester, Ill	550,000	June 13	886,000	July 3, 1947 Apr. 30, 1973
07022000	Mississippi River at Thebes, Ill,	557,000	June 14	893,000	May 27, 1943

¹Peak discharge for period of record prior to Aug. 13, 1982.

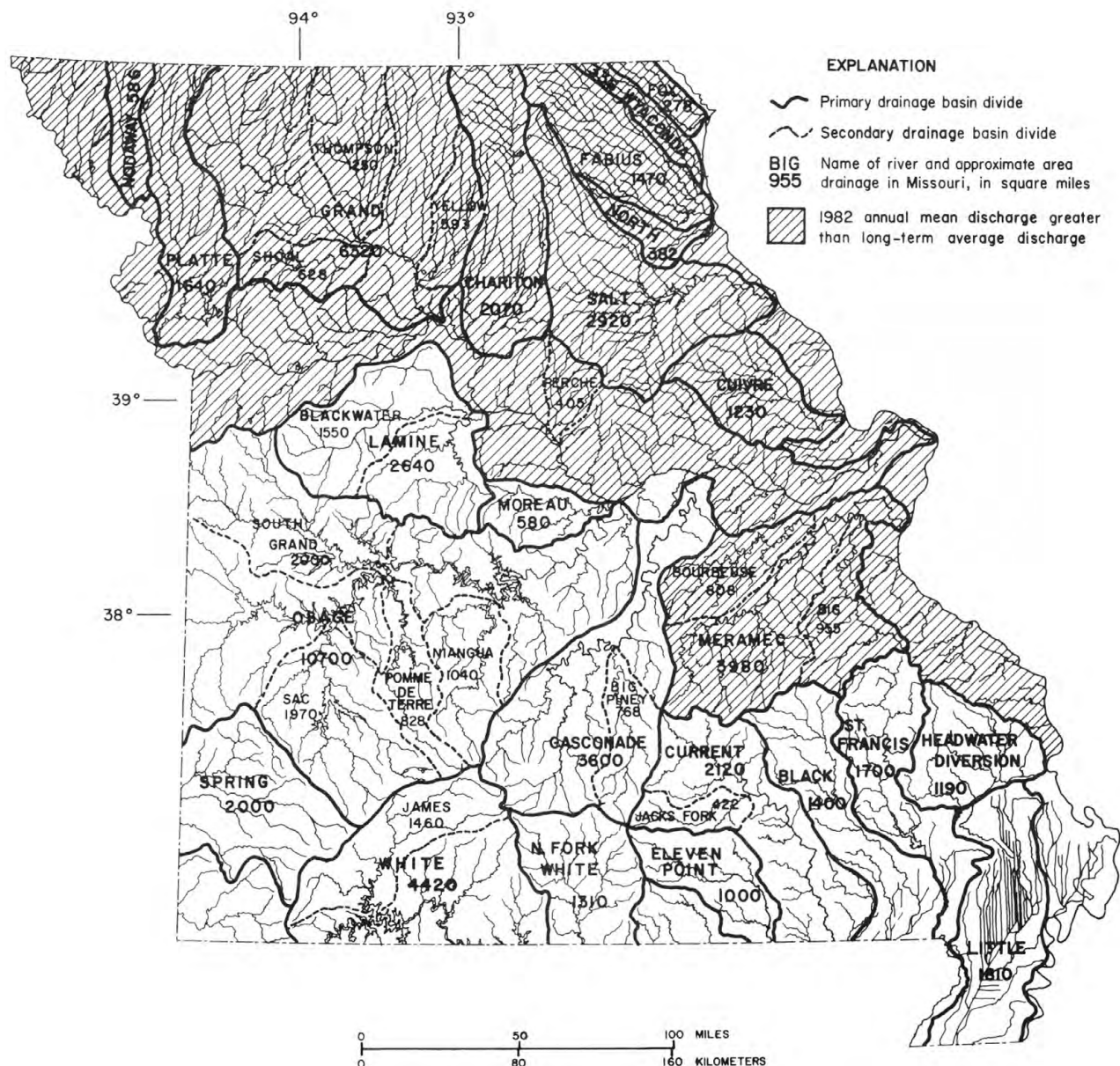


Figure 2.-- Major drainage basins in Missouri and areas of greater-than-average discharge during 1982.

WATER RESOURCES DATA FOR MISSOURI, 1982

Table 3.--Comparisons of 1982 7-day low flows to 7-day, 2-year low flows and of 1982 minimum flows to those for the period of reco

rd at selected stations. (Flows in cubic feet per second)

Station identification and period of record used	Average 7-day Low Flows		Minimum daily flows	
	1982	2-year	Period of record shown Discharge	Year of occurrence
05495000 Fox River at Wayland 1922-1981	17	1.3	0	several years
06817500 Nodaway River near Burlington Jct. 1922-81	72	21.0	1.1	1934
06921070 Pomme de Terre River near Polk 1968-81	3.4	3.0	0.3	1980
07165000 Bourbeuse River at Union 1921-1981	51	32.0	11	1956
07067000 Current River at Van Buren 1912-81	586	700	473	1956
07187000 Shoal Creek above Joplin 1941-81	50	92.0	12	1954

Chemical Quality of Streamflow

Quality of water samples were collected at 30 stations in Missouri; 23 of these stations are visited monthly and 7 are visited bimonthly. Data collected on a routine basis at these stations were temperature, specific conductance, dissolved oxygen, pH, alkalinity, nuclear inorganics, nutrients, metals, organic compounds, biological, pesticides, radio-chemical, phytoplankton, sediment, and streamflow. Water-quality data did not indicate unusual changes during the year.

Daily temperature and conductance samples were collected at 13 stations. Continuous temperature data were recorded at five stations and continuous specific conductance data at one station.

Two water-quality monitors were in operation. The data collected were temperature, specific conductance, dissolved oxygen, and pH.

Discrete water-quality samples were collected at seven springs and four surface-water sites once in the spring and once in the fall. Water-quality data collected at these sites were temperature, specific conductance, dissolved oxygen, pH, alkalinity, biological, nutrients, and trace metals.

Daily suspended-sediment samples were collected at 18 stations in Missouri. At 14 of these stations particle-size data of suspended sediment also were obtained. Suspended-sediment samples were collected daily by observers from a fixed location in a stream cross-section. Approximately once a month samples were collected across the complete river cross section by USGS personnel. The cross-sectional samples were used to adjust the observers sample to get a more accurate daily value. These daily values were then used to compute average daily suspended-sediment concentrations and average daily suspended-sediment loads.

Missouri streams for the most part are not polluted by industrial wastes. Localized stream pollution does occur near urban areas, industrialized centers, agricultural chemical use areas, and waste dump sites. Ranges in dissolved-solids concentrations (mg/L) in selected streams are given in the following table:

	Minimum	Maximum
Missouri River at Hermann	299	410
Missouri River at St. Joseph	375	540
Des Moines River at St. Francisville	228	508
Grand River near Sumner	185	385
Center Creek near Cartersville	216	402

Suspended-sediment concentrations at selected Missouri streams ranged from 1 to 3,520 mg/L. Suspended-sediment concentration in streams generally is higher in the Northern Plains an agricultural area, than in the Ozarks wooded area. The following table lists two selected stations in the Northern Plains followed by two selected stations in the Ozarks and their respective daily mean suspended-sediment concentrations in milligrams per liter:

	Minimum	Maximum
Middle Fork Salt River at Paris	5	2,420
Salt River near New London	8	3,520
Meramec River near Eureka	4	3,910
Little Black River below Fairdealing	1	643

DOWNSTREAM ORDER AND STATION NUMBER

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

As an added means of identification, each hydrologic station and partial-record station has been assigned a station number. These are in the same downstream order used in this report. In assigning station numbers, no distinction is made between partial-record stations and other stations; therefore, the station number for a partial-record station indicates downstream-order position in a list made up of both types of stations. Gaps are left in the series of numbers to allow for new stations that may be established; hence, the numbers are not consecutive. The complete 8-digit number for each station such as 06909000, which appears just to the left of the station name, includes the 2-digit part number "06" plus the 6-digit downstream order number "909000".

NUMBERING SYSTEM FOR MISCELLANEOUS SITES

The 8-digit downstream order station numbers are not assigned to miscellaneous sites where only random water-quality samples or discharge measurements are taken.

The miscellaneous site numbering system of the U.S. Geological Survey is based on the grid system of latitude and longitude. The system provides the geographic location of the miscellaneous sites and a unique number for each site. The number consists of 15 digits. The first 6 digits denote the degrees, minutes, and seconds of latitude, the next 7 digits denote degrees, minutes, and seconds of longitude, and the last 2 digits (assigned sequentially) identify the sites within a 1-second grid. See figure 2 below.

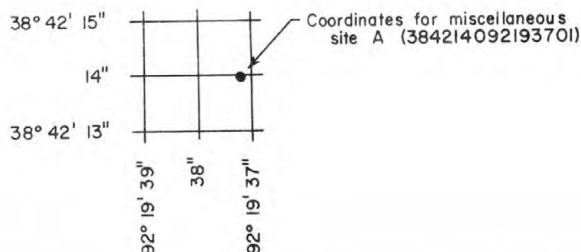


Figure 2. System for numbering miscellaneous sites (latitude and longitude).

SPECIAL NETWORKS AND PROGRAMS

National stream-quality accounting network (NASQAN) is a data collection network designed by the U.S. Geological Survey to meet many of the information demands of agencies or groups involved in national or regional water-quality planning and management. Both accounting and broad-scale monitoring objectives have been incorporated into the network design. Areal configuration of the network is based on river-basin accounting units (identified by 8-digit hydrologic-unit numbers) designated by the Office of Water Data Coordination in consultation with the Water Resources Council. Primary objectives of the network are (1) to depict areal variability of streamflow and water-quality conditions nationwide on a year-by-year basis and (2) to detect and assess long-term changes in streamflow and stream quality.

Pesticide program is a network of regularly sampled water-quality stations where samples are collected to determine the concentration and distribution of pesticides in streams where potential contamination could result from the application of the commonly used insecticides and herbicides. Operation of the network is a Federal interagency activity.

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.

EXPLANATION OF STAGE AND WATER-DISCHARGE RECORDS

Collection and computation of data

The base data collected at gaging stations consist of records of stage and measurements of discharge of streams or canals, and stage, surface area, and contents of lakes or reservoirs. In addition, observations of factors affecting the stage-discharge relation or the stage-capacity relation, weather records, and other information are used to supplement base data in determining the daily flow or volume of water in storage. Records of stage are obtained from either direct readings on nonrecording gage or from a water-stage recorder that gives either a continuous graph of the fluctuations or a tape punched at selected time intervals. Measurements of discharge are made with a current meter, using the general methods adopted by the Geological Survey. These methods are described in standard textbooks, in Water-Supply Paper 888, and in U.S. Geological Survey Techniques of Water Resources Investigations, book 3, chapter A6.

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

At some stream-gaging stations the stage-discharge relation is affected by the 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.

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

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

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

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

The data in this report generally comprise a description of the station and tabulations of daily and monthly figures. For gaging stations on streams or canals a table showing the daily discharge and monthly and yearly discharge is given. For gaging stations on lakes and reservoirs a monthly summary table of stage and contents or a table showing the daily contents is given. Tables of daily mean gage heights are included for some streamflow stations and for some reservoir stations. Records are published for the water year, which begins on October 1 and ends on September 30.

The description of the hydrologic-data station gives the location, drainage area, period of record, notations of revisions of previously published records, type and history of gages, general remarks, average discharge, and extremes of discharge or contents. The location of the gaging station and the drainage area are obtained from most accurate maps available. River mileage, given under "LOCATION" for some stations, is that determined and used by the Corps of Engineers or other agencies. Periods for which there are published records for the present station or for stations generally equivalent to the present one are given under "PERIOD OF RECORD."

Previously published streamflow records of some stations have been found to be in error on the basis of data or information later obtained. Revisions of such records are usually published along with the current records in one of the annual or compilation reports. In order to make it easier to find such revised records, a paragraph headed "REVISED RECORDS" has been added to the description of all stations for which revised records have been published. Listed therein are all the reports in which revisions have been published, each followed by the water years for which figures are revised in that report. In listing the water years only one number is given; for instance, 1965 stands for the water year October 1, 1964 to September 30, 1965. If no daily, monthly, or annual figures of discharge are affected by the revision, the fact is brought out by notations after the year dates as follows: "(M)" means that only the instantaneous maximum discharge was revised; "(m)" that only the instantaneous minimum was revised; and "(P)" that only peak discharges were revised. If the drainage area has been revised, the report in which the revised figure was first published is given. It should be noted that for all stations for which cubic feet per second per square mile and runoff in inches are published, a revision of the drainage area necessitates corresponding revision of all figures based on the drainage area. Revised figures of cubic feet per second per square mile and runoff in inches resulting from revision of the drainage area only are usually not published in the annual series of reports.

The type of gage currently in use, the datum of the present gage referred to National Geodetic Vertical Datum; and a condensed history of the types, locations, and datums of previous gages used during the period of record are given under "GAGE." National Geodetic Vertical Datum is explained in "DEFINITION OF TERMS" on page 5.

Information pertaining to the accuracy of the discharge records and to conditions which affect the natural flow of the gaging station is given under "REMARKS." For reservoir stations information on the dam forming the reservoir, the capacity, outlet works and spillway, and purpose and use of the reservoir is given under "REMARKS."

The average discharge for the number of years indicated is given under "AVERAGE DISCHARGE"; it is not given for stations having fewer than 5 complete years of record or for stations where changes in water development during the period of record cause the figure to have little significance. In addition, the median of yearly mean discharges is given for stream-gaging stations having 10 or more complete years of record if the median differs from the average by more than 10 percent. Under "EXTREMES" are given first, the extremes for the period of record, second, information available outside the period of record, and last, those for the current year. Unless otherwise qualified, the maximum discharge (or contents) is the instantaneous maximum corresponding to the crest stage obtained by use of a water-stage recorder (graphic or digital), a crest-stage gage, or a nonrecording gage read at the time of the crest. If the maximum gage height did not occur on the same day as the maximum discharge (or contents), it is given separately. Similarly, the minimum is the instantaneous minimum unless otherwise qualified. For some stations peak discharges are listed with EXTREMES FOR THE CURRENT YEAR; if they are, all independent peaks, including the maximum for the year, above the selected base with the time of occurrence and corresponding gage heights are published in tabular format. The base discharge, which is given in the table heading, is selected so that an average of about three peaks a year will be presented. Peak discharges are not published for any canals, ditches, drains, or for any stream for which the peaks are subject to substantial control by man. Time of day is expressed in 24-hour local standard time; for example, 12:30 a.m. is 0030, 1:30 p.m. is 1330. The minimums for these stations are published in a separate paragraph following the table of peaks.

The daily table for stream-gaging stations gives the mean discharge for each day and is followed by monthly and yearly summaries. In the monthly summary below the daily table, the line headed "TOTAL" gives the sum of the daily figures. The line headed "MEAN" gives the average flow in cubic feet per second during the month. The lines headed "MAX" and "MIN" give the maximum and minimum daily discharges, respectively, for the month. Discharge for the month also may be expressed in cubic feet per second per square mile (line headed "CFSM"), or in inches (line headed "IN"), or in acre-feet (line headed "AC-FT"). Figures for cubic feet per second per square mile and runoff in inches are omitted if there is extensive regulation or diversion, if the drainage area includes large noncontributing areas, or if the average annual rainfall over the drainage basin is usually less than 20 inches. In the yearly summary below the monthly summary, the figures shown are the appropriate daily discharges for the calendar year and water years.

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

For most gaging stations on lakes and reservoirs the data presented comprise a description of the station and a monthly summary table of stage and contents. For some reservoirs a table showing daily contents or stage is given. A skelton table of capacity at given stages is published for all reservoirs for which records are published on a daily basis, but is not published for reservoirs for which only monthly data are given.

Data collected at partial-record stations follow the information for continuous record sites. Data for partial-record discharge stations are presented in two tables. The first is a table of discharge measurements at low-flow partial-record stations, and the second is a table of annual maximum stage and discharge at crest-stage stations. The tables of partial-record stations are followed by a listing of discharge measurements made at sites other than continuous-record or partial-record stations. Occasionally, a series of discharge measurements are made within a short time period to investigate the seepage gains or losses along a reach of a stream or to determine the low-flow characteristics of an area. Such measurements are also given in special tables following the tables of partial-record stations.

Accuracy of field data and computed results

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

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

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

WATER RESOURCES DATA FOR MISSOURI, 1982

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 data available

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

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

EXPLANATION OF WATER-QUALITY RECORDS

Collection and examination of data

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

The descriptive heading for water-quality records gives the period of record for all water-quality data; the period of daily record for parameters that are measured on a daily basis (specific conductance, pH, dissolved oxygen, water temperature, sediment discharge, etc.); extremes for the period of daily record; extremes for the current year; and general remarks.

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

Water analysis

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

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

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

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

Water Temperature

Water temperatures are measured at most of the water-quality stations. In addition, water temperatures are taken at time of discharge measurements for water-discharge stations. For stations where water temperatures are taken manually once daily, the water temperatures are taken at about the same time each day. Large streams have a small daily 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, maximum and minimum temperatures for each day are published.

WATER RESOURCES DATA FOR MISSOURI, 1982

Sediment

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

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

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

For the Mississippi River at St. Louis, depth-integrated samples were collected weekly at two or more verticals with the P-61 sampler. Periodically, samples were taken at 10 to 20 verticals in the cross section to define more accurately the average concentration of the cross section. Three times during the year, bed material samples were collected from 15 to 18 verticals.

For some periods, when no samples were collected, daily loads of suspended sediment were estimated on the basis of water discharge, turbidity, sediment concentrations observed immediately before and after the periods, and suspended-sediment loads for other periods of similar discharge.

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

Publication of turbidity was changed to the NTU method this year. Previously, turbidity was published using the JTU method.

WATER RESOURCES DATA FOR MISSOURI, WATER YEAR 1982

DEFINITION OF TERMS

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

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

Algae are mostly aquatic single-celled, colonial, or multi-celled 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.

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

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

Fecal streptococcal bacteria are bacteria found also in intestines of warm-blooded animals. Their presence in water is considered to verify fecal pollution. They are characterized as gram-positive, cocci bacteria which are capable of growth in brain-heart infusion broth. In the laboratory they are defined as all the organisms which produce red or pink colonies within 48 hours at $35^{\circ}\text{C} \pm 1.0^{\circ}\text{C}$ on M-enterococcus medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

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

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

Ash mass is the mass or amount of residue present after the residue from the dry mass determination has been ashed in a muffle furnace at a temperature of 500°C for 1 hour. The ash mass values of zooplankton and phytoplankton are expressed in grams per cubic meter (g/m^3), and periphyton and benthic organisms in grams per square meter (g/m^2).

Dry mass refers to the mass of residue present after drying in an oven at 60°C for zooplankton and 105°C for periphyton, until the mass remains unchanged. This mass represents the total organic matter, ash and sediment, in the sample. Dry mass values are expressed in the same units as ash mass.

Organic mass or volatile mass of the living substance is the difference between the dry mass and ash mass, and represents the actual mass of the living matter. The organic mass is expressed in the same units as for ash mass and fry mass.

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

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

Cfs-day is the volume of water represented by flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, approximately 1.9835 acre-feet, about 646,000 gallons or 2,447 cubic meters.

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

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

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.

Cubic foot per second (ft^3/s , ft^3/s) is the rate of discharge representing a volume of 1 cubic foot passing a given point during 1 second and is equivalent to approximately 7.48 gallons per second or 448.8 gallons per minute or 0.02832 cubic meters per second.

WATER RESOURCES DATA FOR MISSOURI, 1982

Cubic feet per second per square mile (CFSM) is the average number of cubic feet of water flowing per second from each square mile of area drained, assuming that the runoff is distributed uniformly in time and area.

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

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

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

Dissolved refers to the amount of substance present in true chemical solution. In practice, however, the term includes all forms of substance that will pass through a 0.45-micrometer membrane filter, and thus may include some very small (colloidal) suspended particles. Analysis are performed on filtered samples.

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

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

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

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

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

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

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

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

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

Micrograms per gram (ug/g) is a unit expressing the concentration of a chemical element as the mass (micrograms) of the element sorbed per unit mass (gram) of sediment.

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

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

National Geodetic Vertical Datum of 1929 (NGVD) is a geodetic datum derived from a general adjustment of the first order level nets of both the United States and Canada. It was formerly called "mean sea level."

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

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

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

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

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

Particle-size is the diameter, in millimeters (mm), of suspended sediment or bed material determined by either sieve or sedimentation methods. Sedimentation methods (pipet, bottom-withdrawn 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).

WATER RESOURCES DATA FOR MISSOURI, 1982

Particle-size classification used in this report agrees with recommendations made by the American Geophysical Union Subcommittee on Sediment Terminology.

The classification is as follows:

Classification	Size (mm)	Method of analysis
Clay.....	0.00024 - 0.004	Sedimentation.
Silt.....	.004 - .062	Sedimentation.
Sand.....	.062 - 2.	Sedimentation or sieve.
Gravel.....	2.0 - 64.0	Sieve.

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

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

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

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

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

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

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

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

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

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

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 characteristic, land usage, and quantity and intensity of precipitation.

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

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

Suspended-sediment discharge (tons/day) is the rate at which dry weight of sediment passes a section of a stream or is the quantity of sediment, as measured by dry weight or volume, that passes a section in a given time. It is computed by multiplying discharge times mg/L times 0.0027.

Suspended-sediment load is quantity of suspended sediment passing a section in a specified period.

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

WATER RESOURCES DATA FOR MISSOURI, 1982

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

Solute is any substance derived from the atmosphere, vegetation, soil, or rocks 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 micromhos per centimeter at 25°C. Specific conductance is related to the type and concentration of ions in solution and can be used for approximating the dissolved-solids content of the water. Commonly, the concentration of dissolved solids (in milligrams per liter) is about 65 percent of the specific conductance (in micromhos). This relation is not constant from stream to stream, and it may vary in the same source with changes in the composition of the water.

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

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

Substrate is the physical surface upon which an organism lives.

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

Artificial substrate is a device which is purposely placed in a stream or lake for colonization of organisms. The artificial substrate simplifies the community structure by standardizing the substrate from which each sample is taken. Examples of artificial substrates are basket samplers (made of wire cages filled with clean streamside rocks) and multi-plate samplers (made of hardboard) for benthic organism collection, and plexiglass strips for periphyton collection.

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

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

Suspended (as used in tables of chemical analyses) refers to the amount (concentration) of the total concentration in a water-sediment mixture. The water-sediment mixture is associated with (or sorbed on) that material retained on a - .45 micrometer filter.

Taxonomy is the division of biology concerned with the classification and naming of organisms. The classification of organisms is based upon a heirarchical 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.....Insects
Order.....Ephemeroptera
Family.....Ephemeridae
Genus.....Hexageris
Species.....Hexagenia limbata

Thermograph is a thermometer that continuously and automatically records, on a chart, the water temperature of a stream. "Temperature recorder" is the term used to indicate the presence of a thermograph or a digital mechanism that automatically records water temperatures on paper tape.

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 water 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 in milligrams per liter by 0.00136.

Tons per day is the quantity of substance in solution or suspension that passes a stream section during a 24-hour day.

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

Total load (tons) is the total quantity of any individual constituent, as measured by dry mass or volume, that is dissolved in a specific amount of water (discharge) during a given time. It is computed by multiplying the total discharge, times the mg/l of the constituent, times the factor 0.0027, times the number of days.

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

WRD is used as an abbreviation for "Water-Resources Data" in the REVISED RECORDS paragraph to refer to State annual basic-data reports published before 1975.

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

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

Thirty-seven manuals by the U.S. Geological Survey have been published to date in the series on techniques describing procedures for planning and executing specialized work in water-resources investigations. The material is grouped under major subject headings called books and is further divided into sections and chapters. For example, Section A of Book 3 (Applications of Hydraulics) is on surface water. The chapter, the unit of publication, is limited to a narrow field of subject matter. This format permits flexibility in revision and publication as the need arises. The reports listed below are for sale by the U.S. Geological Survey, Branch of Distribution, 604 South Pickett St., Alexandria, VA 22304 (authorized agent of the Superintendent of Documents, Government Printing Office).

NOTE: When ordering any of these publications, please give the title, book number, chapter number, and "U.S. Geological Survey Techniques of Water-Resources Investigations".

- 1-D1. *Water temperature--influential factors, field measurement, and data presentation*, by H. H. Stevens, Jr., J. F. Ficke, and G. F. Smoot: USGS--TWRI Book 1, Chapter D1. 1975. 65 pages.
- 1-D2. *Guidelines for collection and field analysis of ground-water samples for selected unstable constituents*, by W. W. Wood: USGS--TWRI Book 1, Chapter D2. 1976. 24 pages.
- 2-D1. *Application of surface geophysics to ground-water investigations*, by A. A. R. Zohdy, G. P. Eaton, and D. R. Mabey: USGS--TWRI Book 2, Chapter D1. 1974. 116 pages.
- 2-E1. *Application of borehole geophysics to water-resources investigations*, by W. S. Keys and L. M. MacCary: USGS--TWRI Book 2, Chapter E1. 1971. 126 pages.
- 3-A1. *General field and office procedures for indirect discharge measurements*, by M. A. Benson and Tate Dalrymple: USGS--TWRI Book 3, Chapter A1. 1967. 30 pages.
- 3-A2. *Measurement of peak discharge by the slope-area method*, by Tate Dalrymple and M. A. Benson: USGS--TWRI Book 3, Chapter A2. 1967. 12 pages.
- 3-A3. *Measurement of peak discharge at culverts by indirect methods*, by G. L. Bodhaine: USGS--TWRI Book 3, Chapter A3. 1968. 60 pages.
- 3-A4. *Measurement of peak discharge at width contractions by indirect methods*, by H. F. Matthai: USGS--TWRI Book 3, Chapter A4. 1967. 44 pages.
- 3-A5. *Measurement of peak discharge at dams by indirect methods*, by Harry Hulsing: USGS--TWRI Book 3, Chapter A5. 1967. 29 pages.
- 3-A6. *General procedure for gaging streams*, by R. W. Carter and Jacob Davidian: USGS--TWRI Book 3, Chapter A6. 1968. 13 pages.
- 3-A7. *Stage measurements at gaging stations*, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A7. 1968. 28 pages.
- 3-A8. *Discharge measurements at gaging stations*, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A8. 1969. 65 pages.
- 3-A9. *Measurement of time of travel and dispersion in streams by dye tracing*, by E. F. Hubbard, F. A. Kilpatrick, L. A. Martens, and J. F. Wilson, Jr.: USGS--TWRI Book 3, Chapter A9. 1982. 44 pages.
- 3-A11. *Measurement of discharge by moving-boat method*, by G. F. Smoot and C. E. Novak: USGS--TWRI Book 3, Chapter A11. 1969. 22 pages.
- 3-B1. *Aquifer-test design, observation, and data analysis*, by R. W. Stallman: USGS--TWRI Book 3, Chapter B1. 1971. 26 pages.
- 3-B2. *Introduction to ground-water hydraulics, a programed text for self-instruction*, by G. D. Bennett: USGS--TWRI Book 3, Chapter B2. 1976. 172 pages.
- 3-B3. *Type curves for selected problems of flow to wells in confined aquifers*, by J. E. Reed: USGS--TWRI Book 3, Chapter B3. 1980. 106 pages.
- 3-C1. *Fluvial sediment concepts*, by H. P. Guy: USGS--TWRI Book 3, Chapter C1. 1970. 55 pages.
- 3-C2. *Field methods for measurement of fluvial sediment*, by H. P. Guy and V. W. Norman: USGS--TWRI Book 3, Chapter C2. 1970. 59 pages.
- 3-C3. *Computation of fluvial-sediment discharge*, by George Porterfield: USGS--TWRI Book 3, Chapter C3. 1972. 66 pages.
- 4-A1. *Some statistical tools in hydrology*, by H. C. Riggs: USGS--TWRI Book 4, Chapter A1. 1968. 39 pages.
- 4-A2. *Frequency curves*, by H. C. Riggs: USGS--TWRI Book 4, Chapter A2. 1968. 15 pages.
- 4-B1. *Low-flow investigations*, by H. C. Riggs: USGS--TWRI Book 4, Chapter B1. 1972. 18 pages.
- 4-B2. *Storage analyses for water supply*, by H. C. Riggs and C. H. Hardison: USGS--TWRI Book 4, Chapter B2. 1973. 20 pages.
- 4-B3. *Regional analyses of streamflow characteristics*, by H. C. Riggs: USGS--TWRI Book 4, Chapter B3. 1973. 15 pages.
- 4-D1. *Computation of rate and volume of stream depletion by wells*, by C. T. Jenkins: USGS--TWRI Book 4, Chapter D1. 1970. 17 pages.
- 5-A1. *Methods for determination of inorganic substances in water and fluvial sediments*, by M. W. Skougstad and others, editors: USGS--TWRI Book 5, Chapter A1. 1979. 626 pages.
- 5-A2. *Determination of minor elements in water by emission spectroscopy*, by P. R. Barnett and E. C. Mallory, Jr.: USGS--TWRI Book 5, Chapter A2. 1971. 31 pages.
- 5-A3. *Methods for analysis of organic substances in water*, by D. F. Goerlitz and Eugene Brown: USGS--TWRI Book 5, Chapter A3. 1972. 40 pages.
- 5-A4. *Methods for collection and analysis of aquatic biological and microbiological samples*, edited by P. E. Greeson, T. A. Ehke, G. A. Irwin, B. W. Lium, and K. V. Slack: USGS--TWRI Book 5, Chapter A4. 1977. 332 pages.
- 5-A5. *Methods for determination of radioactive substances in water and fluvial sediments*, by L. L. Thatcher, V. J. Janzer, and K. W. Edwards: USGS--TWRI Book 5, Chapter A5. 1977. 95 pages.
- 5-C1. *Laboratory theory and methods for sediment analysis*, by H. P. Guy: USGS--TWRI Book 5, Chapter C1. 1969. 58 pages.
- 7-C1. *Finite difference model for aquifer simulation in two dimensions with results of numerical experiments*, by P. C. Trescott, G. F. Pinder, and S. P. Larson: USGS--TWRI Book 7, Chapter C1. 1976. 116 pages.
- 7-C2. *Computer model of two-dimensional solute transport and dispersion in ground water*, by L. F. Konikow and J. D. Bredehoeft: USGS--TWRI Book 7, Chapter C2. 1978. 90 pages.
- 7-C3. *A model for simulation of flow in singular and interconnected channels*, by R. W. Schaffranek, R. A. Baltzer, and D. E. Goldberg: USGS--TWRI Book 7, Chapter C3. 1981. 110 pages.
- 8-A1. *Methods of measuring water levels in deep wells*, by M. S. Garber and F. C. Koopman: USGS--TWRI Book 8, Chapter A1. 1968. 23 pages.
- 8-B2. *Calibration and maintenance of vertical-axis type current meters*, by G. F. Smoot and C. E. Novak: USGS--TWRI Book 8, Chapter B2. 1968. 15 pages.

05490600 DES MOINES RIVER AT ST. FRANCISVILLE, MO
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

LOCATION.-- Lat 40°27'45", long 91°34'00", Clark County, Hydrologic Unit 07100009, at bridge on County Highway B at St. Francisville, and 8 mi (12.9 km) upstream from Sugar Creek.

DRAINAGE AREA.--14,300 mi² (37,00 km²).

PERIOD OF RECORD.--August 1967 to current year.

PERIOD OF DAILY RECORD.--

SEDIMENT RECORDS: April 1978 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 8,010 mg/L April 13, 1981; minimum daily mean, 11 mg/L November 23, 1980.

SUSPENDED-SEDIMENT LOADS: Maximum daily, 765,000 tons (694,000 metric tons) March 20, 1982; minimum daily, 41 tons (37 metric tons) April 6, 1981.

EXTREMES FOR CURRENT YEAR.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 5,220 mg/L March 20; minimum daily mean, 30 mg/L January 27.

SUSPENDED-SEDIMENT LOADS: Maximum daily, 765,000 tons (694,000 metric tons) March 20; minimum daily, 65 tons (59 metric tons) January 27.

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCTI- VANCE (UMHUS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (FTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED 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 04...	1430	21500	350	7.6	14.0	280	5.4	52	29000	39000
JAN 06...	1000	3000	810	6.2	.5	1.8	11.8	82	47	680
MAR 10...	1030	8170	530	7.9	1.0	38	12.8	90	92	520
MAY 12...	0945	19600	419	6.0	18.0	130	7.5	76	700	2600
JUL 15...	1030	44000	312	7.6	23.5	810	5.6	67	30000	42000
SEP 23...	1030	10200	540	6.3	17.0	9.1	9.0	93	4600	4200

DATE	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS, NONCAR- BONATE (MG/L AS CA) CACO3) (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	PERCENT SODIUM (00932)	SODIUM AL- KAL- SODIUM TIOX (MG/L AS K) (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINEITY FIELD (MG/L AS CACO3) (00410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
NOV 04...	150	87	39	12	7.9	10	.3	6.5	98	41
JAN 06...	370	110	72	35	23	12	.6	4.2	239	110
MAR 10...	240	80	63	20	12	10	.4	3.7	160	55
MAY 12...	200	60	52	16	8.3	8	.3	3.6	130	45
JUL 15...	150	53	40	11	4.8	7	.2	3.7	92	35
SEP 23...	250	92	63	23	13	10	.4	4.3	160	65

DES MOINES RIVER BASIN

05490600 DES MOINES RIVER AT ST. FRANCISVILLE, MO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	CHLOR- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUOR- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	SOLIDS, RESIDUE AT 150 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SOM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)
NOV 04...	15	.5	11	225	--	.31	13200	1.6	.190
JAN 06...	39	.4	9.3	500	--	.64	5210	5.6	.420
MAR 10...	25	.5	13	320	246	.44	7190	5.1	.700
MAY 12...	21	.2	9.9	260	235	.36	14100	4.9	.100
JUL 15...	9.8	.3	9.6	233	175	.32	27000	4.1	<.060
SEP 23...	20	.3	11	321	306	.44	6840	3.6	<.060

DATE	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4) (71846)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS TOTAL (MG/L AS PO4) (71886)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS, NITRO, DIS- SOLVED (MG/L AS P) (00671)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
NOV 04...	.24	1.80	.220	.67	.090	.060	4260	247000	27
JAN 06...	.54	1.50	.170	.52	.150	.130	9	92	0
MAR 10...	.98	2.50	.260	.86	.260	.290	309	6820	29
MAY 12...	.21	2.10	.260	.80	.070	.020	268	14200	68
JUL 15...	.08	9.80	.150	.46	.030	.050	2420	267000	89
SEP 23...	.08	1.80	.220	.67	.130	.060	26	716	0

DES MOINES RIVER BASIN

05490600 DES MOINES RIVER AT ST. FRANCISVILLE, MO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC SUS- PENDE TOTAL (UG/L AS AS) (01001)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, TOTAL RECUV- ERABLE (UG/L AS BA) (01007)	BARIUM, SUS- PENDE RECUV- ERABLE (UG/L AS BA) (01006)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	CADMIUM TOTAL RECUV- ERABLE (UG/L AS CD) (01027)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, TOTAL RECUV- ERABLE (UG/L AS CR) (01034)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)
NOV 04...	6	5	1	300	200	78	2	<1	20	<10
JAN 06...	1	0	2	100	2	98	1	<1	10	<10
MAY 12...	3	2	1	400	300	83	1	<3	20	<10
JUL 15...	8	7	1	200	100	90	--	<1	50	<10

DATE	COPPER, TOTAL RECUV- ERABLE (UG/L AS CU) (01037)	COPPER, SUS- PENDE RECUV- ERABLE (UG/L AS CU) (01036)	COPPER, DIS- SOLVED (UG/L AS CU) (01035)	COPPER, TOTAL RECUV- ERABLE (UG/L AS CU) (01042)	COPPER, SUS- PENDE RECUV- ERABLE (UG/L AS CU) (01041)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECUV- ERABLE (UG/L AS FE) (01045)	IRON, SUS- PENDE RECUV- ERABLE (UG/L AS FE) (01044)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECUV- ERABLE (UG/L AS PB) (01051)
NOV 04...	13	--	<3	55	47	8	26000	26000	220	26
JAN 06...	<1	--	<3	8	2	6	230	210	22	3
MAY 12...	3	2	1	25	20	5	5800	5700	65	12
JUL 15...	--	--	<1	--	--	5	--	--	120	--

DATE	LEAD, SUS- PENDE RECUV- ERABLE (UG/L AS PB) (01050)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, TOTAL RECUV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, SUS- PENDE RECUV- ERABLE (UG/L AS MN) (01054)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECUV- ERABLE (UG/L AS HG) (01000)	MERCURY SUS- PENDE RECUV- ERABLE (UG/L AS HG) (01095)	MERCURY DIS- SOLVED (UG/L AS HG) (01090)	NICKEL, TOTAL RECUV- ERABLE (UG/L AS NI) (01067)	NICKEL, SUS- PENDE RECUV- ERABLE (UG/L AS NI) (01066)
NOV 04...	25	1	1300	1300	13	.4	--	<.1	31	26
JAN 06...	0	4	70	40	27	.1	--	<.1	3	0
MAY 12...	9	3	360	360	4	.2	.0	.2	10	7
JUL 15...	--	<1	--	--	7	.5	.2	.3	--	--

DATE	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE) (01146)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, TOTAL RECUV- ERABLE (UG/L AS AG) (01077)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, TOTAL RECUV- ERABLE (UG/L AS ZN) (01092)	ZINC, SUS- PENDE RECUV- ERABLE (UG/L AS ZN) (01091)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 04...	5	1	0	1	<1	<1	160	170	12
JAN 06...	3	2	0	2	<1	<1	30	20	9
MAY 12...	3	2	0	2	1	<1	30	--	<12
JUL 15...	3	1	0	1	--	1	--	--	58

DES MOINES RIVER BASIN

05490600 DES MOINES RIVER AT ST. FRANCISVILLE, MO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	PCB, TOTAL (UG/L) (39516)	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39519)	ALDRIN, TOTAL (UG/L) (39330)	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39333)	CHLOR- DANE, TOTAL (UG/L) (39350)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39351)	DDD, TOTAL (UG/L) (39360)	DDD, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39363)	DDE, TOTAL (UG/L) (39365)	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39368)	DDT, TOTAL (UG/L) (39370)	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39373)
NOV 04...	--	0	--	.0	--	.0	--	.0	--	.0	--	.0
JAN 06...	.00	--	.00	--	.00	--	.00	--	.00	--	.00	--
MAY 12...	--	<1	--	<.1	--	<1.0	--	<.1	--	<.1	--	<.1

DATE	DI- AZINON, TOTAL (UG/L) (39570)	DI- ELDRIN TOTAL (UG/L) (39380)	DI- ELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39383)	ENDO- SULFAN, TOTAL (UG/L) (39388)	ENDURIN, TOTAL (UG/L) (39390)	ENDURIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39393)	ETHION, TOTAL (UG/L) (39398)	HEPTA- CHLOR, TOTAL (UG/L) (39410)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39413)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L) (39420)	HEPTA- CHLOR EPOXIDE TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39423)
NOV 04...	--	--	.1	--	--	.0	--	--	.0	--	.0
JAN 06...	.01	.00	--	.00	.00	--	.00	.00	--	.00	--
MAY 12...	--	--	.1	--	--	<.1	--	--	<.1	--	<.1

DATE	LINDANE TOTAL (UG/L) (39340)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39343)	MALA- THION, TOTAL (UG/L) (39530)	METH- OXY- CHLOR, TOTAL (UG/L) (39480)	METH- OXY- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39481)	METHYL TRI- THION, TOTAL (UG/L) (39600)	METHYL TRI- THION, TOTAL (UG/L) (39790)	PARA- THION, TOTAL (UG/L) (39540)	TOXA- PHENE, TOTAL (UG/L) (39400)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39403)	TOTAL TRI- THION (UG/L) (39786)
NOV 04...	--	.0	--	--	.0	--	--	--	--	.0	--
JAN 06...	.00	--	.00	.00	--	.00	.00	.00	0	--	.00
MAY 12...	--	<.1	--	--	<.1	--	--	--	--	<10	--

DATE	2,4-D, TOTAL (UG/L) (39730)	2,4,5-T TOTAL (UG/L) (39740)	SILVEX, TOTAL (UG/L) (39700)	PER- THANE TOTAL (UG/L) (39034)	PER- THANE IN BOT- TOM MA- TERIAL (UG/KG) (81806)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L) (39250)	PCN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39251)	ENDO- SULFAN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39384)	MIREX, TOTAL IN BOT- TOM MA- TERIAL (UG/L) (39755)	MIREX, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39750)	2, 4-DP TOTAL (UG/L) (62163)
NOV 04...	--	--	--	--	.00	--	.0	.0	--	.0	--
JAN 06...	.05	.00	.00	.00	--	.00	--	--	.00	--	.00
MAY 12...	--	--	--	--	<1.00	--	<1.0	<.1	--	<.1	--

05490600 DES MOINES RIVER AT ST. FRANCISVILLE, MO--continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT

DATE	STREAM- FLOW, INSTAN- TANEOUS (CFS)	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 .062 MM (70342)	SED. SUSP. FALL DIAM. % FINER THAN .125 MM (70343)	SED. SUSP. FALL DIAM. % FINER THAN .250 MM (70344)	SED. SUSP. FALL DIAM. % FINER THAN .500 MM (70345)	SED. SUSP. FALL DIAM. % FINER THAN 1.00 MM (70346)
MAR , 1982										
16...	23700	32	33	36	47	70	78	91	96	100

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL

DATE	BED MAT. SIEVE DIAM. % FINER THAN .062 MM (80164)	BED MAT. SIEVE DIAM. % FINER THAN .125 MM (80165)	BED MAT. SIEVE DIAM. % FINER THAN .250 MM (80166)	BED MAT. SIEVE DIAM. % FINER THAN .500 MM (80167)	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM (80168)	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM (80169)	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM (80170)	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM (80171)	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM (80172)	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM (80173)
DEC , 1981										
14...	2	3	8	24	70	91	98	99	100	100
MAR , 1982										
16...	0	1	10	46	82	93	96	98	100	100
APR										
15...	0	0	8	53	84	94	98	99	100	100
MAY										
24...	0	0	6	35	72	89	96	98	99	100
JUN										
28...	0	0	3	28	65	84	92	96	97	100
AUG										
11...	0	0	8	32	66	83	92	96	98	100

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
OCTOBER			NOVEMBER			DECEMBER			
1	1360	227	834	1920	269	1390	1890	504	2570
2	1450	161	630	2220	273	1640	4320	800	9330
3	1390	110	413	2480	577	3860	5300	1750	25000
4	1170	84	265	9870	1230	32800	3720	590	5930
5	949	88	225	2130	930	5350	3800	140	1440
6	1100	104	309	13200	384	13700	3980	100	1070
7	1170	91	287	9870	477	12700	3720	90	904
8	930	67	168	7740	356	7440	3890	70	735
9	930	88	221	4940	273	3640	3720	75	753
10	1120	81	245	3130	316	2670	2950	80	637
11	1260	74	252	2450	403	2670	2740	230	1700
12	1260	73	248	2280	223	1370	1560	780	3290
13	1260	102	347	2670	335	2420	2740	190	1410
14	1290	1510	5260	2800	130	983	2950	---	---
15	9350	2290	57800	2740	74	547	4230	---	---
16	10700	1440	41600	2240	78	472	4140	---	---
17	4400	602	7150	2640	99	706	4140	---	---
18	3400	377	3460	2800	161	1220	4580	---	---
19	3800	180	1850	2880	161	1250	3980	---	---
20	2280	97	597	2840	139	1070	3700	---	---
21	2150	95	551	2640	115	820	3270	---	---
22	2340	151	954	2180	74	436	2460	---	---
23	2280	107	659	2060	108	601	2080	---	---
24	2080	56	314	2670	87	627	2120	---	---
25	2080	156	876	2670	144	1040	2240	---	---
26	2020	198	1080	2080	110	618	2300	---	---
27	2530	92	628	2500	130	877	2180	---	---
28	2020	65	355	2950	170	1350	2060	---	---
29	1960	56	296	2150	101	586	2000	---	---
30	2020	88	480	1890	189	964	2440	---	---
31	1980	185	989	---	---	---	2570	---	---
TOTAL	74029	---	129343	107630	---	105817	97770	---	54769

DES MOINES RIVER BASIN

05490600 DES MOINES RIVER AT ST. FRANCISVILLE, MO--continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JANUARY			FEBRUARY			MARCH			
1	1760	---	---	930	---	---	20600	865	48100
2	1670	---	---	980	---	---	20600	750	41700
3	1690	---	---	1030	---	---	20200	640	34900
4	1670	---	---	1030	---	---	19500	530	27900
5	1670	---	---	980	---	---	17100	440	20300
6	1600	---	---	960	---	---	13500	340	12400
7	1560	---	---	950	---	---	13200	290	10300
8	1500	---	---	900	---	---	10800	240	7000
9	1480	---	---	850	---	---	8460	200	4570
10	1410	---	---	810	---	---	7310	180	3550
11	1400	---	---	770	---	---	8960	310	7500
12	1370	---	---	780	---	---	11200	570	17200
13	1400	---	---	760	---	---	23200	1740	109000
14	1360	---	---	750	---	---	21000	2520	143000
15	1200	---	---	1400	---	---	21500	1760	102000
16	1260	---	---	1990	---	---	24400	1320	87000
17	1310	---	---	3000	---	---	27400	1480	109000
18	1300	---	---	4200	---	---	26000	1610	113000
19	1220	---	---	5000	---	---	47300	4950	632000
20	1000	---	---	22000	---	---	54300	5220	765000
21	900	---	---	35500	---	---	37700	3150	321000
22	860	---	---	26700	2250	162000	20100	2100	114000
23	810	---	---	31700	2350	201000	9270	1140	28500
24	790	---	---	24400	1400	92200	8460	560	12800
25	830	---	---	23000	1430	88600	16500	700	31200
26	810	---	---	28500	1630	125000	23400	1030	65100
27	800	30	65	28200	3210	244000	26000	860	60400
28	870	90	211	22000	1500	89100	25200	720	49000
29	860	---	---	---	---	---	24900	640	43000
30	890	---	---	---	---	---	25800	690	48100
31	920	---	---	---	---	---	26300	710	50400
TOTAL	38170	---	276	270070	---	1002100	660160	---	3118920
APRIL			MAY			JUNE			
1	26300	690	49000	17200	290	13500	21500	1130	65600
2	23400	650	41100	17100	450	20800	19800	760	40600
3	22000	740	44000	16800	350	15900	18100	456	22300
4	20200	810	44200	16600	320	14300	20600	344	19100
5	20000	790	42700	13700	260	9620	20100	370	20100
6	17800	625	30000	9820	890	23600	20000	318	17200
7	16800	460	20900	7860	1180	25000	19800	267	14300
8	15000	410	16600	9560	1800	46500	20000	227	12300
9	15200	430	17600	20000	1260	68000	21300	318	18300
10	13000	500	17600	18100	1000	48900	21700	334	19600
11	10600	330	9440	19600	960	50800	21500	368	21400
12	10900	290	8530	19600	960	50800	20700	373	20800
13	11400	250	7690	19200	890	46100	20200	333	18200
14	9090	270	6630	19300	860	44800	20100	276	15000
15	11000	310	9210	19000	800	41000	20000	335	18100
16	13200	2920	104000	19000	1030	52800	20100	315	17100
17	37300	4460	449000	21300	820	47200	20000	294	15900
18	26900	4850	352000	20600	640	35600	20000	265	14300
19	14800	2340	93500	20600	560	31100	20200	296	16100
20	9010	1080	26300	20500	570	31500	20400	327	18000
21	8340	530	11900	20200	1380	75300	20800	265	14900
22	7570	570	11700	21800	1180	69500	20800	230	12900
23	10000	950	25700	21300	880	50600	20400	203	11200
24	18500	700	35000	20700	1190	66500	20200	297	16200
25	18300	498	24600	20400	600	33000	19200	801	41500
26	17800	470	22600	20500	810	44800	19600	902	47700
27	17800	375	18000	22400	1050	63500	21600	550	32100
28	17500	340	16100	21200	1450	83000	21700	421	24700
29	17400	410	19300	20700	1490	83300	20200	575	31400
30	17300	375	17500	21400	1470	84900	20800	374	21000
31	---	---	---	25400	1450	99400	---	---	---
TOTAL	494410	---	1592400	581440	---	1471620	611400	---	677900

05490600 DES MOINES RIVER AT ST. FRANCISVILLE, MO--continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JULY			AUGUST			SEPTEMBER			
1	19600	254	13400	19600	150	7940	7020	819	15500
2	19400	244	12800	19200	122	6320	4940	392	5230
3	28700	380	29400	19000	122	6260	6540	371	6550
4	64600	793	138000	18700	112	5650	8390	462	10500
5	60100	1570	255000	13100	147	5200	7600	294	6030
6	38400	2130	221000	27200	1100	80800	5420	231	3380
7	18300	1620	80000	18100	685	33500	4890	210	2770
8	16000	904	39100	16200	320	14000	6280	1780	30200
9	10200	554	15300	19200	224	11600	6850	490	9060
10	17400	494	23200	19400	154	8070	5210	154	2170
11	18200	418	20500	19800	224	12000	3250	175	1540
12	22200	331	19800	20800	322	18100	3200	119	1030
13	20400	307	16900	20800	280	15700	3200	91	786
14	20200	858	46800	20600	259	14400	3190	203	1750
15	44000	1680	200000	19900	238	12800	9300	1320	33100
16	50800	1620	222000	19500	189	9950	4250	679	7790
17	63600	1470	252000	20400	322	17700	2620	602	4260
18	65500	1290	228000	19100	315	16200	3000	462	3740
19	39500	1200	128000	17900	252	12200	9530	728	18700
20	34900	1140	107000	17700	203	9700	1440	1020	3970
21	31500	841	71500	16300	140	6160	1610	707	3070
22	20100	1160	63000	16000	154	6650	1410	420	1600
23	17800	297	14300	14000	182	6880	1090	224	659
24	20200	250	13600	11100	228	6830	9640	140	3640
25	19600	218	11500	10500	245	6950	9580	322	8330
26	19400	179	9380	10200	259	7130	9480	252	6450
27	19000	173	8870	9740	245	6440	9380	245	6200
28	18800	160	8120	9040	164	4000	9250	1130	28200
29	18800	147	7460	6780	116	2120	7570	203	4150
30	19600	144	7620	7380	472	9410	4600	77	956
31	19400	147	7700	7210	1090	21200	---	---	---
TOTAL	896200	---	2291250	504450	---	401860	169730	---	231311
YEAR	4505459		11077566						

LOCATION.--Lat 40°23'33", long 91°35'50", in NW¼ sec.31, T.65 N., R.6 W., Clark County, Hydrologic Unit 07110001, on left bank 90 ft (27 m) downstream from bridge on U.S. Highway 136, 0.8 mi (1.3 km) west of Wayland, and 5.0 mi (8.0 km) downstream from Brush Creek, and at mile 15.2 (24.3 km).

PERIOD OF RECORD.--February 1922 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 501.52 ft (152.863 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1929, nonrecording gage at bridge 2.8 mi (4.5 km) upstream at different datum. Oct. 1, 1929, to June 11, 1936, nonrecording gage, at bridge 90 ft (27 m) upstream at present datum.

REMARKS.--Records fair. Several observations of water temperature and specific conductance made during the year. National Weather Service gage height telemeter at station.

COOPERATION.--Three discharge measurements furnished by Corps of Engineers.

AVERAGE DISCHARGE.--60 years, 248 ft³/s (7.023 m³/s), 8.42 in/yr (214 mm/yr), 179,700 acre-ft/yr (222 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,400 ft³/s (748 m³/s) Apr. 22, 1973, gage height, 21.71 ft (6.617 m); no flow at times in several years.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 4,000 ft³/s (113 m³/s) and maximum (*):

Date	Time	Discharge		Gage height		Date	Time	Discharge		Gage height	
		(ft ³ /s)	(m ³ /s)	(ft)	(m)			(ft ³ /s)	(m ³ /s)	(ft)	(m)
Nov. 4	1300	4,510	128	12.80	3.901	Apr. 17	1900	6,570	186	14.94	4.554
Feb. 20	1245	8,590	243	16.46	5.017	July 5	1800	10,100	286	17.40	5.304
Mar. 20	2215	6,400	181	14.78	4.505	July 19	1800	*11,500	326	18.24	5.559

Minimum daily discharge, 13 ft³/s (0.368 m³/s) Oct. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP			
1	32	67	1250	32	1110	249	627	113	1140	42	43	1630			
2	24	401	1150	33	1080	258	325	109	504	36	37	676			
3	20	2590	464	32	886	300	301	103	285	3000	30	269			
4	17	4100	271	31	734	247	359	100	208	6480	27	94			
5	17	2800	196	30	661	156	276	94	160	9640	21	47			
6	17	765	153	30	423	174	210	160	127	6330	488	34			
7	17	406	137	30	347	170	202	191	121	3680	484	54			
8	21	281	130	29	254	194	208	161	94	1200	187	314			
9	20	229	110	31	212	139	221	119	459	451	89	194			
10	17	175	89	32	181	173	266	97	1010	283	55	76			
11	15	149	77	35	171	1580	291	85	461	206	42	42			
12	13	137	73	34	153	2060	245	77	226	247	39	29			
13	17	125	72	33	149	2040	200	73	146	177	35	19			
14	569	112	70	31	144	1430	159	72	107	482	28	20			
15	2430	112	63	30	196	2860	135	73	88	4110	22	409			
16	873	159	48	30	770	3510	2170	74	118	4690	65	325			
17	318	223	41	29	3180	2320	6150	103	184	7790	1210	428			
18	426	155	54	29	3850	954	4380	220	124	9190	417	1780			
19	296	144	50	29	4310	3040	888	284	180	11100	163	1040			
20	144	148	41	29	6300	5840	501	241	226	10400	72	347			
21	104	142	39	28	5740	5520	360	734	159	4490	48	175			
22	82	127	36	34	4560	990	306	711	86	919	22	120			
23	66	114	34	36	2250	559	260	322	64	451	15	94			
24	58	116	34	37	994	425	222	168	52	293	238	85			
25	54	114	33	36	566	352	202	101	44	208	760	71			
26	52	114	31	33	381	293	182	666	39	142	183	63			
27	52	293	31	31	284	243	160	656	39	140	94	58			
28	49	234	29	31	251	208	141	396	58	101	40	54			
29	44	142	30	40	---	187	127	213	79	81	20	51			
30	42	173	31	1610	---	266	121	2030	62	58	627	49			
31	41	---	33	1810	---	1210	---	1840	---	53	1180	---			
TOTAL	5947	14847	4900	4345	40137	37947	20195	10386	6650	86470	6781	8647			
MEAN	192	495	158	140	1433	1224	673	335	222	2789	219	288			
MAX	2430	4100	1250	1810	6300	5840	6150	2030	1140	11100	1210	1780			
MIN	13	67	29	28	144	139	121	72	39	36	15	19			
CFSM	.48	1.24	.40	.35	3.58	3.06	1.68	.84	.56	6.97	.55	.72			
IN.	.55	1.38	.46	.40	3.73	3.53	1.88	.97	.62	8.04	.63	.80			
AC-FT	11800	29450	9720	8620	79610	75270	40060	20600	13190	171500	13450	17150			
CAL YR 1981	TOTAL	185044		MEAN	507	MAX	11800	MIN	12	CFSM	1.27	IN	17.21	AC-FT	367000
WIR YR 1982	TOTAL	247252		MEAN	677	MAX	11100	MIN	13	CFSM	1.69	IN	22.99	AC-FT	490400

05496000 WYACONDA RIVER ABOVE CANTON, MO

LOCATION.--Lat 40°08'31", long 91°33'55", in SW¼SW¼NE¼ sec.28, T.62 N., R.6 W., Lewis County, Hydrologic Unit 07110001, on left bank on downstream side of bridge on State Highway 16, 1.9 mi (3.1 km) upstream from Sugar Creek, and 2.5 mi (4.0 km) west of Canton, and at mile 16.7 (26.9 km) upstream from mouth.

DRAINAGE AREA.--393 mi² (1018 km²).

PERIOD OF RECORD.--October 1932 to September 1972, October 1979 to current year.

GAGE.--Water-stage recorder and crest stage gage. Datum of gage is 517.41 ft (157.706 m) National Geodetic Vertical Datum of 1929. Prior to May 1, 1939, nonrecording gage at present site and datum, 1972 to 1979 nonrecording gage at present site and datum two feet lower.

REMARKS.--Records good. Several observations of water temperature and specific conductance made during the year.

COOPERATION.--Three discharge measurements furnished by Corps of Engineers.

AVERAGE DISCHARGE.--43 years, (water years 1933-72, 1980-82), 233 ft³/s (6.599 m³/s), 8.05 in/yr (204 mm/yr), 168,800 acre-ft/yr, (208 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,700 ft³/s (501 m³/s) July 30, 1933, gage height, 30.00 ft (9.144 m), from floodmarks; no flow at times in several years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,000 ft³/s (85 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s)	Discharge (m ³ /s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft ³ /s)	Discharge (m ³ /s)	Gage height (ft)	Gage height (m)
Nov. 4	1600	3,030	85.8	15.38	4.688	Mar. 21	0845	5,040	143	19.61	5.977
Feb. 22	0845	5,460	154.6	21.01	6.404	Apr. 18	1145	6,250	177	21.38	6.517
Mar. 11	2045	3,190	90.3	15.75	4.801	July 5	1700	8,820	250	24.03	7.324
Mar. 16	0700	4,620	130.8	18.84	5.742	July 21	1145	10,100*	286	*25.15	7.666

Minimum daily discharge, 18.0 ft³/s (0.510 m³/s) Oct. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34	82	891	55	2040	225	447	64	1120	44	52	2380
2	29	643	1280	55	1410	230	213	60	562	329	47	1140
3	23	2280	445	54	1080	248	279	57	241	3260	42	348
4	19	2910	214	57	830	210	267	54	159	4550	37	149
5	20	2460	146	59	628	190	202	52	120	7770	33	97
6	19	1080	117	62	410	196	153	203	94	6760	242	75
7	18	395	108	64	403	186	157	237	402	2550	262	91
8	36	217	99	63	242	151	157	130	617	1680	120	194
9	72	158	86	53	196	123	171	92	1540	502	83	128
10	40	118	72	29	148	177	231	70	1790	208	63	89
11	51	95	64	43	131	2340	248	55	573	157	56	72
12	64	84	64	45	113	2870	193	46	228	137	60	59
13	46	77	63	47	102	2460	155	43	145	113	48	51
14	347	70	61	45	104	1510	129	43	107	221	39	48
15	1330	74	57	51	259	2600	110	43	108	2760	38	52
16	695	117	44	46	1050	4350	411	54	138	3340	42	73
17	265	113	37	40	2530	3350	3250	80	159	3540	230	72
18	341	112	47	34	3060	1270	5500	221	164	5940	152	2050
19	226	92	27	28	3520	1470	2620	270	318	5560	87	1420
20	138	127	24	22	3980	3620	632	125	168	6280	62	400
21	93	98	36	24	3970	4670	284	963	103	9620	45	179
22	65	79	42	26	5020	1610	188	203	92	6260	34	118
23	50	72	49	29	3690	501	154	115	64	1270	28	91
24	42	69	53	29	1670	309	133	86	49	391	31	77
25	41	65	55	28	790	233	120	71	40	199	774	71
26	44	61	62	24	410	186	108	1540	39	147	433	64
27	44	91	67	22	257	154	95	1300	187	125	139	58
28	41	147	71	26	231	136	81	368	307	117	87	54
29	35	91	68	170	---	125	73	165	124	87	61	50
30	41	100	60	2390	---	153	68	1000	96	70	169	46
31	59	---	54	2660	---	692	---	783	---	60	1360	---
TOTAL	4368	12177	4563	6380	38274	36545	16829	8593	9854	74047	4956	9796
MEAN	141	406	147	206	1367	1179	561	277	328	2389	160	327
MAX	1330	2910	1280	2660	5020	4670	5500	1540	1790	9620	1360	2380
MIN	18	61	24	22	102	123	68	43	39	44	28	46
CFSM	.36	1.03	.37	.52	3.48	3.00	1.43	.71	.84	6.08	.41	.83
IN.	.41	1.15	.43	.60	3.62	3.46	1.59	.81	.93	7.01	.47	.93
AC-FT	8660	24150	9050	12650	75920	72490	33380	17040	19550	146900	9830	19430

CAL YR 1981 TOTAL 199000.2 MEAN 545 MAX 9150 MIN 6.5 CFSM 1.39 IN 18.84 AC-FT 394700
WTR YR 1982 TOTAL 226382.0 MEAN 620 MAX 9620 MIN 18 CFSM 1.58 IN 21.43 AC-FT 449000

FABIUS RIVER BASIN

05497000 NORTH FABIUS RIVER AT MONTICELLO, MO

LOCATION.--Lat 40°06'30", long 91°42'51", in SW¼SE¼ sec.6, T.61 N., R.7 W., Lewis County, Hydrologic Unit 07110002, on right bank upstream from bridge on State Highway 16, 1.0 mi (1.6 km) south of Monticello, and 19.0 mi (30.6 km) upstream from Middle Fabius River.

DRAINAGE AREA.--452 mi² (1,171 km²).

PERIOD OF RECORD.--February 1922 to current year. Monthly discharge only for some periods, published in WSP 1308.

REVISED RECORDS.--WSP 925: 1937-39(M). WSP 1308: 1922(M), 1924-26(M).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 540.73 ft (164.815 m) National Geodetic Vertical Datum of 1929. Prior to Nov. 22, 1930, nonrecording gage at site 400 ft (122 m) downstream at datum 0.03 ft (0.009 m) lower. Nov. 22, 1930, to Nov. 28, 1967, nonrecording gage at present site and datum.

REMARKS.--Records fair. Several observations of water temperature and specific conductance were made during the year.

COOPERATION.--Four discharge measurements furnished by Corps of Engineers.

AVERAGE DISCHARGE.--60 years, 282 ft³/s (7.986 m³/s), 8.47 in/yr (215 mm/yr), 204,300 acre-ft/yr (252 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,700 ft³/s (586 m³/s) Apr. 22, 1973, gage height, 33.03 ft (10.068 m), from graph based on gage readings; no flow at times in many years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1874, 30.8 ft (9.39 m) June 30, 1933.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 5,000 ft³/s (142 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Feb. 21	0915	7190 204	22.84 6.962	July 4	2230	13,500 382	27.67 8.434
Mar. 20	1100	6900 195	21.52 6.559	July 21	0015	*14,200 402	28.20 8.595
Apr. 17	1630	7310 207	22.02 6.712				

Minimum daily discharge, 16 ft³/s (0.453 m³/s) Oct. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	95	1040	20	1000	255	471	100	1460	108	190	3560
2	23	861	1080	25	683	266	267	99	528	127	197	1060
3	21	3320	365	31	612	277	267	102	252	5250	185	442
4	21	3610	226	33	557	269	346	107	178	11400	182	271
5	21	1710	173	33	480	462	221	324	145	11900	165	202
6	21	614	144	31	498	471	198	396	120	7530	618	162
7	20	329	135	35	457	360	196	191	284	2360	466	385
8	20	230	125	33	397	286	191	136	294	1130	288	599
9	19	179	121	33	332	255	204	116	2060	574	220	284
10	18	149	112	25	325	323	251	106	2060	430	191	202
11	17	142	90	23	304	2460	216	104	533	384	184	166
12	16	132	80	22	290	2260	209	103	245	326	203	146
13	20	125	82	24	282	1860	167	99	166	284	179	122
14	304	121	82	27	282	1090	155	98	129	840	161	107
15	1450	121	80	27	356	3070	141	107	115	3600	325	182
16	552	141	60	29	752	4250	171	128	134	2940	1960	206
17	198	114	52	32	2290	2190	6450	188	211	7980	1510	130
18	275	107	40	34	3440	767	3190	155	155	7710	548	2980
19	129	98	28	37	3280	2320	782	147	363	4280	298	1160
20	95	121	26	38	4270	5840	447	143	184	10900	231	413
21	77	105	48	35	6460	1980	306	130	125	11100	185	237
22	67	95	52	39	2960	798	235	130	106	2910	160	167
23	58	88	49	39	1540	501	199	130	94	838	148	134
24	55	85	47	39	977	360	176	125	87	521	144	114
25	54	85	44	39	585	302	160	104	90	374	1380	102
26	55	89	41	40	392	251	151	1090	90	281	585	92
27	53	116	41	44	308	213	133	1330	331	217	299	86
28	49	128	37	43	267	188	115	408	480	200	220	82
29	47	91	27	127	---	170	109	1220	159	187	180	80
30	39	128	22	1440	---	195	104	2520	125	183	958	78
31	40	---	22	2270	---	1130	---	1150	---	185	1510	---
TOTAL	3861	13329	4571	4747	34376	35419	16228	11286	11303	97049	14070	13951
MEAN	125	444	147	153	1228	1143	541	364	377	3131	454	465
MAX	1450	3610	1080	2270	6460	5840	6450	2520	2060	11900	1960	3560
MIN	16	85	22	20	267	170	104	98	87	108	144	78
CFSM	.28	.98	.33	.34	2.72	2.53	1.20	.81	.83	6.93	1.00	1.03
IN.	.32	1.10	.38	.39	2.83	2.92	1.34	.93	.93	7.99	1.16	1.15
AC-FT	7660	26440	9070	9420	68180	70250	32190	22390	22420	192500	27910	27670

CAL YR 1981 TOTAL 196437.3 MEAN 538 MAX 10900 MIN 2.9 CFSM 1.19 IN 16.17 AC-FT 389600
WTR YR 1982 TOTAL 260190.0 MEAN 713 MAX 11900 MIN 16 CFSM 1.58 IN 21.41 AC-FT 516100

FABIUS RIVER BASIN

05498000 MIDDLE FABIUS RIVER NEAR MONTICELLO, MO

LOCATION.--Lat 40°05'37", long 91°44'08", in SE 1/4 sec. 12, T. 61 N., R. 8 W., Lewis County, Hydrologic Unit 07110002, on left bank on downstream end of bridge pier on State Highway 16, 2.5 mi (4.0 km) southwest of Monticello, 8 mi (13 km) downstream from Radish Branch, and 17 miles (27 km) upstream from mouth.

DRAINAGE AREA.--393 mi² (1,018 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1945 to current year.

GAGE.--Water-stage recorder. Datum of gage is 540.46 ft (164.732 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 4, 1967, nonrecording gage at present site and datum.

REMARKS.--Records good. Several observations of water temperature and specific conductance were made during the year.

COOPERATION.--Four discharge measurements furnished by Corps of Engineers.

AVERAGE DISCHARGE.--37 years, 261 ft³/s (7.392 m³/s), 9.02 in/yr (229 mm/yr), 189,100 acre-ft/yr (233 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,700 ft³/s (501 m³/s) Apr. 23, 1973, gage height, 27.14 ft (8.272 m); no flow at times in 1953-56.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 17, 1945, reached a stage of 23.3 ft (7.10 m), from floodmarks.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,500 ft³/s (99.1 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Nov. 4	1300	3,930 111	15.28 4.657	Apr. 19	0515	4,400 125	16.11 4.910
Jan. 30	0630	3,550 100	14.53 4.429	June 9	1630	3,800 108	15.01 4.575
Feb. 18	1115	4,300 122	15.95 4.862	July 6	0215	*9,020 255	*21.72 6.620
Feb. 23	0445	4,640 131	16.52 5.035	July 22	1045	6,240 177	18.79 5.727
Mar. 16	0830	4,660 132	16.54 5.041				

Minimum daily discharge, 7.9 ft³/s (0.224 m³/s); Oct. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	UCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	90	547	34	1890	215	582	68	1530	65	47	1000
2	10	851	1310	32	1490	215	238	64	1060	265	43	1430
3	7.9	2870	470	34	975	222	216	59	342	4700	41	381
4	9.7	3680	234	33	851	215	193	57	201	6020	38	175
5	9.6	2530	167	32	733	165	195	54	155	7730	36	108
6	8.8	712	134	34	618	136	151	665	126	8340	37	77
7	8.6	359	118	35	534	141	147	280	178	7050	261	68
8	8.8	230	113	33	445	123	146	191	481	2990	115	256
9	8.6	170	99	27	370	105	164	124	3110	571	71	193
10	8.9	137	83	22	361	206	218	83	3330	300	57	112
11	8.4	115	73	18	274	1660	233	61	1840	236	46	78
12	8.9	99	66	18	248	2570	209	50	398	189	41	60
13	10	90	61	20	232	1410	161	43	219	152	45	51
14	334	80	61	20	224	999	133	40	154	172	43	45
15	437	79	58	20	268	2070	116	37	129	1360	50	40
16	471	115	47	20	1060	4190	218	45	132	1500	515	39
17	159	90	36	25	2260	2870	2340	238	224	2270	1110	80
18	191	78	47	29	3750	1030	3560	213	231	2150	410	498
19	100	78	43	29	3800	1020	2620	163	459	2540	158	1860
20	74	109	40	28	3370	2590	443	149	355	4140	95	527
21	51	90	39	27	4030	3060	271	359	145	5180	66	187
22	35	73	41	26	4440	917	202	649	95	5220	52	117
23	26	69	45	26	3100	396	164	402	67	589	44	86
24	22	65	47	26	978	296	143	172	51	285	41	68
25	20	60	54	26	561	240	129	108	46	174	110	56
26	16	61	54	27	363	201	119	1330	45	121	545	49
27	12	59	54	28	279	168	105	1670	833	118	180	43
28	19	151	54	27	226	146	92	624	591	81	103	40
29	19	99	52	167	---	133	80	248	174	66	77	37
30	21	110	41	2630	---	150	72	375	172	58	118	36
31	18	---	40	1870	---	531	---	1030	---	52	1020	---
TOTAL	2148.2	13399	4328	5423	37730	28390	13660	9651	16873	64684	5615	7797
MEAN	69.3	447	140	175	1348	916	455	311	562	2087	181	260
MAX	471	3680	1310	2630	4440	4190	3560	1670	3330	8340	1110	1860
MIN	7.9	59	36	18	224	105	72	37	45	52	36	36
CFSM	.18	1.14	.36	.45	3.43	2.33	1.16	.79	1.43	5.31	.46	.66
IN.	.20	1.27	.41	.51	3.57	2.69	1.29	.91	1.60	6.12	.53	.74
AC-FT	4260	26580	8580	10760	74840	56310	27090	19140	33470	128300	11140	15470

CAL YR 1981 TOTAL 179466.2 MEAN 492 MAX 8180 MIN 7.9 CFSM 1.25 IN 16.99 AC-FT 356000
WIR YR 1982 TOTAL 209690.2 MEAN 575 MAX 8340 MIN 7.9 CFSM 1.46 IN 19.85 AC-FT 415900

FABIUS RIVER BASIN

05498000 MIDDLE FABIUS RIVER NEAR MONTICELLO, MO--continued

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT: January 1980 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 5,660 mg/L April 17, 1982; minimum daily mean, 2 mg/L November 17, 19, 27, 1980 and January 8, 1981.

SUSPENDED-SEDIMENT LOAD: Maximum daily, 42,600 tons (38,600 metric tons) April 18, 1982; minimum daily, 0.08 tons (0.07 metric tons) November 17, 1981.

EXTREMES FOR CURRENT YEAR.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 5,660 mg/L April 17; minimum daily mean, 14 mg/L December 8.

SUSPENDED-SEDIMENT LOAD: Maximum daily, 42,600 tons (38,600 metric tons) April 18; minimum daily, 1.10 tons (1.00 metric tons) January 16.

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL

DATE	BED MAT. SIEVE DIAM. % FINER THAN .062 MM (80164)	BED MAT. SIEVE DIAM. % FINER THAN .125 MM (80165)	BED MAT. SIEVE DIAM. % FINER THAN .250 MM (80166)	BED MAT. SIEVE DIAM. % FINER THAN .500 MM (80167)	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM (80168)	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM (80169)	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM (80170)	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM (80171)	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM (80172)	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM (80173)
JAN , 1982										
27...	0	2	5	9	20	--	34	49	61	91
MAR										
16...	2	4	19	44	70	88	95	98	100	100
APR										
14...	6	10	24	56	75	79	83	87	93	100
MAY										
25...	1	2	6	14	19	24	30	40	60	100

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
OCTOBER			NOVEMBER			DECEMBER			
1	15	81	3.3	90	115	28	547	920	1660
2	10	60	1.6	851	1060	2440	1310	1140	4100
3	7.9	77	1.6	2870	1840	14300	470	652	1040
4	9.7	91	2.4	3680	1110	11000	234	115	73
5	9.6	71	1.8	2530	660	4510	167	71	32
6	8.8	87	2.1	712	290	557	134	52	19
7	8.6	74	1.7	359	172	167	118	31	9.9
8	8.8	150	3.6	230	69	43	113	14	4.3
9	8.6	125	2.9	170	66	30	99	22	5.9
10	8.9	57	1.4	137	49	18	83	30	6.7
11	8.4	73	1.7	115	27	8.4	73	25	4.9
12	8.9	81	1.9	99	23	6.1	66	24	4.3
13	10	286	7.7	90	27	6.6	61	29	4.8
14	334	467	421	80	32	6.9	61	23	3.8
15	437	493	582	79	22	4.7	58	18	2.8
16	471	482	613	115	50	16	47	31	3.9
17	159	358	154	90	48	12	36	30	2.9
18	191	252	130	78	29	6.1	47	31	3.9
19	100	268	72	78	30	6.3	43	59	6.8
20	74	212	42	109	34	10	40	67	7.2
21	51	116	16	90	26	6.3	39	56	5.9
22	35	67	6.3	73	31	6.1	41	36	4.0
23	26	49	3.4	69	45	8.4	45	51	6.2
24	22	52	3.1	65	41	7.2	47	33	4.2
25	20	49	2.6	60	40	6.5	54	39	5.7
26	16	24	1.0	61	61	10	54	36	5.2
27	12	21	.68	59	40	6.4	54	34	5.0
28	19	61	3.1	151	49	20	54	50	7.3
29	19	81	4.2	99	40	11	52	70	9.8
30	21	64	3.6	110	271	132	41	44	4.9
31	18	49	2.4	---	---	---	40	18	1.9
TOTAL	2148.2	---	2094.08	13399	---	33390.0	4328	---	7056.2

05498000 MIDDLE FABIUS RIVER NEAR MONTICELLO, MO--continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JANUARY				FEBRUARY				MARCH	
1	34	27	2.5	1890	46	235	215	90	52
2	32	30	2.6	1490	41	165	215	68	39
3	34	20	1.8	975	30	79	222	70	42
4	33	25	2.2	851	13	30	215	65	38
5	32	27	2.3	733	16	32	165	65	29
6	34	24	2.2	618	20	33	136	73	27
7	35	26	2.5	534	17	25	141	62	24
8	33	30	2.7	445	24	29	123	56	19
9	27	34	2.5	370	29	29	105	64	18
10	22	35	2.1	361	23	22	206	437	243
11	18	26	1.3	274	21	16	1660	2570	13900
12	18	35	1.7	248	27	18	2570	2760	19600
13	20	48	2.6	232	31	19	1410	1230	4680
14	20	48	2.6	224	30	18	999	950	2560
15	20	35	1.9	268	28	20	2070	2070	11600
16	20	20	1.1	1060	63	180	4190	3030	33700
17	25	20	1.4	2260	183	1120	2870	1960	15200
18	29	21	1.6	3750	105	1060	1030	1500	4170
19	29	26	2.0	3800	357	3660	1020	2220	6110
20	28	25	1.9	3370	605	5500	2590	2600	18200
21	27	35	2.6	4030	636	6920	3060	2000	16500
22	26	33	2.3	4440	758	9090	917	1190	2950
23	26	28	2.0	3100	733	6140	396	658	704
24	26	19	1.3	978	542	1430	296	363	290
25	26	25	1.8	561	391	592	240	196	127
26	27	30	2.2	363	248	243	201	124	67
27	28	41	3.1	279	85	64	168	125	57
28	27	57	4.2	226	92	56	146	123	48
29	167	54	42	---	---	---	133	128	46
30	2630	152	1080	---	---	---	150	220	89
31	1870	62	313	---	---	---	531	1150	2460
TOTAL	5423	---	1496.0	37730	---	36825	28390	---	153589
APRIL				MAY				JUNE	
1	582	1950	3060	68	106	19	1530	1410	5820
2	238	950	610	64	117	20	1060	1040	2980
3	216	440	257	59	98	16	342	420	388
4	193	147	77	57	116	18	201	210	114
5	195	135	71	54	135	20	155	150	63
6	151	114	46	665	255	458	126	115	39
7	147	112	44	280	213	161	178	125	60
8	146	83	33	191	210	108	481	1150	1490
9	164	60	27	124	146	49	3110	2460	20300
10	218	101	59	83	97	22	3330	2160	19400
11	233	121	76	61	86	14	1840	1310	6510
12	209	112	63	50	82	11	398	980	1050
13	161	80	35	43	92	11	219	310	183
14	133	63	23	40	136	15	154	110	46
15	116	48	15	37	130	13	129	350	122
16	218	92	54	45	117	14	132	310	110
17	2340	5660	37300	238	172	111	224	320	194
18	3560	2390	42600	213	686	395	231	360	225
19	2620	1450	10300	163	685	301	459	610	756
20	443	810	969	149	575	231	355	360	345
21	271	1310	959	359	1010	979	145	190	74
22	202	584	319	649	1670	2930	95	150	38
23	164	172	76	402	650	706	67	110	20
24	143	140	54	172	420	195	51	90	12
25	129	144	50	108	340	99	46	110	14
26	119	127	41	1330	2510	10800	45	150	18
27	105	103	29	1670	2080	9680	833	1160	5440
28	92	95	24	624	1070	1800	591	1300	2700
29	80	94	20	248	530	355	174	1460	761
30	72	95	18	375	680	688	172	1570	931
31	---	---	---	1030	1260	3500	---	---	---
TOTAL	13660	---	97309	9651	---	33739	16873	---	70203

FABIUS RIVER BASIN

05498000 MIDDLE FABIUS RIVER NEAR MONTICELLO, MO--continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JULY			AUGUST			SEPTEMBER			
1	65	250	44	47	120	15	1000	1170	3160
2	265	2620	2200	43	110	13	1430	1060	4090
3	4700	2690	31000	41	80	8.9	381	455	468
4	6020	1080	17600	38	75	7.7	175	200	94
5	7730	870	18200	36	90	8.7	108	100	29
6	8340	420	9460	37	100	10	77	75	16
7	7050	440	8380	261	280	197	68	60	11
8	2990	590	4760	115	200	62	256	190	131
9	571	680	1050	71	150	29	193	175	91
10	300	440	356	57	140	22	112	110	33
11	236	320	204	46	135	17	78	80	17
12	189	230	117	41	110	12	60	65	11
13	152	155	64	45	90	11	51	75	10
14	172	230	107	43	95	11	45	60	7.3
15	1360	1620	5950	50	105	14	40	50	5.4
16	1500	1340	5430	515	476	1410	39	60	6.3
17	2270	1400	8580	1110	1320	3960	80	150	32
18	2150	1060	6150	410	620	686	498	320	199
19	2540	1250	8570	158	285	122	1860	1140	5730
20	4140	1140	12700	95	175	45	527	400	569
21	5180	740	10300	66	130	23	187	150	76
22	5220	470	6620	52	90	13	117	100	32
23	589	410	652	44	85	10	86	60	14
24	285	280	215	41	125	14	68	55	10
25	174	180	85	110	134	40	56	30	4.5
26	121	120	39	545	1320	2030	49	30	4.0
27	118	120	38	180	610	296	43	40	4.6
28	81	170	37	103	360	100	40	40	4.3
29	66	160	29	77	340	71	37	40	4.0
30	58	200	31	118	330	105	36	45	4.4
31	52	180	25	1020	1690	4940	---	---	---
TOTAL	64684	---	158993	5615	---	14303.3	7797	---	14867.8
YEAR	209698.2		623865.38						

FABIUS RIVER BASIN

05500000 SOUTH FABIUS RIVER NEAR TAYLOR, MO

LOCATION.--Lat 39°53'49", long 91°34'49", in SW¼NW¼ sec.21, T.59 N., R.6 W., Marion County, Hydrologic Unit 07110003, on right bank at downstream side of county highway bridge, 4.5 mi (7.2 km) southwest of Taylor, 5.0 mi (8.0 km) downstream from Grassy Creek, and 5.3 mi (8.5 km) upstream from confluence with North Fabius River.

DRAINAGE AREA.--620 mi² (1,606 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1934 to current year. Prior to December 1934 monthly discharge only, published in WSP 1308.

REVISED RECORDS.--WSP 825: 1936.

GAGE.--Water-stage recorder. Datum of gage is 482.91 ft (147.191 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to May 14, 1936, nonrecording gage at bridge 4.0 mi (6.4 km) downstream at datum 21.94 ft (6.687 m) lower. May 14, 1936, to Dec. 2, 1940, nonrecording gage at present site and datum.

REMARKS.--Records good. Several observations of water temperature and specific conductance were made during the year.

COOPERATION.--Three discharge measurements furnished by Corps of Engineers.

AVERAGE DISCHARGE.--48 years, 396 ft³/s (11.215 m³/s), 8.67 in/yr (220 mm/yr), 286,900 acre-ft/yr (354 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,700 ft³/s (558 m³/s) June 8, 1947, gage height, 19.5 ft (5.94 m), from rating curve extended above 11,000 ft³/s (312 m³/s); no flow at times in several years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1928 reached a stage of 18.49 ft (5.636 m), from floodmark, at present site and datum.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 5,100 ft³/s (144 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Nov. 4	1015	5,200 147	9.12 2.780	Mar. 16	1130	8,020 227	11.68 3.560
Jan. 30	unknown	6,540 185	11.00 3.353	June 9	1330	9,040 256	12.76 3.889
Feb. 19	1745	ice jam	*17.63 5.374	July 3	1330	*10,200 289	13.37 4.185
Feb. 23	0400	9,820 278	13.52 4.121				

Minimum daily discharge, 15.0 ft³/s (0.425 m³/s) Oct. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	UCI	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40	34	588	91	3530	287	238	95	2770	222	80	1110
2	30	1210	1230	74	2270	280	361	89	2070	368	69	1710
3	25	4450	816	71	1540	300	417	84	782	7950	60	756
4	21	5090	386	78	1250	375	284	80	382	8970	54	284
5	18	4460	235	76	1160	340	210	75	267	8940	53	158
6	17	1770	174	78	895	270	197	85	201	6830	51	112
7	16	671	146	83	884	248	197	1160	179	5090	52	91
8	16	404	126	72	736	202	200	422	929	1680	57	77
9	16	281	113	71	610	166	218	236	8060	719	62	69
10	17	207	102	78	474	244	351	157	8270	615	56	82
11	16	166	91	78	431	2580	379	120	7790	297	62	83
12	15	141	86	81	375	3010	310	97	4740	179	67	67
13	17	123	79	81	319	2840	254	85	1170	169	56	57
14	179	110	78	78	310	1900	202	77	514	192	57	55
15	906	104	76	79	433	4270	179	73	347	470	125	52
16	602	110	74	71	2530	7480	502	78	442	940	1010	48
17	306	108	81	72	4980	6450	2130	85	330	1250	822	63
18	215	102	89	71	5490	3020	2110	126	212	1010	297	214
19	156	97	110	66	6450	1630	1520	470	176	918	201	365
20	115	119	89	62	6800	2630	583	241	637	1300	127	572
21	102	139	72	62	7950	2570	312	2300	337	3490	90	205
22	72	117	74	58	5650	1180	239	2010	218	3420	71	117
23	54	102	84	56	5150	531	196	1280	158	2170	60	85
24	49	91	110	53	2760	386	164	400	123	445	54	69
25	40	86	110	50	1110	316	148	238	104	264	48	58
26	37	83	108	47	646	261	136	1990	91	186	46	53
27	34	79	110	43	442	215	162	3730	95	487	52	48
28	33	79	119	52	337	187	126	1880	1990	1220	90	45
29	32	79	117	297	---	166	111	567	1470	304	91	41
30	31	119	119	6340	---	174	99	509	523	142	202	38
31	30	---	86	4050	---	197	---	1380	---	100	701	---
TOTAL	3257	20731	5878	12619	65512	44705	12535	20219	45377	60337	4923	6784
MEAN	105	691	190	407	2340	1442	418	652	1513	1946	159	226
MAX	906	5090	1230	6340	7950	7480	2130	3730	8270	8970	1010	1710
MIN	15	34	72	43	310	166	99	73	91	100	46	38
CFSM	.17	1.12	.31	.66	3.77	2.33	.67	1.05	2.44	3.14	.26	.37
IN.	.20	1.24	.35	.76	3.93	2.68	.75	1.21	2.72	3.62	.30	.41
AC-FT	6460	41120	11660	25030	129900	88670	24860	40100	90010	119700	9760	13460
CAL YR1981	TOTAL	251326	MEAN 689	MAX 11000	MIN 14	CFSM 1.11	IN 15.08	AC-FT 498500				
WTR YR1982	TOTAL	302677	MEAN 830	MAX 8970	MIN 15	CFSM 1.34	IN 18.17	AC-FT 600800				

FABIUS RIVER BASIN

05500000 SOUTH FABIUS RIVER NEAR TAYLOR, MO.--continued

WATER-QUALITY RECORDS

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L) (00335)
OCT										
07...	0830	1028	29001	27	410	8.3	14.0	--	--	9
NOV										
04...	1530	1028	29001	5480	220	7.5	15.0	5.8	57	64
DEC										
01...	1400	1028	29001	838	430	7.8	5.0	11.0	86	41
JAN										
06...	1200	1028	29001	166	628	8.1	.5	16.4	114	19
FEB										
17...	1430	1028	29001	E7000	158	7.7	.5	11.6	81	66
MAR										
10...	1230	1028	29001	187	421	7.9	3.0	13.0	96	10
APR										
06...	1330	1028	29001	280	384	6.0	6.5	11.4	93	19
MAY										
12...	1140	1028	29001	106	362	8.1	22.0	8.0	91	27
JUN										
15...	1545	1028	29001	340	295	7.8	21.0	6.0	67	26
JUL										
15...	1300	1028	29001	310	336	8.1	26.0	6.2	76	24
AUG										
10...	1610	1028	29001	58	371	8.3	22.0	7.4	84	18
SEP										
23...	1245	1028	29001	50	249	7.9	16.5	7.8	80	29

DATE	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	HARD- NESS (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)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY FIELD (MG/L AS CACO3) (00410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)
OCT										
07...	280	--	--	--	--	--	154	40	11	.2
NOV										
04...	7100	--	--	--	--	--	72	--	--	--
DEC										
01...	11000	--	--	--	--	--	131	--	--	--
JAN										
06...	12	290	81	20	21	3.5	207	110	17	<.1
FEB										
17...	4400	--	--	--	--	--	52	--	--	--
MAR										
10...	5	--	--	--	--	--	138	--	--	--
APR										
06...	260	180	53	12	12	3.5	121	55	6.0	.1
MAY										
12...	920	--	--	--	--	--	118	--	--	--
JUN										
15...	1300	--	--	--	--	--	108	--	--	--
JUL										
15...	320	190	62	9.0	8.9	4.5	115	30	8.0	.2
AUG										
10...	620	--	--	--	--	--	148	--	--	--
SEP										
23...	16000	--	--	--	--	--	85	--	--	--

05501000 NORTH RIVER AT PALMYRA, MO

LOCATION.--Lat 39°49'06", long 91°31'13", in SE¼SW¼ sec.13, T.58 N., R.6 W., Marion County, Hydrologic Unit 07110004, on right bank 100 ft (30 m) upstream from City Waterworks dam, 1,000 ft (305 m) upstream from upstream bridge on dual U.S. Highways 24 and 61, 0.5 mi (0.8 km) north of Palmyra, and 7.0 mi (11.3 km) upstream from mouth.

DRAINAGE AREA.--373 mi² (966 km²).

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 464.81 ft (141.674 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Oct. 1, 1945, nonrecording gage at bridge 1,000 ft (305 m) downstream, Oct. 1, 1945, to June 22, 1951, nonrecording gage at present site and datum.

REMARKS.--Records good. Several observations of water temperature and specific conductance were made during the year.

COOPERATION.--Three discharge measurements furnished by Corps of Engineers.

AVERAGE DISCHARGE.--47 years, 248 ft³/s (7.023 m³/s), 9.03 in/yr (230 mm/yr), 179,700 acre-ft/yr (222 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 57,500 ft³/s (1,630 m³/s) Apr. 21, 1973, gage height, 29.70 ft (9.053 m); no flow on many days in 1936, 1941, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage prior to 1934, about 28.0 ft (8.53 m), from floodmarks, date unknown, at site 1,000 ft (305 m) downstream, present datum.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 8,500 ft³/s (241 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s)	Discharge (m ³ /s)	Gage height (ft)	Gage height (m)
Jan. 30		ICE JAM		22.87	6.971
Feb. 20		ICE JAM		23.52	7.169
Mar. 16	1200	8,970	254	18.13	5.581
June 9	1800	*27,600	782	*24.65	7.513
July 3	2030	11,600	329	19.77	6.026

Minimum daily discharge, 13.0 ft³/s (0.368 m³/s) Oct. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	41	529	41	3420	150	134	57	1590	85	48	345
2	21	979	316	45	1490	150	155	60	600	111	42	1960
3	16	2750	188	46	1070	165	461	60	263	8170	36	490
4	17	3390	122	57	566	461	242	55	187	4830	32	246
5	18	1150	90	57	175	337	188	55	166	879	30	126
6	17	454	78	57	142	210	210	60	124	300	30	90
7	16	210	71	46	193	232	170	226	191	180	118	78
8	15	147	63	41	215	165	170	177	417	133	542	66
9	13	110	57	35	199	118	188	95	15400	103	91	56
10	16	91	51	51	155	126	288	67	11400	1620	143	48
11	18	78	51	29	126	529	248	55	1280	280	214	43
12	18	71	49	22	94	826	204	47	475	137	81	40
13	23	64	46	22	71	880	165	45	305	270	48	36
14	71	57	45	22	57	862	138	42	218	278	45	43
15	281	55	45	22	1290	4370	122	42	188	260	2020	54
16	182	91	43	22	4080	6740	177	78	205	149	2230	40
17	90	88	41	21	3390	1790	679	88	198	122	590	37
18	63	64	57	19	1970	694	978	60	156	109	223	36
19	74	57	54	21	2490	1770	776	58	186	94	130	33
20	50	81	39	23	11900	1360	226	60	119	1050	96	30
21	39	85	37	25	10200	750	139	1520	94	1380	74	27
22	31	67	45	49	2210	407	119	700	90	218	62	27
23	27	60	49	54	1040	295	106	301	70	115	57	26
24	25	57	46	78	614	236	95	141	61	82	52	23
25	25	54	43	74	379	224	91	102	55	64	52	22
26	22	54	46	54	255	210	88	2340	51	53	49	21
27	19	54	49	45	204	165	85	1270	387	549	112	20
28	23	54	49	71	165	142	74	533	856	186	87	20
29	27	49	39	4250	---	130	67	209	309	140	56	22
30	25	74	49	11200	---	138	67	307	145	84	376	22
31	29	---	45	6130	---	170	---	1230	---	60	212	---
TOTAL	1339	10636	2532	22729	48160	24802	6850	10140	35786	22091	7978	4127
MEAN	43.2	355	81.7	733	1720	800	228	327	1193	713	257	138
MAX	281	3390	529	11200	11900	6740	978	2340	15400	8170	2230	1960
MIN	13	41	37	19	57	118	67	42	51	53	30	20
CFSM	.12	.95	.22	1.97	4.61	2.15	.61	.88	3.20	1.91	.69	.37
IN.	.13	1.06	.25	2.27	4.80	2.47	.68	1.01	3.57	2.20	.80	.41
AC-FT	2660	21100	5020	45080	95530	49190	13590	20110	70980	43820	15020	8190
CAL YR 1981	TOTAL	133646.8	MEAN	366	MAX	14000	MIN	3.7	CFSM	.98	IN	13.33
WTR YR 1982	TOTAL	197170.0	MEAN	540	MAX	15400	MIN	13	CFSM	1.45	IN	19.66
									AC-FT	265100		
									AC-FT	391100		

MISSISSIPPI RIVER MAIN STEM

05501600 MISSISSIPPI RIVER AT HANNIBAL, MO

WATER-QUALITY RECORDS

LOCATION.--Lat 39°42'57", long 91°21'16", Marion County, Hydrologic Unit 07110004, at railroad bridge upstream from Highway 36 bridge at Hannibal, Mo.

PERIOD OF RECORD.--October 1981 to September 1982.

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	AGENCY CUL- LECTING SAMPLE (CODE NUMBER) (000027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (000028)	STREAM- FLOW, INSTAN- TANEOUS (CFS) (000061)	SPE- CIFIC CON- DUCT- ANCE (UMHUS) (000095)	PH (UNITS) (000400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (000300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (000301)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L) (000335)
OCT										
07...	1000	1028	29001	48600	447	8.5	16.5	--	--	22
NOV										
04...	1645	1028	29001	48600	415	8.1	14.0	7.2	69	37
DEC										
01...	1230	1028	29001	114000	449	8.2	4.5	12.2	94	27
JAN										
06...	1330	1028	29001	42200	508	8.7	.5	17.8	124	39
FEB										
18...	0800	1028	29001	61100	355	7.7	1.0	12.2	86	34
MAR										
10...	1345	1028	29001	62400	400	7.9	3.0	12.2	90	28
APR										
06...	1115	1028	29001	171000	400	8.0	6.0	11.2	90	18
MAY										
12...	1350	1028	29001	177000	408	8.0	19.0	7.0	74	27
JUN										
16...	0800	1028	29001	122000	430	8.3	20.0	7.6	83	26
JUL										
15...	1430	1028	29001	118000	435	8.2	26.5	6.2	77	18
AUG										
10...	1430	1028	29001	110000	428	8.0	24.5	6.0	71	14
SEP										
23...	1400	1028	29001	90500	410	8.1	17.0	6.6	68	21

DATE	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	HARD- NESS (MG/L AS CACU3) (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)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LITY FIELD (MG/L AS CACU3) (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)
OCT										
07...	540	230	56	21	9.4	3.3	174	31	17	.1
NOV										
04...	5900	--	--	--	--	--	167	--	--	--
DEC										
01...	520	--	--	--	--	--	167	--	--	--
JAN										
06...	43	250	61	24	12	2.1	236	34	19	<.1
FEB										
18...	720	--	--	--	--	--	131	--	--	--
MAR										
10...	12	--	--	--	--	--	144	--	--	--
APR										
06...	360	190	48	18	8.8	3.6	148	25	14	.2
MAY										
12...	420	--	--	--	--	--	133	--	--	--
JUN										
16...	640	--	--	--	--	--	128	--	--	--
JUL										
15...	1000	200	50	18	7.3	2.8	148	29	15	.2
AUG										
10...	680	--	--	--	--	--	154	--	--	--
SEP										
23...	1900	--	--	--	--	--	148	--	--	--

05501600 MISSISSIPPI RIVER AT HANNIBAL, MO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDE (MG/L) (00530)	NITRO- GEN, NU2+NU3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	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 07...	279	60	1.7	.010	.220	<2	<2	<5	<5	1500
NOV 04...	--	260	1.6	.080	.410	--	--	--	--	--
DEC 01...	--	74	1.8	.010	.200	--	--	--	--	--
JAN 06...	311	16	3.0	.040	.030	2	<2	<5	6	430
FEB 18...	--	30	.86	.690	.390	--	--	--	--	--
MAR 10...	--	42	1.4	.680	.320	--	--	--	--	--
APR 06...	257	282	.47	.270	.470	<2	<2	13	<5	7200
MAY 12...	--	192	2.4	.080	.370	--	--	--	--	--
JUN 16...	--	164	2.3	.060	.320	--	--	--	--	--
JUL 15...	338	156	3.6	.010	.330	<2	<2	7	<5	5600
AUG 10...	--	60	2.0	.010	.230	--	--	--	--	--
SEP 23...	--	56	1.2	.090	.260	--	--	--	--	--

[illegible]

05502000 BEAR CREEK AT HANNIBAL, MO

LOCATION.--Lat 39°40'43", long 91°24'41", in SE¼NW¼ sec.1, T.56 N., R.5 W., Ralls County, Hydrologic Unit 07110004, on right bank 42 ft (13 m) upstream from upstream bridge on dual U.S. Highway 61 at Hannibal, and 4.8 mi (7.7 km) upstream from mouth.

DRAINAGE AREA.--31.0 mi² (80.3 km²).

PERIOD OF RECORD.--October 1938 to September 1942, October 1947 to current year in reports of Geological Survey. Monthly discharge only for some periods, published in WSP 1308. October 1936 to November 1938 (gage heights and discharge measurements only) in reports of Missouri Geological Survey.

REVISED RECORDS.--WSP 1115: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 508.91 ft (155.116 m) National Geodetic Vertical Datum of 1929. Prior to Mar. 26, 1948, nonrecording gage, and Mar. 26, 1948, to Sept. 30, 1953, water-stage recorder, present site and at datum 2.00 ft (0.610 m) higher. Oct. 1, 1953, to Oct. 30, 1961, water-stage recorder at present site, Oct. 31, 1961, to Sept. 5, 1972, water-stage recorder 400 ft (122 m) downstream at present datum.

REMARKS.--Records fair. High flow regulated by Bear Creek flood control reservoir, 1.0 mi (1.6 km) upstream, since Aug. 7, 1961. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--39 years, 19.7 ft³/s (0.558 m³/s), 8.63 in/yr (219 mm/yr), 14,270 acre-ft/yr (17.6 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,500 ft³/s (184 m³/s) Aug. 3, 1957, gage height, 14.05 ft (4.282 m), present datum; no flow at times in several years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,100 ft³/s (31.2 m³/s) June 9, gage height, 8.89 ft (2.710 m); minimum daily, 1.9 ft³/s (0.054 m³/s) Oct. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	UCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.0	8.7	35	12	135	23	16	7.4	9.5	6.6	4.7	35
2	1.9	21	13	9.9	30	25	23	6.4	7.8	26	4.6	46
3	2.1	99	10	21	11	24	68	6.4	9.9	444	4.5	9.5
4	2.2	216	6.7	21	12	36	52	5.6	7.3	527	4.8	5.6
5	2.2	24	7.3	20	11	25	24	6.4	5.6	239	4.3	5.0
6	2.1	15	7.1	10	10	23	20	8.3	15	14	4.4	4.2
7	2.1	12	6.9	12	6.1	23	17	6.6	47	12	9.5	4.2
8	2.1	11	6.6	11	5.1	19	21	5.2	150	9.4	12	4.0
9	2.2	9.0	6.0	8.0	5.4	18	25	4.7	700	8.4	5.4	3.8
10	3.2	8.5	5.6	5.4	5.7	18	26	4.7	847	96	9.0	3.8
11	4.2	8.0	5.4	5.6	6.0	25	19	4.0	200	116	8.9	3.9
12	2.5	7.6	5.4	7.8	5.1	28	16	4.9	50	354	6.0	3.8
13	3.5	7.3	5.4	6.4	4.5	35	16	6.4	25	145	5.2	3.5
14	17	6.9	5.4	4.7	8.1	56	14	6.4	20	312	4.6	5.6
15	9.9	7.6	5.0	4.4	111	145	9.5	7.8	17	72	53	6.7
16	4.7	14	4.5	4.1	177	239	33	7.6	18	15	19	4.7
17	6.4	9.2	8.7	5.0	160	121	55	8.7	17	12	9.2	5.0
18	5.4	7.8	8.3	6.3	152	35	19	8.7	14	10	7.3	6.5
19	3.8	11	8.3	5.1	161	85	15	5.4	16	11	5.7	4.8
20	3.8	24	9.5	6.1	200	94	14	3.5	11	24	5.3	4.2
21	3.3	12	10	6.5	343	73	11	43	7.0	186	5.2	3.7
22	3.2	9.5	6.3	13	245	61	9.5	11	7.2	17	4.6	3.4
23	3.2	8.7	7.6	71	44	23	9.1	7.6	6.5	11	4.6	3.3
24	2.9	8.5	7.1	52	39	23	8.7	5.6	6.1	8.6	4.5	3.3
25	3.0	7.8	5.8	14	29	38	8.9	6.4	5.9	8.1	4.7	3.3
26	3.3	7.8	6.6	4.3	24	26	8.5	8.5	6.0	6.6	5.8	3.3
27	2.7	6.6	6.4	16	23	20	7.8	7.8	6.2	6.9	12	3.3
28	2.2	6.2	6.9	102	21	18	7.7	5.6	17	5.7	6.6	3.2
29	2.2	6.0	11	181	---	16	7.9	5.6	19	5.6	5.4	3.0
30	2.2	25	8.5	349	---	30	6.9	22	26	5.3	42	3.1
31	2.9	---	6.5	393	---	23	---	30	---	5.0	9.2	---
TOTAL	114.4	625.7	256.8	1387.6	1984.0	1448	590.5	278.2	2294.0	2719.2	292.0	202.7
MEAN	3.69	20.9	8.28	44.8	70.9	46.7	19.7	8.97	76.5	87.7	9.42	6.76
MAX	17	216	33	393	343	239	68	43	847	527	53	46
MIN	1.9	6.0	4.5	4.1	4.5	16	6.9	3.5	5.6	5.0	4.3	3.0
CFSM	.12	.67	.27	1.45	2.29	1.51	.64	.29	2.47	2.63	.30	.22
IN.	.14	.75	.31	1.67	2.38	1.74	.71	.33	2.75	3.26	.35	.24
AC-FT	227	1240	509	2750	3940	2870	1170	552	4550	5390	579	402
CAL YR 1981	TOTAL	12601.23	MEAN	34.5	MAX	784	MIN	1.11	IN	15.12	AC-FT	24990
WTR YR 1982	TOTAL	12193.10	MEAN	33.4	MAX	847	MIN	1.08	IN	14.63	AC-FT	24190

SALT RIVER BASIN

05502300 SALT RIVER AT HAGERS GROVE, MO

LOCATION.--Lat 39°49'40", long 92°14'10", in NE¼SW¼ sec.15, T.58 N., R.12 W., Shelby County, Hydrologic Unit 07110005, at bridge on State Highway 151, 200 ft (61 m) downstream from old channel carrying Bear 0.25 mi (0.40 km) west of Hagers Grove, 2.5 mi (4.0 km) upstream from Ten Mile Creek, and at mile 143.8 (231.4 km).

DRAINAGE AREA.--365 mi² (945 km²).

PERIOD OF RECORD.--September 1974 to current year. September 1939 to August 1974, gage height and miscellaneous measurements published by Corps of Engineers.

GAGE.--Water-stage recorder. Datum of gage is 702.30 ft (214.061 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except those for winter periods, which are poor. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--8 years, 267 ft³/s (7.561 m³/s), 9.93 in/yr (252 mm/yr), 193,400 acre-ft/yr (238 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 19.7 ft (6.0 m) June 6, 1947, discharge, 26,900 ft³/s (762 m³/s).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 1928 reached a stage of 19.1 ft (5.82 m), according to information furnished by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 5,000 ft³/s (142 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Nov. 3	2200	5,030 142	14.21 4.331	June 9	1745	*18,900 535	18.34 5.590
Jan. 30	unknown	11,000 312	17.17 5.233	July 20	unknown	7,490 212	16.60 5.060
Feb. 20		ice jam	18.49 5.636	Aug. 15	unknown	13,800 391	17.59 5.361

Minimum daily discharge, 6.0 ft³/s (0.170 m³/s) Oct. 4, 7, 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	730	1020	34	3440	156	162	45	2580	90	42	712
2	7.0	3640	553	34	1840	184	81	44	760	84	40	1600
3	6.6	4080	151	34	983	192	98	43	245	4940	38	270
4	6.0	3630	105	27	513	155	98	40	168	6300	34	80
5	6.3	1010	84	26	445	129	80	111	134	2910	44	55
6	6.3	294	75	22	260	120	70	591	102	586	47	42
7	6.0	168	71	21	208	111	65	300	221	224	55	55
8	6.0	122	67	28	132	95	72	149	741	196	56	115
9	6.6	96	62	31	92	86	99	92	10300	110	46	55
10	7.5	77	59	38	65	258	160	65	7470	92	48	41
11	7.0	69	57	26	46	1600	168	52	2670	132	71	33
12	7.0	62	56	30	34	1020	120	44	690	122	80	30
13	9.3	61	56	27	28	1070	98	42	253	80	55	28
14	164	56	57	19	28	924	74	44	173	444	50	28
15	496	62	55	19	137	3900	61	80	185	1600	3900	26
16	120	62	57	20	3360	4100	90	125	226	368	5020	20
17	81	61	50	23	4620	1620	2250	272	176	1310	1690	24
18	40	51	47	24	3750	472	537	334	107	375	421	458
19	48	51	50	21	4220	1650	210	154	545	4620	186	141
20	36	51	51	25	7560	2490	146	121	243	6530	115	62
21	27	51	45	25	7490	750	98	2510	107	1920	71	52
22	21	50	41	28	2480	336	95	1720	69	322	38	39
23	17	48	28	25	1310	239	83	881	52	134	31	32
24	17	48	20	28	709	174	72	259	41	80	28	29
25	16	48	21	30	406	127	70	385	38	72	28	26
26	16	48	20	28	251	89	66	2780	34	71	71	24
27	16	61	20	25	190	69	59	861	52	83	77	24
28	16	64	20	78	162	56	52	303	148	57	71	24
29	16	52	22	502	---	55	51	303	93	51	47	20
30	14	84	34	6510	---	84	46	1060	110	48	472	20
31	14	---	34	4770	---	392	---	2690	---	45	685	---
TOTAL	1266.6	14987	3088	12578	44759	22703	5431	16500	28733	33996	13657	4165
MEAN	40.9	500	99.6	406	1599	732	181	532	958	1097	441	139
MAX	496	4080	1020	6510	7560	4100	2250	2780	10300	6530	5020	1600
MIN	6.0	48	20	19	28	55	46	40	34	45	28	20
CFSM	.11	1.37	.27	1.11	4.36	2.01	.50	1.46	2.63	3.01	1.21	.38
IN.	.13	1.53	.31	1.28	4.56	2.31	.55	1.68	2.93	3.46	1.39	.42
AC-FT	2510	29730	6130	24950	88780	45030	10770	32730	56990	67430	27090	8260
CAL YR 1981	TOTAL	154913.6	MEAN	424	MAX	12900	MIN	4.5	CFSM	1.16	IN	15.79
WTR YR 1982	TOTAL	201663.6	MEAN	553	MAX	10300	MIN	6.0	CFSM	1.52	IN	20.57
									AC-FT	307300		
										400400		

05502300 SALT RIVER AT HAGERS GROVE, MO--continued

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.21	1.96	5.39	.98	18.01	1.42	1.59	1.05	10.68	1.95	18.28	18.28
2	.12	10.98	4.24	.98	16.89	1.53	1.13	1.04	5.00	1.89	18.28	9.90
3	.09	11.00	1.87	.95	5.46	1.61	1.23	1.03	2.43	11.74	18.28	21.40
4	.08	13.29	1.35	1.06	3.88	1.44	1.22	1.00	1.96	16.23	18.28	17.39
5	.07	5.69	1.08	1.07	3.84	1.21	1.10	.98	1.75	22.92	18.28	18.03
6	.07	2.97	.93	1.17	3.14	1.12	1.07	4.28	1.53	22.38	18.28	19.06
7	.07	2.00	.89	1.16	2.94	1.09	1.01	2.79	1.38	25.19	18.28	19.06
8	.06	1.53	.85	1.03	2.51	.95	1.05	1.75	2.42	31.07	18.28	19.82
9	.06	1.21	.75	1.00	2.26	.87	1.18	1.46	17.33	34.09	18.28	20.31
10	.13	.98	.67	1.00	1.17	1.05	1.50	1.24	17.39	34.09	18.28	23.06
11	.13	.83	.62	1.09	1.91	7.76	1.55	1.12	10.65	18.75	18.28	25.81
12	.11	.77	.62	1.14	1.77	5.18	1.33	1.05	3.97	18.74	18.28	29.43
13	.11	.74	.62	1.17	1.74	5.72	1.21	1.02	2.44	18.74	18.28	29.78
14	2.06	.67	.62	1.45	1.69	3.33	1.08	1.02	1.99	18.74	18.28	30.10
15	4.02	.64	.58	1.49	1.92	13.70	.96	1.41	1.78	18.74	18.28	.81
16	1.71	.63	.53	1.35	10.63	13.36	.95	1.27	2.33	18.74	18.28	.90
17	.97	.62	.96	1.44	15.40	7.56	10.17	2.22	2.09	18.74	18.28	1.01
18	.73	.59	.87	1.46	12.64	3.36	4.01	---	1.63	18.74	18.28	1.25
19	.95	.58	.83	1.41	13.64	3.61	2.23	1.71	4.70	18.74	18.28	3.39
20	.70	.58	.83	1.46	17.71	10.21	1.83	1.73	2.59	18.74	18.28	2.34
21	.57	.58	.85	1.42	17.73	4.28	1.61	3.60	1.71	8.96	18.28	2.68
22	.45	.57	.93	1.53	9.66	2.43	1.45	7.05	1.42	2.87	18.28	2.02
23	.39	.56	1.03	1.56	6.36	1.85	1.38	6.17	1.14	2.08	18.28	2.07
24	.37	.54	1.12	1.59	4.06	1.57	1.31	2.47	.98	1.87	18.28	2.15
25	.35	.54	1.14	1.66	2.72	1.36	1.27	2.25	.98	1.84	18.28	2.40
26	.35	.54	1.12	1.66	1.88	1.17	1.24	11.94	.96	2.15	18.28	2.62
27	.35	.52	1.10	1.72	1.54	1.05	1.18	5.15	1.27	4.85	18.28	2.99
28	.34	.87	1.15	7.52	1.48	.96	1.12	2.76	2.78	18.28	18.28	4.69
29	.34	.62	1.11	10.32	---	.93	1.10	2.14	1.86	18.28	18.28	10.47
30	.33	.56	.91	18.61	---	.98	1.07	5.04	2.04	18.28	18.28	18.15
31	.30	---	.97	20.29	---	3.11	---	9.40	---	18.28	18.28	---

SALT RIVER BASIN

05503500 NORTH FORK SALT RIVER NEAR HUNNEWELL, MO

LOCATION.--Lat 39°40'05", long 91°54'11", in SE¼SE¼NE¼, sec.9, T.56 N., R.9 W., Shelby County, Hydrologic Unit 07110005, on right bank near downstream end of bridge on U.S. Highway 36, 1.5 mi (2.4 km) downstream from Black Creek and 2 mi (3.2 km) west of Hunnewell, Mo., at mile 105.8 (170.2 km).

DRAINAGE AREA.--626 mi² (1,621 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1930 to September 1931 (fragmentary), October 1931 to September 1940 (published as Salt River near Hunnewell, Mo), March 1966 to June 1967 (gage heights only), July 1967 to September 1979 (published by Corps of Engineers), and October 1979 to current year.

GAGE.--Water stage recorder and crest-stage gage. Datum of gage is 615.64 ft (187.647 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--12 years (water years 1932-1940, 1980-1982), 386 ft³/s (10.932 m³/s), 8.37 in/yr (213 mm/yr), 279,700 acre-ft/yr (345 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,560 ft³/s (639 m³/s) April 23, 1973, gage height, 25.16 ft (7.669 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 7,300 ft³/s (170 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Feb. 1	unknown	8,150 231	16.60 5.060	June 11	1000	*12,000 340	19.79 6.032
Feb. 22	unknown	9,290 263	17.68 5.398	Aug. 17	1800	9,210 261	17.61 5.368
Mar. 16	1600	8,060 228	16.51 5.032				

Minimum daily discharge, 8.8 ft³/s (0.249 m³/s) Oct. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	37	462	50	7600	325	398	64	4240	158	49	813
2	18	2380	1270	49	5020	323	221	60	3000	213	43	1520
3	13	4670	501	50	2120	344	251	58	708	3130	38	1500
4	11	6060	248	51	991	443	221	56	363	4860	35	443
5	9.9	5980	172	50	770	395	179	54	274	5860	32	231
6	8.8	1490	136	53	507	292	174	231	213	3450	39	154
7	9.3	552	116	52	443	312	154	616	311	506	100	134
8	9.1	328	106	54	302	259	141	361	363	310	100	147
9	9.1	219	98	42	214	196	152	191	6100	222	64	189
10	11	168	95	36	160	183	189	130	9100	182	111	134
11	10	134	78	28	106	957	233	100	11500	143	98	98
12	10	113	72	25	78	2070	226	82	6920	169	109	78
13	13	103	70	24	62	1600	183	70	846	155	106	65
14	47	95	67	24	52	1510	150	65	393	189	79	59
15	494	92	65	24	120	3820	130	70	282	1850	2750	52
16	548	97	56	25	1400	7220	121	226	363	1080	6850	47
17	196	85	54	25	3460	7440	1200	170	366	506	8640	41
18	128	78	29	26	3600	2920	1990	344	249	707	4720	39
19	103	75	44	26	4520	1370	524	363	247	630	653	500
20	86	78	40	26	5090	3050	275	186	497	3820	375	251
21	72	74	38	27	6210	2450	191	605	240	5730	275	127
22	53	71	43	29	8830	801	150	3070	142	3610	176	82
23	37	67	55	35	7040	440	127	1660	104	462	120	60
24	26	66	64	34	2250	341	111	528	85	236	100	50
25	20	62	75	28	1040	262	101	248	71	148	89	41
26	17	62	85	28	613	228	97	3780	67	106	83	35
27	17	62	82	30	440	187	88	4090	210	210	205	33
28	16	69	85	52	350	160	79	1050	574	111	168	30
29	15	91	82	81	---	145	71	414	393	78	147	30
30	15	100	79	1200	---	147	66	867	182	64	412	27
31	15	---	67	4800	---	217	---	2780	---	58	1050	---
TOTAL	2066.2	23558	4534	7084	63388	40427	8193	22589	48403	39013	27816	7010
MEAN	66.7	785	146	229	2264	1304	273	729	1613	1258	891	234
MAX	548	6060	1270	4800	8830	7440	1990	4090	11500	5860	8640	1520
MIN	8.8	37	29	24	52	145	66	54	67	58	32	27
CFSM	.11	1.25	.23	.37	3.62	2.08	.44	1.17	2.58	2.01	1.43	.37
IN.	.12	1.40	.27	.42	3.77	2.40	.49	1.34	2.88	2.32	1.65	.42
AC-FT	4100	46730	8990	14050	125700	80190	16250	44810	96010	77380	55170	13900

CAL YR 1981	TOTAL	249646.5	MEAN	684	MAX	14300	MIN	6.8	CFSM	1.09	IN	14.84	AC-FT	495200
WIR YR 1982	TOTAL	294081.2	MEAN	806	MAX	11500	MIN	8.8	CFSM	1.29	IN	17.48	AC-FT	583300

05503500 NORTH FORK SALT RIVER NEAR HUNNEWELL, MO--continued

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.64	2.50	3.68	2.89	---	4.09	4.51	2.89	11.86	3.49	2.76	5.21
2	2.45	7.20	7.33	2.88	---	4.06	3.71	2.86	11.52	3.26	2.70	7.76
3	2.34	12.81	5.11	2.90	---	4.14	3.77	2.84	5.54	9.99	2.66	8.06
4	2.28	14.94	4.04	2.91	---	4.39	3.74	2.82	4.37	12.69	2.62	4.70
5	2.23	15.52	3.67	2.88	---	4.46	3.52	2.80	4.02	14.30	2.58	3.86
6	2.20	7.47	3.44	2.91	---	3.99	3.52	2.87	3.77	12.84	2.59	3.50
7	2.20	5.24	3.33	2.90	---	4.05	3.42	5.05	3.58	5.11	3.01	3.34
8	2.20	4.37	3.27	2.93	---	3.86	3.35	4.44	4.15	4.07	3.12	3.39
9	2.19	3.88	3.21	2.84	---	4.50	3.37	3.69	14.15	3.84	2.87	3.68
10	2.24	3.64	3.14	2.75	---	4.45	3.57	3.36	16.56	3.71	3.01	3.40
11	2.26	3.44	3.07	2.63	---	3.75	3.76	3.17	19.66	3.45	3.13	3.17
12	2.24	3.31	3.02	2.58	---	8.69	3.75	3.04	17.06	3.52	3.28	3.04
13	2.28	3.23	3.00	5.56	---	7.12	3.57	2.95	5.91	3.52	3.24	2.93
14	2.69	3.18	2.98	2.55	---	7.00	3.42	2.90	4.50	3.18	3.05	2.87
15	4.50	3.14	2.96	2.53	---	10.90	3.29	2.92	4.02	7.94	3.81	2.83
16	5.32	3.20	2.93	2.56	---	15.34	3.24	4.47	4.04	6.74	15.20	2.78
17	3.82	3.11	2.83	2.56	---	16.02	3.28	3.38	4.39	4.24	16.87	2.72
18	2.39	3.06	2.58	2.56	---	10.73	9.30	4.10	3.94	5.92	15.38	2.70
19	2.27	3.04	2.76	2.56	---	6.65	4.89	---	3.66	3.73	5.38	5.67
20	2.07	3.06	2.74	2.57	---	9.75	4.03	3.59	4.91	11.09	4.42	4.03
21	2.05	3.04	2.71	2.59	---	10.28	3.68	5.09	3.92	13.81	4.03	3.39
22	2.87	3.01	2.75	2.58	---	5.82	3.46	10.37	3.46	14.06	3.62	3.09
23	2.71	2.98	2.85	2.76	---	4.73	3.33	7.62	3.20	4.79	3.27	2.91
24	2.58	2.97	2.93	2.76	---	4.14	3.23	4.97	3.06	3.90	3.14	2.81
25	2.49	2.94	3.02	2.60	6.18	3.96	3.17	3.85	2.96	3.49	3.09	2.74
26	2.42	2.93	3.11	2.60	5.03	3.77	3.14	11.79	2.92	3.20	2.97	2.68
27	2.41	2.94	3.09	2.61	4.50	3.58	3.08	12.97	2.89	4.60	3.80	2.64
28	2.41	2.94	3.10	2.65	4.17	3.44	3.02	6.50	4.83	3.22	3.56	2.62
29	2.38	3.14	2.98	3.10	---	3.36	2.96	4.58	4.58	3.02	3.39	2.61
30	2.38	3.11	3.07	---	---	3.34	2.91	4.46	3.61	2.88	4.40	2.58
31	2.37	---	2.99	---	---	3.47	---	8.82	---	2.84	6.43	---

SALT RIVER BASIN

05503500 NORTH FORK SALT RIVER NEAR HUNNEWELL, MO--continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT: July 1980 to current year.

EXTREMES FOR PERIOD OF RECORD.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 3,400 mg/L June 13, 1981; minimum daily mean, 1 mg/L November 29, 30 and December 3, 1980.

SUSPENDED-SEDIMENT LOADS: Maximum daily, 35,700 tons (32,400 metric tons) June 9, 1982; minimum daily, 0.03 tons (0.03 metric tons) November 29, 30 and December 3, 1980.

EXTREMES FOR CURRENT YEAR.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 2,810 mg/L July 15; minimum daily mean, 6 mg/L November 21.

SUSPENDED-SEDIMENT LOADS: Maximum daily, 35,700 tons (32,400 metric tons) June 9; minimum daily, 0.49 tons (0.44 metric tons) October 11.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT

DATE	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 .062 MM (70342)	SED. SUSP. FALL DIAM. % FINER THAN .125 MM (70343)	SED. SUSP. FALL DIAM. % FINER THAN .250 MM (70344)	SED. SUSP. FALL DIAM. % FINER THAN .500 MM (70345)	SED. SUSP. FALL DIAM. % FINER THAN 1.00 MM (70346)	SED. SUSP. FALL DIAM. % FINER THAN 2.00 MM (70347)
MAK, 1982										
17...	7440	75	79	83	90	95	96	98	100	100

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TUNS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TUNS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TUNS/DAY)
OCTOBER			NOVEMBER			DECEMBER			
1	29	34	2.7	37	31	3.1	462	372	464
2	18	34	1.7	2380	1060	6810	1270	892	3060
3	13	34	1.2	4670	730	9200	501	400	541
4	11	34	1.0	6060	390	6380	248	198	133
5	9.9	32	.86	5980	232	3750	172	47	22
6	8.8	30	.71	1490	276	1110	136	40	15
7	9.3	29	.73	552	80	119	116	32	10
8	9.1	26	.64	328	49	43	106	28	8.0
9	9.1	23	.57	219	36	21	98	22	5.8
10	11	22	.65	168	30	14	95	24	6.2
11	10	18	.49	134	25	9.0	78	17	3.6
12	10	33	.89	113	26	7.9	72	16	3.1
13	13	74	2.6	103	19	5.3	70	17	3.2
14	47	25	3.2	95	21	5.4	67	16	2.9
15	494	239	319	92	22	5.5	65	12	2.1
16	548	434	642	97	28	7.3	56	---	---
17	196	210	111	85	14	3.2	54	---	---
18	128	60	21	78	14	2.9	29	---	---
19	103	51	14	75	18	3.6	44	---	---
20	86	42	9.8	78	23	4.8	40	---	---
21	72	39	7.6	74	6	1.2	38	---	---
22	53	39	5.6	71	8	1.5	43	---	---
23	37	40	4.0	67	16	2.9	55	---	---
24	26	26	1.8	66	25	4.5	64	---	---
25	20	26	1.4	62	14	2.3	75	---	---
26	17	27	1.2	62	19	3.2	85	---	---
27	17	29	1.3	62	17	2.8	82	---	---
28	16	32	1.4	69	18	3.4	85	---	---
29	15	40	1.6	91	16	3.9	82	---	---
30	15	28	1.1	100	15	4.1	79	---	---
31	15	30	1.2	---	---	---	67	---	---
TOTAL	2066.2	---	1162.94	23558	---	27534.8	4534	---	4279.9

SALT RIVER BASIN

05503500 NORTH FORK SALT RIVER NEAR HUNNEWELL, MO--continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JANUARY			FEBRUARY			MARCH			
1	50			7600	53	1090	325	71	62
2	49			5020	30	407	323	56	49
3	50			2120	29	166	344	68	63
4	51			991	51	136	443	72	86
5	50			770	17	35	395	64	68
6	53			507	15	21	292	58	46
7	52			443	---	---	312	60	51
8	54			302	---	---	259	58	41
9	42			214	---	---	196	38	20
10	36			160	---	---	183	46	23
11	28			106	---	---	957	1460	3770
12	25			78	---	---	2070	1910	10700
13	24			62	---	---	1600	200	864
14	24			52	---	---	1510	810	3300
15	24			120	---	---	3820	2490	25200
16	25			1400	---	---	7220	1480	27800
17	25			3460	198	1850	7440	1220	24500
18	26			3600	164	1590	2920	1050	8280
19	26			4520	264	3220	1370	900	3330
20	26			5090	290	3990	3050	2080	17100
21	27			6210	344	5770	2450	1120	7410
22	29			8830	364	8680	801	503	1090
23	35			7040	356	6770	440	302	359
24	34			2250	327	1990	341	294	271
25	28			1040	368	1030	282	135	103
26	28			613	242	401	228	80	49
27	30			440	226	268	187	72	36
28	52			350	106	100	160	75	32
29	81			---	---	---	145	67	26
30	1200			---	---	---	147	92	37
31	4800			---	---	---	217	92	54
TOTAL	7084			63388	---	37514	40427	---	134820
APRIL			MAY			JUNE			
1	398	162	174	64	67	12	4240	850	9730
2	221	515	307	60	59	9.6	3000	400	3240
3	251	382	259	58	37	5.8	708	250	478
4	221	223	133	56	43	6.5	363	175	172
5	179	173	84	54	50	7.3	274	170	126
6	174	110	52	231	335	209	213	130	75
7	154	68	28	616	911	1520	311	150	126
8	141	62	24	361	325	317	363	340	333
9	152	50	21	191	174	90	6100	2170	35700
10	189	43	22	130	140	49	9100	830	20400
11	233	65	41	100	110	30	11500	420	13000
12	226	70	43	82	94	21	6920	342	6390
13	183	55	27	70	90	17	846	374	854
14	150	60	24	65	95	17	393	262	278
15	130	45	16	70	85	16	282	200	152
16	121	55	18	226	704	430	363	200	196
17	1200	1850	5990	170	240	110	366	240	237
18	1990	2500	13400	344	270	251	249	150	101
19	524	870	1230	363	532	521	247	189	126
20	275	530	394	186	225	113	497	443	594
21	191	242	125	605	2040	3330	240	425	275
22	150	141	57	3070	2600	21600	142	234	90
23	127	120	41	1660	1130	5060	104	178	50
24	111	107	32	528	500	713	85	135	31
25	101	73	20	248	450	301	71	100	15
26	97	68	18	3780	2460	25100	67	94	17
27	88	68	16	4090	820	9060	210	97	55
28	79	73	16	1050	470	1330	574	180	279
29	71	50	9.6	414	250	279	393	183	194
30	66	47	8.4	867	655	1530	182	760	373
31	---	---	---	2780	1800	13500	---	---	---
TOTAL	8193	---	22630.0	22589	---	85555.2	48403	---	93691

SALT RIVER BASIN

05503500 NORTH FORK SALT RIVER NEAR HUNNEWELL, MO--continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JULY			AUGUST			SEPTEMBER			
1	158	510	218	49	80	11	813	840	1840
2	213	352	202	43	80	9.3	1520	1010	4150
3	3130	2240	18900	38	90	9.2	1500	870	3520
4	4860	1660	21800	35	70	6.6	443	340	407
5	5860	1010	16000	32	70	6.0	231	210	131
6	3450	850	7920	39	75	7.9	154	130	54
7	566	580	886	100	170	46	134	100	36
8	310	330	276	100	310	84	147	100	40
9	222	250	150	64	150	26	189	115	59
10	182	280	138	111	220	66	134	95	34
11	143	250	97	98	175	46	98	80	21
12	169	210	96	109	160	47	78	70	15
13	155	200	84	106	140	40	65	75	13
14	189	400	204	79	135	29	59	65	10
15	1850	2810	14000	2750	1470	4330	52	70	9.8
16	1080	1130	3300	6850	735	13600	47	75	9.5
17	506	675	922	8640	400	9330	41	80	8.9
18	707	1620	3090	4720	355	4520	39	95	10
19	630	1020	1740	653	325	573	500	750	557
20	3820	1860	19200	375	250	253	251	460	312
21	5730	960	14900	275	160	119	127	230	79
22	3610	510	4970	176	70	33	82	145	32
23	462	410	511	120	60	19	60	120	19
24	236	240	153	100	70	19	50	130	18
25	148	160	64	89	45	11	41	125	14
26	106	285	82	83	80	18	35	130	12
27	210	1650	936	205	100	55	33	135	12
28	111	312	94	168	90	41	30	80	6.5
29	78	90	19	147	115	46	30	90	7.3
30	64	95	16	412	219	124	27	60	4.4
31	58	100	16	1050	60	51100	---	---	---
TOTAL	39013	---	130984	27816	---	84625.0	7010	---	11441.4
YEAR	294081.2		634238.24						

05503800 CROOKED CREEK NEAR PARIS, MO

LOCATION.--Lat 39°35'06", long 91°59'36", near NW corner S½ sec.2, T.55 N., R.10 W., Monroe County, Hydrologic Unit 07110005 on right bank downstream from county road bridge, 7 mi (11.3 km) north of Paris, 1.4 mi (2.3 km) north of State Route 15, and at mile 8.9 (14.3 km).

DRAINAGE AREA.--80.0 mi² (207.2 km²).

PERIOD OF RECORD.--March 1966 to current year. Prior to October 1979 published by Corps of Engineers.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 650.00 ft (198.120 m) National Geodetic Vertical Datum of 1929. Prior to Nov. 8, 1967 wire weight gage and Nov. 9, to Sept. 1979 recording gage at datum 50 ft (15.240 m) lower.

REMARKS.--Records good except for periods of no gage height, which are fair. Several observations of water temperature and specific conductance were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,100 ft³/s (342 m³/s) April 21, 1973, gage height, 15.53 ft (4.734 m) gage datum; no flow at times in several years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,700 ft³/s (76.5 m³/s) June 9, gage height, 9.23 ft (2.813 m) from crest-stage gage. Maximum gage-height, 9.89 ft (3.014 m) Jan. 30, ice jam. Minimum daily discharge, 0.56 ft³/s (0.01 m³/s) Oct. 1, 2, 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.56	26	126	2.8	538	19	25	6.2	601	15	1.7	104
2	.56	664	84	2.5	218	18	20	6.0	94	39	1.6	684
3	.56	748	21	2.8	22	21	118	6.0	29	284	1.6	281
4	.80	952	11	3.8	14	65	55	5.8	21	125	1.6	45
5	1.0	264	8.0	4.4	12	73	27	5.6	20	40	1.1	18
6	.96	58	6.6	4.8	11	53	30	6.5	13	18	1.4	8.7
7	.88	26	5.8	4.2	10	42	24	7.2	11	9.2	2.1	6.8
8	.80	13	5.2	2.7	9.0	36	19	8.8	39	6.8	14	5.8
9	.88	9.7	4.4	2.0	6.0	17	19	8.1	1780	5.8	4.1	5.2
10	.96	7.4	4.0	1.4	5.2	15	23	6.9	1200	13	30	5.2
11	1.0	6.0	3.6	1.3	5.4	18	22	6.2	92	46	21	4.7
12	1.1	5.4	3.4	.99	4.3	40	16	6.0	45	25	10	3.6
13	1.5	4.1	3.4	.92	3.2	109	13	6.2	28	9.0	5.8	3.0
14	9.7	4.3	3.4	.99	4.6	222	10	6.4	20	291	3.8	2.8
15	21	4.0	2.8	1.1	57	838	9.4	6.8	19	104	297	3.6
16	25	5.6	2.7	1.1	360	1180	19	465	28	32	521	3.3
17	15	5.4	2.8	1.3	496	420	18	135	46	14	80	2.7
18	9.7	5.4	2.7	1.2	508	109	30	32	23	7.6	25	2.5
19	8.0	4.7	2.8	1.0	578	976	18	21	218	6.4	8.7	2.4
20	6.6	5.2	2.7	1.0	1030	247	11	9.7	57	32	5.4	2.3
21	6.0	5.4	2.0	1.2	882	92	9.3	13	22	28	3.8	2.1
22	5.6	5.0	2.7	1.7	724	49	8.6	30	10	82	2.8	2.0
23	5.2	4.7	3.0	4.8	279	31	8.3	13	7.4	18	2.8	1.9
24	5.0	5.4	4.0	5.0	86	25	7.7	7.0	6.4	6.0	2.8	1.7
25	4.9	4.3	4.0	4.0	45	27	7.2	16	5.8	4.3	2.5	1.6
26	4.9	4.7	3.8	4.6	34	23	7.4	834	5.2	3.0	2.1	1.5
27	4.7	4.3	4.0	5.8	22	17	7.7	213	728	2.8	49	1.4
28	4.3	4.0	3.6	7.2	21	14	6.7	58	371	2.4	56	1.1
29	4.3	3.6	3.6	125	---	12	6.1	26	59	2.1	18	1.1
30	4.5	8.4	2.8	1550	---	14	6.1	173	27	2.0	158	1.1
31	5.1	---	2.7	928	---	32	---	650	---	1.7	153	---
TOTAL	161.06	2868.0	342.5	2679.60	5984.7	4854	601.5	2794.4	5625.8	1275.1	1487.7	1210.1
MEAN	5.20	95.6	11.0	86.4	214	157	20.1	90.1	188	41.1	48.0	40.3
MAX	25	952	126	1550	1030	1180	118	834	1780	291	521	684
MIN	.56	3.6	2.0	.92	3.2	12	6.1	5.6	5.2	1.7	1.1	1.1
CFSM	.07	1.20	.14	1.08	2.68	1.96	.25	1.13	2.35	.51	.60	.50
IN.	.07	1.33	.16	1.25	2.78	2.26	.28	1.30	2.62	.59	.69	.56
AC-FT	319	5690	679	5310	11870	9630	1190	5540	11160	2530	2950	2400

CAL YR 1981 TOTAL 31939.03 MEAN 87.5 MAX 2980 MIN .00 CFSM 1.09 IN 14.85 AC-FT 63350
WIR YR 1962 TOTAL 29884.46 MEAN 81.9 MAX 1780 MIN .56 CFSM 1.02 IN 13.90 AC-FT 59280

SALT RIVER BASIN

05503800 CROOKED CREEK NEAR PARIS, MO--continued

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.35	2.75	3.38		---	2.68	2.75	2.37	5.10	2.54	2.17	2.81
2	2.35	5.48	3.21		---	2.65	2.67	2.36	3.25	2.47	2.16	5.70
3	2.35	5.60	2.82		---	2.69	3.20	2.36	2.81	3.96	2.16	4.36
4	2.36	6.09	2.69		---	3.05	3.00	2.35	2.70	3.43	2.16	2.82
5	2.36	3.89	2.61		---	2.97	2.74	2.33	2.70	2.78	2.15	2.58
6	2.37	3.04	2.58		---	2.87	2.82	2.37	2.64	2.57	2.15	2.43
7	2.37	2.85	2.51		---	2.76	2.74	2.42	2.54	2.45	2.15	2.37
8	2.35	2.74	2.48		---	2.72	2.69	2.48	2.55	2.37	2.59	2.33
9	2.35	2.66	2.44		---	2.48	2.69	2.48	8.86	2.34	2.29	2.31
10	2.37	2.59	---		---	2.62	2.74	2.41	7.79	2.39	2.28	2.31
11	2.37	2.52	---		---	2.63	2.75	2.37	3.15	2.84	2.55	2.29
12	2.40	2.50	---		---	2.87	2.67	2.36	2.82	2.66	2.46	2.26
13	2.40	2.40	---		---	3.11	2.63	2.36	2.67	2.42	2.34	2.24
14	2.97	2.47	---		---	3.20	2.57	2.38	2.59	2.33	2.27	2.22
15	2.61	2.43	---		---	5.77	2.53	2.39	2.52	3.25	2.37	2.25
16	2.78	2.50	---		---	6.72	3.47	4.51	2.65	2.72	4.85	2.25
17	2.64	2.51	---		---	4.71	2.68	3.44	2.85	2.51	3.07	2.23
18	2.53	2.50	---		---	3.18	2.88	2.83	2.63	2.39	2.66	2.22
19	2.42	2.48	---		4.91	6.42	2.67	2.70	3.98	2.35	2.45	2.22
20	2.72	2.49	---		---	3.97	2.58	2.54	2.93	2.31	2.32	2.22
21	2.73	2.52	---		---	3.24	2.53	2.62	2.63	2.59	2.28	2.22
22	2.66	2.49	---		---	2.93	2.49	2.87	2.46	3.12	2.23	2.22
23	2.62	2.47	---		---	2.81	2.48	2.65	2.40	2.58	2.22	2.22
24	2.65	2.54	---		---	2.75	2.44	2.48	2.36	2.35	2.22	2.22
25	2.65	2.47	---		2.64	2.77	2.42	2.42	2.33	2.28	2.21	2.22
26	2.65	2.47	---		2.80	2.73	2.42	6.45	2.31	2.23	2.19	2.22
27	2.63	2.47	---		2.53	2.68	2.46	3.74	2.30	2.21	2.76	2.22
28	2.61	2.45	---		2.69	2.62	2.40	3.06	4.20	2.21	2.94	2.22
29	2.61	2.43	---		---	2.58	2.36	2.78	2.93	2.19	2.58	2.23
30	2.62	2.43	---		---	2.57	2.36	3.09	2.66	2.17	2.96	2.23
31	2.64	---	---		---	2.75	---	4.90	---	2.17	3.59	---

05505000 SOUTH FORK SALT RIVER AT SANTA FE, MO

LOCATION.--Lat 39°21'45" long 91°49'05", in NW¼NE¼ sec.20, T.53 N., R.8 W., Monroe County, Hydrologic Unit 07110006, on left bank near upstream end of bridge on county road, 0.3 mi (0.5 km) south of Santa Fe, 1.0 mi (1.6 km) upstream from Elm Creek, and at mile 96.2 (154.8 km) above mouth of Salt River.

DRAINAGE AREA.--298 mi² (772 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1939 to current year. Published as "near Santa Fe" October 1968 to September 1975.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 613.05 ft (186.858 m) National Geodetic Vertical Datum of 1929. Prior to Feb. 5, 1940, nonrecording gage; Feb. 5, 1940 to Sept. 30, 1968, water-stage recorder; present site and datum, Oct. 1, 1968 to Sept. 30, 1975, water-stage recorder, 6.3 mi (10.1 km) upstream at datum 26.04 ft (7.937 m) higher.

REMARKS.--Records fair. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--43 years, 191 ft³/s (5.409 m³/s), 8.70 in/yr (221 mm/yr), 138,400 acre-ft/yr (171 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 28,800 ft³/s (816 m³/s) Oct. 13, 1969, gage height, 28.24 ft (8.608 m), at site and datum then in use; no flow at times in several years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,000 ft³/s (85 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 30		ice jam	14.55 4.435	Aug. 27	unknown	8,610 224	16.10 4.907
Mar. 16	0800	3,790 107	10.42 3.176	Aug. 30	unknown	4,200 119	11.00 3.353
June 9	unknown	7,320 207	14.80 4.511	Sept. 3	1630	*12,500 354	19.60 5.974

Minimum daily discharge, 1.4 ft³/s (0.040 m³/s) Oct. 2, 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	2.0	8.6	67	10	668	78	52	18	723	32	5.9	471		
2	1.4	200	182	10	285	74	63	17	301	37	5.3	5960		
3	1.4	678	86	9.4	229	77	614	16	122	611	4.4	10800		
4	1.5	1880	46	309	156	120	296	14	86	614	4.4	3770		
5	2.3	899	32	423	112	200	126	14	597	528	3.6	427		
6	2.6	294	22	220	92	149	98	26	232	114	3.6	236		
7	2.4	159	15	132	67	97	81	14	344	54	4.7	170		
8	2.8	83	15	83	51	74	70	16	2620	37	8.6	137		
9	9.1	52	12	59	42	62	70	14	6870	28	8.1	103		
10	6.9	41	26	43	39	52	73	13	6460	532	7.0	80		
11	5.2	34	9.4	32	33	53	72	12	1860	734	6.3	65		
12	4.3	28	8.6	18	31	75	61	11	375	189	5.6	55		
13	4.0	19	8.2	17	29	346	52	11	288	80	5.3	45		
14	6.9	17	7.4	19	30	366	44	11	159	731	5.3	502		
15	27	11	6.0	19	89	1780	38	11	108	784	1020	2170		
16	21	25	6.6	17	1640	3050	37	10	969	207	957	632		
17	11	73	9.0	25	2100	1240	37	12	307	80	210	179		
18	7.6	44	8.6	25	1640	390	36	14	125	50	76	734		
19	95	31	7.8	21	2000	366	34	31	101	35	43	594		
20	50	24	6.6	21	1400	320	35	57	77	40	25	128		
21	26	30	5.6	21	832	200	32	327	60	62	19	66		
22	16	27	6.3	25	500	132	28	734	49	24	14	49		
23	11	21	8.2	226	363	97	24	133	40	23	715	38		
24	8.3	17	9.4	460	302	83	21	69	34	16	170	33		
25	8.1	16	9.9	370	246	118	19	50	29	13	94	27		
26	6.4	13	9.9	210	188	202	20	66	26	11	59	24		
27	5.8	11	10	183	120	141	20	105	140	9.4	5690	21		
28	4.5	11	12	438	91	89	22	83	195	7.8	2680	17		
29	3.6	9.9	12	1890	---	69	21	61	116	7.4	301	16		
30	4.1	11	11	4900	---	62	20	56	45	8.6	2570	13		
31	4.9	---	10	3490	---	59	---	249	---	7.4	2150	---		
TOTAL	363.1	4767.5	687.5	13725.4	13375	10221	2218	2275	23458	5706.6	16871.1	27562		
MEAN	11.7	159	22.2	443	478	330	73.9	73.4	782	184	544	919		
MAX	95	1880	182	4900	2100	3050	614	734	6870	784	5690	10800		
MIN	1.4	8.6	5.6	9.4	29	52	19	10	26	7.4	3.6	13		
CFSM	.04	.53	.07	1.49	1.60	1.11	.25	.25	2.62	.62	1.83	3.08		
IN	.05	.60	.09	1.71	1.67	1.28	.28	.28	2.93	.71	2.11	3.44		
AC-FT	720	9460	1360	27220	26530	20270	4400	4510	46530	11320	33460	54670		
CAL YR 1981	TOTAL	98997.3	MEAN	271	MAX	11100	MIN	1.1	CFSM	.91	IN	12.36	AC-FT	196400
WIR YR 1982	TOTAL	121230.2	MEAN	332	MAX	10800	MIN	1.4	CFSM	1.11	IN	15.13	AC-FT	240500

SALT RIVER BASIN

05505000 SOUTH FORK SALT RIVER AT SANTA FE, MO--continued

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.49	1.66	2.00		---	2.54	2.28	1.90	5.01	2.00	1.52	
2	1.41	2.24	3.25		---	2.52	2.25	1.87	3.74	2.07	1.48	
3	1.41	4.50	2.68		---	2.52	4.19	1.85	2.84	2.75	1.46	17.55
4	1.42	7.51	2.34		2.87	2.68	3.71	1.83	2.51	4.89	1.45	11.02
5	1.48	5.65	2.18		2.63	3.25	2.84	1.81	4.93	4.45	1.42	3.96
6	1.51	3.62	2.06		2.61	3.08	2.69	1.81	3.43	2.82	1.41	3.50
7	1.49	3.08	2.00		2.40	2.69	2.55	1.82	2.75	2.29	1.40	3.23
8	1.48	2.65	1.95		2.31	2.53	2.43	1.82	6.47	2.08	1.62	3.07
9	1.76	2.38	1.92		2.21	2.43	2.43	1.84	---	1.96	1.58	2.98
10	1.69	2.27	1.88		2.29	2.32	2.46	1.80	13.69	1.90	1.53	2.85
11	1.62	2.19	1.85		2.13	2.31	2.48	1.79	7.63	5.22	1.53	2.73
12	1.59	2.13	1.83		2.12	2.49	2.37	1.76	3.83	3.25	1.49	2.67
13	1.55	2.01	1.82		2.09	3.39	2.28	1.74	3.66	2.54	1.48	2.60
14	1.68	2.01	1.80		2.08	3.84	2.21	1.74	3.06	3.55	1.48	2.97
15	2.02	1.89	1.75		2.35	7.23	2.15	1.75	2.72	4.64	1.61	8.99
16	1.99	1.95	1.76		7.76	10.42	2.11	1.72	6.08	3.31	5.41	4.87
17	1.81	2.58	1.84		9.03	6.53	2.15	1.76	3.73	2.54	3.26	3.57
18	1.70	2.32	1.82		6.41	3.82	2.09	1.75	2.86	2.23	2.44	4.03
19	2.96	2.17	1.81		8.40	3.84	2.09	1.78	2.85	2.06	2.10	4.71
20	2.35	2.05	1.78		7.40	3.73	2.11	2.31	2.50	1.94	1.83	3.38
21	2.05	2.15	1.75		5.13	3.25	2.08	2.19	2.31	2.66	1.81	2.93
22	1.89	2.11	1.75		4.39	2.90	2.03	5.58	2.21	1.88	1.70	2.72
23	1.78	2.05	1.80		3.81	2.67	1.99	2.92	2.11	1.90	1.64	2.60
24	1.73	2.00	1.83		3.63	2.55	1.94	2.43	2.04	1.80	3.06	2.50
25	1.72	1.98	1.86		3.43	2.52	1.90	2.22	1.96	1.71	2.55	2.43
26	1.66	1.92	1.86		3.33	3.18	1.90	2.21	1.92	1.67	2.17	2.40
27	1.64	1.89	1.86		2.90	2.96	1.93	2.53	1.95	1.62	12.23	2.32
28	1.60	1.88	1.90		2.59	2.62	1.94	2.56	3.45	1.58	9.35	2.30
29	1.55	1.86	1.88		---	2.45	1.93	2.35	2.86	1.55	3.55	2.26
30	1.56	1.84	1.90		---	2.35	1.92	2.14	2.19	1.58	8.05	2.22
31	1.60	---	1.87		---	2.34	---	2.59	---	1.57	8.55	---

SALT RIVER BASIN

05505000 SOUTH FORK SALT RIVER AT SANTA FE, MO

WATER-QUALITY RECORDS

PERIOD OF RECORD.--July 1981 to June 1982. (Discontinued)

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT: July 1981 to June 1982. (Discontinued)

EXTREMES FOR PERIOD OF RECORD.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 3,120 mg/L March 16, 1982; minimum daily mean, 1 mg/L on many days.

SUSPENDED-SEDIMENT LOADS: Maximum daily, 46,700 tons (42,400 metric tons) June 21, 1981; minimum daily, 0.00 tons (0.00 metric tons) on many days.

EXTREMES FOR CURRENT YEAR.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 3,120 mg/L March 16; minimum daily mean, 6 mg/L December 26.

SUSPENDED-SEDIMENT LOADS: Maximum daily, 31,000 tons (28,100 metric tons) June 9; minimum daily, 0.06 tons (0.05 metric tons) October 2 and 3.

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
OCTOBER				NOVEMBER				DECEMBER	
1	2.0	16	.09	8.6	22	.51	67	36	6.5
2	1.4	13	.05	200	54	29	182	63	31
3	1.4	14	.05	678	374	685	86	68	16
4	1.5	31	.13	1880	732	3720	48	50	6.5
5	2.3	14	.09	899	173	420	32	40	3.5
6	2.6	70	.49	294	68	54	22	51	3.0
7	2.4	52	.34	159	44	19	15	59	2.4
8	2.8	35	.26	83	37	8.3	15	52	2.1
9	9.1	30	.74	52	42	5.9	12	54	1.7
10	6.9	35	.65	41	32	3.5	26	54	3.8
11	5.2	25	.35	34	31	2.8	9.4	63	1.6
12	4.3	43	.50	28	26	2.0	8.6	50	1.2
13	4.0	26	.28	19	24	1.2	8.2	47	1.0
14	6.9	19	.35	17	26	1.2	7.4	46	.92
15	27	19	1.4	11	55	1.6	6.0	39	.63
16	21	32	1.8	25	40	2.7	6.6	26	.46
17	11	22	.65	73	40	7.9	9.0	24	.58
18	7.6	24	.49	44	31	3.7	8.6	31	.72
19	95	31	8.0	31	34	2.8	7.8	50	1.1
20	50	31	4.2	24	39	2.5	6.6	40	.71
21	26	42	2.9	30	30	2.4	5.6	26	.39
22	16	30	1.3	27	24	1.7	6.3	21	.36
23	11	32	.95	21	20	1.1	8.2	14	.31
24	8.3	29	.65	17	36	1.7	9.4	10	.25
25	8.1	30	.66	16	37	1.6	9.9	8	.21
26	6.4	28	.48	13	37	1.3	9.9	6	.16
27	5.8	24	.38	11	39	1.2	10	10	.27
28	4.5	33	.40	11	42	1.2	12	9	.29
29	3.6	23	.22	9.9	40	1.1	12	21	.68
30	4.1	26	.29	11	34	1.0	11	11	.33
31	4.9	26	.34	---	---	---	10	10	.27
TOTAL	363.1	---	29.48	4767.5	---	4987.91	667.5	---	88.94

SALT RIVER BASIN

05505000 SOUTH FORK SALT RIVER AT SANTA FE, MO--continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JANUARY				FEBRUARY				MARCH	
1	10	11	.30	696	194	365	78	36	7.6
2	10	12	.32	293	178	141	74	32	6.4
3	9.4	12	.30	229	87	54	77	42	8.7
4	309	14	12	156	74	31	120	48	16
5	423	1440	1640	112	64	19	200	72	39
6	220	95	56	92	52	13	149	58	23
7	132	39	14	67	50	9.0	97	44	12
8	83	36	8.1	51	62	8.5	74	36	7.2
9	59	44	7.0	42	48	5.4	62	28	4.7
10	43	25	2.9	39	40	4.2	52	35	4.9
11	32	18	1.6	33	46	4.1	53	48	6.9
12	18	15	.73	31	43	3.6	75	62	13
13	17	20	.92	29	26	2.0	346	169	158
14	19	20	1.0	30	34	2.8	366	312	368
15	19	44	2.3	167	56	25	1880	790	3920
16	17	46	2.1	2410	345	2240	3160	3120	24200
17	25	22	1.5	2560	266	1840	1310	1450	5130
18	25	22	1.5	1800	218	1060	390	500	566
19	21	34	1.9	2440	316	2080	366	270	267
20	21	37	2.1	1640	360	1590	320	280	242
21	21	11	.62	832	274	616	200	300	162
22	25	10	.68	500	158	213	132	260	93
23	226	14	8.5	363	104	102	97	130	34
24	1090	60	177	302	68	55	83	100	22
25	762	148	312	246	54	36	118	90	29
26	492	136	181	188	43	22	242	120	65
27	183	49	24	120	42	14	141	150	57
28	444	40	48	91	55	14	89	90	22
29	2260	80	488	---	---	---	69	50	9.3
30	6560	636	11300	---	---	---	62	60	10
31	3580	492	4760	---	---	---	59	70	11
TOTAL	17195.4	---	19056.37	15559	---	10509.6	10501	---	35414.7
APRIL				MAY				JUNE	
1	52	50	7.0	18	20	.97	761	650	1340
2	63	110	19	17	25	1.1	307	490	466
3	634	930	1590	16	20	.86	122	260	86
4	305	750	618	14	25	.95	86	220	51
5	126	370	126	14	30	1.1	615	450	747
6	98	320	85	26	60	4.2	232	380	238
7	81	210	46	14	65	2.5	352	1140	1260
8	70	130	25	16	75	3.2	2760	2150	17800
9	70	160	19	14	50	1.9	7050	1630	31000
10	73	60	16	13	60	2.1	6620	850	15200
11	72	60	12	12	60	1.9	1970	490	2610
12	61	50	8.2	11	70	2.1	375	270	273
13	52	40	5.6	11	80	2.4	288	200	156
14	44	60	7.1	11	75	2.2	159	145	62
15	38	70	7.2	11	75	2.2	108	220	64
16	37	35	3.5	10	70	1.9	1030	390	1080
17	37	40	4.0	12	60	1.9	313	610	516
18	36	30	2.9	14	75	2.8	125	230	78
19	34	28	2.6	31	60	5.0	101	160	44
20	35	25	2.4	57	70	11	77	150	31
21	32	15	1.3	337	475	1060	60	120	19
22	28	20	1.5	775	2300	5360	49	120	16
23	24	20	1.3	133	1100	395	40	110	12
24	21	20	1.1	69	710	132	34	100	9.2
25	19	20	1.0	50	560	76	29	80	6.3
26	20	15	.81	66	450	80	26	75	5.3
27	20	15	.81	105	400	113	140	220	83
28	22	20	1.2	83	320	72	195	1060	558
29	21	20	1.1	61	240	40	116	---	---
30	20	20	1.1	56	330	50	45	---	---
31	---	---	---	249	460	309	---	---	---
TOTAL	2245	---	2617.72	2326	---	7739.28	24185	---	73750.8

05506000 YOUNGS CREEK NEAR MEXICO, MO

LOCATION.--Lat 39°18'39", long 91°56'51", in NW¼SW¼ sec.5, T.52 N., R.9 W., Audrain County, Hydrologic Unit 07110006, on downstream side of bridge on State Highway 15, 6 mi (9.7 km) upstream from Long Branch, and 11 mi (17.7 km) north of Mexico.

DRAINAGE AREA.--67.4 mi² (174.6 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1930 to June 30, 1982 (discontinued). Fragmentary prior to August 1936 and September 1969 to July 1980.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 700.31 ft (213.454 m) National Geodetic Vertical Datum (levels by Missouri Highway Department). Prior to June 1, 1956, nonrecording gage on upstream side of bridge; and June 1, 1956 to Nov. 1, 1965, water-stage recorder at present site and datum 4.00 ft higher.

AVERAGE DISCHARGE.--34 years, 44.5 ft³/s (1.260 m³/s), 8.96 in/yr (228 mm/yr), 32240 acreft/yr (39.8 hm³/yr).

REMARKS.--Records fair. Several observations of water temperature and specific conductance made during the year.

REVISIONS.--WSP 875: 1932, 1937. WSP 1308: 1939(M).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,120 ft³/s (230 m³/s) July 10, 1969, gage height, 17.81 ft (5.426 m); no flow at times in many years. Maximum stage known, about 19.1 ft (5.821 m) present datum, from floodmarks, date unknown.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period October 1981 to June 1982, 2,580 ft³/s (73.1 m³/s) at 0900 June 9, gage height, 11.42 ft (3.481 m); no flow on many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	4.2	5.7	1.1	97	15	7.4	1.7	145			
2	.00	58	11	1.0	62	16	7.4	1.6	36			
3	.00	83	8.3	1.0	18	16	8.7	1.7	14			
4	.00	241	4.8	2.3	12	58	11	1.7	8.9			
5	.00	66	3.9	2.5	7.8	52	8.3	1.9	25			
6	.00	27	2.8	2.3	5.7	22	6.9	2.3	19			
7	.00	15	2.3	2.0	4.2	21	6.0	2.3	243			
8	.00	8.7	1.9	2.0	4.8	16	5.7	2.3	462			
9	.00	4.5	1.1	1.4	4.5	19	5.7	2.1	1830			
10	.00	3.3	.96	1.2	4.5	15	6.5	2.1	824			
11	.00	2.5	.84	1.0	3.6	17	6.9	1.7	50			
12	.00	1.9	.84	.70	3.3	21	6.5	1.7	28			
13	.00	1.4	.66	.60	2.8	72	5.7	1.6	23			
14	.14	.96	.66	.60	2.5	96	4.5	1.9	16			
15	6.9	.96	.66	.60	291	405	3.6	1.9	34			
16	8.3	1.4	6.9	.70	1790	892	5.1	1.9	157			
17	5.4	1.4	5.1	.70	1020	191	5.1	3.5	33			
18	3.9	.96	3.3	.40	900	42	7.8	4.1	15			
19	2.6	1.1	2.0	.50	1400	27	6.0	3.5	9.3			
20	1.4	1.9	1.2	.60	820	30	4.5	3.1	8.3			
21	1.4	1.9	1.2	.70	117	22	3.0	21	6.1			
22	1.1	2.6	1.4	6.9	66	14	2.6	54	4.4			
23	.84	2.6	2.0	9.2	55	11	2.5	14	3.4			
24	.56	2.3	1.8	5.1	43	9.2	2.3	6.7	2.7			
25	.56	1.9	1.4	5.4	28	13	2.3	5.3	2.3			
26	.56	1.4	1.2	6.0	22	31	3.0	45	2.1			
27	.56	1.1	1.4	6.0	17	18	3.0	39	5.4			
28	.56	.96	1.6	6.9	16	11	2.5	15	5.8			
29	.66	.96	1.6	340	---	8.3	2.3	11	2.7			
30	1.1	2.6	1.4	1470	---	7.4	1.9	7.2	3.0			
31	1.4	---	1.1	340	---	6.9	---	43	---			
TOTAL	37.94	543.50	81.02	2219.40	6817.7	2194.8	154.7	305.8	4018.4			
MEAN	1.22	18.1	2.61	71.6	243	70.8	5.16	9.86	134			
MAX	8.3	241	11	1470	1790	892	11	54	1830			
MIN	.00	.96	.66	.40	2.5	6.9	1.9	1.6	2.1			
CFSM	.02	.27	.04	1.06	3.61	1.05	.08	.15	1.99			
IN.	.02	.30	.04	1.22	3.76	1.21	.09	.17	2.22			
AC-FT	75	1080	161	4400	13520	4350	307	607	7970			

CAL YR 1981 TOTAL 25339.15 MEAN 69.4 MAX 3870 MIN .00 CFSM 1.03 IN 13.99 AC-FT 50260

SALT RIVER BASIN

05506000 YOUNGS CREEK NEAR MEXICO, MO

WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1980 to June 1982. (Discontinued)

EXTREMES FOR PERIOD OF RECORD.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 4,200 mg/L July 25, 1981; minimum daily mean, 1 mg/L on many days.

SUSPENDED-SEDIMENT LOADS: Maximum daily, 16,900 tons (15,300 metric tons) June 21, 1981; minimum daily, 0.00 tons (0.00 metric tons) on many days.

EXTREMES FOR CURRENT YEAR.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 3,350 mg/L June 7; minimum daily mean, 1 mg/L Dec. 22, January 7 and 8.

SUSPENDED-SEDIMENT LOADS: Maximum daily, 11,400 tons (10,300 metric tons) June 9; minimum daily, 0.00 tons (0.00 metric tons) on many days.

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TUNS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TUNS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TUNS/DAY)
	OCTOBER			NOVEMBER			DECEMBER		
1	.00	48	.00	4.2	29	.33	5.7	14	.22
2	.00	47	.00	58	33	5.2	11	10	.30
3	.00	44	.00	83	73	16	8.3	7	.16
4	.00	43	.00	241	244	122	4.8	11	.14
5	.00	57	.00	66	28	5.0	3.9	8	.08
6	.00	46	.00	27	18	1.3	2.8	5	.04
7	.00	37	.00	15	19	.77	2.3	7	.04
8	.00	36	.00	8.7	25	.59	1.9	7	.04
9	.00	46	.00	4.5	27	.33	1.1	8	.02
10	.00	58	.00	3.3	21	.19	.96	9	.02
11	.00	68	.00	2.5	15	.10	.84	10	.02
12	.00	28	.00	1.9	15	.08	.84	14	.03
13	.00	15	.00	1.4	17	.06	.66	10	.02
14	.14	20	.00	.96	22	.06	.66	7	.01
15	6.9	32	.60	.96	30	.08	.66	7	.01
16	8.3	51	1.1	1.4	27	.10	6.9	5	.09
17	5.4	63	.92	1.4	23	.09	5.1	4	.06
18	3.9	56	.59	.96	22	.06	3.3	3	.03
19	2.6	45	.32	1.1	17	.05	2.0	7	.04
20	1.4	40	.15	1.9	12	.06	1.2	6	.02
21	1.4	37	.14	1.9	7	.04	1.2	2	.00
22	1.1	35	.10	2.6	6	.04	1.4	1	.00
23	.84	33	.07	2.6	8	.06	2.0	2	.01
24	.56	29	.04	2.3	11	.07	1.8	3	.01
25	.56	25	.04	1.9	9	.05	1.4	3	.01
26	.56	29	.04	1.4	7	.03	1.2	3	.00
27	.56	36	.05	1.1	7	.02	1.4	3	.01
28	.56	48	.07	.96	10	.03	1.6	3	.01
29	.66	31	.06	.96	8	.02	1.6	3	.01
30	1.1	28	.08	2.6	11	.08	1.4	4	.02
31	1.4	31	.12	---	---	---	1.1	3	.00
TOTAL	37.94	---	4.49	543.50	---	152.89	81.02	---	1.47

SALT RIVER BASIN

05506000 YOUNGS CREEK NEAR MEXICO, MO--continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JANUARY				FEBRUARY				MARCH	
1	1.1	2	.00	97	59	15	15	23	.93
2	1.0	2	.00	62	47	7.9	16	27	1.2
3	1.0	2	.00	18	32	1.6	16	33	1.4
4	2.3	2	.01	12	28	.91	58	27	4.2
5	2.5	2	.01	7.8	26	.55	52	38	5.3
6	2.3	2	.01	5.7	29	.45	22	42	2.5
7	2.0	1	.00	4.2	24	.27	21	42	2.4
8	2.0	1	.00	4.8	23	.30	16	27	1.2
9	1.4	2	.00	4.5	23	.28	19	29	1.5
10	1.2	2	.00	4.5	18	.22	15	29	1.2
11	1.0	2	.00	3.6	14	.14	17	35	1.6
12	.70	2	.00	3.3	11	.10	21	29	1.6
13	.60	3	.00	2.8	6	.05	72	193	38
14	.60	3	.00	2.5	28	.19	96	418	86
15	.60	3	.00	291	114	90	405	1150	1030
16	.70	6	.01	1790	262	1270	892	2810	6340
17	.70	3	.00	1020	57	157	191	690	356
18	.40	3	.00	900	41	100	42	251	28
19	.50	3	.00	1400	176	665	27	157	11
20	.60	3	.00	820	167	370	30	108	8.7
21	.70	3	.00	117	57	18	22	84	5.0
22	6.9	3	.06	66	34	6.1	14	105	4.0
23	9.2	5	.12	55	26	3.9	11	111	3.3
24	5.1	5	.07	43	23	2.7	9.2	114	2.8
25	5.4	4	.06	28	17	1.3	13	133	4.7
26	6.0	4	.06	22	30	1.8	31	92	7.7
27	6.0	4	.06	17	44	2.0	18	90	4.4
28	6.9	6	.11	16	29	1.3	11	66	2.6
29	340	96	88	---	---	---	8.3	81	1.8
30	1470	351	1220	---	---	---	7.4	90	1.8
31	340	180	165	---	---	---	6.9	80	1.5
TOTAL	2219.40	---	1473.58	6817.7	---	2717.06	2194.8	---	7962.33
APRIL				MAY				JUNE	
1	7.4	72	1.4	1.7	52	.24	145	606	237
2	7.4	62	1.2	1.6	67	.29	36	330	32
3	8.7	64	1.5	1.7	43	.20	14	220	8.3
4	11	43	1.3	1.7	74	.34	8.9	171	4.1
5	8.3	42	.94	1.9	75	.38	25	198	13
6	6.9	38	.71	2.3	50	.31	19	182	9.3
7	6.0	37	.60	2.3	46	.29	243	3350	2620
8	5.7	50	.77	2.3	58	.36	462	3090	4680
9	5.7	56	.86	2.1	60	.34	1830	2480	11400
10	6.5	51	.90	2.1	42	.24	824	510	1130
11	6.9	50	.93	1.7	40	.18	50	184	25
12	6.5	64	1.1	1.7	38	.17	28	124	9.4
13	5.7	77	1.2	1.6	80	.35	23	110	6.8
14	4.5	61	.74	1.9	66	.34	16	112	4.8
15	3.6	63	.61	1.9	58	.30	34	130	12
16	5.1	77	1.1	1.9	70	.36	157	704	298
17	5.1	112	1.5	3.5	67	.63	33	345	31
18	7.8	105	2.2	4.1	72	.80	15	220	8.9
19	6.0	92	1.5	3.5	73	.69	9.3	179	4.5
20	4.5	59	.72	3.1	72	.60	8.3	160	3.6
21	3.0	80	.65	21	248	115	6.1	144	2.4
22	2.6	99	.69	54	750	103	4.4	100	1.2
23	2.5	62	.42	14	679	26	3.4	69	.63
24	2.3	57	.35	6.7	492	8.9	2.7	68	.50
25	2.3	67	.42	5.3	410	5.9	2.3	70	.43
26	3.0	65	.53	45	538	71	2.1	62	.35
27	3.0	55	.45	39	572	60	5.4	61	.89
28	2.5	47	.32	15	431	17	5.8	68	1.1
29	2.3	42	.26	11	339	10	2.7	73	.53
30	1.9	41	.21	7.2	286	5.6	3.0	62	.50
31	---	---	---	43	318	37	---	---	---
TOTAL	154.7	---	26.08	305.8	---	466.81	4018.4	---	20546.23

SALT RIVER BASIN

05506190 MIDDLE FORK SALT RIVER AT DUNCANS BRIDGE, MO

LOCATION.--Lat 39°34'25", long 92°15'54", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 8, T.55 N., R.12 W., Monroe County, Hydrologic Unit 07110006, on left bank at left end of State Highway J bridge, 3.7 mi (5.9 km) upstream from Mud Creek, 30.3 mi (48.8 km) upstream from gage at Paris, and at mile 134.8 (216.9 km) above mouth of Salt River.

DRAINAGE AREA.--200 mi² (518 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1980 to June 30, 1982 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 675.00 ft (205.740 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. Several observations of water temperature and specific conductance made during the year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period October 1981 to June 1982, 3,360 ft³/s (95.2 m³/s) at 0100 June 10; maximum gage height, 24.17 ft (7.367 m) at 1500 January 30; minimum daily discharge, 1.4 ft³/s (0.040 m³/s) Oct. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	UCI	UCV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.6	276	239	15	2130	74	62	18	1840			
2	1.9	1560	227	13	1450	77	65	18	1420			
3	1.5	1990	89	15	441	83	112	17	248			
4	1.4	2250	52	19	312	155	79	16	101			
5	1.6	1750	36	22	198	163	59	16	86			
6	1.6	269	29	24	131	99	62	142	65			
7	1.5	94	25	21	91	118	62	262	53			
8	1.5	61	23	15	62	100	54	94	54			
9	1.7	45	22	12	40	74	56	50	1870			
10	1.8	35	20	8.0	19	66	64	35	2920			
11	1.9	30	18	7.5	20	106	62	28	2100			
12	2.2	25	17	5.8	16	267	58	23	988			
13	2.7	23	17	5.4	12	283	49	21	92			
14	82	21	17	5.8	17	457	42	21	58			
15	210	20	15	6.5	205	1830	35	64	51			
16	91	20	14	6.7	1230	2450	32	288	208			
17	43	19	15	7.6	1730	2300	57	249	152			
18	22	18	14	7.2	1790	816	91	137	75			
19	30	18	15	6.2	1940	1160	63	130	145			
20	18	18	14	6.2	2230	955	45	125	86			
21	11	19	11	6.7	2080	443	38	68	36			
22	7.6	21	14	9.3	1820	156	31	122	23			
23	5.8	18	17	24	802	101	26	89	16			
24	4.9	17	20	25	521	82	24	41	14			
25	5.1	18	20	20	193	74	23	33	12			
26	5.2	15	19	23	116	63	23	443	11			
27	5.4	14	20	29	88	52	22	671	91			
28	5.7	14	18	36	78	45	20	147	329			
29	6.2	15	18	540	---	42	19	98	97			
30	6.0	18	15	3390	---	49	16	319	49			
31	7.6	---	14	2620	---	54	---	1620	---			
TOTAL	590.4	8711	1104	6951.9	19562	12794	1453	5405	13290			
MEAN	19.0	290	35.6	224	699	413	48.4	174	443			
MAX	210	2250	239	3390	2230	2450	112	1620	2920			
MIN	1.4	14	11	5.4	12	42	18	16	11			
AC-FT	1170	17280	2190	13790	38800	25380	2880	10720	26360			
CAL YR 1981	TOTAL	102776.9	MEAN	282	MAX	6950	MIN	1.1	AC-FT	203900		

05506190 MIDDLE FORK SALT RIVER AT DUNCANS BRIDGE, MO--continued

WATER-QUALITY RECORDS

PERIODS OF RECORD.-- November 1980 to June 1982. (Discontinued)

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT: November 1980 to June 1982. (Discontinued)

EXTREMES FOR PERIOD OF RECORD.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 3,130 mg/L March 19, 1982; minimum daily mean, 1 mg/L November 28 and 30, 1980.

SUSPENDED-SEDIMENT LOADS: Maximum daily, 10,300 tons (9,340 metric tons) March 19, 1982; minimum, 0.0 tons on many days.

EXTREMES FOR CURRENT YEAR.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 3,130 mg/L March 19; minimum daily mean, 2 mg/L December 26.

SUSPENDED-SEDIMENT LOADS: Maximum daily, 10,300 tons (9,340 metric tons) March 19; minimum daily, 0.10 tons (0.09 metric tons) December 26.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT

DATE	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	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 .062 MM (70342)	SED. SUSP. FALL DIAM. % FINER THAN .125 MM (70343)	SED. SUSP. FALL DIAM. % FINER THAN .250 MM (70344)	SED. SUSP. FALL DIAM. % FINER THAN .500 MM (70345)	SED. SUSP. FALL DIAM. % FINER THAN 1.00 MM (70346)	SED. SUSP. FALL DIAM. % FINER THAN 2.00 MM (70347)
MAR , 1982 17...	2260	79	83	86	89	95	96	97	100	100	100

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
OCTOBER				NOVEMBER				DECEMBER	
1	2.6	188	1.3	276	546	623	239	344	269
2	1.9	112	.57	1560	734	3090	227	238	146
3	1.5	94	.38	1990	203	1090	89	45	11
4	1.4	100	.38	2250	130	790	52	35	4.9
5	1.6	94	.41	1750	130	614	36	27	2.6
6	1.6	100	.43	269	79	57	29	21	1.6
7	1.5	81	.33	94	52	13	25	16	1.1
8	1.5	74	.30	61	44	7.2	23	16	.99
9	1.7	84	.39	45	35	4.3	22	22	1.3
10	1.8	59	.29	35	29	2.7	20	12	.65
11	1.9	81	.42	30	20	1.6	18	11	.53
12	2.2	80	.48	25	14	.95	17	12	.55
13	2.7	73	.53	23	10	.62	17	10	.46
14	82	252	56	21	18	1.0	17	13	.60
15	210	650	369	20	22	1.2	15	10	.41
16	91	230	57	20	18	.97	14	11	.42
17	43	226	26	19	13	.67	15	5	.20
18	22	201	12	18	21	1.0	14	4	.15
19	30	118	9.6	18	24	1.2	15	3	.12
20	18	87	4.2	18	24	1.2	14	4	.15
21	11	79	2.3	19	24	1.2	11	4	.12
22	7.6	63	1.3	21	18	1.0	14	5	.19
23	5.8	61	.96	18	20	.97	17	4	.18
24	4.9	61	.81	17	18	.83	20	3	.16
25	5.1	43	.59	18	17	.83	20	3	.16
26	5.2	33	.46	15	15	.61	19	2	.10
27	5.4	48	.70	14	14	.53	20	3	.16
28	5.7	51	.78	14	10	.38	18	3	.15
29	6.2	49	.82	15	14	.57	18	3	.15
30	6.0	49	.79	18	18	.87	15	4	.16
31	7.6	50	1.0	---	---	---	14	5	.19
TOTAL	590.4	---	550.52	8711	---	6309.40	1104	---	444.45

SALT RIVER BASIN

05506190 MIDDLE FORK SALT RIVER AT DUNCANS BRIDGE, MO--continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JANUARY				FEBRUARY				MARCH	
1	15	5	.20	2130	35	201	74	74	15
2	13	5	.18	1450	28	110	77	38	7.9
3	15	5	.20	441	23	27	83	47	11
4	19	4	.21	312	25	21	155	179	75
5	22	4	.24	198	25	15	163	132	58
6	24	4	.26	131	22	7.8	99	75	20
7	21	4	.23	91	53	13	118	74	24
8	15	5	.20	62	48	8.0	100	60	16
9	12	6	.19	40	25	2.7	74	48	9.6
10	8.0	6	.13	19	22	1.1	66	62	11
11	7.5	6	.12	20	24	1.3	106	96	27
12	5.8	9	.14	16	21	.91	267	551	397
13	5.4	12	.17	12	40	1.3	283	571	436
14	5.8	12	.19	17	26	1.2	457	932	1620
15	6.5	12	.21	205	71	39	1830	1840	9090
16	6.7	10	.18	1230	68	226	2450	650	4300
17	7.6	12	.25	1730	57	266	2300	480	2980
18	7.2	14	.27	1790	50	242	816	450	991
19	6.2	18	.30	1940	44	230	1160	3130	10300
20	6.2	18	.30	2230	128	771	955	1060	2730
21	6.7	21	.38	2080	138	775	443	600	718
22	9.3	14	.35	1820	220	1080	156	265	112
23	24	12	.78	802	326	706	101	175	48
24	25	12	.81	321	256	222	82	140	31
25	20	13	.70	193	144	75	74	130	26
26	23	14	.87	116	110	34	63	100	17
27	29	32	2.5	88	84	20	52	60	8.4
28	36	28	2.7	78	76	16	45	60	7.3
29	540	21	31	---	---	---	42	95	11
30	3390	27	247	---	---	---	49	320	42
31	2620	42	297	---	---	---	54	290	42
TOTAL	6951.9	---	588.26	19562	---	5111.31	12794	---	34181.2
APRIL				MAY				JUNE	
1	62	140	23	18	82	4.0	1840	460	2290
2	65	268	47	18	80	3.9	1420	350	1340
3	112	730	221	17	83	3.8	248	270	181
4	79	200	43	16	82	3.5	101	176	48
5	59	100	16	16	78	3.4	86	144	33
6	62	60	10	142	518	322	65	96	17
7	62	50	8.4	262	780	552	53	110	16
8	54	50	7.3	94	288	73	54	166	24
9	56	50	7.6	50	188	25	1870	1510	7170
10	64	50	8.6	35	170	16	2920	358	2820
11	62	60	10	28	160	12	2100	267	1510
12	58	80	13	23	148	9.2	988	192	512
13	49	80	11	21	130	7.4	92	183	45
14	42	100	11	21	124	7.0	58	152	24
15	35	65	8.0	64	223	46	51	191	26
16	32	75	6.5	268	646	860	208	436	245
17	57	134	21	249	709	517	152	313	128
18	91	192	47	137	560	207	75	216	44
19	63	181	31	130	737	304	145	298	117
20	45	140	17	125	1140	385	86	332	77
21	38	188	19	68	503	92	36	180	17
22	31	182	15	122	378	125	23	128	7.9
23	26	157	11	89	450	108	16	98	4.2
24	24	123	8.0	41	348	39	14	130	4.9
25	23	114	7.1	33	267	24	12	92	3.0
26	23	102	6.3	443	1010	1470	11	98	2.9
27	22	101	6.0	671	740	1340	91	1020	283
28	20	90	4.9	147	280	111	329	2160	1990
29	19	81	4.2	98	240	64	97	750	196
30	18	83	4.0	319	765	1420	49	200	26
31	---	---	---	1620	1120	4900	---	---	---
TOTAL	1453	---	652.9	5405	---	13054.2	13290	---	19201.9

05506500 MIDDLE FORK SALT RIVER AT PARIS, MO

LOCATION.--Lat 39°29'05", long 91°59'50", in NE¼NW¼NW¼ sec.11, T.54 N., R.10 W., Monroe County, Hydrologic Unit 07110006, on right bank near upstream side of bridge on E. Madison Street in Paris, 600 ft (183 m) downstream from Wabash Railroad bridge, 12.5 mi (20.1 km) upstream from Elk Fork Salt River, and at mile 104.5 (168.1 km) above mouth of Salt River.

DRAINAGE AREA.--356 mi² (922 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1939 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 621.88 ft (189.549 m) National Geodetic Vertical Datum of 1929, 1961 adjustment. Prior to Jan. 22, 1940, nonrecording gage; Jan. 22, 1940 to Sept. 30, 1968, water-stage recorder, 600 ft (183 m) upstream at present datum.

REMARKS.--Records good. Water diverted from river upstream from gage by City of Paris. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--43 years, 243 ft³/s (6.882 m³/s), 9.27 in/yr (235 mm/yr), 176,100 acre-ft/yr (217 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 45,000 ft³/s (1,270 m³/s) Apr. 21, 1973, gage height, 33.5 ft (10.21 m), from floodmark; no flow at times in several years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,500 ft³/s (99.1 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)	
Jan. 31	Unknown	4,280	137	12.97	3.953
Feb. 20	2000	4,210	119	12.02	3.664
Mar. 16	1715	3,590	102	10.78	3.286
June 10	0200	*5,550	157	*13.97	4.258
Sept. 3	2315	3,610	102	10.82	3.298

Minimum daily discharge, 1.3 ft³/s (0.40 m³/s) Oct. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	310	246	25	3350	178	98	28	2430	83	13	920
2	7.8	2140	443	25	2180	173	97	27	1850	90	9.6	2480
3	6.6	2350	264	26	1260	186	320	25	914	191	6.8	3240
4	5.1	2640	124	30	480	351	210	27	225	98	5.3	2530
5	9.8	2220	84	31	314	458	139	27	144	63	4.1	755
6	11	1170	64	33	228	298	139	30	132	83	3.9	170
7	9.1	298	54	34	151	252	118	294	249	53	15	104
8	7.2	165	48	28	110	255	112	260	755	31	26	80
9	6.1	112	41	22	90	173	104	120	4040	23	13	81
10	6.1	84	39	15	83	153	108	69	5040	210	18	80
11	9.8	71	35	15	63	151	108	47	3580	750	90	54
12	15	63	33	11	56	301	98	37	2020	178	31	42
13	20	56	32	11	49	465	91	30	515	73	34	31
14	70	49	30	10	54	671	76	29	180	178	24	35
15	128	44	29	9.9	160	2200	66	67	128	1410	1130	33
16	219	48	28	8.0	1330	3410	93	276	202	680	1580	35
17	114	43	21	8.0	1690	3250	126	458	368	347	1270	27
18	70	40	22	10	1690	2480	107	365	205	122	1780	24
19	46	38	18	14	2040	1060	141	246	135	63	1540	25
20	50	43	15	18	3280	1400	104	194	237	56	173	20
21	34	41	17	16	3810	906	74	173	120	654	59	16
22	21	35	21	16	3180	431	60	151	66	443	36	15
23	21	36	26	18	2070	246	49	165	36	1460	28	13
24	13	36	28	20	755	170	42	108	31	694	23	12
25	3.8	32	28	20	488	165	39	73	26	33	18	11
26	3.8	38	31	20	344	141	39	580	23	23	36	11
27	3.1	37	31	28	252	108	36	874	386	18	680	11
28	1.8	31	32	35	199	88	32	539	636	21	632	11
29	1.5	28	32	234	---	76	30	178	334	13	165	11
30	1.3	47	28	3600	---	78	29	387	146	9.5	1030	11
31	2.2	---	27	4640	---	116	---	1570	---	12	1550	---
TOTAL	933.1	12345	1971	9030.9	29756	20390	2885	7454	25153	8162.5	12023.7	10888
MEAN	30.1	412	63.6	291	1063	658	96.2	240	838	263	388	363
MAX	219	2640	443	4640	3810	3410	320	1570	5040	1460	1780	3240
MIN	1.3	28	15	8.0	49	76	29	25	23	9.5	3.9	11
CFSM	.09	1.16	.18	.82	2.99	1.85	.27	.67	2.35	.74	1.09	1.02
IN.	.10	1.29	.21	.94	3.11	2.13	.30	.78	2.63	.85	1.26	1.14
AC-FT	1650	24490	3910	17910	59020	40440	5720	14790	49890	16190	23850	21600

CAL YR 1981 TOTAL 160398.0 MEAN 439 MAX 10700 MIN 1.3 CFSM 1.23 IN 16.76 AC-FT 318100
WTR YR 1982 TOTAL 140992.2 MEAN 366 MAX 5040 MIN 1.3 CFSM 1.08 IN 14.73 AC-FT 279700

SALT RIVER BASIN

05506500 MIDDLE FORK SALT RIVER AT PARIS, MO--continued

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	UCI	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.22	3.58	4.26	3.35	11.27	4.11	3.68	3.14	8.27	3.58	2.96	5.97
2	3.11	8.30	4.97	3.35	8.70	4.07	3.66	3.12	7.49	3.44	2.89	7.98
3	3.10	8.45	4.44	3.35	7.10	4.11	4.73	3.10	6.19	4.29	2.86	10.60
4	3.07	9.61	3.97	3.40	4.94	4.39	4.18	3.10	4.23	3.66	2.83	9.42
5	3.15	8.66	3.74	3.41	4.55	4.94	3.87	3.08	3.43	3.40	2.80	5.53
6	3.15	7.15	3.62	3.43	4.36	4.47	3.89	3.13	3.78	3.52	2.79	3.91
7	3.07	4.50	3.55	3.45	4.12	4.29	3.77	4.43	4.10	3.32	2.79	3.61
8	3.12	4.09	3.50	3.42	3.88	4.33	3.74	4.41	4.96	3.13	3.13	3.48
9	3.09	3.88	3.45	3.36	3.73	4.00	3.70	3.81	12.03	3.05	2.99	3.42
10	3.09	3.74	3.44	---	3.68	4.06	3.71	3.52	13.71	3.02	3.01	3.50
11	3.09	3.66	3.41	---	3.61	4.00	3.73	3.34	11.34	5.78	3.75	3.33
12	3.21	3.60	3.38	---	3.57	4.09	3.68	3.24	8.03	3.97	3.17	3.23
13	3.17	3.56	3.38	3.13	3.51	4.90	3.64	3.17	5.00	3.47	3.24	3.11
14	3.61	3.51	3.37	---	3.49	5.14	3.55	3.14	3.94	3.22	3.10	3.10
15	3.43	3.48	3.35	3.10	3.63	8.97	3.48	3.16	3.70	6.80	3.31	3.12
16	4.28	3.50	3.33	3.10	6.70	10.50	3.44	3.91	3.98	5.39	7.03	3.17
17	3.90	3.48	3.33	3.10	7.60	10.01	3.78	4.92	4.56	4.74	6.22	3.06
18	3.68	3.44	3.26	3.29	7.57	8.79	3.65	4.71	4.04	3.85	7.16	3.04
19	3.52	3.42	3.29	3.20	7.75	5.32	3.85	4.42	3.71	3.48	7.66	3.05
20	3.38	3.47	3.16	3.24	9.47	6.93	3.71	3.90	4.23	3.29	4.31	3.01
21	3.39	3.47	3.22	3.22	11.21	5.92	3.54	4.06	3.72	5.29	3.44	2.96
22	3.30	3.41	3.26	3.22	10.42	4.86	3.45	3.88	3.39	4.82	3.26	2.94
23	3.26	3.40	3.30	3.27	8.82	4.32	3.36	4.03	3.23	4.10	3.13	2.93
24	3.23	3.42	3.33	3.30	5.65	4.08	3.29	3.81	3.14	3.46	3.08	2.91
25	3.03	3.38	3.35	3.32	5.04	3.99	3.26	3.48	3.07	3.21	3.03	2.89
26	3.03	3.37	3.37	3.30	4.65	3.90	3.25	4.75	3.04	3.08	2.97	2.88
27	3.03	3.42	3.39	3.32	4.34	3.75	3.23	5.74	3.07	3.01	5.19	2.88
28	2.89	3.38	3.39	3.32	4.16	3.62	3.18	5.18	4.88	3.05	5.56	2.88
29	2.85	3.34	3.30	3.77	---	3.55	3.16	5.13	4.51	2.94	4.06	2.89
30	2.84	3.32	3.39	11.22	---	3.51	3.15	4.00	3.85	2.90	4.72	2.90
31	2.87	---	3.36	12.57	---	3.79	---	6.77	---	3.01	6.90	---

SALT RIVER BASIN

05506500 MIDDLE FORK SALT RIVER AT PARIS, MO

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT: August 1980 to current year.

EXTREMES FOR PERIOD OF RECORD.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 3,170 mg/L July 23, 1981; minimum daily mean, 6 mg/L on many days.

SUSPENDED-SEDIMENT LOADS: Maximum daily, 27,500 tons (24,900 metric tons) June 9, 1982; minimum daily, 0.01 tons (0.01 metric tons) on many days.

EXTREMES FOR CURRENT YEAR.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 2,420 mg/L June 9; minimum daily mean, 14 mg/L November 19 and 23.

SUSPENDED-SEDIMENT LOADS: Maximum daily, 27,500 tons (24,900 metric tons) June 9; minimum daily, 0.19 tons (0.17 metric tons) October 5.

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
OCTOBER			NOVEMBER			DECEMBER			
1	16	25	.95	310	405	329	246	43	26
2	7.8	27	.44	2140	888	5080	443	70	81
3	5.6	23	.25	2350	558	3530	264	101	67
4	3.8	28	.20	2640	475	3360	124	56	19
5	4.6	21	.19	2220	340	2020	84	46	10
6	5.1	25	.26	1170	176	713	64	40	6.9
7	7.2	30	.45	298	33	24	54	36	5.3
8	7.2	25	.38	165	33	14	48	37	4.9
9	6.1	20	.25	112	30	8.9	41	46	5.5
10	6.1	22	.27	84	29	6.6	39	34	3.8
11	9.8	26	.55	71	23	4.4	35	30	3.0
12	15	35	1.2	63	29	4.9	33	30	2.8
13	20	29	1.4	56	19	2.9	32	29	2.7
14	70	24	4.3	49	18	2.4	30	28	2.5
15	128	31	11	44	17	2.2	29	28	2.4
16	219	25	15	48	18	2.4	28	18	1.5
17	114	43	14	43	31	3.8	21	18	1.2
18	70	57	11	40	17	1.8	22	20	1.4
19	46	46	5.7	38	14	1.5	18	24	1.3
20	50	45	6.1	43	15	1.8	15	20	.86
21	34	50	4.9	41	18	2.0	17	22	1.1
22	21	34	2.6	35	23	2.2	21	24	1.6
23	21	26	2.5	36	14	1.4	27	38	2.9
24	13	30	2.2	36	17	1.7	28	36	2.9
25	3.8	33	1.6	32	21	1.9	30	33	2.9
26	3.8	28	1.3	38	24	2.6	33	32	3.0
27	3.1	24	.97	37	26	2.5	34	46	4.5
28	1.8	22	.46	31	22	1.9	35	52	5.2
29	1.5	22	.33	28	21	1.6	35	58	5.8
30	1.3	18	.25	47	24	3.4	32	72	6.8
31	2.2	17	.39	---	---	---	29	33	2.9
TOTAL	917.8	---	91.39	12345	---	15134.8	1991	---	288.66

SALT RIVER BASIN

05506500 MIDDLE FORK SALT RIVER AT PARIS, MO--continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JANUARY			FEBRUARY			MARCH			
1	29	40	3.5	3350	54	488	178	65	30
2	29	39	3.4	2180	70	412	173	39	18
3	30	35	3.1	1260	71	242	186	40	19
4	35	51	5.1	443	50	60	351	55	50
5	37	31	3.3	314	58	46	458	64	101
6	40	52	5.9	228	36	22	298	75	58
7	41	44	5.1	151	36	15	252	69	45
8	35	48	4.8	110	32	9.6	255	60	40
9	28	29	2.3	90	36	8.7	173	60	27
10	23	44	2.7	83	30	6.7	153	48	20
11	17	64	2.9	63	51	8.5	151	41	16
12	13	46	1.6	56	62	9.0	301	39	31
13	11	58	1.7	49	50	6.5	465	41	50
14	10	60	1.6	54	42	5.9	671	358	636
15	9.9	50	1.3	160	109	44	2200	2080	12300
16	8.0	67	2.0	1330	167	591	3410	2290	21000
17	8.0	68	2.0	1690	119	540	3250	975	8560
18	10	68	1.8	1690	131	591	2480	625	3900
19	14	56	2.7	2040	126	687	1060	911	2800
20	18	58	3.4	3280	280	2460	1400	1760	6940
21	16	51	2.8	3810	318	3250	906	800	2120
22	16	48	2.6	3180	609	5200	431	498	667
23	18	30	2.0	2070	610	3390	246	275	216
24	20	24	1.2	755	174	348	170	180	97
25	20	24	1.8	488	176	226	165	110	58
26	20	34	2.6	344	130	117	141	115	51
27	28	31	2.4	252	174	111	108	100	33
28	35	16	1.8	199	115	60	88	75	20
29	234	29	18	---	---	---	76	60	14
30	3640	238	2340	---	---	---	78	125	29
31	4360	132	1550	---	---	---	116	95	34
TOTAL	8852.9	---	3985.4	29719	---	18954.9	20390	---	59980
APRIL			MAY			JUNE			
1	98	95	29	28	50	3.9	2430	960	6320
2	97	145	43	27	40	2.9	1850	410	2070
3	320	210	217	25	35	2.5	914	403	1010
4	210	320	213	27	30	2.1	225	155	94
5	139	280	121	27	75	5.3	144	157	61
6	139	200	86	30	60	5.0	132	154	55
7	118	70	26	294	70	57	249	197	132
8	112	75	26	260	120	86	755	1640	3360
9	104	60	19	120	215	70	4160	2420	27500
10	108	70	23	69	130	25	5040	800	10960
11	108	48	16	47	125	16	3580	490	4760
12	98	50	15	37	110	11	2020	398	2200
13	91	50	13	30	100	8.4	515	202	283
14	76	54	12	29	90	7.5	180	132	67
15	66	70	13	67	87	16	128	85	29
16	93	75	19	276	178	136	202	75	41
17	126	210	71	458	270	344	368	87	86
18	107	240	69	365	327	325	205	125	68
19	141	95	36	246	436	293	135	142	51
20	104	80	22	194	240	127	237	111	71
21	74	80	16	173	162	74	120	87	27
22	60	60	10	151	171	70	66	78	12
23	49	90	12	165	306	136	36	82	9.1
24	42	60	7.1	108	270	79	31	82	6.9
25	39	75	8.1	73	156	31	26	57	3.8
26	39	200	22	580	362	580	23	51	3.2
27	36	140	14	874	550	1320	386	48	52
28	32	90	8.0	539	328	481	636	142	227
29	30	60	5.0	178	166	80	334	443	372
30	29	50	4.1	387	448	473	146	454	165
31	---	---	---	1570	1430	6180	---	---	---
TOTAL	2885	---	1195.3	7454	---	11047.6	25273	---	60056.0

05506500 MIDDLE FORK SALT RIVER AT PARIS, MO--continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JULY				AUGUST			SEPTEMBER		
1	83	438	90	13	94	3.3	906	526	1480
2	90	318	71	9.6	84	2.2	2620	1720	11300
3	191	182	86	6.8	66	1.2	3360	590	5180
4	98	121	29	5.3	52	.74	2670	300	2040
5	63	110	17	4.1	50	.55	755	170	332
6	83	140	28	3.9	62	.65	170	83	38
7	53	162	20	15	40	1.8	104	62	18
8	31	104	7.6	26	52	4.1	80	60	13
9	23	84	4.5	13	50	2.2	81	55	13
10	210	471	282	18	77	4.8	80	52	12
11	750	706	1340	90	87	25	54	48	7.9
12	178	240	102	31	92	9.2	42	48	6.2
13	73	148	25	34	91	10	33	55	5.8
14	178	201	106	24	100	7.8	35	53	5.4
15	1410	1420	5480	1100	428	2120	33	47	4.2
16	680	675	1240	1560	980	3970	35	60	5.8
17	361	460	451	1230	720	2330	27	65	4.9
18	122	285	97	1800	560	2620	24	60	4.2
19	63	187	32	1520	360	1440	25	55	3.9
20	56	178	27	173	120	67	20	52	3.1
21	640	393	710	59	70	13	16	71	3.6
22	435	520	629	36	72	8.7	15	46	2.2
23	168	310	150	28	65	6.0	13	53	2.3
24	59	218	36	23	60	4.7	12	50	2.0
25	33	166	15	18	68	4.4	11	67	2.4
26	23	154	10	36	72	8.7	11	51	1.8
27	18	145	7.0	662	318	594	11	58	2.0
28	21	148	8.8	618	460	804	11	57	1.8
29	13	144	5.1	165	224	118	11	60	2.3
30	9.5	128	3.3	999	611	2000	11	61	2.3
31	12	106	3.4	1530	810	3240	---	---	---
TOTAL	6227.5	---	11112.7	11850.7	---	19422.04	11276	---	20500.1
YEAR	139181.9		221768.89						

SALT RIVER BASIN

05506800 ELK FORK SALT RIVER NEAR MADISON, MO

LOCATION.--Lat 39°26'05", long 92°10'04", in SW¼NE¼SW¼ sec.29, T.54 N., R.11 W., Monroe County, Hydrologic Unit 07110006, on downstream side of highway, 25 ft (8 m) to the left of bridge on State Highway AA, 500 ft (152 m) downstream from Allen Creek, 3.5 mi (5.6 km) southeast of Madison, and at mile 29.8 (47.9 km).

DRAINAGE AREA.--200 mi² (518 km²).

PERIOD OF RECORD.--October 1968 to current year.

REVISED RECORDS.--WRD MO 1973: 1970(M).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 690.16 ft (210.361 m) National Geodetic Vertical Datum of 1929 (Missouri State Highway Commission bench mark).

REMARKS.--Records fair. Several observations of water temperature and specific conductance made during the year.

AVERAGE DISCHARGE.--14 years, 168 ft³/s (4.758 m³/s), 11.41 in/yr (290 mm/yr), 121,700 acre-ft/yr (150 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 42,300 ft³/s (1,200 m³/s) Apr. 21, 1973, gage height, 33.4 ft (10.18 m), from floodmarks; no flow Aug. 4-10, 1976.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 9, 1967, reached a stage of 31.25 ft (9.525 m), from floodmark, discharge, 31,200 ft³/s (884 m³/s), by contracted-opening method. Flood in 1871 reached nearly the same stage, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,500 ft³/s (70.8 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 30	1845	6,880 195	19.73 6.014	June 9	2045	*12,700 360	*24.83 7.568
Feb. 19	1730	3,860 81.0	13.38 4.078	Sept. 3	0100	12,400 351	24.62 7.504
Mar. 16	0400	3,770 107	15.23 4.642				

Minimum daily discharge, 1.0 ft³/s (0.028 m³/s) Oct. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.1	59	140	5.1	305	45	38	9.8	780	20	5.1	161
2	2.1	461	91	6.0	223	47	33	9.0	179	208	3.9	6410
3	1.5	466	41	7.3	116	52	169	8.3	70	179	3.4	8630
4	1.0	605	23	11	91	129	74	8.2	52	75	3.0	448
5	1.5	123	16	9.8	50	152	47	9.0	94	30	2.7	150
6	2.1	57	14	9.0	29	80	55	16	63	18	2.7	86
7	2.3	38	13	6.6	25	64	42	26	1340	13	3.2	61
8	2.3	24	12	5.7	22	53	35	33	2770	11	29	41
9	2.2	18	11	5.0	21	37	38	19	9350	9.0	28	36
10	2.5	14	9.7	4.5	20	35	40	12	7290	106	12	28
11	2.9	11	9.0	3.9	20	38	35	10	430	192	7.7	23
12	2.8	11	8.4	3.4	20	48	30	8.0	166	52	7.7	18
13	3.7	10	7.9	3.4	21	76	26	8.0	112	21	6.2	16
14	14	9.7	7.4	3.1	40	331	22	8.6	74	37	5.2	15
15	29	9.4	7.0	3.2	800	1600	21	30	70	310	74	121
16	18	9.4	7.0	3.4	1910	2990	75	120	204	53	686	320
17	11	9.4	7.4	3.4	965	794	230	180	111	24	106	48
18	9.0	9.4	6.4	3.2	744	214	84	120	57	14	35	44
19	6.8	9.4	5.7	3.2	1990	152	42	76	50	9.4	19	50
20	7.9	11	5.7	3.2	1520	126	33	49	36	7.3	13	23
21	7.3	12	6.8	3.4	550	91	27	65	27	7.2	10	16
22	7.1	11	7.3	5.5	300	62	22	150	23	5.3	8.0	13
23	7.1	10	7.9	19	225	49	19	43	19	4.8	7.3	11
24	7.1	9.0	8.2	15	160	44	17	22	16	4.3	7.1	9.6
25	6.2	8.2	7.6	20	90	87	18	19	15	4.1	8.1	8.6
26	6.0	10	7.9	15	74	106	15	78	14	3.6	12	8.3
27	5.5	13	8.2	22	52	66	13	84	179	4.3	1360	7.8
28	5.3	11	8.2	245	47	44	12	45	41	26	731	7.3
29	5.3	11	7.9	863	---	34	12	58	22	32	90	6.6
30	5.5	29	6.2	5940	---	33	11	158	30	13	1130	6.5
31	4.3	---	5.5	2010	---	50	---	1020	---	7.0	912	---
TOTAL	192.4	2088.9	524.3	9261.3	10430	7729	1335	2501.9	23686	1500.3	5328.3	16823.7
MEAN	6.21	69.6	16.9	299	373	249	44.5	80.7	790	48.4	172	561
MAX	29	605	140	5940	1990	2990	230	1020	9350	310	1360	8630
MIN	1.0	8.2	5.5	3.1	20	33	11	8.0	14	3.6	2.7	6.5
CFSM	.03	.35	.09	1.50	1.87	1.25	.22	.40	3.95	.24	.86	2.81
IN.	.04	.39	.10	1.72	1.94	1.44	.25	.47	4.41	.28	.99	3.13
AC-FT	382	4140	1040	18370	20690	15330	2650	4960	46980	2980	10570	33370

CAL YR 1981 TOTAL 85489.66 MEAN 234 MAX 8810 MIN .37 CFSM 1.17 IN 15.90 AC-FT 169600
WIR YR 1982 TOTAL 81401.10 MEAN 223 MAX 9350 MIN 1.0 CFSM 1.12 IN 15.14 AC-FT 161500

SALT RIVER BASIN

05506800 ELK FORK SALT RIVER NEAR MADISON, MO--continued

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	UCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.90	4.58	5.38	3.89	6.02	4.38	4.29	---	8.64	4.00	3.62	5.23
2	3.92	7.52	5.09	3.85	5.91	4.38	4.20	---	5.54	6.18	3.57	17.51
3	3.91	6.64	4.53	3.89	5.17	4.44	5.83	---	4.71	6.14	3.53	23.16
4	3.89	7.76	4.24	3.98	5.12	4.94	4.76	---	4.42	4.81	3.50	6.34
5	3.94	5.28	4.09	4.00	4.60	5.19	4.39	---	4.92	4.22	3.48	5.18
6	3.94	4.72	4.01	4.03	4.32	4.58	4.52	---	4.65	3.96	3.48	4.75
7	3.93	4.48	3.98	4.00	4.19	4.51	4.36	---	4.25	3.83	3.48	4.53
8	3.93	4.26	3.97	3.91	4.15	4.52	4.25	---	13.38	3.76	3.70	4.37
9	3.93	4.13	3.93	3.90	4.12	4.32	4.27	---	19.24	3.71	4.21	4.24
10	3.95	4.01	3.91	3.85	4.10	4.24	4.31	---	21.67	3.80	3.84	4.15
11	3.94	3.95	3.88	3.79	4.08	4.27	4.26	---	6.43	5.87	3.73	4.05
12	3.98	3.94	3.88	3.77	4.06	4.35	4.17	---	5.38	4.54	3.74	3.95
13	3.94	3.91	3.88	3.77	4.05	4.68	4.11	---	5.01	4.04	3.67	3.86
14	4.25	3.90	3.86	3.75	4.05	4.99	4.04	---	4.71	3.86	3.62	3.85
15	4.39	3.89	3.84	3.75	5.72	11.18	3.98	---	4.51	6.88	3.73	3.90
16	4.12	3.89	3.83	3.76	11.42	14.02	---	---	5.30	4.47	8.18	6.69
17	3.97	3.89	3.85	3.76	9.05	8.00	---	---	5.04	4.11	4.90	4.41
18	3.90	3.89	3.93	3.76	7.35	5.71	---	---	4.52	3.89	4.26	4.14
19	3.81	3.89	3.87	3.76	10.25	5.28	---	5.12	4.45	3.74	3.99	4.48
20	3.84	3.95	3.81	3.75	10.59	5.14	---	4.50	4.30	3.69	3.83	4.06
21	3.83	3.94	3.80	3.77	7.19	4.89	---	4.28	4.14	3.64	3.76	3.92
22	3.81	3.93	3.86	3.79	6.08	4.62	---	5.55	4.04	3.62	3.68	3.83
23	3.81	3.93	3.88	4.27	5.70	4.44	---	4.41	3.98	3.60	3.65	3.77
24	3.81	3.92	3.90	4.14	5.35	4.35	---	4.07	3.89	3.57	3.65	3.73
25	3.79	3.89	3.88	4.19	4.57	4.83	---	3.94	3.87	3.56	3.69	3.70
26	3.77	3.89	3.88	4.13	4.59	5.04	---	4.45	3.85	3.52	3.63	3.69
27	3.75	3.99	3.91	4.09	4.30	4.67	---	4.85	6.20	3.53	8.60	3.67
28	3.74	3.93	3.91	5.20	4.29	4.38	---	4.41	4.36	4.24	8.43	3.65
29	3.74	3.91	3.88	7.19	---	4.25	---	4.18	4.00	4.41	4.81	3.63
30	3.74	3.94	3.86	18.16	---	4.20	---	4.67	4.21	3.90	8.05	3.62
31	3.67	---	3.85	12.84	---	4.51	---	8.77	---	3.71	8.91	---

SALT RIVER BASIN

05507000 ELK FORK SALT RIVER NEAR PARIS, MO

LOCATION.--Lat 39°26'25", long 92°00'05", in SE¼SE¼, sec.22, T.54 N., R.10 W., Monroe County, Hydrologic Unit 07110006, on downstream side of highway, at the left end of bridge on State Highway 15, and 2.5 mi (4.0 km) south of Paris and 11 mi (17.7 km) upstream from mouth.

DRAINAGE AREA.--262 mi² (679 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Apr. 1, 1930 to September 1954, August 1980 to June 30, 1982 (discontinued). Fragmentary prior to February 1935 and monthly discharge only October 1934 to January 1935.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 628.86 ft (191.677 m) National Geodetic Vertical Datum of 1929. Prior to November 23, 1934, chain gage; Nov. 23, 1934 to Jan. 21, 1935, wire-weight gage; and Jan. 22, 1935 to Sept. 30, 1954, with stage recorder at same site and datum 2.00 ft higher.

REMARKS.--Record fair above gage height 7.0 ft (.198 m). Rest of record poor. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--21 years (1961-1981) 185 ft³/s (5.239 m³/s), 9.589 in/yr (244 mm/yr), 134,000 acre-ft/yr (165 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,600 ft³/s (583 m³/s) June 27, 1942, gage height, 22.22 ft (6.163 m) present datum; maximum gage height 24.8 ft (7.559 m) April 1973, obtained from Missouri Highway and Transportation District Office, Hannibal, Missouri. Discharge not determined. Minimum, no flow.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period October 1981 to June 1982, 12,600 ft³/s (357 m³/s) at 0830 June 10, gage height, 18.02 ft (5.492 m); minimum daily discharge 1.4 ft³/s (0.040 m³/s) Oct. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.5	138	240	6.8	484	75	70	14	1170			
2	2.5	980	191	7.5	348	75	56	14	295			
3	1.5	899	90	10	257	81	117	12	124			
4	1.4	1440	52	21	138	201	148	11	81			
5	1.8	303	36	16	90	236	79	11	95			
6	2.5	152	26	11	52	138	72	16	101			
7	2.8	79	21	10	39	117	74	26	1810			
8	3.0	56	19	7.6	31	87	61	43	3140			
9	2.8	39	16	6.6	28	70	61	26	9030			
10	3.3	29	15	6.0	27	60	65	19	10900			
11	3.8	21	12	5.8	26	68	60	12	1370			
12	3.5	17	11	5.6	26	79	52	11	306			
13	4.7	15	10	5.4	30	110	47	11	219			
14	68	14	9.6	5.4	50	383	38	11	152			
15	43	13	8.9	5.6	376	2170	32	12	110			
16	32	12	8.9	6.7	2510	3840	64	201	229			
17	23	12	8.9	6.7	1550	1540	306	376	247			
18	16	12	9.6	6.4	1210	338	166	232	114			
19	10	12	8.9	6.1	2850	226	64	148	81			
20	10	15	8.9	6.0	2270	194	50	101	62			
21	9.7	19	8.9	6.0	804	149	41	75	47			
22	9.3	16	9.6	6.8	415	107	34	152	31			
23	9.3	14	6.9	35	327	81	29	90	24			
24	9.3	12	12	33	250	70	26	49	22			
25	8.2	11	16	40	163	117	23	52	19			
26	7.8	14	15	38	128	152	24	278	18			
27	7.4	19	15	70	93	114	21	138	145			
28	7.0	16	14	201	79	75	19	81	215			
29	7.1	15	14	1160	---	59	16	62	68			
30	7.7	38	8.2	6210	---	74	16	141	43			
31	6.2	---	7.5	4130	---	64	---	1330	---			
TOTAL	328.1	4432	931.8	12092.0	14651	11150	1931	3755	30268			
MEAN	10.6	148	30.1	390	523	360	64.4	121	1009			
MAX	68	1440	240	6210	2850	3840	306	1330	10900			
MIN	1.4	11	7.5	5.4	26	59	16	11	18			
CFSM	.04	.57	.12	1.49	2.00	1.37	.25	.46	3.85			
IN	.05	.63	.13	1.72	2.06	1.58	.27	.53	4.30			
AC-FT	651	8790	1850	23960	29060	22120	3830	7450	60040			

CAL YR 1981 TOTAL 120434.20 MEAN 330 MAX 10100 MIN .38 CFSM 1.26 IN 17.10 AC-FT 238900

SALT RIVER BASIN

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05507000 ELK FORK SALT RIVER NEAR PARIS, MO

WATER-QUALITY RECORDS

PERIODS OF RECORD.-- August 1980 to June 1982. (Discontinued)

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT: August 1980 to June 1982. (Discontinued)

EXTREMES FOR PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT CONCENTRATION: Maximum daily mean, 4,060 mg/L June 21, 1981; minimum daily mean, 1 mg/L on many days.

SUSPENDED-SEDIMENT LOAD: Maximum daily, 38,600 tons (35,000 metric tons) June 21, 1981; minimum daily, 0.00 tons (0.00 metric tons) on many days.

EXTREMES FOR CURRENT YEAR.--

SUSPENDED-SEDIMENT CONCENTRATION: Maximum daily mean, 3,070 mg/L March 16,; minimum daily mean, 6 mg/L December 24 and 30.

SUSPENDED-SEDIMENT LOAD: Maximum daily, 29,400 tons (26,700 metric tons) March 16; minimum daily, 0.08 tons (0.07 metric tons) October 4.

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
OCTOBER			NOVEMBER			DECEMBER			
1	3.5	55	.52	138	200	108	240	92	60
2	2.5	36	.24	980	624	1310	191	113	58
3	1.5	28	.11	899	241	441	90	78	19
4	1.4	22	.08	1440	395	1120	52	72	10
5	1.8	32	.16	303	122	100	36	81	7.9
6	2.5	32	.22	152	70	29	26	71	5.0
7	2.8	28	.21	79	66	14	21	68	3.9
8	3.0	24	.19	56	58	8.8	19	64	3.3
9	2.8	22	.17	39	42	4.4	16	55	2.4
10	3.3	20	.18	29	32	2.5	15	41	1.7
11	3.8	23	.24	21	42	2.4	12	32	1.0
12	3.5	28	.26	17	80	3.7	11	28	.83
13	4.7	30	.38	15	56	2.3	10	24	.65
14	68	193	35	14	34	1.3	9.6	15	.39
15	43	27	3.1	13	36	1.3	8.9	12	.29
16	32	28	2.4	12	28	.91	8.9	14	.34
17	23	28	1.7	12	28	.91	8.9	12	.29
18	16	28	1.2	12	42	1.4	9.6	12	.31
19	10	30	.81	12	30	.97	8.9	14	.34
20	10	32	.86	15	22	.89	8.9	18	.43
21	9.7	32	.84	19	25	1.3	8.9	18	.43
22	9.3	20	.50	16	25	1.1	9.6	14	.36
23	9.3	20	.50	14	16	.60	8.9	12	.29
24	9.3	22	.55	12	14	.45	12	10	.32
25	8.2	18	.40	11	16	.48	16	16	.69
26	7.8	12	.25	14	31	1.2	15	10	.41
27	7.4	14	.28	19	41	2.1	15	8	.32
28	7.0	16	.30	16	39	1.7	14	8	.30
29	7.1	18	.35	15	28	1.1	14	6	.23
30	7.7	18	.37	38	30	3.1	8.2	6	.13
31	6.2	15	.25	---	---	---	7.5	11	.22
TOTAL	328.1	---	52.62	4432	---	3166.91	931.8	---	179.77

SALT RIVER BASIN

05507000 ELK FORK SALT RIVER NEAR PARIS, MO--continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JANUARY				FEBRUARY				MARCH	
1	6.8	10	.18	464	130	170	75	44	8.9
2	7.5	8	.16	348	76	71	75	40	8.1
3	10	8	.22	257	54	37	81	70	15
4	21	12	.68	138	58	22	201	95	52
5	16	10	.43	90	56	14	236	80	51
6	11	10	.30	52	52	7.3	138	54	20
7	10	10	.27	39	42	4.4	117	45	14
8	7.6	10	.21	31	59	4.9	87	58	14
9	6.6	12	.21	28	60	4.5	70	72	14
10	6.0	12	.19	27	47	3.4	60	61	9.9
11	5.8	20	.31	26	39	2.7	68	63	12
12	5.6	26	.39	26	39	2.7	79	76	16
13	5.4	31	.45	30	42	3.4	110	54	16
14	5.4	41	.60	50	48	6.5	383	365	627
15	5.6	32	.48	376	104	106	2170	2440	10400
16	6.7	50	.90	2510	268	1820	3840	3070	29400
17	6.7	36	.65	1550	178	745	1540	1260	5240
18	6.4	32	.55	1210	160	523	338	450	411
19	6.1	41	.68	2850	1010	5830	226	192	117
20	6.0	48	.78	2270	180	1100	194	133	70
21	6.0	48	.78	804	190	412	149	93	37
22	6.8	76	1.4	415	140	157	107	69	20
23	35	90	6.5	327	82	72	81	64	14
24	33	104	9.3	250	62	42	70	72	14
25	40	83	9.0	163	55	24	117	93	29
26	38	110	11	128	60	21	152	94	39
27	70	120	23	93	52	13	114	83	26
28	201	300	163	79	40	8.5	75	93	19
29	1160	1800	5640	---	---	---	59	78	12
30	6210	410	6870	---	---	---	74	220	44
31	4130	202	2250	---	---	---	64	217	37
TOTAL	12092.0	---	14994.62	14651	---	11227.3	11150	---	46806.9
APRIL				MAY				JUNE	
1	70	128	24	14	70	2.6	1170	658	2080
2	56	72	11	14	89	3.4	295	358	285
3	117	67	21	12	74	2.4	124	202	68
4	148	70	28	11	52	1.5	81	130	28
5	79	160	34	11	78	2.3	95	110	28
6	72	232	45	16	84	3.6	101	180	49
7	74	198	40	26	69	4.8	1810	2480	15300
8	61	86	14	43	70	8.1	3140	1970	12300
9	61	96	16	26	58	4.1	9030	1030	25100
10	65	64	15	19	74	3.8	10900	610	18000
11	60	50	8.1	12	86	2.8	1370	350	1290
12	52	54	7.6	11	85	2.5	306	205	169
13	47	60	7.6	11	92	2.7	219	108	64
14	38	64	6.6	11	100	3.0	152	89	37
15	32	62	5.4	12	138	4.5	110	88	26
16	64	98	17	201	370	201	229	86	53
17	306	742	613	376	739	750	247	92	61
18	166	424	190	232	572	358	114	82	25
19	64	243	42	148	590	236	81	86	19
20	50	190	26	101	288	79	62	82	14
21	41	259	29	75	352	71	47	79	10
22	34	342	31	152	323	133	31	80	6.7
23	29	231	18	90	209	51	24	66	4.3
24	26	182	13	49	174	23	22	128	7.6
25	23	128	7.9	52	160	22	19	68	3.5
26	24	98	6.4	278	382	287	18	---	---
27	21	71	4.0	138	345	129	145	---	---
28	19	76	3.9	81	203	44	215	---	---
29	16	88	3.8	62	152	25	68	---	---
30	16	78	3.4	141	150	57	43	---	---
31	---	---	---	1330	472	1690	---	---	---
TOTAL	1931	---	1291.7	3755	---	4208.1	30268	---	75028.1

05507600 LICK CREEK AT PERRY, MO

LOCATION.--Lat 39°25'53", long 91°40'34", near center of NW¼SW¼ sec. 27, T.54 N., R.7 W., Ralls County.
Hydrologic Unit 07110007, on right bank and downstream side of State Highway 154 bridge, 0.1 mi (.16 km) west of Perry and at mile 11.9 (19 km).

DRAINAGE AREA.--104 mi² (269.4 km²).

PERIOD OF RECORD.--March 1966 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 625.00 ft (190.500 m) National Geodetic Vertical Datum of 1929. Prior to November 1967 non-recording gage at same site and datum.

REMARKS.--Records good. Several observations of water temperature and conductance were made during the year. Prior to October 1979 gages were maintained and operated by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage 26.24 ft (7.998 m) Oct. 12 1969 determined by Corps of Engineers;
no flow on many days each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge 3,620 ft³/s (103 m³/s) June 9 at 0115, gage height, 15.02 ft (4.578 m), no flow on many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
-MEAN VALUES

DAY	UCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	4.0	16	2.8	100	19	9.9	4.8	148	8.6	1.4	369
2	.00	33	25	3.0	50	21	24	4.2	41	94	1.1	1790
3	.00	351	15	5.9	38	25	81	3.6	19	1170	.74	400
4	.00	565	9.5	7.8	28	56	36	3.4	13	241	.51	69
5	.00	127	6.9	7.7	18	57	21	3.2	64	237	.44	32
6	.00	49	5.2	7.1	12	28	20	3.0	31	64	.58	19
7	.00	26	3.9	6.9	9.0	22	17	3.0	433	25	16	13
8	.00	14	2.8	4.8	6.8	17	15	2.8	1590	13	5.2	10
9	.00	9.2	2.5	4.1	6.7	13	15	2.4	2860	8.5	1.5	8.7
10	.00	6.0	2.2	3.6	6.4	11	15	2.2	801	18	7.8	7.3
11	.00	4.4	2.0	2.6	6.1	21	14	1.8	95	84	5.5	5.8
12	.00	3.0	1.9	1.9	2.4	40	11	1.6	49	25	1.4	4.7
13	.00	2.8	1.7	1.4	18	317	9.9	1.5	34	149	.75	4.5
14	1.1	2.5	1.6	1.4	13	227	8.6	1.5	23	1130	.54	79
15	.48	3.5	1.5	1.5	24	624	7.7	1.5	20	856	1500	514
16	.33	18	1.6	2.0	1300	1230	9.0	1.9	147	83	773	80
17	.35	7.8	2.1	2.0	804	191	41	2.4	40	36	85	31
18	.41	4.8	2.1	1.0	859	64	25	2.4	20	18	32	48
19	.30	6.3	1.2	1.3	1410	43	15	1.8	18	9.9	16	43
20	.23	7.6	1.2	1.5	1080	46	12	8.8	15	24	11	22
21	.20	6.6	1.2	2.0	195	32	9.6	99	8.1	129	7.6	14
22	.23	4.7	1.6	12	72	23	8.3	73	5.2	27	5.2	8.8
23	.24	4.9	2.1	15	81	17	7.1	20	3.8	8.9	3.9	6.7
24	.24	4.6	2.0	11	87	14	6.2	9.9	2.8	4.9	3.4	5.3
25	.24	3.5	1.8	9.0	53	20	5.5	7.3	2.2	2.9	3.5	4.1
26	.20	2.6	1.8	7.0	29	35	8.0	11	2.1	2.0	47	3.6
27	.20	2.2	1.9	8.0	23	22	7.6	7.9	5.1	1.6	774	3.1
28	.20	1.9	2.2	10	20	15	5.7	9.0	39	62	124	2.5
29	.20	1.8	2.1	1000	---	12	5.3	6.6	85	13	39	1.8
30	.23	3.0	1.9	2750	---	12	5.1	46	17	5.0	715	1.1
31	.43	---	2.1	800	---	10	---	217	---	2.2	249	---
TOTAL	5.87	1280.7	126.6	4694.3	6351.4	3284	475.5	564.5	6631.3	4552.5	4432.06	3601.0
MEAN	.19	42.7	4.08	151	227	106	15.9	18.2	221	147	143	120
MAX	1.1	565	25	2750	1410	1230	81	217	2860	1170	1500	1790
MIN	.00	1.8	1.2	1.0	2.4	10	5.1	1.5	2.1	1.6	.44	1.1
CFSM	.002	.41	.04	1.45	2.18	1.02	.15	.18	2.13	1.41	1.38	1.15
IN	.00	.46	.05	1.68	2.27	1.17	.17	.20	2.37	1.63	1.59	1.29
AC-FT	12	2540	251	9310	12600	6510	943	1120	13150	9030	8790	7140
CAL YR 1981	TOTAL	25573.07		MEAN 70.1	MAX 3460	MIN .00	CFSM .67	IN 9.15	AC-FT 50720			
WTR YR 1982	TOTAL	35999.73		MEAN 98.6	MAX 2860	MIN .00	CFSM .95	IN 12.88	AC-FT 71410			

SALT RIVER BASIN

05507600 LICK CREEK AT PERRY, MO--continued

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.89	5.26	5.78	5.34	---	5.74	5.55	5.38	6.87	5.51	5.20	6.49
2	4.88	5.81	5.90	5.33	---	5.77	5.52	5.36	6.11	6.05	5.18	12.60
3	4.88	7.83	5.74	5.44	---	5.85	6.28	5.33	5.78	9.14	5.13	7.90
4	4.88	8.93	5.60	5.51	---	6.08	6.07	5.33	5.61	7.13	5.09	6.37
5	4.91	6.75	5.50	5.51	---	6.28	5.76	5.32	6.48	7.24	5.07	5.98
6	4.90	6.20	5.43	5.51	---	5.96	5.76	5.31	6.00	6.33	5.09	5.75
7	4.88	5.92	5.39	5.50	---	5.82	5.71	5.31	5.69	5.90	5.10	5.63
8	4.87	5.71	5.34	5.43	---	5.72	5.67	5.31	7.32	5.66	5.39	5.55
9	4.94	5.58	5.32	5.40	5.54	5.64	5.66	5.27	14.10	5.51	5.22	5.49
10	4.93	5.47	5.30	4.80	5.56	5.59	5.68	5.27	9.57	5.45	5.18	5.45
11	4.89	5.40	5.29	---	5.56	5.80	5.67	5.23	6.53	6.53	5.44	5.39
12	4.88	5.35	5.28	---	5.30	6.00	5.60	5.22	6.17	5.69	5.21	5.36
13	4.88	5.34	5.27	---	6.38	7.87	5.56	5.21	6.03	5.65	5.13	5.31
14	5.32	5.32	5.26	---	5.95	6.53	5.51	5.21	5.84	9.09	5.10	6.03
15	5.13	5.30	5.25	---	5.56	8.91	5.47	5.21	5.69	10.21	5.79	9.00
16	5.08	5.90	5.24	---	10.05	11.07	5.48	5.21	6.96	6.47	9.50	6.45
17	5.08	5.54	5.29	---	9.32	7.05	5.84	5.26	6.10	6.05	6.49	5.98
18	5.11	5.41	5.29	---	8.56	6.31	5.91	5.28	5.79	5.75	5.99	6.15
19	5.08	5.45	5.10	---	9.35	6.10	5.66	5.24	5.62	5.56	5.69	6.15
20	5.06	5.51	5.21	---	9.45	6.15	5.63	5.21	5.70	5.47	5.57	5.82
21	5.05	5.49	5.21	---	7.24	6.00	5.55	6.01	5.50	6.68	5.46	5.63
22	5.06	5.41	5.24	---	6.34	5.85	5.49	6.41	5.39	5.95	5.37	5.51
23	5.06	5.41	5.29	---	6.39	5.73	5.46	5.80	5.34	5.54	5.32	5.42
24	5.06	5.41	5.29	---	6.44	5.65	5.42	5.57	5.30	5.39	5.31	5.40
25	5.06	5.37	5.27	---	6.24	5.74	5.39	5.45	5.27	5.31	5.29	5.35
26	5.05	5.33	5.27	---	5.95	6.07	5.46	5.57	5.23	5.26	5.31	5.33
27	5.05	5.30	5.28	---	5.82	5.82	5.47	5.48	5.29	5.21	9.67	5.32
28	5.05	5.28	5.30	---	5.76	5.67	5.41	5.53	6.16	6.72	6.74	5.29
29	5.05	5.27	5.30	---	---	5.61	5.39	5.45	6.88	5.66	6.09	5.24
30	5.05	5.28	5.28	---	---	5.61	5.38	5.38	5.74	5.40	8.82	5.17
31	5.08	---	5.28	---	---	5.58	---	7.07	---	5.27	7.32	---

SALT RIVER BASIN

05507800 SALT RIVER NEAR CENTER, MO

LOCATION.--Lat 39°34'26", long 91°34'15", near SE corner, sec.4, T.55 N., R.6 W., Ralls County, Hydrologic Unit 07110007, on left bank at left downstream end of bridge on highway A, 5 mi (8.04 km) northwest of Center, at mile 53.1 (85.4 km).

DRAINAGE AREA.--2,350 mi² (6,090 km²), approximately.

PERIOD OF RECORD.--April 1963 to current year, prior to October 1979, gage heights only by St. Louis District Corps of Engineers.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 500.00 ft (152.400 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 1979 non-recording gage at same site and datum.

REMARKS.--Records fair. Several observations of water temperature and specific conductance were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge not determined, Apr. 22, 1973, gage height, 33.00 ft (10.06 m) minimum gage height, 2.6 ft (0.79 m) April 27, 1963 determined by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 22,400 ft³/s (634 m³/s) June 12 at 0800, gage height, 20.95 ft (6.386 m), minimum daily discharge 15.0 ft³/s (0.425 m³/s) Oct. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	186	90	679	200	18000	1020	763	228	7390	699	175	6640		
2	152	1040	1650	208	16200	937	1020	205	8770	694	225	7500		
3	107	7770	2410	228	13000	867	1320	191	5680	2870	138	13600		
4	73	12100	1350	301	7970	1000	1810	163	2040	7000	118	16600		
5	122	13800	833	413	3950	1560	1190	161	1240	6480	110	16300		
6	100	12100	578	669	2530	1620	838	183	1470	6310	103	12700		
7	68	5730	437	645	2220	1230	615	217	1530	3350	100	5490		
8	38	1720	359	437	1750	922	583	529	7710	986	264	1290		
9	24	1080	304	338	1360	788	569	542	16300	546	328	620		
10	22	788	276	233	1150	592	592	448	19300	1800	236	520		
11	16	587	254	197	937	674	556	352	21800	1680	311	459		
12	15	467	233	166	689	1420	592	282	22200	1850	328	379		
13	18	386	211	143	601	2990	605	242	20800	913	276	338		
14	92	332	206	125	669	3450	490	217	17600	1600	219	315		
15	122	298	189	117	1750	5550	430	191	10200	4150	2090	2420		
16	482	511	183	107	6850	12200	410	177	2920	4790	11500	3130		
17	1080	459	200	105	17000	13400	1830	1230	2310	2420	11600	1500		
18	635	376	183	95	16800	14100	2420	1380	1700	1340	10500	808		
19	372	328	177	90	15900	13000	2470	1110	1150	1100	7430	1410		
20	304	325	169	90	16600	9100	1260	973	1210	1410	2830	1280		
21	289	328	163	95	17700	5550	947	1020	1160	4650	937	709		
22	242	298	153	107	17200	3750	615	1950	659	6110	490	427		
23	208	279	150	132	16100	1960	459	3850	470	3680	374	325		
24	158	254	163	183	14400	1410	406	2120	413	1050	295	273		
25	132	233	177	342	9250	1220	366	947	349	482	289	233		
26	105	225	183	798	3270	1280	315	1240	292	359	298	205		
27	73	214	200	551	1660	1220	258	6070	482	276	2340	191		
28	53	211	219	437	1240	1000	225	5330	5220	270	6780	177		
29	38	208	211	798	---	803	231	3340	3390	304	4680	161		
30	28	217	211	11600	---	704	242	2360	1450	225	2320	153		
31	24	---	222	17500	---	768	---	2060	---	191	6590	---		
TOTAL	5378	62754	12927	37450	226746	106065	24427	39308	187205	69585	74279	96153		
MEAN	173	2092	417	1208	8098	3422	814	1268	6240	2245	2396	3205		
MAX	1080	13800	2410	17500	18000	14100	2470	6070	22200	7000	11600	16600		
MIN	15	90	150	90	601	592	225	161	292	191	100	153		
CFSM	.07	.89	.18	.51	3.45	1.46	.35	.54	2.66	.96	1.02	1.37		
IN.	.09	.99	.20	.59	3.59	1.68	.39	.62	2.97	1.10	1.18	1.52		
AC-FT	10670	124500	25640	74280	449800	210400	48450	77970	371300	138000	147300	190700		
CAL YR 1981	TOTAL	886064	MEAN	2428	MAX	65600	MIN	14	CFSM	1.03	IN	14.04	AC-FT	1758000
WTR YR 1982	TOTAL	942297	MEAN	2582	MAX	22200	MIN	15	CFSM	1.10	IN	14.93	AC-FT	1869000

SALT RIVER BASIN

05507800 SALT RIVER NEAR CENTER, MO--continued

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.09	3.42	5.02	4.01	18.85	5.90	5.39	4.27	12.33	5.54	4.03	12.30
2	3.94	4.29	6.15	4.15	18.12	5.82	5.84	4.16	13.73	5.25	3.95	11.00
3	3.75	12.27	8.14	4.18	16.59	5.65	6.35	4.11	11.90	6.54	1.54	15.97
4	3.59	15.24	6.53	4.43	13.04	---	7.17	3.97	7.65	12.37	3.78	17.88
5	3.96	16.44	5.63	4.67	---	---	6.27	3.92	6.06	11.57	3.74	18.09
6	3.70	15.90	5.16	5.19	---	---	5.70	4.05	6.65	11.75	3.71	16.34
7	3.56	11.97	4.86	5.31	---	---	5.37	4.10	6.30	9.70	3.67	11.89
8	3.41	7.10	4.65	4.87	---	5.82	5.34	5.35	8.21	6.00	3.87	6.47
9	3.31	6.06	4.52	4.61	---	5.73	5.20	5.21	17.51	5.22	4.74	5.36
10	3.30	5.52	4.41	4.30	---	5.27	5.28	5.04	19.15	6.94	4.29	5.18
11	3.27	5.16	4.33	4.09	---	5.28	5.26	4.64	20.60	6.02	4.51	5.06
12	3.25	4.92	4.25	3.98	---	6.15	5.20	4.40	20.95	7.45	4.61	4.78
13	3.23	4.72	4.17	3.89	---	6.29	5.33	4.23	20.45	5.82	4.42	4.62
14	3.50	4.59	4.11	3.80	---	---	5.12	4.15	18.95	6.77	4.21	4.54
15	3.79	4.47	4.08	3.77	---	---	4.95	4.09	15.45	9.83	4.29	5.26
16	4.22	4.89	4.04	3.73	10.20	---	4.80	4.00	8.45	10.59	15.11	9.20
17	6.13	4.95	4.19	3.72	---	---	6.80	6.83	7.97	8.18	15.28	6.80
18	5.31	4.69	3.91	3.67	---	---	7.85	6.43	7.16	6.18	14.62	5.70
19	4.72	4.58	3.99	3.64	---	---	8.15	6.22	6.12	6.31	13.14	6.33
20	4.46	4.54	---	3.63	17.90	---	6.25	5.98	6.15	5.16	8.86	6.50
21	4.49	4.58	---	3.66	18.57	14.27	6.10	5.66	6.21	9.90	5.92	5.57
22	4.29	4.49	---	3.68	18.52	10.35	5.20	6.51	5.70	11.35	5.16	4.95
23	4.18	4.42	---	3.80	18.52	7.67	5.00	9.95	5.12	10.11	4.79	4.60
24	3.96	4.34	3.95	3.98	17.12	6.58	4.80	7.82	4.90	6.01	4.52	4.42
25	3.84	4.25	4.01	4.31	17.13	6.13	4.74	5.90	4.69	5.13	4.36	4.27
26	3.73	4.23	4.04	5.55	14.40	6.25	4.57	5.35	4.49	4.72	4.51	4.17
27	3.59	4.18	4.10	5.08	8.80	6.23	4.34	11.43	4.55	4.44	4.52	4.09
28	3.48	4.16	4.18	4.81	6.88	5.89	4.20	11.20	10.93	4.25	11.96	4.02
29	3.41	4.14	4.09	5.03	---	5.54	4.21	9.10	9.38	4.58	10.95	3.98
30	3.35	4.10	4.09	13.88	---	5.31	4.25	8.21	6.72	4.24	7.07	3.93
31	3.31	---	4.20	16.28	---	5.47	---	7.25	---	4.09	11.51	---

05508000 SALT RIVER NEAR NEW LONDON, MO

LOCATION.--Lat 39°36'44", long 91°24'30", in NE¼NW¼ sec.36, T.56 N., R.5 W., Ralls County, Hydrologic Unit 07110007, on left bank 180 ft (55 m) upstream from upstream bridge on dual U.S. Highway 61, 2.0 mi (3.2 km) north of New London, 8.0 mi (12.9 km) upstream from Spencer Creek and at mile 35.5 (57.1 km).

DRAINAGE AREA.--2,480 mi² (6,420 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1922 to current year.

GAGE.--Water-stage recorder. Datum of gage is 477.03 ft (145.399 m) National Geodetic Vertical Datum of 1929. Prior to Apr. 7, 1931, nonrecording gage at present site at datum 0.03 ft (0.009 m) higher. Apr. 7, 1931, to Jan. 17, 1935, nonrecording gage at site 180 ft (55 m) downstream at datum 0.04 ft (0.012 m) lower.

REMARKS.--Records good except those for periods of ice affect, which are fair. Several observations of water temperature and specific conductance were made during the year. National Weather Service gageheight telemeter at station.

AVERAGE DISCHARGE.--60 years, 1,674 ft³/s (47.41 m³/s), 9.17 in/yr (233 mm/yr), 1,213,000 acre-ft/yr (1.50 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 107,000 ft³/s (3,030 m³/s) Apr. 22, 1973, gage height, 31.8 ft (9.69 m), from floodmark; no flow Aug. 3-14, Aug. 21 to Sept. 1, 1936.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 14, 1858, reached a stage of 27.6 ft (8.41 m), present datum, based on comparison of June 1928 flood crest at stone marker 1.0 mi (1.6 km) downstream of gage.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 20,000 ft³/s (566 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Feb. 18	0215	20,800 589	19.14 5.834
June 12	1545	*22,100 626	*19.16 5.840

Minimum daily discharge, 43 ft³/s (1.218 m³/s), Oct. 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	156	82	553	197	18400	1170	755	320	7310	846	204	8080
2	146	302	1220	212	17600	1070	1010	296	9490	640	183	9900
3	118	7640	2490	265	14700	1040	1560	280	7320	3080	156	12900
4	91	12500	1560	322	9900	1250	1790	260	3060	7350	140	16000
5	97	13800	936	373	3880	1850	1610	244	1320	6860	128	16700
6	108	13200	668	486	2310	1890	1120	240	1370	6820	121	13500
7	88	7880	510	529	1650	1420	960	240	1570	4360	485	7270
8	70	2280	414	391	1340	1190	882	575	6990	1270	468	1700
9	56	1180	354	309	1050	1050	816	972	16900	675	464	775
10	50	865	319	225	837	906	804	665	18500	2550	408	630
11	46	677	291	179	708	804	804	468	20700	1510	352	575
12	45	544	266	167	587	1220	816	380	21700	2000	408	468
13	43	456	248	141	496	2880	780	328	20900	1040	356	412
14	79	391	226	122	462	3270	710	292	18200	1220	288	392
15	124	348	214	116	1000	7170	640	260	12100	3400	1280	1080
16	137	531	210	104	7890	13900	804	240	3670	4900	10300	3650
17	946	588	203	94	19200	16200	1630	954	2300	3020	12000	1670
18	753	452	189	97	19400	16500	2060	1530	1700	1300	11000	1010
19	440	399	195	91	18900	16700	2810	1250	1230	1210	9200	1100
20	308	410	183	88	19500	11700	1480	1070	1030	755	4520	1370
21	288	395	178	91	18500	8330	966	1160	1110	4590	1210	924
22	243	362	175	101	17600	5350	735	1610	894	6120	670	595
23	210	328	176	173	16800	2540	615	4050	635	4810	472	428
24	173	308	180	146	15300	1550	530	2730	456	930	380	344
25	146	275	182	171	10600	1260	472	1350	376	680	320	284
26	124	258	184	342	4170	1250	444	1090	328	460	380	244
27	106	246	201	553	1860	1250	424	6110	344	340	630	219
28	86	237	216	464	1390	1050	400	6010	4400	276	5620	198
29	77	237	202	629	---	870	376	2800	3990	356	5980	186
30	68	262	206	8790	---	770	344	1210	1740	292	2600	174
31	63	---	226	16800	---	770	---	1910	---	231	3550	---
TOTAL	5487	67433	13384	32768	246030	128170	29147	40894	191633	73891	74273	102778
MEAN	177	2248	432	1057	8787	4135	972	1319	6388	2384	2396	3426
MAX	946	13800	2490	16800	19500	16700	2810	6110	21700	7350	12000	16700
MIN	43	82	175	88	462	770	344	240	326	231	121	174
CFSM	.07	.91	.17	.43	3.54	1.67	.39	.53	2.58	.96	.97	1.38
IN	.08	1.01	.20	.49	3.69	1.92	.44	.61	2.87	1.11	1.11	1.54
AC-FT	10880	133800	26550	65000	488000	254200	57810	81110	380100	146600	147300	203900
CAL YR 1981 TOTAL	944368			2587	MAX 62100	MIN 15	CFSM 1.04	IN 14.17	AC-FT 1873000			
WTR YR 1982 TOTAL	1005888			2756	MAX 21700	MIN 43	CFSM 1.11	IN 15.09	AC-FT 1995000			

SALT RIVER BASIN

05508000 SALT RIVER NEAR NEW LONDON, MO--continued

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.13	2.73	3.95	3.21	17.99	5.17	4.47	3.51	10.00	4.71	3.19	---
2	3.10	3.41	4.96	3.44	17.70	5.00	4.65	3.44	12.20	4.18	3.14	---
3	3.00	10.04	6.93	3.61	16.43	4.94	5.65	3.40	11.21	8.68	3.04	---
4	2.88	14.19	5.92	3.76	14.10	5.07	5.77	3.35	7.71	10.91	2.98	---
5	2.87	14.98	4.92	3.80	8.80	6.00	5.93	3.33	5.41	10.27	2.93	---
6	2.97	14.77	4.42	4.15	7.34	6.18	5.11	3.30	5.41	10.40	2.90	---
7	2.85	11.87	4.10	4.33	6.49	5.54	4.81	3.30	5.10	9.19	2.87	---
8	2.76	6.79	3.86	3.92	6.14	5.15	4.68	3.63	9.58	5.37	4.19	6.11
9	2.68	5.32	3.74	3.80	5.73	4.98	4.55	4.90	17.55	4.35	3.98	4.56
10	2.63	4.79	3.63	3.59	5.35	4.74	4.54	4.37	17.19	7.93	3.65	4.20
11	2.60	4.43	3.56	3.31	5.02	4.57	4.54	3.91	18.37	5.38	3.52	4.13
12	2.59	4.16	3.49	3.36	4.70	4.60	4.54	3.68	18.90	6.52	3.74	3.88
13	2.57	3.96	3.43	3.24	4.45	7.14	4.54	3.54	18.77	5.05	3.61	3.73
14	2.74	3.81	3.38	3.14	4.31	7.21	4.30	3.44	17.60	4.90	3.43	3.70
15	3.02	3.70	3.33	3.14	4.62	9.20	4.23	3.38	14.78	7.07	3.63	3.68
16	2.96	4.08	3.31	3.08	7.80	14.88	4.11	3.28	8.30	8.98	12.96	8.33
17	4.96	4.28	3.23	3.04	18.22	15.95	5.43	3.33	6.57	7.68	---	5.89
18	4.65	3.94	3.20	3.07	18.49	16.31	5.81	5.73	6.10	5.41	---	5.02
19	3.98	3.82	3.24	3.05	17.09	17.08	7.33	5.28	5.31	5.42	---	4.47
20	3.61	3.85	3.21	3.04	17.86	14.03	5.71	5.11	4.87	4.38	---	5.36
21	3.53	3.81	3.24	3.06	17.39	11.63	4.80	5.30	5.08	---	---	4.86
22	3.44	3.74	3.24	3.07	16.93	9.78	4.45	5.40	4.80	---	---	4.19
23	3.34	3.66	3.24	3.42	16.52	6.97	4.20	8.30	4.27	---	---	3.81
24	3.21	3.59	3.24	3.33	15.90	5.78	4.04	7.14	3.88	---	---	3.58
25	3.11	3.50	3.28	3.43	13.84	5.27	3.90	5.55	3.66	---	---	3.43
26	3.03	3.46	3.32	3.52	8.75	5.28	3.83	4.55	3.53	---	---	3.32
27	2.94	3.43	3.35	4.62	6.14	5.28	3.78	9.70	3.43	---	---	3.24
28	2.86	3.39	3.42	4.41	5.48	5.03	3.71	10.08	8.67	---	---	3.17
29	2.80	3.39	3.22	4.37	---	4.68	3.64	7.47	8.41	3.59	---	3.12
30	2.75	3.36	3.29	11.42	---	4.48	3.58	5.28	6.19	3.46	---	3.08
31	2.72	---	3.50	16.93	---	4.47	---	4.84	---	3.28	---	---

05508000 SALT RIVER NEAR NEW LONDON, MO--continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--August 1967 to July 1975, July 1977 to current year.

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT: July 1980 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 3,520 mg/L July 3, 1982; minimum daily mean, 8 mg/L October 1, 1982.

SUSPENDED-SEDIMENT LOADS: Maximum daily, 143,000 tons (130,000 metric tons) May 18, 1981; minimum daily, 0.45 tons (0.41 metric tons) August 3, 1980.

EXTREMES FOR CURRENT YEAR--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 3,520 mg/L July 3; minimum daily mean, 8 mg/L October 1.

SUSPENDED-SEDIMENT LOADS: Maximum daily, 117,000 tons (106,000 metric tons) March 6; maximum daily, 3.4 tons (3.1 metric tons) October 1.

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (FTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED 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 04...	1730	13300	210	7.2	15.0	180	7.0	69	5200	24000
JAN 06...	1400	647	540	8.0	.5	7.8	14.6	101	140	370
MAR 10...	1500	662	370	7.8	5.0	15	12.8	100	4	150
MAY 12...	1435	316	456	8.1	22.0	35	8.3	94	40	120
JUL 15...	1530	3460	196	7.6	25.5	600	5.4	66	14000	15000
SEP 23...	1515	450	334	8.0	17.0	3.8	8.6	89	900	2800

DATE	HARD- NESS (MG/L AS CaCO3) (00900)	HARD- NESS, NONCAR- BONATE (MG/L CaCO3) (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	PERCENT SODIUM (00932)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY FIELD (MG/L AS CaCO3) (00410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
NOV 04...	79	25	24	4.7	5.7	12	.3	7.6	75	25
JAN 06...	230	61	71	13	19	15	.6	4.4	164	95
MAR 10...	160	57	48	9.1	12	14	.4	4.2	100	66
MAY 12...	190	54	58	12	17	16	.6	4.5	140	77
JUL 15...	83	17	26	4.4	4.8	10	.2	5.4	66	26
SEP 23...	140	19	42	8.2	11	14	.4	6.0	120	37

SALT RIVER BASIN

05508000 SALT RIVER NEAR NEW LONDON, MO--continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)
NOV 04...	19	.2	9.7	153	--	.21	5490	.83	.150
JAN 06...	16	.2	7.5	337	--	.46	589	.93	.140
MAR 10...	13	.2	9.2	243	228	.33	434	.96	.330
MAY 12...	12	.2	5.1	286	270	.39	244	.89	.160
JUL 15...	6.3	.3	8.8	142	121	.19	1330	.79	<.060
SEP 23...	12	.2	11	201	204	.27	244	.36	<.060

DATE	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4) (71846)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS TOTAL (MG/L AS PO4) (71886)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P) (00671)	SEDI- MENT, SUS- PENDEED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDEED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
NOV 04...	.19	1.50	.200	.61	.090	.070	672	24100	81
JAN 06...	.18	.75	.050	.15	.050	.030	5	8.7	0
MAR 10...	.43	1.30	.100	.31	.030	<.020	50	89	80
MAY 12...	.21	1.80	.120	.37	.010	.020	79	67	82
JUL 15...	.08	8.50	.160	.49	.060	.080	1580	14800	94
SEP 23...	.08	1.60	.150	.46	.060	.030	207	252	68

SALT RIVER BASIN

05508000 SALT RIVER NEAR NEW LONDON, MO--continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC SUS- PENDE TOTAL (UG/L AS AS) (01001)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, TOTAL RECov- ERABLE (UG/L AS BA) (01007)	BARIUM, SUS- PENDE RECov- ERABLE (UG/L AS BA) (01006)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	CADMIUM TOTAL RECov- ERABLE (UG/L AS CD) (01027)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, TOTAL RECov- ERABLE (UG/L AS CR) (01034)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)
NOV 04...	5	4	1	200	100	74	2	<1	20	<10
JAN 06...	1	0	1	100	5	95	1	<1	<10	<10
MAY 12...	2	1	1	100	0	110	<1	<3	<10	<10
JUL 15...	5	4	1	400	300	75	2	<1	50	<10

DATE	COBALT, TOTAL RECov- ERABLE (UG/L AS CO) (01037)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, TOTAL RECov- ERABLE (UG/L AS CU) (01042)	COPPER, SUS- PENDE RECov- ERABLE (UG/L AS CU) (01041)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECov- ERABLE (UG/L AS FE) (01045)	IRON, SUS- PENDE RECov- ERABLE (UG/L AS FE) (01044)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECov- ERABLE (UG/L AS Pb) (01051)
NOV 04...	6	<3	53	46	7	13000	13000	260	18
JAN 06...	<1	<3	7	5	2	740	720	21	3
MAY 12...	1	<1	7	4	3	1700	1700	43	5
JUL 15...	10	<1	29	25	4	12000	12000	220	25

DATE	LEAD, SUS- PENDE RECov- ERABLE (UG/L AS Pb) (01050)	LEAD, DIS- SOLVED (UG/L AS Pb) (01049)	MANGA- NESE, TOTAL RECov- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, SUS- PENDE RECov- ERABLE (UG/L AS MN) (01054)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECov- ERABLE (UG/L AS HG) (71900)	MERCURY SUS- PENDE RECov- ERABLE (UG/L AS HG) (71895)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	NICKEL, TOTAL RECov- ERABLE (UG/L AS NI) (01067)
NOV 04...	17	1	590	490	100	.6	.5	.1	17
JAN 06...	--	<1	290	20	270	.4	--	<.1	2
MAY 12...	3	2	390	280	110	.1	.0	.2	5
JUL 15...	--	<1	1000	990	12	.4	.1	.3	38

DATE	NICKEL, SUS- PENDE RECov- ERABLE (UG/L AS NI) (01066)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, TOTAL RECov- ERABLE (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, TOTAL RECov- ERABLE (UG/L AS AG) (01077)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, TOTAL RECov- ERABLE (UG/L AS ZN) (01092)	ZINC, SUS- PENDE RECov- ERABLE (UG/L AS ZN) (01091)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 04...	12	5	1	<1	<1	<1	80	50	31
JAN 06...	0	3	<1	<1	<1	<1	20	0	21
MAY 12...	1	4	<1	<1	<1	<1	20	--	<12
JUL 15...	34	4	<1	<1	<1	<1	160	130	33

SALT RIVER BASIN

05508000 SALT RIVER NEAR NEW LONDON, MO--continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT

DATE	SIREAM- FLOW, INSTAN- TANEOUS (CFS)	SED. SUSP. FALL DIAM. % FINER THAN (70337)	SED. SUSP. FALL DIAM. % FINER THAN (70338)	SED. SUSP. FALL DIAM. % FINER THAN (70339)	SED. SUSP. FALL DIAM. % FINER THAN (70340)	SED. SUSP. FALL DIAM. % FINER THAN (70342)	SED. SUSP. FALL DIAM. % FINER THAN (70343)	SED. SUSP. FALL DIAM. % FINER THAN (70344)	SED. SUSP. FALL DIAM. % FINER THAN (70345)	SED. SUSP. FALL DIAM. % FINER THAN (70346)
MAR , 1982 15...	6110	51	54	61	75	97	99	100	100	100

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL

DATE	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)	BED MAT. SIEVE DIAM. % FINER THAN (80173)
JAN , 1982 26...	0	1	3	5	7	8	11	26	54	88

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
OCTOBER			NOVEMBER			DECEMBER			
1	156	8	3.4	82	38	8.4	553	55	82
2	146	21	8.3	302	188	153	1220	106	714
3	118	15	4.8	7640	796	10200	2490	228	1530
4	91	38	9.3	12500	623	21000	1560	144	607
5	97	52	14	13800	434	16200	936	168	425
6	108	56	16	13200	308	11000	668	144	260
7	88	63	15	7880	228	4850	510	88	121
8	70	63	12	2280	148	911	414	88	98
9	56	70	11	1180	98	312	354	76	73
10	50	76	10	865	90	210	319	67	58
11	46	48	6.0	677	122	223	291	59	46
12	45	43	5.2	544	95	140	266	64	46
13	43	62	7.2	456	41	50	248	231	155
14	79	60	13	391	42	44	228	252	155
15	124	52	17	348	53	50	214	---	---
16	137	57	21	531	52	75	210	---	---
17	946	97	248	588	64	102	203	---	---
18	753	62	126	452	69	84	189	---	---
19	440	77	91	399	60	65	195	---	---
20	308	116	96	410	57	63	183	---	---
21	288	98	76	395	43	46	178	---	---
22	243	69	45	362	28	27	175	---	---
23	210	80	45	328	34	30	176	---	---
24	173	70	33	308	38	32	180	---	---
25	146	134	53	275	30	22	182	---	---
26	124	55	18	258	25	17	189	---	---
27	106	50	14	246	27	18	201	---	---
28	88	39	9.3	237	29	19	216	---	---
29	77	49	10	237	34	22	202	---	---
30	68	43	7.9	262	31	22	208	---	---
31	63	41	7.0	---	---	---	226	---	---
TOTAL	5487	---	1052.4	67433	---	65995.4	13384	---	4370

05508000 SALT RIVER NEAR NEW LONDON, MO--continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JANUARY				FEBRUARY			MARCH		
1	197			18400	---	---	1170	77	243
2	212			17600	---	---	1070	48	139
3	265			14700	---	---	1040	36	101
4	322			9900	---	---	1250	38	128
5	373			3880	---	---	1850	41	205
6	486			2310	---	---	1890	70	357
7	529			1650	---	---	1420	43	165
8	391			1340	---	---	1190	28	90
9	309			1050	---	---	1050	24	68
10	225			837	---	---	906	24	59
11	179			708	---	---	804	36	78
12	167			587	---	---	1220	74	244
13	141			496	---	---	2880	350	2720
14	122			462	---	---	3270	728	6430
15	116			1000	---	---	7170	1040	22200
16	104			7890	---	---	13900	3150	117000
17	94			19200	---	---	16200	1480	64700
18	97			19400	---	---	16500	1420	63300
19	91			18900	---	---	16700	973	43900
20	88			19500	441	23200	11700	742	23400
21	91			18500	298	14900	8330	616	13900
22	101			17600	798	37900	5350	413	5970
23	173			16800	917	41600	2540	511	3500
24	146			15300	735	30400	1550	385	1610
25	171			10600	168	4810	1260	238	810
26	342			4170	224	2520	1250	252	850
27	553			1860	119	598	1250	434	1460
28	464			1390	88	330	1050	161	456
29	629			---	---	---	870	112	263
30	8790			---	---	---	770	105	218
31	16800			---	---	---	770	98	204
TOTAL	32768			246030	---	156258	128170	---	374768
APRIL				MAY			JUNE		
1	755	91	186	320	52	45	7310	1110	21900
2	1010	168	458	296	56	45	9490	798	20400
3	1560	490	2060	280	56	42	7320	483	9550
4	1790	287	1390	260	63	44	3060	364	3010
5	1610	252	1100	244	49	32	1320	224	798
6	1120	273	826	240	70	45	1370	168	621
7	960	462	1200	240	70	45	1570	245	1040
8	882	343	817	575	77	120	6990	2210	54000
9	816	140	308	972	98	257	16900	2180	90100
10	804	112	243	665	77	138	18500	858	42900
11	804	105	228	468	84	106	20700	609	34000
12	816	105	231	380	70	72	2170	392	2300
13	780	91	192	328	77	68	20900	357	20100
14	710	70	134	292	91	72	18200	308	15100
15	640	66	114	260	98	69	12100	287	9380
16	804	210	456	240	94	61	3670	182	1800
17	1630	1120	4930	954	47	121	2300	210	1300
18	2060	413	2300	1530	329	1360	1700	238	1090
19	2810	392	2970	1250	402	1360	1230	192	638
20	1480	791	3160	1070	357	1030	1030	168	467
21	966	532	1390	1160	581	1820	1110	133	399
22	735	308	611	1610	455	1980	894	112	270
23	615	161	267	4050	1190	13000	635	84	144
24	530	147	210	2730	749	5520	456	98	121
25	472	140	178	1350	97	354	376	91	92
26	444	112	134	1090	539	1590	328	84	74
27	424	77	88	6110	2040	33700	344	77	72
28	400	77	83	6010	826	13400	4400	276	3280
29	376	56	57	2800	462	3490	3990	854	9200
30	344	52	48	1210	266	869	1740	546	2570
31	---	---	---	1910	357	1840	---	---	---
TOTAL	29147	---	26369	40894	---	82695	172103	---	346716

SALT RIVER BASIN

05508000 SALT RIVER NEAR NEW LONDON, MO--continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JULY			AUGUST			SEPTEMBER			
1	846	448	1020	204	52	29	8080	392	8550
2	640	910	4070	183	42	21	9900	350	9360
3	3080	3520	49800	156	32	13	12900	762	26500
4	7350	1600	31800	140	46	17	16000	560	24200
5	6860	966	17900	128	63	22	16700	560	25300
6	6820	854	15700	121	126	41	13500	273	9950
7	4360	763	8980	485	262	343	7270	133	2610
8	1270	413	1420	468	245	310	1700	70	321
9	675	665	1210	464	189	237	775	105	220
10	2550	3460	23800	408	84	93	630	52	88
11	1510	952	3880	352	63	60	575	49	76
12	2000	462	2490	408	77	85	468	42	53
13	1040	259	727	356	77	74	412	49	55
14	1220	420	1380	288	98	76	392	35	37
15	3400	819	7520	1280	648	1750	1080	670	1950
16	4900	819	10800	10300	1930	13500	3650	1760	17300
17	3020	672	5480	12000	994	32200	1670	168	758
18	1300	448	1570	11000	476	14100	1010	84	229
19	1210	364	1190	9200	343	8520	1100	70	208
20	755	616	1260	4520	182	2220	1370	98	363
21	4590	1720	21300	1210	140	457	924	80	200
22	6120	1030	17000	670	84	152	595	35	56
23	4810	644	8360	472	77	98	428	42	49
24	930	315	791	380	112	115	344	46	43
25	680	175	321	320	56	48	284	49	38
26	460	158	196	380	42	43	244	46	30
27	340	168	154	630	252	429	219	49	29
28	276	140	104	5620	805	12200	198	42	22
29	356	122	117	5980	357	5760	186	35	18
30	292	70	55	2600	231	1620	174	28	13
31	231	52	32	3550	287	2750	---	---	---
TOTAL	73891	---	240427	74273	---	97383	102778	---	128626
YEAR	966358		1524659.8						

05508805 SPENCER CREEK BELOW PLUM CREEK NEAR FRANKFORD, MO

LOCATION.--Lat 39°31'13", long 91°20'32", in NW¼NW¼NW¼ sec.27, T.55 N., R.4 W., Ralls County, Hydrologic Unit 07110007, on left bank 25 ft (7.62 m) downstream from bridge on U.S. Highway 61, 0.75 mi (1.21 km) downstream from Plum Creek, 2.5 mi (4.02 km) northwest of Frankford, and at mile 4.5 (7.24 km).

DRAINAGE AREA.--206 mi² (534 km²).

PERIOD OF RECORD.--March 24, 1930 to September 1936, October 1961 to current year, prior to 1978 fragmentary record.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 485.00 ft (147.828 m) National Geodetic Vertical Datum of 1929. March 24, 1930 to September 30, 1936 nonrecording gage at site 0.75 mi (1.21 km) upstream at datum 3.63 ft (1.106 m) higher. October 7, 1961 to July 15, 1974, fragmentary record, at present site and datum unknown, July 26, 1974 to April 15, 1975 from nonrecording gage present site and datum.

REMARKS.--Records good except for periods of fragmentary gage height and ice effect which are fair, several observations of water temperature and specific conductance were made during the year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 10,000 ft³/s (283 m³/s) June 9, at 1230, gage height, 14.22 ft (4.334 m); minimum daily discharge, 0.65 ft³/s (0.018 m³/s) Oct. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	LCI	NCV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	26	270	38	288	90	60	37	200	54	13	111
2	1.0	170	134	44	220	91	82	35	84	210	11	572
3	.78	1250	76	175	130	100	491	32	42	1730	8.7	294
4	.65	2160	55	233	89	258	182	28	33	663	7.3	104
5	151	372	43	169	78	200	135	26	42	920	6.0	59
6	48	177	39	127	59	124	140	27	49	215	6.0	33
7	19	115	35	71	54	97	101	27	654	86	72	22
8	8.3	83	29	54	48	79	91	24	2000	53	218	18
9	4.3	66	27	44	42	65	95	22	7190	47	34	15
10	5.1	54	24	26	38	62	96	20	1350	46	29	12
11	3.6	46	23	22	36	136	84	18	256	45	81	10
12	2.7	42	22	20	33	151	75	16	179	39	39	9.2
13	5.3	37	20	22	30	722	65	16	130	29	24	9.1
14	62	33	20	23	42	322	56	17	99	400	18	61
15	58	31	18	23	656	996	53	17	94	264	449	682
16	17	151	18	21	1950	1780	218	15	184	76	375	200
17	16	96	21	17	1590	393	663	17	104	40	122	76
18	15	64	19	16	924	231	188	17	69	26	55	47
19	16	51	18	16	2410	492	122	15	55	20	40	54
20	8.9	83	17	17	2050	205	108	17	46	17	24	34
21	5.3	65	19	22	787	160	87	393	37	288	26	24
22	6.2	50	20	26	453	122	76	186	31	86	21	19
23	3.3	44	21	95	379	103	67	56	25	38	19	15
24	2.7	38	21	94	306	94	60	33	33	23	19	14
25	2.2	33	20	69	208	120	55	23	26	16	18	12
26	4.1	34	21	48	148	129	55	89	24	14	21	11
27	2.2	34	24	37	114	100	52	87	22	89	152	11
28	8.4	28	24	80	98	83	58	42	161	20	148	11
29	3.5	25	23	212	---	75	46	24	208	15	69	10
30	3.3	62	19	5860	---	75	39	20	106	23	108	9.2
31	6.5	---	25	783	---	71	---	141	---	16	196	---
TOTAL	491.63	5520	1167	8504	13260	7726	3700	1537	13533	5608	2429.0	2558.5
MEAN	15.9	184	37.6	274	474	249	123	49.6	451	181	78.4	85.3
MAX	151	2160	270	5860	2410	1780	663	393	7190	1730	449	682
MIN	.65	25	17	16	30	62	39	15	22	14	6.0	9.1
CFSM	.08	.89	.18	1.33	2.30	1.21	.60	.24	2.19	.88	.38	.41
IN.	.09	1.00	.21	1.54	2.39	1.40	.67	.28	2.44	1.01	.44	.46
AC-FI	975	10950	2310	16870	26300	15320	7340	3050	26840	11120	4820	5070
CAL YR 1981	ICTAL	93353.83	MEAN	256	MAX	15600	MIN	.65	CFSM	1.24	IN	16.86
WTR YR 1982	ICTAL	66034.13	MEAN	181	MAX	7190	MIN	.65	CFSM	.88	IN	11.92
									AC-FI	185200		
									AC-FI	131000		

SALT RIVER BASIN

05508805 SPENCER CREEK BELOW PLUM CREEK NEAR FRANKFORD, MO--continued

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	3.01	4.63	3.29	4.64	3.68	3.48	3.28	4.34	3.45	3.04	3.79
2	2.72	3.91	4.02	3.33	4.49	3.67	3.48	3.26	3.69	3.34	3.01	4.40
3	2.72	4.82	3.66	4.09	3.99	3.73	5.20	3.23	3.36	6.98	2.93	4.69
4	2.72	9.85	3.49	4.38	3.63	4.39	4.18	3.20	3.24	6.32	2.90	3.81
5	5.04	5.13	3.37	4.09	3.65	4.34	3.85	3.18	3.41	6.58	2.91	3.47
6	3.49	4.19	3.33	3.93	3.41	3.85	3.96	3.19	3.42	4.33	2.89	3.24
7	3.19	3.89	3.31	3.54	3.45	3.70	3.76	3.20	3.22	3.70	3.64	3.16
8	3.03	3.68	3.25	3.41	3.41	3.61	3.67	3.17	4.85	3.49	4.21	3.11
9	2.88	3.55	3.22	3.39	3.37	3.49	3.69	3.14	13.47	3.38	3.30	3.07
10	2.98	3.45	3.19	3.20	1.37	3.48	3.70	3.12	7.79	3.35	3.19	2.99
11	2.93	3.39	3.17	3.18	3.30	3.84	3.63	3.10	4.52	3.33	3.76	3.02
12	2.94	3.34	3.16	3.13	3.28	3.89	3.57	3.07	4.16	3.31	3.31	2.91
13	2.81	3.30	3.14	3.15	3.25	6.19	3.51	3.07	3.92	3.21	3.18	2.96
14	3.31	3.26	3.13	3.17	3.25	4.54	3.43	3.05	3.74	4.98	3.11	3.38
15	3.64	3.23	3.12	3.17	4.05	6.83	3.40	3.08	3.63	4.72	3.17	7.68
16	3.15	4.03	3.10	3.17	7.02	9.34	3.98	3.05	4.02	3.63	5.07	4.31
17	3.14	3.77	3.14	3.10	7.65	5.10	5.50	3.10	3.79	3.33	3.89	3.60
18	3.13	3.54	3.13	3.09	5.83	4.34	4.25	3.08	3.54	3.20	3.48	3.39
19	3.17	3.43	2.30	3.09	6.72	4.94	3.86	3.05	3.45	3.12	3.37	3.46
20	3.06	3.68	3.05	3.09	7.51	4.34	3.81	3.07	3.37	3.08	3.13	3.30
21	2.98	3.56	3.07	3.16	6.02	4.06	3.65	6.16	3.31	5.06	3.21	3.16
22	3.00	3.42	3.13	3.15	5.23	3.86	3.55	4.22	3.24	3.74	3.13	3.10
23	2.88	3.38	3.15	3.65	5.04	3.76	3.54	3.48	3.13	3.30	3.06	3.06
24	2.84	3.33	3.16	3.78	4.82	3.71	3.49	3.27	3.18	3.16	3.11	3.02
25	2.84	3.28	3.14	3.57	4.33	3.80	3.46	3.16	3.14	3.08	3.12	3.03
26	2.97	3.26	3.14	3.43	4.01	3.89	3.46	3.24	3.16	3.03	3.11	3.00
27	2.87	3.28	3.16	3.28	3.82	3.76	3.42	3.43	3.14	3.77	3.94	3.00
28	2.27	3.23	3.18	3.56	3.73	3.63	3.44	3.37	4.13	3.14	4.05	2.98
29	2.89	3.20	3.05	4.02	---	3.57	3.36	3.17	3.69	3.00	3.57	2.96
30	2.88	3.18	3.12	13.57	---	3.56	3.30	3.13	3.82	3.19	3.67	2.96
31	2.95	---	3.17	6.25	---	3.58	---	3.33	---	3.11	4.41	---

05514500 CUIVRE RIVER NEAR TROY, MO

LOCATION.--Lat 39°00'59", long 90°59'00", in SE¼ sec.14, T.49 N., R.1 N., Lincoln County, Hydrologic Unit 07110008, on downstream side of right end of downstream bridge on dual U.S. Highway 61, 1.2 mi (1.9 km) downstream from confluence of North and West Forks Cuivre River and 2 mi (3.2 km) north of Troy.

DRAINAGE AREA.--903 mi² (2,339 km²).

PERIOD OF RECORD.--February 1922 to July 1972, May 1979 to current year.

REVISED RECORDS.--WSP 855: 1933(m), 1935(m), 1937(m). WSP 895: 1939. WSP 1005: 1942(m). WSP 1308: 1922-25(m).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 450.27 ft (137.242 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1930, nonrecording gage at site 3 mi (4.83 km) downstream at datum 4.31 ft (1.318 m) lower. Oct. 1, 1930 to July 1939, nonrecording gage at present site and datum.

REMARKS.--Records good, except for periods of lost record, which are poor. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--52 years (water years 1922-71, 1980 to current year) 640 ft³/s (18.12 m³/s), 9.63 in/yr (245 mm/yr), 463,700 acre-ft/yr (572 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 120,000 ft³/s (3.398 m³/s) Oct. 5, 1941, gage height 33.4 ft (10.180 m) from floodmarks; no flow at times in 1936, 1954, 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of December 1895 was 5 or 6 feet lower at Frenchmens Bluff, 3 mi (4.83 km) downstream, than the October 1941 flood which is the highest flood since 1888.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 10,000 ft³/s (283 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s)	Discharge (m ³ /s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft ³ /s)	Discharge (m ³ /s)	Gage height (ft)	Gage height (m)
Nov. 4	1630	10,700	303	20.52	6.254	Aug. 27	0915	11,200	317	20.91	6.373
Jan. 30	unknown	ice jam		26.28	8.010	Sept. 3	0030	13,100	371	22.16	6.754
Mar. 17	unknown	14,100	399	22.78	6.943	Sept. 15	0945	10,500	297	20.32	6.194
June 10	0045	*16,500	467	23.91	7.288	Sept. 18	1015	11,400	323	21.05	6.416

Minimum daily discharge, 8.8 ft³/s (0.25 m³/s) Oct. 7, 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	16	1000	90	4400	405	310	143	1400	188	79	2950
2	9.8	29	630	84	3100	380	313	133	679	126	74	8330
3	9.5	461	335	84	2200	365	1830	125	323	1940	70	7880
4	9.8	8280	214	1800	1600	530	1080	117	1900	3170	67	2240
5	9.8	3730	133	2450	1500	824	599	110	3200	2110	63	656
6	9.8	914	134	1300	1540	563	590	104	845	1130	1350	363
7	8.8	443	120	800	1400	428	470	102	820	380	899	268
8	8.8	283	110	440	536	368	403	96	3420	213	2050	222
9	9.5	205	102	310	590	325	388	89	13500	161	298	194
10	9.8	168	96	240	425	305	395	84	11700	1040	150	177
11	11	148	91	180	212	295	375	79	2990	1320	125	157
12	11	129	88	140	165	368	335	65	1000	591	120	141
13	11	116	86	120	129	640	300	72	702	903	96	154
14	15	107	83	122	110	1260	270	72	517	481	84	2030
15	17	102	79	128	679	3600	263	73	616	258	1170	8280
16	16	113	79	132	6870	9200	524	71	2790	428	5350	2370
17	18	181	77	150	4910	10400	2380	69	988	220	1440	1320
18	32	172	75	150	4210	5000	844	79	500	148	557	8400
19	32	148	72	125	5510	2100	509	114	333	122	207	1390
20	31	128	68	120	5850	1300	405	310	257	108	141	611
21	30	116	63	120	3270	860	343	2130	192	4580	110	378
22	32	113	60	140	1760	539	286	1820	174	982	94	271
23	28	107	68	250	1310	450	250	482	147	289	318	226
24	25	101	77	1720	1130	400	214	222	126	183	732	199
25	19	95	80	900	873	851	205	147	110	136	220	177
26	17	94	82	500	659	1160	203	123	102	114	482	163
27	17	92	84	215	524	637	199	647	111	102	9170	150
28	17	90	92	640	450	470	184	719	663	263	2710	140
29	18	85	104	2600	---	403	168	340	345	133	1120	131
30	17	102	104	9760	---	370	156	315	335	101	1690	122
31	16	---	97	6400	---	338	---	715	---	88	2640	---
TOTAL	524.6	16868	4583	32210	55912	45134	14791	9767	50785	22010	33676	50090
MEAN	16.9	562	148	1039	1997	1456	493	315	1693	710	1086	1670
MAX	32	8280	1000	9760	6870	10400	2380	2130	13500	4580	9170	8400
MIN	8.8	16	60	84	110	295	156	65	102	68	63	122
CFSM	.02	.62	.16	1.15	2.21	1.61	.55	.35	1.88	.79	1.20	1.85
IN.	.02	.69	.19	1.33	2.30	1.86	.61	.40	2.09	.91	1.39	2.06
AC=FT	1040	33460	9090	63890	110900	89520	29340	19370	100700	43600	66800	99350

CAL YR	TOTAL	MEAN	MAX	MIN	CFSM	IN	AC=FT
YR 1981	269334.2	738	19700	2.0	.82	11.10	534200
YR 1982	336350.6	922	13500	8.8	1.02	13.86	667200

MISSISSIPPI RIVER MAIN STEM

05587500 MISSISSIPPI RIVER AT ALTON, IL

LOCATION.--Lat 38°53'06", long 90°10'51", in NE¼ sec.14, T.5 N., R.10 W., Madison County, Hydrologic Unit 07110009, near right bank in downstream end of intermediate lock wall of lock and dam 26 at Alton, 300 ft (91 m) downstream from Missouri & Illinois Bridge & Belt Railroad bridge, 7.7 mi (12.4 km) upstream from Missouri River, and at mile 202.7 (326.1 km) upstream from Ohio River.

DRAINAGE AREA.--171,500 mi² (444,200 km²), approximately.

PERIOD OF RECORD.--Discharge: October 1927 to current year. Monthly discharge only for some periods, published in WSP 1308. Gage heights: At Grafton since 1879 and at Alton since January 1904 in reports of Mississippi River Commission, December 1890 to September 1893 and January 1917 to December 1939 in reports of National Weather Service.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Mar. 20, 1933, nonrecording gage at Grafton 15.3 mi (24.6 km) upstream, at datum 403.79 ft (123.075 m) higher. Mar. 20, 1933, to Jan. 4, 1937, and Nov. 11, 1937, to Jan. 31, 1938, nonrecording gage 300 ft (91 m) upstream at datum 395.48 ft (120.542 m) higher. Since July 11, 1940, auxiliary water-stage recorder 5.9 mi (9.5 km) downstream; previously various combinations of gages were used.

REMARKS.--Records good. Natural flow of stream affected by many reservoirs and navigation dams in upper Mississippi River basin. Floodwater from Missouri River overtops or breaches the levees at extreme high stages. Overflow from Missouri River occurred during various floods as shown in the following table:

Period	Runoff for period acreft hm ³		Date	Maximum Discharge	
				ft ³ /s	m ³ /s
May 21 to June 4, 1943	1,075,000	1,330	May 24, 1943	90,000	2,550
Apr. 29 to May 13, 1944	891,000	1,100	Apr. 30, 1944	90,000	2,550
June 29 to July 19, 1947	687,000	847	July 2, 1947	65,000	1,840
July 5-31, 1951	2,534,000	3,120	July 20, 1951	110,000	3,120
Apr. 3-7, 23-26, 1973	Unknown		Unknown	Unknown	

AVERAGE DISCHARGE.--55 years, 99,844 ft³/s (2,828 m³/s), 72,340,000 acre-ft/yr (89.2 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 535,000 ft³/s (15,200 m³/s) Apr. 29, 1973, includes undetermined amount of overflow from Missouri River; maximum elevation, 432.15 ft (131.719 m) Apr. 28, 1973; minimum discharge, 7,960 ft³/s (225 m³/s) Nov. 7, 1948, result of temporary storage in pool of lock and dam 26; minimum elevation, 390.50 ft (119.024 m) Jan. 27, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 1844 reached a stage of 432.10 ft (131.704 m), present datum.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 363,000 ft³/s (10,280 m³/s) Mar. 24 at 2200; maximum elevation, 421.40 ft. (128.443 m) June 12 at 0400; minimum daily discharge, 32,300 ft³/s (915 m³/s) Dec. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	83400	102000	83400	52200	168000	220000	298000	272000	230000	119000	126000	127000
2	76900	94800	85900	55200	124000	208000	290000	273000	237000	109000	123000	131000
3	79100	98800	107000	62100	97500	209000	287000	273000	244000	136000	109000	143000
4	81500	137000	112000	67500	95400	203000	282000	270000	248000	218000	110000	87000
5	73600	183000	104000	63700	68800	187000	278000	266000	248000	239000	101000	90800
6	78800	174000	105000	66200	75100	172000	273000	263000	243000	230000	105000	84100
7	69800	132000	103000	58700	68600	155000	268000	254000	236000	227000	131000	87500
8	84000	107000	98100	58100	65400	138000	264000	241000	231000	210000	149000	73900
9	92600	87200	87200	55800	64500	138000	260000	231000	222000	182000	141000	73900
10	90200	82700	77600	45600	65100	129000	255000	232000	232000	189000	143000	74700
11	91100	60000	70600	48900	64000	131000	249000	219000	241000	173000	121000	65800
12	89100	72600	77400	54100	63200	164000	248000	207000	245000	147000	99800	61100
13	90800	69400	72100	49100	64000	189000	248000	198000	236000	138000	90800	67200
14	98200	62700	75000	50200	63600	205000	253000	190000	223000	146000	80900	66600
15	116000	58000	70300	49000	63600	233000	258000	188000	206000	157000	75400	75000
16	130000	58000	66000	44700	73600	255000	265000	192000	188000	173000	89000	97100
17	128000	55600	72400	49300	109000	280000	273000	192000	161000	185000	104000	85400
18	113000	58300	45600	46800	118000	307000	288000	188000	162000	181000	89700	120000
19	101000	66800	32300	43000	154000	329000	309000	194000	172000	207000	80100	119000
20	102000	64600	33200	43800	173000	340000	332000	188000	162000	225000	70300	123000
21	101000	58600	39200	44900	203000	347000	340000	195000	179000	248000	56900	117000
22	109000	69300	44300	49600	243000	351000	341000	209000	161000	261000	67300	106000
23	101000	71300	43000	47200	267000	343000	332000	214000	120000	271000	57700	97600
24	90800	70200	41900	51800	280000	357000	320000	214000	88700	273000	53500	91900
25	95800	67400	46200	51800	272000	359000	310000	223000	109000	250000	62500	82800
26	97600	75200	47500	52200	241000	355000	300000	210000	102000	202000	72000	86600
27	99600	66600	55200	49600	230000	349000	293000	210000	104000	170000	97800	80700
28	101000	63900	56000	47500	227000	342000	287000	218000	114000	164000	116000	74800
29	101000	65600	57200	51100	---	332000	282000	230000	132000	151000	110000	71600
30	97500	73600	58400	73700	---	322000	275000	232000	128000	141000	68800	62500
31	100000	---	60100	154000	---	309000	---	241000	---	135000	74300	---
TOTAL	2963400	2506200	2127100	1737400	3821600	7958000	8558000	6927000	5624700	5857000	2975800	2724600
MEAN	95590	83540	68620	56050	136500	256700	285300	223500	187500	188900	95990	90820
MAX	130000	183000	112000	154000	280000	359000	341000	273000	248000	273000	149000	143000
MIN	69800	55600	32300	43000	63200	129000	248000	188000	88700	109000	53500	61100
CFSM	.56	.49	.40	.33	.80	1.50	1.66	1.30	1.09	1.10	.56	.53
IN.	.64	.54	.46	.38	.83	1.73	1.86	1.50	1.22	1.27	.65	.59
AC-FT	5878000	4971000	4219000	3446000	7580000	15780000	16970000	13740000	11160000	11620000	5902000	5404000
CAL YR 1981 TOTAL	40946800			MEAN 112200	MAX 304000	MIN 31200	CFSM .65	IN 6.88	AC-FT 81220000			
WIR YR 1982 TOTAL	53780800			MEAN 147300	MAX 359000	MIN 32300	CFSM .86	IN 11.67	AC-FT 106700000			

MISSISSIPPI RIVER MAIN STEM

05587500 MISSISSIPPI RIVER AT ALTON, IL--continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT: October 1980 to current year.

REMARKS.--The number of missing days of record exceeds 20 percent of the year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 2,120 mg/L May 13, 1981; minimum daily mean, 7 mg/L March 17, 1981.

SUSPENDED-SEDIMENT LOADS: Maximum daily, 1,120,000 tons (1,020,000 metric tons) July 7 and 8, 1981; minimum daily, 1,290 tons (1,170 metric tons) March 17, 1981.

EXTREMES FOR CURRENT YEAR.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 1,250 mg/L July 3; minimum daily mean, 52 mg/L October 3.

SUSPENDED-SEDIMENT LOADS: Maximum daily, 723,000 tons (656,000 metric tons) July 5; minimum daily, 9,710 tons (8,810 metric tons) September 14.

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL

	BED MAT.	BED MAT.	BED MAT.	BED MAT.	BED MAT.	BED MAT.	BED MAT.	BED MAT.	BED MAT.	BED MAT.
	SIEVE DIAM.	SIEVE DIAM.	SIEVE DIAM.	SIEVE DIAM.	SIEVE DIAM.	SIEVE DIAM.	SIEVE DIAM.	SIEVE DIAM.	SIEVE DIAM.	SIEVE DIAM.
	% FINER THAN	% FINER THAN	% FINER THAN	% FINER THAN	% FINER THAN	% FINER THAN	% FINER THAN	% FINER THAN	% FINER THAN	% FINER THAN
DATE	.062 MM (80164)	.125 MM (80165)	.250 MM (80166)	.500 MM (80167)	1.00 MM (80168)	2.00 MM (80169)	4.00 MM (80170)	8.00 MM (80171)	16.0 MM (80172)	32.0 MM (80173)
OCT , 1981										
01...	0	0	2	28	74	85	89	91	94	100

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
OCTOBER			NOVEMBER			DECEMBER			
1	83400	53	11900	102000	146	40200	83400	111	25000
2	76900	53	11000	94800	132	33800	85900	248	57500
3	79100	52	11100	98800	138	36800	107000	142	41000
4	81500	69	15200	137000	420	155000	112000	109	33000
5	73600	64	12700	183000	552	273000	104000	135	37900
6	78800	68	14500	174000	---	---	105000	182	51600
7	69800	75	14100	132000	---	---	103000	184	51200
8	84000	79	17900	107000	---	---	98100	298	78900
9	92600	91	22800	87200	---	---	87200	192	45200
10	90200	74	18000	82700	---	---	77600	158	33100
11	91100	61	15000	60000	---	---	70600	146	27800
12	89100	67	16100	72600	110	21600	77400	130	27200
13	90800	50	12300	69400	106	19900	72100	114	22200
14	98200	61	16200	62700	108	18300	75000	---	---
15	116000	93	29100	58000	104	16300	70300	---	---
16	130000	120	42100	58000	90	14100	66000	---	---
17	128000	122	42200	55600	76	11400	72400	---	---
18	113000	151	46100	58300	76	12000	45600	---	---
19	101000	194	52900	66800	89	16100	32300	---	---
20	102000	178	49000	64600	88	15300	33200	---	---
21	101000	191	52100	58600	85	13400	39200	---	---
22	109000	214	63000	69300	84	15700	44300	---	---
23	101000	171	46600	71300	72	13900	43000	---	---
24	90800	157	38500	70200	73	13800	41900	---	---
25	95800	160	41400	67400	69	12600	46200	---	---
26	97600	183	48200	75200	81	16400	47500	---	---
27	99600	192	51600	66600	98	17600	55200	---	---
28	101000	169	46100	63900	94	16200	56000	---	---
29	101000	178	48500	65600	212	37500	57200	---	---
30	97500	146	38400	73600	189	37600	58400	---	---
31	100000	128	34600	---	---	---	60100	---	---
TOTAL	2963400	---	979200	2506200	---	878500	2127100	---	531600

MISSISSIPPI RIVER MAIN STEM

05587500 MISSISSIPPI RIVER AT ALTON, IL-- continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TUNS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TUNS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TUNS/DAY)
JANUARY			FEBRUARY			MARCH			
1	52200		168000	---	---	220000	---	---	---
2	55200		124000	---	---	208000	---	---	---
3	62100		97500	---	---	209000	---	---	---
4	67500		95400	---	---	203000	---	---	---
5	63700		88800	---	---	187000	---	---	---
6	66200		75100	---	---	172000	---	---	---
7	58700		68800	---	---	155000	---	---	---
8	58100		65400	---	---	138000	---	---	---
9	55800		64500	---	---	138000	---	---	---
10	45600		65100	---	---	129000	110		38300
11	48900		64000	---	---	131000	130		46000
12	54100		63200	---	---	164000	152		67300
13	49100		64000	---	---	189000	177		90300
14	50200		63600	---	---	205000	762		422000
15	49000		63600	---	---	233000	430		271000
16	44700		73600	---	---	255000	---	---	---
17	49300		109000	---	---	280000	---	---	---
18	46800		118000	---	---	307000	---	---	---
19	43000		154000	399		329000	---	---	---
20	43800		173000	627		340000	---	---	---
21	44900		203000	605		332000	347000	---	---
22	49600		243000	404		265000	351000	---	---
23	47200		267000	258		186000	343000	---	---
24	51800		280000	292		221000	357000	---	---
25	51800		272000	469		344000	359000	---	---
26	52200		241000	492		320000	355000	---	---
27	49600		230000	393		244000	349000	---	---
28	47500		227000	---	---	---	342000	---	---
29	51100		---	---	---	---	332000	---	---
30	73700		---	---	---	---	322000	---	---
31	154000		---	---	---	---	309000	---	---
TOTAL	1737400		3821600	---	---	2371000	7958000	---	934900
APRIL			MAY			JUNE			
1	298000	---	---	272000	188	138000	230000	366	227000
2	290000	---	---	273000	148	109000	237000	402	257000
3	287000	---	---	273000	184	136000	244000	314	207000
4	282000	---	---	270000	197	144000	248000	300	201000
5	278000	---	---	266000	190	136000	248000	598	400000
6	273000	---	---	263000	189	134000	243000	930	610000
7	268000	---	---	254000	198	136000	236000	738	470000
8	264000	---	---	241000	200	130000	231000	446	278000
9	260000	---	---	231000	201	125000	222000	322	193000
10	255000	---	---	232000	208	130000	232000	294	184000
11	249000	---	---	219000	262	155000	241000	500	325000
12	248000	303	203000	207000	300	168000	245000	718	475000
13	248000	315	211000	198000	274	146000	236000	812	517000
14	253000	378	258000	190000	260	133000	223000	900	542000
15	258000	358	249000	188000	248	126000	206000	798	444000
16	265000	293	210000	192000	232	120000	188000	412	209000
17	273000	304	224000	192000	218	113000	161000	232	101000
18	288000	505	393000	188000	218	111000	162000	264	115000
19	309000	748	624000	194000	221	116000	172000	218	101000
20	332000	514	461000	188000	245	124000	182000	280	138000
21	340000	329	302000	195000	240	126000	179000	564	273000
22	341000	295	272000	209000	380	214000	161000	580	252000
23	332000	311	279000	214000	445	257000	120000	412	133000
24	320000	271	234000	214000	369	213000	88700	278	66600
25	310000	194	162000	223000	348	210000	109000	204	60000
26	300000	120	97200	210000	382	217000	102000	190	52300
27	293000	212	168000	210000	373	211000	104000	220	61800
28	287000	178	138000	218000	346	204000	114000	178	54800
29	282000	190	145000	230000	384	238000	132000	210	74800
30	275000	225	167000	232000	342	214000	128000	212	73300
31	---	---	---	241000	326	212000	---	---	---
TOTAL	8558000	---	4797200	6927000	---	4946000	5624700	---	7095600

05587500 MISSISSIPPI RIVER AT ALTON, IL--continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JULY				AUGUST				SEPTEMBER	
1	119000	860	276000	126000	256	87100	127000	137	47000
2	109000	1220	359000	123000	205	68100	131000	138	48800
3	136000	1250	459000	109000	144	42400	143000	106	40900
4	218000	1180	695000	110000	115	34200	87000	120	28200
5	239000	1120	723000	101000	336	91600	90800	140	34300
6	230000	1050	652000	105000	168	47600	84100	143	32500
7	227000	1000	613000	131000	122	43200	87500	108	25500
8	210000	985	558000	149000	160	64400	73900	108	21500
9	182000	860	423000	141000	150	57100	73900	87	17400
10	189000	650	332000	143000	200	77200	74700	60	12100
11	173000	550	257000	121000	210	68600	65800	82	14600
12	147000	550	218000	99800	216	58200	61100	103	17000
13	138000	560	209000	90800	86	21100	67200	72	13100
14	146000	454	179000	80900	88	19200	66600	54	9710
15	157000	378	160000	75400	110	22400	75000	142	28800
16	173000	330	154000	89000	140	33600	97100	161	42200
17	185000	362	181000	104000	177	49700	85400	109	25100
18	181000	502	245000	89700	130	31500	120000	---	---
19	207000	550	307000	80100	87	18800	119000	---	---
20	225000	740	450000	70300	108	20500	123000	---	---
21	248000	832	557000	56900	96	14700	117000	---	---
22	261000	718	506000	67300	91	16500	106000	---	---
23	271000	640	468000	57700	77	12000	97600	---	---
24	273000	524	386000	53500	68	9820	91900	---	---
25	250000	286	193000	62500	73	12300	82800	325	72700
26	202000	244	133000	72000	72	14000	86600	267	62400
27	170000	254	117000	97800	73	19300	80700	198	43100
28	164000	288	128000	116000	73	22900	74800	91	18400
29	151000	360	147000	110000	72	21400	71600	60	11600
30	141000	310	118000	68800	71	13200	62500	59	9960
31	135000	258	94000	74300	75	15000	---	---	---
TOTAL	5857000	---	10297000	2975800	---	1127620	2724600	---	676870
YEAR	53780800		34635490						

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

MISSISSIPPI RIVER MAIN STEM

05587550 MISSISSIPPI RIVER BELOW ALTON, IL
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

LOCATION.--Lat 38°51'41", long 90°08'15", Madison County, Hydrologic Unit 07110009, 3.0 mi (4.8 km) downstream from gaging station, 4.7 mi (7.6 km) upstream from Missouri River and at mile 199.7 (321.3 km) upstream from Ohio River.

DRAINAGE AREA.--171,500 mi² (444,200 km²), approximately above gaging station.

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (FTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED 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 05...	0930	181000	460	8.1	14.0	70	9.2	88	1600	2200
JAN 07...	0900	59100	670	8.2	.5	23	16.0	111	1500	160
MAR 11...	1000	127000	490	7.8	2.5	34	11.6	85	36	420
MAY 13...	1040	204000	385	8.1	19.0	96	6.6	70	280	1100
JUL 16...	1000	150000	435	8.1	25.5	80	5.6	68	110	200
SEP 24...	1200	97400	432	8.3	19.5	9.8	6.2	67	400	740

DATE	HARD- NESS (MG/L AS CAC03) (00900)	HARD- NESS, NONCAR- BONATE (MG/L CAC03) (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	PERCENT SODIUM (00932)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY FIELD AS CAC03) (00410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
NOV 05...	210	35	53	20	11	10	.4	3.2	174	15
JAN 07...	280	63	67	28	21	14	.6	3.0	210	67
MAR 11...	190	57	47	17	23	21	.8	3.9	130	43
MAY 13...	190	58	49	16	7.5	8	.3	3.0	130	35
JUL 16...	210	67	53	18	7.7	7	.3	3.5	140	39
SEP 24...	190	61	45	19	11	11	.4	3.4	130	44

05587550 MISSISSIPPI RIVER BELOW ALTON, IL--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4) (71846)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS TOTAL (MG/L AS PU4) (71886)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P) (00671)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SEDI- MENT, CHARGE, SUS- PENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
NOV 05...	.26	.94	.160	.49	.090	.080	437	214000	74
JAN 07...	.64	1.50	.130	.40	.130	.080	49	7820	87
MAR 11...	.76	2.10	.210	.64	.180	.200	111	38100	93
MAY 13...	.26	2.10	.300	.92	.060	.020	243	134000	86
JUL 16...	.08	2.10	.160	.49	.100	.110	339	137000	68
SEP 24...	.08	.50	.250	.77	.140	.080	87	22900	96

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)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)
NOV 05...	18	.2	5.2	248	234	.34	121000	2.2	.200
JAN 07...	40	.3	6.4	388	355	.53	61900	3.4	.500
MAR 11...	42	.2	6.6	286	261	.39	98800	3.3	.590
MAY 13...	14	.1	4.7	226	214	.30	124000	3.0	.200
JUL 16...	15	.2	9.8	278	238	.38	113000	4.5	<.060
SEP 24...	17	.2	7.3	243	243	.33	63900	1.6	<.060

MISSISSIPPI RIVER MAIN STEM

05587550 MISSISSIPPI RIVER BELOW ALTON, IL--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	ARSENIC		ARSENIC		BARIUM,		BARIUM,		CADMIUM		CHROMIUM,	
	SUS- PENDE		DIS- RECOV-		TOTAL RECOV-		SUS- PENDE		TOTAL RECOV-		TOTAL RECOV-	
	ERABLE (UG/L AS AS) (01002)	ERABLE (UG/L AS AS) (01001)	ERABLE (UG/L AS AS) (01000)	ERABLE (UG/L AS AS) (01007)	ERABLE (UG/L AS BA) (01006)	ERABLE (UG/L AS BA) (01005)	ERABLE (UG/L AS BA) (01005)	ERABLE (UG/L AS BA) (01005)	ERABLE (UG/L AS CD) (01027)	ERABLE (UG/L AS CD) (01025)	ERABLE (UG/L AS CR) (01034)	ERABLE (UG/L AS CR) (01030)
NOV 05...	3	2	1	100	30	73	1	<1	10	<10		
JAN 07...	2	1	1	100	40	61	<1	<1	10	<10		
MAY 13...	2	1	1	400	300	68	<1	<5	<10	<10		
JUL 16...	2	0	2	<100	--	96	<1	<1	10	<10		

DATE	COBALT,		COBALT,		COPPER,		COPPER,		IRON,		IRON,	
	SUS- PENDE		DIS- RECOV-		TOTAL RECOV-		SUS- PENDE		TOTAL RECOV-		TOTAL RECOV-	
	ERABLE (UG/L AS CO) (01037)	ERABLE (UG/L AS CO) (01035)	ERABLE (UG/L AS CO) (01042)	ERABLE (UG/L AS CO) (01041)	ERABLE (UG/L AS CU) (01040)	ERABLE (UG/L AS CU) (01040)	ERABLE (UG/L AS FE) (01045)	ERABLE (UG/L AS FE) (01044)	ERABLE (UG/L AS FE) (01045)	ERABLE (UG/L AS FE) (01044)	ERABLE (UG/L AS CR) (01046)	ERABLE (UG/L AS CR) (01046)
NOV 05...	3	<3	55	47	8	8300	8200	77	18	17		
JAN 07...	3	<3	17	15	2	1300	1200	71	3	--		
MAY 13...	2	<1	11	8	3	5100	5100	28	13	10		
JUL 16...	2	<1	13	9	4	5100	5100	31	3	--		

DATE	MANGA- NESE,		MANGA- NESE,		MANGA- NESE,		MERCURY		MERCURY		NICKEL,	
	SUS- PENDE		DIS- RECOV-		TOTAL RECOV-		SUS- PENDE		TOTAL RECOV-		TOTAL RECOV-	
	ERABLE (UG/L AS PD) (01049)	ERABLE (UG/L AS MN) (01055)	ERABLE (UG/L AS MN) (01054)	ERABLE (UG/L AS MN) (01056)	ERABLE (UG/L AS HG) (71900)	ERABLE (UG/L AS HG) (71895)	ERABLE (UG/L AS HG) (71890)	ERABLE (UG/L AS NI) (01067)	ERABLE (UG/L AS NI) (01066)	ERABLE (UG/L AS NI) (01066)	ERABLE (UG/L AS NI) (01066)	ERABLE (UG/L AS NI) (01066)
NOV 05...	1	480	460	16	.2	--	<.1	11	6			
JAN 07...	<1	130	70	61	.3	--	<.1	10	8			
MAY 13...	3	370	--	5	--	.0	.1	7	5			
JUL 16...	<1	240	230	7	.3	.0	.3	13	--			

DATE	NICKEL,		SILVER,		SILVER,		ZINC,		ZINC,	
	SUS- PENDE		DIS- RECOV-		TOTAL RECOV-		TOTAL RECOV-		TOTAL RECOV-	
	ERABLE (UG/L AS NI) (01065)	ERABLE (UG/L AS SE) (01147)	ERABLE (UG/L AS SE) (01146)	ERABLE (UG/L AS SE) (01145)	ERABLE (UG/L AS AG) (01077)	ERABLE (UG/L AS AG) (01075)	ERABLE (UG/L AS ZN) (01092)	ERABLE (UG/L AS ZN) (01091)	ERABLE (UG/L AS ZN) (01090)	ERABLE (UG/L AS ZN) (01090)
NOV 05...	5	<1	--	<1	<1	<1	70	70	5	
JAN 07...	2	1	--	<1	<1	<1	40	30	6	
MAY 13...	2	1	0	1	<1	<1	40	30	13	
JUL 16...	<1	1	0	1	<1	<1	40	20	17	

TARKIO RIVER BASIN

06813000 TARKIO RIVER AT FAIRFAX, MO

LOCATION.--Lat 40°20'20", long 95°24'11", in SW¼SW¼ sec.22, T.64 N., R.40 W., Atchison County, Hydrologic Unit 1024005, in left bank on downstream side of bridge pier, 0.5 mi (0.8 km) west of Fairfax, and 2 mi (3.2 km) downstream from Cow Branch, and at mile 13.3 (21.4 km).

DRAINAGE AREA.--508 mi² (1,315 km²).

PERIOD OF RECORD.--March 1922 to current year.

REVISED RECORDS.--WSP 856: 1937.

GAGE.--Water-stage recorder. Datum of gage is 867.66 ft (264.463 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1931, nonrecording gage at site 50 ft (15 m) downstream at datum 2.0 ft (0.61 m) higher. Oct. 1, 1931, to Oct. 22, 1953, nonrecording gage at site 50 ft (15 m) downstream at same datum.

REMARKS.--Records poor. Several observations of water temperatures were made during the year.

AVERAGE DISCHARGE.--60 years, 199 ft³/s (5.636 m³/s), 5.32 in/yr (135 mm/yr), 144,200 acre-ft/yr (178 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,300 ft³/s (461.6 m³/s) June 20, 1942, from rating curve extended above 11,000 ft³/s (311.5 m³/s); maximum gage height, 24.43 ft (7.446 m) Mar. 3, 1979; no flow on several days in July and August 1934, Jan. 28 to Feb. 10, 1977, Feb. 6-12, 1979.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,800 ft³/s (135 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Feb. 20	0800	8,300 235	19.0 5.791	June 16	0200	10,900 309	22.03 6.715
Mar. 19	2030	10,700 303	21.13 6.440	Aug. 13	0700	4,860 138	15.93 4.855
Apr. 16	1500	7,510 213	18.58 5.663	Aug. 15	0230	8,000 227	19.43 5.922
May 5	1600	5,980 168	17.20 5.243	Aug. 30	1900	*14,300 405	24.75 7.544
May 21	2000	7,510 213	18.90 5.761	Sept. 17	2400	6,570 186	17.90 5.456
June 9	0530	7,800 221	19.25 5.867				

Minimum, 27 ft³/s (0.76 m³/s) Oct. 2, gage height, 5.02 ft (1.530 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	31	290	978	70	75	384	344	272	650	438	156	1680	
2	28	300	409	70	70	392	338	261	590	530	147	1180	
3	77	216	265	70	70	360	336	265	575	414	137	1020	
4	185	245	217	70	70	350	324	265	515	390	121	800	
5	108	151	196	70	70	337	318	2860	475	500	121	620	
6	62	122	187	70	70	311	316	2110	450	590	127	550	
7	50	113	180	70	70	298	335	1540	462	710	132	500	
8	46	104	162	70	70	293	414	650	1820	359	137	400	
9	46	97	153	70	70	291	324	488	5040	320	165	347	
10	49	90	149	70	70	293	296	450	892	303	1060	325	
11	51	88	148	70	70	629	285	414	635	280	633	294	
12	47	87	145	70	70	456	283	500	575	272	414	303	
13	48	86	140	67	70	452	276	575	515	274	2320	544	
14	55	83	133	70	70	394	269	672	500	413	1640	905	
15	43	83	133	70	70	414	271	1960	5080	1100	5980	650	
16	43	79	112	70	100	1040	3740	1140	5420	426	1130	378	
17	43	76	135	70	400	629	1620	695	1060	303	416	1230	
18	43	77	150	70	3060	481	551	725	788	253	467	3100	
19	43	77	100	70	5380	6220	446	438	665	237	414	875	
20	42	75	90	70	6000	3150	384	733	575	267	361	545	
21	42	71	85	70	3870	1400	346	6180	545	840	338	438	
22	40	75	85	70	1410	950	320	2640	500	320	325	402	
23	38	79	80	70	1080	680	302	1200	462	225	322	390	
24	36	79	80	70	614	700	280	945	438	205	1070	366	
25	36	72	75	70	464	662	272	1000	426	187	498	331	
26	37	72	75	70	412	560	261	1730	414	178	390	309	
27	43	72	70	80	402	470	251	1060	402	178	385	298	
28	40	66	70	90	392	450	261	805	390	219	385	289	
29	40	66	70	80	---	460	366	875	390	182	397	283	
30	39	238	70	75	---	488	296	2160	371	167	10800	283	
31	49	---	70	75	---	390	---	1000	---	160	6170	---	
TOTAL	1580	3429	5012	2217	24639	24384	14425	36608	31620	11240	37158	19635	
MEAN	51.0	114	162	71.5	880	787	481	1181	1054	363	1199	655	
MAX	185	300	978	90	6000	6220	3740	6180	5420	1100	10800	3100	
MIN	28	66	70	67	70	291	251	261	371	160	121	283	
CFSM	.10	.22	.32	.14	1.73	1.55	.95	2.33	2.08	.72	2.36	1.29	
IN.	.12	.25	.37	.16	1.80	1.79	1.06	2.68	2.32	.82	2.72	1.44	
AC-FT	3130	6800	9940	4400	48870	48370	28610	72610	62720	22290	73700	38950	
CAL YR 1981 TOTAL	36066	MEAN	98.8	MAX	1610	MIN	18	CFSM	.19	IN	2.64	AC-FT	71540
WTR YR 1982 TOTAL	211947	MEAN	581	MAX	10800	MIN	28	CFSM	1.14	IN	15.52	AC-FT	420400

MISSOURI RIVER MAIN STEM

06813500 MISSOURI RIVER AT RULO, NB

LOCATION.--Lat 40°03'14", long 95°25'12", in NW¼NW¼ sec.17, T.1 N., R.18 E., Richardson County, Hydrologic Unit 10240005, on downstream end of middle pier of bridge on U.S. Highway 159 at Rulo, 3.2 mi (5.1 km) upstream from Nemaha River, and at mile 498.0 (801.3 km).

DRAINAGE AREA.--414,900 mi² (1,074,600 km²), approximately. The 3,959 mi² (10,254 km²) in Great Divide basin are not included.

REVISED RECORDS.--WDR MO-761: Drainage area.

PERIOD OF RECORD.--October 1949 to current year in reports of Geological Survey. Gage-height record collected at site 80 ft (24 m) upstream January 1886 to December 1899 published in reports of Missouri River Commission September 1929 to September 1950 in files of Kansas City office of Corps of Engineers.

GAGE.--Water-stage recorder. Datum of gage is 837.23 ft (255.188 m) National Geodetic Vertical Datum of 1929. Prior to Sept. 13, 1950, nonrecording gage at site 80 ft (24 m) upstream at same datum.

REMARKS.--Records good. Flow regulated by upstream main-stem reservoirs. Several observations of water temperature were made during the year. National Weather Service gage height telemeter at station.

AVERAGE DISCHARGE.--33 years, 39,570 ft³/s (1,121 m³/s), 28,670,000 acre-ft/yr (35,400 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 358,000 ft³/s (10,100 m³/s) Apr. 22, 1952, gage height, 25.60 ft (7.803 m); minimum daily, 4,420 ft³/s (125 m³/s) Jan. 13, 1957; minimum gage height, 0.65 ft (0.198 m) Jan. 7, 1971, result of freezeup.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1881 reached a stage of 22.9 ft (6.98 m) from floodmark, discharge not determined.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 126,000 ft³/s (3,570 m³/s) June 16, gage height, 19.73 ft (6.014 m); minimum daily, 11,600 ft³/s (329 m³/s) Jan. 13; minimum gage height, 2.53 ft (0.771 m) Jan. 13, 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	38800	43500	29300	21600	22700	43700	42400	39500	71300	45600	40500	49300		
2	38300	48000	30200	20100	22300	43900	42400	40000	72400	47800	40200	44500		
3	38800	42800	28600	19800	21700	43100	41700	39500	63900	47700	40300	42800		
4	40800	41900	27800	18900	21300	41500	42400	39300	58400	45500	39900	41100		
5	40100	41600	26700	18600	20900	37800	42400	41900	55900	43900	39200	39900		
6	39500	41000	26400	19500	20600	33100	41400	46700	53900	44300	42600	40200		
7	39300	39200	25000	19200	21300	29900	41300	46600	52600	51600	46900	41000		
8	39000	37800	25100	18800	21700	27500	40900	43300	51200	64500	44700	40100		
9	39700	35200	24900	18900	22400	26000	40700	41600	64000	58600	41000	39300		
10	39200	33200	25400	16500	23700	25000	40600	40300	55100	53200	44000	39100		
11	39100	30700	25100	14500	24100	25900	40700	40000	51100	59500	46700	38900		
12	39200	28700	25600	13000	23000	26700	39700	44000	47600	69700	45300	38600		
13	39400	26900	25400	11600	22300	31400	39500	51800	46300	61600	60000	51800		
14	39700	25400	25600	11900	22700	36900	40600	48200	44400	60700	75000	56400		
15	40900	24200	25300	14100	23300	34900	41300	49800	73800	55100	73500	50700		
16	41400	24000	25200	16900	26100	33500	52600	47900	121000	54000	60900	44900		
17	41900	23900	24300	17200	28000	32700	48000	46000	101000	54200	49600	43000		
18	42000	23900	20900	17300	32800	32000	43700	48700	74800	55300	46200	51800		
19	42600	23900	18600	15900	46300	42000	42800	49300	65500	54100	43600	46600		
20	41500	23800	17800	16200	58400	58000	42400	55200	60900	56400	41800	44300		
21	41600	24700	16700	19000	59800	54000	41400	106000	55600	54400	42200	43300		
22	42000	24800	16000	22100	60300	51000	41000	111000	52900	50200	40800	42600		
23	41500	25000	16300	22500	71000	49600	40600	86900	50000	49400	39700	42600		
24	41000	23700	18300	21500	76800	47900	39800	70300	48100	47000	40600	42500		
25	41000	24000	21600	19900	63600	46900	39800	69600	46300	44400	46200	41700		
26	41500	23800	23300	17800	53100	45800	39100	78200	46200	42400	44600	42000		
27	41500	23500	23800	17300	47100	44900	38800	89000	48000	41200	43600	41800		
28	40200	23800	24800	18500	43900	44200	38900	97000	49700	40200	41800	41400		
29	40500	23800	24700	20700	---	43200	39800	108000	46800	40800	40000	41800		
30	41400	24500	23400	22800	---	43300	40100	98800	43200	41100	64600	42700		
31	41600	---	22500	23200	---	43600	---	90000	---	41000	57200	---		
TOTAL	1254400	901200	734600	565800	1001200	1219900	1246800	1904400	1772100	1575400	1463400	1306700		
MEAN	40460	30040	23700	18250	35760	39350	41560	61430	59070	50820	47210	43560		
MAX	42000	48000	30200	23200	76800	58000	52600	111000	121000	69700	75000	56400		
MIN	38300	23500	16000	11600	20600	25000	38800	39300	43200	40200	39200	38600		
CFSM	.10	.07	.06	.04	.09	.10	.10	.15	.14	.12	.11	.11		
IN.	.11	.08	.07	.05	.09	.11	.11	.17	.16	.14	.13	.12		
AC-FT	2488000	1788000	1457000	1122000	1986000	2420000	2473000	3777000	3515000	3125000	2903000	2592000		
CAL YR 1981	TOTAL	12066800	MEAN	33060	MAX	56100	MIN	13500	CFSM	.08	IN	1.08	AC-FT	23930000
WIR YR 1982	TOTAL	14945900	MEAN	40950	MAX	121000	MIN	11600	CFSM	.10	IN	1.34	AC-FT	29650000

06817500 NODAWAY RIVER NEAR BURLINGTON JUNCTION, MO

LOCATION.--Lat 40°26'42", long 95°05'19", in SW¼NE¼ sec. 17, T.65 N., R.37 W., Nodaway County, Hydrologic Unit 10240010, near left bank on downstream end of bridge pier on U.S. Highway 136, 0.5 mi (0.8 km) upstream from Mill Creek, 0.5 mi (0.8 km) downstream from Norfolk and Western Railroad Co. bridge, and 1.5 mi (2.4 km) west of Burlington Junction.

DRAINAGE AREA.--1,240 mi² (3,210 km²), approximately.

PERIOD OF RECORD.--March 1922 to current year.

GAGE.--Water-stage recorder. Datum of gage is 895.17 ft (272.848 m) National Geodetic Vertical Datum of 1929. Prior to October 1, 1970 at datum 1.00 ft (0.305 m) higher. Prior to June 29, 1939, nonrecording gage. Prior to Oct. 26, 1928, at former bridge at same site and approximately same as previous datum; Oct. 26, 1928, to June 9, 1929, at site 0.5 mi (0.8 km) upstream set to read same as former gage at low water; June 10, 1929 to June 28, 1939, at present site and at previous datum.

REMARKS.--Records poor. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--60 years, 548 ft³/s (15.52 m³/s), 6.00 in/yr (152 mm/yr), 397,000 acre-ft/yr (490 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 46,000 ft³/s (1,300 m³/s) Oct. 11, 1973, gage height, 19.85 ft (6.050 m); maximum gage height observed, 20.69 ft (6.306 m), present datum, Mar. 5, 1949, (ice jam); minimum discharge, 1.1 ft³/s (0.031 m³/s) Aug. 7, 1934.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 8,500 ft³/s (241 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Feb. 21	0330	14,000 396	13.14 4.005	May 26	1630	9,260 262	10.11 3.082
Mar. 19	1300	16,900 479	14.62 5.096	June 8	2100	13,800 391	12.99 3.959
Apr. 16	1100	14,600 413	13.43 4.093	June 16	0700	18,600 527	15.49 4.721
May 5	1000	10,100 286	10.72 3.267	Aug. 14	2200	10,300 292	10.84 3.319
May 21	1300	10,700 303	11.12 3.389	Aug. 30	0300	*21,000 595	16.56 5.047

Minimum, 53 ft³/s (1.50 m³/s) Oct. 1, gage height, -0.10 ft (-0.030 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53	207	1390	95	100	826	1130	699	2050	1050	248	2560
2	53	422	709	95	100	857	1090	664	1740	2740	219	1760
3	106	318	505	95	100	846	1050	664	1570	1850	202	1090
4	162	284	410	95	100	635	1020	664	1460	2880	187	784
5	126	255	349	95	100	589	989	6410	1290	1300	836	619
6	97	245	297	95	100	549	965	6870	1180	2890	3170	569
7	82	242	255	95	100	486	936	5600	1090	3350	1250	554
8	76	236	225	95	100	445	909	2950	4420	1790	768	445
9	71	227	197	95	100	349	899	2060	5880	1280	633	427
10	71	210	189	95	100	353	878	1580	2840	1100	1430	321
11	83	199	184	95	100	1310	862	1320	1780	930	1170	233
12	74	177	177	95	100	1760	841	1420	1410	865	892	325
13	76	167	175	95	100	2280	654	1750	1230	779	3030	3510
14	108	149	177	95	100	2070	620	2210	1130	720	3270	4310
15	104	130	175	95	120	1680	609	5670	11200	1290	4710	2450
16	99	120	130	96	1030	3070	8570	4500	12600	895	2220	1450
17	87	118	216	96	2960	3040	5670	2910	4370	677	1280	3130
18	83	114	172	96	4000	2500	3230	2760	3070	589	915	5410
19	73	108	150	96	4710	10100	2170	2320	2460	524	737	2640
20	73	108	140	98	8580	5830	1690	1780	2030	573	625	170
21	73	108	130	100	10100	3030	1350	8160	1800	1140	589	1380
22	74	106	120	100	6160	2090	1140	6280	1630	1080	524	1140
23	74	106	110	100	4910	1650	1030	3510	1440	711	574	1010
24	74	104	105	100	2920	1440	942	2670	1290	491	2360	943
25	74	99	100	100	1620	1420	888	2450	1200	468	1000	865
26	71	99	100	100	1060	1420	831	6660	1110	391	391	768
27	74	99	98	110	920	1350	800	5510	846	364	364	707
28	63	97	96	120	852	1290	760	3450	1090	391	391	604
29	73	95	95	110	---	1230	810	3650	954	491	1380	486
30	73	446	95	100	---	1190	770	3350	872	414	11500	459
31	76	---	95	100	---	1170	---	2630	---	297	3750	---
TOTAL	2556	5395	7366	3047	51342	56855	44103	103121	77032	34310	50615	41119
MEAN	82.5	180	238	98.3	1834	1834	1470	3326	2568	1107	1633	1371
MAX	162	446	1390	120	10100	10100	8570	8160	12600	3350	11500	5410
MIN	53	95	95	95	100	349	609	664	846	297	187	170
CFSM	.07	.15	.19	.08	1.48	1.48	1.19	2.68	2.07	.89	1.32	1.11
IN.	.08	.16	.22	.09	1.54	1.71	1.32	3.09	2.31	1.03	1.52	1.23
AC-FT	5070	10700	14610	6040	101800	112800	87480	204500	152800	68050	100400	81560
CAL YR 1981 TOTAL	78765			MEAN 216	MAX 3670	MIN 53	CFSM .17	IN 2.36	AC-FT 156200			
WIR YR 1982 TOTAL	476861			MEAN 1306	MAX 12600	MIN 53	CFSM 1.05	IN 14.31	AC-FT 945900			

NODAWAY RIVER BASIN

06817800 NODAWAY RIVER NEAR OREGON, MO.

WATER-QUALITY RECORDS

LOCATION.--Lat 39°58'19", long 94°59'46", in SE¼ sec.36, T.60 N., R.37 W., Holt County, Hydrologic Unit 10240010, at bridge on U.S. Highway 59, 7 mi (11.3 km) east of Oregon.

PERIOD OF RECORD.--November 1968 to July 1975, July 1977 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00501)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L) (00335)
OCT									
05...	1800	1028	29001	170	427	8.2	21.0	--	19
NOV									
03...	0745	1028	29001	540	342	7.9	13.0	6.4	41
DEC									
03...	1300	1028	29001	810	340	7.7	3.0	11.5	26
JAN									
05...	0800	1028	29001	325	287	7.4	.5	8.2	10
FEB									
05...	1345	1028	29001	250	510	7.3	.0	8.4	7
MAR									
09...	0815	1028	29001	440	430	8.1	.5	11.4	22
APR									
07...	1230	1028	29001	600	450	7.6	5.0	10.8	21
MAY									
11...	0820	1028	29001	1800	377	8.0	19.0	7.5	18
JUN									
03...	1100	1028	29001	2000	420	7.7	17.0	9.6	11
JUL									
14...	0830	1028	29001	1170	452	8.0	25.0	7.0	27
AUG									
05...	1000	1028	29001	240	310	8.5	27.5	7.0	21
SEP									
22...	0830	1028	29001	1850	400	7.9	14.0	7.8	14

DATE	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	HARD- NESS (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)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LITY FIELD (MG/L AS CACO3) (00410)	SULFATE DIS- SOLVED (MG/L AS SU4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)
OCT										
05...	5400	190	55	13	14	6.5	148	31	17	.2
NOV										
03...	15000	--	--	--	--	--	131	--	--	--
DEC										
03...	38000	--	--	--	--	--	121	--	--	--
JAN										
05...	280	250	71	17	13	3.2	180	17	13	.1
FEB										
05...	140	--	--	--	--	--	215	--	--	--
MAR										
09...	440	--	--	--	--	--	157	--	--	--
APR										
07...	360	290	90	16	10	3.0	154	34	8.0	.2
MAY										
11...	6500	--	--	--	--	--	113	--	--	--
JUN										
03...	5400	--	--	--	--	--	131	--	--	--
JUL										
14...	4400	190	56	13	9.4	3.4	138	27	11	.3
AUG										
05...	130	--	--	--	--	--	105	--	--	--
SEP										
22...	32000	--	--	--	--	--	141	--	--	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

[illegible]

MISSOURI RIVER MAIN STEM

06818000 MISSOURI RIVER AT ST. JOSEPH, MO

LOCATION.--Lat 39°45'12", long 94°51'28", in NW¼SW¼ sec.17, T.57 N., R.35 W., Buchanan County, Hydrologic Unit 10240011, on left bank at left abutment of St. Joseph & Grand Island Railroad bridge in St. Joseph. River mile, 448.2 (721.2 km).

DRAINAGE AREA.--420,300 mi² (1,089,000 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1928 to current year. Gage-height records collected in vicinity 1873-99 are contained in reports of Missouri River Commission; since 1900 in reports of National Weather Service.

REVISED RECORDS.--WDR MO-76-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 788.19 ft (240.240 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 21, 1931, nonrecording gage and Oct. 21, 1931, to Dec. 31, 1933, water-stage recorder at same site at datum 5.50 ft (1.676 m) higher.

REMARKS.--Records good except during periods of no gage-height record, which are poor. Discharge measurements made weekly except during ice-flow periods. Some regulation from many upstream reservoirs.

AVERAGE DISCHARGE.--54 years, 39,680 ft³/s (1,120 m³/s), 28,750,000 acre-ft/yr (35,450 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 397,000 ft³/s (11,240 m³/s) Apr. 22, 23, 1952, gage height, 26.82 ft (8.175 m); minimum, 2,300 ft³/s (65.1 m³/s) Jan. 9, 1937; minimum gage height, 0.00 ft (0.000 m) Dec. 18, 19, 1940.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of April 29, 1881 reached a stage of 27.2 ft (8.29 m), present datum, discharge, about 370,000 ft³/s (10,500 m³/s), computed by Corps of Engineers.
Flood of June 1844 reached a stage of 24.5 ft (7.47 m) discharge, about 370,000 ft³/s (10,500 m³/s), computed by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 159,000 ft³/s (4,500 m³/s) June 17, gage height, 21.70 ft (6.614 m); minimum, 9,120 ft³/s (258 m³/s) Jan. 11, gage height, 2.85 ft (0.869 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	41100	44900	34000	22900	30000	49400	46800	43200	90200	54500	41500	65600		
2	41300	52800	38100	21600	26000	48800	46400	42900	86300	58500	40600	57600		
3	41100	49600	32300	20300	23000	47800	47000	43200	77700	58300	40400	52600		
4	43100	49200	30100	19700	21000	46800	46200	42500	69800	54000	39800	49800		
5	44600	49200	29200	18500	20000	42600	46800	45200	68200	52500	39200	47200		
6	43400	48900	28400	18600	19000	41400	46400	58100	66000	51300	42000	46600		
7	42600	46800	27800	20800	19000	36800	45000	58900	63500	54900	48300	48500		
8	42200	45300	26800	20400	20000	31000	44900	52500	61500	67700	48100	47100		
9	41900	42500	26700	18700	22000	29000	43500	48700	67500	72500	42600	45100		
10	42200	40500	26300	18000	25000	27700	42800	46500	114000	64500	43000	45100		
11	41700	37700	26700	17000	25000	26000	42200	45400	79700	62600	49900	45500		
12	41800	35200	26200	15000	26000	28800	41400	46900	65100	80900	49600	45600		
13	42200	32700	27100	13000	25000	31100	39800	55500	59200	79200	97100	54900		
14	42200	30700	26600	12500	27000	38600	40200	56200	56400	69800	95700	81900		
15	42300	28400	26600	11800	29000	40500	41000	58800	54800	65800	87800	75900		
16	43600	27400	26000	11700	40000	39000	52900	58200	97000	63600	75800	58800		
17	44300	27200	25500	12000	56000	38800	66500	53600	154000	60300	57600	53000		
18	44500	27400	23100	12500	60000	36900	51000	53100	122000	61900	51600	63100		
19	44000	27300	19600	12800	70000	44600	48700	54900	84700	59100	48300	59900		
20	43600	26600	17800	12000	84000	85100	47900	57600	72400	60500	44700	51900		
21	43400	26800	16100	12500	98500	69900	46700	113000	67400	63800	45900	48600		
22	43800	27300	15000	13000	96900	58100	45300	140000	62000	57100	44000	46300		
23	43000	27700	15700	15000	104000	53200	44400	110000	59500	53300	43100	45400		
24	42500	26500	14900	14500	108000	50200	43200	78700	56200	52300	43200	45600		
25	42400	25800	17300	16000	90700	51300	42600	77000	54400	48300	49500	44800		
26	42700	26300	21200	19000	67400	50200	41900	104000	52600	45900	54500	44900		
27	43000	25700	22700	20000	57200	48500	41600	113000	53400	44200	56000	45000		
28	41800	25700	23800	19000	51500	47700	41700	112000	60100	43000	47300	44500		
29	41200	26200	24900	20000	---	46100	42300	128000	58500	42600	45200	44600		
30	41900	27000	24400	50000	---	46700	43700	118000	52000	42700	84200	45400		
31	42800	---	23400	40000	---	47500	---	114000	---	42000	86400	---		
TOTAL	1322200	1035300	764300	568800	1341200	1380100	1360800	2229600	2186100	1787600	1682900	1550800		
MEAN	42650	34510	24650	18350	47900	44520	45360	71920	72870	57660	54290	51690		
MAX	44600	52800	38100	50000	108000	85100	66500	140000	154000	80900	97100	81900		
MIN	41100	25700	14900	11700	19000	26000	39800	42500	52000	42000	39200	44500		
CFSM	.10	.08	.06	.04	.11	.11	.11	.17	.17	.14	.13	.12		
IN.	.12	.09	.07	.05	.12	.12	.12	.20	.19	.16	.15	.14		
AC-FT	2623000	2054000	1516000	1128000	2660000	2737000	2699000	4422000	4336000	3546000	3338000	3076000		
CAL YR 1981	TOTAL	13111400	MEAN	35920	MAX	67400	MIN	13500	CFSM	.09	IN	1.16	AC-FT	26010000
WIR YR 1982	TOTAL	17209700	MEAN	47150	MAX	154000	MIN	11700	CFSM	.11	IN	1.52	AC-FT	34140000

MISSOURI RIVER MAIN STEM

06818000 MISSOURI RIVER AT ST. JOSEPH, MO--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (FTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED 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 03...	0845	49000	722	8.1	12.0	130	8.4	78	12000	15000
JAN 05...	0945	18600	825	8.1	.5	5.4	12.4	86	3900	1200
MAR 09...	1000	28500	618	8.0	.5	60	12.2	85	4200	8200
MAY 11...	1000	46000	750	8.4	17.5	64	8.0	83	2100	4200
JUL 14...	1115	68000	572	8.0	25.5	1300	4.8	59	10000	13000
SEP 22...	1115	47500	730	8.3	17.0	64	8.4	87	15000	7400

DATE	HARD- NESS (MG/L AS CAC03) (00900)	HARD- NESS, NONCAR- BONATE (MG/L CAC03) (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	PERCENT SODIUM (00932)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LITY FIELD (MG/L AS CAC03) (00410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
NOV 03...	230	77	58	20	68	39	2.1	6.0	154	200
JAN 05...	260	61	65	24	70	36	2.0	5.9	197	200
MAR 09...	210	64	56	18	43	29	1.4	8.0	150	120
MAY 11...	250	97	61	23	65	36	2.0	5.8	150	200
JUL 14...	190	53	51	16	38	29	1.3	7.5	140	120
SEP 22...	250	76	64	21	59	34	1.8	6.2	170	170

MISSOURI RIVER MAIN STEM

06818000 MISSOURI RIVER AT ST. JOSEPH, MO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)
NOV 03...	20	.5	10	484	--	.66	64000	.61	.150
JAN 05...	24	.5	17	540	--	.73	27100	.65	.390
MAR 09...	20	.4	15	389	377	.53	29900	1.2	.480
MAY 11...	15	.4	8.4	477	481	.65	59200	.83	.150
JUL 14...	12	.4	13	375	343	.51	68900	2.6	<.060
SEP 22...	14	.4	12	463	453	.63	59400	1.5	.090

DATE	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4) (71846)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS TOTAL (MG/L AS PO4) (71886)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P) (00671)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP., SIEVE DIAM. % FINER THAN .062 MM (70331)
NOV 03...	.19	.78	.150	.46	.090	.070	1030	136000	27
JAN 05...	.50	1.10	.170	.52	.130	.110	249	12500	0
MAR 09...	.62	1.80	.160	.49	.130	.140	697	53600	42
MAY 11...	.19	1.60	.510	1.6	.130	.080	1050	130000	31
JUL 14...	.08	15.0	.260	.80	.100	.110	3030	556000	89
SEP 22...	.12	1.60	.370	1.1	.140	.080	417	53500	70

MISSOURI RIVER MAIN STEM

06818000 MISSOURI RIVER AT ST. JOSEPH, MO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC SUS- PENDE TOTAL (UG/L AS AS) (01001)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	BARIUM, SUS- PENDE RECOV- ERABLE (UG/L AS BA) (01006)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)
NOV 03...	5	2	3	200	100	87	3	<1	20	<10
JAN 05...	3	0	3	100	10	89	3	<1	10	<10
MAY 11...	5	2	3	400	300	120	1	<3	20	<10
JUL 14...	17	14	3	900	800	150	1	<1	80	<10

DATE	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO) (01037)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU) (01041)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE) (01044)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB) (01050)
NOV 03...	5	<3	46	41	5	10000	9900	72	30	29
JAN 05...	<1	<3	14	11	3	2300	2300	20	13	--
MAY 11...	3	<1	80	72	8	7400	7400	23	21	20
JUL 14...	24	<1	75	71	4	30000	30000	290	42	--

DATE	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN) (01054)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG) (71895)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	NICKEL, SUS- PENDE RECOV- ERABLE (UG/L AS NI) (01066)
NOV 03...	1	490	470	19	.3	--	<.1	15	12
JAN 05...	<1	130	110	22	.2	--	<.1	15	14
MAY 11...	1	410	410	4	.5	.0	50	13	10
JUL 14...	<1	2600	2600	21	.5	.3	.2	90	88

DATE	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE) (01147)	SELE- NIUM, SUS- PENDE RECOV. (UG/L AS SE) (01146)	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, SUS- PENDE RECOV- ERABLE (UG/L AS ZN) (01091)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 03...	3	1	0	1	<1	<1	70	60	7
JAN 05...	1	2	0	2	1	<1	40	--	<3
MAY 11...	3	1	0	2	10	<1	70	50	17
JUL 14...	2	2	0	2	<1	<1	350	330	18

MISSOURI RIVER MAIN STEM

06818000 MISSOURI RIVER AT ST. JOSEPH, MO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	PCB, TOTAL (UG/L) (39516)	PCB, IN BOT- TUM MA- TERIAL (UG/KG) (39519)	ALDRIN, TOTAL (UG/L) (39330)	ALDRIN, IN BOT- TUM MA- TERIAL (UG/KG) (39333)	CHLOR- DANE, TOTAL (UG/L) (39350)	CHLOR- DANE, IN BOT- TUM MA- TERIAL (UG/KG) (39351)	DDD, TOTAL (UG/L) (39360)	DDD, IN BOT- TUM MA- TERIAL (UG/KG) (39363)	DDE, TOTAL (UG/L) (39365)	DDE, IN BOT- TUM MA- TERIAL (UG/KG) (39368)	DDT, TOTAL (UG/L) (39370)	DDT, IN BOT- TUM MA- TERIAL (UG/KG) (39373)
	PCB, TOTAL (UG/L) (39516)	PCB, IN BOT- TUM MA- TERIAL (UG/KG) (39519)	ALDRIN, TOTAL (UG/L) (39330)	ALDRIN, IN BOT- TUM MA- TERIAL (UG/KG) (39333)	CHLOR- DANE, TOTAL (UG/L) (39350)	CHLOR- DANE, IN BOT- TUM MA- TERIAL (UG/KG) (39351)	DDD, TOTAL (UG/L) (39360)	DDD, IN BOT- TUM MA- TERIAL (UG/KG) (39363)	DDE, TOTAL (UG/L) (39365)	DDE, IN BOT- TUM MA- TERIAL (UG/KG) (39368)	DDT, TOTAL (UG/L) (39370)	DDT, IN BOT- TUM MA- TERIAL (UG/KG) (39373)
NOV 03...	--	0	--	.0	--	.0	--	.0	--	.0	--	.0
JAN 05...	.00	--	.00	--	.00	--	.00	--	.00	--	.00	--
MAY 11...	--	<1	--	<.1	--	<1.0	--	<.1	--	<.1	--	<.1

DATE	DI- AZINON, TOTAL (UG/L) (39570)	DI- ELURIN TOTAL (UG/L) (39380)	DI- ELURIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39383)	ENDO- SULFAN, TOTAL (UG/L) (39388)	ENDRIN, TOTAL (UG/L) (39390)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39393)	ETHION, TOTAL (UG/L) (39398)	HEPTA- CHLOR, TOTAL (UG/L) (39410)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39413)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L) (39420)	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG) (39423)
NOV 03...	--	--	.0	--	--	.0	--	--	.0	--	.0
JAN 05...	.01	.00	--	.00	.00	--	.00	.00	--	.00	--
MAY 11...	--	--	<.1	--	--	<.1	--	--	<.1	--	<.1

DATE	LINDANE TOTAL (UG/L) (39340)	LINDANE IN BOT- TUM MA- TERIAL (UG/KG) (39343)	MALA- THIUN, TOTAL (UG/L) (39530)	METH- OXY- CHLOR, TOTAL (UG/L) (39480)	METH- OXY- CHLOR, IN BOT- TUM MA- TERIAL (UG/KG) (39481)	METHYL PARA- THIUN, TOTAL (UG/L) (39600)	METHYL TRI- THIUN, TOTAL (UG/L) (39790)	PARA- THIUN, TOTAL (UG/L) (39540)	TOX- APHENE, TOTAL (UG/L) (39400)	TOXA- PHENE, IN BOT- TUM MA- TERIAL (UG/KG) (39403)	TOTAL TRI- THIUN (UG/L) (39786)
	LINDANE TOTAL (UG/L) (39340)	LINDANE IN BOT- TUM MA- TERIAL (UG/KG) (39343)	MALA- THIUN, TOTAL (UG/L) (39530)	METH- OXY- CHLOR, TOTAL (UG/L) (39480)	METH- OXY- CHLOR, IN BOT- TUM MA- TERIAL (UG/KG) (39481)	METHYL PARA- THIUN, TOTAL (UG/L) (39600)	METHYL TRI- THIUN, TOTAL (UG/L) (39790)	PARA- THIUN, TOTAL (UG/L) (39540)	TOX- APHENE, TOTAL (UG/L) (39400)	TOXA- PHENE, IN BOT- TUM MA- TERIAL (UG/KG) (39403)	TOTAL TRI- THIUN (UG/L) (39786)
NOV 03...	--	.0	--	--	.0	--	--	--	--	.0	--
JAN 05...	.00	--	.00	.00	--	.00	.00	.00	0	--	.00
MAY 11...	--	<.1	--	--	<.1	--	--	--	--	<10	--

DATE	2,4-D, TOTAL (UG/L) (39730)	2,4,5-T TOTAL (UG/L) (39740)	SILVEX, TOTAL (UG/L) (39760)	PER- THANE TOTAL (UG/L) (39034)	PER- THANE IN BOT- TUM MA- TERIAL (UG/KG) (81886)	NAPH- THA- LENES, POLY- CHLOR, TOTAL (UG/L) (39250)	PCN, TOTAL IN BOT- TUM MA- TERIAL (UG/KG) (39251)	ENDO- SULFAN, TOTAL IN BOT- TUM MA- TERIAL (UG/KG) (39384)	MIREX, TOTAL IN BOT- TUM MA- TERIAL (UG/KG) (39755)	MIREX, IN BOT- TUM MA- TERIAL (UG/KG) (39758)	2, 4-DP TOTAL (UG/L) (82183)
	2,4-D, TOTAL (UG/L) (39730)	2,4,5-T TOTAL (UG/L) (39740)	SILVEX, TOTAL (UG/L) (39760)	PER- THANE TOTAL (UG/L) (39034)	PER- THANE IN BOT- TUM MA- TERIAL (UG/KG) (81886)	NAPH- THA- LENES, POLY- CHLOR, TOTAL (UG/L) (39250)	PCN, TOTAL IN BOT- TUM MA- TERIAL (UG/KG) (39251)	ENDO- SULFAN, TOTAL IN BOT- TUM MA- TERIAL (UG/KG) (39384)	MIREX, TOTAL IN BOT- TUM MA- TERIAL (UG/KG) (39755)	MIREX, IN BOT- TUM MA- TERIAL (UG/KG) (39758)	2, 4-DP TOTAL (UG/L) (82183)
NOV 03...	--	--	--	--	.00	--	.0	.0	--	.0	--
JAN 05...	.06	.00	.00	.00	--	.00	--	--	.00	--	.00
MAY 11...	--	--	--	--	<1.00	--	<1.0	<.1	--	<.1	--

06819500 ONE HUNDRED AND TWO RIVER AT MARYVILLE, MO

LOCATION.--Lat 40°20'45", long 94°49'56", in SW¼SW¼ sec.15, T.64 N., R.35 W., Nodaway County, Hydrologic Unit 10240013, on right bank at intake for city waterworks, just upstream from City Waterworks dam, 150 ft (45.7 m) upstream from bridge on U.S. Highway 136, 0.3 mi (0.48 km) downstream from Thill Branch, 1 mi (1.6 km) east of Maryville and at mile 64.0 (103.0 km).

DRAINAGE AREA.--515 mi² (1,334 km²).

PERIOD OF RECORD.--October 1932 to current year. April to June 1934 monthly discharge only, published in WSP 1310. June 1934 to October 1971, published as "near Maryville".

GAGE.--Water-stage recorder. Datum of gage is 964.65 ft (294.025 m) National Geodetic Vertical Datum of 1929. Nonrecording gage prior to Sept. 15, 1958. Prior to June 20, 1934, at present site and datum. June 20, 1934, to Oct. 31, 1971, at site 3 mi (4.8 km) upstream at datum 5.68 ft (1.731 m) higher.

REMARKS.--Records good. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--50 years, 219 ft³/s (6.202 m³/s), 5.95 in/yr (151 mm/yr), 158,700 acre-ft/yr (196 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 28,000 ft³/s (793 m³/s) Oct. 12, 1973, gage height, 19.25 ft (5.867 m); no flow at times in several years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Sept. 16, 1926, reached a stage of 15 ft (4.6 m), present site, from floodmark; discharge, 14,500 ft³/s (411 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 7,500 ft³/s (212 m³/s) and maximum(*)

Date	Time	Discharge (ft ³ /s)	Discharge (m ³ /s)	Gage height (ft)	Gage height (m)
Feb. 18	1800	9,240	262	13.66	4.164
Mar. 20	0530	13,400	379	15.92	4.852
Apr. 16	1800	7,980	226	12.72	3.878
May 6	2000	10,100	286	14.19	4.325
May 21	1800	12,500	354	15.55	4.740
May 26	1215	8,680	246	13.26	4.042
May 29	2200	*15,700	445	16.50	5.029
June 9	1345	14,300	405	15.79	4.813
Aug. 30	1345	13,000	368	15.82	4.822
Sept. 18	0030	7,950	225	12.75	3.886

Minimum, 6.4 ft³/s (0.18 m³/s) Oct. 2, gage height, 3.79 ft (1.155 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	UCI	NCV	DFC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	179	1660	32	31	340	201	162	1010	529	55	954
2	6.9	456	575	31	30	396	166	166	795	4400	43	562
3	22	414	299	30	29	340	215	150	619	3050	41	397
4	53	430	201	30	28	310	205	134	611	875	57	315
5	49	199	151	30	28	280	191	1830	545	567	51	252
6	28	125	131	29	27	262	191	5610	448	487	61	298
7	20	92	128	29	27	254	246	2730	404	487	57	269
8	19	83	115	28	27	230	274	728	3020	334	45	246
9	31	61	97	28	27	220	284	453	11400	251	41	220
10	51	50	82	27	26	220	293	327	1620	174	392	150
11	43	47	86	27	26	1300	274	269	587	187	489	112
12	33	42	87	27	26	1490	220	424	418	154	174	90
13	42	39	87	27	26	1210	182	1550	350	134	2570	2220
14	143	39	89	27	26	717	154	1920	251	119	1210	3830
15	64	37	76	27	26	900	146	7040	1300	220	4320	1040
16	43	37	34	27	303	3890	4190	1810	3810	505	1190	444
17	38	36	31	27	1000	900	3450	1190	661	187	511	2050
18	33	36	64	27	4210	505	881	1480	535	79	286	3730
19	30	37	52	27	2100	7310	642	881	367	69	186	886
20	31	34	42	27	1300	7670	475	673	308	71	140	525
21	32	30	42	27	1170	1230	379	7840	260	93	102	368
22	30	33	41	27	1050	691	318	6100	220	71	88	290
23	28	36	40	27	1000	542	290	1740	196	59	76	263
24	26	34	39	27	875	463	210	1090	170	61	1420	248
25	26	32	38	27	511	523	170	1060	166	55	758	200
26	28	32	37	27	402	505	116	7660	205	61	253	171
27	30	30	37	35	373	379	123	2530	187	55	167	151
28	13	27	36	40	345	318	134	2070	235	123	119	137
29	14	27	35	37	---	274	191	6080	158	82	474	123
30	16	639	34	34	---	511	205	2310	134	55	11400	212
31	23	---	33	32	---	517	---	1490	---	55	3970	---
TOTAL	1055.9	3393	4499	904	15049	34697	15016	69497	30990	13649	30746	20753
MEAN	34.1	113	145	29.2	537	1119	501	2242	1033	440	992	692
MAX	143	639	1660	40	4210	7670	4190	7840	11400	4400	11400	3830
MIN	6.9	27	31	27	26	220	116	134	134	55	41	90
CFSM	.07	.22	.28	.06	1.04	2.17	.97	4.35	2.01	.85	1.93	1.34
IN.	.08	.25	.32	.07	1.09	2.51	1.08	5.02	2.24	.99	2.22	1.50
AC-FT	2090	6730	8920	1790	29850	68820	29780	137800	61470	27070	60980	41160
CAL YR 1981 TOTAL	28249.90			MEAN 77.4	MAX 1660	MIN .00	CFSM .15	IN 2.04	AC-FT 56030			
WTR YR 1982 TOTAL	240248.90			MEAN 658	MAX 11400	MIN 6.9	CFSM 1.28	IN 17.35	AC-FT 476500			

06820500 PLATTE RIVER NEAR AGENCY, MO

LOCATION.--Lat 39°41'19", long 94°42'10", in NE¼NW¼ sec. 10, T.56 N., R.34 W., Buchanan County, Hydrologic Unit 10240012, on left bank 10 ft (0.3 m) downstream from bridge of U.S. Highway 169, 1.5 mi (2.4 km) downstream from Third Fork, 3.5 mi (5.6 km) northeast of Agency, and at mile 66.8 (107.5 km).

DRAINAGE AREA.--1,760 mi² (4,560 km²), approximately.

PERIOD OF RECORD.--May 1924 to August 1930 (published as "at Agency"), May 1932 to current year.

GAGE.--Water-stage recorder. Datum of gage is 807.38 ft (246.089 m) National Geodetic Vertical Datum of 1929. May 22, 1924, to Aug. 9, 1930, nonrecording gage at site 4 mi (6.4 km) downstream at different datum. May 13, 1932, to Nov. 14, 1965, nonrecording gage at same site and datum.

REMARKS.--Records poor. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE--55 years (1924-29, 1932-82), 912 ft³/s (25.83 m³/s), 7.04 in/yr (179 mm/yr), 660,700 acre-ft/yr (815 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 53,000 ft³/s (1,500 m³/s) from loop rating, July 20, 1965, gage height, 35.05 ft (10.683 m); no flow at times in July and August 1934 and October 1956.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 7,000 ft³/s (198 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s)	Discharge (m ³ /s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft ³ /s)	Discharge (m ³ /s)	Gage height (ft)	Gage height (m)
Feb. 20	1245	29,000	821	27.48	8.376	May 31	0915	28,700	813	27.43	8.361
Mar. 21	0015	12,900	365	22.85	6.965	June 10	0115	*29,700	841	27.61	8.416
Apr. 18	0400	8,360	237	19.24	5.864	July 3	0600	10,200	289	20.98	6.395
May 7	2300	9,750	276	20.59	6.276	July 21	2215	11,800	334	22.16	6.754
May 16	0645	14,800	419	23.88	7.279	Aug. 15	2315	8,540	242	19.42	5.919
May 23	0200	12,300	348	22.50	6.858	Aug. 31	1345	20,600	583	25.85	7.879

Minimum, 86 ft³/s (2.44 m³/s) Oct. 11, gage height, 4.68 ft (1.426 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	182	1430	2000	327	1140	1080	1140	445	13400	6570	357	15800		
2	160	1940	4000	337	800	1070	1100	405	3640	7550	312	10500		
3	128	1560	1600	382	500	1050	1430	362	2480	9060	276	2790		
4	110	1230	900	400	350	1030	814	339	2070	3790	248	1560		
5	113	1220	800	429	260	733	799	320	1660	1700	260	1190		
6	147	769	650	439	210	547	778	3150	1420	1650	276	1240		
7	135	519	600	408	190	607	751	9590	1690	2740	339	3010		
8	115	421	550	382	180	583	769	7550	3410	4540	571	1640		
9	101	359	520	357	170	550	818	2500	21400	1670	324	1100		
10	96	324	480	307	160	508	745	1470	27500	1480	488	982		
11	88	340	450	230	150	604	718	1160	18400	1580	1060	784		
12	132	350	410	170	140	2240	706	1300	11400	760	1880	607		
13	178	330	390	150	130	3060	649	1330	4140	700	7510	550		
14	2520	310	340	130	200	2220	556	2140	1850	694	6400	3060		
15	1030	290	320	140	500	1760	508	11100	4290	565	5600	6750		
16	507	270	280	150	3830	7020	485	14200	4760	1150	7440	3040		
17	342	250	260	170	6040	8030	3490	10500	4870	878	3300	1260		
18	257	240	230	180	7180	3030	6560	3760	2270	533	1470	2890		
19	203	230	300	190	13300	6560	2020	3050	1900	439	994	6070		
20	199	220	340	200	21000	12500	1260	1900	1540	397	784	2240		
21	188	210	360	210	16400	12000	899	7340	1190	9350	827	1160		
22	166	200	382	230	15300	8680	836	11500	1050	4880	539	911		
23	162	190	382	300	12800	2550	709	11900	948	1170	976	757		
24	156	185	402	260	6280	1640	619	9500	863	854	550	671		
25	143	180	395	230	2570	1380	553	3340	824	703	1890	637		
26	137	175	395	200	1590	1270	519	5530	957	600	3790	592		
27	128	175	382	350	1230	1260	472	9290	1970	559	4390	550		
28	124	170	382	727	1130	1100	429	6780	1420	453	1140	491		
29	119	165	344	1270	---	1000	442	15800	1190	359	799	456		
30	156	450	337	4040	---	1180	431	26200	878	505	12900	408		
31	544	---	352	1890	---	972	---	27500	---	429	19800	---		
TOTAL	8766	14702	19533	15185	113730	87814	32005	211251	145380	68308	87490	73696		
MEAN	283	490	630	490	4062	2833	1067	6815	4846	2203	2822	2457		
MAX	2520	1940	4000	4040	21000	12500	6560	27500	27500	9350	19800	15800		
MIN	88	165	230	130	130	508	429	320	824	359	248	408		
CFSM	.16	.28	.36	.28	2.31	1.61	.61	3.87	2.75	1.25	1.60	1.40		
IN.	.19	.31	.41	.32	2.40	1.86	.68	4.47	3.07	1.44	1.85	1.56		
AC-FT	17390	29160	38740	30120	225600	174200	63480	419000	288400	135500	173500	146200		
CAL YR 1981	TOTAL	165485	MEAN	453	MAX	8070	MIN	12	CFSM	.26	IN	3.50	AC-FT	328200
WTR YR 1982	TOTAL	877860	MEAN	2405	MAX	27500	MIN	88	CFSM	1.37	IN	18.55	AC-FT	1741000

06821140 SMITHVILLE RESERVOIR NEAR SMITHVILLE, MO

LOCATION.--Lat 39°23'50", long 94°33'25", SW¼ sec.13, T.53 N., R.33 W., Clay County Hydrologic Unit 10240012, in control tower at outlet works on the Little Platte River, and 1.0 mi (1.6 km) northeast of Smithville and 5.0 mi (8.0 km) north of Kansas City.

DRAINAGE AREA.--213 mi² (552 km²).

PERIOD OF RECORD.--July 1976 to current year. Records collected at same site since 1976 and are available from Corps of Engineers.

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

REMARKS.--Lake is formed by a rolled earthfill type dam. Storage began on July 13, 1976. An uncontrolled limited service type spillway, 50 ft (15 m) wide, is located at the right abutment. Capacity of surcharge pool (elevations 876.2 ft (267.07 m) to 891.1 ft (271.61 m)), 182,209 acre-ft (225 hm³); of flood control pool (elevations 864.2 ft (263.41 m) to 876.2 ft (276.07 m)), 101,800 acre-ft (126 hm³); and of multipurpose pool (elevations 799.0 ft (243.54 m) to 864.2 ft (263.41 m)), 144,600 acre-ft (178 hm³). Lake is used for flood control, water supply, water quality control, recreation, and fish and wildlife enhancement.

COOPERATION.--Records furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 171,000 acre-ft (211 hm³) Sept. 2-8, 1982, elevation 867.76 ft (264.493 m); minimum, 2,360 acre-ft (2.91 hm³) Jan. 13, 1980, elevation, 819.0 ft (249.631 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 171,000 acre-ft (211 hm³) Sept. 2-8, elevation, 867.76 ft (264.493 m); minimum, 20,300 acre-ft (25.0 hm³) Oct. 10-13, elevation, 834.81 ft (254.450 m).

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20600	21200	23800	21700	41500	58800	68500	71600	102000	144000	147000	170000
2	20500	22200	24800	21800	41900	59100	68800	71800	102000	148000	146000	171000
3	20400	21900	25100	21800	42100	59300	69300	71900	103000	150000	146000	171000
4	20400	21100	25300	22000	42100	59400	69400	71900	103000	149000	146000	171000
5	20400	20900	23700	22000	42200	59400	69600	72000	104000	149000	145000	171000
6	20400	20900	22000	22100	42300	59600	69800	72900	104000	149000	145000	171000
7	20400	21000	20400	22100	42400	59600	69900	73600	105000	149000	145000	171000
8	20400	21000	20500	22100	42400	59600	70100	73700	107000	148000	145000	171000
9	20400	21200	20600	22100	42500	59800	70300	74100	127000	148000	145000	169000
10	20300	21200	20700	22100	42500	59800	70400	74200	144000	148000	145000	167000
11	20300	21100	20700	22100	42500	59900	70400	74300	144000	148000	145000	166000
12	20300	20900	20800	22100	42600	60000	70600	74400	145000	148000	144000	163000
13	20300	20500	20800	22100	42700	60100	70800	74500	145000	148000	153000	161000
14	25900	20500	20900	22100	43700	60200	71000	74800	145000	149000	154000	161000
15	28800	20500	20900	22100	44600	60600	71100	76200	147000	151000	154000	162000
16	28500	20600	21000	22100	46300	61400	71200	77000	148000	151000	154000	162000
17	27600	20600	21100	22100	50000	62200	71300	78400	148000	151000	154000	162000
18	26900	20600	21100	22100	51500	62700	71300	80300	149000	151000	154000	162000
19	23500	20600	21100	22200	54000	63600	71300	80700	149000	150000	154000	162000
20	21800	20600	21200	22200	55400	64300	71400	80900	148000	150000	154000	162000
21	21100	20500	21200	22200	56600	64600	71400	81600	148000	150000	153000	162000
22	20800	20500	21300	22300	57700	64800	71300	81900	148000	151000	152000	159000
23	20800	20500	21300	22500	58200	64900	71400	82100	147000	151000	152000	158000
24	20800	20500	21400	22500	58300	65100	71400	82200	147000	151000	153000	156000
25	20800	20500	21400	22600	58500	65200	71400	82400	146000	151000	153000	154000
26	20800	20500	21500	22600	58500	65400	71400	83000	146000	151000	152000	152000
27	20800	20500	21600	22700	58700	65400	71400	83400	146000	151000	159000	150000
28	20900	20400	21600	23100	58700	65500	71500	83900	144000	150000	160000	148000
29	20900	20400	21600	23500	---	65500	71600	86600	144000	149000	160000	147000
30	20900	20400	21700	33300	---	66700	71700	89700	144000	148000	162000	146000
31	20900	---	21700	40300	---	68100	---	99500	---	148000	169000	---

WTR YR 1982

(+)	835.15	834.89	835.54	843.10	848.43	850.69	851.50	857.04	864.15	864.61	867.46	864.45
(‡)	+400	-500	+1300	+18600	+18400	+9400	+3600	+27800	+44500	+4000	+21000	-23000
MAX	28800	22200	25300	40300	58700	68100	71700	99500	149000	151000	169000	171000
MIN	20300	20400	20400	21700	41500	58800	68500	71600	102000	144000	144000	146000

CAL YR 1981.....‡ +10300

WTR YR 1982.....‡ - 6000

(+) Elevation, in feet NGVD, at end of month.

(‡) Change in contents, in acre-feet.

PLATTE RIVER BASIN (IOWA-MISSOURI)

06821150 LITTLE PLATTE RIVER AT SMITHVILLE, MO

LOCATION.--Lat 39°23'17", long 94°34'44", in N½SW¼ sec.23, T.53 N., R.33 W., Clay County, Hydrologic Unit 10240012, on left bank behind city equipment shelter on old bridge abutment, 500 ft (152 m) upstream from town bridge in Smithville, 1,500 ft (457 m) upstream from bridge on U.S. Highway 169, 0.5 mi (0.8 km) downstream from Wilkerson Creek, 2.4 mile (3.9 km) downstream from Smithville Lake and at mile 11.1 (17.8 km).

DRAINAGE AREA.--234 mi² (606 km²).

PERIOD OF RECORD.--June 1965 to current year. Occasional measurements 1942, 1943, 1946, 1962-65.

GAGE.--Water-stage recorder. Datum of gage is 778.18 ft (237.189 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Mar. 23, 1966, nonrecording gage at site 1,500 ft (457 m) downstream at same datum.

REMARKS.--Records fair, except during periods of backwater which are poor. Construction of dam for Smithville Lake began in June 1974 and partial regulation began Aug. 6, 1977. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--17 years, 155 ft³/s (4.390 m³/s), 8.99 in/yr (228 mm/yr), 112,300 acre-ft/yr (138 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 76,600 ft³/s (2,170 m³/s), slope-area measurement of peak flow, July 20, 1965, gage height, 44.8 ft (13.66 m) from floodmark; no flow at times in many years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of 1947 reached a stage of 37.4 ft (11.40 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 21,000 ft³/s (595 m³/s) at 0445 August 13, gage height, 36.44 ft (11.107 m); minimum discharge, 3.6 ft³/s (0.102 m³/s) April 19, gage height, 10.57 ft (3.222 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	23	123	143	10	96	16	18	9.8	110	29	190	70		
2	21	149	74	11	99	15	34	9.8	51	27	190	41		
3	19	545	62	11	65	15	33	8.3	12	14	190	22		
4	16	481	111	11	49	16	21	6.8	117	4.2	190	17		
5	19	29	906	11	55	15	24	28	14	4.6	188	127		
6	16	25	883	11	45	14	21	122	4.0	7.2	102	360		
7	15	24	376	10	35	14	20	24	644	207	46	503		
8	15	27	23	9.2	29	14	22	16	203	151	47	733		
9	15	28	25	8.2	28	14	20	15	2600	28	47	1020		
10	15	104	14	8.0	30	14	17	12	149	34	48	1020		
11	15	206	13	7.8	29	14	17	12	125	121	51	1020		
12	15	206	13	7.6	28	15	16	20	98	123	518	1020		
13	111	101	13	9.0	29	16	15	18	60	86	7190	384		
14	272	19	13	12	32	20	14	108	58	204	127	17		
15	180	19	12	10	621	37	13	159	458	138	67	15		
16	568	19	12	13	330	78	12	112	94	134	51	13		
17	564	24	16	12	82	25	10	115	44	132	48	13		
18	1070	39	11	11	269	38	7.2	20	67	132	39	15		
19	1370	41	13	9.5	80	19	3.8	10	189	288	32	14		
20	556	41	15	9.6	57	16	6.8	10	350	395	473	14		
21	406	41	16	9.8	38	13	8.2	29	362	256	338	292		
22	20	41	14	35	29	12	8.8	6.5	381	45	588	971		
23	20	41	12	118	26	11	10	5.2	378	46	214	967		
24	19	39	11	39	15	10	9.8	4.4	377	47	248	954		
25	19	38	11	16	7.8	10	10	111	255	155	513	959		
26	19	38	12	14	8.6	14	9.3	114	53	335	530	958		
27	18	38	11	31	16	14	9.9	9.0	54	407	120	820		
28	17	41	11	48	16	14	11	4.8	26	410	33	538		
29	16	41	11	1170	---	14	16	145	13	410	117	532		
30	17	405	11	1900	---	105	11	1150	18	310	136	229		
31	17	---	11	182	---	19	---	396	---	190	26	---		
TOTAL	5485	3013	2879	3764.7	2244.4	661	448.8	2810.6	7364.0	4870.0	12697	13658		
MEAN	177	100	92.9	121	80.2	21.3	15.0	90.7	245	157	410	455		
MAX	1370	545	906	1900	621	105	34	1150	2600	410	7190	1020		
MIN	15	19	11	7.6	7.8	10	3.6	4.4	4.0	4.2	26	13		
CFSM	.76	.43	.40	.52	.34	.09	.06	.39	1.05	.67	1.75	1.94		
IN.	.87	.48	.46	.60	.36	.11	.07	.45	1.17	.77	2.02	2.17		
AC-FT	10880	5980	5710	7470	4450	1310	890	5570	14610	9660	25180	27090		
CAL YR 1981	TOTAL	78544.40	MEAN	215	MAX	7810	MIN	.10	CFSM	.92	IN	12.49	AC-FT	155800
WTR YR 1982	TOTAL	59895.50	MEAN	164	MAX	7190	MIN	3.8	CFSM	.70	IN	9.52	AC-FT	118800

06821190 PLATTE RIVER AT SHARPS STATION, MO

LOCATION.--Lat 39°24'03", long 94°43'36", in NW¼SE¼SW¼ sec.16, T.53 N., R.34 W., Platte County, Hydrologic Unit 10240012, on downstream side of center pier at Sharps bridge, 0.2 mi (0.3 km) upstream from Jowler Creek, 3.3 mi (5.3 km) downstream from Little Platte River, 3.6 mi (5.8 km) south of Camden Point, and at mile 25.1 (40.4 km).

DRAINAGE AREA.--2,380 mi² (6160 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1978 to current year.

GAGE.--Water-stage recorder. Datum of gage is 754.23 ft (229.889 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Water discharge records fair. Some regulation from Smithville Lake.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 26,100 ft³/s (739 m³/s) June 1, gage height, 33.81 ft (10.305 m); minimum discharge, 124 ft³/s (3.512 m³/s) Oct. 12,13, minimum gage height, 4.94 ft (1.506 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	218	778	4370	437	4990	1370	1580	686	25600	2360	824	12900	
2	171	1920	7270	425	2110	1280	1640	696	24600	8510	751	17700	
3	141	2740	4920	440	1510	1240	2360	656	19300	10500	714	17900	
4	143	2330	2330	470	1330	1250	2070	611	11700	10700	681	13000	
5	164	1740	2220	487	1210	1200	1310	599	5080	8160	674	4080	
6	162	1490	1980	494	1110	908	1290	1230	3010	2520	640	1860	
7	156	1010	1630	486	966	775	1160	8300	4000	2040	498	2570	
8	191	764	834	459	818	824	1050	13500	4290	4160	496	3800	
9	170	692	745	431	730	798	1110	14200	12200	4510	672	2770	
10	148	572	684	405	646	769	1150	5550	19500	2100	581	2390	
11	137	681	642	356	599	744	1080	1770	23300	1840	613	2040	
12	128	652	614	317	554	966	1040	1450	22700	1770	1560	1830	
13	264	602	588	310	523	3460	1020	1780	19300	1040	11500	1510	
14	4180	444	576	312	512	3960	966	2040	13400	1510	12600	809	
15	4480	427	561	325	1540	3400	878	6900	7360	1560	9770	4510	
16	1840	418	550	335	3470	5420	820	9730	6450	928	8880	7070	
17	1230	408	417	338	4970	10300	826	12100	2490	1600	8540	3810	
18	1130	410	338	335	6740	11200	5800	14800	5340	1150	4650	1600	
19	2020	411	455	338	6910	6650	6280	11600	3040	825	2060	4440	
20	986	403	462	347	6620	10100	4020	5490	2470	874	1720	6420	
21	799	386	459	358	6340	12800	1450	4160	1980	4260	1170	3140	
22	368	376	487	388	11100	16400	1170	7870	1620	8900	1450	2580	
23	256	378	509	649	14500	15500	985	9740	1440	7740	1760	2280	
24	250	376	503	550	13600	7200	872	11500	1300	1960	2110	2090	
25	252	372	500	512	10200	2520	828	13100	1170	985	1290	1970	
26	260	374	501	464	4180	1890	794	11600	904	912	3390	1900	
27	258	372	495	470	2110	1700	749	8840	985	935	8090	1820	
28	249	358	476	790	1560	1600	702	9430	2610	882	7470	1310	
29	236	350	467	1990	---	1380	728	10600	1720	850	2260	1170	
30	233	974	441	8760	---	2590	717	14000	1190	816	3000	1020	
31	250	---	432	9180	---	2400	---	23800	---	790	9010	---	
TOTAL	21470	23208	37456	31958	111448	132594	46445	238328	250049	97687	109424	132289	
MEAN	693	774	1208	1031	3980	4277	1548	7688	8335	3151	3530	4410	
MAX	4480	2740	7270	9180	14500	16400	6280	23800	25600	10700	12600	17900	
MIN	128	350	338	310	512	744	702	599	904	790	496	809	
CFSM	.29	.33	.51	.43	1.67	1.80	.65	3.23	3.50	1.32	1.48	1.85	
IN.	.34	.36	.59	.50	1.74	2.07	.73	3.73	3.91	1.53	1.71	2.07	
AC-FT	42590	46030	74290	63390	221100	263000	92120	472700	496000	193800	217000	262400	
CAL YR 1981 TOTAL	364634	MEAN	999	MAX	16200	MIN	39	CFSM	.42	IN	5.70	AC-FT	723300
WTR YR 1982 TOTAL	1232356	MEAN	3376	MAX	25600	MIN	128	CFSM	1.42	IN	19.26	AC-FT	2444000

PLATTE RIVER BASIN

06821190 PLATTE RIVER AT SHARPS STATION, MO.--continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (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)
NOV 02...	1600	2050	344	7.5	14.0	220	5.2	50	17000	16000
JAN 04...	1630	480	570	7.6	.5	4.2	8.8	61	230	380
MAR 08...	1615	822	467	7.8	3.0	50	11.0	81	410	440
MAY 10...	1640	4310	318	7.7	19.0	630	6.8	72	23000	41000
JUL 13...	1400	950	315	7.6	25.5	690	6.2	76	7400	15000
SEP 21...	1530	2500	280	7.7	16.5	270	7.2	73	14000	18000

DATE	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS, NONCAR- BONATE (MG/L AS CA) (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	PERCENT SODIUM (00932)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LITY FIELD (MG/L AS CACO3) (00410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
NOV 02...	154	23	46	9.5	9.8	12	.4	7.9	131	21
JAN 04...	264	67	76	18	18	13	.5	4.1	197	51
MAR 08...	206	26	61	13	12	11	.4	5.5	180	40
MAY 10...	137	37	40	9.1	7.7	10	.3	5.1	100	26
JUL 13...	142	22	43	8.4	7.2	0	.3	4.9	120	27
SEP 21...	116	6	34	7.6	7.2	11	.3	5.5	110	22

06821190 PLATTE RIVER AT SHARPS STATION, MO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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 SIU2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)
NOV 02...	19	.2	12	221	--	.30	1220	.99	.190
JAN 04...	16	.2	14	348	336	.47	451	2.2	.320
MAR 08...	13	.3	13	280	266	.38	621	1.4	.390
MAY 10...	12	.2	12	222	170	.30	2580	5.4	.380
JUL 13...	8.5	.3	12	193	180	.26	495	2.9	<.060
SEP 21...	9.0	.2	13	172	165	.23	1160	1.4	.110

DATE	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4) (71846)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS TOTAL (MG/L AS P04) (71886)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P) (00671)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
NOV 02...	.24	1.30	.220	.67	.100	.100	1650	9130	68
JAN 04...	.41	1.00	.070	.21	.030	.040	4	5.2	0
MAR 08...	.50	1.30	.070	.21	.020	.030	234	519	93
MAY 10...	.49	4.30	2.30	7.1	.080	.030	2410	28000	97
JUL 13...	.08	4.60	.180	.55	.060	.080	1610	4130	95
SEP 21...	.14	3.80	.960	2.9	.160	.090	1000	6750	95

PLATTE RIVER BASIN

06821190 PLATTE RIVER AT SHARPS STATION, MO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	ARSENIC		ARSENIC		BARIUM,		BARIUM,		CADMIUM		CHROMIUM,	
	TOTAL	SUS- PENDE	TOTAL	DIS- SOLVED	TOTAL	RECOV- ERABLE	TOTAL	RECOV- ERABLE	TOTAL	DIS- SOLVED	TOTAL	RECOV- ERABLE
	(UG/L AS AS) (01002)	(UG/L AS AS) (01001)	(UG/L AS AS) (01000)	(UG/L AS AS) (01000)	(UG/L AS BA) (01007)	(UG/L AS BA) (01006)	(UG/L AS BA) (01005)	(UG/L AS BA) (01005)	(UG/L AS CU) (01027)	(UG/L AS CU) (01025)	(UG/L AS CR) (01034)	(UG/L AS CR) (01030)
NOV 02...	10	8	2	500	400	140	<1	<1	20	<10		
JAN 04...	1	0	1	100	0	150	4	<1	<10	<10		
MAY 10...	12	10	2	500	400	120	<1	<3	30	<10		
JUL 13...	10	8	2	800	700	150	1	<1	60	<10		

DATE	COBALT,		COPPER,		IRON,		IRON,		LEAD,	
	TOTAL	DIS- SOLVED	TOTAL	RECOV- ERABLE	TOTAL	RECOV- ERABLE	TOTAL	RECOV- ERABLE	TOTAL	RECOV- ERABLE
	(UG/L AS CU) (01037)	(UG/L AS CU) (01035)	(UG/L AS CU) (01042)	(UG/L AS CU) (01041)	(UG/L AS CU) (01040)	(UG/L AS FE) (01045)	(UG/L AS FE) (01044)	(UG/L AS FE) (01046)	(UG/L AS Pb) (01051)	(UG/L AS Pb) (01050)
NOV 02...	12	<3	85	78	7	28000	28000	170	32	30
JAN 04...	<1	<3	9	7	2	720	700	25	8	7
MAY 10...	16	<1	52	48	4	37000	37000	120	10	5
JUL 13...	14	<1	36	33	3	19000	19000	96	22	--

DATE	MANGANESE,		MANGANESE,		MERCURY		MERCURY		NICKEL,	
	TOTAL	DIS- SOLVED	TOTAL	RECOV- ERABLE	TOTAL	RECOV- ERABLE	TOTAL	RECOV- ERABLE	TOTAL	RECOV- ERABLE
	(UG/L AS Pb) (01049)	(UG/L AS Mn) (01055)	(UG/L AS Mn) (01054)	(UG/L AS Mn) (01056)	(UG/L AS Hg) (71900)	(UG/L AS Hg) (71895)	(UG/L AS Hg) (71890)	(UG/L AS Ni) (01067)	(UG/L AS Ni) (01066)	(UG/L AS Ni) (01066)
NOV 02...	2	1500	1400	87	.5	--	<.1	90	86	
JAN 04...	1	330	30	300	.1	--	<.1	6	4	
MAY 10...	5	1700	1700	7	.2	--	<.1	36	32	
JUL 13...	<1	1500	1500	11	.4	.2	.2	61	--	

DATE	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	SELE-	SELE-	SILVER,	SILVER,	ZINC,	ZINC,	ZINC,		
			NIUM,	NIUM,	TOTAL	DIS-	TOTAL	RECOV-	SUS- PENDE	PENDE	DIS-
			SUS- PENDE	DIS-	RECOV-	DIS-	RECOV-	RECUV-	RECUV-	SOLVED	
			TOTAL (UG/L AS SE) (01146)	SOLVED (UG/L AS SE) (01145)	ERABLE (UG/L AS AG) (01077)	SOLVED (UG/L AS AG) (01075)	ERABLE (UG/L AS ZN) (01092)	ERABLE (UG/L AS ZN) (01091)	SOLVED (UG/L AS ZN) (01090)		
NOV 02...	4	1	--	<1	<1	<1	140	110	29		
JAN 04...	2	1	0	1	<1	<1	30	30	5		
MAY 10...	4	1	0	1	1	<1	150	--	<12		
JUL 13...	<1	<1	--	<1	<1	<1	180	150	27		

06892350 KANSAS RIVER AT DESOTO, KS

LOCATION.--Lat 38°59'00", long 94°57'52", in SE¼NE¼NE¼ sec.27, T.12 S., R.22 E., Leavenworth County, Hydrologic Unit 10270104, on left bank at downstream side of bridge on county road, north edge of DeSoto, 0.4 mi (0.6 km) upstream from Kill Creek and at mile 31.0 (49.9 km).

DRAINAGE AREA.--59,756 mi² (154,768 km²), of which a large area is noncontributing.

PERIOD OF RECORD.--July 1917 to current year. Monthly discharge only for some periods published in WSP 1310. Prior to October 1973, published as "at Bonner Springs".

REVISED RECORDS.--WSP 806: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 758.87 ft (231.304 m) National Geodetic Vertical Datum of 1929. July 9, 1917, to Apr. 23, 1934, nonrecording gage; April 24, 1934, to Nov. 26, 1961, water-stage recorder at site 9.7 mi (15.6 km) downstream at datum 11.81 ft (3.600 m) lower; Nov. 26, 1961, to Sept. 30, 1971, water-stage recorder at site 10.2 mi (16.4 km) downstream at datum 17.81 ft (5.428 m) lower; and Oct. 1, 1971, to Sept. 30, 1973, at site 10.2 mi (16.4 km) downstream at datum 22.81 ft (6.952 m) lower.

REMARKS.--Records good except those for winter periods, which are poor. Natural flow of stream affected by lakes and reservoirs in Colorado, Nebraska, and Kansas, and by numerous diversions for irrigation above station.

AVERAGE DISCHARGE.--65 years, 6,956 ft³/s (197.0 m³/s), 5,040,000 acre-ft/yr (6.21 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 510,000 ft³/s (14,400 m³/s) July 13, 1951, gage height, 37.3 ft (11.37 m), from floodmarks, present site and datum, from rating curve extended above 128,000 ft³/s (3,620 m³/s) on basis of slope-area measurement of peak flow at mile 19.52 (31.41 km) and at mile 18.60 (29.93 km); minimum observed, 160 ft³/s (4.53 m³/s) Oct. 11, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since at least 1844, that of July 13, 1951.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 92,900 ft³/s (2,630 m³/s) June 10, gage height, 21.97 ft (6.696 m); minimum daily, 1,900 ft³/s (53.8 m³/s) Jan. 9-11, result of freezeup.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	2660	4950	6120	2790	11400	18400	7920	3070	57200	41900	9250	7520		
2	2760	15400	10700	2610	7640	18100	10100	2830	41700	62700	8810	8840		
3	2750	13600	7220	2630	5690	17100	10400	3080	35000	44500	8320	8780		
4	2850	7430	5380	2710	4920	16900	9730	3840	39400	39600	7640	8740		
5	2970	10800	4500	2250	4600	16600	9140	3910	43300	38400	6890	8330		
6	3160	12100	4070	2200	4100	14200	8560	8320	40700	38100	6400	7230		
7	3070	8690	3680	2200	3900	11000	5950	10400	46700	38400	5990	7260		
8	2980	7450	3800	2000	3900	8330	4570	7530	57400	37100	5680	7340		
9	2950	8140	3660	1900	5000	7760	4100	7020	59000	33500	5460	7080		
10	3030	9000	3410	1900	4300	7640	3840	5970	66100	37400	5570	6150		
11	2770	7740	3210	1900	3500	7520	5130	5650	57800	38900	6050	5880		
12	2740	8680	3060	2000	3500	7150	5810	10700	44700	33500	6090	5590		
13	2890	8280	2980	2100	3500	5980	5680	22700	36800	26700	7170	5400		
14	5510	7010	3020	2200	4900	5750	5530	19000	34700	27300	7630	4360		
15	6120	5770	5870	2300	7000	5570	5520	16000	38200	30500	6910	4150		
16	3820	5080	7260	2200	10000	6730	5370	23400	28000	32800	6110	5690		
17	3380	4720	8440	2300	15000	7810	5150	21100	23200	33900	6060	5980		
18	3170	4490	10500	2500	20900	7190	4920	21600	27700	28000	6130	5530		
19	2960	3520	12300	2700	23700	6190	4060	21600	34400	26400	6080	5990		
20	2700	2780	12800	2800	22300	6420	3310	18800	32500	25200	6200	5400		
21	2480	2590	10500	2800	19100	9570	3160	19200	31500	24800	6220	5000		
22	2360	2430	9450	2800	17300	7910	3550	25300	32300	24900	6160	4100		
23	2260	2330	10000	2700	15400	7050	3880	14000	31500	24700	6250	3390		
24	2300	2300	13700	2700	14300	7740	3220	9310	21900	24200	6220	3210		
25	2380	2200	11400	2800	18100	13400	2740	13500	23400	19500	6840	3140		
26	2430	2060	7650	3000	20800	14200	2580	41700	22000	17900	7350	3030		
27	2450	2100	5730	3400	19600	13700	2450	36000	22200	16300	8210	2980		
28	2420	2120	4670	4100	18700	12900	2430	26500	31100	13000	8100	2920		
29	2340	2160	4220	5600	---	11800	2990	39800	34500	10600	7960	2860		
30	2430	2920	3900	15000	---	13200	3140	56600	31500	10300	7680	2710		
31	2590	---	3420	23600	---	11400	---	61100	---	10000	7540	---		
TOTAL	91680	178840	206820	114690	313050	325230	154930	579530	1146400	911000	212970	164580		
MEAN	2957	5961	6672	3700	11180	10490	5164	18690	38210	29390	6870	5486		
MAX	6120	15400	13700	23600	23700	18400	10400	61100	86100	62700	9250	8840		
MIN	2260	2060	2980	1900	3500	5570	2430	2830	21900	10000	5460	2710		
CFSM	.05	.10	.11	.06	.19	.18	.09	.31	.64	.49	.12	.09		
IN	.06	.11	.13	.07	.19	.20	.10	.36	.71	.57	.13	.10		
AC-FT	181800	354700	410200	227500	620900	645100	307300	1149000	2274000	1807000	422400	326400		
CAL YR 1981	TOTAL	1833078	MEAN	5022	MAX	53900	MIN	865	CFSM	.08	IN	1.14	AC-FT	3636000
WTR YR 1982	TOTAL	4399720	MEAN	12050	MAX	86100	MIN	1900	CFSM	.20	IN	2.74	AC-FT	8727000

MISSOURI RIVER MAIN STEM

06893000 MISSOURI RIVER AT KANSAS CITY, MO

LOCATION.--Lat 39°06'43", long 94°35'16", in sec.32, T.50 N., R.33 W., Jackson County, Hydrologic Unit 10300101, on downstream side of right pier of Chicago, Burlington, & Quincy Railroad bridge at Kansas City, 1.4 mi (2.3 km) downstream from Kansas River. River mile, 366.1 (589.1 km).

DRAINAGE AREA.--485,200 mi² (1,257,000 km²), approximately.

PERIOD OF RECORD.--October 1897 to current year. Prior to August 1928 monthly discharge only, published in WSP 1310. Gage-height records collected at same site 1873-99 are contained in reports of Missouri River Commission; those since 1900 are contained in reports of National Weather Service.

REVISED RECORDS.--WDR MO-76-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 716.40 ft (218.359 m) National Geodetic Vertical Datum of 1929. Prior to May 4, 1931, nonrecording gage, and May 4, 1931, to Aug. 23, 1934, water-stage recorder, at present site and datum. Aug. 24, 1934, to May 15, 1947, water-stage recorder at site 200 ft (61.0 m) upstream at same datum. May 16, 1947, to Feb. 28, 1948, nonrecording gage at present site and datum.

REMARKS.--Records good. Discharge measurements made weekly except during ice-flow periods. Some regulation from many upstream reservoirs. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--85 years (1898-1982), 54,690 ft³/s (1,549 m³/s), 39,620,000 acre-ft/yr (48,850 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 573,000 ft³/s (16,230 m³/s) July 14, 1951; maximum gage height, 36.2 ft (11.03 m) July 14, 1951; minimum discharge, about 1,500 ft³/s (42.5 m³/s) Jan. 9, 10, 1937; minimum gage height, -2.91 ft (-0.887 m) Jan. 29, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 16, 1844 reached a stage of 38.0 ft (11.58 m), discharge, about 625,000 ft³/s (17,000 m³/s), computed by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 201,000 ft³/s (5,690 m³/s) June 10, gage height, 21.96 ft (6.693 m); minimum daily, 12,000 ft³/s (340 m³/s) Jan. 15, 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	40800	46000	35500	25000	41800	77000	55900	47900	188000	89600	55200	88200	
2	41100	54800	46000	23800	35200	70000	54200	46900	156000	133000	54300	76900	
3	41000	67600	46000	23300	31000	64000	55700	46600	143000	125000	52000	74600	
4	41500	56600	38500	21400	25600	56000	54400	46100	126000	105000	51000	72500	
5	43800	55800	35000	20700	22400	52000	53400	45500	118000	99400	51900	65700	
6	43700	59100	33700	19700	21200	47000	52500	54800	107000	91800	48700	57000	
7	42800	55400	32400	21400	20300	44000	50100	72900	112000	90300	52800	57700	
8	42300	51400	31000	20800	22400	40000	47600	71200	123000	98900	58500	59900	
9	41800	49700	29800	20300	24100	38900	47000	62500	173000	111000	55500	57700	
10	41800	47700	29500	19700	26300	36800	45900	56800	198000	106000	49100	53800	
11	41500	45000	29000	17500	26800	35300	45500	52200	172000	103000	52300	52400	
12	41500	42300	29000	16000	27900	35100	46500	54200	136000	108000	62200	51500	
13	43400	40900	28500	14000	28000	36800	46000	68300	117000	114000	130000	51200	
14	49400	38000	29000	13000	28100	41100	45300	79900	107000	97900	151000	67000	
15	50800	35300	29300	12000	30700	48600	46000	81700	109000	99600	116000	85700	
16	46800	33000	32400	12000	40400	51500	46900	87000	148000	96700	104000	75300	
17	45800	31400	32400	12500	53300	53000	73000	89700	169000	97500	80300	66300	
18	45500	30800	33200	13000	56500	53700	65700	84400	150000	90000	64600	59800	
19	45700	30300	32300	13500	65700	49000	59900	86400	122000	87900	54900	71800	
20	45800	29100	30200	13000	74000	82900	54700	81800	107000	85000	50100	65700	
21	44400	28200	28100	13000	84000	103000	51100	97000	98100	96200	47800	58800	
22	44000	28000	25900	14000	92000	86600	49300	152000	91500	95900	48700	54700	
23	43700	28200	25200	17000	99000	79400	48900	157000	89200	88800	48200	52700	
24	43300	28300	28000	16000	106000	72500	47300	108000	78300	84100	47800	51300	
25	43100	27700	29000	17000	114000	66400	45800	92200	73100	76000	47100	51100	
26	42800	26900	27100	20000	107000	66200	45400	132000	70700	67600	56800	50400	
27	42500	26900	26600	21200	90000	63900	44300	148000	70000	64200	75000	50700	
28	42400	26600	26700	20400	84000	61100	44600	135000	80700	60400	64300	49900	
29	41100	26500	26600	21000	---	58200	46300	152000	94900	55700	54900	48900	
30	40800	29600	27200	61900	---	59900	47100	177000	80900	55000	58700	48700	
31	42100	---	27000	52700	---	60500	---	189000	---	55400	113000	---	
TOTAL	1347000	1177100	960100	626800	1477700	1790400	1516300	2856000	3608400	2828900	2056700	1827900	
MEAN	43450	39240	30970	20220	52780	57750	50540	92130	120300	91250	66350	60930	
MAX	50800	67600	46000	61900	114000	103000	73000	189000	198000	133000	151000	88200	
MIN	40800	26500	25200	12000	20300	35100	44300	45500	70000	55000	47100	48700	
CFSM	.09	.08	.06	.04	.11	.12	.10	.19	.25	.19	.14	.13	
IN.	.10	.09	.07	.05	.11	.14	.12	.22	.28	.22	.16	.14	
AC-FT	2672000	2335000	1904000	1243000	2931000	3551000	3008000	5665000	7157000	5611000	4079000	3626000	
CAL YR 1981	TOTAL	14912500	MEAN	40860	MAX	125000	MIN	15800	CFSM	.08	IN	1.14	
WTR YR 1982	TOTAL	22073300	MEAN	60470	MAX	198000	MIN	12000	CFSM	.13	IN	1.69	
									AC-FT	29580000		AC-FT	43780000

06893500 BLUE RIVER NEAR KANSAS CITY, MO

LOCATION.--Lat 38°57'26", long 94°33'31", in SE¼NE¼ sec.28, T.48 N., R.33 W., Jackson County, Hydrologic Unit 10300101, on downstream side of right pier of bridge on Bannister Road, 0.4 mi (0.6 km) downstream from Indian Creek, in Kansas City and at river mile 23.16 (37.3 km).

DRAINAGE AREA.--188 mi² (487 km²).

PERIOD OF RECORD.--May 1939 to current year.

REVISED RECORDS.--WSP 926: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 753.73 ft (229.737 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to July 1, 1939, nonrecording gage at same site and datum.

REMARKS.--Records good. Low flow regulated by commercial plants above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--43 years, 146 ft³/s (4.135 m³/s), 10.55 in/yr (268 mm/yr), 105,800 acre-ft/yr (130 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 41,000 ft³/s (1,160 m³/s) Sept. 13, 1961, gage height, 44.46 ft (13.551 m); no flow September 1939 to February 1940 and in August 1946.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Nov. 17, 1928, prior to 1961, reached a stage about 39 ft (11.9 m) from information by City of Kansas City.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 5,800 ft³/s (164 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s)	(m ³ /s)	Gage height (ft)	(m)
Jan. 30	0230	11,700	331	27.73	8.452
May 16	0745	9,240	262	24.79	7.556
Aug. 13	0830	15,100	428	30.78	9.382

Minimum discharge, 11 ft³/s (0.31 m³/s) Oct. 3; gage height, 4.09 ft (1.247 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	46	587	622	48	239	110	62	128	519	104	49	68
2	23	195	245	51	194	100	73	107	332	222	48	100
3	20	210	187	55	153	92	86	90	298	112	46	76
4	26	93	152	55	125	84	63	85	366	80	45	50
5	61	94	130	59	126	78	94	85	260	69	150	38
6	40	202	125	57	114	70	82	207	220	90	212	36
7	17	112	112	45	108	66	80	138	994	148	190	45
8	20	135	97	39	105	60	80	97	2060	85	62	33
9	23	343	88	40	99	63	66	80	2120	83	54	32
10	23	197	88	34	91	63	68	71	425	332	50	30
11	22	145	83	35	85	61	61	113	332	153	150	34
12	43	125	79	32	82	64	59	497	277	117	561	30
13	409	117	76	32	83	76	54	263	230	210	8140	55
14	387	104	73	35	123	177	52	710	411	2000	760	58
15	157	95	71	34	437	274	48	369	465	362	419	32
16	104	88	76	35	2000	375	56	2510	279	208	281	31
17	272	80	69	33	800	226	57	950	202	152	229	30
18	125	78	61	32	900	182	48	509	182	117	180	30
19	80	73	53	36	650	163	58	310	190	95	142	29
20	64	73	54	68	450	142	53	308	157	82	105	29
21	55	64	59	62	300	123	43	1160	207	300	75	29
22	48	63	71	405	240	109	43	334	138	150	221	29
23	41	61	69	373	220	103	45	245	210	70	273	28
24	37	61	66	134	180	102	40	220	207	66	117	28
25	40	59	60	104	160	112	63	449	242	60	104	28
26	50	57	58	82	145	98	56	498	148	58	252	26
27	39	52	56	87	130	85	55	240	117	56	107	26
28	36	52	54	110	120	78	290	210	127	90	70	26
29	34	50	49	1920	---	70	370	545	104	70	53	25
30	34	1360	50	6600	---	87	172	855	83	54	158	24
31	50	---	49	380	---	70	---	2040	---	52	66	---
TOTAL	2426	5025	3182	11132	8459	3563	2477	14423	11902	5847	13369	1135
MEAN	78.3	168	103	359	302	115	82.6	465	397	189	431	37.8
MAX	409	1360	622	6600	2000	375	370	2510	2120	2000	8140	100
MIN	17	50	49	32	82	60	40	71	83	52	45	24
CFSM	.42	.89	.55	1.91	1.61	.61	.44	2.47	2.11	1.01	2.29	.20
IN.	.48	.99	.63	2.20	1.67	.71	.49	2.85	2.36	1.16	2.65	.22
AC-FT	4810	9970	6310	22080	16780	7070	4910	28610	23610	11600	26520	2250

CAL YR 1981	TOTAL	57440	MEAN 157	MAX 4770	MIN 17	CFSM .84	IN 11.37	AC-FT 113900
WTR YR 1982	TOTAL	82940	MEAN 227	MAX 8140	MIN 17	CFSM 1.21	IN 16.41	AC-FT 164500

06893590 BLUE RIVER AT 12TH STREET AT KANSAS CITY, MO

LOCATION.--Lat 39°05'48", long 94°29'24", in NW¼NE¼SW¼ sec.6, T.49 N., R.32 W., Jackson County, at 12th Street and Interstate Highway 435 exit ramp, 0.2 mi downstream from Truman Road and at river mile 4.3.

DRAINAGE AREA.--264 mi² (684 km²).

GAGE.--Water-stage recorder. Datum of gage is 724.41 ft (220.800 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Daily mean gage heights published, discharge not computed. Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,700 ft³/s (473 m³/s) Aug. 13, 1982, gage height, 21.10 (6.431 m) on basis of slope-area measurement of peak flow.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Sept. 13, 1977, reached a stage of 26.33 ft (8.025 m), discharge, 34,900 ft³/s (988 m³) on a basis of slope-area measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 16,700 ft³/s (473 m³/s) Aug. 13, gage height, 20.65 ft (6.294 m) on basis of slope-area measurement of peak flow.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.33	5.78	7.10	3.15	4.07	3.37	3.29	3.55	6.89	3.34	3.20	3.43
2	3.20	10.28	4.22	3.17	3.74	3.34	3.33	3.45	4.45	3.76	3.19	3.37
3	3.12	3.73	3.82	3.19	3.75	3.34	3.38	3.40	4.12	3.51	3.20	3.26
4	3.12	4.13	3.63	3.16	3.39	3.41	3.31	3.36	4.60	3.32	3.16	3.22
5	3.27	4.08	3.51	3.19	3.42	3.34	3.43	3.38	4.02	3.28	5.54	3.19
6	3.37	3.68	3.47	3.18	3.36	3.29	3.39	4.16	3.78	3.42	3.95	3.19
7	3.15	3.52	3.45	3.17	3.34	3.28	3.33	3.65	6.78	3.54	3.98	3.19
8	3.11	3.63	3.38	3.12	3.30	3.27	3.41	3.45	7.76	3.41	3.35	3.18
9	3.09	4.44	3.34	3.20	3.27	3.22	3.33	3.37	10.99	3.28	3.24	3.14
10	3.10	4.06	3.31	3.18	3.32	3.23	3.30	3.33	7.52	5.49	3.21	3.13
11	3.09	3.69	3.31	3.10	3.26	3.25	3.28	3.41	5.13	3.70	3.49	3.13
12	3.15	3.58	3.30	3.09	3.27	3.31	3.26	4.60	4.23	3.38	5.86	3.12
13	4.83	3.50	3.29	3.09	3.26	3.35	3.24	4.57	3.89	3.44	18.87	3.15
14	5.84	3.44	3.28	3.11	3.45	3.79	3.25	5.83	3.91	7.20	10.95	3.50
15	3.80	3.40	3.25	3.11	4.82	4.34	3.22	6.05	5.42	6.23	4.35	3.34
16	3.49	3.37	3.26	3.11	7.27	4.76	3.21	10.93	4.49	3.80	3.79	3.18
17	4.86	3.35	3.26	3.10	5.00	4.03	3.25	14.62	4.23	3.55	3.59	3.15
18	3.69	3.32	3.20	3.09	5.51	3.71	3.22	5.66	3.86	3.42	3.46	3.14
19	3.34	3.31	3.20	3.10	4.51	3.61	3.23	4.38	3.75	3.35	3.39	3.13
20	3.30	3.29	3.19	3.17	4.06	3.56	3.28	4.09	3.58	3.31	3.33	3.12
21	3.25	3.26	3.22	3.33	3.84	3.48	3.20	6.58	3.70	4.91	3.28	3.11
22	3.20	3.26	3.29	3.90	3.70	3.42	3.18	4.72	3.54	3.47	3.59	3.08
23	3.18	3.24	3.28	5.63	3.63	3.40	3.19	3.98	3.49	3.31	3.75	3.06
24	3.17	3.24	3.27	3.68	3.57	3.40	3.20	3.77	3.88	10.75	3.37	3.06
25	3.22	3.24	3.25	3.49	3.48	3.46	3.28	4.26	3.79	3.25	3.25	3.06
26	3.27	3.25	3.23	6.83	3.42	3.41	3.36	5.40	3.63	3.24	4.55	3.04
27	3.22	3.24	3.22	4.40	3.41	3.36	3.24	4.01	3.44	3.27	3.57	3.06
28	3.19	3.22	3.21	3.46	3.38	3.34	4.15	3.74	3.41	4.11	3.30	3.04
29	3.23	3.20	3.17	5.25	---	3.32	5.38	5.54	3.43	3.28	3.25	3.04
30	3.21	6.05	3.17	15.32	---	3.43	3.83	5.46	3.32	3.23	4.36	3.04
31	3.33	---	3.17	8.32	---	3.34	---	9.09	---	3.21	3.39	---

06893793 LITTLE BLUE RIVER BELOW LONGVIEW DAMSITE IN KANSAS CITY, MO

LOCATION.--Lat 38°55'52", long 94°28'12", in NW¼SE¼SE¼ sec.32, T.48 N., R.32 W., Jackson County, Hydrologic Unit 10300101, on left bank 700 ft (213 m) downstream from Longview damsite in Kansas City, 1 mile (1.6 km) downstream from Longview Road and 2.0 miles (3.2 km) upstream from Cedar Creek.

DRAINAGE AREA.--50.7 mi² (131.3 km²).

PERIOD OF RECORD.--August 1966 to current year.

REVISED RECORDS.--WDR MO-77-1: 1975-76.

GAGE.--Water-stage recorder. Datum of gage is 798.60 ft (243.413 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 25, 1974 at site 1.0 mile (1.6 km) upstream and at datum 24.90 ft (7.590 m) higher.

REMARKS.--Records good. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--16 years, 38.6 ft³/s (1.093 m³/s) 10.34 in/yr (263 mm/yr), 27,970 acre-ft/yr (34.5 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,100 ft³/s (513 m³/s) Sept. 13, 1977, gage height, 21.07 ft (6.422 m) highwater mark; minimum, 0.5 ft³/s (0.014 m³/s) Oct. 3, 1966, at site and datum then in use.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,200 ft³/s (62 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 29	1700	8,060 228	16.50 5.029	July 14	1400	2,960 83.8	10.25 3.124
May 16	0800	7,030 199	15.56 4.743	Aug. 13	0400	*18,700 530	21.24 6.474
June 9	0900	3,720 105	11.03 3.362				

Minimum discharge, 2.0 ft³/s (0.06 m³/s) Oct. 7, minimum gage height, 0.59 ft (0.180 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.0	150	124	13	49	18	14	26	138	24	19	17
2	4.2	120	71	10	27	19	28	21	102	58	18	17
3	2.5	85	48	11	24	18	24	19	84	27	18	10
4	2.5	120	34	12	28	21	16	16	102	24	17	8.5
5	5.6	98	28	12	20	16	26	24	72	22	48	7.5
6	4.8	25	27	12	12	15	20	135	60	31	28	6.8
7	2.6	11	26	10	10	14	13	62	310	53	21	6.8
8	2.5	34	22	8.3	9.4	13	20	32	413	25	19	6.8
9	2.9	129	18	8.6	13	13	16	24	555	22	18	6.8
10	3.1	46	17	10	12	13	13	20	116	121	17	6.3
11	2.9	24	17	9.6	9.9	13	12	19	76	29	27	6.0
12	2.5	16	16	12	8.6	16	11	94	60	25	202	5.7
13	84	15	15	17	7.3	20	11	26	48	79	2980	6.4
14	139	16	15	20	16	62	9.1	524	57	557	35	11
15	75	14	14	15	123	92	9.1	198	75	113	24	7.3
16	31	10	15	16	136	105	13	1840	48	55	18	5.2
17	61	9.6	18	14	98	56	16	244	37	42	16	4.6
18	37	9.4	14	22	124	44	11	104	34	36	14	9.3
19	25	9.4	15	18	82	38	14	76	41	30	12	5.2
20	24	7.0	16	31	63	32	10	99	30	28	10	4.0
21	23	6.5	13	54	46	28	8.1	210	30	45	9.5	3.4
22	22	6.8	16	97	40	26	7.0	125	27	30	16	3.0
23	21	7.0	16	93	38	24	7.0	86	28	26	15	2.9
24	21	6.3	18	71	31	24	6.3	72	28	24	12	2.7
25	23	5.8	15	31	21	30	14	173	30	23	13	2.6
26	30	6.0	15	26	20	24	19	163	27	22	11	2.5
27	25	5.3	15	22	19	21	10	101	26	24	9.9	2.3
28	24	4.8	12	26	19	20	48	72	37	39	8.8	2.3
29	23	4.6	14	1650	---	20	101	148	26	23	8.3	2.5
30	23	185	12	250	---	22	45	501	24	22	24	2.4
31	45	---	14	100	---	19	---	455	---	21	12	---
TOTAL	800.1	1186.5	730	2701.5	1106.2	896	571.6	5709	2741	1700	3700.5	184.8
MEAN	25.8	39.6	23.5	87.1	39.5	28.9	19.1	184	91.4	54.8	119	6.16
MAX	139	185	124	1650	136	105	101	1840	555	557	2980	17
MIN	2.5	4.6	12	8.3	7.3	13	6.3	16	24	21	8.3	2.3
CFSM	.51	.78	.46	1.72	.78	.57	.38	3.63	1.80	1.08	2.35	.12
IN.	.59	.87	.54	1.98	.81	.66	.42	4.19	2.01	1.25	2.72	.14
AC-FT	1590	2350	1450	5360	2190	1780	1130	11320	5440	3370	7340	367

CAL YR 1981	TOTAL	11944.1	MEAN	32.7	MAX	1140	MIN	1.3	CFSM	.65	IN	8.76	AC-FT	23690
WTR YR 1982	TOTAL	22027.2	MEAN	60.3	MAX	2980	MIN	2.3	CFSM	1.19	IN	16.16	AC-FT	43690

LITTLE BLUE RIVER BASIN

06893890 EAST FORK LITTLE BLUE RIVER NEAR BLUE SPRINGS, MO

LOCATION.--Lat 39°01'32", long 94°20'37" in NE¼NE¼NW¼ sec.33, T.49 N., R.31 W., Jackson County, Hydrologic Unit 10300101, on left downstream side of bridge on east bound lane of U.S. Highway 40, 2.6 miles (4.2 km) west of Blue Springs, and 1.5 miles (2.4 km) upstream from mouth.

DRAINAGE AREA.--34.4 mi² (89.1 km²).

PERIOD OF RECORD.--October 1974 to current year.

GAGE.--Water-stage recorder. Datum of gage is 753.09 ft (229.542 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Records fair. Several observations of water temperature were made during the year. Flow impounded or detained in Jackson County Lake at times.

AVERAGE DISCHARGE.--8 years, 23.7 ft³/s (0.671 m³/s), 9.36 in/yr (238 mm/yr), 17,200 acre-ft/yr (21.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,100 ft³/s (173 m³/s) Sept. 13, 1977, gage height, 21.13 ft (6.440 m); no flow at times each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,000 ft³/s (28.3 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s)	Discharge (m ³ /s)	Gage height (ft)	Gage height (m)
June 9	1330	1,500	42.5	15.63	4.764
Aug. 13	0830	*11,000	312	22.14	6.748

No flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.3	72	8.7	6.6	64	39	17	10	244	21	8.7	65
2	3.6	44	8.9	7.2	44	38	39	17	108	24	8.0	46
3	3.1	42	22	7.7	37	36	7.1	20	71	22	7.2	36
4	2.8	46	37	5.8	12	34	6.5	14	61	20	7.2	29
5	2.7	46	34	9.6	30	32	2.4	16	58	20	10	27
6	5.8	44	32	10	27	30	1.3	45	56	25	94	22
7	5.4	42	30	7.8	25	29	3.32	35	141	28	12	20
8	4.5	42	27	8.7	22	26	2.0	32	222	22	12	19
9	3.8	56	24	8.2	23	24	7.8	30	1000	21	12	17
10	3.2	52	22	8.3	23	24	16	29	455	120	11	20
11	3.0	48	21	4.3	22	21	33	27	123	43	12	17
12	3.6	45	19	7.0	21	24	57	25	76	39	66	17
13	35	42	18	6.7	22	26	41	28	56	42	4850	23
14	36	40	17	7.2	23	37	43	177	54	47	730	22
15	11	37	16	6.6	27	55	55	380	53	37	107	20
16	10	34	15	7.3	125	66	50	695	48	33	45	18
17	30	31	15	3.8	118	53	20	607	46	30	38	17
18	26	30	12	5.5	110	49	23	166	43	28	33	15
19	21	29	2.0	4.5	100	49	23	74	41	24	27	13
20	21	25	2.2	5.4	90	45	12	59	39	22	19	16
21	21	22	4.1	11	80	41	10	173	36	25	17	12
22	20	20	12	18	70	38	11	100	34	22	17	7.4
23	18	19	13	54	60	36	18	60	32	19	18	13
24	18	15	13	31	56	33	23	47	31	18	17	8.7
25	19	14	13	27	51	33	16	45	30	16	18	12
26	23	15	12	25	47	31	23	45	29	15	28	7.8
27	21	12	11	27	44	29	13	41	28	13	24	5.6
28	20	10	11	32	41	27	3.3	38	27	13	20	7.8
29	19	9.1	11	64	---	27	6.6	58	25	12	19	11
30	18	8.5	9.8	114	---	30	10	110	23	10	627	4.8
31	18	---	9.6	112	---	6.2	---	591	---	9.2	203	---
TOTAL	449.8	991.6	502.3	653.2	1414	1068.2	590.32	3794	3290	840.2	7117.1	569.1
MEAN	14.5	33.1	16.2	21.1	50.5	34.5	19.7	122	110	27.1	230	19.0
MAX	36	72	37	114	125	66	57	695	1000	120	4850	65
MIN	2.7	8.5	2.0	3.8	12	6.2	3.32	10	23	9.2	7.2	4.8
CFSM	.42	.96	.47	.61	1.47	1.00	.57	3.55	3.20	.79	6.69	.55
IN.	.49	1.07	.54	.71	1.53	1.16	.64	4.10	3.56	.91	7.70	.62
AC-FT	892	1970	996	1300	2800	2120	1170	7530	6530	1670	14120	1130

CAL YR 1981	TOTAL	11776.18	MEAN	32.3	MAX	639	MIN	.00	CFSM	.94	IN	12.73	AC-FT	23360
WTR YR 1982	TOTAL	21279.82	MEAN	58.3	MAX	4850	MIN	.32	CFSM	1.70	IN	23.01	AC-FT	42210

LITTLE BLUE RIVER BASIN

06894000 LITTLE BLUE RIVER NEAR LAKE CITY, MO

LOCATION.--Lat 39°06'02", long 94°18'01", in SW¼SE¼ sec.35, T.50 N., R.31 W., Jackson County, Hydrologic Unit 10300101, at downstream side of right pier of upstream bridge on dual State Highway 78, 3 mi (4.8 km) southwest of Lake City, and 10.5 mi (16.9 km) upstream from mouth.

DRAINAGE AREA.--184 mi² (477 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 719.15 ft (219.197 m) National Geodetic Vertical Datum of 1929. Prior to July 24, 1957, nonrecording gage at site 50 ft (15 m) downstream at same datum. Water-stage recorder July 24, 1957 to Apr. 28, 1977. Nonrecording gage Apr. 29, 1977 to May 10, 1979.

REMARKS.--Records fair. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--34 years, 143 ft³/s (4.05 m³/s), 10.55 in/yr (268 mm/yr), 103,600 acre-ft/yr (128 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,000 ft³/s (481 m³/s) Sept. 13, 1977; maximum gage height, 27.94 ft (8.516 m) Sept. 14, 1961; no flow at times during 1953-54, 1973.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft³/s (57 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s)	(m ³ /s)	Gage height (ft)	(m)
Nov. 30	2330	2,400	68.0	10.24	3.121
Jan. 29	2400	9,060	257	17.44	5.316
May 16	1900	6,910	196	15.35	4.679
Aug. 13	1600	*42,300	1198	27.06	8.248

Minimum, 15 ft³/s (0.42 m³/s) Oct. 10, gage height, 3.06 ft (0.933 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	1030	1130	58	316	132	90	113	1110	74	55	130
2	33	597	270	58	214	130	104	99	427	106	53	128
3	31	211	173	63	161	123	139	96	305	99	52	172
4	27	214	138	63	135	130	99	93	344	76	50	126
5	35	239	117	64	128	123	101	94	241	68	143	108
6	44	183	112	66	103	111	108	595	207	96	179	68
7	34	138	106	61	117	105	96	334	1550	186	85	106
8	28	140	98	56	113	102	103	174	1860	95	62	74
9	27	466	90	58	107	98	102	135	4340	72	60	51
10	23	275	87	55	104	96	93	122	1210	1200	55	82
11	23	181	83	53	101	95	87	118	424	227	39	76
12	27	153	80	54	100	94	87	116	307	130	734	70
13	352	136	77	53	101	113	85	140	219	209	27700	77
14	1330	125	75	53	113	155	80	799	190	1450	7660	87
15	287	116	73	52	377	448	79	2310	330	779	409	92
16	156	108	72	51	1220	684	80	4580	243	135	218	73
17	547	100	72	48	668	327	81	3810	200	126	188	69
18	244	98	64	49	837	1550	79	1520	172	104	148	69
19	142	93	55	51	567	360	78	360	178	83	123	69
20	110	86	47	55	415	179	80	309	160	84	104	69
21	99	79	65	74	515	153	73	1210	122	264	94	69
22	89	77	74	149	262	137	70	523	108	135	89	69
23	82	75	74	342	239	128	67	288	99	91	124	69
24	76	70	71	145	211	122	67	214	104	79	110	69
25	77	67	68	105	176	128	70	322	107	74	114	69
26	87	63	65	86	156	122	84	766	104	70	294	69
27	85	61	63	97	144	109	75	255	92	67	154	59
28	75	60	66	131	136	103	175	181	88	87	114	55
29	70	59	58	1710	---	102	408	618	92	77	106	58
30	67	803	60	5830	---	104	140	701	81	62	5580	59
31	75	---	62	962	---	100	---	3240	---	57	195	---
TOTAL	4418	6103	3745	10752	7638	6463	3080	24235	15014	6462	45091	2441
MEAN	143	203	121	347	273	208	103	782	500	208	1455	81.4
MAX	1330	1030	1130	5830	1220	1550	408	4580	4340	1450	27700	172
MIN	23	59	47	48	100	94	67	93	81	57	39	51
CFSM	.78	1.10	.66	1.89	1.46	1.13	.56	4.25	2.72	1.13	7.91	.44
IN.	.89	1.23	.76	2.17	1.54	1.31	.62	4.90	3.04	1.31	9.12	.49
AC-FT	8760	12110	7430	21330	15150	12820	6110	48070	29780	12820	89440	4840

CAL YR 1981	TOTAL	66214	MEAN	181	MAX	5390	MIN	23	CFSM	.98	IN	13.39	AC-FT	131300
WTR YR 1982	TOTAL	135442	MEAN	371	MAX	27700	MIN	23	CFSM	2.02	IN	27.38	AC-FT	268600

06895500 MISSOURI RIVER AT WAVERLY, MO

LOCATION.--Lat 39°12'50", long 93°30'50", sec.14, T.51 N., R.24 W., Lafayette County, Hydrologic Unit 10300101, on right bank 450 ft (137 m) downstream from bridge on U.S. Highway 65 at Waverly. River mile, 293.4 (472.1 km).

DRAINAGE AREA.--487,200 mi² (1,262,000 km²), approximately.

PERIOD OF RECORD.--October 1928 to current year. Gage-height records collected at same site 1878-79, 1883-99 are contained in reports of Missouri River Commission; since 1915 in reports of National Weather Service. Daily discharge not collected Apr. 1, 1977 to Mar. 31, 1978.

REVISED RECORDS.--WDR MO-76-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 646.00 ft (196.901 m) National Geodetic Vertical Datum of 1929. Prior to Jan. 1, 1934, at datum 5.00 ft (1.524 m) lower; Mar. 30, 1929, to Apr. 4, 1934, nonrecording gage, Apr. 5, 1934, to June 13, 1943, water-stage recorder, June 14, 1943, to Sept. 15, 1944, nonrecording gage, and Sept. 16, 1944, to May 28, 1969, water-stage recorder at present datum; all at site 450 ft (137 m) upstream.

REMARKS.--Records good. Discharge measurements made weekly except during ice-flow periods. Some regulation from many upstream reservoirs. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--52 years (1929-76, 1979-82), 49,100 ft³/s (1,390 m³/s), 35,570,000 acre-ft/yr (43,860 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 549,000 ft³/s (15,550 m³/s) July 16, 1951; maximum gage height, 28.85 ft (8.793 m) Oct. 13, 1973; minimum discharge, about 1,700 ft³/s (48.1 m³/s) Jan. 9, 1940; minimum gage height, 0.4 ft (0.122 m) Jan. 12, 1930, present datum.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 208,300 ft³/s (5,899 m³/s) June 11, gage height, 27.10 ft (8.260 m); minimum daily, 12,000 ft³/s (340 m³/s) Jan. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	46400	42600	38600	29700	94000	86000	57400	47400	202000	88400	51700	108000	
2	46300	53600	42100	27800	80000	74000	53700	47600	182000	115000	50800	86700	
3	46500	65800	49900	27100	70000	64000	57400	46400	156000	137000	49500	78000	
4	46200	63900	43300	26900	60000	58000	56500	46400	140000	130000	48100	73400	
5	47000	55400	36500	25200	45000	55000	55500	45200	129000	120000	48000	69300	
6	41100	56900	34500	24400	38000	50000	54600	47800	115000	105000	50000	61300	
7	40600	58300	33300	23100	35000	45000	53800	67000	111000	100000	47300	56900	
8	39800	53700	32400	22600	33000	42500	51500	73800	128000	110000	52300	57700	
9	39700	50600	31000	23200	32000	38500	50200	66700	151000	120000	54900	58100	
10	39100	49500	30300	22900	31000	37500	49500	60100	197000	115000	50400	55100	
11	39400	47300	30100	21000	30700	35300	48400	54500	202000	110000	48200	53100	
12	39200	44100	29700	18000	31200	33900	48800	51800	164000	115000	54600	52200	
13	40100	42000	29600	15000	31000	34200	48900	53100	135000	120000	101000	51200	
14	50000	39700	29400	14000	29500	35300	47300	76700	119000	115000	157000	53600	
15	53900	36600	29800	12000	29000	45300	46900	90600	114000	111000	129000	75100	
16	49800	33900	33400	12500	35000	53700	47400	89600	127000	98500	112000	81100	
17	46800	31800	33800	13000	45000	54700	54400	105000	156000	93600	96200	69300	
18	47600	30500	33800	13500	52000	54400	75500	92800	161000	91000	78600	62500	
19	46400	29900	34500	14000	60000	52900	62400	84800	137000	85500	68100	64800	
20	46800	29400	32400	13500	70000	68000	58100	83300	121000	81800	61200	71300	
21	46500	28400	30900	13000	80000	90000	53400	81400	105000	83400	57600	64200	
22	44900	27500	29000	15000	90000	107000	50700	130000	101000	94200	56600	58000	
23	44100	27500	27300	18000	110000	90000	49200	150000	100000	86200	57400	55600	
24	42900	27600	27100	17000	122000	75000	48800	127000	93100	80800	57000	53800	
25	42800	27600	30200	20000	128000	70900	47700	103000	83300	76200	55000	52500	
26	42000	27100	30600	22000	134000	66000	46700	119000	81100	68400	58400	51300	
27	41400	26300	28800	28000	110000	60000	46000	150000	79000	64400	83400	50400	
28	41400	26400	28700	30000	96000	56000	44600	145000	81300	61400	85000	50000	
29	40700	26200	29000	30000	---	52000	46600	143000	97800	57200	67400	48900	
30	39200	26700	29100	50000	---	54000	47600	168000	96400	53400	73200	48200	
31	39100	---	29800	110000	---	63100	---	190000	---	52600	108000	---	
TOTAL	1357700	1186800	1008900	752400	1801400	1802200	1559500	2837000	3865000	2940000	2167900	1871600	
MEAN	43800	39560	32550	24270	64340	58140	51980	91520	128800	94840	69930	62390	
MAX	53900	65800	49900	110000	134000	107000	75500	190000	202000	137000	157000	108000	
MIN	39100	26200	27100	12000	29000	33900	44600	45200	79000	52600	47300	48200	
CFSM	.09	.08	.07	.05	.13	.12	.11	.19	.26	.20	.14	.13	
IN.	.10	.09	.08	.06	.14	.14	.12	.22	.30	.22	.17	.14	
AC-FT	2693000	2354000	2001000	1492000	3573000	3575000	3093000	5627000	7666000	5831000	4300000	3712000	
CAL YR 1981 TOTAL	14689500	MEAN	40250	MAX	135000	MIN	15900	CFSM	.08	IN	1.12	AC-FT	29140000
WTR YR 1982 TOTAL	23150400	MEAN	63430	MAX	202000	MIN	12000	CFSM	.13	IN	1.77	AC-FT	45920000

06897500 GRAND RIVER NEAR GALLATIN, MO

LOCATION.--Lat 39°55'37", long 93°56'33", in SW¼NW¼ sec.16, T.59 N., R.27 W., Daviess County, Hydrologic Unit 10280101, on left bank 100 ft (30 m) upstream from bridge on State Highway 6, 50 ft (15 m) downstream from Chicago, Rock Island and Pacific Railroad Co. bridge, 1 mi (1.6 km) northeast of Gallatin, and 6 mi (9.7 km) upstream from Honey Creek, and at mile 90 (144.8 km).

DRAINAGE AREA.--2,250 mi² (5,830 km²), approximately.

PERIOD OF RECORD.--June 1921 to current year.

REVISED RECORDS.--WSP 786: 1933-34. WSP 1280: 1922. WDR MO-81-1: 1981.

GAGE.--Water-stage recorder. Datum of gage is 712.56 ft (217.188 m) National Geodetic Vertical Datum of 1929. Prior to Jan. 31, 1922, nonrecording gage at site 100 ft (30 m) upstream at same datum. Jan. 31, 1922, to Nov. 15, 1936 nonrecording gage, at site about 1,100 ft (335 m) upstream at datum 0.17 ft (0.052 m) higher. Nov. 16, 1936, to Nov. 14, 1937, nonrecording gage, and Nov. 15, 1937, to Sept. 21, 1961, water-stage recorder on center pier of highway bridge at present datum. Sept. 22-27, 1961, nonrecording gage at railroad bridge, 100 ft (30 m) upstream at same datum, Sept. 28, 1961, to Mar. 4, 1964, water-stage recorder on downstream side of left bank pier of highway bridge and wire-weight gage for stages below 7.2 ft (2.2 m) at present datum.

REMARKS.--Records fair except periods of missing record or backwater from ice which are poor. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--61 years, 1,159 ft³/s (32.82 m³/s), 7.00 in/yr (178 mm/yr), 839,700 acre-ft/yr (1,035 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 69,100 ft³/s (1,960 m³/s) June 24, 1947, gage height, 34.55 ft (10.531 m); maximum gage height, 37.02 ft (11.284 m) June 2, 1929, (present site and datum); minimum discharge, 2.2 ft³/s (0.062 m³/s) June 3, 4, Oct. 27, 28, 29, 1956; minimum gage height observed, -0.37 ft (-0.113 m) June 15, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, about 40 ft (12.2 m) July 8, 1909, from floodmarks.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 18,000 ft³/s (510 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s)	Discharge (m ³ /s)	Gage-Height (ft)	Gage-Height (m)	Date	Time	Discharge (ft ³ /s)	Discharge (m ³ /s)	Gage-Height (ft)	Gage-Height (m)
Mar. 16	2100	22,900	649	24.53	7.477	May 31	1615	*46,100	1306	33.29	10.147
Mar. 20	1545	27,400	776	26.62	8.114	June 10	2315	44,300	1255	33.03	10.068
May 7	0815	19,700	558	22.89	6.977	July 3	0400	19,500	552	23.46	7.151
May 15	1445	26,200	742	26.09	7.952	Aug. 31	0115	25,600	725	26.35	8.031

Minimum discharge, 34 ft³/s (0.96 m³/s) Oct. 11, gage height, -0.14 ft (-0.043m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	79	166	5530	86	2000	900	1020	260	29200	3000	358	5580
2	58	1770	3250	88	700	800	843	248	6350	8860	329	2770
3	50	1910	1280	90	300	700	1470	226	3380	16800	307	1960
4	51	1410	745	100	230	600	1790	212	2570	6050	291	1250
5	54	1540	545	190	230	550	1090	201	2090	2320	273	971
6	56	816	428	180	220	533	912	3420	1670	1570	261	949
7	49	535	403	160	220	499	792	17100	1490	1310	261	3560
8	45	406	358	140	220	484	760	9510	5320	3660	258	3130
9	40	327	310	130	200	462	867	2760	35100	2610	262	1490
10	38	275	274	130	200	359	861	1470	42000	1300	295	1050
11	38	247	250	120	200	549	814	1030	35100	3200	859	846
12	36	227	220	120	200	2490	786	784	6200	2490	945	713
13	61	217	200	120	200	2620	785	737	3530	1730	608	610
14	1880	212	170	120	200	2360	664	2650	2590	1370	903	779
15	2050	208	160	120	200	2860	542	22200	3290	881	7210	4230
16	725	201	150	120	11000	14900	506	9470	5500	1600	5900	2170
17	410	193	140	120	4000	13300	716	5430	4180	1340	2310	1210
18	269	188	130	120	3000	4310	1570	2860	2480	763	1330	2670
19	200	176	125	120	2000	10700	1240	1680	2220	609	918	4540
20	140	170	120	120	2000	26200	704	9740	1540	553	712	1860
21	130	160	115	117	2000	14200	531	7000	1200	1980	637	1080
22	120	152	110	120	14000	4230	417	4000	950	2510	584	831
23	115	146	105	120	4500	2280	356	3000	818	1010	477	722
24	110	150	100	120	3500	1630	316	2150	747	670	455	721
25	105	152	100	130	2480	1320	295	1510	667	552	716	647
26	100	146	100	135	1630	1250	282	1410	844	498	2330	577
27	96	140	96	140	1210	1100	266	2120	1200	460	3780	532
28	95	136	94	200	1080	954	243	2400	1390	437	1640	505
29	93	130	92	300	---	837	234	22900	1300	419	822	468
30	89	178	90	1990	---	1430	255	37000	1900	389	16300	429
31	88	---	88	3140	---	1680	---	44500	---	368	21100	---
TOTAL	7470	12684	15878	9006	57920	117087	21927	219978	206816	71309	73431	48850
MEAN	241	423	512	291	2069	3777	731	7096	6894	2300	2369	1628
MAX	2050	1910	5530	3140	14000	26200	1790	44500	42000	16800	21100	5580
MIN	36	130	88	86	200	359	234	201	667	368	258	429
CFSM	.11	.19	.23	.13	.92	1.68	.33	3.15	3.06	1.02	1.05	.72
IN.	.12	.21	.26	.15	.96	1.94	.36	3.64	3.42	1.18	1.21	.81
AC-FT	14820	25160	31490	17860	114900	232200	43490	436300	410200	141400	145700	96890

CAL YR 1981 TOTAL 219493.2 MEAN 601 MAX 15100 MIN 1.2 CFSM .27 IN 3.63 AC-FT 435400
WTR YR 1982 TOTAL 862356.0 MEAN 2363 MAX 44500 MIN 36 CFSM 1.05 IN 14.26 AC-FT 1710000

GRAND RIVER BASIN

06897500 GRAND RIVER NEAR GALLATIN, MO

LOCATION.--Lat 39°55'37", long 93°56'33", in SW¼NW¼ sec.16, T.59 N., R.27 W., Daviess County, Hydrologic Unit 10280101, on left bank 100 ft (30 m) upstream from bridge on State Highway 6, 50 ft (15 m) downstream from Chicago, Rock Island and Pacific Railroad Co. bridge, 1 mi (1.6 km) northeast of Gallatin, and 6 mi (9.7 km) upstream from Honey Creek, and at mile 90 (144.8 km).

DRAINAGE AREA.--2,250 mi² (5,830 km²), approximately.

PERIOD OF RECORD.--June 1921 to current year.

REVISED RECORDS.--WSP 786: 1933-34. WSP 1280: 1922. WDR MO-81-1: 1981.

GAGE.--Water-stage recorder. Datum of gage is 712.56 ft (217.188 m) National Geodetic Vertical Datum of 1929. Prior to Jan. 31, 1922, nonrecording gage at site 100 ft (30 m) upstream at same datum. Jan. 31, 1922, to Nov. 15, 1936 nonrecording gage, at site about 1,100 ft (335 m) upstream at datum 0.17 ft (0.052 m) higher. Nov. 16, 1936, to Nov. 14, 1937, nonrecording gage, and Nov. 15, 1937, to Sept. 21, 1961, water-stage recorder on center pier of highway bridge at present datum. Sept. 22-27, 1961, nonrecording gage at railroad bridge, 100 ft (30 m) upstream at same datum, Sept. 28, 1961, to Mar. 4, 1964, water-stage recorder on downstream side of left bank pier of highway bridge and wire-weight gage for stages below 7.2 ft (2.2 m) at present datum.

REMARKS.--Records fair except periods of missing record or backwater from ice which are poor. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--60 years, 1,139 ft³/s (32.26 m³/s), 6.88 in/yr (175 mm/yr), 825,200 acre-ft/yr (1,051 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 69,100 ft³/s (1,960 m³/s) June 24, 1947, gage height, 34.55 ft (10.531 m); maximum gage height, 37.02 ft (11.284 m) June 2, 1929, (present site and datum); minimum discharge, 2.2 ft³/s (0.062 m³/s) June 3, 4, Oct. 27, 28, 29, 1956; minimum gage height observed, -0.37 ft (-0.113 m) June 15, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, about 40 ft (12.2 m) July 8, 1909, from floodmarks.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 17,800 ft³/s (504 m³/s) July 27, gage height, 18.26 ft (5.566 m) from highwater mark, no peak above base of 18,000 ft³/s (510 m³/s); minimum daily discharge, 5.0 ft³/s (0.14 m³/s) July 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	156	36	108	48	165	99	155	220	815	1660	238
2	30	125	50	114	48	154	86	148	193	483	2390	428
3	26	100	20	114	54	138	86	142	180	298	6350	342
4	26	77	56	98	44	156	98	149	234	195	2190	223
5	24	66	48	104	28	266	147	168	525	604	1110	180
6	20	55	54	98	22	480	176	188	983	520	750	157
7	18	46	368	85	18	438	176	188	364	254	800	178
8	16	42	9660	77	12	326	174	184	234	158	608	275
9	14	39	4000	79	14	266	128	195	173	117	458	755
10	10	35	2000	66	8.0	228	96	204	139	84	363	415
11	8.0	30	1000	68	34	189	81	236	117	60	306	263
12	8.0	27	700	54	40	174	121	263	102	64	264	206
13	6.0	24	500	54	28	145	344	241	97	44	238	175
14	12	24	350	56	34	134	1410	1140	91	24	222	151
15	18	25	300	54	36	119	4320	1960	120	11	206	155
16	32	30	220	52	54	102	2090	1080	1480	5.0	201	126
17	44	32	187	51	77	96	912	716	1250	52	180	102
18	64	32	178	50	205	81	608	3360	719	167	162	94
19	70	34	119	48	1000	72	502	9860	398	333	139	87
20	58	34	96	52	775	62	460	6680	293	7800	127	83
21	44	32	108	64	539	52	468	1560	283	5890	114	73
22	34	34	89	68	441	55	462	843	222	1450	104	73
23	34	42	79	75	360	57	444	724	162	4130	95	66
24	85	42	96	79	309	54	376	2560	137	13500	104	66
25	81	42	68	94	272	61	329	2470	115	3890	108	104
26	87	36	66	94	242	85	297	1440	89	4620	334	237
27	167	42	64	89	209	85	249	797	90	15100	2870	288
28	903	36	64	79	182	79	216	541	89	9490	954	223
29	527	32	64	68	---	96	180	415	70	3720	470	152
30	268	38	77	62	---	111	161	323	95	1770	349	112
31	183	---	91	58	---	101	---	265	---	1260	293	---
TOTAL	2953.0	1409	20610	2312	5133.0	4627	15300	39195	9264	76908.0	24719	6007
MEAN	95.3	47.0	671	74.6	183	149	510	1264	309	2481	797	200
MAX	903	156	9660	114	1000	480	4320	9860	1480	15100	6350	755
MIN	6.0	24	20	48	8.0	52	81	142	70	5.0	95	66
CFSM	.04	.02	.30	.03	.08	.07	.23	.56	.14	1.10	.35	.09
IN.	.05	.02	.34	.04	.08	.08	.25	.65	.15	1.27	.41	.10
AC-FT	5860	2790	41280	4590	10180	9180	30350	77740	18380	152500	49030	11910

CAL YR 1960 TOTAL 190793.2 MEAN 521 MAX 11100 MIN 2.0 CFSM .23 IN 3.15 AC-FT 376400
WTR YR 1981 TOTAL 208637.0 MEAN 572 MAX 15100 MIN 5.0 CFSM .25 IN 3.45 AC-FT 413800

06899500 THOMPSON RIVER AT TRENTON, MO

LOCATION.--Lat 40°04'46", long 93°38'39", in NE¼SW¼ sec.18, T.61 N., R.24 W., Grundy County, Hydrologic Unit 10280102, at downstream side of center pier of bridge in Trenton, 1.8 mi (2.9 km) downstream from Weldon River, and at mile 26.0 (41.8 km).

DRAINAGE AREA.--1,670 mi² (4,330 km²), approximately.

PERIOD OF RECORD.--June 1921 to September 1923 (published as "near Hickory"), August 1928 to current year. Monthly discharge only for some periods, published in WSP 1310. Gage-height records collected in vicinity 1910-14 and since 1925 are contained in reports of National Weather Service.

REVISED RECORDS.--WSP 1116: 1945(M).

GAGE.--Water-stage recorder and nonrecording gage. Datum of gage is 721.87 ft (220.026 m) National Geodetic Vertical Datum of 1929. June 25, 1921, to Aug. 26, 1923, nonrecording gage at two sites 12 mi (19.3 km) downstream (by old channel route) at different datums. Aug. 1, 1928, to Sept. 15, 1930, nonrecording gage at present site and datum. Sept. 16, 1930, to May 31, 1945, nonrecording gage at site 1.5 mi (2.4 km) downstream at datum 3.46 ft (1.055 m) lower. June 1, 1945, to Dec. 7, 1959, nonrecording gage at same site and datum.

REMARKS.--Records poor. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--56 years (1921-23, 1928-82), 938 ft³/s (26.56 m³/s), 7.63 in/yr (194 mm/yr), 680,600 acre-ft/yr (839 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 95,000 ft³/s (2,690 m³/s) June 6, 1947, gage height, 25.7 ft (7.833 m) from floodmark; minimum daily, 1 ft³/s (0.028 m³/s) June 17, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 30.7 ft (9.357 m) July 6, 1909, present site and datum, from information by local residents, discharge, 50,000 ft³/s (1,420 m³/s), determination by Corps of Engineers occurred before new channel was dredged.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 15,000 ft³/s (425 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage-Height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage-Height (ft) (m)
Mar. 19	2100	24,300 688	15.60 4.755	May 29	1515	32,000 906	17.10 5.212
May 6	2215	16,200 459	13.62 4.151	June 9	0800	*36,800 1042	18.00 5.486
May 14	1930	20,100 569	14.64 4.462				

Minimum discharge, 36 ft³/s (1.02 m³/s) Oct. 12, gage-height 1.43 ft (0.436 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	59	218	1060	120	1200	924	1120	506	4670	1640	590	3060		
2	43	2020	1090	120	996	900	917	492	2740	7130	518	1530		
3	43	2550	653	130	848	859	3370	475	2130	4090	474	1320		
4	44	2730	537	150	727	660	2210	438	1750	3070	407	914		
5	46	1140	413	140	620	514	1300	405	1470	4560	442	568		
6	44	701	320	120	550	463	1060	5140	1230	2250	499	1920		
7	42	475	281	100	501	409	1050	12200	2090	2630	2910	4130		
8	45	350	238	90	475	438	1200	8530	3650	5470	3090	1220		
9	45	278	176	80	458	401	1210	3400	25800	4150	1270	664		
10	40	203	153	70	454	350	1240	1640	7720	2410	1060	509		
11	39	169	143	65	471	2240	1360	1100	3580	4310	1170	386		
12	36	141	144	65	475	2580	1780	837	2220	3330	936	314		
13	44	141	143	65	463	4320	1230	696	1770	2130	808	265		
14	1010	141	140	65	506	3920	924	6040	1580	1510	681	3810		
15	1130	141	140	65	506	4450	748	14200	1700	2640	3280	3770		
16	400	141	140	70	3490	7970	1560	9320	2950	2100	2060	2280		
17	215	143	141	70	6450	6470	8200	6060	3230	1770	1100	1580		
18	154	143	142	70	7660	4410	6200	4120	4190	1390	910	7810		
19	110	143	140	75	9180	13700	3160	3080	2940	1050	583	4480		
20	88	134	138	75	8710	15900	1810	2100	2080	1250	411	2560		
21	68	129	138	78	7590	7470	1320	6320	1600	3040	314	1380		
22	61	136	135	92	6120	3710	1060	10700	1410	2490	247	928		
23	61	127	135	105	5820	2560	894	7950	1280	1760	204	740		
24	62	109	130	110	4260	1630	776	3710	1150	1850	172	626		
25	62	107	130	105	2670	1420	722	2310	1050	1130	1590	543		
26	66	105	130	100	1520	1260	650	2100	1110	894	600	484		
27	75	105	125	100	1100	1090	573	2560	1530	789	324	442		
28	78	103	125	100	972	949	523	4370	1270	727	194	399		
29	64	103	120	365	---	849	514	22400	1260	680	274	360		
30	50	117	120	1550	---	2430	510	11800	1120	724	7790	327		
31	49	---	120	1290	---	2180	---	10800	---	744	3880	---		
TOTAL	4373	13243	7740	5800	74792	97426	49191	165799	92270	73708	38788	49319		
MEAN	141	441	250	187	2671	3143	1640	5348	3076	2378	1251	1644		
MAX	1130	2730	1090	1550	9180	15900	8200	22400	25800	7130	7790	7810		
MIN	36	103	120	65	454	350	510	405	1050	680	172	265		
CFSM	.08	.26	.15	.11	1.60	1.88	.98	3.20	1.84	1.42	.75	.98		
IN.	.10	.29	.17	.13	1.67	2.17	1.10	3.69	2.06	1.64	.86	1.10		
AC=FT	8670	26270	15350	11500	148300	193200	97570	328900	183000	146200	76940	97820		
CAL YR 1981	TOTAL	249953	MEAN	685	MAX	14300	MIN	36	CFSM	.41	IN	5.57	AC=FT	495800
WTR YR 1982	TOTAL	672449	MEAN	1842	MAX	25800	MIN	36	CFSM	1.10	IN	14.98	AC=FT	1334000

GRAND RIVER BASIN

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06900000 MEDICINE CREEK NEAR GALT, MO

LOCATION.--Lat 40°17'45", long 93°21'45", in SW¼NW¼ sec.34, T.62 N., R.22 W., Sullivan County, Hydrologic Unit 10280103, on left bank 15 ft (4.6 m) upstream from bridge on State Highway 6, 1.2 mi (1.9 km) east of Galt, 2 mi (3.2 km) upstream from West Medicine Creek, and at mile 32.0 (51.5 km).

DRAINAGE AREA.--225 mi² (583 km²).

PERIOD OF RECORD.--July 1921 to September 1975, October 1977 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1340: 1926. WSP 1730: 1948(M).

GAGE.--Water-stage recorder and nonrecording gage. Datum of gage is 767.48 ft (233.928 m) National Geodetic Vertical Datum of 1929. Prior to Dec. 3, 1934, nonrecording gage at site 150 ft (46 m) downstream at following datums: prior to Oct. 1, 1924, at datum 6.97 ft (2.124 m) higher; Oct. 1, 1924 to Sept. 30, 1926, at datum 4.97 ft (1.515 m) higher; Oct. 1, 1926, to Dec. 2, 1934, at datum 1.97 ft (0.600 m) higher; Dec. 3, 1934, to Apr. 25, 1956, nonrecording gage, and Apr. 26 to Sept. 30, 1956; water-stage recorder at site 30 ft (9 m) downstream at datum 2.00 ft (0.610 m) higher; Oct. 1, 1956, to Apr. 5, 1969, water-stage recorder at site 30 ft (9 m) downstream at present datum; Apr. 6, 1969 to July 24, 1975, water-stage recorder; July 25, 1975 to Aug. 21, 1978, nonrecording gage at same site and datum.

REMARKS.--Records poor. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--59 years (water years 1922-75, 78-82), 144 ft³/s (4.078 m³/s), 8.69 in/yr (221 mm/yr), 104,300 acre-ft (129 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,200 ft³/s (685 m³/s) June 6, 1947, gage height, 20.9 ft (6.37 m), present datum, from floodmark; no flow at times in 1934, 1936-37, 1940, 1954, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Discharge of 8,000 ft³/s (227 m³/s) was determined for flood of July 1909 by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,000 ft³/s (85 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)		Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)	
Mar. 19	1645	5,910	167	9.50	2.896	Aug. 30	1130	3,270	92.6	6.09	1.856
May 14	----	3,580	101	6.50	1.981	Sept. 7	0130	3,420	96.9	6.29	1.917
May 29	----	*8,510	241	12.81	3.904	Sept. 14	1930	3,280	92.9	6.10	1.859
July 17	0900	3,730	106	6.70	2.042	Sept. 18	0545	4,540	129	7.75	2.362

Minimum, 12 ft³/s (0.34 m³/s) Oct. 23, 24, Aug. 3, minimum gage height 0.96 ft (0.293 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	190	594	16	561	130	250	46	799	96	16	530
2	15	644	380	20	361	120	230	42	369	1450	15	186
3	16	924	146	35	245	110	750	35	265	1080	12	81
4	20	1330	93	70	128	102	550	35	265	950	13	54
5	30	369	79	65	106	99	450	50	250	1100	18	41
6	36	220	69	60	82	84	320	100	307	650	311	886
7	26	124	60	50	75	72	290	1000	196	750	101	1970
8	26	90	50	45	72	64	330	700	113	1200	40	375
9	26	77	45	35	72	59	350	500	110	900	23	163
10	32	62	35	25	52	117	400	450	113	700	43	98
11	32	59	28	22	75	753	600	350	62	1100	75	73
12	36	54	25	18	68	675	500	280	69	900	49	60
13	41	52	23	16	63	713	400	240	60	700	33	49
14	392	48	22	14	66	556	250	2460	141	500	26	1870
15	478	48	18	14	230	1000	200	1760	363	900	334	997
16	136	45	16	14	1020	3800	960	1900	386	1410	770	261
17	64	48	16	14	1300	3500	850	613	242	2980	178	439
18	45	41	15	16	2000	2800	500	1060	650	1350	83	3480
19	34	41	15	19	1300	5200	350	569	369	768	53	672
20	24	41	15	16	800	4250	250	271	302	521	43	233
21	18	36	15	16	500	1230	200	1080	220	220	31	129
22	15	36	15	16	400	490	150	613	93	103	23	92
23	12	34	15	16	300	380	120	277	53	66	20	76
24	12	34	15	16	270	296	100	151	46	48	23	66
25	15	32	15	19	232	289	90	130	40	36	1120	57
26	15	32	15	21	200	283	75	120	49	32	181	47
27	15	32	15	21	170	277	65	200	74	28	77	40
28	16	30	16	21	150	265	55	800	60	24	53	38
29	15	28	16	347	---	259	49	2000	54	22	55	34
30	15	74	16	1030	---	713	47	5540	56	20	2020	30
31	16	---	16	743	---	595	---	1760	---	16	602	---
TOTAL	1680	4875	1913	2850	10898	29281	9731	25132	6176	20620	6441	13127
MEAN	54.2	163	61.7	91.9	389	945	324	811	206	665	208	438
MAX	478	1330	594	1030	2000	5200	960	5540	799	2980	2020	3480
MIN	12	28	15	14	52	59	47	35	40	16	12	30
CFSM	.24	.72	.27	.41	1.73	4.20	1.44	3.60	.92	2.96	.92	1.95
IN	.28	.81	.32	.47	1.80	4.84	1.61	4.16	1.02	3.41	1.06	2.17
AC-FT	3330	9670	3790	5650	21620	58080	19300	49850	12250	40900	12780	26040

CAL YR 1981 TOTAL 52483.7 MEAN 144 MAX 5820 MIN 3.4 CFSM .64 IN 8.68 AC-FT 104100
WTR YR 1982 TOTAL 132724.0 MEAN 364 MAX 5540 MIN 12 CFSM 1.62 IN 21.94 AC-FT 263300

06902000 GRAND RIVER NEAR SUMNER, MO

LOCATION.--Lat 39°38'21", long 93°16'22", in NE¼ sec.29, T.56 N., R.21 W., Livingston County, Hydrologic Unit 10280103, near right bank on downstream side of pier of bridge on State Highway 139, 240 ft (73 m) downstream from Chicago, Burlington & Quincy Railroad bridge, 2 mi (3.2 km) southwest of Sumner, 2.5 mi (4.0 km) downstream from Locust Creek, and at mile 41.0 (66.0 km).

DRAINAGE AREA.--6,880 mi² (17,800 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1923 to current year. Prior to April 1924 monthly discharge only, published in WSP 1310.

GAGE.--Water-stage recorder. Datum of gage is 631.18 ft (192.384 m) National Geodetic Vertical Datum of 1929. Prior to July 11, 1926, nonrecording gage at site 200 ft (61 m) upstream at same datum. July 11, 1926, to July 9, 1939, nonrecording gage at same site and datum. July 10, 1939, to Aug. 8, 1952, water-stage recorder at site 200 ft (61 m) upstream at same datum. Aug. 9, 1952, to Nov. 12, 1953, nonrecording gage at site 120 ft (37 m) upstream and at same datum. Nov. 13, 1953, to July 6, 1964, water-stage recorder and nonrecording gage for stages below 8.3 ft (2.53 m) at site 120 ft (37 m) upstream and at same datum. July 7, 1964, to May 26, 1965, nonrecording gage at present site and datum. Auxiliary water-stage recorder at site 3.2 mi (5.1 km) downstream from base gage at datum 631.30 ft (192.420 m) above mean sea level. Mar. 15, 1939, to Aug. 4, 1942, auxiliary nonrecording gage at various sites. Aug. 5, 1942, to Dec. 14, 1956, auxiliary nonrecording gage at present site.

REMARKS.--Water-discharge records fair except periods of no gage-height record and ice effect which are poor.

AVERAGE DISCHARGE.--59 years, 3,836 ft³/s (108.6 m³/s), 7.57 in/yr (192 mm/yr), 2,779,000 acre-ft/yr (3,427 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 180,000 ft³/s (5,100 m³/s) June 7, 8, 1947, gage height, 39.5 ft (12.04 m) from floodmark; minimum observed, 10 ft³/s (0.28 m³/s) Aug. 12, 1934; minimum gage height, 2.19 ft (0.668 m) Aug. 22, 23, 31, Sept. 1, 1936.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 9, 1909, reached a stage of 36.7 ft (11.19 m) from floodmark.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 38,000 ft³/s (1,080 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s)	Discharge (m ³ /s)	Gage-Height (ft)	Gage-Height (m)
May 17	0030	38,900	1102	33.60	10.241
June 2	0800	60,100	1702	36.50	11.125
June 12	1330	*67,400	1909	36.94	11.259

Minimum discharge, 167 ft³/s (4.729 m³/s) Oct. 9-12, gage height, 7.00 ft (2.134 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	303	356	3370	480	32000	5570	9130	1640	56200	2530	889	33000
2	261	3920	11000	480	28000	5010	5320	1620	56500	3580	793	29000
3	225	9480	6760	480	18000	4640	10500	1530	35200	23900	716	13200
4	219	11600	3300	700	1400	4340	12300	1460	20900	22800	658	6750
5	219	8240	2810	900	1000	3720	7260	1370	10300	11400	640	5180
6	232	4730	2150	900	1000	3260	5760	1490	9760	7230	662	4280
7	217	2900	1450	800	880	3030	4880	22800	7020	4490	797	8520
8	201	2030	1300	700	840	2860	4350	25800	10500	4650	1960	13400
9	184	1600	1190	600	780	2710	4340	16800	25700	8810	2570	6980
10	183	1330	1060	550	760	2540	4420	5330	36500	5990	1580	4490
11	181	1120	922	500	750	2750	4350	4690	64000	4020	1650	3510
12	176	1000	862	450	710	6420	4230	3660	63900	7450	1990	2990
13	200	918	823	450	710	7790	4340	3090	45100	5710	2130	2610
14	512	855	808	400	710	10300	3820	5600	23800	4190	5210	2620
15	5780	816	757	400	710	14100	3540	30000	18000	3330	11000	8470
16	4760	788	677	390	5000	24200	3020	35800	18800	3600	22800	11000
17	2170	754	650	370	20000	31600	11100	33000	15500	5380	12200	6300
18	1280	718	640	360	12000	28900	15400	31600	8290	6900	5300	4770
19	948	697	600	360	8000	28100	11200	28300	10800	5260	3850	8000
20	720	681	580	370	8000	34100	6390	15000	9340	4720	2720	12000
21	576	656	560	384	10000	35900	4170	19500	6450	5660	2480	6000
22	479	623	550	390	16000	22100	3270	26400	4530	8900	2010	3800
23	413	605	540	420	32000	12400	2730	25900	3720	6980	1750	3000
24	366	576	540	440	30000	11100	2430	16000	3140	3410	1570	2520
25	328	555	540	450	28000	8420	2220	8590	2720	2590	1930	2220
26	322	555	540	460	11000	6930	2120	11500	2410	1860	4190	2030
27	311	545	520	470	8650	5550	2020	12200	2580	1440	14200	1890
28	294	525	520	480	6770	4740	1840	10300	3260	1170	12100	1730
29	276	508	500	490	---	4250	1720	23000	3190	1000	6980	1590
30	279	553	490	22000	---	5340	1670	35900	3200	912	18800	1470
31	294	---	480	30000	---	14000	---	43700	---	848	33100	---
TOTAL	22909	60234	47489	66624	283670	356670	159640	503570	581310	180710	179225	213320
MEAN	739	2008	1532	2149	10130	11510	5321	16240	19380	5829	5781	7111
MAX	5780	11600	11000	30000	32000	35900	15400	43700	64000	23900	33100	33000
MIN	176	356	480	360	710	2540	1670	1370	2410	848	640	1470
CFSM	.11	.29	.22	.31	1.47	1.67	.77	2.36	2.82	.85	.84	1.03
IN.	.12	.33	.26	.36	1.53	1.93	.86	2.72	3.14	.98	.97	1.15
AC-FT	45440	119500	94190	132100	562700	707500	316600	998800	1153000	358400	355500	423100

CAL YR 1981 TOTAL 1169276 MEAN 3203 MAX 59500 MIN 176 CFSM .47 IN 6.32 AC-FT 2319000
WTR YR 1982 TOTAL 2655371 MEAN 7275 MAX 64000 MIN 176 CFSM 1.06 IN 14.36 AC-FT 5267000

GRAND RIVER BASIN

06902000 GRAND RIVER NEAR SUMNER, MO--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--August 1962 to June 1963 and August 1967 to current year..

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (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)
NOV 03...	1300	9780	280	7.3	14.0	290	4.8	46	13000	15000
JAN 05...	1330	1150	618	7.6	1.0	3.7	10.6	75	38	38
MAR 09...	1345	2700	458	7.9	1.5	48	12.2	87	1000	1300
MAY 11...	1335	4570	332	7.9	19.5	430	7.1	76	5000	25000
JUL 14...	1500	4000	300	7.7	26.5	400	6.8	84	5000	6600
SEP 22...	1545	3670	295	7.9	16.5	280	8.2	84	11000	15000

DATE	HARD- NESS (MG/L AS CaCO3) (00900)	HARD- NESS, NONCAR- BONATE (MG/L CaCO3) (00902)	CALCIUM DIS- SOLVED (MG/L AS Ca) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg) (00925)	SODIUM, DIS- SOLVED (MG/L AS Na) (00930)	PERCENT SODIUM (00932)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LITY FIELD (MG/L AS CaCO3) (00410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
NOV 03...	125	27	38	7.4	8.4	12	.3	7.5	98	23
JAN 05...	289	53	86	18	18	12	.5	4.1	236	76
MAR 09...	211	51	63	13	11	0	.3	5.0	160	50
MAY 11...	158	38	48	9.2	7.9	9	.3	5.2	120	32
JUL 14...	136	26	42	7.6	6.1	8	.2	5.4	110	26
SEP 22...	127	27	38	7.7	6.6	0	.3	6.2	100	31

GRAND RIVER BASIN

06902000 GRAND RIVER NEAR SUMNER, MO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	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, 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)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)
NOV 03...	12	.2	11	195	--	.27	5150	1.6	.160
JAN 05...	15	.2	11	385	--	.52	1200	.47	.190
MAR 09...	10	.2	11	278	271	.38	2030	.80	.360
MAY 11...	9.0	.2	10	213	194	.29	2630	2.5	.300
JUL 14...	6.9	.3	11	198	172	.27	2140	2.5	<.060
SEP 22...	7.5	.2	11	185	180	.25	1830	.93	<.060

DATE	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS NH4) (71846)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOSPHORUS, TOTAL (MG/L AS P) (00665)	PHOSPHORUS, TOTAL (MG/L AS P04) (71886)	PHOSPHORUS, DIS-SOLVED (MG/L AS P) (00666)	PHOSPHORUS, ORTHOPHOSPHATE, DIS-SOLVED (MG/L AS P) (00671)	SEDIMENT, DISCHARGE, SUSPENDED (MG/L) (80154)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY) (80155)	SEDIMENT, SIEVE DIAM. % FINER THAN .062 MM (70331)
NOV 03...	.21	1.60	.180	.55	.070	.090	1750	46200	54
JAN 05...	.24	.74	.050	.15	.030	.020	41	127	0
MAR 09...	.46	1.40	.050	.15	.020	.030	190	1390	84
MAY 11...	.39	4.00	.930	2.9	.100	.050	1490	18400	93
JUL 14...	.08	3.80	.160	.49	.060	.070	1130	12200	92
SEP 22...	.08	3.40	.570	1.7	.100	.060	658	6520	90

GRAND RIVER BASIN

06902000 GRAND RIVER NEAR SUMNER, MO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC SUS- PENDE TOTAL (UG/L AS AS) (01001)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	BARIIUM, SUS- PENDE RECOV- ERABLE (UG/L AS BA) (01006)	BARIIUM, DIS- SOLVED (UG/L AS BA) (01005)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRU- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	CHRU- MIUM, DIS- SOLVED (UG/L AS CR) (01030)
NOV 03...	9	8	1	400	300	100	1	<1	30	<10
JAN 05...	1	0	1	<100	--	140	1	<1	<10	<10
MAY 11...	9	8	1	400	300	110	<1	<3	30	<10
JUL 14...	7	6	1	400	300	110	1	<1	60	<10

DATE	CUBALT, TOTAL RECOV- ERABLE (UG/L AS CU) (01037)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	CUPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	CUPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU) (01041)	CUPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE) (01044)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB) (01050)
NOV 03...	11	<3	50	42	8	25000	25000	270	17	15
JAN 05...	<1	<3	31	30	1	2500	2400	65	5	--
MAY 11...	12	<1	95	88	7	28000	28000	95	10	6
JUL 14...	10	<1	31	26	5	12000	12000	76	18	--

DATE	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, SUS- PENDE RECOV- ERABLE (UG/L AS MN) (01054)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG) (71895)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	NICKEL, SUS- PENDE RECOV- ERABLE (UG/L AS NI) (01066)
NOV 03...	2	1600	1600	41	.4	--	<.1	29	23
JAN 05...	<1	400	20	380	.2	--	<.1	4	1
MAY 11...	4	1100	1100	11	.3	.1	.2	33	29
JUL 14...	<1	980	980	5	.5	.3	.2	47	44

DATE	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE) (01147)	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE) (01146)	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, SUS- PENDE RECOV- ERABLE (UG/L AS ZN) (01091)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 03...	6	1	--	<1	<1	<1	110	100	15
JAN 05...	3	1	0	1	<1	<1	30	0	33
MAY 11...	4	1	0	1	<1	<1	110	--	<12
JUL 14...	3	<1	--	<1	<1	<1	310	310	4

06904050 CHARITON RIVER AT LIVONIA, MO

LOCATION.--Lat 40°29'00", long 92°41'10", in NW¼SE¼NW¼ sec.34, T.66 N., R.16 W., Schuyler County, Hydrologic Unit 10280201, on left bank 10 ft (3.0 m) downstream from bridge on U.S. Highway 136, 1 mi (1.6 km) upstream from Shoal Creek, and 0.5 mi (0.8 km) east of Livonia.

DRAINAGE AREA.--864 mi² (2,240 km²).

PERIOD OF RECORD.--May 1974 to current year. Occasional discharge measurements were made from October 1962 to May 1974.

GAGE.--Water-stage recorder. Datum of gage is 770.00 ft (234.696 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records poor. Several observations of water temperature were made during the year. Flow mostly regulated by Rathbun Lake.

AVERAGE DISCHARGE.--8 years, 660 ft³/s (18.69 m³/s), 478,200 acre-ft/yr (590 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,350 ft³/s (123 m³/s) Sept. 18, 1978; maximum gage height, 24.26 ft (7.394 m) July 4, 1974; minimum, 13 ft³/s (0.368 m³/s) Jan. 11 to Feb. 9, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 8,960 ft³/s (254 m³/s) July 18; minimum, 67 ft³/s (1.90 m³/s) Jan. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	900	147	474	110	85	1110	868	1020	2590	618	1700	1930		
2	1100	1730	514	100	90	1260	1070	1010	1130	2300	1690	1520		
3	1150	3610	310	90	85	1440	1090	1020	501	5450	1680	1360		
4	1150	2720	185	85	85	1430	741	1030	792	4040	1660	1310		
5	1150	2380	140	80	85	1380	1040	1030	895	3630	1910	1280		
6	1150	1840	116	80	90	1340	1010	1050	865	3450	2220	1620		
7	1150	1620	115	80	95	1330	1010	1070	851	2370	1350	2360		
8	1150	1480	114	74	105	1320	1020	1040	910	965	1140	1110		
9	1100	1450	221	72	100	1300	1010	1030	1780	1170	1640	997		
10	500	1350	1090	70	95	1390	1020	1010	1790	1180	1790	1260		
11	200	1340	1300	70	90	2140	1020	1010	749	1220	1780	1270		
12	100	1300	1300	70	90	2280	1000	1010	414	1210	1300	1090		
13	70	930	1300	70	90	2370	994	1000	639	1200	1180	382		
14	140	260	1300	70	160	2130	991	1040	635	1890	1400	1060		
15	1000	160	1300	70	364	2150	978	1720	739	2840	3000	2300		
16	700	159	1300	70	1530	2330	2560	1160	831	5960	2900	2130		
17	300	157	1310	70	3130	2300	3610	1260	640	8280	2200	1520		
18	250	136	1240	70	3130	2500	2800	560	408	8960	1200	2680		
19	230	128	1070	67	3560	3500	1990	452	915	8490	1300	2190		
20	210	132	591	70	4000	6200	1010	595	1030	8220	1500	1020		
21	190	127	538	70	3500	4000	930	675	705	8210	1600	837		
22	160	116	629	75	3190	2000	1440	378	607	6560	1600	948		
23	130	116	629	80	2840	1700	1130	188	657	3870	1600	1270		
24	110	113	508	80	1450	1300	1110	146	792	2590	2000	1290		
25	85	119	228	75	907	1400	1100	214	788	2180	2140	1280		
26	80	115	178	70	1210	1600	1090	1220	807	2030	1570	1270		
27	75	106	161	75	1150	1700	1070	1160	841	1920	1650	1260		
28	70	100	142	90	1120	1300	1050	497	775	1860	1600	1250		
29	70	95	130	100	---	650	1040	4520	677	1800	1380	1270		
30	75	104	120	90	---	650	1030	4670	595	1730	2770	1320		
31	73	---	110	90	---	1100	---	3360	---	1720	2260	---		
TOTAL	14818	24140	18663	2433	32426	58600	37822	37145	26348	107913	54710	42384		
MEAN	478	805	602	78.5	1158	1890	1261	1198	878	3481	1765	1413		
MAX	1150	3610	1310	110	4000	6200	3610	4670	2590	8960	3000	2680		
MIN	70	95	110	67	85	650	741	146	408	618	1140	382		
CFSM	.55	.93	.70	.09	1.34	2.19	1.46	1.39	1.02	4.03	2.04	1.64		
IN	.64	1.04	.80	.10	1.40	2.52	1.63	1.60	1.13	4.65	2.36	1.82		
AC-FT	29390	47880	37020	4830	64320	116200	75020	73680	52260	214000	108500	84070		
CAL YR 1981	TOTAL	274164	MEAN	751	MAX	4000	MIN	28	CFSM	.87	IN	11.80	AC-FT	543800
WTR YR 1982	TOTAL	457402	MEAN	1253	MAX	8960	MIN	67	CFSM	1.45	IN	19.69	AC-FT	907300

CHARITON RIVER BASIN

06904500 CHARITON RIVER AT NOVINGER, MO

LOCATION.--Lat 40°14'05", long 92°41'14", on south line of SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.28, T.63 N., R.16 W., Adair County, Hydrologic Unit 10280202, on right bank at the downstream side of center pier on bridge on State Highway 6, 0.6 mi (1.0 km) east of Novinger, 1 mi (1.6 km) downstream from Rye Creek, 2 mi (3.2 km) upstream from Spring Creek, and at mile 73.1 (117.6 km).

DRAINAGE AREA.--1,370 mi² (3,550 km²), approximately.

PERIOD OF RECORD.--October 1930 to September 1952. October 1954 to current year. Prior to February 1931 monthly discharge only, published in WSP 1310.

REVISED RECORDS.--WSP 896: 1939. WSP 1116: 1932(M).

GAGE.--Water-stage recorder. Datum of gage is 737.65 ft (224.836 m) National Geodetic Vertical Datum of 1929. Prior to Dec. 20, 1939, nonrecording gage at bridge over old channel, 500 ft (152 m) east, at same datum. Dec. 20, 1939, to Sept. 30, 1952, and Oct. 1, 1954, to Aug. 1, 1956, water-stage recorder, supplemented by nonrecording gage, at same site and datum. Aug. 2, 1956, to May 16, 1957, nonrecording gage at present site and datum.

REMARKS.--Records poor. Several observations of water temperature were made during the year. Some regulation by Rathbun Lake.

AVERAGE DISCHARGE.--50 years, 807 ft³/s (22.85 m³/s), 8.00 in/yr (203 mm/yr), 584,700 acre-ft/yr (721 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,900 ft³/s (649 m³/s) June 7, 13, 1947, gage height, 28.50 ft (8.687 m); minimum, 0.1 ft³/s (0.003 m³/s) Aug. 31, Sept. 1, 1936.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 28.6 ft (8.72 m) in June 1917.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 8,000 ft³/s (227 m³/s) revised and maximum (*):

Date	Time	Discharge (ft ³ /s)	Discharge (m ³ /s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft ³ /s)	Discharge (m ³ /s)	Gage height (ft)	Gage height (m)
Nov. 3	1215	8,540	242	15.53	4.734	June 9	Unknown	13,600	385	20.2	6.157
Feb. 20	2130	9,270	263	15.83	4.825	July 3	1345	14,600	413	21.05	6.416
Mar. 19	1715	11,400	323	18.03	5.496	July 16	2045	*15,000	425	21.37	6.514
Apr. 17	0345	11,700	331	18.31	5.581	July 19	0245	14,700	416	21.14	6.443
May 30	Unknown	12,000	340	-----	-----	Aug. 15	2145	9,530	270	16.11	4.190

Minimum discharge, 108 ft³/s (3.05 m³/s) Jan. 20, minimum gage height, 1.78 ft (0.543 m) Oct. 31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	961	630	1310	160	1220	1450	1510	1170	6000	654	1770	2760
2	1220	4760	1400	150	1070	1510	1640	1170	2500	4590	1760	2070
3	1270	6990	800	150	650	1720	1910	1170	1300	13100	1740	1650
4	1280	4940	400	140	480	1620	1280	1140	1200	8800	1730	1500
5	1290	3170	250	140	400	1610	1410	1130	1200	4880	1970	1440
6	1270	2290	180	130	360	1560	1410	1290	1200	4220	3310	2000
7	1270	1790	170	130	300	1530	1380	1290	1200	3380	2240	3960
8	1280	1590	170	120	270	1580	1380	1230	2000	1390	1190	1970
9	1260	1450	300	120	240	1580	1410	1200	10000	1230	1720	1280
10	1040	1400	800	110	220	1920	1500	1160	4000	1360	1890	1470
11	393	1400	1330	110	200	3790	1430	1140	1970	1500	2000	1530
12	192	1300	1330	110	200	3310	1370	1140	953	1300	1380	1470
13	145	1300	1330	110	190	3770	1400	1130	881	1460	1220	832
14	1700	1000	1330	110	180	3210	1320	1260	884	2110	1510	1260
15	2000	300	1330	110	600	5320	1280	3280	862	3700	6080	3190
16	1300	200	1330	110	3890	5310	5030	2230	1850	10900	6190	2570
17	700	200	1330	110	3640	3690	8580	1760	1010	13700	3210	2450
18	400	200	1330	110	3340	2780	4600	1390	1050	12800	2340	5720
19	350	180	1210	110	5230	6630	3240	911	1070	14500	1520	3280
20	340	180	907	108	8180	8110	1750	726	1400	12900	1680	1890
21	320	190	680	110	6360	5750	1320	1290	1000	11100	1720	1210
22	300	180	820	110	5430	4910	1480	1060	806	9430	1690	1180
23	270	170	759	110	5150	3520	1450	589	723	5510	1670	1510
24	220	170	737	110	2860	2000	1410	480	828	3150	2080	1580
25	190	170	517	120	1490	1700	1380	774	832	2350	3490	1570
26	150	170	413	110	1680	1700	1340	1800	828	2090	1920	1540
27	140	160	368	110	1600	1800	1310	1360	907	1910	1780	1540
28	120	160	230	503	1500	1500	1290	1110	980	1870	1730	1540
29	120	150	190	1120	---	1000	1290	4520	862	1860	1550	1550
30	117	150	180	4460	---	800	1210	4670	723	1820	4890	1550
31	114	---	170	1700	---	1800	---	7000	---	1780	3430	---
TOTAL	21722	36940	23601	11011	56930	88480	58310	51570	51019	161344	72400	59062
MEAN	701	1231	761	355	2033	2854	1944	1664	1701	5205	2335	1969
MAX	2000	6990	1400	4460	8180	8110	8580	7000	10000	14500	6190	5720
MIN	114	150	170	108	180	800	1210	480	723	654	1190	832
CFSM	.51	.90	.56	.26	1.48	2.08	1.42	1.22	1.24	3.80	1.70	1.44
IN	.59	1.00	.64	.30	1.55	2.40	1.58	1.40	1.39	4.38	1.97	1.60
AC-FT	43090	73270	46610	21840	112900	175500	115700	102300	101200	320000	143600	117100

CAL YR 1981 TOTAL 481311 MEAN 1319 MAX 16200 MIN 73 CFSM .96 IN 13.07 AC-FT 954700
WTR YR 1982 TOTAL 692389 MEAN 1897 MAX 14500 MIN 108 CFSM 1.39 IN 18.80 AC-FT 1373000

06905500 CHARITON RIVER NEAR PRAIRIE HILL, MO

LOCATION.--Lat 39°32'25", long 92°47'23", in NW¼SW¼ sec.26, T.55 N., R.17 W., Chariton County, Hydrologic Unit 10280202, on right bank on downstream side of road at bridge on State Highway 129, 3.2 mi (5.1 km) northwest of Prairie Hill, 13.5 mi (21.7 km) upstream from Puzzle Creek, and at mile 19.6 (31.5 km).

DRAINAGE AREA.--1,870 mi² (4,840 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1928 to current year. Prior to Oct. 1, 1953, published as "near Keytesville". Prior to May 1929, monthly discharge only, published in WSP 1309.

GAGE.--Water-stage recorder. Datum of gage is 632.05 ft (192.649 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Oct. 1, 1953, nonrecording gage at site 8.2 mi (13.2 km) downstream at datum 13.68 ft (4.170 m) lower. Oct. 1, 1953, to July 2, 1958, nonrecording gage at present site and datum.

REMARKS.--Records poor. Several observations of water temperature were made during the year. Some regulation by Rathbun Lake.

AVERAGE DISCHARGE.--54 years, 1,188 ft³/s (33.64 m³/s), 8.63 in/yr (219 mm/yr), 860,700 acre-ft/yr (1,060 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 31,900 ft³/s (903 m³/s) Apr. 23, 1973, gage height, 21.96 ft (6.693 m); maximum gage height, 25.3 ft (7.71 m) from floodmark, at site and datum then in use, June 8, 9, 1947; minimum, 4.6 ft³/s (0.13 m³/s) Aug. 7, 9, 10, 1934.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 9,000 ft³/s (255 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s)	Discharge (m ³ /s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft ³ /s)	Discharge (m ³ /s)	Gage height (ft)	Gage height (m)
Nov. 4	0100	13,100	371	15.58	4.749	May 31	0300	15,500	439	17.00	5.182
Jan. 30	0800	17,800	504	18.26	5.566	June 9	1900	*23,600	668	20.14	6.139
Feb. 20	2400	12,400	351	15.16	4.621	July 4	1000	16,400	464	17.50	5.334
Mar. 16	1000	10,100	286	13.70	4.176	July 20	1000	22,500	637	19.86	6.053
Mar. 20	0100	10,100	286	13.68	4.170	Aug. 16	Unknown	14,300	405	16.30	4.968
Apr. 17	0900	11,700	331	14.75	4.496	Aug. 26	0030	10,200	289	13.78	4.200
May 15	1800	9,020	255	12.97	3.953	Aug. 30	2130	9,990	283	13.63	4.154
May 21	1130	13,200	374	15.67	4.776	Sept. 2	Unknown	14,600	413	16.50	5.029

Minimum discharge, 164 ft³/s (4.64 m³/s) Jan. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	964	355	1270	220	2070	1680	2500	1290	11700	1210	2130	5000
2	978	6980	1920	210	1270	1660	1610	1300	5460	1670	2090	13100
3	1230	10500	1400	210	927	1730	1720	1290	2670	11100	2070	6330
4	1310	10400	927	200	750	1950	1960	1280	1870	15400	2020	2840
5	1320	5200	624	190	600	1800	1410	1300	1680	8290	1990	2210
6	1340	3480	502	190	480	1760	1460	1640	1690	5180	2440	1980
7	1320	2560	442	180	410	1750	1430	1940	1600	4440	4210	3220
8	1310	2170	403	180	330	1670	1430	1580	2380	3420	3000	4550
9	1310	1960	366	180	290	1610	1450	1440	19900	1810	1380	2290
10	1300	1740	319	170	260	1580	1490	1360	15800	1630	1800	1690
11	1110	1700	715	170	240	2700	1570	1300	5490	1740	2260	1800
12	663	1640	1330	170	230	4130	1480	1270	2700	1760	2290	1830
13	380	1590	1380	170	220	3940	1420	1270	1870	1530	1690	1730
14	799	1430	1380	170	220	4470	1340	1370	1680	1870	2080	1220
15	3310	706	1370	170	461	8630	1300	6470	1730	2780	12100	1590
16	2260	422	1360	165	2600	9120	1490	6040	1940	5840	13100	3570
17	1220	348	1370	165	6240	5840	9790	4460	2570	15200	6060	2840
18	777	326	1370	164	5140	3860	6200	3430	1920	15800	3170	5220
19	573	326	1370	170	6810	4810	4070	2120	2480	18100	1820	5730
20	462	306	1200	170	11700	8720	2810	1490	1800	21800	2040	3390
21	426	296	1000	170	9750	6940	1880	7440	1850	17900	2100	2100
22	380	289	900	170	6470	5370	1490	3820	1460	14500	2100	1490
23	351	273	1000	170	6440	4760	1580	2020	1240	10500	2080	1430
24	333	267	950	170	4710	3260	1540	1290	1150	5570	1840	1700
25	316	279	850	170	2730	2040	1490	1060	1220	3280	4640	1750
26	260	276	700	170	1860	1840	1450	3910	1250	2600	7620	1720
27	222	289	500	170	1890	1900	1420	4960	1530	2350	5350	1690
28	195	280	350	170	1770	1830	1370	2530	2050	2160	2360	1670
29	185	257	300	1140	---	1430	1330	4150	1430	2210	2070	1660
30	180	257	250	12600	---	955	1310	14000	1340	2140	7370	1640
31	182	---	230	3980	---	3940	---	14600	---	2130	6320	---
TOTAL	26966	56902	28048	22694	76868	107675	62790	103420	103450	205910	113590	88980
MEAN	870	1897	905	732	2745	3473	2093	3336	3448	6642	3664	2966
MAX	3310	10500	1920	12600	11700	9120	9790	14600	19900	21800	13100	13100
MIN	180	257	230	164	220	955	1300	1060	1150	1210	1380	1220
CFSM	.47	1.01	.48	.39	1.47	1.86	1.12	1.78	1.84	3.55	1.96	1.59
IN.	.54	1.13	.56	.45	1.53	2.14	1.25	2.06	2.06	4.10	2.26	1.77
AC-FT	53490	112900	55630	45010	152500	213600	124500	205100	205200	408400	225300	176500
CAL YR 1981	TOTAL	792722	MEAN	2172	MAX	29300	MIN	100	CFSM	1.16	IN	15.77
WTR YR 1982	TOTAL	997293	MEAN	2732	MAX	21800	MIN	164	CFSM	1.46	IN	19.84
									AC-FT			1572000
									AC-FT			1978000

CHARITON RIVER BASIN

06905500 CHARITON RIVER NEAR PRAIRIE HILL, MO.--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--August 1962 to June 1963, August 1967 to July 1975, and January 1978 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PEK- 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 03...	1530	10700	238	7.2	14.5	480	6.2	60	13000	10000
JAN 05...	1545	498	612	7.6	.5	6.5	10.8	75	22	70
MAR 09...	1515	1600	328	8.0	2.0	92	11.6	84	96	820
MAY 11...	1515	1300	321	8.2	19.0	20	8.4	89	180	4400
JUL 14...	1630	2060	260	7.6	25.5	360	6.6	80	9200	15000
SEP 22...	1700	1500	294	8.0	17.0	140	8.0	82	9200	4200

DATE	HARD- NESS (MG/L AS CaCO3) (00900)	HARD- NESS, NONCAR- BONATE (MG/L AS CaCO3) (00902)	CALCIUM DIS- SOLVED (MG/L AS Ca) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg) (00925)	SODIUM, DIS- SOLVED (MG/L AS Na) (00930)	PERCENT SODIUM (00932)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LILITY FIELD AS CaCO3) (00410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
NOV 03...	103	1	31	6.2	4.6	8	.2	5.3	102	22
JAN 05...	273	70	78	19	17	12	.5	4.1	203	110
MAR 09...	151	41	45	9.5	7.5	9	.3	5.3	110	47
MAY 11...	152	54	45	9.6	8.5	10	.3	4.9	98	51
JUL 14...	110	35	33	6.7	6.5	11	.3	4.6	75	38
SEP 22...	125	25	37	7.8	6.3	9	.3	5.2	100	43

CHARITON RIVER BASIN

06905500 CHARITON RIVER NEAR PRAIRIE HILL, NO.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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 SIU2) (00955)	SOLIDS, RESIDUE AT 160 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)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)
NOV 03...	7.0	.2	10	171	--	.23	4940	1.7	.250
JAN 05...	8.8	.2	12	398	--	.54	535	.41	.270
MAR 09...	7.5	.2	6.8	239	195	.33	1030	.73	.130
MAY 11...	7.2	.1	6.6	211	199	.29	741	1.4	.230
JUL 14...	5.9	.2	8.0	190	151	.26	1060	1.5	<.060
SEP 22...	4.7	.2	9.4	173	177	.24	701	.40	<.060

DATE	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4) (71846)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS TOTAL (MG/L AS P04) (71886)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P) (00671)	SEDI- MENT, DIS- SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
NOV 03...	.32	1.20	.170	.52	.060	.070	2420	69900	48
JAN 05...	.35	.71	.030	.09	.030	.030	6	8.1	0
MAR 09...	.17	.78	.040	.12	.010	.020	555	2400	52
MAY 11...	.30	1.50	.230	.71	.070	.020	245	860	74
JUL 14...	.08	4.20	.130	.40	.040	.050	2230	12400	60
SEP 22...	.08	1.70	.310	.95	.070	.030	336	1360	74

CHARITON RIVER BASIN

06905500 CHARITON RIVER NEAR PRAIRIE HILL, MO.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC SUS- PENDE TOTAL (UG/L AS AS) (01001)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	BARIUM, SUS- PENDE RECOV- ERABLE (UG/L AS BA) (01006)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CADMIUM SUS- PENDE RECOV- ERABLE (UG/L AS CD) (01026)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)
NOV 03...	9	8	1	400	300	80	<1	--	<1	30
JAN 05...	1	0	1	100	0	120	1	0	1	10
MAY 11...	2	1	1	300	200	69	1	--	<3	10
JUL 14...	6	5	1	400	300	75	<1	--	<1	60

DATE	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO) (01037)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU) (01041)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE) (01044)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)
NOV 03...	<10	16	<3	60	52	8	35000	35000	250	22
JAN 05...	<10	2	<3	5	2	3	750	740	10	2
MAY 11...	<10	2	<1	40	33	7	4700	4600	66	16
JUL 14...	<10	8	<1	30	27	3	44000	44000	120	4

DATE	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB) (01050)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, SUS- PENDE RECOV- ERABLE (UG/L AS MN) (01054)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG) (71895)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)
NOV 03...	21	1	1600	1500	61	.3	--	<.1	45
JAN 05...	--	<1	180	30	150	.2	--	<.1	2
MAY 11...	13	3	250	220	32	.2	.0	.2	8
JUL 14...	--	<1	1200	1200	25	.5	.3	.2	35

DATE	NICKEL, SUS- PENDE RECOV- ERABLE (UG/L AS NI) (01066)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN) (01091)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 03...	40	5	1	<1	<1	<1	150	120	27
JAN 05...	0	2	<1	<1	<1	<1	30	10	16
MAY 11...	4	4	<1	<1	<1	<1	40	9	31
JUL 14...	--	<1	<1	<1	<1	<1	160	150	6

06906000 MUSSEL FORK NEAR MUSSELFORK, MO

LOCATION.--Lat 39°31'26", long 92°56'59", in SW¼SW¼SE¼ sec.32, T.55 N., R.18 W., Chariton County, Hydrologic Unit 10280202, on left bank at downstream side of pier of bridge on State Highway 5, 4.5 mi (7.2 km) southwest of Musselfork, and 1.5 mi (2.4 km) upstream from Long Branch.

DRAINAGE AREA.--267 mi² (692 km²).

PERIOD OF RECORD.--October 1948 to December 1951, October 1962 to current year.

GAGE.--Water-stage recorder. Datum of gage is 639.25 ft (194.843 m) National Geodetic Vertical Datum of 1929. Prior to Jan. 1, 1952, nonrecording gage at same site and datum.

REMARKS.--Records poor. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--23 years (1948-51, 1962-82), 225 ft³/s (6.37 m³/s), 11.44 in/yr (291 mm/yr), 163,000 acre-ft/yr (201 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,100 ft³/s (654 m³/s) Apr. 22, 1973, gage height, 22.11 ft (6.739 m); no flow Sept. 29 to Oct. 16, Oct. 30 to Nov. 2, 1963, Aug. 16-26, 27-29, Nov. 16-24, 1975.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft³/s (57 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s)	Discharge (m ³ /s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft ³ /s)	Discharge (m ³ /s)	Gage height (ft)	Gage height (m)
Nov. 5	0300	2,870	81.3	18.68	5.694	June 19	0130	2,050	58.1	17.10	5.212
Feb. 1	1645	7,040	199	20.19	6.154	July 21	1000	2,380	67.4	17.78	5.419
Feb. 21	1630	3,360	95.2	19.11	5.825	Sept. 2	1145	*18,200	515	21.82	6.651
June 11	1515	6,030	171	19.96	6.804						

Minimum discharge, 4.2 ft³/s (0.12 m³/s) Oct. 13, gage height, 3.81 ft (1.161 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	47	643	26	5640	135	110	32	1400	85	22	469
2	8.6	1130	980	26	5720	129	120	31	800	164	21	6280
3	7.3	2040	444	26	5230	128	110	31	400	528	20	4500
4	6.1	2540	145	25	2870	155	105	30	200	859	20	1700
5	6.0	2440	96	25	439	150	100	30	170	249	19	168
6	6.0	610	73	25	336	114	96	230	140	103	19	85
7	5.2	221	63	25	266	128	92	250	104	62	19	102
8	5.1	146	59	24	209	128	88	150	197	46	19	97
9	5.2	113	54	24	170	108	84	100	3030	37	19	144
10	5.3	85	46	24	140	90	80	80	2400	38	25	63
11	5.6	68	42	23	121	99	77	70	4290	36	35	58
12	5.5	60	39	23	109	355	74	60	2790	34	31	45
13	5.8	56	38	23	43	321	70	50	386	30	35	38
14	5.9	51	37	23	41	393	68	100	155	34	33	33
15	6.77	49	37	22	125	1300	64	600	226	42	1340	48
16	350	46	36	22	571	1500	60	700	313	30	1070	37
17	96	44	35	21	1750	1600	56	300	228	57	773	38
18	51	42	34	21	2110	800	53	180	542	42	203	35
19	32	40	33	21	2360	450	51	150	1140	61	80	125
20	40	39	32	21	2890	300	49	140	505	697	50	177
21	34	38	32	21	2970	250	48	120	191	2060	35	62
22	25	38	31	21	2780	210	46	110	101	709	29	40
23	20	37	30	23	1950	190	44	100	69	123	33	31
24	16	35	30	27	855	160	42	90	55	66	29	29
25	15	34	29	32	399	150	40	400	47	46	26	28
26	14	34	28	37	250	140	37	1400	43	36	197	27
27	14	33	27	38	186	130	37	1500	48	33	1430	26
28	13	41	27	41	150	130	36	1600	345	29	286	25
29	13	39	27	264	---	120	35	800	147	27	95	24
30	13	56	27	2990	---	120	33	1100	89	26	1450	23
31	14	---	26	4860	---	110	---	1100	---	24	1160	---
TOTAL	1577.7	10252	3282	8824	40680	10093	2005	11634	20551	6413	8623	14577
MEAN	50.9	342	106	285	1453	326	66.8	375	685	207	278	486
MAX	677	2540	980	4860	5720	1600	120	1600	4290	2060	1450	6280
MIN	5.1	33	26	21	41	90	33	30	43	24	19	23
CFSM	.19	1.28	.40	1.07	5.44	1.22	.25	1.40	2.57	.78	1.04	1.82
IN.	.22	1.43	.46	1.23	5.67	1.41	.28	1.62	2.86	.89	1.20	2.03
AC-FT	3130	20330	6510	17500	80690	20020	3980	23080	40760	12720	17100	28910

CAL YR 1981 TOTAL 190881.1 MEAN 523 MAX 18100 MIN 5.1 CFSM 1.96 IN 26.59 AC-FT 378600
WTR YR 1982 TOTAL 138511.7 MEAN 379 MAX 6280 MIN 5.1 CFSM 1.42 IN 19.30 AC-FT 274700

LITTLE CHARITON RIVER BASIN

06906190 LONGBRANCH RESERVOIR NEAR MACON, MO

LOCATION.--Lat 39°45'05", long 92°30'20", NW¼ sec.10, T.57 N., R.14 W., Macon County, in Administration building at left end of dam on East Fork Little Chariton River, 2 miles west of junction U.S. Highway 63 and 36 in Macon and 2 miles below confluence with Long Branch.

DRAINAGE AREA.--109 mi² (282 km²).

PERIOD OF RECORD.--September 1978 to current year. Contents published 1982 to current year. Records collected at same site since 1978 and are available from Corps of Engineers.

GAGE.--Water-stage recorder. Datum of gage is at National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Lake is formed by a rolled earthfill type dam. Storage began on September 3, 1976. An uncontrolled limited service type spillway, 50 ft (15 m) wide, is located at the right abutment. Capacity of surcharge pool (elevations 801.0 ft (244.1 m) to 820.7 ft (250.1 m)), 98,590 acre-ft (1.22 km³); of flood control pool (elevations 791.0 ft (241.1 m) to 801.0 ft (244.1 m)), 30,600 acre-ft (374 hm³); and of multipurpose pool (elevations 751.1 ft (228.9 m) to 791.0 ft (241.1 m)), 34,640 acre-ft (427 hm³). Lake is used for flood control, water supply, water quality control and recreation.

COOPERATION.--Records furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 59,840 acre-ft (73.8 hm³) July 28, 1981, elevation, 799.56 ft (243.706 m); minimum, 14,310 acre-ft (17.6 hm³) December 5, 1980, elevation 780.21 ft (237.81 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 48,300 acre-ft (59.6 hm³) June 11, elevation, 796.03 ft (242.630 m); minimum, 18,100 acre-ft (22.3 hm³) October 11-13, elevation, 782.78 ft (238.591 m).

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	UCI	NGV	DEL	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18400	18600	26600	27800	36100	44200	40800	35300	41300	39800	39000	39600
2	18300	20500	27400	27800	36400	43700	40400	35200	41800	39600	38800	40500
3	18300	23200	27500	27800	36500	43400	40100	35100	41400	39600	38600	40500
4	18300	25500	27600	27900	36600	43200	39700	35000	41000	40100	38400	40200
5	18200	26300	27500	27900	36500	42800	39400	34900	40600	40200	38300	39800
6	18200	26500	27500	27900	36500	42400	39100	35200	40200	40400	38200	39500
7	18200	26600	27500	27900	36500	42100	38800	35400	40000	40200	38100	39300
8	18200	26600	27600	27900	36400	41700	38600	35400	39600	39900	37900	39000
9	18200	26700	27600	27900	36400	41400	38400	35300	41100	39600	37800	38700
10	18200	26700	27600	27900	36400	41000	38200	35200	47300	39400	37900	38400
11	18100	26700	27600	27900	36300	40900	38000	35100	48300	39200	37900	38200
12	18100	26700	27600	27900	36300	41200	37800	35100	47800	39000	37700	38000
13	18100	26700	27600	27900	36300	41200	37700	34900	47200	38800	37600	37800
14	18500	26700	27600	27900	36200	41100	37400	34900	46700	38800	37500	37600
15	18700	26700	27600	27900	36200	42600	37200	35100	46200	38800	37700	37600
16	18800	26700	27600	27900	36600	44900	37100	35100	45800	38600	41500	37400
17	18800	26700	27700	27900	37600	46000	37200	35500	45300	38400	43200	37300
18	18700	26700	27700	27900	39000	45600	37100	35700	44900	38300	42800	37300
19	18600	26700	27700	27900	39900	45500	37000	36000	44400	38400	42300	37200
20	18600	26800	27700	27900	41400	46300	36900	35900	43900	41600	41700	37100
21	18600	26700	27700	27900	43700	46400	36700	35900	43500	42700	41400	37000
22	18600	26700	27700	27900	45800	45900	36500	37700	42900	42300	40900	36900
23	18600	26600	27700	27900	46100	45300	36400	38200	42200	42100	40500	36600
24	18500	26700	27700	27900	46200	44700	36200	38100	41800	41500	40200	36700
25	18500	26600	27700	27900	45800	44200	36100	38000	41400	41100	39800	36700
26	18500	26600	27700	27900	45500	43600	36000	38200	41000	40700	39400	36600
27	18500	26700	27700	27900	45000	43100	35800	38500	40600	40500	39300	36300
28	18500	26700	27700	27900	44600	42600	35700	38400	40600	40200	39100	36400
29	18500	26700	27800	27900	---	42100	35600	38300	40400	39900	38800	36300
30	18400	26700	27800	30600	---	41600	35400	38400	40100	39600	39100	36300
31	18400	---	27700	34700	---	41200	---	39600	---	39300	39800	---

WTR YR 1982

(+)	782.95	787.44	787.95	791.04	794.78	793.57	791.34	792.97	793.14	792.84	793.03	791.69
(#)	0	+8300	+1000	+7000	+9900	-3400	-5800	+4200	+500	-800	+500	-3500
MAX	18800	26800	27800	34700	46200	46400	40800	39600	48300	42700	43200	40500
MIN	18100	18600	26800	27800	36100	40900	35400	34900	39600	38300	37500	36300

CAL YR 1981.....\$ +10400

WTR YR 1982.....\$ +17900

(+) Elevation, in feet NGVD, at end of month

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

06906200 EAST FORK LITTLE CHARITON RIVER NEAR MACON, MO

LOCATION.--Lat 39°44'47", long 92°31'05", NW¼NW¼NW¼ sec.18, T.57 N., R.14 W., Macon County, Hydrologic Unit 10280203, on downstream end of right abutment of bridge on U.S. Highway 36, 1000 ft (308 m) downstream from Long Branch Lake and 3 mi (4.8 km) west of Macon.

DRAINAGE AREA.--112 mi² (290 km²).

PERIOD OF RECORD.--September 1971 to current year. Partial-record station since May 1970.

GAGE.--Water-stage recorder. Datum of gage is 741.43 ft (225.988 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records poor. Several observations of water temperatures were made during the year. Some regulation from Long Branch Lake.

AVERAGE DISCHARGE.--11 years, 105 ft³/s (2.974 m³/s), 76,100 acre-ft/yr (93.8 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,700 ft³/s (246 m³/s) Apr. 21, 1973, gage height, 20.60 ft (6.279 m); no flow in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 391 ft³/s (11.07 m³/s) Sept. 2, gage height, 10.44 ft (3.182 m), no peak above regulated base of 1,000 ft³/s (28.3 m³/s); minimum, 0.80 ft³/s (0.02 m³/s) Nov. 5, gage height, 5.76 ft (1.756 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.6	6.2	5.8	6.5	22	309	284	72	265	175	98	214
2	2.2	30	5.5	6.5	26	303	276	68	259	162	83	262
3	1.6	49	5.5	6.5	28	297	270	65	266	168	79	239
4	1.7	25	5.7	6.4	68	294	260	58	256	189	81	228
5	2.1	6.7	6.0	6.2	92	288	253	63	247	193	65	219
6	2.7	5.0	6.3	6.0	30	281	242	66	237	192	52	211
7	2.8	5.0	6.3	6.0	23	276	235	64	230	184	46	205
8	3.2	5.0	6.4	5.8	23	267	229	61	225	172	41	196
9	3.2	4.8	6.5	5.8	23	259	223	58	226	157	36	188
10	3.3	4.8	6.5	5.8	23	268	217	55	329	142	41	178
11	3.6	4.8	6.6	5.6	23	293	211	52	336	123	96	169
12	3.6	4.8	6.7	5.6	22	299	201	49	330	102	102	156
13	3.5	4.8	6.9	5.4	22	300	194	47	324	88	31	97
14	9.6	4.8	7.0	5.4	21	308	178	47	319	92	29	68
15	40	4.8	7.1	5.2	25	337	162	48	315	85	102	65
16	38	4.8	7.3	5.2	32	371	152	55	310	75	220	59
17	38	4.8	7.4	5.2	68	372	155	57	304	64	252	56
18	39	4.8	7.7	5.0	181	369	150	65	301	56	272	54
19	7.9	4.8	7.7	5.0	231	369	142	149	292	93	265	51
20	2.5	4.8	7.7	5.0	276	378	134	170	285	211	259	49
21	2.5	5.0	7.8	5.0	314	374	123	158	304	223	252	45
22	2.6	5.0	7.6	5.2	334	369	114	159	310	217	241	41
23	2.4	4.4	7.5	5.2	337	362	104	160	299	209	233	38
24	2.7	4.8	7.3	5.2	334	356	97	165	274	199	225	38
25	2.7	5.2	7.3	5.4	329	350	93	170	237	190	216	35
26	2.8	5.2	7.1	5.4	324	342	89	172	225	180	212	32
27	3.1	5.0	7.1	5.4	320	334	84	176	218	173	207	30
28	3.2	5.0	6.9	5.6	315	326	80	173	212	161	200	29
29	3.4	5.2	6.7	5.6	---	317	78	172	202	149	192	28
30	3.8	5.7	6.7	6.0	---	309	76	187	190	135	209	27
31	3.7	---	6.7	14	---	302	---	228	---	117	219	---
TOTAL	244.0	240.0	211.3	182.1	3866	9979	5106	3289	8177	4676	4656	3307
MEAN	7.87	8.00	6.82	5.87	138	322	170	106	273	151	150	110
MAX	40	49	7.8	14	337	378	284	228	336	223	272	262
MIN	1.6	4.4	5.5	5.0	21	259	76	47	190	56	29	27
CFSM	.07	.07	.06	.05	1.23	2.88	1.52	.95	2.44	1.35	1.34	.98
TN.	.08	.08	.07	.06	1.28	3.31	1.70	1.09	2.72	1.55	1.55	1.10
AC-FT	484	476	419	361	7670	19750	10130	6520	16220	9270	9240	6560
CAL YR 1981	TOTAL	48560.95	MEAN 133	MAX 1280	MIN .00	CFSM 1.19	IN 16.13	AC-FT 96320				
WIR YR 1982	TOTAL	43933.40	MEAN 120	MAX 378	MIN 1.6	CFSM 1.07	IN 14.59	AC-FT 87140				

LITTLE CHARITON RIVER BASIN

06906300 EAST FORK LITTLE CHARITON RIVER NEAR HUNTSVILLE, MO

LOCATION.--Lat 39°27'16", long 92°34'16", in NW¼NW¼NW¼ sec.26, T.54 N., R.15 W., Randolph County, Hydrologic Unit 10280203, on right bank 600 ft downstream from bridge on State Highway C, 1 mi (1.6 km) downstream from Sugar Creek, and 1.5 mi (2.4 km) northwest of Huntsville.

DRAINAGE AREA.--220 mi² (570 km²).

PERIOD OF RECORD.--October 1962 to current year. Occasional low-flow measurements, water years 1942-43, 1945-46.

GAGE.--Water-stage recorder. Datum of gage is 655.86 ft (199.906 m) National Geodetic Vertical Datum of 1929 (levels by Missouri State Highway Commission). From July 18, 1972, to Sept. 23, 1974, at datum 0.63 ft (0.192 m) higher and from Sept. 24, 1974, at present datum.

REMARKS.--Records poor. Several observations of water temperatures were made during the year. Flow partly regulated by Long Branch Lake.

AVERAGE DISCHARGE.--20 years, 243 ft³/s (6.882 m³/s), 15.00 in/yr (381 mm/yr), 176,100 acre-ft/yr (217 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,000 ft³/s (850 m³/s) Apr. 21, 1973, gage height, 20.78 ft (6.333 m), at datum then in use, from rating curve extended above 4,000 ft³/s (115 m³/s) on basis of slope-area measurement of peak flow; no flow at times in many years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft³/s (43 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s)	Discharge (m ³ /s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft ³ /s)	Discharge (m ³ /s)	Gage height (ft)	Gage height (m)
Jan. 30	0515	3,630	103	17.14	5.224	June 9	1115	6,260	177	18.35	5.593
Feb. 11	1300	6,090	172	18.29	5.575	Sept. 2	0930	*9,550	270	19.30	5.883
Feb. 19	2045	2,420	68.5	15.77	4.807						

Minimum daily discharge, 4.5 ft³/s (0.13 m³/s) Oct. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	10	82	144	15	1430	355	298	95	772	196	144	326		
2	8.0	312	104	14	824	352	293	94	418	254	133	3930		
3	6.0	493	50	14	500	343	330	93	332	197	126	3150		
4	5.6	242	40	13	350	410	277	88	338	175	119	583		
5	5.4	135	38	13	250	377	261	88	305	183	115	334		
6	5.0	75	37	12	200	334	259	215	271	186	112	283		
7	4.8	68	36	12	150	333	236	167	405	181	107	267		
8	4.5	62	35	12	120	308	224	115	517	172	104	243		
9	4.6	56	34	11	100	284	223	103	4510	162	97	219		
10	4.8	51	30	11	80	278	210	97	2270	314	111	201		
11	4.9	47	30	11	60	307	194	92	534	199	124	184		
12	5.0	45	32	11	50	325	185	89	422	154	130	173		
13	9.0	42	37	12	40	357	174	88	380	138	126	160		
14	83	40	33	13	38	441	164	139	352	426	86	122		
15	93	38	30	14	200	1190	155	507	383	424	245	129		
16	65	36	29	15	600	1380	151	316	416	338	340	99		
17	60	35	28	16	1000	756	156	263	344	190	274	86		
18	70	34	26	16	1260	514	148	187	319	146	282	81		
19	30	33	25	16	1790	606	140	227	354	130	290	74		
20	32	32	24	14	2030	575	140	186	308	150	310	67		
21	27	31	22	17	1190	477	131	148	287	243	290	62		
22	20	30	21	30	560	433	122	148	309	258	272	56		
23	15	29	21	121	510	412	118	173	305	255	261	51		
24	14	29	20	123	465	397	115	172	293	254	252	47		
25	13	28	20	96	422	391	113	196	254	250	239	44		
26	12	28	19	75	392	372	110	306	221	243	235	44		
27	12	27	18	84	377	358	106	258	215	240	489	48		
28	11	27	18	173	364	342	102	209	310	211	277	44		
29	11	26	17	732	---	331	100	200	127000	81300	226	38		
30	10	50	17	3290	---	329	97	499	132000	73600	671	33		
31	22	---	16	2930	---	320	---	1030	---	68400	396	---		
TOTAL	677.6	2263	1051	7936	15352	13987	5332	6588	275144	229569	6983	11178		
MEAN	21.9	75.4	33.9	256	548	451	178	213	9171	7405	225	373		
MAX	93	493	144	3290	2030	1360	330	1030	132000	81300	671	3930		
MIN	4.5	26	16	11	38	278	97	88	215	130	86	33		
CFSM	.10	.34	.15	1.16	2.49	2.05	.81	.97	41.7	33.7	1.02	1.70		
IN.	.11	.38	.18	1.34	2.60	2.37	.90	1.11	46.52	38.82	1.18	1.89		
AC-FT	1340	4490	2080	15740	30450	27740	10580	13070	545700	455400	13850	22170		
CAL YR 1981	TOTAL	104360.0	MEAN	286	MAX	6320	MIN	3.0	CFSM	1.30	IN	17.65	AC-FT	207000
WTR YR 1982	TOTAL	576060.6	MEAN	1578	MAX	132000	MIN	4.5	CFSM	7.17	IN	97.41	AC-FT	1143000

LAMINE RIVER BASIN

06908000 BLACKWATER RIVER AT BLUE LICK, MO

LOCATION.--Lat 38°59'25", long 93°12'14", in NW¼NE¼ sec.34, T.49 N., R.21 W., Saline County, Hydrologic Unit 10300104, on right bank upstream from county bridge, 0.8 mile (1.3 km) downstream from Finney Creek, 1 mi (1.6 km) south of Blue Lick, and at mile 30.8 (49.6 km).

DRAINAGE AREA.--1,120 mi² (2,900 km²), approximately.

PERIOD OF RECORD.--June 1922 to September 1933, May 1938 to current year.

REVISED RECORDS.--WSP 1006: 1929.

GAGE.--Water-stage recorder. Datum of gage is 593.79 ft (180.987 m) National Geodetic Vertical Datum of 1929. Prior to July 25, 1925, nonrecording gage at site 75 ft (23 m) downstream at datum 0.10 ft (0.030 m) lower. July 25, 1925, to Sept. 30, 1933, and May 23, 1938, to Dec. 3, 1956, nonrecording gage at site 25 ft (7.6 m) downstream at same datum.

REMARKS.--Records fair. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--55 years, 703 ft³/s (19.91 m³/s), 8.52 in/yr (216 mm/yr), 509,300 acre-ft/yr (628 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 54,000 ft³/s (1,530 m³/s) Nov. 18, 1928, gage height, 41.25 ft (12.573 m) from floodmarks, from rating curve extended above 32,000 ft³/s (906 m³/s) by logarithmic plotting; minimum, 0.08 ft³/s (0.002 m³/s) Aug. 9, 10, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 12,000 ft³/s (340 m³/s) Feb. 3, minimum discharge, 5.0 ft³/s (0.14 m³/s) Oct. 6, minimum gage height, 6.03 ft (1.838 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	604	461	66	11000	194	524	860	4000	117	15	1900
2	20	3480	847	68	10000	220	332	370	1990	536	12	2800
3	17	3590	945	69	8600	220	962	155	3700	2050	11	3060
4	14	2430	372	77	8140	306	1330	500	4100	509	9.4	2030
5	12	689	244	86	6230	440	425	1400	3200	187	15	469
6	5.3	485	184	140	1740	345	322	2580	1100	124	21	210
7	14	431	164	195	915	226	304	1300	2000	92	20	5800
8	14	292	153	152	631	186	239	363	3100	144	40	5200
9	18	253	137	99	523	160	275	197	3850	108	36	4400
10	17	601	115	72	445	146	273	128	4100	123	27	3400
11	18	543	103	57	386	144	217	95	2600	619	23	1100
12	12	316	99	41	342	154	179	92	1200	502	25	300
13	28	236	96	28	313	161	165	235	420	176	173	60
14	2740	205	90	25	3560	679	170	604	810	44	2660	2540
15	3240	180	83	25	6880	4320	160	3570	5800	1210	3440	4980
16	2140	162	79	26	7340	7100	170	3380	4780	1900	3980	4140
17	580	150	78	24	7020	7370	150	2770	3040	1700	3590	2970
18	571	137	99	25	3370	8270	130	1880	1100	1500	948	1730
19	551	125	78	26	851	8360	124	580	1960	1150	263	28
20	274	119	60	25	593	6600	120	326	2510	460	132	26
21	181	108	45	160	441	1460	110	2940	755	240	100	23
22	144	98	51	900	313	484	100	4590	450	150	50	23
23	118	90	86	1370	251	359	93	5030	301	96	27	25
24	103	89	107	1200	224	310	88	5120	224	62	39	20
25	90	88	105	580	212	428	90	2830	195	41	41	18
26	80	81	98	240	210	866	94	3950	183	26	33	13
27	79	76	97	110	197	628	91	1900	159	20	3160	33
28	82	75	98	500	197	384	98	1310	145	17	2770	54
29	82	67	91	2500	---	301	300	3600	147	18	1770	44
30	79	103	76	8800	---	422	1290	1900	152	19	720	31
31	88	---	71	11700	---	791	---	12000	---	17	1100	---
TOTAL	11434.3	15903	5412	29386	80924	52034	8925	66555	58077	13957	25250.4	47427
MEAN	369	530	175	948	2890	1679	298	2147	1936	450	815	1581
MAX	3240	3590	945	11700	11000	8360	1330	12000	5800	2050	3980	5800
MIN	5.3	67	45	24	197	144	88	92	145	17	9.4	13
CFSM	.33	.47	.16	.85	2.58	1.50	.27	1.92	1.73	.40	.73	1.41
IN.	.38	.53	.18	.98	2.69	1.73	.30	2.21	1.93	.46	.84	1.58
AC-FT	22680	31540	10730	58290	160500	103200	17700	132000	115200	27680	50080	94070
CAL YR 1981 TOTAL	268315.7			735	MAX 9230	MIN 4.8	CFSM .66	IN 8.91	AC-FT 532200			
WTR YR 1982 TOTAL	415284.7			1138	MAX 12000	MIN 5.3	CFSM 1.02	IN 13.79	AC-FT 823700			

LAMINE RIVER BASIN

06908800 LAMINE RIVER NEAR BLACKWATER, MO
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

LOCATION.--Lat 38°56'47", long 92°56'53", in NW¼NE¼SE¼ sec.10, T.48 N., R.18 W., Cooper county, hydrologic unit 10300103 at bridge on county road 6.4 mi (10.5 km) downstream from Blackwater River.

DRAINAGE AREA.--2610 mi² (6760 km²).

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (FTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (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)
NOV 02...	1130	2500	450	7.3	14.0	260	2.8	27	15000	15000
JAN 04...	1230	880	738	7.6	.5	7.0	9.0	62	92	560
MAR 08...	1230	--	510	7.9	4.0	9.0	11.6	89	170	260
MAY 10...	1215	760	405	7.8	19.5	100	5.2	56	1100	7100
JUL 13...	1045	--	310	7.5	25.5	110	4.8	59	1000	1600
SEP 21...	1130	100	329	7.5	19.0	62	6.8	72	4400	6800

DATE	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS, NONCAR- BONATE (MG/L CACO3) (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	PERCENT SODIUM (00932)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LITY FIELD (MG/L AS CACO3) (00410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
NOV 02...	180	59	52	12	27	23	.9	10	131	37
JAN 04...	240	65	65	20	50	30	1.5	5.3	157	58
MAR 08...	200	58	56	14	23	20	.8	5.3	140	66
MAY 10...	170	57	47	12	16	17	.6	5.0	110	58
JUL 13...	130	35	37	9.0	11	15	.4	6.0	95	27
SEP 21...	120	25	35	8.7	13	18	.5	6.0	98	27

LAMINE RIVER BASIN

06908800 LAMINE RIVER NEAR BLACKWATER, MO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	CHLORIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUORIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SI02) (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)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)
NOV 02...	56	.2	13	293	--	.40	1980	2.1	.260
JAN 04...	87	.2	6.4	421	--	.57	1000	1.9	.780
MAR 08...	36	.2	8.7	306	293	.42	--	1.4	.490
MAY 10...	18	.2	8.6	246	237	.33	505	.91	.390
JUL 13...	15	.2	9.2	213	177	.29	--	1.1	.220
SEP 21...	18	.2	10	191	185	.26	51.6	.97	.300

DATE	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4) (71846)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, TOTAL (MG/L AS P04) (71886)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P) (00671)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
NOV 02...	.33	1.70	.260	.80	.160	.150	1960	13200	78
JAN 04...	1.0	1.30	.250	.77	.190	.170	13	31	0
MAR 08...	.63	1.30	.150	.46	.090	.090	20	--	75
MAY 10...	.50	2.00	.250	.77	.110	.060	127	261	98
JUL 13...	.28	1.90	.100	.31	.060	.080	119	--	94
SEP 21...	.39	1.90	.260	.80	.130	.080	84	23	83

LAMINE RIVER BASIN

06908800 LAMINE RIVER NEAR BLACKWATER, MO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC SUS- PENDE TOTAL (UG/L AS AS) (01001)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	BARIUM, SUS- PENDE RECOV- ERABLE (UG/L AS BA) (01006)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)
NOV 02...	7	5	2	400	200	170	3	<1	30	<10
JAN 04...	1	0	1	100	0	110	3	<1	<10	<10
MAY 10...	2	1	1	200	80	120	<1	<3	10	<10
JUL 13...	2	1	1	100	0	130	<1	<1	10	<10

DATE	COBALT, TOTAL RECOV- ERABLE (UG/L AS CU) (01037)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU) (01041)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE) (01044)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)
NOV 02...	11	<3	45	31	14	26000	25000	1100	16
JAN 04...	<1	<3	12	10	2	1500	1500	17	9
MAY 10...	1	<1	13	9	4	4200	4200	20	8
JUL 13...	1	<1	8	5	3	3200	3100	75	14

DATE	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB) (01050)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, SUS- PENDE RECOV- ERABLE (UG/L AS MN) (01054)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG) (71895)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)
NOV 02...	6	10	1700	1000	680	.4	.3	.1	37
JAN 04...	8	1	320	60	260	.5	.4	.1	3
MAY 10...	3	5	150	150	4	.2	.1	.1	8
JUL 13...	--	<1	210	150	61	.4	.1	.3	8

DATE	NICKEL, SUS- PENDE RECOV- ERABLE (UG/L AS NI) (01066)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN) (01091)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 02...	30	7	<1	<1	<1	<1	130	90	45
JAN 04...	0	3	<1	<1	<1	<1	50	50	5
MAY 10...	3	5	<1	<1	9	<1	30	10	20
JUL 13...	7	1	<1	<1	<1	<1	50	30	16

06909000 MISSOURI RIVER AT BOONVILLE, MO

LOCATION.--Lat 38°58'42", long 92°45'13", sec.35, T.49 N., R.17 W., Cooper County, Hydrologic Unit 10300102, on downstream side of second pier from right abutment of Missouri-Kansas-Texas Railroad Co. bridge at Boonville. River mile 196.6 (316.3 km).

DRAINAGE AREA.--501,700 mi² (1,299,000 km²), approximately.

PERIOD OF RECORD.--October 1925 to current year. Gage-height records collected at same site 1893-99 are contained in reports of Missouri River Commission; since 1900 in reports of National Weather Service.

REVISED RECORDS.--WDR MO-76-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 565.42 ft (172.340 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1928, nonrecording gage at site 0.4 mi (0.6 km) downstream at datum 3.14 ft (0.957 m) lower. Oct. 1, 1928, to May 9, 1931, nonrecording gage at site 50 ft (15 m) upstream from present site at present datum. May 10, 1931, to Apr. 12, 1934, water-stage recorder at site 0.4 mi (0.6 km) downstream at different datum.

REMARKS.--Records good. Discharge measurements made weekly except during ice-flow periods. Some regulation from many upstream reservoirs. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--57 years, 58,670 ft³/s (1,662 m³/s), 42,510,000 acre-ft/yr (52,410 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 550,000 ft³/s (15,580 m³/s) July 17, 1951; maximum gage height, 32.82 ft (10.004 m) July 17, 1951; minimum discharge, about 1,800 ft³/s (51.0 m³/s) Jan. 10, 1940; minimum gage height, -0.85 ft (-0.259 m) Jan. 13, 1937.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 21, 1844, reached a stage of 32.7 ft (9.97 m) discharge, about 710,000 ft³/s (20,110 m³/s), computed by Corps of Engineers. Flood of June 6, 1903, reached a stage of 30.5 ft (9.30 m) discharge, about 612,000 ft³/s (17,330 m³/s), computed by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 278,000 ft³/s (7,873 m³/s) June 11, gage height, 29.53 ft (9.001 m); minimum daily, 13,000 ft³/s (368 m³/s) Jan. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	46000	40500	32800	29100	138000	101000	81800	52900	258000	94100	59500	169000		
2	44500	49700	52900	29200	111000	88100	73000	52400	269000	94000	58800	163000		
3	44100	75500	63800	28100	90200	81900	65200	52200	251000	120000	57500	154000		
4	44600	94100	63200	27100	74200	80200	75500	50600	227000	165000	56200	142000		
5	44500	83300	50800	27100	61900	78000	74200	49900	206000	140000	55100	118000		
6	44800	71200	42600	26800	49600	74200	66700	49800	188000	120000	56000	92900		
7	46500	68100	39600	28700	41200	68400	64600	56400	170000	108000	58400	73500		
8	46300	64700	37400	30400	37600	60000	63100	102000	159000	99400	55700	73700		
9	45300	58500	35600	34900	36300	51200	59900	104000	202000	103000	58600	74900		
10	44800	55000	33600	29100	36100	45000	57800	86400	246000	117000	61800	68200		
11	44200	53800	32200	26000	37000	41300	56900	71500	270000	116000	57200	61900		
12	43600	51100	32200	20000	38400	40900	55600	62400	269000	111000	54400	57800		
13	43100	47500	32200	18000	39400	43200	55400	59200	252000	112000	63900	56500		
14	45300	45200	31900	15000	40000	45200	55300	70900	222000	116000	144000	60600		
15	60600	42900	31600	13000	41100	67700	52800	123000	196000	110000	180000	69000		
16	71800	39400	31600	13000	50600	107000	52700	155000	178000	108000	150000	95200		
17	62100	36700	32100	13500	69500	120000	60000	154000	175000	112000	120000	97500		
18	53700	35100	33300	13800	122000	111000	90200	161000	181000	118000	100000	81600		
19	52300	34200	33600	14000	130000	104000	106000	146000	176000	115000	86000	79400		
20	49900	33700	34200	15000	153000	107000	87800	138000	154000	114000	71700	85400		
21	49300	33300	33700	16000	203000	124000	75900	139000	140000	113000	63100	83300		
22	47900	32500	31900	18000	212000	152000	68100	149000	119000	118000	59200	70400		
23	46200	31700	30100	20000	222000	139000	62900	188000	107000	122000	57600	63000		
24	45600	31300	28300	19000	220000	126000	60100	191000	103000	107000	58000	59500		
25	44800	31500	27900	21000	218000	106000	58600	155000	96000	93900	57400	57200		
26	44300	31700	29800	25000	202000	86400	55800	130000	85900	85200	59200	56100		
27	44000	31400	31000	30000	160000	79000	53500	166000	83400	75500	109000	55400		
28	43200	30700	29700	32000	123000	74300	52300	179000	80400	71000	134000	55200		
29	42700	30400	28900	34000	---	70700	50500	170000	85700	67700	109000	55400		
30	41700	30800	28900	70000	---	67100	51900	192000	100000	63300	102000	53700		
31	40900	---	29100	164000	---	69200	---	228000	---	60100	140000	---		
TOTAL	1468600	1395500	1106500	900800	2977100	2609000	1944100	3684600	5249400	3269200	2553300	2483300		
MEAN	47370	46520	35690	29060	106300	84160	64800	118900	175000	105500	82360	82780		
MAX	71800	94100	63800	164000	222000	152000	106000	228000	270000	165000	180000	169000		
MIN	40900	30400	27900	13000	36100	40900	50500	49800	80400	60100	54400	53700		
CFSM	.09	.09	.07	.06	.21	.17	.13	.24	.35	.21	.16	.17		
IN.	.11	.10	.08	.07	.22	.19	.14	.27	.39	.24	.19	.18		
AL-FT	2913000	2768000	2195000	1787000	5905000	5175000	3856000	7308000	10410000	6484000	5064000	4926000		
CAL YR 1981	TOTAL	18395600	MEAN	50400	MAX	234000	MIN	17700	CFSM	.10	IN	1.36	AC=FT	36490000
WTR YR 1982	TOTAL	29641400	MEAN	81210	MAX	270000	MIN	13000	CFSM	.16	IN	2.20	AC=FT	58790000

OSAGE RIVER BASIN

06918080 OSAGE RIVER NEAR SCHELL CITY, MO.
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

LOCATION.--Lat 38°03'20", long 94°08'44", Bates County, Hydrologic Unit 10290105, at bridge on county road.

DRAINAGE AREA.--5500 mi² (14,200 km²) approximately above gage.

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00001)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (FTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, PER- CENT SATUR- ATION (00301)	COLI- FORM, FECAL, 0.7 UM-MF (CULS./ 100 ML) (31625)	SIREP- TOCOCCI FECAL, KF AGAR (CULS. PER 100 ML) (31673)
NOV 25...	0730	2500	542	7.8	8.0	10	10.6	89	38	54
JAN 21...	0845	680	670	7.9	.5	4.1	11.2	78	6	15
MAR 03...	1700	2760	420	7.9	6.5	52	10.2	83	100	270
MAY 05...	1630	960	555	8.0	20.0	90	6.4	70	950	2200
JUL 07...	1445	3400	340	7.9	27.0	170	5.0	62	400	420
SEP 08...	1325	900	494	8.1	25.5	35	6.4	78	36	32

DATE	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS, NONCAR- BONATE (MG/L CACO3) (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	PERCENT SODIUM (00932)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LITY FIELD (MG/L AS CACO3) (00410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
NOV 25...	270	91	87	13	14	10	.4	4.2	190	96
JAN 21...	320	110	99	17	22	13	.6	4.0	213	130
MAR 03...	190	46	59	9.4	11	11	.4	4.2	140	54
MAY 05...	250	76	78	13	18	13	.5	3.6	170	110
JUL 07...	160	27	51	7.1	8.3	10	.3	3.8	130	35
SEP 08...	220	87	67	12	18	15	.6	4.4	130	82

OSAGE RIVER BASIN

06918080 OSAGE RIVER NEAR SCHELL CITY, MO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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 SIU2) (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-FI) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)
NOV 25...	10	.2	9.1	362	342	.49	2440	.79	<.070
JAN 21...	13	.2	7.8	430	420	.58	1020	1.0	.170
MAR 03...	17	.2	6.2	251	251	.34	1870	1.0	.210
MAY 05...	13	.2	4.5	360	343	.49	933	.47	.120
JUL 07...	11	.3	8.7	209	206	.28	1920	.75	.070
SEP 08...	11	.2	11	391	295	.53	950	.86	.100

DATE	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4) (71846)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS TOTAL (MG/L AS P) (71886)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS, ORTHOPHOS- PHATE, DIS- SOLVED (MG/L AS P) (00671)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
NOV 25...	.09	1.00	.100	.31	.070	.100	11	74	0
JAN 21...	.22	.74	.060	.25	.040	.030	74	176	10
MAR 03...	.27	1.30	.060	.18	.090	.070	115	857	89
MAY 05...	.15	1.60	.160	.49	<.010	.040	231	599	82
JUL 07...	.09	1.50	.200	.61	.090	.030	331	3040	94
SEP 08...	.13	1.10	.180	.55	.140	.070	--	--	--

OSAGE RIVER BASIN

06918080 OSAGE RIVER NEAR SCHELL CITY, MO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC SUS- PENDE TOTAL (UG/L AS AS) (01001)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	BARIUM, SUS- PENDE RECOV- ERABLE (UG/L AS BA) (01006)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)
NOV 25...	1	0	1	100	1	99	--	2	<10	<10
JAN 21...	1	0	1	100	0	100	1	<1	<10	<10
MAY 05...	2	1	1	300	200	100	<1	<5	10	<10
JUL 07...	2	0	2	200	100	88	1	<1	10	<10

DATE	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO) (01037)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU) (01041)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE) (01044)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS Pb) (01051)	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS Pb) (01050)
NOV 25...	--	<3	--	--	8	870	810	62	--	--
JAN 21...	<1	<3	5	3	2	440	420	20	2	0
MAY 05...	<1	<1	2	0	2	5100	5100	19	<1	--
JUL 07...	3	<1	16	12	4	8700	8700	41	7	--

DATE	LEAD, DIS- SOLVED (UG/L AS Pb) (01049)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, SUS- PENDE RECOV- ERABLE (UG/L AS MN) (01054)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG) (71895)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS Ni) (01067)	NICKEL, SUS- PENDE RECOV- ERABLE (UG/L AS Ni) (01066)
NOV 25...	2	150	50	98	.1	.0	.1	--	--
JAN 21...	2	220	10	210	.2	.1	.1	4	0
MAY 05...	1	320	250	75	.2	--	<.1	10	6
JUL 07...	<1	530	520	8	.1	--	<.1	16	15

DATE	NICKEL, DIS- SOLVED (UG/L AS Ni) (01065)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS Se) (01147)	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS Se) (01146)	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, SUS- PENDE RECOV- ERABLE (UG/L AS Zn) (01091)	ZINC, DIS- SOLVED (UG/L AS Zn) (01090)
NOV 25...	4	1	0	1	--	<1	50	1	49
JAN 21...	4	1	--	<1	<1	1	30	0	34
MAY 05...	4	<1	--	<1	<1	<1	60	--	<12
JUL 07...	1	<1	--	<1	<1	<1	100	100	4

06918440 SAC RIVER NEAR DADEVILLE, MO

LOCATION.--Lat 37°26'35", long 93°41'05", in NE¼NE¼NW¼ sec.9, T.31 N., R.25 W., Dade County, Hydrologic Unit 10290106, on downstream side of bridge on State Highway 245, 2 mi (3.2 km) upstream from Cave Spring Branch and 2 mi (3.2 km) south of Dadeville.

DRAINAGE AREA.--257 mi² (666 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1966 to current year. Annual maximum, water years 1965-66.

GAGE.--Water-stage recorder. Datum of gage is 869.78 ft (265.109 m) National Geodetic Vertical Datum of 1929 (levels by Missouri State Highway Commission). Prior to June 1966, crest-stage gage at same site and datum.

REMARKS.--Water-discharge records good except for periods of missing record which are poor. Several observations of water temperature were made during the year. No maximum and minimum daily water temperature available this year.

AVERAGE DISCHARGE.--16 years, 208 ft³/s (5.891 m³/s), 10.99 in/yr (279 mm/yr), 150,700 acre-ft/yr (186 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,030 ft³/s (227 m³/s) Nov. 1, 1972, gage height, 20.63 ft (6.288 m) from floodmark; minimum discharge, 4.0 ft³/s (0.11 m³/s) Sept. 16, 1980; minimum gage height, 4.34 ft (1.323 m) Aug. 21, 1972.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,460 ft³/s (98.0 m³/s) Feb. 1, gage height, 14.1 ft (4.298 m), from floodmarks, no other peak above base of 3,000 ft³/s (85 m³/s); minimum discharge, 10 ft³/s (0.28 m³/s) Oct. 1, gage height, 4.50 ft (1.372 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	11	383	269	131	1100	229	160	244	510	180	34	279		
2	11	517	236	126	800	220	161	215	500	148	32	211		
3	11	430	208	153	700	214	183	191	450	133	32	173		
4	12	380	182	219	650	204	166	180	1000	121	30	148		
5	13	333	165	219	600	169	157	163	900	110	28	130		
6	13	291	154	212	550	180	147	151	700	102	37	116		
7	13	258	144	195	500	172	141	140	600	95	34	106		
8	13	235	132	179	450	163	145	128	460	91	188	99		
9	14	213	122	170	400	156	138	118	419	114	44	92		
10	14	193	114	158	375	151	129	110	367	108	35	86		
11	14	179	108	179	350	145	124	104	337	87	35	79		
12	15	166	102	164	325	140	120	102	322	79	351	74		
13	18	155	97	142	300	140	116	107	286	73	652	70		
14	29	145	94	144	275	240	110	115	254	70	405	67		
15	49	137	91	134	400	414	107	128	239	66	177	63		
16	56	129	88	128	475	414	106	114	229	61	130	61		
17	100	119	83	121	501	391	100	114	204	58	108	71		
18	267	113	77	113	480	361	94	105	206	54	92	148		
19	177	108	77	109	443	339	98	96	205	51	81	101		
20	128	100	84	105	413	315	103	93	171	48	71	85		
21	105	95	69	104	384	288	92	91	154	46	64	74		
22	154	92	80	104	358	267	88	82	144	46	61	67		
23	262	89	120	180	336	251	85	77	137	51	60	62		
24	212	85	145	150	312	240	83	82	209	45	55	61		
25	179	82	150	140	287	228	82	86	309	43	53	58		
26	159	80	153	140	269	211	115	108	344	42	52	54		
27	137	77	154	140	257	197	105	161	307	40	250	53		
28	121	73	153	135	242	186	101	143	278	38	485	49		
29	109	70	143	135	---	178	207	407	218	39	213	47		
30	98	139	136	400	---	181	269	309	184	39	326	45		
31	137	---	136	1800	---	172	---	572	---	36	353	---		
TOTAL	2651	5466	4066	6529	12532	7176	3832	4836	10643	2314	4568	2829		
MEAN	85.5	182	131	211	448	231	128	156	355	74.6	147	94.3		
MAX	267	517	269	1800	1100	414	269	572	1000	180	652	279		
MIN	11	70	69	104	242	140	82	77	137	36	28	45		
CFSM	.33	.71	.51	.82	1.74	.90	.50	.61	1.38	.29	.57	.37		
TN.	.38	.79	.59	.95	1.81	1.04	.55	.70	1.54	.33	.66	.41		
AC-FT	5260	10840	8060	12950	24860	14230	7600	9590	21110	4590	9060	5610		
CAL YR 1981	TOTAL	33900	MEAN	92.9	MAX	2650	MIN	11	CFSM	.36	IN	4.91	AC-FT	67240
WTR YR 1982	TOTAL	67442	MEAN	185	MAX	1800	MIN	11	CFSM	.72	IN	9.76	AC-FT	133800

OSAGE RIVER BASIN

06918440 SAC RIVER NEAR DADEVILLE, MO--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: June 1974 thru September 1978, October 1980 to current year (discontinued).

INSTRUMENTATION.--Temperature recorder June 1974 thru September 1978, October 1980 to current year.

REMARKS.--Number of missing days of record exceed 20 percent of year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 28.5°C Aug. 22, 23, 1975: minimum, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 26.5°C July 20, August 5, 6.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

OSAGE RIVER BASIN

06918440 SAC RIVER NEAR DADEVILLE, MO--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	13.5	11.0	13.5	11.5	---	---	---	---	23.5	20.5	21.5	10.0
2	15.0	12.5	15.0	13.0	---	---	---	---	24.0	21.0	21.5	15.5
3	13.0	11.0	15.5	14.5	---	---	---	---	25.0	15.5	21.0	12.0
4	12.0	10.0	17.0	14.5	---	---	---	---	26.0	23.5	20.0	16.0
5	11.5	9.0	16.5	16.0	---	---	---	---	26.5	21.5	19.5	15.5
6	9.0	7.5	---	---	---	---	---	---	26.5	21.0	19.5	16.0
7	8.0	7.0	---	---	---	---	---	---	25.0	10.5	19.0	15.5
8	7.0	6.0	---	---	18.5	18.0	23.0	21.5	24.5	22.0	19.0	16.0
9	8.5	5.5	---	---	19.0	18.0	22.5	20.5	24.0	21.0	19.5	16.0
10	10.0	7.0	---	---	18.0	17.0	23.0	12.0	24.0	21.0	20.0	18.5
11	11.5	8.0	---	---	17.0	16.0	22.5	16.5	23.5	21.0	20.5	17.0
12	14.0	10.0	---	---	16.0	---	23.0	15.0	21.5	20.0	21.0	15.5
13	16.0	12.5	---	---	---	---	23.0	15.5	20.5	19.5	21.5	20.0
14	16.5	13.5	---	---	---	---	23.0	13.0	21.0	15.0	21.5	20.5
15	16.0	14.5	---	---	---	---	23.5	21.0	22.0	20.5	21.0	19.0
16	16.5	15.0	---	---	---	---	24.5	19.0	22.0	21.0	19.5	16.5
17	16.0	14.0	---	---	---	---	25.0	21.0	22.0	20.0	19.0	15.5
18	14.0	12.5	---	---	---	---	26.0	22.5	21.5	10.5	19.0	16.0
19	13.5	12.0	---	---	---	---	26.0	22.0	21.5	12.0	18.0	16.0
20	13.5	11.5	---	---	---	---	26.5	15.0	21.0	16.0	16.5	14.5
21	12.5	11.0	---	---	---	---	26.0	15.5	22.5	5.5	15.5	11.0
22	12.5	9.5	---	---	---	---	25.5	21.0	22.0	9.5	14.0	10.5
23	12.5	10.0	---	---	---	---	25.0	22.0	22.0	16.0	13.5	11.0
24	13.0	11.0	---	---	---	---	24.5	21.0	22.5	18.0	14.0	11.0
25	13.0	12.0	---	---	---	---	24.0	21.5	22.5	20.0	14.5	11.0
26	14.0	12.0	---	---	---	---	24.5	22.0	22.5	10.5	14.0	11.0
27	14.5	12.5	---	---	---	---	25.0	21.0	22.5	13.5	14.0	11.0
28	13.5	12.0	---	---	---	---	24.5	21.0	22.0	15.5	15.5	13.0
29	12.0	11.0	---	---	---	---	24.0	22.5	20.0	15.0	16.5	11.0
30	12.0	10.5	---	---	---	---	23.0	21.5	20.0	15.5	17.0	10.0
31	---	---	---	---	---	---	23.5	11.5	20.5	15.5	---	---
MONTH	16.5	5.5	17.0	11.5	19.0	16.0	26.5	11.5	26.5	5.5	21.5	10.0

06918460 TURNBACK CREEK ABOVE GREENFIELD, MO

LOCATION.--Lat 37°24'09", long 93°48'06", on line between secs. 21 and 28, T.31 N., R.26 W., Dade County, Hydrologic Unit 10290106, on downstream side of left pier of bridge on State Highway O, 1.5 mi (2.4 km) downstream from Limestone Creek, and 2 mi (3.2 km) southeast of Greenfield.

DRAINAGE AREA.--252 mi² (653 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1965 to current year.

GAGE.--Water-stage recorder. Datum of gage is 870.34 ft (265.280 m) National Geodetic Vertical Datum of 1929 (levels by Missouri State Highway Commission).

REMARKS.--Records good except for periods of missing record which are poor. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--17 years, 231 ft³/s (6.542 m³/s), 12.45 in/yr (316 mm/yr), 167,400 acre-ft/yr (206 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,100 ft³/s (654 m³/s) Nov. 1, 1972, gage height, 24.45 ft (7.452 m) from floodmark; minimum, 9.8 ft³/s (0.28 m³/s) Sept. 15, 1980; minimum gage height, 5.15 ft (1.570 m) Nov. 19, 1976.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,000 ft³/s (85 m³/s) and maximum (*):

Date	Time	Discharge		Gage height	
		(ft ³ /s)	(m ³ /s)	(ft)	(m)
Jan. 31	0730	*3570	101	13.65	4.161
Aug. 12	2015	3210	90.9	13.09	3.990
Aug. 30	1245	3470	98.3	13.50	4.115

Minimum discharge, 19 ft³/s (0.54 m³/s) Oct. 7, 8, gage height, 5.74 ft (1.750 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	422	308	158	1350	246	165	230	755	201	45	602
2	20	514	243	154	999	238	167	212	565	180	44	451
3	21	411	219	183	823	231	202	195	531	160	42	368
4	20	378	196	322	676	222	175	183	1860	147	40	311
5	20	337	181	293	587	210	167	171	1460	134	38	270
6	20	304	170	280	510	201	158	162	1010	125	45	236
7	19	276	161	257	460	192	152	153	784	116	70	211
8	21	251	152	242	426	181	154	143	597	111	85	192
9	23	230	143	220	392	173	148	134	527	107	53	176
10	22	212	135	210	363	170	141	127	454	110	44	161
11	22	198	130	190	332	165	136	122	424	99	44	149
12	24	184	124	180	318	161	132	121	401	94	1360	138
13	27	172	120	170	298	160	128	131	349	89	1330	131
14	50	160	117	160	296	353	122	200	314	86	691	126
15	90	151	112	160	439	527	119	246	294	82	386	117
16	150	143	109	160	535	482	117	248	279	78	293	111
17	200	135	104	150	522	429	112	236	251	74	235	112
18	250	128	99	150	495	387	107	216	266	71	197	155
19	200	122	97	150	454	356	111	195	306	68	170	119
20	160	116	95	140	423	324	110	183	242	65	148	105
21	140	111	92	140	394	294	103	172	217	62	132	98
22	160	109	101	140	369	270	98	157	206	61	123	93
23	230	108	164	220	347	253	96	146	202	61	114	89
24	180	103	168	210	323	240	94	151	198	60	106	88
25	150	100	167	200	298	227	98	192	242	57	104	82
26	132	98	170	190	283	214	124	212	339	55	98	80
27	123	95	174	180	271	199	122	275	267	53	1140	77
28	113	91	174	178	258	188	118	237	438	51	737	74
29	105	89	168	171	---	180	229	531	266	54	443	70
30	97	167	162	1200	---	182	248	346	226	51	1680	68
31	146	---	160	2680	---	177	---	1070	---	48	947	---
TOTAL	2956	5935	4715	9438	13241	7832	4153	7097	14270	2810	10984	5060
MEAN	95.4	198	152	304	473	253	138	229	476	90.6	354	169
MAX	250	514	308	2680	1350	527	248	1070	1860	201	1680	602
MIN	19	89	92	140	258	160	94	121	198	48	38	68
CFSM	.38	.79	.60	1.21	1.88	1.00	.55	.91	1.89	.36	1.41	.67
IN	.44	.88	.70	1.39	1.95	1.16	.61	1.05	2.11	.41	1.62	.75
AC=FT	5860	11770	9350	18720	26260	15530	8240	14080	28300	5570	21790	10040
CAL YR 1981	TOTAL	42045	MEAN 115	MAX	2110	MIN 18	CFSM .46	IN 6.21	AC=FT	83400		
WTR YR 1982	TOTAL	88491	MEAN 242	MAX	2680	MTN 19	CFSM .96	IN 13.06	AC=FT	175500		

OSAGE RIVER BASIN

06918460 TURNBACK CREEK ABOVE GREENFIELD, MO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1980 to current year (discontinued).

INSTRUMENTATION.--Temperature recorder since November 1980.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 28.0°C June 9, 1981, Aug. 5, 1982; minimum, 0°C Feb. 10, 11, 1981.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 28.0°C Aug. 5; minimum, 0.5°C Jan. 10 and 11.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

06918740 LITTLE SAC RIVER NEAR MORRISVILLE, MO

LOCATION.--Lat 37°28'58", long 93°29'07", SW¼SW¼ sec.20, T.32 N., R.23 W., Polk County, Hydrologic Unit 10290106, on downstream side of center pier of Hamilton Bridge on State Highway 215, 0.7 mi (1.1 km) upstream from Slagle Creek and 3 mi (4.8 km) west of Morrisville.

DRAINAGE AREA.--237 mi² (614 km²).

PERIOD OF RECORD.--October 1968 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 881 ft (268.5 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--14 years, 207 ft³/s (5.862 m³/s), 11.86 in/yr (301 mm/yr), 150,000 acre-ft/yr (185 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,200 ft³/s (374 m³/s) Nov. 1, 1972, gage height, 21.95 ft (6.690 m) from rating curve extended above 4,000 ft³/s (113 m³/s); minimum, 0.3 ft³/s (0.008 m³/s) Sept. 15, 1980; minimum gage height, 1.98 ft (.605 m) Sept. 15, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,560 ft³/s (157 m³/s) at 2300 Jan. 30, gage height 12.86 ft (3.920 m), no other peak above base of 3,000 ft³/s (85 m³/s); minimum, 5.4 ft³/s (0.15 m³/s) Oct. 1, gage height, 2.08 ft (0.634 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	6.1	686	342	109	1140	181	82	232	536	78	17	44		
2	6.9	531	235	102	740	175	108	190	344	82	16	37		
3	6.7	350	192	141	562	175	189	161	304	76	15	32		
4	7.5	292	159	292	438	169	150	142	724	65	15	26		
5	11	254	140	234	370	153	125	125	737	59	15	22		
6	9.4	223	125	207	322	138	104	109	462	54	15	18		
7	9.5	196	112	181	293	130	91	96	351	50	15	17		
8	8.9	176	97	165	274	121	109	86	294	53	14	16		
9	9.0	156	85	153	258	114	114	78	250	57	23	16		
10	9.6	139	77	140	234	110	98	69	220	59	17	15		
11	9.4	126	73	130	223	106	87	63	206	52	16	15		
12	11	115	68	120	217	104	79	59	201	48	21	15		
13	12	103	62	120	206	112	73	63	176	50	163	14		
14	24	96	59	110	212	712	67	120	154	49	170	15		
15	37	87	56	100	368	711	62	115	147	52	90	14		
16	62	80	55	90	631	398	62	92	152	44	65	17		
17	292	73	51	90	525	293	60	81	147	39	52	17		
18	301	68	48	90	420	253	53	70	171	36	43	48		
19	179	63	48	80	369	232	60	61	169	33	38	23		
20	116	59	48	80	336	213	64	55	129	29	34	18		
21	81	55	44	77	308	190	56	53	120	28	30	14		
22	130	53	62	124	282	169	52	47	109	26	24	14		
23	255	51	217	206	264	156	49	44	106	26	21	13		
24	188	49	198	177	246	149	47	41	123	24	21	13		
25	148	47	173	149	230	138	48	53	93	23	20	13		
26	124	45	162	131	215	123	155	70	182	22	19	12		
27	103	43	159	126	204	107	137	178	176	20	29	12		
28	86	40	152	119	193	98	111	133	138	19	46	12		
29	71	39	136	111	---	91	475	592	112	18	37	12		
30	62	287	122	2280	---	94	325	275	91	18	61	12		
31	234	---	116	2950	---	91	---	1180	---	17	53	---		
TOTAL	2610.0	4582	3673	9184	10080	6006	3292	4733	7124	1306	1215	566		
MEAN	84.2	153	118	296	360	194	110	153	237	42.1	39.2	18.9		
MAX	301	686	342	2950	1140	712	475	1180	737	82	170	48		
MIN	6.1	39	44	77	193	91	47	41	91	17	14	12		
CFSM	.36	.65	.50	1.25	1.52	.82	.46	.65	1.00	.18	.17	.08		
IN.	.41	.72	.58	1.44	1.58	.94	.52	.74	1.12	.20	.19	.09		
AC-FT	5180	9090	7290	18220	19990	11910	6530	9390	14130	2590	2410	1120		
CAL YR 1981	TOTAL	46168.8	MEAN	126	MAX	7270	MIN	5.5	CFSM	.53	IN	7.25	AC-FT	91580
WTR YR 1982	TOTAL	54371.0	MEAN	149	MAX	2950	MIN	6.1	CFSM	.63	IN	8.53	AC-FT	107800

OSAGE RIVER BASIN

06918990 STOCKTON LAKE NEAR STOCKTON, MO

LOCATION.--Lat 37°41'38", long 93°45'55", SW¼SE¼SW¼ sec.10, T.34 N., R.26 W., Cedar County, Hydrologic Unit 10290106, in power house at dam on Sac River, 2 mi (3.2 km) east of Stockton.

DRAINAGE AREA.--1,160 mi² (3,004 km²).

PERIOD OF RECORD.--October 1969 to current year.

GAGE.--Water-stage recorder. Nonrecording gage prior to May 30, 1973. Datum of gage is at National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Lake is formed by a rock shell earth-fill dam (crest elevation, 911 ft or 277.7 m). Spillway is equipped with 4 tainter gates, 40 ft (12.2 m) by 30.5 ft (9.30 m), crest elevation, 861.5 ft or (262.59 m). Embankment closed and river diverted on Sept. 23, 1968. Gates closed and storage began on Dec. 12, 1969; minimum power elevation 830.0 ft (252.98 m) reached on May 1, 1970. Gross storage at top of flood control pool is 1,666,659 acre-ft (2,055 hm³) at elevation 892 ft (271.88 m), of which 779,550 acre-ft (961 hm³) between elevations 867 ft (264.3 m) and 892 ft (271.9 m) is used for flood control, and 887,109 acre-ft (1,093 hm³) between elevations 760 ft (231.6 m) and 867 ft (264.3 m) is used for multipurpose and power. Sedimentation reserve is 25,000 acre-ft (30.8 hm³). Lake is used for flood control, power, and recreational purposes.

COOPERATION.--Records furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,450,000 acre-ft (1,790 hm³) Apr. 28, 1973, elevation, 885.94 ft (270.034 m); minimum, since initial filling to minimum power pool level, 352,000 acre-ft (434 hm³) Aug. 27 to Sept. 4, 1970, elevation, 839.60 ft (255.910 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 1,020,000 (1,258 hm³) July 3-5; maximum elevation, 871.99 ft (265.783 m) July 5; minimum contents, 860,000 acre-ft (1,060 hm³) Sept. 30; minimum elevation, 865.91 ft (263.929 m) Sept. 30.

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

859	701,700	870	963,400
862	768,300	875	1,100,000
866	862,500	877	1,158,000

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	870000	902000	940000	910000	910000	944000	895000	883000	926000	1010000	984000	929000
2	869000	906000	943000	910000	917000	939000	896000	884000	929000	1010000	978000	926000
3	869000	911000	944000	916000	922000	936000	895000	885000	934000	1020000	972000	922000
4	868000	915000	945000	917000	924000	932000	897000	885000	945000	1020000	967000	923000
5	863000	916000	946000	915000	928000	928000	893000	886000	954000	1020000	962000	923000
6	862000	918000	947000	912000	932000	924000	890000	885000	959000	1010000	959000	923000
7	862000	920000	948000	911000	934000	921000	886000	884000	963000	1010000	959000	919000
8	862000	921000	949000	909000	936000	916000	882000	882000	967000	1010000	960000	915000
9	861000	923000	949000	909000	939000	913000	879000	883000	969000	1010000	955000	912000
10	861000	924000	948000	908000	941000	909000	877000	884000	971000	1010000	949000	907000
11	861000	925000	945000	905000	943000	909000	878000	884000	975000	1010000	945000	907000
12	862000	925000	945000	901000	946000	902000	877000	886000	975000	1010000	947000	907000
13	864000	927000	946000	898000	948000	897000	878000	887000	977000	1010000	956000	903000
14	864000	928000	942000	895000	950000	903000	879000	887000	979000	1010000	958000	899000
15	867000	929000	939000	890000	954000	903000	880000	889000	981000	1010000	960000	894000
16	868000	929000	934000	888000	954000	903000	881000	891000	983000	1010000	955000	889000
17	876000	930000	931000	884000	953000	902000	881000	891000	984000	1010000	953000	889000
18	878000	931000	928000	881000	952000	901000	882000	891000	988000	1010000	946000	888000
19	879000	930000	928000	878000	951000	899000	878000	889000	990000	1010000	943000	888000
20	879000	931000	928000	875000	954000	901000	875000	889000	992000	1010000	938000	886000
21	879000	932000	925000	872000	957000	903000	872000	887000	993000	1010000	939000	884000
22	880000	932000	924000	874000	955000	901000	869000	886000	994000	1010000	939000	885000
23	882000	932000	921000	871000	952000	900000	869000	884000	994000	1010000	935000	884000
24	883000	933000	919000	871000	949000	901000	869000	886000	996000	1010000	931000	881000
25	883000	932000	920000	867000	946000	902000	871000	887000	998000	1010000	927000	881000
26	884000	932000	920000	866000	943000	900000	872000	890000	999000	1010000	922000	881000
27	884000	932000	921000	865000	944000	900000	873000	892000	1010000	997000	923000	875000
28	885000	932000	918000	867000	946000	902000	875000	895000	1010000	997000	925000	871000
29	886000	933000	915000	866000	---	899000	878000	907000	1010000	988000	927000	865000
30	886000	940000	913000	884000	---	898000	881000	911000	1010000	982000	932000	860000
31	898000	---	909000	904000	---	894000	---	921000	---	984000	932000	---

WTR YR 1982

(+)	867.43	869.11	867.86	876.70	869.33	867.29	866.74	868.35	871.72	870.78	868.78	865.91
(#)	+25000	+42000	-31000	-5000	+42000	-52000	-13000	+40000	+80000	-26000	-52000	-72000

MAX	898000	940000	949000	917000	957000	944000	897000	921000	1010000	1020000	984000	929000
MIN	861000	902000	909000	865000	910000	894000	869000	882000	926000	928000	922000	860000

CAL YR 1981.....# +210000

WTR YR 1982.....# - 13000

(+) Elevation, in feet NGVD, at end of month.
(#) Change in contents in acre-feet.

OSAGE RIVER BASIN

06919000 SAC RIVER NEAR STOCKTON, MO

LOCATION.--Lat 37°41'51", long 93°45'43", in SE¼NW¼SE¼ sec.10, T.34 N., R.26 W., Cedar County, Hydrologic Unit 10290106, on left bank 0.5 mi (0.8 km) upstream from bridge on State Highway 32, 0.5 mi (0.8 km) downstream from Stockton Dam, 2.0 mi (3.2 km) upstream from Bear Creek, 2.0 mi (3.2 km) east of Stockton, and at mile 49.5 (79.6 km).

DRAINAGE AREA.--1,160 mi² (3,000 km²), approximately.

PERIOD OF RECORD.--July 1921 to current year.

REVISED RECORDS.--WSP 926: 1940.

GAGE.--Water-stage recorder. Revised datum of gage is 758.12 ft (231.075 m) National Geodetic Vertical Datum of 1929. Prior to Sept. 30, 1973, all previous gages at site 0.5 mi (0.8 km) downstream and at datum 6.00 ft (1.829 m) higher. Prior to May 4, 1960, nonrecording gage. Datum lowered 6.00 ft Oct. 1, 1978.

REMARKS.--Records good except periods of backwater and releases from Stockton Dam which are fair. Several observations of water temperature were made during the year. Flow regulated by Stockton Lake since Dec. 12, 1969.

AVERAGE DISCHARGE.--61 years, 952 ft³/s (26.96 m³/s), 689,700 acre-ft/yr (850 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 120,000 ft³/s (3,400 m³/s) May 19, 1943, gage height, 31.8 ft (9.693 m); no flow Sept. 9-23, 1954, Oct. 14, 17-20, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known prior to 1943, 29.3 ft (8.93 m) in July 1909.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 3,320 ft³/s (94.0 m³/s) Mar. 15; minimum, 44 ft³/s (1.25 m³/s) Sept. 5, 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	1320	55	55	88	1840	2420	227	60	55	60	52	2560		
2	55	55	55	59	75	2760	1030	59	55	54	2320	2180		
3	53	55	55	55	55	2810	125	794	55	53	2430	2320		
4	53	55	57	2100	1210	2700	55	670	55	78	2790	70		
5	2380	55	56	2100	106	2670	1340	91	55	55	2420	44		
6	76	55	55	2100	73	2660	2570	1260	55	58	2440	44		
7	53	56	54	2000	67	2800	2640	1260	81	2210	64	2210		
8	53	55	55	2100	67	2840	2620	1100	64	2220	50	2260		
9	53	55	55	93	70	2720	2550	54	62	77	1880	2220		
10	53	55	871	354	65	2740	1590	60	55	61	2440	2310		
11	52	54	2260	2460	65	2750	53	66	55	54	2440	80		
12	51	54	81	2500	64	2780	502	67	1040	53	2530	48		
13	47	54	55	2260	63	2900	56	817	58	52	417	2360		
14	47	54	2060	2280	64	2780	55	1320	54	2210	60	2430		
15	50	54	2160	2300	65	3320	54	117	54	91	49	2500		
16	51	54	2170	2470	2690	3070	54	105	61	50	2390	2780		
17	59	54	2180	2460	2980	2940	53	538	52	49	2490	2400		
18	87	54	2120	2150	2840	2800	53	966	51	52	2550	95		
19	52	54	81	2190	2980	2860	2060	1010	51	54	2200	51		
20	50	54	56	2110	160	336	1830	1030	51	58	2220	363		
21	51	54	1980	1970	77	66	1520	1070	51	57	67	1030		
22	53	55	2180	817	2560	2160	1750	1030	52	59	51	66		
23	54	55	2170	2320	2620	1280	655	1130	51	55	1840	790		
24	54	277	2120	709	2720	73	54	132	52	55	2120	768		
25	52	637	91	2660	2910	403	54	54	51	55	2060	74		
26	53	55	61	1500	2840	1740	884	54	51	2420	2400	48		
27	52	55	61	822	241	313	59	55	50	2430	2390	2910		
28	52	55	2060	59	64	56	493	55	50	2090	56	2910		
29	51	55	2280	1340	---	1940	60	55	50	1920	2560	2530		
30	52	55	2340	75	---	1200	60	55	544	2440	51	2320		
31	55	---	2210	55	---	2120	---	55	---	67	2560	---		
TOTAL	5274	2444	32144	46556	29631	65007	25106	15189	3121	19297	50387	42771		
MEAN	170	81.5	1037	1502	1058	2097	837	490	104	622	1625	1426		
MAX	2380	637	2340	2660	2980	3320	2640	1320	1040	2440	2790	2910		
MIN	47	54	54	55	55	56	53	54	50	49	49	44		
CFSM	.15	.07	.89	1.30	.91	1.81	.72	.42	.09	.54	1.40	1.23		
IN.	.17	.08	1.03	1.49	.95	2.08	.81	.49	.10	.62	1.62	1.37		
AC-FT	10460	4850	63760	92340	58770	128900	49800	30130	6190	38280	99940	84840		
CAL YR 1981	TOTAL	103969	MEAN	285	MAX	2460	MIN	47	CFSM	.25	IN	3.33	AC-FT	206200
WTR YR 1982	TOTAL	336927	MEAN	923	MAX	3320	MIN	44	CFSM	.80	IN	10.80	AC-FT	668300

OSAGE RIVER BASIN

06919020 SAC RIVER AT HIGHWAY J BELOW STOCKTON, MO

LOCATION.--Lat 37°44'11", long 93°46'26", NW¼ sec.3, T.34 N., R.26 W., Cedar County, Hydrologic Unit 10290106, on right bank 500 ft (152.4 m) upstream from bridge on State Highway J, 4.5 mi (7.2 km) downstream from Bear Creek, 6.3 mi (10.1 km) downstream from Stockton Lake, 3 mi (4.8 km) north of Stockton and at mile 44.9 (72.2 km).

DRAINAGE AREA.--1,292 mi² (3,346 km²) approximately.

PERIOD OF RECORD.--October 1973 to current year. Occasional discharge measurements in water year 1973.

GAGE.--Water-stage recorder. Datum of gage is 750.19 ft (228.658 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except for periods of release from Stockton Dam which are poor. Several observations of water temperature were made during the year. Mostly regulated by Stockton Lake.

AVERAGE DISCHARGE.--9 years, 963 ft³/s (27.27 m³/s) 697,700 acre-ft/yr (860 hm³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum observed discharge, 7,720 ft³/s (219 m³/s) Nov. 11, 1972, gage height, 21.20 ft (6.462 m); minimum, 24 ft³/s (0.68 m³/s) Mar. 25, 26, 1977, gage height, 4.76 ft (1.451 m).

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 3,410 ft³/s (96.6 m³/s) Mar. 15; minimum daily, 62 ft³/s (1.76 m³/s) Oct. 13, 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1570	925	391	485	2330	1910	900	180	497	161	96	2290
2	90	517	185	130	379	2660	837	157	316	114	1890	2430
3	70	266	151	278	274	2750	692	666	250	105	2500	2510
4	68	219	133	2820	1130	2600	126	919	809	115	3140	625
5	2330	184	121	2550	407	2570	1030	312	651	100	2500	103
6	392	156	116	2390	189	2540	2580	1280	360	99	2630	97
7	68	139	113	2330	157	2710	2580	1410	283	2040	966	2090
8	66	130	109	2290	147	2740	2590	1330	214	2350	103	2650
9	65	126	104	506	145	2630	2490	128	185	427	1330	2440
10	65	123	592	577	139	2640	2120	117	166	230	2620	2360
11	65	116	2270	2540	129	2660	143	120	161	124	2740	703
12	64	111	481	2520	126	2690	613	119	1200	101	2670	98
13	62	108	106	2150	123	2870	129	893	175	95	1350	2190
14	62	105	1820	2250	135	2850	116	1420	138	2120	310	2600
15	64	103	2170	2230	256	3410	113	499	140	473	135	2700
16	68	101	2120	2400	2370	3140	114	241	204	92	2020	3090
17	117	98	2100	2400	2970	2940	114	561	146	88	2440	2670
18	228	96	2000	2110	2780	2780	111	1030	128	88	3020	513
19	102	95	160	2120	2620	2820	2180	1170	120	91	2460	118
20	83	94	109	2080	646	991	1710	1180	118	92	2430	432
21	77	92	1660	1910	198	210	1860	1290	113	92	762	818
22	78	91	2090	941	2170	1900	1500	1150	113	94	108	411
23	85	90	2150	2170	2500	1370	1030	1290	111	90	1630	653
24	84	261	2070	1050	2640	345	118	664	105	90	2190	961
25	80	690	484	2250	2760	508	115	136	108	90	2320	454
26	79	101	117	1960	2830	1260	1060	148	110	1830	2350	92
27	78	91	114	917	863	1050	188	223	122	2350	2490	2870
28	76	88	1770	126	147	134	622	221	876	2360	528	2750
29	73	87	2230	1240	---	1640	275	1340	178	2300	120	2630
30	72	217	2300	1510	---	1270	249	728	648	2500	1920	2650
31	367	---	2180	1230	---	2140	---	553	---	851	2850	---
TOTAL	6848	5620	32516	52460	31560	64728	28305	21475	8745	21752	54618	46998
MEAN	221	187	1049	1692	1127	2088	944	693	292	702	1762	1567
MAX	2330	925	2300	2820	2970	3410	2590	1420	1200	2500	3140	3090
MIN	62	87	104	126	123	134	111	117	105	88	96	92
CFSM	.17	.15	.81	1.31	.87	1.62	.73	.54	.23	.54	1.36	1.21
IN.	.20	.16	.94	1.51	.91	1.86	.81	.62	.25	.63	1.57	1.35
AC-FT	13580	11150	64500	104100	62600	128400	56140	42600	17350	43150	108300	93220
CAL YR 1981 TOTAL	139149			381	MAX 6290	MIN 52	CFSM .50	IN 4.01	AC-FT 276000			
WTR YR 1982 TOTAL	375625			MEAN 1029	MAX 3410	MIN 62	CFSM .80	IN 10.82	AC-FT 745100			

06919500 CEDAR CREEK NEAR PLEASANT VIEW, MO

LOCATION.--Lat 37°50'03", long 93°52'31", in NE¼ sec.2, T.35 N., R.27 W., Cedar County, Hydrologic Unit 10290106, on downstream side of right pier of bridge on State Highway 39, 1.5 mi (2.4 km) north of Pleasant View, 1.8 mi (2.9 km) downstream from Alder Creek, and 5.8 mi (9.3 km) upstream from mouth.

DRAINAGE AREA.--420 mi² (1,090 km²), approximately.

PERIOD OF RECORD.--April 1923 to September 1926, October 1948 to current year.

REVISED RECORDS.--WSP 1146: 1923-26, drainage area. WSP 1176: 1924(M).

GAGE.--Water-stage recorder. Datum of gage is 739.5 ft (225.40 m) National Geodetic Vertical Datum of 1929. Apr. 22, 1923, to Sept. 30, 1926, and Oct. 1, 1948, to May 10, 1950, nonrecording gage at site 50 ft (15 m) downstream at same datum. May 11, 1950 to Dec. 17, 1952, nonrecording gage, at present site and datum.

REMARKS.--Records fair. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--37 years, 291 ft³/s (8.241 m³/s), 9.41 in/yr (239 mm/yr), 210,800 acre-ft/yr (260 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 33,900 ft³/s (960 m³/s) July 17, 1958, gage height, 27.35 ft (8.336 m); no flow at times in 1953-54, 1956, 1959-61, 1963.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 27.7 ft (8.44 m) July 20, 1909, from floodmark.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,500 ft³/s (99.1 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s)	(m ³ /s)	Gage height (ft)	(m)
Mar. 15	0800	3,460	98.0	14.66	4.468
May 30	0200	*4,170	118	16.29	4.965
June 5	0130	4,010	114	15.95	4.862

Minimum, 2.0 ft³/s (0.06 m³/s) Oct. 1, 2, gage height, 2.95 ft (0.899 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1961 TO SEPTEMBER 1962
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.3	2050	1490	95	1060	152	129	540	1440	102	6.9	489
2	2.1	2080	665	123	703	147	146	393	841	75	6.5	172
3	2.5	798	360	175	542	143	355	307	602	67	6.2	106
4	3.3	783	256	1190	405	147	260	259	2750	55	6.1	73
5	3.8	1120	206	1020	319	162	198	236	3090	43	5.5	53
6	4.9	541	182	512	317	155	169	251	1060	35	5.0	40
7	4.7	369	167	365	291	145	147	260	649	29	5.4	32
8	4.6	289	154	239	210	139	145	235	486	25	5.1	26
9	4.6	239	137	219	189	128	147	197	359	23	4.0	22
10	4.6	208	121	169	156	121	134	168	283	457	3.4	19
11	4.6	190	112	137	158	118	121	148	275	1480	5.8	16
12	5.4	173	104	127	152	117	113	137	388	315	25	13
13	7.5	159	97	109	151	121	105	157	346	155	464	26
14	9.7	146	90	98	204	765	97	450	252	100	1020	659
15	14	134	86	95	561	3150	90	1470	256	73	360	315
16	14	124	82	84	656	1770	84	1180	296	57	124	130
17	439	113	78	74	597	1120	84	603	260	44	70	88
18	2170	104	71	70	487	651	92	477	191	35	46	678
19	481	95	60	66	426	507	92	371	671	29	32	315
20	227	90	56	65	378	420	91	289	588	25	24	168
21	159	83	54	66	340	336	88	481	245	20	19	105
22	125	76	57	105	298	273	79	474	165	18	16	74
23	122	74	67	203	265	243	72	288	129	15	13	58
24	136	72	73	214	237	224	66	227	114	14	12	47
25	121	68	80	181	206	217	64	325	334	13	10	38
26	105	66	85	118	183	208	213	939	299	12	9.3	32
27	97	67	91	101	169	189	628	724	224	11	9.1	27
28	93	65	96	93	160	172	373	826	150	9.4	8.7	24
29	82	61	91	87	---	160	532	2540	122	9.2	163	20
30	72	319	88	1760	---	153	847	2780	157	9.1	655	16
31	116	---	89	2230	---	143	---	1460	---	7.7	1720	---
TOTAL	4637.6	10816	5445	10190	9820	12496	5761	19192	17022	3362.4	4860.0	3881
MEAN	150	361	176	329	351	403	192	619	567	108	157	129
MAX	2170	2080	1490	2230	1060	3150	847	2780	3090	1480	1720	678
MIN	2.1	61	54	65	151	117	64	137	114	7.7	3.4	13
CFSM	.36	.86	.42	.78	.84	.96	.46	1.47	1.35	.26	.37	.31
IN.	.41	.96	.48	.90	.87	1.11	.51	1.70	1.51	.30	.43	.34
AC-FT	9200	21450	10600	20210	19480	24790	11430	38070	33760	6670	9640	7700

CAL YR 1961 TOTAL 97916.82 MEAN 268 MAX 11500 MIN .22 CFSM .64 IN 8.67 AC-FT 194200
WTR YR 1962 TOTAL 107483.00 MEAN 294 MAX 3150 MIN 2.1 CFSM .70 IN 9.52 AC-FT 213200

OSAGE RIVER BASIN

06919900 SAC RIVER NEAR CAPLINGER MILLS, MO

LOCATION.--Lat 37°52'12", long 93°48'11", in NW¼NE¼SW¼ sec.21, St. Clair County, Hydrologic Unit 10290106, on right downstream wingwall of bridge on State Highway W, 1.5 mi (2.4 km) downstream from Cedar Creek and 5 mi (8.0 km) north of Caplinger Mills.

DRAINAGE AREA.--1,810 mi² (4,690 km²).

PERIOD OF RECORD.--October 1974 to current year.

GAGE.--Water-stage recorder. Datum of gage is 720.82 ft (219.602 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Several observations of water temperature were made during the year. Some regulation from Stockton Lake.

AVERAGE DISCHARGE.--8 years, 1140 ft³/s (32.28 m³/s) 825,900 acre-ft/yr (1,020 hm³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,900 ft³/s (507 m³/s) Nov. 4, 1974, gage height, 25.99 ft (7.921 m) from floodmark; minimum, 48 ft³/s (1.36 m³/s) Sept. 13, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,060 ft³/s (200 m³/s) Jan. 31, gage height, 15.85 ft (4.831 m); minimum daily, 64 ft³/s (1.81 m³/s) Oct. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1910	2970	2140	1400	4360	1270	1970	848	2560	585	129	2750
2	526	3260	1170	308	1790	2670	358	608	1500	219	742	2350
3	83	1400	640	370	988	2820	1720	486	1030	186	2180	2260
4	70	1030	486	2960	1060	2640	461	1270	4450	165	2680	1840
5	794	1620	406	3650	1310	2650	382	887	5060	164	2250	197
6	1600	858	365	2840	595	2580	2150	759	1990	131	2320	150
7	103	588	341	2580	567	2720	2410	1820	1180	700	1820	753
8	74	485	320	2400	427	2800	2500	1970	916	2040	136	2470
9	70	422	296	1580	390	2720	2610	618	688	1480	297	2210
10	68	386	273	365	363	2610	2520	313	560	614	2150	2010
11	65	356	1890	2110	356	2700	574	290	518	1980	2410	1750
12	65	331	1420	2480	318	2720	543	282	1330	523	2440	142
13	72	288	263	2140	291	2750	446	724	895	268	3020	925
14	72	289	941	2270	366	3310	256	1510	477	724	1570	2930
15	64	275	2080	2220	818	6910	243	2970	473	1820	651	2800
16	98	263	2100	2260	1970	5460	237	1770	549	189	944	2830
17	280	249	2100	2300	3320	4250	231	964	497	146	2240	2590
18	2700	238	2060	2140	3070	3450	225	1220	383	126	2670	2510
19	848	226	1270	2050	3070	3260	1390	1510	782	122	2260	498
20	352	217	220	2070	1860	2220	1810	1420	799	118	2160	304
21	259	210	894	1960	678	678	1940	1780	420	113	1660	693
22	227	201	2040	1170	1520	1520	1240	1650	315	111	155	855
23	215	199	2080	1860	2790	1810	1460	1510	276	108	669	185
24	236	225	2080	2000	2830	1110	326	1470	249	101	1850	937
25	223	617	1340	1470	2770	719	208	524	469	97	2080	883
26	209	438	266	2690	2930	652	1030	1220	401	613	2000	152
27	193	199	255	1110	1780	2000	1090	1070	361	2350	2380	1120
28	183	186	971	396	405	374	984	1290	861	2190	1350	2530
29	174	179	2140	733	---	1210	944	3840	387	1930	260	2340
30	160	589	2280	4420	---	1230	1360	4850	444	2280	1620	2320
31	278	---	2170	7060	---	1710	---	2840	---	1730	4420	---
TOTAL	12271	18794	37297	65362	42992	75523	33618	44283	30820	23923	53513	46284
MEAN	396	626	1203	2108	1535	2436	1121	1428	1027	772	1726	1543
MAX	2700	3260	2280	7060	4360	6910	2610	4850	5060	2350	4420	2930
MIN	64	179	220	308	291	374	208	282	249	97	129	142
CFSM	.22	.35	.67	1.17	.85	1.35	.62	.79	.57	.43	.95	.85
IN.	.25	.39	.77	1.34	.88	1.55	.69	.91	.63	.49	1.10	.95
AC-FT	24340	37280	73980	129600	85270	149800	66680	87840	61130	47450	106100	91800
CAL YR 1981 TOTAL	236595			648	MAX 8970	MIN 50	CFSM .36	IN 4.86	AC-FT 469300			
WTR YR 1982 TOTAL	484680			MEAN 1328	MAX 7060	MIN 64	CFSM .73	IN 9.96	AC-FT 961400			

OSAGE RIVER BASIN

06921070 POMME DE TERRE RIVER NEAR POLK, MO

LOCATION.--Lat 37°40'56", long 93°22'12", in NE¼NW¼NW¼ sec.17, T.34 N., R.22 W., Polk County, Hydrologic Unit 10290107, on right bank 150 ft (46 m) upstream from Jefferson Bridge on State Highway D and 5 mi (8.0 km) southwest of Polk.

DRAINAGE AREA.--276 mi² (715 km²).

PERIOD OF RECORD.--October 1968 to current year.

GAGE.--Water-stage recorder. Datum of gage is 872.61 ft (265.971 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--14 years, 234 ft³/s (6.627 m³/s), 11.51 in/yr (292 mm/yr), 169,500 acre-ft/yr (209 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,300 ft³/s (575 m³/s) Nov. 1, 1972, gage height, 21.88 ft (6.669 m); minimum, 0.3 ft³/s (0.008 m³/s) Aug. 11, 1980; minimum gage height, 1.26 ft (0.384 m) Sept. 1, 2, 1973.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,230 ft³/s (233 m³/s) at 0800 Jan. 31, gage height 12.95 ft (3.947 m), no other peak above base of 5,500 ft³/s (156 m³/s); minimum discharge, 1.2 ft³/s (0.03 m³/s) Oct. 4, gage height 1.71 ft (0.521 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	4.5	546	366	92	1080	127	114	242	511	83	11	83		
2	4.1	303	180	89	680	122	198	182	251	74	10	62		
3	3.4	174	124	435	527	122	507	152	174	64	8.3	49		
4	1.4	130	101	728	385	118	220	135	529	55	7.0	38		
5	2.3	111	86	341	300	112	169	122	686	48	5.5	31		
6	2.7	94	78	249	231	107	146	112	304	42	7.0	25		
7	5.2	82	72	185	204	104	130	105	204	36	7.5	22		
8	8.8	74	66	144	196	98	129	98	175	34	7.9	19		
9	7.6	68	60	132	168	94	153	90	139	48	6.7	18		
10	7.5	62	56	97	143	93	137	82	124	108	5.5	17		
11	8.5	57	62	96	146	92	124	75	106	81	7.6	15		
12	9.3	53	64	103	138	89	117	71	110	91	10	14		
13	13	50	61	94	130	94	111	73	99	61	925	14		
14	20	46	58	89	136	1010	104	96	87	104	546	15		
15	23	43	57	88	706	1440	98	104	119	64	121	15		
16	33	42	54	79	1260	742	96	98	243	45	79	16		
17	321	40	53	70	814	481	130	85	193	35	59	14		
18	256	38	50	73	558	389	106	74	117	28	45	14		
19	103	36	45	72	423	324	97	66	115	24	36	14		
20	66	36	43	71	347	270	110	60	91	20	28	13		
21	49	33	43	71	287	220	101	63	77	17	22	13		
22	49	33	54	173	240	189	91	57	86	16	19	12		
23	120	31	331	475	210	173	86	51	76	14	17	12		
24	95	31	206	187	186	162	81	48	67	12	15	12		
25	71	30	146	148	163	151	79	49	96	11	14	11		
26	61	30	128	120	150	142	96	84	413	10	12	11		
27	53	30	123	108	142	132	114	274	348	9.5	15	11		
28	47	28	115	102	134	126	115	135	167	9.5	128	10		
29	43	27	104	95	---	121	233	906	119	12	95	10		
30	38	299	94	3170	---	120	419	230	97	13	140	10		
31	166	---	91	4810	---	124	---	558	---	13	123	---		
TOTAL	1692.3	2657	3171	12786	10084	7688	4411	4577	5923	1282.0	2533.0	620		
MEAN	54.6	88.6	102	412	360	248	147	148	197	41.4	81.7	20.7		
MAX	321	546	366	4810	1260	1440	507	906	686	108	925	83		
MIN	1.4	27	43	70	130	89	79	48	67	9.5	5.5	10		
CFSM	.20	.32	.37	1.49	1.30	.90	.53	.54	.71	.15	.30	.08		
IN.	.23	.36	.43	1.72	1.36	1.04	.59	.62	.80	.17	.34	.08		
AC-FT	3360	5270	6290	25360	20000	15250	8750	9080	11750	2540	5020	1230		
CAL YR 1981	TOTAL	62124.3	MEAN	170	MAX	11000	MIN	1.4	CFSM	.62	IN	8.37	AC-FT	123200
WTR YR 1982	TOTAL	57424.3	MEAN	157	MAX	4810	MIN	1.4	CFSM	.57	IN	7.74	AC-FT	113900

OSAGE RIVER BASIN

06921200 LINDLEY CREEK NEAR POLK, MO

LOCATION.--Lat 37°45'02", long 93°15'58", in NE¼SE¼ sec.29, T.35 N., R.21 W., Polk County, Hydrologic Unit 10290107, on left bank 30 ft (9 m) upstream from county highway bridge, 0.5 mi (0.8 km) downstream from Panther Creek, 2.5 mi (4.0 km) northeast of Polk, and 11 mi (17.7 km) upstream from Ingalls Creek.

DRAINAGE AREA.--112 mi² (290 km²).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 884.08 ft (269.468 m) National Geodetic Vertical Datum of 1929. Prior to Sept. 25, 1957, nonrecording gage at site 30 ft (9 m) downstream at same datum.

REMARKS.--Records good. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--25 years, 87.5 ft³/s (2.478 m³/s), 10.39 in/yr (264 mm/yr), 62,100 acre-ft/yr (76.6 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 28,000 ft³/s (793 m³/s) May 5, 1961, gage height, 23.60 ft (7.193 m), from rating extended above 12,000 ft³/s (340 m³/s) on basis of slope-conveyance study; no flow on many days in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in September 1914, reached a stage of about 25.2 ft (7.68 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft³/s (57 m³/s) and maximum (*):

Date	Time	Discharge		Gage height	
		(ft ³ /s)	(m ³ /s)	(ft)	(m)
Jan. 30	1515	3,730	83.8	13.13	4.002
Mar. 14	1900	2,420	68.5	10.85	3.307
May 29	0745	*4,140	117	13.72	4.182
June 4	1015	2,140	60.6	10.28	3.133

No flow several days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.04	401	241	66	270	47	35	33	222	14	.07	12
2	.03	175	109	72	192	45	77	27	128	51	.04	6.7
3	.02	99	75	656	154	44	387	23	98	16	.02	4.1
4	.02	76	56	715	111	42	96	22	978	11	.01	3.5
5	.02	62	45	243	90	37	72	19	375	7.7	.00	2.4
6	.02	54	40	180	78	35	58	18	189	5.5	.00	1.5
7	.01	45	36	115	63	34	49	17	126	4.2	.00	1.1
8	.00	39	31	86	63	31	68	15	92	3.7	.00	.78
9	.00	38	27	72	55	29	71	13	205	9.0	.00	.73
10	.02	41	25	47	50	29	54	11	124	79	.00	.72
11	.03	35	24	41	53	29	47	9.9	78	39	.00	.79
12	.04	31	23	41	212	28	42	9.4	91	16	.03	1.5
13	.07	28	21	38	41	39	37	11	64	10	.87	2.9
14	.29	26	20	36	66	943	32	25	46	7.3	39	5.8
15	.31	25	19	35	595	665	30	38	80	5.9	11	6.5
16	1.8	23	19	30	638	273	29	24	121	4.2	5.4	4.9
17	51	22	19	24	362	168	34	15	51	2.9	3.1	2.1
18	73	21	17	25	262	245	26	12	36	2.0	1.9	3.1
19	21	21	15	25	198	219	26	9.6	38	1.4	1.2	2.1
20	12	20	14	25	152	146	31	8.2	28	1.1	.80	1.6
21	7.8	18	14	26	125	108	24	9.5	22	.79	.50	.61
22	15	17	23	134	107	87	21	12	24	.61	.37	.27
23	29	16	104	113	94	75	19	8.7	20	.45	.65	.26
24	21	16	67	48	77	68	19	8.0	17	.33	.73	.25
25	14	15	56	37	65	69	19	73	20	.26	.50	.14
26	12	14	55	30	58	62	27	107	71	.22	.43	.08
27	9.6	14	57	30	55	52	24	443	27	.19	8.7	.06
28	8.2	13	53	30	50	46	21	247	29	.17	18	.07
29	7.6	12	48	28	---	42	57	1690	18	.16	7.8	.06
30	6.9	412	42	2470	---	45	47	267	13	.14	50	.04
31	167	---	48	711	---	46	---	348	---	.10	25	---
TOTAL	457.82	1829	1443	6229	4336	3828	1579	3573.3	3431	294.32	262.25	66.66
MEAN	14.8	61.0	46.5	201	155	123	52.6	115	114	9.49	8.46	2.22
MAX	167	412	241	2470	638	943	387	1690	978	79	87	12
MIN	.00	12	14	24	41	28	19	8.0	13	.10	.00	.04
CFSM	.13	.55	.42	1.80	1.38	1.10	.47	1.03	1.02	.09	.08	.02
IN.	.15	.61	.48	2.07	1.44	1.27	.52	1.19	1.14	.10	.09	.02
AC-FT	908	3630	2860	12360	8600	7590	3130	7090	6810	584	520	132

CAL YR 1981 TOTAL 24192.02 MEAN 66.3 MAX 4770 MIN .00 CFSM .59 IN 8.04 AC-FT 47980
WIR YR 1982 TOTAL 27329.35 MEAN 74.9 MAX 2470 MIN .00 CFSM .67 IN 9.08 AC-FT 54210

06921200 LINDLEY CREEK NEAR POLK, MO--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: November 1980 to current year (discontinued).

INSTRUMENTATION.--Temperature recorder since November 1980.

REMARKS.--Temperature recorder inoperative April 20 through June 3. Number of missing days of record exceed 20 percent of year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 32°C July 15, 1981. Minimum, 0.5 on many days during winter months.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 31.0°C Aug. 5. Minimum, 0.5°C on many days during winter months.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	22.0	19.5	16.5	15.5	7.5	6.5	3.0	2.0	1.5	.5	9.0	6.0
2	19.5	17.0	15.5	14.0	8.0	6.5	3.0	2.0	2.0	.5	9.5	8.5
3	17.0	15.5	14.5	13.0	8.0	7.0	3.0	2.5	2.5	1.5	9.5	9.0
4	20.0	16.0	14.5	13.5	7.0	5.5	4.0	3.5	1.0	.5	9.0	6.5
5	24.0	18.5	14.5	13.0	7.5	6.5	3.5	1.0	1.0	.5	6.5	5.5
6	21.0	18.0	13.0	10.5	10.0	7.5	1.5	.5	1.0	.5	6.5	4.5
7	18.0	15.5	12.0	10.0	9.5	8.5	1.0	.5	1.0	.5	6.5	4.5
8	15.5	14.0	12.5	11.0	8.0	6.5	1.0	.5	1.0	.5	7.5	4.0
9	17.0	15.0	11.0	9.5	6.5	5.5	.5	.5	1.0	.5	7.5	5.0
10	18.0	15.5	10.5	9.0	5.5	5.0	.5	.5	1.0	.5	10.5	7.0
11	18.0	15.5	10.5	8.5	5.5	5.0	1.0	.5	1.5	.5	13.0	10.0
12	17.0	16.0	10.0	8.5	6.0	5.5	.5	.5	1.0	.5	14.5	12.0
13	18.0	17.0	10.5	8.5	6.0	6.0	---	---	1.5	1.0	14.0	12.0
14	19.0	17.5	10.0	9.0	6.0	5.5	---	---	3.0	1.0	13.0	9.0
15	19.5	18.0	10.0	9.5	6.0	5.5	1.0	1.0	3.0	2.0	13.0	9.0
16	18.5	18.0	11.0	9.0	5.0	2.0	1.0	.5	5.0	2.5	16.0	13.0
17	19.5	18.0	10.5	9.5	2.0	1.0	1.0	.5	5.0	5.0	16.0	13.0
18	18.0	15.0	12.0	11.0	2.0	1.0	1.0	1.0	5.5	5.0	17.0	14.5
19	15.0	13.0	11.5	8.0	1.5	1.0	1.0	1.0	6.5	5.0	16.5	15.5
20	15.5	13.0	6.0	5.5	2.0	1.5	1.0	1.0	9.0	6.5	17.0	14.5
21	15.5	13.0	6.5	5.0	2.0	.5	1.0	1.0	9.5	7.0	15.0	12.5
22	14.5	12.5	8.5	6.5	1.0	.5	1.5	.5	10.5	7.0	13.0	10.5
23	12.5	10.0	8.5	7.5	1.0	1.0	1.0	.5	12.5	9.0	12.5	9.5
24	9.5	8.5	9.5	7.0	1.0	1.0	1.0	.5	12.0	8.5	14.5	11.0
25	10.0	9.0	11.0	9.5	1.5	1.0	1.0	.5	8.5	6.0	14.0	10.5
26	10.5	9.0	11.0	8.0	1.0	1.0	1.0	.5	6.0	5.0	12.0	9.0
27	11.0	8.5	9.0	7.5	1.5	1.0	1.5	1.0	6.5	4.0	11.0	9.0
28	11.0	9.0	9.0	8.5	1.5	1.0	2.0	1.0	7.5	4.5	11.5	8.5
29	13.0	10.0	9.0	8.0	2.0	1.0	3.5	2.0	---	---	12.5	9.5
30	14.5	12.0	9.0	7.5	2.5	1.0	4.0	2.5	---	---	16.0	12.0
31	15.5	13.5	---	---	2.0	1.5	2.0	.5	---	---	16.5	13.5
MONTH	24.0	8.5	16.5	5.0	10.0	.5	4.0	.5	12.5	.5	17.0	4.0

OSAGE RIVER BASIN

06921200 LINDLEY CREEK NEAR POLK, MO--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	16.5	13.0			---	---	27.0	25.0	27.5	23.5	27.5	25.5
2	18.5	15.0			---	---	26.5	25.0	27.5	24.0	27.5	26.0
3	15.5	12.0			---	---	29.0	25.5	30.5	25.0	26.0	23.0
4	14.0	11.0			17.5	17.0	30.0	26.5	30.5	25.5	25.0	22.0
5	13.5	10.0			19.0	16.5	30.0	27.0	31.0	26.0	24.5	21.5
6	11.0	8.5			21.0	18.0	30.0	26.5	26.5	26.5	25.0	21.0
7	10.0	8.0			23.5	20.5	28.0	26.5	26.0	26.0	25.0	22.0
8	8.0	7.0			25.0	22.0	28.0	25.5	26.5	26.0	24.5	22.5
9	9.5	6.0			24.5	21.5	26.5	25.0	27.5	24.5	24.5	22.5
10	12.0	8.0			22.5	20.5	26.0	24.5	27.0	24.0	25.0	23.0
11	14.0	10.0			21.5	18.5	26.0	24.0	25.0	22.5	25.0	23.0
12	17.0	12.5			19.0	18.0	27.0	24.0	22.5	21.5	25.0	24.0
13	19.5	15.5			20.5	17.5	27.0	24.5	24.0	21.5	25.0	24.0
14	19.5	15.5			22.0	19.5	26.5	25.0	25.0	23.0	25.0	23.5
15	18.5	17.0			22.0	21.5	27.0	24.5	26.0	24.5	25.0	22.5
16	21.0	17.5			22.5	20.5	28.0	25.0	25.5	24.5	22.5	20.5
17	19.5	16.5			22.5	20.0	30.0	26.0	26.5	24.5	23.5	20.5
18	16.5	14.5			23.0	21.0	30.5	26.5	26.0	23.5	22.5	21.0
19	15.5	14.0			23.5	21.0	30.5	26.5	26.5	23.5	21.0	18.5
20	---	---			23.5	20.5	30.5	27.0	28.0	24.0	19.0	17.5
21	---	---			23.5	21.5	30.5	27.0	27.0	24.5	17.5	16.0
22	---	---			24.5	21.5	30.0	27.0	27.0	23.5	16.5	14.0
23	---	---			24.0	22.5	29.0	26.0	26.0	24.5	16.0	14.5
24	---	---			24.5	21.5	28.0	25.0	26.5	24.5	18.5	15.5
25	---	---			24.0	23.0	28.0	24.5	26.0	24.0	17.0	16.0
26	---	---			24.0	22.5	28.5	25.5	26.0	23.0	17.0	15.0
27	---	---			25.0	23.5	29.0	25.5	25.0	23.5	17.0	14.5
28	---	---			25.5	23.0	27.5	26.0	25.5	24.0	18.5	16.0
29	---	---			26.5	24.0	27.5	24.5	25.5	23.0	20.5	17.5
30	---	---			27.0	24.5	27.0	24.5	25.0	23.0	20.5	18.0
31	---	---			---	---	28.5	24.5	26.5	24.5	---	---
MONTH	21.0	6.0			27.0	16.5	30.5	24.0	31.0	21.5	27.5	14.0

OSAGE RIVER BASIN

06921325 POMME DE TERRE LAKE NEAR HERMITAGE, MO

LOCATION.--Lat 37°54'06", long 93°19'05", in NE $\frac{1}{4}$ sec.2, T.36 N., R.22 W., Hickory County, Hydrologic Unit 10290107, in intake tower at dam on Pomme de Terre River, and 3 mi (4.8 km) southwest of Hermitage.

DRAINAGE AREA.--611 mi² (1,583 km²).

PERIOD OF RECORD.--June 1960 to current year.

GAGE.--Water-stage recorder. Nonrecording gage prior to Nov. 9, 1961. Datum of gage is at National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Lake is formed by earth fill embankment with a concrete gravity section-type dam. Closure operation began on June 28, 1960; conservation pool level reached June 15, 1963. Capacity nominal top of flood control pool, 648,700 acre-ft (800 hm³) at elevation, 874 ft or 266.4 m, crest of spillway, of which 407,200 acre-ft (502 hm³) between elevations 839 ft or 255.7 m and 874 ft or 266.4 m is used for flood control, and 228,700 acre-ft (282 hm³) between elevations 783 ft or 238.7 m and 839 ft or 255.7 m is used for conservation and 12,840 acre-ft (15.8 hm³) below elevation 783 ft or 238.7 m is sediment storage. Lake used for flood control and recreational purposes.

COOPERATION.--Records furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 481,000 acre-ft (593 hm³) Apr. 30, 1973, elevation, 862.35 ft (262.844 m), minimum, since initial filling to conservation pool level, 215,880 acre-ft (266 hm³) Mar. 3, 1964, elevation, 835.61 ft (254.694 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 286,000 acre-ft (353 hm³) June 6-8, elevation, 844.28 ft (257.337 m); minimum daily, 239,000 acre-ft (295 hm³) Aug. 3-7, 9, 10; elevation, 838.67 ft (255.627 m).

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

837	226,200	847	310,400
840	249,500	850	339,600
843	274,500	853	370,700

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	244000	250000	262000	246000	276000	251000	242000	247000	271000	247000	240000	246000
2	243000	252000	264000	247000	278000	247000	242000	248000	273000	244000	240000	246000
3	243000	254000	264000	248000	279000	246000	244000	248000	272000	243000	239000	246000
4	242000	255000	265000	256000	280000	246000	245000	249000	275000	243000	239000	246000
5	242000	255000	265000	259000	280000	245000	245000	248000	284000	243000	239000	246000
6	242000	256000	266000	259000	280000	245000	246000	248000	286000	243000	239000	246000
7	242000	256000	266000	260000	280000	244000	246000	248000	286000	242000	239000	246000
8	242000	256000	266000	260000	280000	243000	246000	247000	286000	243000	240000	246000
9	241000	256000	266000	259000	279000	242000	246000	246000	285000	242000	239000	245000
10	241000	257000	266000	257000	279000	242000	245000	245000	282000	243000	239000	245000
11	241000	257000	265000	256000	279000	243000	245000	244000	282000	243000	240000	245000
12	241000	257000	263000	254000	278000	243000	245000	243000	282000	243000	240000	245000
13	241000	257000	262000	252000	278000	244000	245000	245000	282000	243000	241000	245000
14	242000	257000	260000	251000	277000	244000	244000	243000	282000	243000	243000	247000
15	242000	257000	258000	249000	277000	255000	244000	243000	281000	243000	243000	246000
16	242000	257000	256000	247000	281000	261000	244000	243000	281000	243000	244000	246000
17	242000	257000	254000	246000	284000	263000	243000	242000	281000	243000	244000	245000
18	244000	257000	252000	244000	284000	265000	243000	242000	281000	243000	244000	246000
19	244000	258000	250000	242000	282000	267000	243000	242000	281000	242000	244000	246000
20	244000	258000	248000	242000	279000	264000	242000	242000	281000	242000	244000	245000
21	244000	257000	246000	243000	277000	261000	242000	242000	280000	242000	244000	245000
22	245000	257000	245000	243000	274000	258000	242000	242000	279000	242000	244000	245000
23	245000	258000	244000	245000	271000	255000	242000	242000	275000	242000	244000	246000
24	245000	257000	243000	246000	268000	251000	242000	242000	272000	241000	243000	245000
25	245000	257000	243000	247000	264000	248000	242000	245000	268000	241000	243000	245000
26	245000	257000	244000	246000	261000	245000	243000	245000	264000	241000	243000	245000
27	245000	258000	244000	245000	258000	244000	243000	247000	261000	241000	244000	245000
28	245000	257000	245000	245000	254000	244000	243000	249000	258000	241000	244000	244000
29	245000	257000	245000	244000	---	243000	244000	259000	255000	241000	244000	244000
30	245000	258000	246000	248000	---	242000	246000	267000	251000	241000	245000	244000
31	245000	---	246000	268000	---	242000	---	269000	---	240000	246000	---

WTR YR 1982

(+)	839.48	841.07	839.55	842.23	840.57	839.01	839.56	842.30	840.18	838.82	839.53	839.27
(+)	+1000	+13000	-12000	+22000	-14000	-12000	+4000	+23000	-18000	-11000	+6000	-2000
MAX	245000	258000	266000	268000	264000	267000	246000	269000	286000	247000	246000	247000
MIN	241000	250000	243000	242000	254000	242000	242000	242000	251000	240000	239000	244000

CAL YR 1981.....+26000

WTR YR 1982.....0

(+) Elevation, in feet NGVD, at end of month.

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

OSAGE RIVER BASIN

06921350 POMME DE TERRE RIVER NEAR HERMITAGE, MO

LOCATION.--Lat 37°54'20", long 93°19'45", in NW¼NW¼ sec.2, T.36 N., R.22 W., Hickory County, Hydrologic Unit 10290107, on right bank 2,000 ft (610 m) downstream from outlet of Pomme de Terre Lake, 2.5 mi (4.0 km) south west of Hermitage, 4.5 mi (7.2 km) upstream from Green Branch, and at mile 43.4 (69.8 km).

DRAINAGE AREA.--615 mi² (1,590 km²).

PERIOD OF RECORD.--August 1960 to current year.

GAGE.--Water-stage recorder. Datum of gage is 749.33 ft (228.396 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except during periods of no gage height record which are fair. Flow regulated by Pomme de Terre Lake.

AVERAGE DISCHARGE.--22 years, 448 ft³/s (12.69 m³/s), 324,600 acre-ft/yr (400 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,000 ft³/s (255 m³/s) May 9, 1961, gage height, 15.02 ft (4.578 m); no flow Sept. 10, 1960, Mar. 9-17, 1971, Nov. 4-6, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 2,040 ft³/s (89.5 m³/s) June 23; minimum daily discharge, 41 ft³/s (1.16 m³/s) Oct. 10, 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	93	49	48	47	532	1970	46	52	488	2000	46	49		
2	91	46	46	47	533	1180	46	53	486	1040	46	49		
3	90	46	46	55	534	547	48	53	488	86	46	48		
4	91	46	46	299	534	548	47	294	502	86	47	49		
5	92	46	46	526	535	547	48	503	494	86	47	49		
6	91	46	46	526	535	547	185	501	492	86	48	48		
7	91	46	46	526	533	547	319	500	490	86	50	48		
8	86	46	46	805	533	547	319	498	962	86	49	48		
9	50	46	291	1040	535	250	319	497	2000	86	48	48		
10	41	46	526	1040	534	46	319	495	1000	86	48	47		
11	41	46	840	1040	533	46	319	494	410	86	52	47		
12	42	46	1060	1040	533	46	319	493	410	86	49	47		
13	42	46	1050	1040	533	46	319	491	410	86	58	48		
14	42	46	1050	1040	530	61	319	493	410	86	49	47		
15	43	46	1040	1040	530	52	319	491	408	86	49	47		
16	44	46	1040	1030	530	50	320	488	408	86	49	47		
17	46	46	1040	1030	1400	48	322	488	409	86	49	47		
18	45	46	1040	1030	2000	47	322	257	409	86	49	45		
19	44	46	1040	475	2020	1180	323	85	409	72	49	46		
20	44	47	1040	47	2020	1960	324	85	410	46	49	46		
21	44	46	1040	47	2010	1960	324	86	411	46	49	46		
22	45	46	1040	48	2000	1960	175	85	1390	46	48	46		
23	44	46	1040	49	2000	1960	50	85	2040	46	49	45		
24	44	46	460	47	2000	1950	50	86	2030	46	49	44		
25	44	46	47	218	1990	1950	50	96	2020	46	49	45		
26	44	46	47	519	1990	1100	50	91	2020	46	49	45		
27	44	46	47	517	1980	532	50	91	2020	46	49	43		
28	44	46	47	517	1980	532	51	290	2010	46	49	44		
29	44	46	47	518	---	531	53	534	2000	46	49	44		
30	44	57	47	551	---	532	52	486	2000	46	54	44		
31	52	---	46	534	---	256	---	491	---	46	49	---		
TOTAL	1742	1395	15335	17288	31917	23528	5807	9732	29436	5040	1520	1396		
MEAN	56.2	46.5	495	558	1140	759	194	314	981	163	49.0	46.5		
MAX	93	57	1060	1040	2020	1970	324	534	2040	2000	58	49		
MIN	41	46	46	47	530	46	46	52	408	46	46	43		
CFSM	.09	.08	.81	.91	1.85	1.23	.32	.51	1.60	.27	.08	.08		
IN.	.11	.08	.93	1.05	1.93	1.42	.35	.59	1.78	.30	.09	.08		
AC-FT	3460	2770	30420	34290	63310	46670	11520	19300	58390	10000	3010	2770		
CAL YR 1981	TOTAL	127207.6	MEAN	349	MAX	3160	MIN	2.1	CFSM	.57	IN	7.69	AC-FT	252300
WTR YR 1982	TOTAL	144136.0	MEAN	395	MAX	2040	MIN	41	CFSM	.64	IN	8.72	AC-FT	285900

06921590 SOUTH GRAND RIVER AT ARCHIE, MO

LOCATION.--Lat 38°28'44", long 94°20'03", in NW¼NW¼SE¼ sec.34, T.43 N., R.31 W., Cass County, Hydrologic Unit 10290108, on right bank 25 ft (8 m) downstream from bridge on State Highway B, 0.9 mi (1.4 km) east of Archie, 1.4 mi (2.3 km) upstream from Mormon Fork, and 7.4 mi (11.9 km) downstream from South Fork.

DRAINAGE AREA.--356 mi² (663 km²), revised 1980.

PERIOD OF RECORD.--October 1969 to current year.

GAGE.--Water-stage recorder. Datum of gage is 768.99 ft (234.388 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--13 years, 243 ft³/s (6.882 m³/s), 12.88 in/yr (327 mm/yr), 176,100 acre-ft/yr (217 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,600 ft³/s (442 m³/s) Oct. 13, 1969, gage height, 19.4 ft (5.91 m); no flow Aug. 11 to Oct. 10, 1976, Oct. 13-24, 1978, July 10 to Aug. 4, Sept. 21 to Sept. 30, 1980.

EXTREMES OUTSIDE PERIOD OF RECORD.--Floods of Nov. 13, 1928, and Sept. 15, 1961, reached stages of 27.6 ft (8.41 m) and 23.8 ft (7.25 m), respectively, at point 1 mi (1.6 km) northeast of gage, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 5,500 ft³/s (156 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Nov. 1	1500	7,370 209	11.34 3.456	May 31	1500	12,300 348	14.20 4.328
Jan. 30	0700	11,700 331	14.01 4.270	June 4	1100	7,280 206	11.20 3.414
Mar. 16	0400	12,400 351	14.34 4.371	July 14	1800	*12,700 360	14.45 4.404
May 20	2400	7,420 210	11.31 3.447	Aug. 13	0930	8,760 248	12.87 3.923

Minimum, 2.3 ft³/s (0.07 m³/s) Oct. 3, gage height, 2.39 ft (0.728 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.3	4570	2070	26	564	110	99	236	4120	67	34	20
2	3.1	1880	461	30	300	108	367	173	893	96	29	26
3	2.3	487	265	31	207	108	441	138	571	86	25	23
4	2.3	721	187	39	200	130	128	116	4200	63	18	17
5	2.3	726	144	40	108	126	133	437	1020	48	17	13
6	2.3	334	128	39	127	101	137	2140	538	39	16	10
7	2.3	217	119	51	94	90	107	896	429	221	16	9.6
8	2.3	288	105	24	72	82	132	369	2770	86	13	8.9
9	2.6	1830	89	20	74	75	155	236	3590	55	10	8.3
10	3.3	599	82	23	98	74	124	173	1570	1020	8.0	8.0
11	3.3	307	78	16	76	72	104	147	498	252	13	6.4
12	4.0	221	78	15	72	75	91	149	418	102	87	6.4
13	271	180	74	15	68	80	84	201	314	61	6760	8.3
14	2230	150	70	14	66	857	77	2260	286	4760	2210	9.1
15	658	132	64	14	747	2310	75	2670	1170	4390	341	6.0
16	471	120	62	15	2720	7740	83	2110	525	742	187	5.6
17	986	105	58	12	1330	960	75	4720	250	261	114	14
18	711	93	58	12	1270	496	73	948	187	136	81	12
19	219	83	45	12	774	363	66	497	184	83	58	8.3
20	137	74	38	16	546	285	64	892	167	59	44	8.3
21	99	68	41	91	336	210	58	7370	128	42	35	8.1
22	73	62	50	348	251	172	53	928	140	33	32	7.7
23	57	61	54	1100	220	150	49	473	145	28	31	6.7
24	45	55	49	296	197	141	49	348	221	22	31	6.0
25	45	51	44	173	156	165	54	1340	126	17	33	4.8
26	81	49	40	115	130	198	84	2580	108	76	31	4.3
27	81	45	38	80	110	145	76	681	142	66	29	4.1
28	66	42	37	91	105	123	102	391	577	60	26	4.2
29	52	39	27	188	---	112	1100	2960	123	52	21	4.8
30	43	1540	29	10300	---	168	428	1440	83	45	22	.00
31	52	---	28	2370	---	147	---	11000	---	38	31	---
TOTAL	6410.4	15129	4712	15616	11018	15973	4668	49019	25493	13106	10403.0	278.90
MEAN	207	504	152	504	394	515	156	1581	850	423	336	9.30
MAX	2230	4570	2070	10300	2720	7740	1100	11000	4200	4760	6760	26
MIN	2.3	39	27	12	66	72	49	116	83	17	8.0	.00
CFSM	.81	1.97	.59	1.97	1.54	2.01	.61	6.18	3.32	1.65	1.31	.04
IN.	.93	2.20	.68	2.27	1.60	2.32	.68	7.12	3.70	1.90	1.51	.04
AC-FT	12720	30010	9350	30970	21850	31680	9260	97230	50570	26000	20630	553

CAL YR 1981	TOTAL	109097.36	MEAN	299	MAX	6680	MIN	.00	CFSM	1.17	IN	15.85	AC-FT	216400
WTR YR 1982	TOTAL	171826.30	MEAN	471	MAX	11000	MIN	.00	CFSM	1.84	IN	24.97	AC-FT	340800

OSAGE RIVER BASIN

06922200 TEBO CREEK AT LEESVILLE, MO

WATER-QUALITY RECORDS

LOCATION.--Lat 38°22'04", long 93°32'41" in SE¼NW¼ sec.2, T.41 N., R.24 W., Henry County, Hydrologic Unit 10290108, at bridge on County Highway PP, 1.5 mi (2.4 km) north of Leesville.

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (UMHDS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	CULI- FURM, FECAL, 0.7 UM-MF (CULS./ 100 ML) (31625)	HARD- NESS (MG/L AS CACU3) (00900)	HARD- NESS, NONCAR- BONATE (MG/L CACU3) (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)
UCT											
22...	1230	370	7.4	16.0	7.8	79	63	160	--	45	12
NOV											
25...	1345	350	7.6	10.5	9.4	84	17	160	--	44	11
DEC											
17...	1045	405	7.6	5.0	5.6	44	3	180	--	50	14
JAN											
21...	1330	394	7.8	3.5	12.0	90	1	190	100	54	13
FEB											
11...	0930	275	7.0	.5	6.4	44	92	110	84	30	8.6
MAR											
04...	1200	339	7.2	5.0	9.8	77	6	140	86	37	12
APR											
15...	0930	392	8.0	14.5	9.6	93	2	160	110	44	13
MAY											
06...	1330	370	8.3	19.5	9.4	100	3	170	100	47	12
JUN											
03...	1230	384	7.5	21.5	6.6	74	88	160	94	44	13
JUL											
08...	1015	329	8.3	29.0	6.8	88	K3	150	65	43	9.6
AUG											
05...	1130	326	8.4	31.0	6.4	85	2	140	64	42	9.3
SEP											
08...	1050	334	7.9	25.0	6.6	80	40	140	1	40	10

DATE	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY FIELD (MG/L AS CACU3) (00410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L AS N) (70300)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)
UCT											
22...	8.1	5.7	72	110	5.3	.2	3.7	242	.32	1.20	.040
NOV											
25...	7.5	6.1	98	92	6.3	.2	4.2	229	.32	.89	.060
DEC											
17...	9.2	6.2	66	110	10	.2	4.8	260	.42	.80	.020
JAN											
21...	9.2	5.7	90	99	7.0	.2	4.4	245	.78	.88	.020
FEB											
11...	6.2	8.6	26	73	12	.2	7.0	181	.90	2.00	.010
MAR											
04...	8.1	6.4	56	100	8.2	.1	6.6	223	1.2	--	.180
APR											
15...	11	5.7	56	120	7.9	.2	6.6	254	.83	1.30	<.010
MAY											
06...	9.8	6.0	66	120	8.3	.2	3.7	256	.54	1.60	.060
JUN											
03...	9.3	4.9	69	110	6.4	.3	6.4	259	.40	1.80	.080
JUL											
08...	8.9	4.9	82	65	7.7	.2	2.7	213	<.10	1.20	.100
AUG											
05...	8.6	5.5	79	64	12	.2	.8	257	<.10	1.60	.090
SEP											
08...	7.7	5.1	140	--	--	1.0	3.4	--	<.10	1.70	.060

OSAGE RIVER BASIN

06922200 TEBO CREEK AT LEESVILLE, MO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL) (01105)	ALUM- INUM, TOTAL RECOV- FM BOT- TUM MA- TERIAL (UG/G) (01108)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CADMIUM RECOV. FM BOT- TUM MA- TERIAL (UG/G AS CD) (01028)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	CHRO- MIUM, TOTAL RECOV- FM BOT- TUM MA- TERIAL (UG/G) (01029)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, RECOV. FM BOT- TUM MA- TERIAL (UG/G AS CU) (01043)
OCT 22...	390	4000	0	<1	<10	6	11	12
JAN 21...	100	--	1	--	10	--	6	--
MAR 04...	--	2000	--	<1	--	<10	--	5
JUL 08...	90	140000	<1	<10	<10	8	2	20

DATE	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, RECOV. FM BOT- TUM MA- TERIAL (UG/G AS FE) (01170)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, RECOV. FM BOT- TUM MA- TERIAL (UG/G AS PB) (01052)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, RECOV. FM BOT- TUM MA- TERIAL (UG/G AS MN) (01053)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, RECOV. FM BOT- TUM MA- TERIAL (UG/G AS ZN) (01093)
OCT 22...	800	10000	7	20	250	600	40	60
JAN 21...	140	--	5	--	100	--	30	--
MAR 04...	--	3800	--	10	--	500	--	18
JUL 08...	120	--	2	<100	90	800	30	65

OSAGE RIVER BASIN

06922440 HARRY S. TRUMAN DAM AND RESERVOIR AT WARSAW, MO

LOCATION.--Lat 38°15'30", long 93°23'40", in sec.7, T.40 N., R.22 W., Benton County, Hydrologic Unit 10290105, in control room near middle of dam on Osage River, and 1.5 mi (2.4 km) northwest of Warsaw and 95 mi (153 km) southeast of Kansas City, and at mile 175 (282 km).

DRAINAGE AREA.--11,500 mi² (29,800 km²).

PERIOD OF RECORD.--October 1981 to current year. Records collected at same site since 1977 and are available from Corps of Engineers.

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

REMARKS.--Lake is formed by a rolled earthfill type dam. Storage began on July 21, 1977. Spillway is equipped with 4 taintor gates 40 ft (12 m) wide by 47.3 ft (14.4 m) high. Capacity of surcharge pool (elevations 739.6 ft (225.4 m) to 751.1 ft (228.9 m)), 2,911,000 acre-ft (3.59 km³); of flood control pool (elevations 706.0 ft (215.2 m) to 739.6 ft (225.4 m)), 4,006,000 acre-ft (4.94 km³); and of multipurpose pool (elevations 635.0 ft (193.5 m) to 706.0 to (215.2 m)), 5,209,000 acre-ft (6.42 km³). Lake is used for flood control, hydroelectric power, recreation, fish and wildlife conservation.

COOPERATION.--Records furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 2,521,000 acre-ft (3.11 km³) July 3, 1981, elevation 722.3 ft (220.2 m), minimum, 41,710 acre-ft (51.4 hm³) Nov. 14, 1978, elevation, 661.0 ft (201.5 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 2,440,000 acre-ft (3.01 km³) June 15-17, elevation, 721.58 ft (219.360 m); minimum, 118,000 acre-ft (145 hm³) April 22-24, elevation, 705.61 ft (215.070 m).

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1230000	1360000	1410000	1220000	1470000	1240000	1220000	1220000	1530000	1830000	1310000	1360000
2	1230000	1400000	1430000	1220000	1510000	1240000	1240000	1230000	1640000	1880000	1310000	1340000
3	1230000	1430000	1460000	1230000	1530000	1250000	1240000	1230000	1720000	2230000	1300000	1300000
4	1230000	1460000	1460000	1240000	1530000	1250000	1250000	1220000	1810000	1710000	1300000	1290000
5	1230000	1490000	1460000	1250000	1540000	1250000	1260000	1210000	1860000	1650000	1300000	1280000
6	1240000	1510000	1460000	1260000	1550000	1250000	1250000	1210000	1910000	1600000	1290000	1270000
7	1240000	1520000	1450000	1260000	1560000	1250000	1250000	1200000	1950000	1570000	1290000	1260000
8	1240000	1520000	1440000	1260000	1530000	1250000	1260000	1210000	1970000	1560000	1290000	1260000
9	1240000	1520000	1430000	1270000	1490000	1250000	1250000	1230000	2040000	1560000	1290000	1260000
10	1240000	1530000	1410000	1280000	1460000	1250000	1250000	1230000	2130000	1580000	1280000	1250000
11	1240000	1550000	1390000	1270000	1430000	1240000	1250000	1230000	2220000	1590000	1280000	1260000
12	1240000	1570000	1380000	1270000	1410000	1240000	1240000	1210000	2300000	1590000	1280000	1260000
13	1240000	1570000	1380000	1270000	1380000	1240000	1230000	1210000	2360000	1590000	1350000	1250000
14	1250000	1560000	1360000	1260000	1360000	1290000	1220000	1230000	2400000	1580000	1390000	1260000
15	1270000	1560000	1350000	1260000	1350000	1360000	1210000	1260000	2440000	1570000	1460000	1280000
16	1280000	1560000	1350000	1260000	1350000	1450000	1210000	1280000	2440000	1560000	1520000	1290000
17	1320000	1550000	1340000	1250000	1360000	1510000	1210000	1300000	2440000	1560000	1560000	1280000
18	1350000	1540000	1330000	1250000	1370000	1540000	1210000	1320000	2400000	1550000	1580000	1290000
19	1380000	1530000	1320000	1240000	1370000	1550000	1190000	1350000	2360000	1520000	1570000	1290000
20	1400000	1510000	1310000	1250000	1360000	1550000	1190000	1360000	2310000	1490000	1540000	1280000
21	1400000	1500000	1300000	1260000	1370000	1530000	1190000	1370000	2270000	1450000	1520000	1270000
22	1410000	1490000	1280000	1270000	1350000	1500000	1180000	1360000	2210000	1420000	1480000	1260000
23	1420000	1470000	1260000	1270000	1340000	1450000	1180000	1370000	2170000	1380000	1450000	1270000
24	1410000	1460000	1240000	1280000	1330000	1410000	1180000	1370000	2110000	1370000	1420000	1260000
25	1400000	1450000	1250000	1280000	1320000	1370000	1190000	1360000	2070000	1350000	1390000	1260000
26	1390000	1440000	1260000	1290000	1300000	1330000	1190000	1330000	2020000	1330000	1390000	1260000
27	1370000	1420000	1260000	1280000	1280000	1290000	1190000	1320000	1980000	1320000	1380000	1250000
28	1370000	1410000	1240000	1280000	1270000	1240000	1190000	1310000	1950000	1320000	1370000	1250000
29	1350000	1390000	1220000	1280000	---	1220000	1200000	1350000	1910000	1320000	1360000	1250000
30	1340000	1400000	1220000	1360000	---	1230000	1210000	1380000	1870000	1310000	1370000	1250000
31	1350000	---	1210000	1420000	---	1220000	---	1450000	---	1320000	1360000	---

WTR YR 1982

(+)	708.42	709.27	706.14	709.57	707.10	706.31	706.19	710.04	715.54	707.95	708.59	706.87
(‡)	+123000	+50000	-190000	+210000	-150000	-50000	-10000	+240000	+420000	-550000	+40000	-110000
MAX	1420000	1570000	1460000	1420000	1560000	1550000	1260000	1450000	2440000	2230000	1580000	1360000
MIN	132000	1360000	1210000	1220000	1270000	1220000	1180000	1200000	1530000	1310000	1280000	1250000

CAL YR 1981.....‡ +123000

WTR YR 1982.....‡ +23000

(†) Elevation, in feet NGVD, at end of month.

(‡) Change in contents, in acre-feet.

06922450 OSAGE RIVER BELOW HARRY S. TRUMAN DAM AT WARSAW, MO

LOCATION.--Lat 38°15'41", long 93°24'16", NE¼SW¼ sec. 17, T.40 N., R.22 W., Benton County, Hydrologic Unit 10290109, on right bank 2,000 ft (610 m) below Harry S. Truman Dam, and 1.5 mi (2.4 km) northwest of Warsaw.

DRAINAGE AREA.--7,856 mi² (20,350 km²) uncontrolled area below other reservoirs.

PERIOD OF RECORD.--May 1978 to current year.

GAGE.--Acoustic flow monitor. Datum of gage is at National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Records are fair above 2,000 cfs and poor below 2,000 cfs. Records not published prior to 1982 water year due to test period of acoustic flow monitor which included periods of unreliable record. On April 13, 14 a maximum of 4,400 cfs (125 m³/s) was pumped back up into Truman Lake as Truman Dam has the ability to pump water from the Osage River.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily flow, 38,900 ft³/s (1,100 m³/s) June 25, 1982; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum daily flow, 38,900 ft³/s (1,100 m³/s) June 25; no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	UCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	.0	11500	12400	.0	11700	21900	10900	1140	6970	34200	724	6980		
2	.0	7980	10500	.0	20300	5980	7920	338	.0	32100	4660	17700		
3	.0	11200	11000	.0	22600	6110	1390	4860	1640	34400	5400	17700		
4	.0	7830	9400	5110	24200	6380	1280	4160	14700	34900	7160	7300		
5	.0	9250	13400	5950	24000	6010	1630	10600	29900	35500	6010	5320		
6	.0	8860	14000	6130	19600	5560	7020	7230	29500	31700	5270	6000		
7	.0	11900	12500	5880	16800	5620	9890	6870	26700	19700	1600	2820		
8	.0	9100	9950	6700	20700	6350	8090	4400	29200	11600	778	2390		
9	.0	8480	9600	.0	24000	7430	6890	200	18000	12200	4230	5960		
10	.0	9780	17300	.0	20200	7230	6980	665	292	8970	2340	4950		
11	.0	8760	19400	7120	16500	6400	7170	5560	.0	8820	7450	200		
12	.0	9820	9710	5610	17000	6420	7280	11700	.0	12400	5720	200		
13	2240	10200	9080	5450	17000	6520	6540	6460	.0	11100	3310	4820		
14	222	12100	12900	5710	16700	6690	7110	12600	5510	12600	3810	200		
15	2260	12500	9460	5580	16700	7100	7360	14700	10200	16700	4880	1420		
16	9860	5870	8530	5680	16600	6730	4620	15500	17200	21400	10100	704		
17	10400	12000	14200	6060	17500	9540	200	16200	21200	22500	12000	10200		
18	7670	12300	14200	5940	24300	19200	200	16100	31600	22500	12700	200		
19	6630	8310	8600	5700	24800	21400	12100	16600	36400	22200	15600	200		
20	12500	8430	8600	.0	24700	30700	6470	19800	37400	22400	16300	14000		
21	11100	10800	8600	.0	24700	32900	3220	23700	35200	22200	16500	6640		
22	8920	12100	12900	1220	24900	33800	5420	22200	36600	21300	16300	1620		
23	9560	10200	14000	4920	23400	34000	3040	24800	32200	21600	17200	220		
24	12700	9830	14400	1120	17400	36000	200	25600	37200	9670	19500	3180		
25	11200	13100	12900	4890	16500	25200	200	26200	38900	9440	16100	200		
26	9290	10800	.0	5380	22600	25200	2670	26300	38000	9530	14800	200		
27	11700	9130	.0	5800	18000	25400	200	26200	35700	8180	9110	4370		
28	5760	11100	.0	5500	18000	23700	1040	29700	33200	4550	4270	1090		
29	10200	12100	14900	6300	---	21700	200	28900	32000	5000	6370	3120		
30	10800	10200	6390	6300	---	6090	200	21400	33600	4000	13200	2080		
31	10500	---	6370	8250	---	8050	---	17100	---	754	17600	---		
TOTAL	163512.0	305530	325390.0	132300.0	561400	465310	137430	447783	669012.0	544114	280992	131984		
MEAN	5275	10180	10500	4268	20050	15010	4581	14440	22300	17550	9064	4399		
MAX	12700	13100	19400	8250	24900	34000	12100	29700	38900	35500	19500	17700		
MIN	.00	5870	.00	.00	11700	5560	200	200	.00	754	724	200		
CFSM	.67	1.30	1.34	.54	2.55	1.91	.58	1.84	2.84	2.23	1.15	.56		
IN.	.77	1.45	1.54	.63	2.66	2.20	.65	2.12	3.17	2.58	1.33	.62		
AC-FT	324300	606000	645400	262400	1114000	922900	272600	888200	1327000	1079000	557300	261800		
WTR YR 1982	TOTAL	4164757.0	MEAN	11410	MAX	36900	MIN	.00	CFSM	1.45	IN	19.72	AC-FT	8261000

06923500 BENNETT SPRING AT BENNETT SPRINGS, MO

LOCATION.--Lat 37°43'03", long 92°51'26", in NW¼ sec.1, T.34 N., R.18 W., Dallas County, Hydrologic Unit 10290110, on left bank 300 ft (91 m) downstream from spring outlet, 1.5 mi (2.4 km) upstream from Niangua River and at Bennett Springs.

PERIOD OF RECORD.--September 1916 to March 1920, October 1928 to September 1941, October 1965 to current year. Prior to March 1920 and October 1939 to September 1941 monthly discharge only published in WSP 1310. Occasional discharge measurements 1923, 1954, 1964, 1965.

GAGE.--Nonrecording gage. Datum of gage 864.71 ft (263.564 m) National Geodetic Vertical Datum of 1929. Sept. 1916 to Mar. 1920, in the vicinity, datum unknown; Oct. 17, 1928, to Apr. 11, 1934, at site 1,780 ft (543 m) down stream at datum 2.30 ft (0.70 m) lower; Apr. 12 to Dec. 13, 1934, nonrecording gage, and Dec. 14, 1934, to Sept. 17, 1941, water-stage recorder at present site and datum.

REMARKS.--Records fair. Occasional runoff from drainage area of 42.4 mi² (109.8 km²) included in records.

AVERAGE DISCHARGE.--33 years (1916-19, 1928-41, 1965-82), 156 ft³/s (4.418 m³/s), 113,000 acre-ft/yr (139 hm³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,000 ft³/s (255 m³/s) Nov. 1, 1973, gage height, 9.14 ft (2.786 m) from floodmark, includes about 7,200 ft³/s (204 m³/s) from Spring Creek, by indirect measurement of peak flow over dam; minimum, about 55 ft³/s (1.6 m³/s) Nov. 13, 1934.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 668 ft³/s (18.9 m³/s) Jan. 31; minimum daily discharge, 87 ft³/s (2.46 m³/s) Sept. 25-30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	95	174	140	115	400	170	158	132	288	164	98	100
2	94	162	135	111	360	170	156	132	259	177	98	98
3	95	142	130	122	303	168	219	132	232	164	97	95
4	95	130	125	168	262	162	194	128	219	156	97	98
5	95	124	120	156	250	152	185	128	348	144	97	95
6	97	119	110	150	230	152	172	124	309	140	97	92
7	97	113	105	132	214	150	164	124	250	130	97	92
8	97	109	100	126	197	146	168	122	230	130	97	92
9	95	106	97	120	190	144	168	120	230	128	98	92
10	97	105	95	117	174	146	162	120	237	130	98	92
11	95	103	95	115	162	146	160	117	207	122	100	94
12	94	103	95	113	154	144	155	117	202	120	100	91
13	94	101	95	111	152	140	150	117	181	120	100	91
14	100	100	95	111	154	217	150	124	170	117	109	91
15	105	101	95	111	250	348	148	124	164	117	103	89
16	109	101	94	106	324	327	146	122	166	117	100	89
17	136	100	92	105	365	282	144	122	158	115	97	89
18	172	100	91	105	330	253	140	119	150	113	98	88
19	132	100	89	105	306	297	142	117	150	111	97	89
20	124	97	94	105	294	270	142	115	145	110	97	89
21	111	97	94	103	270	264	134	124	140	109	95	89
22	124	97	100	117	250	209	132	117	136	109	94	89
23	132	97	158	148	230	194	132	113	134	106	94	88
24	122	95	144	134	214	168	134	113	138	105	94	88
25	115	97	135	126	199	177	134	113	150	105	94	87
26	113	95	130	119	188	166	134	111	177	103	94	87
27	106	95	130	113	179	164	128	144	158	101	115	87
28	101	94	124	113	174	160	124	136	154	100	103	87
29	101	92	115	111	---	158	132	168	150	100	101	87
30	97	150	115	361	---	160	132	234	146	98	105	87
31	98	---	115	668	---	160	---	303	---	98	101	---
TOTAL	3338	3299	3452	4517	6775	5984	4539	4132	5780	3759	3065	2722
MEAN	108	110	111	146	242	193	151	133	193	121	98.9	90.7
MAX	172	174	158	668	400	348	219	303	348	177	115	100
MIN	94	92	89	103	152	140	124	111	134	98	94	87
AC-FT	6620	6540	6850	8960	13440	11870	9000	8200	11460	7460	6080	5400

CAL YR 1981 TOTAL 50392 MEAN 138 MAX 1330 MIN 79 AC-FT 99950
WTR YR 1982 TOTAL 51362 MEAN 141 MAX 668 MIN 67 AC-FT 101900

OSAGE RIVER BASIN

06925500 LAKE OF THE OZARKS NEAR BAGNELL, MO

LOCATION.--Lat 38°12'19", long 92°37'21", in SE¼ sec.19, T.40 N., R.15 W., Miller County, Hydrologic Unit 10290111, at left end of powerhouse section near left end of Bagnell Dam on Osage River, 2 mi (3.2 km) southwest of Bagnell, and at mile 81.7 (131.5 km).

DRAINAGE AREA.--14,000 mi² (36,000 km²), approximately.

PERIOD OF RECORD.--April 1931 to current year. Gage-height records collected at same site since 1932 and are contained in reports of the National Weather Service, published as Osage River at Bagnell Dam, Lakeside.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum, adjustment of 1912. To obtain National Geodetic Vertical Datum of 1929 subtract 0.88 ft (0.286 m).

REMARKS.--Lake is formed by concrete gravity dam. Spillway is equipped with 12 taintor gates 34 ft (10 m) wide by 22 ft (6.7 m) high. Storage began in 1931. Usable capacity 1,218,000 acre-ft (1.50 km³) between elevations 630.00 ft or 192.024 m (maximum draw-down) and 660.00 ft or 201.168 m (top of gates). Dead storage, 708,800 acre-ft (874 hm³). Figures given herein are usable contents. Water is used for generating electricity.

COOPERATION.--Records furnished by Union Electric Company of Missouri.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,527,000 acre-ft (1.88 km³), May 22, 1943, elevation, 665.45 ft (202.829 m); minimum, 322,100 acreft (397 hm³) Feb. 13, 1948, elevation, 639.95 ft (195.057 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 1,178,000 acre-ft (1.45 km³) Aug. 31, elevation, 659.30 ft (200.955 m); minimum, 844,200 acre-ft (1.041 km³) Apr. 8, elevation, 652.93 ft (199.013 m).

MONTHEND ELEVATION AND CONTENTS, AT 2400, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	655.06	948,800	-75,200
Oct. 31	657.51	1,078,000	+129,200
Nov. 30	658.00	1,104,000	+26,000
Dec. 31	657.54	1,079,000	-25,000
CAL YR 1980	-----	-----	-35,000
Jan. 31	656.10	1,002,000	-77,000
Feb. 28	654.25	908,400	-93,600
Mar. 31	656.03	998,800	+90,400
Apr. 30	654.05	898,400	-100,400
May 31	658.93	1,157,000	+258,600
June 30	659.11	1,167,000	+10,000
July 31	658.88	1,154,000	-13,000
Aug. 31	659.30	1,178,000	+24,000
Sept. 30	658.37	1,125,000	-53,000
WTR YR 1981	-----	-----	+176,200

OSAGE RIVER BASIN

06926000 OSAGE RIVER NEAR BAGNELL, MO

LOCATION.--Lat 38°12'27", long 92°36'20", in N½SE¼ sec.21, T.40 N., R.15 W., Miller County, Hydrologic Unit 10290111, on left bank 1.5 mi (2.4 km) upstream from Bagnell, 3 mi (4.8 km) downstream from hydroelectric plant of Union Electric Company of Missouri, and at mile 78.5 (126.3 km).

DRAINAGE AREA.--14,000 mi² (36,300 km²), approximately.

PERIOD OF RECORD.--October 1880 to current year. Monthly discharge only for some periods published in WSP 1310. Gage-height records collected in this vicinity 1880-1931 are contained in reports of Missouri River Commission or National Weather Service.

GAGE.--Water-stage recorder. Datum of gage is 548.87 ft (167.296 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 15, 1930, nonrecording gage at present site and datum. Since Oct. 1, 1940, auxiliary waterstage recorder at power plant 3 mi (4.8 km) upstream from base gage.

REMARKS.--Records fair. Flow regulated by Lake of the Ozarks.

AVERAGE DISCHARGE.--102 years, 9,532 ft³/s (269.9 m³/s), 6,906,000 acre-ft/yr (8,520 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 220,000 ft³/s (6,230 m³/s) May 19, 1943, gage height, 48.8 ft (14.87 m); minimum, 183 ft³/s (5.18 m³/s) Sept. 9, 1969; minimum daily discharge, 220 ft³/s (6.23 m³/s) Dec. 12, 1917.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known prior to 1943, 43.1 ft (13.14 m) in June 1844, discharge, 164,000 ft³/s (4,640 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 32,700 ft³/s (926 m³/s) June 27, 28; minimum daily discharge, 456 ft³/s (12.91 m³/s) Oct. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	UCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	960	704	12000	1170	19800	13100	5710	561	23600	31100	5680	21500
2	464	12500	12800	5540	16000	15900	13900	558	6200	31200	7860	17800
3	478	12000	13100	4050	25000	15700	11900	568	1180	31100	13900	13300
4	486	11700	13300	11600	28800	14700	9610	816	10200	31100	8940	12200
5	1520	11800	8150	10100	29300	13800	14800	1400	30800	31100	6070	6290
6	574	11400	11000	7990	25600	5450	21800	3880	31100	31100	7540	4810
7	506	9670	12600	13000	28600	1070	21300	810	31200	28000	1610	7400
8	456	10000	9650	13400	20300	3100	15000	544	31100	24600	1310	1510
9	474	9690	9600	13900	24200	3150	2020	545	29500	11100	1360	8830
10	488	4360	15600	20000	14600	6990	1090	602	7100	7300	1640	8710
11	472	5440	11100	12000	15700	9860	563	2240	2030	1180	1380	5470
12	470	3160	2210	11000	20600	9180	4110	2040	577	9170	1340	1180
13	494	6750	2470	2560	21600	1760	4760	6630	538	13100	13900	991
14	512	1330	11800	4630	19000	1010	4180	6390	4460	10500	17700	1300
15	503	531	13600	4770	18400	14500	8080	2940	10600	8580	3300	900
16	531	8300	12900	4870	21500	20000	12700	2090	16100	6340	9800	5500
17	1170	10500	14400	4870	22900	26300	2350	10500	26300	12600	14000	1000
18	893	12300	18900	3370	23400	22200	593	15100	29600	11600	16000	700
19	503	12800	18600	5090	25800	25600	8980	15800	32400	13200	12400	700
20	468	12800	12600	4700	29600	17000	2790	16300	31600	20400	12900	8000
21	460	11300	2810	4240	25000	17200	615	13100	32500	14800	8890	10000
22	5510	2050	559	1050	25600	22600	3820	25700	31900	21000	5760	3500
23	10800	11000	7060	826	28300	26600	14100	26400	32500	17200	13900	2230
24	8130	18200	9690	656	17800	25400	1700	18700	29900	11800	14500	3830
25	7820	11800	1640	8110	28000	27500	602	24600	32500	6610	20100	745
26	11000	1470	546	7050	17500	28000	613	24200	32600	11100	16400	577
27	13000	534	538	4940	7680	17400	1440	26800	32700	7590	13500	3580
28	4000	523	542	4150	5000	15200	749	22700	32700	2270	4670	4090
29	13800	518	8650	1140	---	16500	569	31400	32100	1300	5060	944
30	643	9040	17600	13400	---	9500	570	26500	31100	3510	8430	6770
31	573	---	2730	18900	---	5570	---	21400	---	3280	15900	---
TOTAL	88158	234170	288945	225072	605580	451840	191014	351814	676685	464830	285740	164357
MEAN	2844	7806	9321	7196	21630	14580	6367	11350	22560	14990	9217	5479
MAX	13800	18200	18900	20000	29600	28000	21800	31400	32700	31200	20100	21500
MIN	456	518	538	656	5000	1010	563	544	538	1180	1310	577
CFSM	.20	.56	.67	.51	1.55	1.04	.46	.81	1.61	1.07	.66	.39
IN.	.23	.62	.77	.59	1.61	1.20	.51	.93	1.80	1.24	.76	.44
AC-FT	174900	464500	573100	442500	1201000	896200	378900	697800	1342000	922000	566800	326000
CAL YR 1981 TOTAL	3259158			MEAN 8929	MAX 41200	MIN 238	CFSM .64	IN 8.66	AC-FT 6465000			
WTR YR 1982 TOTAL	4026205			MEAN 11030	MAX 32700	MIN 456	CFSM .79	IN 10.70	AC-FT 7986000			

06926500 OSAGE RIVER NEAR ST. THOMAS, MO

LOCATION.--Lat 38°20'20", long 92°13'34", in SE¼SW¼ sec.35, T.42 N., R.12 W., Cole County, Hydrologic Unit 10290111, on left bank 0.5 mi (0.8 km) downstream from Sugar Creek, 2.5 mi (4.0 km) south of St. Thomas, and at mile 43.1 (69.3 km).

DRAINAGE AREA.--14,500 mi² (37,600 km²), approximately.

PERIOD OF RECORD.--August 1931 to current year.

GAGE.--Water-stage recorder. Datum of gage is 528.06 ft (160.953 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Flow regulated by Lake of the Ozarks.

AVERAGE DISCHARGE.--51 years, 9,837 ft³/s (278.6 m³/s), 7,127,000 acre-ft/yr (8,788 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 216,000 ft³/s (6,120 m³/s) May 20, 1943, gage height, 43.8 ft (13.35 m); minimum, 346 ft³/s (9.80 m³/s) July 12, 1959, Sept. 18, 1960; minimum gage height, 1.28 ft (0.390 m) Sept. 18, 1960; minimum daily discharge, 373 ft³/s (10.6 m³/s) July 12, 1959.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known prior to 1943, about 39.4 ft (12.0 m) in June 1844.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 36,300 ft³/s (1028 m³/s) May 29; minimum daily discharge, 516 ft³/s (14.61 m³/s) Oct 9, 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3390	1330	11600	2590	21000	8780	4340	740	28400	32300	2870	20100
2	1150	4110	13200	2010	18000	15600	10700	724	21700	32200	6160	22000
3	597	11900	12600	6810	25000	15800	13100	716	11000	32200	9750	15400
4	540	10900	13200	11000	30000	15500	11600	730	8880	32500	12100	12800
5	545	12300	12300	11900	30000	13500	12300	933	30600	32800	7070	10400
6	1600	10800	9590	10600	28000	10200	21600	1840	34900	32600	6660	6510
7	745	11400	9660	9450	30000	4590	21400	3890	33900	30000	7240	6060
8	558	9200	12300	13400	24000	2190	16700	1060	33700	27200	1750	6110
9	516	9980	7620	14300	26000	3330	11600	712	34400	15500	978	2670
10	540	8330	13500	18000	20000	3500	2050	660	22200	11900	869	9540
11	528	4860	11600	20100	17000	9530	1590	694	12100	5950	1110	8300
12	516	4810	9130	17100	20000	9370	1320	2930	9630	2670	903	5090
13	522	3910	1880	6720	24000	8000	4990	2300	8800	12300	3730	1480
14	558	5920	5290	3550	20000	3210	4380	8660	7480	11000	23500	2440
15	565	1450	14400	4810	20000	10600	5100	5120	8770	11000	11400	3030
16	577	1930	11900	4570	23800	19800	10600	3840	14800	7130	5100	1820
17	761	10100	13800	5970	25800	26800	11300	3640	25600	9290	9540	4970
18	1700	11200	17800	6170	24700	24000	2310	13900	29500	12000	15200	2900
19	1210	12100	17600	5080	24700	25800	9160	16700	34300	13000	12600	1280
20	602	12600	14800	4660	30500	23200	8290	19000	34800	18200	13100	1090
21	638	11300	9100	4580	27300	15800	1540	11600	34200	15900	11300	8250
22	792	8930	2150	4110	27400	22800	905	23800	33900	16900	7510	8800
23	8630	4090	1680	1780	26400	23700	850	26800	34000	17600	9170	3590
24	11000	16500	9220	1150	20300	27300	1300	21200	31500	15800	15700	2860
25	9860	13000	8100	1870	27000	26700	974	23400	33300	9450	16900	3480
26	10100	8810	1640	9500	21900	30500	792	25100	33900	8850	17500	997
27	12600	1500	859	6730	12700	21100	772	27500	34000	9000	19900	698
28	10600	735	797	5070	5690	15600	753	25000	33900	7910	11900	4600
29	3650	640	1680	3400	---	14700	738	36300	33700	1820	3330	3270
30	1830	3440	16800	12000	---	16400	738	35400	32500	1000	8990	1910
31	1040	---	9980	26200	---	7570	---	29700	---	3310	14700	---
TOTAL	88660	228075	296376	255180	651190	475470	193792	374589	780360	489280	288530	182445
MEAN	2860	7603	9561	8232	23260	15340	6460	12080	26010	15780	9307	6082
MAX	12600	16500	17800	26200	30500	30500	21600	36300	34900	32800	23500	22000
MIN	516	640	797	1150	5690	2190	738	660	7480	1000	869	698
CFSM	.20	.52	.66	.57	1.60	1.06	.45	.83	1.79	1.09	.64	.42
IN	.23	.59	.70	.65	1.67	1.22	.50	.96	2.00	1.26	.74	.47
AC-FT	175900	452400	587900	506100	1292000	943100	384400	743000	1548000	970500	572300	361900
CAL YR 1981 TOTAL	3385199			MEAN 9275	MAX 48200	MIN 516	CFSM .64	IN 8.68	AC-FT 6715000			
WTR YR 1982 TOTAL	4303447			MEAN 11790	MAX 36300	MIN 516	CFSM .81	IN 11.04	AC-FT 8537000			

OSAGE RIVER BASIN

06926510 OSAGE RIVER BELOW ST. THOMAS, MO
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

LOCATION.--Lat 38°25'18", long 92°12'31", Cole County, Hydrologic Unit 10290111, at bridge on State Highway B, 3.8 mi (6.1 km) north of St. Thomas, 8.6 mi (14 km) downstream from gaging station, and at mile 34.5 (55.5 km).

DRAINAGE AREA.--14,500 mi² (37,600 km²) approximately above gage.

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

REMARKS.--Records of discharge are given for gaging station 06926500 Osage River near St. Thomas.

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (MG/L) (00300)	COLI- FORM, FECAL, (PER- CENT UM-MF SATUR- ATION) (00301)	STREP- TOCOCCI FECAL, KF AGAR (CULS. PER 100 ML) (31673)
NOV 12...	1130	5600	238	7.6	14.5	5.5	7.6	74	9	3
JAN 12...	1100	15000	278	8.1	3.0	4.6	11.2	83	1	44
MAR 25...	1145	25500	280	8.0	12.0	19	10.8	100	9	88
MAY 18...	1000	13400	280	7.9	15.0	19	7.6	75	96	230
JUL 20...	1100	18200	296	7.9	25.5	4.9	6.4	78	60	180
SEP 15...	0930	3700	250	7.5	24.0	27	6.4	75	200	320

DATE	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS, NONCAR- BONATE (MG/L CACO3) (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	PERCENT SODIUM (00932)	SODIUM AD- SURP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINEITY FIELD (MG/L AS CACO3) (00410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
NOV 12...	117	32	33	8.4	4.2	7	.2	4.4	85	35
JAN 12...	133	21	37	9.8	5.2	8	.2	4.3	112	22
MAR 25...	129	31	37	9.0	5.6	8	.2	4.4	98	29
MAY 18...	133	35	38	9.2	5.4	8	.2	4.0	98	26
JUL 20...	136	38	40	8.8	5.9	8	.2	3.6	98	31
SEP 15...	113	34	29	9.9	4.3	7	.2	3.5	79	21

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 SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)
NOV 12...	4.9	.2	4.6	150	153	.20	2270	.35	.150
JAN 12...	6.3	.2	4.3	169	155	.23	6840	.47	<.070
MAR 25...	7.3	.2	5.1	172	157	.23	11800	.99	.170
MAY 18...	14	.2	4.3	164	161	.22	5930	.87	.100
JUL 20...	6.1	.2	6.2	178	169	.24	8750	.62	.090
SEP 15...	4.7	.1	6.9	203	134	.28	2030	.29	.100

OSAGE RIVER BASIN

06926510 OSAGE RIVER BELOW ST. THOMAS, MO--continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4) (71846)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, TOTAL (MG/L AS P) (71886)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS, ORTHOPHOS- PHATE, DIS- SOLVED (MG/L AS P) (00671)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
NOV 12...	.19	.47	.050	.15	.040	.060	4	60	79
JAN 12...	.09	.53	.020	.06	.020	<.010	28	1130	70
MAR 25...	.22	.95	.050	.15	.030	.020	46	3170	58
MAY 18...	.13	1.30	.250	.77	.170	.020	71	2570	65
JUL 20...	.12	.50	.030	.09	.040	.040	0	486	20
SEP 15...	.13	1.20	.100	.31	.070	.060	45	450	90

DATE	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC SUS- PENDED TOTAL (UG/L AS AS) (01001)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	BARIUM, SUS- PENDED RECOV- ERABLE (UG/L AS BA) (01006)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)
NOV 12...	1	0	1	100	30	73	<1	<1	<10	<10
JAN 12...	1	0	1	100	30	72	1	<1	<10	<10
MAY 18...	1	0	1	<100	--	71	1	<3	<10	<10
JUL 20...	2	1	1	<100	--	85	<1	<1	10	<10

DATE	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO) (01037)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, SUS- PENDED RECOV- ERABLE (UG/L AS CU) (01041)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE) (01044)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)
NOV 12...	<1	<3	7	5	2	310	300	12	4
JAN 12...	1	<3	8	7	1	590	560	27	5
MAY 18...	<1	2	5	4	1	1100	1100	41	7
JUL 20...	<1	<1	3	1	2	440	420	19	<1

DATE	LEAD, SUS- PENDED RECOV- ERABLE (UG/L AS PB) (01050)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, SUS- PENDED RECOV- ERABLE (UG/L AS MN) (01054)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MERCURY SUS- PENDED RECOV- ERABLE (UG/L AS HG) (71695)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)
NOV 12...	--	<1	50	40	11	.2	.1	.1	1
JAN 12...	3	2	60	50	8	.1	--	<.1	3
MAY 18...	5	2	100	90	6	<.1	--	.1	7
JUL 20...	--	<1	120	90	31	.1	.0	.1	5

OSAGE RIVER BASIN

06926510 OSAGE RIVER BELOW ST. THOMAS, MO--continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	NICKEL, SUS- PENDEED RECOV- ERABLE (UG/L AS NI) (01066)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- 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, SUS- PENDEED RECOV- ERABLE (UG/L AS ZN) (01091)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 12...	0	2	<1	<1	<1	<1	60	50	10
JAN 12...	--	<1	<1	<1	<1	<1	30	20	9
MAY 18...	5	2	<1	<1	<1	1	20	7	13
JUL 20...	--	<1	<1	<1	<1	1	30	0	42

GASCONADE RIVER BASIN

06928600 GASCONADE RIVER NEAR HOOKER, MO

WATER-QUALITY RECORDS

LOCATION.--Lat 37°53'31", long 92°04'53" in SW¼NE¼ sec.36, T.37 N., R.11 W., Pulaski County, Hydrologic Unit 10290201, at bridge on State highway 28 2.5 mi (4.0 km) northwest of Hooker.

PERIOD OF RECORD.--July 1977 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (MG/L) (00301)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L) (00335)
OCT										
14...	1300	1026	29001	162	370	7.9	17.0	8.0	82	17
NOV										
09...	1245	1026	29001	430	352	8.0	12.0	10.0	93	4
DEC										
08...	0930	1028	29001	510	350	7.8	8.5	10.0	85	11
JAN										
11...	1400	1028	29001	520	365	8.2	1.0	14.0	99	12
FEB										
19...	1215	1028	29001	7560	212	7.9	6.5	11.2	91	9
MAR										
23...	1230	1028	29001	1380	286	8.1	13.0	9.2	87	5
APR										
20...	1210	1028	29001	470	334	8.3	15.5	9.2	92	<5
MAY										
17...	1300	1028	29001	2600	348	8.1	23.0	7.2	83	<5
JUN										
22...	1200	1028	29001	1100	351	8.1	22.0	7.6	86	8
JUL										
21...	1200	1028	29001	510	328	8.2	28.0	6.0	76	<5
AUG										
17...	1300	1028	29001	430	317	7.9	23.5	6.0	70	10
SEP										
14...	1200	1028	29001	266	338	7.9	23.0	7.0	80	<5

DATE	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	HARD- NESS (MG/L AS CACU3) (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)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY FIELD (MG/L AS CACO3) (00410)	SULFATE DIS- SOLVED (MG/L AS SU4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)
OCT										
14...	230	250	63	22	3.0	2.2	174	<10	6.9	<.1
NOV										
09...	12	--	--	--	--	--	180	--	--	--
DEC										
08...	15	--	--	--	--	--	144	--	--	--
JAN										
11...	3	190	39	22	2.8	1.6	180	11	7.0	<.1
FEB										
19...	950	--	--	--	--	--	92	--	--	--
MAR										
23...	22	--	--	--	--	--	131	--	--	--
APR										
20...	9	190	38	22	2.6	1.5	164	<10	5.0	<.1
MAY										
17...	110	--	--	--	--	--	161	--	--	--
JUN										
22...	130	--	--	--	--	--	144	--	--	--
JUL										
21...	92	170	33	20	2.7	2.0	157	6.0	2.0	<.1
AUG										
17...	520	--	--	--	--	--	151	--	--	--
SEP										
14...	110	--	--	--	--	--	164	--	--	--

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L) (00530)	NITRO- GEN, NO ₂ +NO ₃ TOTAL (MG/L AS N) (00630)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	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 14...	191	12	<.05	--	--	<2	<2	<5	10	180
NOV 09...	--	5	.23	.110	<.020	--	--	--	--	--
DEC 08...	--	10	.14	.030	<.050	--	--	--	--	--
JAN 11...	194	12	.59	.030	.020	<2	<2	<5	<5	270
FEB 19...	--	68	1.0	.110	.150	--	--	--	--	--
MAR 23...	--	14	.65	.020	<.050	--	--	--	--	--
APR 20...	192	4	.05	.020	<.050	<2	<2	<5	<5	170
MAY 17...	--	7	.12	.040	<.050	--	--	--	--	--
JUN 22...	--	31	.44	.010	.050	--	--	--	--	--
JUL 21...	191	6	<.05	.020	<.050	<2	<2	5	<5	250
AUG 17...	--	38	.32	.090	.130	--	--	--	--	--
SEP 14...	--	4	.05	.020	.050	--	--	--	--	--

[illegible]

LOCATION.--Lat 37°39'58", long 92°03'02", in NE¼SE¼ sec.8, T.34 N., R.10 W., Pulaski County, Hydrologic Unit 10290202, on downstream side of left pier of Ross bridge, 3 mi (4.8 km) east of Big Piney, 14.8 mi (23.8 km) upstream from Spring Creek, and at mile 22 (35.4 km).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 10,400 ft³/s (295 m³/s) and maximum (*):

Date	Time	Discharge		Gage height	
		(ft ³ /s)	(m ³ /s)	(ft)	(m)
Feb. 1	1215	*14,000	396	14.69	4.478
Feb. 17	1415	9,830	278	12.20	3.719

Minimum discharge, 92 ft³/s (2.61 m³/s) Oct. 3, gage height, 1.93 ft (0.588 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	UCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	96	215	189	194	12400	515	356	248	1060	416	148	459
2	95	210	280	191	13500	531	347	250	1040	380	144	395
3	94	207	314	195	1970	600	342	243	787	382	142	347
4	103	214	276	215	1510	542	335	238	1750	377	140	320
5	103	218	244	274	1240	543	326	232	1960	335	138	302
6	100	203	221	361	1070	521	314	202	1460	301	137	275
7	97	189	207	355	962	487	304	175	1060	329	137	259
8	97	178	196	326	842	438	312	246	629	297	158	245
9	97	172	182	295	805	451	320	344	780	283	166	234
10	97	162	172	289	768	436	322	306	1360	289	153	223
11	99	156	164	270	753	420	313	268	951	262	176	213
12	98	150	158	260	673	381	304	237	749	245	161	203
13	103	144	154	250	648	412	298	237	632	238	235	199
14	146	141	150	237	633	430	288	241	547	228	299	203
15	136	138	146	221	661	1120	275	267	501	217	611	192
16	139	135	144	220	1360	1630	276	274	755	210	1270	188
17	192	132	140	220	7690	1610	273	260	1130	202	578	188
18	268	132	135	280	3710	1190	268	263	816	194	392	187
19	255	130	135	230	2290	961	264	1630	1070	186	313	178
20	251	127	135	220	1660	841	276	1260	819	181	267	173
21	200	122	134	200	1340	703	269	807	631	177	234	169
22	205	122	148	190	1230	590	257	597	536	171	216	166
23	429	122	210	233	997	519	248	486	480	166	202	165
24	645	119	280	372	895	484	241	419	452	162	198	162
25	444	119	325	557	845	485	237	381	457	159	210	162
26	368	119	307	400	817	469	239	346	442	162	405	159
27	334	119	283	340	759	435	238	466	421	165	750	159
28	315	117	260	300	610	410	232	536	512	156	1360	158
29	288	119	237	289	---	---	241	809	554	155	800	151
30	254	141	218	285	---	---	243	3230	477	153	615	150
31	232	---	205	4290	---	377	---	1120	---	151	538	---
TOTAL	6380	4572	6349	12559	62638	19304	8558	16618	25018	7329	11293	6584
MEAN	206	152	205	405	2237	623	285	536	834	236	364	219
MAX	645	218	325	4290	13500	1630	356	3230	1960	416	1360	459
MIN	94	117	134	190	610	377	232	175	421	151	137	150
CFSM	.37	.27	.37	.72	4.00	1.11	.51	.96	1.49	.42	.65	.39
IN.	.42	.30	.42	.83	4.16	1.28	.57	1.10	1.66	.49	.75	.44

GASCONADE RIVER BASIN

06930450 BIG PINEY RIVER AT DEVILS ELBOW, MO

WATER-QUALITY RECORDS

LOCATION.--Lat 37°50'53", long 93°03'44" in SE¼NE¼ sec.18, T.36 N., R.10 W., Pulaski County, Hydrologic Unit 10290202, at bridge on county highway V at Devils Elbow.

PERIOD OF RECORD.--July 1977 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00026)	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00300)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L) (00335)
OCT									
16...	1100	1028	29001	210	341	7.7	17.0	8.0	82
NOV									
09...	1145	1028	29001	250	321	7.7	12.0	9.6	89
DEC									
08...	1100	1028	29001	287	340	8.2	9.0	12.0	103
JAN									
11...	1300	1028	29001	265	340	8.2	1.5	14.8	106
FEB									
19...	1015	1028	29001	2880	172	7.9	7.0	11.0	91
MAR									
23...	1100	1028	29001	640	250	8.0	12.0	9.8	91
APR									
20...	1100	1028	29001	330	292	8.3	15.5	10.4	104
MAY									
17...	1145	1028	29001	380	301	8.1	21.0	8.0	89
JUN									
22...	1045	1028	29001	640	279	7.9	20.5	6.8	76
JUL									
20...	1345	1028	29001	300	305	8.3	28.0	7.4	94
AUG									
16...	1230	1028	29001	2250	265	7.7	20.5	6.8	76
SEP									
14...	1000	1028	29001	325	289	7.9	22.0	6.0	68

DATE	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	HARD- NESS (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)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LITY FIELD (MG/L AS CALO3) (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)
OCT										
16...	170	180	38	21	3.4	1.4	164	<10	3.0	<.1
NOV										
09...	10	--	--	--	--	--	161	--	--	--
DEC										
08...	9	--	--	--	--	--	174	--	--	--
JAN										
11...	2	180	38	21	3.5	1.5	167	<10	4.0	<.1
FEB										
19...	180	--	--	--	--	--	75	--	--	--
MAR										
23...	11	--	--	--	--	--	121	--	--	--
APR										
20...	8	160	33	18	2.8	1.5	138	<10	5.0	<.1
MAY										
17...	47	--	--	--	--	--	148	--	--	--
JUN										
22...	84	--	--	--	--	--	115	--	--	--
JUL										
20...	22	180	41	18	2.8	1.5	139	7.0	2.0	<.1
AUG										
16...	2300	--	--	--	--	--	118	--	--	--
SEP										
14...	160	--	--	--	--	--	138	--	--	--

[illegible]

GASCONADE RIVER BASIN

06930800 GASCONADE RIVER ABOVE JEROME, MO
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

LOCATION.--Lat 37°55'12", long 91°58'33", in NE¼ sec. 24, T.27N, R.10W., Phelps County, Hydrologic Unit 10290203, at bridge on County Highway D at Jerome, 150 ft (46 m) upstream from Little Piney Creek, 0.7 mi (1.1 km) upstream from gaging station.

DRAINAGE AREA.--2570 mi² (6660 km²).

PERIOD OF RECORD.--January 1978 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (FTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED 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 12...	1400	762	330	8.1	11.5	1.6	11.0	101	4	2
JAN 12...	1330	924	354	8.2	1.0	1.5	12.4	87	2	11
MAR 25...	0900	2200	278	8.1	13.0	4.0	10.0	94	21	--
MAY 18...	1230	1110	320	8.0	22.0	1.3	7.0	80	17	84
JUL 21...	1300	648	300	8.3	28.0	3.1	7.4	94	140	150
SEP 15...	1145	769	294	7.9	22.5	5.0	6.2	70	130	240

DATE	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS, NONCAR- BONATE (MG/L CACO3) (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	PERCENT SODIUM (00932)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LITY FIELD (MG/L AS CACO3) (00410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
NOV 12...	180	12	40	20	2.7	3	.1	1.9	151	<5.0
JAN 12...	190	8	39	22	2.8	3	.1	1.6	171	6.0
MAR 25...	150	15	30	17	2.2	3	.1	1.7	130	<5.0
MAY 18...	170	24	35	21	2.6	3	.1	1.6	150	5.0
JUL 21...	160	18	32	19	2.5	3	.1	1.9	140	7.0
SEP 15...	150	9	30	18	2.7	4	.1	1.8	140	8.0

GASCONADE RIVER BASIN

069030800 GASCONADE RIVER ABOVE JEROME, MO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)
NOV 12...	5.2	.1	5.3	152	--	.21	313	.26	.150
JAN 12...	5.6	.2	5.4	194	191	.26	484	.56	<.070
MAR 25...	5.1	.1	5.4	155	--	.21	921	.56	<.060
MAY 18...	4.6	<.1	5.5	184	178	.25	551	.19	.070
JUL 21...	4.1	<.1	7.2	167	166	.23	292	.23	.060
SEP 15...	4.2	<.1	7.6	155	159	.21	322	.24	<.060

DATE	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4) (71846)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS TOTAL (MG/L AS PO4) (71886)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P) (00671)	SEDI- MENT, DIS- SUS- PENDED (MG/L) (80154)	SEDI- MENT, CHARGE, SUS- PENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
NOV 12...	.19	.30	.010	.03	.010	.050	11	23	38
JAN 12...	.09	.54	<.010	--	.010	<.010	12	30	42
MAR 25...	.08	.53	.030	.09	.020	.020	75	445	48
MAY 18...	.09	.66	.270	.83	.170	.010	0	30	13
JUL 21...	.08	1.20	.030	.09	.020	.020	9	16	46
SEP 15...	.08	.60	.060	.18	.040	.030	23	48	95

GASCONADE RIVER BASIN

069030800 GASCONADE RIVER ABOVE JEROME, MO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC SUS- PENDE TOTAL (UG/L AS AS) (01001)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	BARIUM, SUS- PENDE RECOV- ERABLE (UG/L AS BA) (01006)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CU) (01027)	CADMIUM DIS- SOLVED (UG/L AS CU) (01025)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	CHRO- MIUM, SUS- PENDE RECOV- ERABLE (UG/L AS CR) (01031)
NOV 12...	<1	--	1	<100	--	58	<1	<1	<10	--
JAN 12...	1	--	<1	100	50	55	1	<1	<10	--
MAY 18...	1	0	1	100	40	61	1	<3	<10	--
JUL 21...	1	0	1	<100	--	58	<1	<1	10	0

DATE	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO) (01037)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU) (01041)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE) (01044)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
NOV 12...	<10	<1	<3	6	0	16	150	120	28
JAN 12...	<10	2	<3	110	100	8	1100	1100	14
MAY 18...	<10	<1	<1	9	8	1	130	120	13
JUL 21...	10	<1	<1	2	1	1	210	190	18

DATE	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB) (01050)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, SUS- PENDE RECOV- ERABLE (UG/L AS MN) (01054)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)
NOV 12...	5	1	4	20	5	15	.2	<.1	1
JAN 12...	14	12	2	20	10	9	.1	<.1	3
MAY 18...	6	--	<1	40	30	14	.1	<.1	3
JUL 21...	<1	--	<1	40	20	17	.1	<.1	4

DATE	NICKEL, SUS- PENDE RECOV- ERABLE (UG/L AS NI) (01066)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN) (01091)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 12...	0	3	<1	<1	<1	<1	40	6	34
JAN 12...	2	1	<1	<1	1	<1	110	100	6
MAY 18...	2	1	<1	<1	<1	<1	10	0	38
JUL 21...	--	<1	<1	<1	<1	3	20	10	7

06932000 LITTLE PINEY CREEK AT NEWBURG, MO

LOCATION.--Lat 37°54'35", long 91°54'12", in SE¼ sec.22, T.37 N., R.9 W., Phelps County, Hydrologic Unit 10290203, on left bank at downstream side of bridge on State Highway P and T at Newburg, and 2 mi (3.2 km) upstream from Mill Creek.

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

PERIOD OF RECORD.--October 1928 to current year.

GAGE.--Water-stage recorder. Datum of gage is 693.40 ft (211.348 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1951, all gages at datum 3.0 ft (0.914 m) higher. Prior to Nov. 21, 1963, nonrecording gage at site 100 ft (30 m) downstream. Nov. 21, 1963, to May 9, 1966, nonrecording gage at present site.

REMARKS.--Records fair except periods of no gage height record which are poor. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--54 years, 149 ft³/s (4.220 m³/s), 10.12 in/yr (257 mm/yr), 108,000 acre-ft/yr (133 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 32,500 ft³/s (920 m³/s) Aug. 14, 1946, gage height, 16.2 ft (4.94 m), present datum from floodmark, from rating curve extended above 21,000 ft³/s (595 m³/s) on basis of slope-area measurements at gage heights 15.0 ft (4.57 m) and 16.2 ft (4.94 m); maximum gage height, 16.26 ft (4.956 m) June 26, 1935, from floodmark, present datum; minimum discharge, 24 ft³/s (0.68 m³/s) Aug. 22-31, 1936, Sept. 19, 20, 1954, Oct. 10-16, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 16.7 ft (5.09 m) Aug. 20, 1915, from floodmark, present datum; discharge, 30,000 ft³/s (850 m³/s), from rating curve based on discharge measurements made in 1935 and extended above 25,000 ft³/s (708 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,980 ft³/s (198 m³/s) at 2230 Jan. 30, gage height, 10.17 ft (3.100 m), no other peak above base of 4,900 ft³/s (139 m³/s); minimum, 40 ft³/s (1.13 m³/s) Aug. 11, 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	50	74	94	143	738	165	122	83	574	104	50	155
2	51	81	69	149	500	163	124	80	458	106	50	143
3	52	113	58	137	403	155	126	79	376	102	50	128
4	53	145	112	126	327	158	116	77	407	102	50	114
5	53	127	124	120	288	145	121	76	407	99	50	103
6	53	112	115	120	244	140	125	77	355	91	50	93
7	50	101	109	110	223	135	124	78	305	84	50	85
8	49	94	100	111	208	131	131	76	267	88	45	83
9	49	90	98	109	193	128	132	75	257	92	45	79
10	48	84	96	107	174	126	125	72	257	92	45	77
11	48	80	94	100	164	126	124	73	213	94	40	75
12	48	78	92	97	159	126	124	72	190	85	40	75
13	47	75	90	87	150	153	123	73	173	84	300	76
14	65	73	90	82	154	342	108	82	158	86	1000	121
15	60	71	88	82	308	462	105	93	165	82	900	116
16	55	69	86	79	1330	342	112	80	163	78	700	93
17	100	66	84	89	1870	267	122	74	143	78	550	86
18	94	64	82	93	736	235	111	303	160	76	400	104
19	88	64	82	67	542	248	115	661	216	77	300	94
20	82	63	80	64	461	222	114	286	155	78	250	86
21	75	61	80	63	396	198	103	316	143	86	200	83
22	106	60	80	117	341	182	98	237	143	81	160	80
23	114	60	150	115	297	171	94	189	112	79	140	82
24	99	58	140	92	258	165	94	157	110	79	120	84
25	93	56	130	88	219	163	96	146	112	78	110	84
26	91	55	120	79	201	148	103	142	110	81	71	83
27	91	52	120	73	187	138	97	274	101	72	843	79
28	83	94	110	73	176	131	88	210	99	64	277	75
29	78	146	102	72	---	137	92	1840	103	55	190	72
30	76	111	93	2700	---	128	88	765	108	55	190	72
31	76	---	89	3530	---	127	---	653	---	55	168	---
TOTAL	2177	2477	3057	9074	11247	5657	3357	7499	6540	2563	7434	2780
MEAN	70.2	82.6	98.6	293	402	182	112	242	218	82.7	240	92.7
MAX	114	146	150	3530	1870	462	132	1840	574	106	1000	155
MIN	47	52	58	63	150	126	88	72	99	55	40	72
CFSM	.35	.41	.49	1.47	2.01	.91	.56	1.21	1.09	.41	1.20	.46
IN	.40	.46	.57	1.69	2.09	1.05	.62	1.39	1.22	.48	1.38	.52
AC-FT	4320	4910	6060	18000	22310	11220	6660	14870	12970	5080	14750	5510

CAL YR 1981 TOTAL 53171 MEAN 146 MAX 2360 MIN 39 CFSM .73 IN 9.89 AC-FT 105500
WTR YR 1982 TOTAL 63862 MEAN 175 MAX 3530 MIN 40 CFSM .88 IN 11.88 AC-FT 126700

GASCONADE RIVER BASIN

06933500 GASCONADE RIVER AT JEROME, MO

LOCATION.--Lat 37°55'35", long 91°58'40", in SE¼ sec.13, T.37 N., R.10 W., Phelps County, Hydrologic Unit 10290203, on left bank at Jerome, 0.5 mi (0.8 km) downstream from Little Piney Creek, and at mile 107 (172.2 km).

DRAINAGE AREA.--2,840 mi² (7,360 km²), approximately.

PERIOD OF RECORD.--April 1903 to July 1906 (published as "at Arlington") and January 1923 to current year. October to December 1922 monthly discharge only, published in WSP 1310. Gageheight records collected intermittently in the vicinity 1885-1926 and at same site since 1938 are contained in reports of National Weather Service.

REVISED RECORDS.--SP 172: 1904. WSP 566: Drainage area. WSP 1340: 190304, 1928(M).

GAGE.--Water-stage recorder. Datum of gage is 657.64 ft (200.449 m) National Geodetic Vertical Datum of 1929. Prior to July 26, 1904, nonrecording gage at site 0.8 mi (1.3 km) downstream at different datum. July 26, 1904, to July 21, 1906, nonrecording gage at site 0.5 mi (0.8 km) upstream from present site at datum about 0.85 ft (0.259 m) higher than present gage. Jan. 3, 1923, to Sept. 29, 1928, nonrecording gage at site 400 ft (122 m) downstream from present site at datum 0.14 ft (0.043 m) lower than present datum. Sept. 30, 1928, to Jan. 17, 1939, nonrecording gage at present site and datum.

REMARKS.--Records good. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--62 years (1903-05, 1922-82), 2,461 ft³/s (69.70 m³/s), 11.77 in/yr (299 mm/yr), 1,783,000 acre-ft/yr (2,200 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 101,000 ft³/s (2,860 m³/s) Apr. 15, 1945, gage height, 27.7 ft (8.44 m); minimum, 254 ft³/s (7.19 m³/s) Sept. 21, 22, 1956, gage height, 1.24 ft (0.378 m).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jan. 6, 1897 reached a stage about 29.0 ft (8.84 m) Jan. 6, 1897, discharge, 120,000 ft³/s (3,400 m³/s). A stage of 28.6 ft (8.72 m) was reached on Aug. 20, 22, 1915, discharge, 114,000 ft³/s (3,230 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 16,000 ft³/s (453 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Feb. 1	2100	*29,900 847	16.39 4.996
Feb. 18	0745	16,600 470	11.52 3.511

Minimum, 436 ft³/s (12.3 m³/s) Oct. 3, 4, gage height, 1.58 ft (0.482 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	456	1150	1580	1310	26100	2190	1570	1060	5450	1580	630	1830
2	448	1180	1570	1250	27800	2050	1510	1090	5790	1550	615	1620
3	443	1240	1490	1300	18200	1950	1580	1140	4800	1510	600	1600
4	444	1220	1440	1420	7370	1880	1530	1150	4250	1440	592	1470
5	456	1170	1380	1470	5700	1780	1500	1120	10200	1390	577	1290
6	461	1120	1300	1500	4620	1690	1440	1100	8620	1270	584	1170
7	451	1060	1200	1540	3890	1620	1370	1080	6800	1210	600	1080
8	446	1010	1110	1530	3370	1540	1380	1050	5220	1180	668	1040
9	454	985	1040	1360	3000	1470	1380	1040	4170	1100	653	980
10	457	972	972	1170	2660	1410	1420	1090	4810	1190	630	934
11	456	925	921	1170	2420	1390	1420	1040	4910	1070	622	890
12	457	885	885	1100	2220	1340	1380	1000	3630	974	661	847
13	467	843	851	1100	2030	1400	1360	968	3040	958	1940	822
14	517	814	824	1090	1930	1830	1310	1000	2660	937	1890	899
15	548	794	801	1040	2230	3920	1260	1100	2400	1010	5040	925
16	560	768	779	1030	4540	6380	1240	1110	2270	941	3910	830
17	727	749	766	1310	11200	6510	1230	1220	2710	878	2510	797
18	916	732	739	889	15200	5620	1190	1780	4080	833	1820	864
19	1110	718	723	890	11400	4840	1170	3400	3960	802	1480	813
20	1280	704	702	869	7920	4160	1170	4050	3540	785	1270	772
21	1420	676	694	837	6190	3580	1130	3260	2850	804	1130	747
22	1400	662	778	926	5120	3110	1110	2700	2410	754	1040	723
23	1380	654	1200	1000	4350	2780	1080	2280	2110	722	970	708
24	1510	640	1370	1230	3810	2530	1050	1940	1970	695	925	692
25	1750	629	1930	1910	3250	2380	1050	1750	2000	683	890	676
26	2010	628	2130	2180	2870	2170	1060	1600	1680	677	856	669
27	1790	628	2050	1990	2600	2020	1050	1870	1700	656	2110	661
28	1590	617	1910	1830	2360	1870	1020	2060	1680	646	2160	653
29	1450	616	1700	1830	---	1750	1030	4830	1820	638	2220	633
30	1300	889	1530	4660	---	1610	1040	6190	1710	630	1930	626
31	1200	---	1410	15900	---	1640	---	5680	---	622	1840	---
TOTAL	28354	25678	37775	58631	194350	80410	38030	61748	113240	30125	43363	28261
MEAN	915	856	1219	1891	6941	2594	1268	1992	3775	972	1399	942
MAX	2010	1240	2130	15900	27800	6510	1580	6190	10200	1580	5040	1830
MIN	443	616	694	837	1930	1340	1020	968	1680	622	577	626
CFSM	.32	.30	.43	.67	2.44	.91	.45	.70	1.33	.34	.49	.33
IN.	.37	.34	.49	.77	2.55	1.05	.50	.81	1.48	.39	.57	.37
AC-FT	56240	50930	74930	116300	365500	159500	75430	122500	224600	59750	86010	56060

CAL YR 1981 TOTAL 620371 MEAN 1700 MAX 24300 MIN 443 CFSM .60 IN 8.13 AC-FT 1231000
WTR YR 1982 TOTAL 739965 MEAN 2027 MAX 27800 MIN 443 CFSM .71 IN 9.69 AC-FT 1468000

06934500 MISSOURI RIVER AT HERMANN, MO

LOCATION.--Lat 38°42'36", long 91°26'21", in SW¼ sec.25, T.46 N., R.5 W., Montgomery County, Hydrologic Unit 10300200, on downstream side of third pier from right abutment of bridge on State Highway 19 at Hermann. River mile, 97.9 (157.5 km).

DRAINAGE AREA.--524,200 mi² (1,358,000 km²) approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1897 to current year. Prior to August 1928 monthly discharge only published in WSP 1310. Gage-height records 1873-99 collected at site 480 ft (146 m) downstream are contained in reports of Missouri River Commission; since 1900 in reports of National Weather Service.

REVISED RECORDS.--WDR MO-76-1: Drainage area.

GAGE.--Water-stage recorder and nonrecording gage. Datum of gage is 481.56 ft (146.779 m) National Geodetic Vertical Datum of 1929. Prior to Sept. 26, 1930, nonrecording gage at site 480 ft (146 m) downstream at datum 0.07 ft (0.021 m) lower. Sept. 26, 1930, to Mar. 27, 1932, nonrecording gage, Mar. 28, 1932, to June 12, 1945, water-stage recorder, June 13, 1945, to Apr. 2, 1946, May 13 to Sept. 30, 1978, nonrecording gage at present site and datum.

REMARKS.--Records good. Discharge measurements made weekly except during ice-flow periods. Some regulation from many upstream reservoirs.

AVERAGE DISCHARGE.--85 years, 79,570 ft³/s (2,250 m³/s), 57,650,000 acre-ft/yr (71,080 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 676,000 ft³/s (19,140 m³/s) June 6, 7, 1903, gage height, 21.5 ft (8.99 m), discharge computed by Corps of Engineers; maximum gage height, 33.70 ft (10.272 m) Apr. 25, 1973; minimum, about 4,200 ft³/s (119 m³/s) Jan. 10-12, 1940; minimum gage height observed, -0.80 ft (-0.244 m) Jan. 5, 6, 1940.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 1844 reached a stage of 35.5 ft (10.82 m), discharge, about 892,000 ft³/s (25,260 m³/s) computed by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 298,900 ft³/s (8,460 m³/s) June 11, gage height, 28.24 ft (8.608 m); minimum daily, 13,900 ft³/s (394 m³/s) Jan. 15, 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	51100	46900	46900	37600	177000	112000	100000	52900	267000	142000	66200	160000	
2	49800	50500	53600	35000	156000	102000	93600	54100	284000	140000	65800	207000	
3	47800	70200	67800	42400	138000	98900	96900	54300	287000	148000	68500	210000	
4	46200	111000	78300	47000	132000	93000	92800	54300	280000	189000	72000	179000	
5	46500	114000	77400	48100	118000	89000	95500	53300	280000	203000	71100	148000	
6	47000	101000	66000	45400	97900	85500	97400	52900	267000	186000	66500	121000	
7	47000	89500	57600	41500	83400	79400	99000	54300	235000	165000	67000	100000	
8	48600	84200	54400	39800	75600	71600	97400	63000	224000	151000	70800	89000	
9	48900	78700	52900	40400	67400	64000	90200	95900	251000	142000	64400	88300	
10	47900	73500	47900	42600	66200	58700	80700	97000	288000	156000	63200	88300	
11	47000	67600	50700	49200	58800	54700	70900	83800	295000	156000	66400	86600	
12	46300	63500	47500	28900	58700	57900	67200	73600	292000	137000	63800	80100	
13	45900	60400	43900	24400	64500	61000	64200	68000	290000	131000	61000	74100	
14	45800	56300	37900	17800	67000	66500	65200	66300	279000	139000	81300	86800	
15	46600	54400	40300	14400	69800	93900	64300	83800	256000	138000	184000	99200	
16	56600	48500	48100	13900	95600	125000	63100	130000	234000	136000	209000	102000	
17	72500	46000	47200	13900	116000	155000	69500	147000	216000	130000	177000	107000	
18	67500	50800	48900	14000	140000	155000	72700	155000	219000	135000	157000	115000	
19	59000	51000	53800	16400	167000	144000	84800	164000	227000	139000	129000	100000	
20	55600	50400	55100	14900	198000	143000	96200	156000	225000	137000	105000	92000	
21	53400	50000	51900	16100	220000	140000	86600	159000	203000	139000	94000	95600	
22	52400	48200	46600	21800	223000	164000	74600	159000	180000	135000	84000	98200	
23	52100	44600	40000	24100	229000	190000	70000	176000	165000	141000	76000	90300	
24	57200	39900	36600	24700	231000	180000	66000	207000	153000	138000	81000	83000	
25	60000	50000	41000	22400	225000	167000	64000	201000	145000	121000	82000	75000	
26	58700	47400	39000	27300	216000	146000	62000	172000	139000	104000	83500	70000	
27	58900	42300	35400	34400	193000	130000	58000	163000	134000	96500	121000	65000	
28	61100	35500	34800	34900	147000	112000	54000	192000	130000	87000	164000	63300	
29	58000	33000	33000	36300	---	105000	53600	210000	127000	81300	146000	64600	
30	51300	33100	40900	94300	---	100000	52600	216000	132000	73600	125000	63700	
31	47800	---	46100	197000	---	102000	---	241000	---	68400	138000	---	
TOTAL	1634700	1792400	1521500	1160900	3830900	3446100	2303000	3855500	6704000	4184800	3103500	3102100	
MEAN	52730	59750	49080	37450	136800	111200	76770	124400	223500	135000	100100	103400	
MAX	72500	114000	78300	197000	231000	190000	100000	241000	295000	203000	209000	210000	
MIN	45800	33000	33000	13900	58700	54700	52600	52900	127000	68400	61000	63300	
CFSM	.10	.11	.09	.07	.26	.21	.15	.24	.43	.26	.19	.20	
IN	.12	.13	.11	.08	.27	.24	.16	.27	.48	.30	.22	.22	
AC-FT	5242000	3555000	3018000	2303000	7599000	6835000	4568000	7647000	13300000	8301000	6156000	6153000	
CAL YR 1981 TOTAL	24841100	MEAN	68060	MAX	271000	MIN	22000	CFSM	.13	IN	1.76	AC-FT	49270000
WTR YR 1982 TOTAL	36639400	MEAN	100400	MAX	295000	MIN	13900	CFSM	.19	IN	2.60	AC-FT	72670000

MISSOURI RIVER MAIN STEM

06934500 MISSOURI RIVER AT HERMANN, MO--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--July 1969 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1974 to current year.

WATER TEMPERATURE: October 1974 to current year.

REMARKS.--Water temperature and specific conductance samples collected daily by observer.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: (water years 1976-82) Maximum daily, 1250 micromhos Dec. 9, 1978; minimum daily, 205 micromhos April 16, 1979.

WATER TEMPERATURE: (water years 1976-82) Maximum daily, 32.0°C July 14, 17, 18, 19, 20, 1980; minimum daily 0.0°C on many days during winter period.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 830 micromhos Jan. 26; minimum daily, 300 micromhos June 14, Sept. 4.

WATER TEMPERATURE: Maximum daily, 31.0°C Aug. 4, minimum daily, 0.0°C Dec. 24, Jan. 4, 9, 11, 14, 15, 17, 18, 24, Feb. 3, 7, 9.

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (FTU) (00076)	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 17...	1130	45300	648	8.0	9.0	36	9.8	64	1000	150
JAN 27...	1100	35900	621	7.9	.5	16	11.0	70	240	1500
MAR 24...	1030	165000	332	7.8	9.0	1000	7.0	60	2800	15000
MAY 19...	1000	109000	424	7.8	19.0	990	6.2	66	6400	24000
JUL 22...	1030	134000	450	8.0	27.0	370	5.4	68	1800	140
SEP 16...	1030	102000	514	8.0	21.0	78	7.0	78	14000	5400

DATE	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS, NONCAR- BONATE (MG/L AS CA) (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	PERCENT SODIUM (00932)	SODIUM AD- SURP- TION RAILU (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LILITY FIELD (MG/L AS CACO3) (00410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
NOV 17...	230	130	59	19	48	31	1.5	6.4	160	150
JAN 27...	220	48	58	19	43	29	1.4	6.4	172	110
MAR 24...	140	34	41	10	15	18	.6	5.6	110	51
MAY 19...	160	34	46	12	24	23	.9	6.7	130	71
JUL 22...	170	49	48	12	27	23	1.0	6.2	120	78
SEP 16...	170	44	45	15	37	31	1.3	5.8	130	100

MISSOURI RIVER MAIN STEM

06934500 MISSOURI RIVER AT HERMANN, MO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4) (71646)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, TOTAL (MG/L AS P) (71636)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS, DITHIO, DIS- SOLVED (MG/L AS P) (00671)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
NOV 17...	.18	.61	.110	.34	.110	.080	206	25200	41
JAN 27...	.53	1.50	.100	.31	.040	.130	167	16200	9
MAR 24...	.28	2.50	.290	.89	.070	.060	4640	2070000	61
MAY 19...	.13	3.70	2.70	5.3	.200	.070	4060	1860000	89
JUL 22...	.14	.50	.700	2.1	.110	.190	1610	562000	70
SEP 16...	.10	1.50	.340	1.0	.120	.100	534	147000	72

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 100 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)
NOV 17...	21	.4	9.2	410	409	.56	50100	.71	.140
JAN 27...	26	.4	11	387	376	.53	37500	.78	.410
MAR 24...	15	.3	8.9	219	207	.30	97600	1.5	.220
MAY 19...	12	.4	9.0	281	253	.38	126000	1.9	.100
JUL 22...	13	.3	10	274	268	.37	99100	1.7	.110
SEP 16...	14	.3	9.8	360	303	.49	99100	.71	.080

MISSOURI RIVER MAIN STEM

06934500 MISSOURI RIVER AT HERMANN, MO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC SUS- PENDE TOTAL (UG/L AS AS) (01001)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	BARIIUM, SUS- PENDE RECOV- ERABLE (UG/L AS BA) (01006)	BARIIUM, DIS- SOLVED (UG/L AS BA) (01005)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CADMIUM SUS- PENDE RECOV- ERABLE (UG/L AS CD) (01026)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)
NOV 17...	4	1	3	200	100	96	3	--	<1	<10
JAN 27...	2	0	2	100	0	100	2	--	<1	10
MAY 19...	16	14	2	1000	900	110	4	0	8	60
JUL 22...	9	7	2	400	300	120	930	860	68	30

DATE	CHRO- MIUM, SUS- PENDE RECOV- ERABLE (UG/L AS CR) (01031)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO) (01037)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU) (01041)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE) (01044)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
NOV 17...	--	<10	1	<3	13	9	4	2700	2700	23
JAN 27...	--	<10	1	<3	13	10	3	1500	1400	70
MAY 19...	--	<10	22	<1	100	97	3	61000	61000	83
JUL 22...	20	10	9	<1	75	70	5	22000	22000	49

DATE	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB) (01050)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, SUS- PENDE RECOV- ERABLE (UG/L AS MN) (01054)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG) (71895)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)
NOV 17...	5	4	1	170	160	11	.1	--	<.1	6
JAN 27...	10	8	2	90	60	32	.7	--	<.1	15
MAY 19...	22	--	<1	2800	2800	6	.2	--	<.1	34
JUL 22...	53	--	<1	870	870	4	.2	.1	.1	27

DATE	NICKEL, SUS- PENDE RECOV- ERABLE (UG/L AS NI) (01066)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE) (01147)	SELE- NIUM, SUS- PENDE RECOV- ERABLE (UG/L AS SE) (01146)	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, SUS- PENDE RECOV- ERABLE (UG/L AS ZN) (01091)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 17...	4	2	1	0	1	<1	<1	40	30	6
JAN 27...	10	5	1	0	1	<1	1	40	10	28
MAY 19...	32	2	15	14	1	1	<1	260	0	<3
JUL 22...	26	1	<1	--	<1	<1	<1	120	120	3

MISSOURI RIVER MAIN STEM

06934500 MISSOURI RIVER AT HERMANN, MO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	PCB, TOTAL (UG/L) (39516)	PCB, TOTAL IN BOT- TUM MA- TERIAL (UG/KG) (39519)	ALDRIN, TOTAL (UG/L) (39330)	ALDRIN, TOTAL IN BOT- TUM MA- TERIAL (UG/KG) (39333)	CHLOR- DANE, TOTAL (UG/L) (39350)	CHLOR- DANE, TOTAL IN BOT- TUM MA- TERIAL (UG/KG) (39351)	DDD, TOTAL (UG/L) (39360)	DDD, TOTAL IN BOT- TUM MA- TERIAL (UG/KG) (39363)	DDE, TOTAL (UG/L) (39365)	DDE, TOTAL IN BOT- TUM MA- TERIAL (UG/KG) (39368)	DDT, TOTAL (UG/L) (39370)	DDT, TOTAL IN BOT- TUM MA- TERIAL (UG/KG) (39373)
	PCB, TOTAL (UG/L) (39516)	PCB, TOTAL IN BOT- TUM MA- TERIAL (UG/KG) (39519)	ALDRIN, TOTAL (UG/L) (39330)	ALDRIN, TOTAL IN BOT- TUM MA- TERIAL (UG/KG) (39333)	CHLOR- DANE, TOTAL (UG/L) (39350)	CHLOR- DANE, TOTAL IN BOT- TUM MA- TERIAL (UG/KG) (39351)	DDD, TOTAL (UG/L) (39360)	DDD, TOTAL IN BOT- TUM MA- TERIAL (UG/KG) (39363)	DDE, TOTAL (UG/L) (39365)	DDE, TOTAL IN BOT- TUM MA- TERIAL (UG/KG) (39368)	DDT, TOTAL (UG/L) (39370)	DDT, TOTAL IN BOT- TUM MA- TERIAL (UG/KG) (39373)
JAN 27...	.00	--	.00	--	.00	--	.00	--	.00	--	.00	--
MAY 19...	--	<1	--	<.1	--	<1.0	--	<.1	--	<.1	--	<.1

DATE	DI- AZINON, TOTAL (UG/L) (39570)	DI- ELDRIN TOTAL (UG/L) (39380)	DI- ELDRIN, TOTAL IN BOT- TUM MA- TERIAL (UG/KG) (39383)	ENDO- SULFAN, TOTAL (UG/L) (39388)	ENDRIN, TOTAL (UG/L) (39390)	ENDRIN, TOTAL IN BOT- TUM MA- TERIAL (UG/KG) (39393)	ETHION, TOTAL (UG/L) (39398)	HEPTA- CHLOR, TOTAL (UG/L) (39410)	HEPTA- CHLOR, TOTAL IN BOT- TUM MA- TERIAL (UG/KG) (39413)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L) (39420)	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MAIL. (UG/KG) (39423)
	DI- AZINON, TOTAL (UG/L) (39570)	DI- ELDRIN TOTAL (UG/L) (39380)	DI- ELDRIN, TOTAL IN BOT- TUM MA- TERIAL (UG/KG) (39383)	ENDO- SULFAN, TOTAL (UG/L) (39388)	ENDRIN, TOTAL (UG/L) (39390)	ENDRIN, TOTAL IN BOT- TUM MA- TERIAL (UG/KG) (39393)	ETHION, TOTAL (UG/L) (39398)	HEPTA- CHLOR, TOTAL (UG/L) (39410)	HEPTA- CHLOR, TOTAL IN BOT- TUM MA- TERIAL (UG/KG) (39413)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L) (39420)	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MAIL. (UG/KG) (39423)
JAN 27...	.01	.00	--	.00	.00	--	.00	.00	--	.00	--
MAY 19...	--	--	<.1	--	--	<.1	--	--	<.1	--	<.1

DATE	LINDANE TOTAL (UG/L) (39340)	LINDANE TOTAL IN BOT- TUM MA- TERIAL (UG/KG) (39343)	MALA- THIUN, TOTAL (UG/L) (39530)	METH- OXY- CHLOR, TOTAL (UG/L) (39480)	METH- OXY- CHLOR, TOTAL IN BOT- TUM MA- TERIAL (UG/KG) (39481)	METHYL PARA- THIUN, TOTAL (UG/L) (39600)	METHYL TRI- THIUN, TOTAL (UG/L) (39790)	PARA- THIUN, TOTAL (UG/L) (39540)	TOX- APHENE, TOTAL (UG/L) (39400)	TOXA- PHENE, TOTAL IN BOT- TUM MA- TERIAL (UG/KG) (39403)	TOTAL TRI- THIUN (UG/L) (39786)
	LINDANE TOTAL (UG/L) (39340)	LINDANE TOTAL IN BOT- TUM MA- TERIAL (UG/KG) (39343)	MALA- THIUN, TOTAL (UG/L) (39530)	METH- OXY- CHLOR, TOTAL (UG/L) (39480)	METH- OXY- CHLOR, TOTAL IN BOT- TUM MA- TERIAL (UG/KG) (39481)	METHYL PARA- THIUN, TOTAL (UG/L) (39600)	METHYL TRI- THIUN, TOTAL (UG/L) (39790)	PARA- THIUN, TOTAL (UG/L) (39540)	TOX- APHENE, TOTAL (UG/L) (39400)	TOXA- PHENE, TOTAL IN BOT- TUM MA- TERIAL (UG/KG) (39403)	TOTAL TRI- THIUN (UG/L) (39786)
JAN 27...	.00	--	.00	.00	--	.00	.00	.00	0	--	.00
MAY 19...	--	<.1	--	--	<.1	--	--	--	--	<10	--

DATE	2,4-D, TOTAL (UG/L) (39730)	2,4,5-T TOTAL (UG/L) (39740)	SILVEX, TOTAL (UG/L) (39760)	PER- THANE TOTAL (UG/L) (39034)	PER- THANE IN BOTTOM MATERIAL (UG/KG) (81886)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L) (39250)	PCN, TOTAL IN BOT- TUM MA- TERIAL (UG/KG) (39251)	ENDO- SULFAN, TOTAL IN BOT- TUM MA- TERIAL (UG/KG) (39389)	MIREX, TOTAL IN BOT- TUM MA- TERIAL (UG/L) (39755)	MIREX, TOTAL IN BOT- TUM MA- TERIAL (UG/KG) (39758)	2, 4-DP TOTAL (UG/L) (82183)
	2,4-D, TOTAL (UG/L) (39730)	2,4,5-T TOTAL (UG/L) (39740)	SILVEX, TOTAL (UG/L) (39760)	PER- THANE TOTAL (UG/L) (39034)	PER- THANE IN BOTTOM MATERIAL (UG/KG) (81886)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L) (39250)	PCN, TOTAL IN BOT- TUM MA- TERIAL (UG/KG) (39251)	ENDO- SULFAN, TOTAL IN BOT- TUM MA- TERIAL (UG/KG) (39389)	MIREX, TOTAL IN BOT- TUM MA- TERIAL (UG/L) (39755)	MIREX, TOTAL IN BOT- TUM MA- TERIAL (UG/KG) (39758)	2, 4-DP TOTAL (UG/L) (82183)
JAN 27...	.20	.03	.00	.00	--	.00	--	--	.00	--	.00
MAY 19...	--	--	--	--	<1.00	--	<1.0	<.1	--	<.1	--

MISSOURI RIVER MAIN STEM

06934500 MISSOURI RIVER AT HERMANN, MO--Continued

SPECIFIC CONDUCTANCE (MICROMHUS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	772	775	535	583	---	400	535	734	358	540	614	403
2	721	755	615	620	325	410	535	738	341	490	637	412
3	741	715	515	580	320	402	490	729	341	471	612	350
4	776	590	545	570	330	420	500	734	332	495	630	300
5	769	585	555	550	360	440	550	736	346	415	639	345
6	756	542	535	570	391	460	515	734	354	395	649	390
7	763	520	520	625	430	485	525	742	367	420	658	430
8	770	550	515	625	450	505	545	722	390	445	678	470
9	775	605	485	500	505	505	570	698	384	465	670	530
10	775	625	565	651	515	507	605	581	346	445	688	560
11	766	640	550	590	565	510	665	546	335	475	713	575
12	762	653	520	585	595	505	675	538	---	512	710	605
13	770	655	575	535	595	510	690	568	301	522	695	625
14	775	660	660	655	595	510	675	589	300	---	662	570
15	770	660	620	742	605	450	685	611	318	---	555	560
16	775	685	570	710	560	420	690	---	344	510	424	535
17	688	690	585	730	485	365	655	511	369	477	363	640
18	605	640	565	725	525	375	665	480	409	453	358	585
19	620	620	565	715	465	380	635	444	416	420	380	500
20	653	630	615	735	395	380	630	416	357	417	394	500
21	685	630	630	745	435	375	550	434	365	413	402	500
22	715	637	625	765	390	360	504	436	379	455	429	540
23	735	673	555	705	355	380	551	451	397	460	501	555
24	700	725	665	730	340	350	570	518	427	465	548	550
25	670	620	620	770	330	360	620	430	447	470	581	---
26	680	655	620	830	332	355	660	384	457	475	540	---
27	710	695	670	690	351	380	670	---	467	480	514	---
28	702	662	536	725	367	420	685	---	497	504	412	---
29	722	725	583	775	---	480	731	409	515	540	452	---
30	735	---	592	541	---	510	730	397	528	589	448	---
31	770	---	446	---	---	512	---	406	---	603	408	---
MEAN	730	649	573	662	441	433	610	561	386	477	547	501

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21.0	13.0	7.0	1.0	---	2.0	13.0	17.0	19.5	25.0	28.0	24.0
2	20.5	13.5	7.0	2.0	1.5	6.5	13.5	17.0	19.5	26.0	29.5	24.0
3	19.5	14.0	7.0	2.0	.0	5.0	13.0	17.0	19.5	26.0	30.0	24.0
4	20.0	14.5	7.0	.0	1.0	4.5	10.5	19.0	19.0	26.5	31.0	24.0
5	21.0	14.0	6.5	4.0	.5	5.0	11.0	19.5	20.0	26.0	30.5	24.0
6	20.0	14.5	7.0	2.0	1.5	7.0	11.0	19.0	19.0	27.0	29.0	25.0
7	19.0	14.0	8.0	1.0	.0	3.5	8.5	18.5	20.0	28.0	29.0	25.0
8	19.0	13.5	8.0	2.0	2.0	5.0	8.5	18.5	21.0	27.5	29.0	25.5
9	17.5	12.5	7.0	.0	.0	4.5	9.5	18.5	20.0	27.0	28.0	25.0
10	18.0	12.0	5.0	.5	1.0	5.5	10.0	19.0	19.0	26.0	27.0	25.0
11	18.0	12.0	6.0	.0	4.0	8.0	10.0	19.5	20.5	26.5	26.0	25.0
12	17.0	11.0	6.0	1.0	1.0	8.0	12.5	19.5	---	26.0	25.5	25.0
13	17.5	11.0	5.0	1.5	2.0	9.0	13.0	19.5	21.0	23.5	24.5	25.0
14	17.0	11.0	6.0	.0	4.0	8.0	12.5	19.5	22.0	---	25.0	24.0
15	17.5	10.5	4.5	.0	4.5	8.5	14.5	19.5	22.0	---	23.5	23.5
16	17.0	10.5	5.0	.5	3.0	12.0	15.0	---	23.0	27.5	24.0	24.0
17	17.0	11.0	4.5	.0	2.5	12.0	15.0	20.5	23.0	26.0	24.0	24.5
18	15.0	11.5	2.5	.0	2.0	11.0	14.5	20.5	23.0	26.0	24.5	23.0
19	16.5	11.5	4.0	2.0	4.0	10.0	15.0	22.5	22.0	28.0	25.5	22.0
20	15.0	9.0	2.5	1.5	4.0	12.5	15.5	22.0	21.0	28.0	26.0	20.5
21	15.0	9.0	3.0	2.0	3.0	9.5	15.0	21.5	22.5	28.0	26.0	20.5
22	14.0	8.0	1.5	1.5	4.5	8.5	15.0	21.5	23.5	28.5	26.0	20.0
23	13.0	10.0	1.0	1.0	6.5	10.5	15.0	20.5	24.0	27.0	26.0	19.5
24	12.0	8.5	.0	.0	4.0	10.0	16.0	21.0	24.0	29.0	25.5	19.5
25	12.5	9.5	1.0	1.0	3.0	9.5	16.0	20.0	23.5	26.0	26.5	---
26	12.0	11.0	2.0	1.0	5.0	10.5	16.0	20.5	25.0	29.0	24.0	---
27	11.5	9.5	1.0	1.5	5.0	9.5	17.0	---	24.0	29.0	25.0	---
28	10.0	8.5	2.0	3.5	4.0	9.0	16.5	---	25.0	29.0	23.5	---
29	13.0	7.5	1.5	2.0	---	9.0	15.0	21.0	25.0	29.0	24.0	---
30	13.0	---	2.0	1.0	---	12.0	16.5	20.5	25.0	29.5	24.0	---
31	14.5	---	3.0	---	---	11.5	---	20.5	---	29.0	24.0	---
MEAN	16.0	11.0	4.5	1.0	2.5	8.5	13.5	20.0	22.0	27.0	26.5	23.5
WTR YR 1982	MEAN	14.5		MAX	31.0		MIN	.0				

MISSISSIPPI RIVER MAIN STEM

07010000 MISSISSIPPI RIVER AT ST. LOUIS, MO

LOCATION.--Lat 38°37'44", long 90°10'47", Hydrologic Unit 07140101, on downstream side of west pier of Eads Bridge at St. Louis, 15 mi (24 km) downstream from Missouri River, 19.2 mi (30.9 km) upstream from Meramec River, and at mile 180.0 (289.6 km) above the Ohio River.

DRAINAGE AREA --697,000 mi² (1,805,000 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Discharge: January 1861 to current year. Monthly discharge only for some periods, published in WSP 1311.

Gage heights: March 1933 to current year in reports of Geological Survey. Since January 1861 in reports of Mississippi River Commission. Since January 1890 in reports of National Weather Service.

REVISED RECORDS.--WRD MO-76-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 379.94 ft (115.806 m) National Geodetic Vertical Datum of 1929. Prior to May 5, 1934, nonrecording gage 0.4 mi (0.6 km) downstream and May 5, 1934, to Dec. 9, 1952, water-stage recorder at site 20 ft (6 m) downstream at present datum.

REMARKS.--Records excellent. Natural flow of stream affected by many reservoirs and navigation dams in upper Mississippi River basin and by many reservoirs and diversions for irrigation in Missouri River basin.

AVERAGE DISCHARGE.--121 years, 177,300 ft³/s (5,021 m³/s), 128,500,000 acre-ft/yr (158 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 1,019,000 ft³/s (28,900 m³/s) June 10, 11, 1903, gage height, 38.00 ft (11.582 m); maximum gage height, 43.23 ft (13.176 m) Apr. 28, 1973; minimum daily discharge, 18,000 ft³/s (510 m³/s) Dec. 21-23, 1863; minimum gage height, -6.11 ft (-1.862 m) Jan. 16, 1940.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 27, 1844, reached a stage of 41.32 ft (12.594 m), from floodmarks, discharge, 1,300,000 ft³/s (36,800 m³/s), computed by Corps of Engineers. Flood in April 1785 may have reached a stage of 42.0 ft (12.80 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 546,000 ft³/s (15,460 m³/s) June 12 at 1000, maximum gage height, 32.27 ft (9.836 m) June 12 at 1000; minimum daily, 68,300 ft³/s (1,934 m³/s) Jan. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	135000	153000	120000	97200	345000	347000	359000	323000	468000	252000	198000	237000		
2	124000	148000	130000	100000	300000	319000	351000	321000	488000	253000	188000	297000		
3	125000	146000	158000	103000	257000	302000	357000	322000	503000	257000	177000	351000		
4	126000	193000	181000	116000	235000	296000	354000	319000	515000	329000	176000	332000		
5	120000	284000	185000	112000	222000	282000	347000	316000	516000	386000	176000	285000		
6	123000	283000	182000	117000	211000	266000	344000	311000	509000	400000	177000	250000		
7	118000	248000	173000	112000	180000	250000	339000	304000	495000	391000	189000	221000		
8	118000	209000	156000	104000	155000	231000	336000	293000	466000	372000	215000	194000		
9	134000	185000	146000	105000	143000	221000	332000	286000	466000	342000	213000	173000		
10	131000	173000	134000	94000	138000	210000	324000	306000	481000	333000	211000	165000		
11	130000	157000	121000	97000	123000	200000	312000	307000	500000	346000	195000	152000		
12	126000	149000	124000	99900	117000	216000	303000	289000	506000	311000	176000	142000		
13	123000	144000	125000	93300	110000	242000	300000	271000	502000	267000	160000	141000		
14	128000	139000	122000	84100	113000	259000	299000	258000	491000	261000	153000	144000		
15	136000	130000	113000	81800	117000	288000	304000	248000	476000	269000	165000	151000		
16	156000	132000	107000	75600	131000	335000	312000	257000	452000	281000	284000	178000		
17	174000	126000	124000	72800	188000	381000	321000	302000	420000	292000	322000	191000		
18	179000	124000	104000	72900	235000	423000	334000	317000	394000	287000	285000	202000		
19	170000	129000	93000	69400	288000	442000	355000	325000	389000	303000	257000	216000		
20	165000	134000	89800	68300	348000	450000	384000	329000	394000	327000	217000	209000		
21	164000	118000	97800	69500	376000	455000	406000	328000	394000	347000	179000	207000		
22	166000	127000	104000	73100	409000	463000	408000	344000	373000	366000	167000	192000		
23	167000	124000	99600	77600	435000	488000	395000	357000	335000	374000	154000	191000		
24	153000	127000	89200	81800	451000	497000	360000	380000	287000	383000	138000	178000		
25	155000	107000	87300	87100	456000	487000	370000	403000	262000	374000	138000	163000		
26	161000	124000	90300	83700	448000	470000	361000	401000	250000	338000	148000	155000		
27	164000	124000	98200	79100	423000	446000	347000	385000	242000	291000	163000	151000		
28	163000	113000	98100	83400	391000	422000	339000	384000	242000	266000	209000	142000		
29	164000	106000	96600	90600	---	399000	332000	417000	252000	247000	247000	138000		
30	159000	108000	95300	137000	---	382000	326000	436000	258000	227000	231000	132000		
31	157000	---	96800	268000	---	372000	---	446000	---	209000	211000	---		
TOTAL	4514000	4564000	3741000	3006200	7345000	10841000	10331000	10285000	12326000	9681000	6119000	5880000		
MEAN	145600	152100	120700	96970	262300	349700	344400	331800	410900	312300	197400	196000		
MAX	179000	284000	185000	268000	456000	497000	408000	446000	516000	400000	322000	351000		
MIN	118000	106000	87300	68300	110000	200000	299000	248000	242000	209000	138000	132000		
CFSM	.21	.22	.17	.14	.38	.50	.49	.48	.59	.45	.28	.28		
IN.	.24	.24	.20	.16	.39	.58	.55	.55	.66	.52	.33	.31		
AC-FT	8954000	9053000	7420000	5963000	14570000	21500000	20490000	20400000	24450000	19200000	12140000	11660000		
CAL YR 1981	TOTAL	65378100	MEAN	179100	MAX	507000	MIN	51800	CFSM	.26	IN	3.49	AC-FT	129700000
WTR YR 1982	TOTAL	88633200	MEAN	242800	MAX	516000	MIN	68300	CFSM	.35	IN	4.73	AC-FT	175800000

MISSISSIPPI RIVER MAIN STEM

07010000 MISSISSIPPI RIVER AT ST. LOUIS, MO--continued

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.84	9.25	6.08	3.22	21.22	22.44	24.04	21.86	28.96	17.67	13.75	15.25
2	6.95	9.00	6.66	3.81	18.84	20.82	23.32	21.68	30.02	17.55	12.64	19.32
3	6.92	8.51	8.99	3.88	14.55	19.61	23.64	21.70	30.71	17.51	11.78	22.39
4	6.68	10.71	10.93	5.32	7.66	19.39	23.57	21.64	31.20	21.58	11.27	22.43
5	6.74	19.30	11.52	5.03	13.73	18.69	22.99	21.56	31.63	25.29	11.38	19.39
6	6.62	19.37	11.33	5.34	12.35	17.67	22.78	21.39	31.58	26.47	11.31	17.36
7	6.30	17.71	10.83	5.07	10.13	16.78	22.56	21.19	31.15	26.06	12.05	15.17
8	5.75	14.66	9.35	4.25	8.18	15.39	22.39	20.70	30.39	25.21	14.66	13.11
9	7.49	12.82	8.83	4.11	7.18	14.48	22.10	20.26	29.76	23.64	14.22	11.25
10	7.27	11.41	7.48	3.00	6.60	13.80	21.69	21.37	30.59	22.54	14.36	10.49
11	7.28	10.28	6.29	3.30	5.50	12.55	21.11	21.80	31.68	23.81	13.01	9.82
12	7.01	9.09	5.82	3.50	5.29	13.43	20.46	20.83	32.19	22.14	11.63	8.32
13	6.79	8.55	6.77	2.80	4.37	15.36	20.28	19.82	32.12	19.19	9.75	8.13
14	7.22	8.17	6.29	1.80	4.33	16.41	20.21	18.96	31.73	18.69	9.64	8.49
15	7.38	7.21	5.33	1.40	5.10	17.91	20.37	18.25	30.97	19.16	8.59	8.50
16	9.30	7.36	4.76	.56	5.61	20.52	20.80	18.43	29.87	19.85	18.25	10.67
17	11.15	6.64	4.88	.20	10.01	22.83	21.35	21.16	28.18	20.79	21.41	13.90
18	11.74	6.53	.21	.30	14.24	25.24	21.92	22.41	26.57	20.44	19.01	13.00
19	11.32	6.48	7.68	-.30	16.19	26.28	23.07	22.58	26.14	21.21	17.60	12.70
20	10.59	7.07	2.64	-.50	20.68	26.48	24.56	23.07	26.34	22.56	14.88	11.60
21	10.63	5.45	3.05	-.10	22.10	26.62	26.03	22.62	26.59	23.58	11.61	10.20
22	10.40	6.46	3.98	-.40	23.87	26.84	26.26	23.13	25.57	24.72	10.45	9.40
23	10.79	5.95	3.79	.72	25.18	27.78	25.71	23.61	23.59	25.07	9.64	8.90
24	9.60	6.64	2.50	1.00	25.85	28.88	24.96	24.43	20.83	25.60	7.99	12.27
25	9.49	4.55	2.46	1.80	26.12	28.86	24.37	25.91	18.92	25.34	7.66	12.27
26	9.80	5.86	2.53	1.38	25.61	28.45	24.01	25.99	18.02	23.48	8.89	12.27
27	10.22	6.24	3.29	.82	25.02	27.67	23.36	24.99	17.32	20.63	9.74	12.27
28	10.07	5.44	3.35	1.20	24.06	26.79	22.82	24.53	17.22	18.87	12.87	7.99
29	10.10	4.57	3.18	1.74	---	25.89	22.47	26.32	17.59	17.68	16.64	7.76
30	9.76	4.79	3.20	4.70	---	25.37	21.98	27.51	18.16	16.33	15.83	7.36
31	9.67	---	3.40	14.84	---	24.80	---	27.84	---	14.70	13.62	---

WTR YR 1982

WATER-QUALITY RECORDS

REMARKS.--Sediment discharge for many days computed from turbidity readings.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 6,420 mg/L June 7, 1951; minimum daily mean, 19 mg/L Jan. 21, 22, 1967.

SEDIMENT LOADS: Maximum daily, 7,010,000 tons (6,359,000 metric tons) May 5, 1951; minimum daily, 2,800 tons (2,540 metric tons) Jan. 21, 1967.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 3,780 mg/L Aug. 18; minimum daily mean, 84 mg/L Feb. 13, 14 and 15.

SEDIMENT LOADS: Maximum daily, 3,330,000 tons (3,020,000 metric tons) March 24; minimum daily, 24,400 tons (22,100 metric tons) Jan. 19.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

[illegible]

MISSISSIPPI RIVER MAIN STEM

07010000 MISSISSIPPI RIVER AT ST. LOUIS, MO--continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	LCI	NCV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	6.0	---	---	3.0	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	13.5	---	---	---	---	---	17.0	---	---	---	---
4	---	---	---	---	---	---	---	---	19.0	---	---	---
5	---	---	---	1.5	---	1.0	10.0	---	---	---	29.5	---
6	18.5	---	---	---	---	---	---	---	---	26.0	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	5.5	---	---	---	---	---	22.5	---	---	---
9	---	11.0	---	---	---	2.0	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	24.0
11	---	---	---	---	---	---	---	19.0	---	---	---	---
12	---	---	---	---	---	---	8.0	---	---	26.5	---	---
13	---	---	---	---	---	---	---	---	---	---	24.5	24.0
14	---	---	---	---	---	---	---	---	22.0	---	---	---
15	---	---	---	---	---	5.0	---	---	---	---	---	---
16	16.5	---	---	---	---	---	---	---	---	---	24.5	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	11.0	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	28.0	---	---
20	---	---	---	1.0	---	---	---	22.5	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	12.5	---	23.0	---	---	---
23	---	---	---	---	---	7.5	---	---	---	---	25.0	19.0
24	---	---	---	---	---	---	---	22.0	---	---	---	---
25	---	7.0	---	---	---	---	---	21.0	---	---	---	---
26	10.5	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	13.5	---	---	---	---	---
28	---	---	1.0	---	---	---	---	---	---	---	---	---
29	---	---	---	1.0	---	---	---	---	---	---	---	---
30	---	---	---	---	---	8.5	---	---	---	---	---	18.0
31	---	---	---	---	---	---	---	---	---	---	25.0	---

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT

DATE	STREAM- FLUM, INSTANTANEOUS (CFS) (00061)	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 .062 MM (70342)	SED. SUSP. FALL DIAM. % FINER THAN .125 MM (70343)	SED. SUSP. FALL DIAM. % FINER THAN .250 MM (70344)	SED. SUSP. FALL DIAM. % FINER THAN .500 MM (70345)	SED. SUSP. FALL DIAM. % FINER THAN 1.00 MM (70346)
MAR, 1982										
05...	284000	31	33	38	45	59	65	93	100	100
APR										
27...	369000	31	34	38	45	61	64	77	89	100
MAY										
25...	417000	36	42	50	57	94	95	98	100	100
JUL										
12...	344000	47	53	58	67	92	95	97	98	100
AUG										
30...	233000	43	47	49	60	93	97	100	100	100

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL

DATE	BED MAT. SIEVE DIAM. % FINER THAN .062 MM (80164)	BED MAT. SIEVE DIAM. % FINER THAN .125 MM (80165)	BED MAT. SIEVE DIAM. % FINER THAN .250 MM (80166)	BED MAT. SIEVE DIAM. % FINER THAN .500 MM (80167)	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM (80168)	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM (80169)	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM (80170)	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM (80171)	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM (80172)	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM (80173)
NOV, 1981										
09...	0	0	15	55	81	--	94	95	96	100
JAN, 1982										
05...	0	0	27	61	88	96	98	99	100	100
MAR										
05...	0	1	19	78	91	95	97	98	98	100
AUG										
30...	0	0	4	29	75	90	96	99	100	100

07010000 MISSISSIPPI RIVER AT ST. LOUIS, MO--continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
OCTOBER			NOVEMBER			DECEMBER			
1	135000	147	53600	153000	177	73100	120000	134	43400
2	124000	161	53900	148000	172	68700	130000	179	62800
3	125000	153	51600	146000	174	68600	158000	184	76500
4	126000	142	48300	193000	188	98000	181000	208	102000
5	120000	203	65800	284000	308	236000	185000	211	105000
6	123000	150	49800	283000	502	384000	182000	397	195000
7	118000	186	59300	248000	637	427000	173000	528	247000
8	118000	154	49100	209000	454	256000	156000	411	173000
9	134000	170	61500	185000	425	212000	146000	409	161000
10	131000	180	63700	173000	571	267000	134000	400	145000
11	130000	166	58300	157000	384	163000	121000	285	93100
12	126000	156	53100	149000	356	143000	124000	260	87000
13	123000	156	51800	144000	336	131000	125000	213	71900
14	128000	155	53600	139000	348	131000	122000	195	64200
15	136000	153	56200	130000	334	117000	113000	187	57100
16	156000	176	74100	132000	335	119000	107000	170	49100
17	174000	190	89300	126000	320	109000	104000	176	49400
18	179000	226	109000	124000	310	104000	101000	143	39000
19	170000	254	117000	129000	301	105000	118000	129	41100
20	165000	267	119000	134000	288	104000	92200	108	26900
21	164000	346	153000	118000	280	89200	97800	118	31200
22	166000	322	144000	127000	259	88800	104000	132	37100
23	167000	267	120000	124000	187	62600	99600	119	32000
24	153000	228	94200	127000	172	59000	89200	137	33000
25	155000	201	84100	107000	150	43300	87300	147	34600
26	161000	200	86900	124000	156	52200	90300	103	25100
27	164000	202	89400	124000	163	54600	98200	149	39500
28	163000	196	86300	113000	136	41500	98100	137	36300
29	164000	188	83200	106000	124	35500	96600	127	33100
30	159000	177	76000	108000	122	35600	95300	132	34000
31	157000	176	74600	---	---	---	96800	129	33700
TOTAL	4514000	---	2429700	4564000	---	3878700	3745400	---	2261100
JANUARY			FEBRUARY			MARCH			
1	97200	144	37800	345000	1140	1060000	347000	795	745000
2	100000	153	41300	300000	1370	1110000	319000	770	663000
3	103000	143	39800	257000	1760	1220000	302000	781	637000
4	116000	194	60800	235000	1430	907000	296000	717	573000
5	112000	180	54400	222000	1040	623000	282000	626	477000
6	117000	166	52400	211000	864	492000	266000	648	465000
7	112000	133	40200	180000	515	250000	250000	562	379000
8	104000	129	36200	155000	331	139000	231000	533	332000
9	105000	130	36900	143000	209	80700	221000	530	316000
10	94000	117	29700	138000	180	67100	210000	516	293000
11	97000	120	31400	123000	156	51800	200000	554	299000
12	99900	117	31600	117000	95	30000	216000	438	255000
13	93300	136	34300	110000	84	24900	242000	445	291000
14	84100	127	28800	113000	84	25600	259000	745	521000
15	81800	159	35100	117000	84	26500	288000	1030	601000
16	75600	159	32500	131000	94	33200	335000	978	885000
17	72800	148	29100	188000	146	74100	381000	1280	1320000
18	72900	147	28900	235000	222	141000	423000	1590	1820000
19	69400	130	24400	288000	274	213000	442000	2440	2910000
20	68300	153	28200	348000	384	361000	450000	1960	2380000
21	69500	156	29300	376000	504	512000	455000	1780	2190000
22	73100	128	25300	409000	632	698000	463000	1630	2040000
23	77600	178	37300	435000	850	998000	488000	1700	2240000
24	81800	202	44600	451000	995	1210000	497000	2480	3330000
25	87100	186	43700	456000	949	1170000	487000	1860	2450000
26	83700	163	36800	448000	1160	1400000	470000	2050	2600000
27	79100	151	32200	423000	1020	1160000	446000	1430	1720000
28	83400	118	26600	391000	985	1040000	422000	983	1120000
29	90600	114	27900	---	---	---	399000	658	709000
30	137000	390	144000	---	---	---	382000	485	500000
31	268000	1030	745000	---	---	---	372000	454	456000
TOTAL	3006200	---	1926500	7345000	---	15117900	10841000	---	35717000

MISSISSIPPI RIVER MAIN STEM

07010000 MISSISSIPPI RIVER AT ST. LOUIS, MO--continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
APRIL			MAY			JUNE			
1	359000	361	350000	323000	227	198000	468000	1590	2010000
2	351000	305	289000	321000	224	194000	488000	1660	2190000
3	357000	417	402000	322000	242	210000	503000	1800	2440000
4	354000	442	422000	319000	250	215000	515000	1160	1610000
5	347000	467	438000	316000	267	228000	516000	1170	1630000
6	344000	453	421000	311000	256	215000	509000	1350	1860000
7	339000	456	417000	304000	261	214000	495000	1590	2130000
8	336000	600	544000	293000	276	218000	466000	911	1150000
9	332000	516	463000	286000	285	220000	466000	891	1120000
10	324000	417	365000	306000	296	245000	481000	1220	1580000
11	312000	377	318000	307000	679	563000	500000	1150	1550000
12	303000	369	302000	289000	1550	1210000	506000	1100	1500000
13	300000	329	266000	271000	1740	1270000	502000	981	1330000
14	299000	295	238000	258000	1440	1000000	491000	1020	1350000
15	304000	329	270000	248000	899	602000	476000	1050	1350000
16	312000	321	270000	257000	782	543000	452000	991	1210000
17	321000	357	309000	302000	625	510000	420000	674	764000
18	334000	225	203000	317000	1440	1230000	394000	513	546000
19	355000	390	374000	325000	1870	1640000	389000	448	471000
20	384000	579	600000	329000	1880	1670000	394000	585	622000
21	406000	682	748000	328000	1880	1660000	394000	1610	1710000
22	408000	598	659000	344000	1110	1030000	373000	1580	1590000
23	395000	653	696000	357000	1200	1160000	335000	1460	1320000
24	380000	865	887000	380000	1260	1290000	287000	757	587000
25	370000	596	595000	403000	1650	1800000	262000	1050	743000
26	361000	475	463000	401000	1490	1610000	250000	690	466000
27	347000	307	288000	385000	2700	2810000	242000	676	442000
28	339000	281	257000	384000	2260	2340000	242000	636	416000
29	332000	233	209000	417000	2190	2470000	252000	557	379000
30	326000	241	212000	436000	1820	2140000	258000	500	346000
31	---	---	---	446000	1630	1960000	---	---	---
TOTAL	10331000	---	12275000	10285000	---	32665000	12326000	---	36414000
JULY			AUGUST			SEPTEMBER			
1	252000	496	337000	198000	377	202000	237000	1030	659000
2	253000	657	449000	188000	327	166000	297000	1210	970000
3	257000	676	469000	177000	272	130000	351000	1250	1180000
4	329000	950	844000	176000	217	103000	332000	1270	1140000
5	386000	1810	1890000	176000	179	85100	285000	1510	1160000
6	400000	1910	2060000	177000	151	72200	250000	1280	864000
7	391000	2700	2850000	189000	150	76500	221000	650	388000
8	372000	2260	2270000	215000	190	110000	194000	488	256000
9	342000	1710	1580000	213000	314	181000	173000	344	161000
10	333000	1380	1240000	211000	285	162000	165000	292	130000
11	346000	1040	972000	195000	285	150000	152000	230	94400
12	311000	868	729000	176000	251	119000	142000	232	88900
13	267000	885	638000	160000	183	79100	141000	166	63200
14	261000	938	661000	153000	276	114000	144000	121	47000
15	269000	1070	777000	165000	1110	495000	151000	135	55000
16	281000	1580	1200000	284000	1720	1320000	178000	249	120000
17	292000	940	741000	322000	3470	3020000	191000	252	130000
18	287000	1110	860000	285000	3780	2910000	202000	208	113000
19	303000	1310	1070000	257000	3450	2390000	216000	190	111000
20	327000	1240	1090000	217000	2720	1590000	209000	264	149000
21	347000	1400	1310000	179000	1660	802000	207000	431	241000
22	366000	1090	1080000	167000	925	417000	192000	514	266000
23	374000	1010	1020000	154000	546	227000	191000	486	251000
24	383000	925	957000	138000	421	157000	178000	512	246000
25	374000	760	767000	138000	313	117000	163000	306	135000
26	338000	769	702000	148000	265	106000	155000	321	134000
27	291000	852	669000	163000	225	99000	151000	282	115000
28	266000	1070	768000	209000	544	307000	142000	196	75100
29	247000	938	626000	247000	788	526000	136000	153	57000
30	227000	585	359000	231000	1270	792000	132000	128	45600
31	209000	456	257000	211000	1070	610000	---	---	---
TOTAL	9681000	---	31242000	6119000	---	17634900	5880000	---	9445200
YEAR	88637600		201007000						

07010500 MARAMEC SPRING NEAR ST. JAMES, MO

LOCATION.--Lat 37°57'20", long 91°32'57", in NW¼SE¼ sec.1, T.37 N., R.6 W., Phelps County, Hydrologic Unit 07140102, 650 ft (198 m) downstream from spring outlet, 1 mi (1.6 km) upstream from Meramec River, and 6 mi (9.7 km) southeast of St. James.

PERIOD OF RECORD.--March 1903 to July 1906, November 1921 to October 1929, October 1965 to current year. Monthly discharge only for some months prior to October 1905 published in WSP 1311. Occasional discharge measurements 1930, 1932, 1934, 1939-40, 1946, 1953-55, 1957, 1961-65.

GAGE.--Nonrecording gage. Datum of gage is 773.97 ft (235.906 m) National Geodetic Vertical Datum of 1929. Prior to Nov. 11, 1921, gage at site 150 ft (45.7 m) upstream at different datum. Nov. 11, 1921, to June 4, 1928, at site 50 ft (15.2 m) upstream at datum 0.21 ft (0.064 m) higher.

REMARKS.--Records poor. Occasional backwater from Meramec River.

AVERAGE DISCHARGE.--26 years (1903-05, 1922-29, 1965-82), 147 ft³/s (4.163 m³/s), 106,500 acre-ft/yr (131 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 650 ft³/s (18.4 m³/s), estimated, several days during 1927 and 1928, backwater from Meramec River; minimum measured, 56 ft³/s (1.59 m³/s) Aug. 1, 1934.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 562 ft³/s (15.92 m³/s) Feb. 2; minimum daily, 100 ft³/s (2.83 m³/s) Oct. 1-3, 6-9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	100	131	410	163	380	244	134	141	485	106	115	190
2	100	154	358	163	562	206	141	141	407	104	106	172
3	100	201	335	249	460	190	141	141	358	111	104	154
4	111	447	272	268	340	161	141	141	340	111	106	163
5	108	398	260	277	286	172	141	141	323	104	106	150
6	100	340	217	260	311	172	141	158	323	102	108	145
7	100	288	212	255	323	159	141	141	272	102	118	158
8	100	260	190	233	306	150	145	145	260	106	118	131
9	100	227	181	212	294	145	154	145	233	104	106	131
10	102	206	172	172	294	141	145	141	222	115	106	125
11	115	196	172	167	272	141	145	141	201	106	106	134
12	118	196	172	163	227	134	150	134	176	102	106	134
13	118	185	167	163	217	138	141	141	172	102	111	128
14	128	190	163	150	217	138	141	145	163	106	172	255
15	128	172	163	145	249	323	141	145	150	102	176	369
16	125	172	163	141	422	311	145	141	159	102	300	300
17	128	163	154	141	480	266	145	134	154	111	255	244
18	167	167	154	141	542	249	145	141	145	111	212	255
19	167	159	145	138	476	227	145	172	141	106	190	244
20	163	150	145	134	407	217	150	172	138	102	172	212
21	154	141	145	134	441	212	145	154	125	108	172	196
22	159	150	154	138	464	190	145	167	116	106	154	181
23	185	150	335	154	358	181	145	159	106	102	138	167
24	185	145	311	167	340	176	141	154	115	111	131	163
25	172	145	277	167	300	163	145	145	115	111	138	163
26	167	150	255	159	288	154	145	154	115	106	138	159
27	167	145	204	141	272	134	150	172	111	111	416	163
28	159	145	212	134	249	150	141	227	106	111	369	154
29	159	145	201	134	---	145	145	227	104	106	172	150
30	159	154	172	154	---	138	141	441	104	106	233	154
31	145	---	172	400	---	134	---	466	---	115	212	---
TOTAL	4189	5872	6683	5637	9833	5661	4315	5347	5991	3308	5168	5424
MEAN	135	196	216	182	351	183	144	172	200	107	167	181
MAX	185	447	410	400	562	323	154	466	485	115	416	369
MIN	100	131	145	134	217	134	134	134	104	102	104	125
AC-FT	8310	11650	13260	11180	19500	11270	8560	10610	11890	6560	10250	10760

CAL YR 1981 TOTAL 49935 MEAN 137 MAX 460 MIN 54 AC-FT 99050
WTP YR 1982 TOTAL 67448 MEAN 185 MAX 562 MIN 100 AC-FT 153800

MERAMEC RIVER BASIN

194

07013000 MERAMEC RIVER NEAR STEELVILLE, MO

LOCATION.--Lat 37°59'58", long 91°21'39", in NE¼ sec.21, T.38 N., R.4 W., Crawford County, Hydrologic Unit 07140102, on left bank 20 ft (6 m) downstream from railroad bridge, 400 ft (123 m) upstream from highway bridge, 0.8 mi (1.3 km) upstream from Whittenburg Creek, 1.5 mi (2.4 km) north of Steelville, and at mile 149.4 (235.6 km).

DRAINAGE AREA.--781 mi² (2,023 km²).

PERIOD OF RECORD.--October 1922 to current year. Prior to January 1923 monthly discharges only, published in WSP 1311. Gage-height records for 1916-33 at site 1 mi (1.6 km) upstream in reports of National Weather Service.

REVISED RECORDS.--WSP 897: 1939. WSP 1007: Drainage Area.

GAGE.--Water-stage recorder. Datum of gage is 681.68 ft (207.776 m) National Geodetic Vertical Datum of 1929. Prior to May 24, 1934, July 20, 1966, to July 20, 1967, nonrecording gage, and May 24, 1934 to Oct. 10, 1942, water-stage recorder at site 400 ft (122 m) downstream. July 21, 1967 to Feb. 13, 1973 at site 1,900 ft (579 m) downstream and at datum 2.0 ft (0.61 m) lower.

REMARKS.--Records good except periods of missing record which are poor. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--60 years, 556 ft³/s (15.75 m³/s), 9.67 in/yr (246 mm/yr), 402,800 acre-ft/yr (497 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 47,800 ft³/s (1,350 m³/s) June 26, 1935, gage height, 23.39 ft (7.129 m); maximum gage height, 24.30 ft (7.407 m) June 9, 1945; minimum discharge, 74 ft³/s (2.10 m³/s) July 22, 1934.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Aug. 20, 1915, reached a stage of 26.5 ft (8.08 m), discharge, 60,000 ft³/s (1,700 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 6,500 ft³/s (184 m³/s) and maximum (*):

Date	Time	Discharge		Gage height	
		(ft ³ /s)	(m ³ /s)	(ft)	(m)
Jan. 31	----	*15,000	425	14.5	4.420
Feb. 17	2400	14,600	413	14.43	4.398
Aug. 16	1900	6,960	197	9.38	2.859

Minimum discharge, 125 ft³/s (3.54 m³/s) Oct. 4, gage height, 1.71 ft (0.521 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	137	251	1420	372	9600	604	375	334	3420	294	148	600		
2	132	255	1110	362	2170	576	359	322	2000	272	145	900		
3	130	1200	830	554	1480	544	353	312	1290	259	142	600		
4	127	5310	673	644	1120	528	332	312	1030	248	140	520		
5	130	3250	554	679	919	506	325	306	1090	235	135	470		
6	130	1550	501	644	793	474	312	293	1340	220	150	420		
7	130	1080	437	554	685	442	296	299	1010	212	168	380		
8	130	844	396	479	656	416	299	305	822	209	205	360		
9	127	716	348	430	615	396	310	316	724	203	212	350		
10	130	659	312	381	538	381	358	305	722	241	198	344		
11	130	600	299	357	528	372	372	292	693	222	198	334		
12	130	543	291	326	501	362	364	274	611	225	185	321		
13	132	469	278	316	464	376	356	265	551	206	212	316		
14	153	422	270	286	442	446	337	260	505	202	1410	700		
15	178	386	255	290	522	1600	328	262	468	195	1660	1400		
16	212	367	251	282	2880	1650	336	270	506	178	5140	1200		
17	222	339	251	262	11100	1180	459	274	512	178	2000	1000		
18	295	325	240	251	8260	939	556	259	454	175	830	1000		
19	427	304	219	240	3000	991	531	272	443	172	581	900		
20	353	291	212	236	2680	1030	480	307	516	165	441	700		
21	299	278	208	233	2080	824	442	305	472	162	567	561		
22	291	266	248	240	1500	685	397	295	411	159	308	510		
23	406	255	554	406	1220	604	364	293	365	162	286	460		
24	538	248	793	376	1030	549	348	271	341	156	262	410		
25	448	244	638	339	687	526	343	260	324	150	248	375		
26	386	244	571	299	780	490	343	255	321	150	229	350		
27	344	236	538	274	714	452	343	303	309	165	5000	336		
28	330	226	507	262	656	415	343	860	308	175	12000	319		
29	304	222	453	259	---	394	343	958	325	165	2000	308		
30	286	317	401	2000	---	387	339	3380	329	159	400	289		
31	259	---	386	13000	---	389	---	2220	---	159	700	---		
TOTAL	7426	21697	14444	25633	58020	19618	11043	15239	22212	6215	36600	16733		
MEAN	240	723	466	827	2072	633	366	492	740	200	1181	558		
MAX	538	5310	1420	13000	11100	1600	556	3380	3420	294	12000	1400		
MIN	127	222	208	233	442	362	296	255	308	150	135	289		
CFSM	.31	.93	.60	1.06	2.65	.81	.47	.63	.95	.26	1.51	.71		
IN.	.35	1.03	.69	1.22	2.76	.93	.53	.73	1.06	.30	1.74	.80		
AC=FT	14730	43040	28650	50840	115100	38910	21900	30250	44060	12330	72600	33190		
CAL YR 1981	TOTAL	174697	MEAN	479	MAX	6510	MIN	117	CFSM	.61	IN	8.32	AC=FT	346500
WTR YR 1982	TOTAL	254880	MEAN	698	MAX	13000	MIN	127	CFSM	.89	IN	12.14	AC=FT	505600

MERAMEC RIVER BASIN

07013000 MERAMEC RIVER NEAR STEELVILLE, MO--continued

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.76	2.12	4.05	2.33	---	3.06	2.50	2.35	6.28	2.42	2.04	---
2	1.74	2.13	3.63	2.31	5.04	3.01	2.46	2.32	4.85	2.37	2.03	---
3	1.73	3.77	3.21	2.67	4.21	2.95	2.44	2.30	3.97	2.34	2.02	---
4	1.72	1.80	2.95	2.83	3.74	2.92	2.40	2.30	3.62	2.31	2.01	---
5	1.73	6.04	2.74	2.69	3.44	2.88	2.38	2.29	3.71	2.27	1.99	---
6	1.73	4.22	2.64	2.83	3.14	2.62	2.35	2.27	4.05	2.24	2.05	---
7	1.73	3.60	2.52	2.68	2.89	2.76	2.31	2.28	3.59	2.22	2.11	---
8	1.73	3.24	2.44	2.54	3.01	2.71	2.31	2.29	3.31	2.38	2.22	---
9	1.72	3.03	2.34	2.45	2.94	2.67	2.34	2.32	3.15	2.42	2.24	---
10	1.73	2.94	2.26	---	2.31	2.64	2.44	2.29	3.15	2.31	2.20	---
11	1.73	2.83	2.23	---	2.78	2.62	2.47	2.26	3.10	2.27	2.20	2.35
12	1.73	2.73	2.20	2.23	2.73	2.60	2.45	2.23	2.96	2.28	2.16	2.32
13	1.74	2.59	2.17	2.20	2.66	2.63	2.44	2.21	2.80	2.23	2.24	2.31
14	1.72	2.50	2.15	---	2.62	2.86	2.39	2.19	2.70	2.21	4.27	---
15	1.70	2.43	2.11	2.14	2.77	4.59	2.37	2.20	2.72	2.19	4.69	2.19
16	2.00	2.39	2.09	2.04	5.77	4.55	2.38	2.22	2.79	2.14	0.00	1.87
17	2.03	2.33	2.09	---	10.72	3.97	2.63	2.23	2.80	2.14	5.08	2.46
18	2.22	2.29	2.06	---	10.37	3.61	2.81	2.20	2.70	2.13	3.51	2.12
19	2.50	2.24	2.00	2.01	6.02	3.69	2.77	2.24	2.66	2.12	3.07	1.64
20	2.35	2.21	1.97	2.00	5.71	3.75	2.60	2.32	2.82	2.10	---	1.75
21	2.23	2.18	1.96	1.99	5.08	3.43	2.59	2.31	2.75	2.09	2.72	2.79
22	2.21	2.15	2.07	2.01	4.38	3.20	2.50	2.29	2.63	2.08	2.59	2.70
23	2.47	2.12	2.71	2.39	4.01	3.06	2.44	2.29	2.55	2.09	2.54	2.60
24	2.77	2.10	3.11	2.33	3.75	2.98	2.46	2.24	2.49	2.07	2.48	2.50
25	2.55	2.09	2.85	2.25	3.53	2.93	2.38	2.21	2.46	2.05	2.44	2.44
26	2.43	2.09	2.73	2.16	3.36	2.73	2.38	2.20	2.46	2.05	2.39	2.38
27	2.34	2.07	2.67	2.10	3.25	2.66	2.38	2.32	2.43	2.10	---	2.35
28	2.31	2.04	2.60	2.07	3.15	2.58	2.38	3.34	2.44	2.13	---	2.32
29	2.25	2.03	2.50	2.06	---	2.54	2.38	3.49	2.48	2.10	---	2.29
30	2.21	2.27	2.46	4.92	---	2.52	2.37	6.24	2.49	2.08	---	2.26
31	2.14	---	2.37	---	---	2.53	---	5.09	---	2.08	---	---

MERAMEC RIVER BASIN

07014500 MERAMEC RIVER NEAR SULLIVAN, MO

LOCATION.--Lat 38°09'30", long 91°06'30", in SE¼NE¼ sec.35, T.40 N., R.2 W., Crawford County, Hydrologic Unit 07140102, on right bank at upstream side of Sappington Bridge, 3.8 mi (6.1 km) downstream from Brazil Creek, 4.0 mi (6.4 km) southeast of Sullivan, and at mile 117.0 (188.3 km).

DRAINAGE AREA.--1,475 mi² (3,820 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1921 to September 1933, October 1943 to current year. Monthly discharge only for October 1943, published in WSP 1311.

REVISED RECORDS.--WSP 1007: 1922, 1923(M), 1924-30, 1933, drainage area.

GAGE.--Water-stage recorder. Datum of gage is 581.82 ft (177.339 m) above mean sea level (levels by Corps of Engineers). Prior to Oct. 21, 1952, nonrecording gage at present site and datum.

REMARKS.--Records good except for periods of missing record which are fair. Water diverted from river 0.5 mi (0.8 km) above gage by mining company. Several observations of water temperature and specific conductance made during the year. National Weather Service gageheight telemeter at station.

AVERAGE DISCHARGE.--51 years, 1,149 ft³/s (32.54 m³/s), 10.58 in/yr (269 mm/yr), 832,400 acre-ft/yr (1,026 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 77,300 ft³/s (2,190 m³/s) June 9, 1945, gage height, 32.0 ft (9.75 m); minimum discharge, 131 ft³/s (3.71 m³/s) Sept. 20, 22, 1956; minimum gage height, 1.00 ft (0.305 m) June 12, 13, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in August 1915 reached a stage of 33.5 ft (10.21 m) from information by local residents, discharge 90,000 ft³/s (2,550 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 8,500 ft³/s (241 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s)	Discharge (m ³ /s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft ³ /s)	Discharge (m ³ /s)	Gage height (ft)	Gage height (m)
Nov. 5	0200	15,800	447	15.52	4.730	Feb. 18	0115	21,400	606	18.02	5.492
Jan. 31	2030	*22,500	637	18.46	5.627	Aug. 28	0730	22,100	626	18.31	5.581

Minimum daily discharge, 283 ft³/s (8.01 m³/s), Oct. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	305	579	2690	834	18900	1550	1020	945	5750	625	335	1620
2	297	608	2650	839	12100	1470	981	896	4600	588	328	2150
3	292	2620	2080	1010	7680	1410	950	803	2860	567	320	1530
4	297	12100	1660	1340	4900	1370	925	840	2200	535	311	1310
5	302	12200	1410	1510	3630	1310	920	810	2020	508	311	1120
6	304	4560	1240	1490	2930	1250	901	780	2130	484	754	973
7	299	2920	1140	1370	2470	1180	863	760	2040	464	1040	870
8	283	2190	1030	1210	2050	1120	877	740	1690	608	770	790
9	292	1920	935	1090	1800	1060	901	800	1540	792	604	734
10	305	1750	648	1010	1520	1030	997	770	1680	783	510	682
11	298	1560	786	991	1380	1000	1050	720	1630	687	459	635
12	295	1390	737	971	1240	981	1030	660	1440	634	423	598
13	296	1250	692	940	1170	1050	991	621	1280	572	455	572
14	374	1120	656	862	1120	1320	940	608	1140	519	520	1080
15	395	1040	629	858	1460	3150	896	612	1040	516	2570	2710
16	402	971	600	797	5520	4090	896	583	1210	478	3880	2480
17	765	891	583	792	17500	3200	1330	571	1170	452	5610	1580
18	760	820	555	774	19300	2540	1400	555	1020	431	2150	1520
19	197	774	523	621	9620	2160	1410	543	1080	414	1460	1480
20	806	719	508	612	6790	2440	1320	555	997	396	1130	1290
21	656	656	496	588	5840	2040	1220	604	976	384	891	1090
22	925	612	687	710	4280	1710	1110	575	840	373	747	953
23	1060	583	1410	877	3270	1520	1010	567	751	360	661	849
24	1170	555	1810	1040	2790	1420	945	543	692	354	622	781
25	1100	531	1580	906	2350	1370	906	516	643	346	585	723
26	961	520	1380	834	2110	1290	920	504	634	353	567	679
27	867	508	1330	746	1810	1210	970	660	643	351	6100	646
28	802	484	1170	705	1660	1130	1030	981	678	371	18100	615
29	746	468	1060	683	---	1060	1040	1770	651	362	6090	585
30	678	1170	955	5820	---	1050	997	5460	665	352	2640	555
31	616	---	686	18900	---	1070	---	4210	---	344	1970	---
TOTAL	17747	58069	34918	51750	147390	49571	30752	30622	45698	15003	62918	33200
MEAN	572	1936	1120	1669	5264	1599	1025	988	1523	484	2030	1107
MAX	1170	12200	2650	18900	19300	4090	1410	5460	5750	792	18100	2710
MIN	283	468	496	588	1120	981	863	504	634	344	311	555
CFSM	.39	1.31	.76	1.13	3.57	1.08	.70	.67	1.03	.33	1.38	.75
IN	.45	1.46	.88	1.31	3.72	1.25	.78	.77	1.15	.38	1.59	.84
AC-FT	35200	115200	69260	102600	292300	96320	61000	60740	90640	29760	124800	65850

CAL YR 1981	ICIAL	405391	MEAN	1111	MAX	12700	MIN	228	CFSM	.75	IN	10.22	AC-FT	804100
WIR YR 1982	ICIAL	577030	MEAN	1583	MAX	19300	MIN	283	CFSM	1.07	IN	14.57	AC-FT	1146000

MERAMEC RIVER BASIN

07014500 MERAMEC RIVER NEAR SULLIVAN, MO--continued

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	UCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.51	2.24	5.43	2.79	17.72	4.14	3.24	3.12	8.94	2.52	1.76	4.48
2	1.48	2.27	6.12	2.68	---	3.98	3.18	3.02	8.48	2.42	1.74	5.30
3	1.47	3.30	4.97	3.04	---	3.90	3.14	2.94	6.12	2.36	1.70	4.31
4	1.49	12.86	4.30	3.71	---	3.82	3.08	---	5.10	2.30	1.68	3.95
5	1.50	14.95	3.86	3.95	---	3.76	3.06	---	4.90	2.22	1.66	3.58
6	1.50	8.33	3.58	3.98	---	3.64	3.04	---	5.28	2.16	3.68	3.28
7	1.49	6.18	3.37	3.78	---	3.54	2.94	---	4.94	2.12	3.36	3.08
8	1.48	5.15	3.19	3.52	---	3.44	2.96	---	4.38	2.24	2.90	2.89
9	1.48	4.62	3.00	3.29	---	3.34	3.00	---	4.10	2.86	2.50	2.77
10	1.52	4.46	2.83	3.11	---	3.26	3.18	---	4.30	2.92	2.26	2.65
11	1.51	4.17	2.69	3.08	---	3.22	3.28	---	4.32	2.68	2.12	2.55
12	1.49	3.89	2.59	3.06	3.62	3.16	3.26	---	4.02	2.54	2.02	2.46
13	1.49	3.66	2.49	3.04	3.50	3.28	3.18	---	3.76	2.40	2.04	2.39
14	1.63	3.45	2.43	2.88	3.40	3.40	3.12	2.42	3.52	2.24	2.20	2.56
15	1.79	3.28	2.34	2.85	3.64	5.60	3.02	2.46	3.32	2.26	6.16	5.82
16	1.75	3.17	2.27	2.70	6.00	7.78	2.96	2.38	3.66	2.16	6.48	5.73
17	1.92	3.03	2.25	2.69	15.56	6.60	3.82	2.34	3.56	2.10	10.20	4.42
18	2.64	2.88	2.17	2.69	17.32	5.62	3.88	2.30	3.32	2.02	5.18	4.45
19	2.64	2.77	2.10	2.32	12.60	4.98	3.90	2.28	3.46	1.98	4.10	4.21
20	2.78	2.67	1.99	2.29	9.98	5.64	3.76	2.30	3.22	1.94	3.56	3.89
21	2.44	2.55	2.03	2.26	9.44	4.94	3.58	2.44	3.28	1.90	3.14	3.53
22	2.61	2.45	2.04	2.40	7.82	4.42	3.42	2.36	3.02	1.86	2.82	3.25
23	3.18	2.37	3.43	2.76	6.62	4.10	3.24	2.34	2.82	1.82	2.60	3.02
24	3.36	2.32	4.55	3.23	5.90	---	3.10	2.28	2.68	1.82	2.50	2.88
25	3.34	2.25	4.15	2.93	5.34	3.82	3.02	2.22	2.56	1.80	2.44	2.75
26	3.06	2.21	3.80	2.79	4.86	3.72	3.04	2.18	2.52	1.78	2.34	2.64
27	2.86	2.20	3.60	2.63	4.54	3.58	3.14	2.60	2.50	1.78	6.18	2.56
28	2.73	2.14	3.43	2.52	4.32	3.46	3.26	2.72	2.64	1.86	18.18	2.50
29	2.61	2.10	3.25	2.45	---	3.32	3.28	3.82	2.56	1.84	10.34	2.43
30	2.47	2.11	3.04	5.06	---	3.24	3.22	7.64	2.60	1.80	5.82	2.35
31	2.34	---	2.89	16.29	---	3.32	---	7.62	---	1.78	4.86	---

MERAMEC RIVER BASIN

07014500 MERAMEC RIVER NEAR SULLIVAN, MO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--August 1963 to July 1975, July 1977 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L) (00335)
OCT 07...	1700	1028	29001	300	351	8.3	18.0	--	<5
NOV 05...	1630	1028	29001	9600	196	7.5	14.5	7.0	18
DEC 02...	1500	1028	29001	2500	260	7.7	8.5	10.0	12
JAN 07...	1400	1028	29001	1300	290	8.1	4.0	13.6	<5
FEB 18...	1415	1028	29001	19400	100	7.7	3.0	12.2	22
MAR 11...	1515	1028	29001	577	272	8.2	12.5	10.6	<5
APR 07...	1450	1028	29001	899	292	8.1	9.5	11.0	9
MAY 13...	1535	1028	29001	660	325	8.3	22.0	9.0	<5
JUN 16...	1500	1028	29001	1250	274	8.3	21.5	8.4	6
JUL 16...	1445	1028	29001	473	339	8.3	27.0	7.8	<5
AUG 11...	1330	1028	29001	460	351	7.6	23.0	7.0	<5
SEP 24...	1700	1028	29001	756	308	8.3	18.5	9.0	90

DATE	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	HARD- NESS (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)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY FIELD (MG/L AS CaCO3) (00410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS Cl) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)
OCT 07...	41	210	46	22	4.1	1.5	164	<10	15	<.1
NOV 05...	820	--	--	--	--	--	79	--	--	--
DEC 02...	1400	--	--	--	--	--	108	--	--	--
JAN 07...	10	150	31	18	2.4	1.1	148	14	4.0	<.1
FEB 18...	1000	--	--	--	--	--	46	--	--	--
MAR 11...	3	--	--	--	--	--	131	--	--	--
APR 07...	6	170	36	19	2.5	1.2	141	10	<1.0	<.1
MAY 13...	7	--	--	--	--	--	157	--	--	--
JUN 16...	540	--	--	--	--	--	134	--	--	--
JUL 16...	7	180	37	20	2.7	1.9	164	8.0	3.0	.7
AUG 11...	64	--	--	--	--	--	154	--	--	--
SEP 24...	33	--	--	--	--	--	148	--	--	--

07015720 BOURBEUSE RIVER NEAR HIGH GATE, MO

LOCATION.--Lat 38°04'49", long 91°34'50", in SE¼NE¼ sec.4, T.39 N., R.6 W., Phelps County, Hydrologic Unit 07140103, on downstream side of right bridge pier on State Highway B, 1.8 mi (2.9 k) downstream from Lanes Fork, 5 mi (8.0 km) east of High Gate, and 11 mi (17.7 km) north of St. James.

DRAINAGE AREA.--135 mi² (350 km²).

PERIOD OF RECORD.--July 1965 to current year. Occasional low-flow measurements 1963, 1964.

REVISED RECORDS.--WDR MO-83-1: 1982.

GAGE.--Water-stage recorder. Datum of gage is 804.1 ft (245.09 m) National Geodetic Vertical Datum of 1929 (levels by Missouri State Highway Commission). Prior to Aug. 17, 1966, nonrecording gage at present site and datum.

REMARKS.--Records fair except those for periods of no gage-height record, which are poor. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--17 years, 111 ft³/s (3.144 m³/s), 11.17 in/yr (284 mm/yr), 80,420 acre-ft/yr (99.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 33,500 ft³/s (949 m³/s) Apr. 11, 1979, gage height, 21.15 ft (6.447 m) from highwater mark; no flow Aug. 27 to Sept. 15, 1971, July 28 to Aug. 24, 1975, Aug. 18-22, 1976.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 1957 reached a stage of about 23 ft (7.0 m), from information by local resident.

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

Date	Time	Discharge (ft ³ /s)	Discharge (m ³ /s)	Gage height (ft)	Gage height (m)
Nov. 30	1700	4,760	135	9.37	2.856
Jan. 30	2030	11,200	317	14.42	4.395
Aug. 8	0645	6,560	186	11.04	3.365
Aug. 15	1145	10,500	297	14.02	4.273
Aug. 27	0545	*13,200	374	15.45	4.709

No flow several days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.90	27	671	82	750	50	46	30	481	5.5	.00	186
2	.86	270	263	578	400	46	40	27	182	4.2	.00	99
3	.81	1560	170	639	250	44	36	24	101	3.4	.00	79
4	1.1	1380	116	542	150	51	29	21	75	2.2	.00	58
5	1.4	393	89	246	100	48	30	18	129	1.4	.00	52
6	1.6	270	72	200	80	41	34	17	87	.91	.36	43
7	1.6	178	61	125	70	38	30	17	56	.64	.94	37
8	1.4	135	51	90	65	33	42	16	48	.57	1360	33
9	1.4	127	41	70	60	29	85	14	90	.67	69	31
10	2.3	123	36	50	55	29	123	12	238	6.1	27	30
11	2.0	104	33	40	55	28	91	9.6	100	6.3	18	26
12	1.8	90	30	35	55	27	68	8.3	66	3.8	13	25
13	2.5	79	26	33	50	132	53	6.7	47	2.7	49	23
14	6.4	70	25	30	50	1040	41	5.8	32	3.7	65	61
15	16	65	23	27	200	880	34	11	27	4.2	3040	147
16	10	61	21	25	3000	334	265	14	33	2.0	314	51
17	63	56	20	23	1620	185	881	11	24	1.1	126	57
18	110	51	20	22	695	129	226	8.9	36	.55	63	547
19	38	48	18	21	781	101	165	8.6	107	.30	39	114
20	24	47	18	20	519	83	182	8.3	38	.15	27	58
21	17	45	18	20	301	64	116	9.3	26	56	20	40
22	90	42	188	459	196	52	86	10	21	4.3	16	30
23	110	41	730	600	151	45	69	9.3	14	.46	15	25
24	61	38	347	350	120	44	58	6.0	11	.00	13	21
25	47	36	215	225	93	46	50	7.9	7.6	.00	13	19
26	47	35	149	140	75	47	47	18	27	3.1	171	18
27	49	35	175	125	65	38	49	42	38	21	5150	17
28	41	33	140	116	57	32	38	44	17	2.5	380	15
29	35	31	126	107	---	29	37	303	10	.32	180	12
30	30	1370	107	5130	---	42	35	253	7.6	.00	208	7.9
31	26	---	75	1500	---	63	---	523	---	.00	195	---
TOTAL	840.07	6840	4074	11670	10063	3850	3086	1513.7	2175.8	138.07	11572.30	1961.9
MEAN	27.1	228	131	376	359	124	103	48.8	72.5	4.45	373	65.4
MAX	110	1560	730	5130	3000	1040	881	523	481	56	5150	547
MIN	.81	27	18	20	50	27	29	5.8	7.0	.00	.00	7.9
CFSM	.20	1.69	.97	2.79	2.66	.92	.76	.36	.54	.03	2.76	.48
IN.	.23	1.88	1.12	3.22	2.77	1.06	.85	.42	.60	.04	3.19	.54
AC-FT	1670	13570	8080	23150	19960	7640	6120	3000	4320	274	22950	3890
CAL YR 1981	TOTAL	19537.33	MEAN	53.5	MAX	1560	MIN	.28	CFSM	.40	IN	5.38
WTR YR 1982	TOTAL	57784.84	MEAN	158	MAX	5150	MIN	.00	CFSM	1.17	IN	15.92
										AC-FT	38750	
										AC-FT	114600	

07015720 BOURBEUSE RIVER NEAR HIGH GATE, MO--continued

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.61	1.11	1.05	---	---	1.04	1.40	1.22	3.90	1.60	---	4.54
2	.58	1.06	1.07	---	---	1.02	1.28	1.13	---	1.24	---	2.21
3	.56	1.04	1.05	---	---	.99	1.19	1.08	5.82	1.11	---	1.51
4	.54	1.02	1.02	---	---	1.51	1.17	1.05	3.42	1.07	---	1.20
5	.53	.99	.99	---	---	3.41	1.10	1.19	2.44	1.75	---	1.03
6	.54	.98	.97	---	---	2.13	1.05	1.27	2.38	1.30	---	.91
7	.54	.98	.95	---	---	1.70	1.02	1.16	2.01	1.12	---	.82
8	.55	.97	1.00	---	---	1.47	1.00	1.08	1.75	1.02	---	.78
9	.54	.96	1.21	---	---	1.33	.97	1.08	1.54	.96	---	.71
10	.54	.95	1.26	---	---	1.27	.95	10.22	1.40	.90	---	.65
11	.55	.93	1.19	---	---	1.22	.96	3.71	2.75	.86	---	---
12	.56	.92	1.12	---	---	1.17	.96	2.41	2.69	.81	---	---
13	.58	.91	1.07	---	---	1.14	.94	2.33	1.91	.79	---	---
14	.58	.90	1.03	---	---	1.11	1.00	5.06	1.63	.78	---	---
15	.75	.92	1.00	---	---	1.08	1.02	2.79	1.45	.75	---	---
16	1.00	.91	.99	---	---	1.12	.97	2.11	1.63	1.02	---	---
17	3.05	.91	.96	---	2.16	1.10	.96	4.29	1.45	3.47	---	---
18	1.45	.91	.95	---	1.79	1.07	3.61	10.84	1.28	2.62	---	.40
19	1.13	.91	.93	---	1.56	1.03	4.14	5.00	2.43	3.94	---	.38
20	1.02	.90	---	---	1.39	1.00	3.11	2.83	2.22	3.23	---	.36
21	.97	.89	---	---	1.28	.99	2.35	2.21	3.13	4.80	---	.33
22	1.09	.88	---	---	1.28	1.02	2.48	1.90	2.67	2.87	---	.32
23	1.14	.90	---	.83	1.25	1.09	2.99	1.73	2.50	1.88	---	.31
24	1.18	.90	---	.83	1.17	1.09	1.99	3.83	1.80	10.86	---	.31
25	1.21	.89	---	.82	1.12	1.06	1.65	2.95	1.53	---	1.02	.30
26	1.23	.89	---	.82	1.08	1.05	1.46	---	1.38	---	.73	.30
27	2.16	.94	---	.81	1.06	1.03	1.33	---	1.24	---	.73	.29
28	2.32	.95	---	.81	1.06	1.01	1.29	---	1.15	---	1.86	.29
29	1.56	.96	---	.80	---	1.69	1.38	---	1.07	---	.96	.29
30	1.31	.98	---	.80	---	2.23	1.31	1.76	1.83	---	.75	.28
31	1.19	---	---	4.00	---	1.67	---	2.30	---	---	1.24	---

MERAMEC RIVER BASIN

07015720 BOURBEUSE RIVER NEAR HIGH GATE, MO--continued

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	.73	3.44	1.43	---	1.02	.98	.72	2.88	.33	-.12	2.02
2	.17	2.07	2.19	3.18	---	.98	.91	.68	1.82	.29	-.13	1.53
3	.17	5.00	1.80	3.34	---	.95	.87	.65	1.38	.27	-.14	1.36
4	.19	4.88	1.54	3.09	---	1.02	.79	.59	1.21	.22	-.15	1.17
5	.21	2.74	1.37	2.08	---	1.00	.80	.55	1.58	.17	-.16	1.09
6	.22	2.16	1.28	1.87	---	.93	.85	.53	1.31	.14	-.03	.98
7	.22	1.77	1.21	---	---	.89	.81	.53	1.05	.11	-.12	.92
8	.21	1.55	1.13	---	---	.84	.94	.51	.97	.10	4.90	.88
9	.21	1.51	1.07	---	---	.80	1.32	.49	1.33	.11	1.11	.86
10	.26	1.49	1.01	---	---	.79	1.57	.46	2.11	.33	.68	.84
11	.25	1.36	.97	---	---	.78	1.37	.41	1.40	.33	.55	.80
12	.24	1.26	.94	---	---	.77	1.19	.39	1.14	.26	.47	.78
13	.27	1.18	.89	---	---	1.62	1.04	.35	.96	.21	.92	.75
14	.39	1.12	.87	---	---	4.28	.92	.32	.80	.25	1.07	1.17
15	.57	1.07	.84	---	---	3.92	.85	.43	.74	.27	7.44	1.75
16	.47	1.04	.82	---	---	2.43	2.16	.48	.81	.19	2.33	1.07
17	.90	.98	---	---	---	1.85	3.92	.43	.70	.13	1.49	1.13
18	1.42	.94	---	---	---	1.57	2.00	.40	.84	.09	1.04	3.28
19	.85	.90	---	---	3.71	1.42	1.72	.39	1.44	.05	.79	1.61
20	.69	.90	---	---	3.02	1.31	1.80	.39	.85	.02	.65	1.16
21	.58	.87	---	---	2.32	1.15	1.44	.41	.72	.99	.55	.98
22	1.31	.85	1.93	---	1.91	1.04	1.24	.43	.64	.27	.49	.85
23	1.45	.83	3.57	---	1.69	.96	1.11	.41	.52	.08	.47	.78
24	1.08	.81	2.55	---	1.52	.90	1.00	.33	.47	-.02	.44	.73
25	.94	.78	1.95	---	1.35	.94	.93	.38	.42	-.07	.44	.70
26	.94	.77	1.84	---	1.23	.98	.90	.56	.72	.24	1.72	.68
27	.96	.78	1.97	---	1.15	.90	.92	.84	.83	.60	9.75	.66
28	.88	.75	1.79	---	1.08	.83	.81	.86	.57	.21	2.76	.63
29	.82	.73	1.73	---	---	.79	.79	2.30	.45	.05	1.99	.58
30	.76	4.94	1.59	---	---	.93	.77	2.11	.38	-.02	2.12	.51
31	.71	---	1.36	---	---	1.14	---	3.01	---	-.08	2.06	---

07016500 BOURBEUSE RIVER AT UNION, MO

LOCATION.--Lat 38°26'45", long 90°59'30", in SE¼ sec.26, T.43 N., R.1 W., Franklin County, Hydrologic Unit 07140103, on right bank downstream side of pier of bridge on U.S. Highway 50, 800 ft (244 m) upstream from Flat Creek, 0.5 mi (0.8 km) east of Union, 7.0 mi (11.3 km) upstream from Birch Creek, and at mile 13.4 (21.6 km). Records include flow of Flat Creek.

DRAINAGE AREA.--808 mi² (2,093 km²), includes that of Flat Creek.

PERIOD OF RECORD.--June 1921 to current year. Gage-height record collected at same site since 1916 are contained in reports of National Weather Service.

REVISED RECORDS.WSP 957: 1941. WSP 1147: Drainage area. WSP 1281: 1924.

GAGE.--Water-stage recorder. Datum of gage is 488.58 ft (148.919 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1948, datum of all gages 3.00 ft (0.914 m) higher. Prior to Oct. 21, 1933, nonrecording gage, at site 30 ft (9 m) upstream. Oct. 21, 1933, to June 11, 1944, nonrecording gage, at present site.

REMARKS.--Records good except those for periods of ice effect and no gageheight record, which are fair. Several observations of water temperature and specific conductance were made during the year. National Weather Service gage height telemeter at station.

AVERAGE DISCHARGE.--61 years, 625 ft³/s (17.70 m³/s), 10.50 in/yr (267 mm/yr), 452,800 acre-ft/yr (558 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 33,100 ft³/s (937 m³/s) July 1, 1957, gage height, 24.44 ft (7.449 m); minimum, 11 ft³/s (0.31 m³/s) Oct. 10, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Aug. 22, 1915, reached a stage of 28.5 ft (8.69 m), present datum, from floodmarks, discharge, about 50,000 ft³/s (1,420 m³/s), determined from extension of rating curve for main channel based on measurements made since 1921 and study of overflow areas in vicinity of gaging station.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 7,500 ft³/s (212 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s)	Discharge (m ³ /s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft ³ /s)	Discharge (m ³ /s)	Gage height (ft)	Gage height (m)
Nov. 6	0545	11,900	337	15.17	4.624	June 8	1130	7,800	221	12.00	3.658
Feb. 1	unknown	8,870	251	12.89	3.929	Aug. 29	1115	7,960	225	12.13	3.697
Feb. 18	2045	*13,000	371	16.04	4.889	Sept. 3	1700	8,410	238	12.52	3.816

Minimum daily discharge, 47 ft³/s (1.33 m³/s) Aug. 2, 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	67	157	2310	503	4270	535	494	254	2060	285	49	600
2	67	175	4750	610	3000	496	518	237	1890	220	47	3480
3	67	657	1690	1650	2000	464	450	225	919	251	47	7830
4	67	6920	962	3220	1500	426	433	212	798	227	51	2000
5	131	10200	719	2630	1200	397	610	202	1020	164	51	791
6	164	7980	582	1610	1000	383	430	195	853	139	64	582
7	78	1960	499	1120	900	361	367	190	642	126	81	437
8	73	1170	443	841	800	336	358	175	3730	116	63	348
9	61	860	397	621	740	312	361	162	4040	105	1170	294
10	58	756	361	500	710	294	387	152	1520	183	2450	254
11	56	775	331	400	680	285	492	141	1450	110	575	225
12	57	664	304	350	562	282	617	135	1150	112	345	200
13	57	568	264	310	485	390	546	129	798	128	243	181
14	77	482	235	280	367	868	447	122	621	160	190	227
15	72	430	218	250	485	2910	447	118	496	112	210	430
16	177	430	207	230	2410	5210	345	114	420	89	1450	1160
17	371	393	202	210	8610	2010	342	108	348	86	5050	704
18	333	367	202	200	12200	1220	806	108	327	85	1140	485
19	220	328	220	190	7710	888	1190	105	303	77	642	393
20	233	298	216	185	5170	726	738	101	262	74	447	1050
21	249	272	194	183	3980	617	596	106	303	79	327	568
22	318	252	282	225	2140	532	561	105	410	154	251	387
23	303	237	521	265	1440	464	477	99	321	94	207	294
24	271	225	1230	433	1140	405	397	99	254	66	181	240
25	304	214	1250	572	928	434	341	97	227	58	158	202
26	298	210	909	442	764	498	318	95	230	55	160	177
27	263	202	798	312	632	535	294	105	291	56	321	162
28	218	191	783	254	572	461	285	101	297	55	3910	148
29	192	188	745	225	---	406	300	150	596	61	6380	137
30	175	478	639	1770	---	387	276	430	393	57	1160	129
31	162	---	550	7140	---	397	---	1540	---	53	660	---
TOTAL	5239	38039	23013	27731	66395	23929	14223	6112	26969	3637	28080	24115
MEAN	169	1268	742	895	2371	772	474	197	899	117	906	804
MAX	371	10200	4750	7140	12200	5210	1190	1540	4040	285	6380	7830
MIN	56	157	194	183	367	282	276	95	227	53	47	129
CFSM	.21	1.57	.92	1.11	2.93	.96	.59	.24	1.11	.15	1.12	1.00
IN	.24	1.75	1.06	1.28	3.06	1.10	.65	.28	1.24	.17	1.29	1.11
AC-FI	10390	75450	45650	55000	131700	47460	28210	12120	53490	7210	55700	47830

CAL YR 1981 TOTAL 331786 MEAN 909 MAX 18300 MIN 46 CFSM 1.13 IN 15.28 AC-FI 658100
WTR YR 1982 TOTAL 287482 MEAN 788 MAX 12200 MIN 47 CFSM .98 IN 13.24 AC-FI 570200

MERAMEC RIVER BASIN

07016500 BOURBEUSE RIVER AT UNION, MO--continued

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.63	1.08	3.80	2.17	---	2.24	2.13	1.48	5.38	1.58	.52	2.32
2	.63	1.14	9.73	2.20	---	2.13	2.18	1.42	5.21	1.38	.50	5.31
3	.63	1.99	4.83	3.70	---	2.05	2.05	1.37	3.64	1.24	.50	11.99
4	.63	10.25	3.40	7.20	---	1.97	1.87	1.33	2.64	1.45	.52	4.92
5	.62	13.62	2.81	6.40	---	1.87	2.52	1.28	3.54	1.15	.53	3.06
6	1.06	15.05	2.46	4.66	---	1.83	2.01	1.24	3.06	1.04	.61	2.50
7	.64	5.44	2.22	3.61	---	1.78	1.79	1.25	2.52	.97	.76	2.11
8	.69	3.83	2.05	3.12	---	1.71	1.74	1.18	2.21	.93	.64	1.84
9	.59	3.14	1.92	2.50	---	1.64	1.77	1.13	8.32	.88	.57	1.66
10	.56	2.83	1.81	2.58	---	1.58	1.80	1.09	4.44	2.08	6.93	1.52
11	.55	2.95	1.72	---	---	1.56	2.03	1.05	4.05	.88	2.44	1.41
12	.55	2.66	1.63	---	2.31	1.54	2.46	1.02	3.72	.92	1.79	1.32
13	.55	2.40	1.52	---	2.16	1.85	2.28	.99	2.90	.85	1.46	1.25
14	.63	2.18	1.40	---	1.90	2.25	2.04	.95	2.49	.91	1.26	1.23
15	.66	2.01	1.34	---	1.84	5.23	1.85	.94	2.15	.91	1.18	1.36
16	.64	2.02	1.30	---	3.82	10.20	1.75	.91	1.97	.80	1.55	3.94
17	1.61	1.90	1.28	---	12.11	5.45	1.70	.89	1.76	.77	10.55	2.82
18	1.81	1.83	1.25	---	15.16	3.83	1.77	.89	1.69	.77	3.68	2.28
19	1.34	1.72	1.35	---	13.22	3.11	3.80	.87	1.64	.72	2.56	1.83
20	1.36	1.62	1.34	---	9.10	2.72	2.78	.86	1.50	.68	2.06	3.82
21	1.41	1.53	1.23	1.21	8.60	2.45	2.38	.88	1.54	.71	1.72	2.49
22	1.53	1.46	1.21	1.26	5.63	2.24	2.30	.88	1.96	1.13	1.48	1.97
23	1.57	1.41	1.99	1.34	4.27	2.06	2.12	.84	1.69	.86	1.31	1.67
24	1.50	1.37	4.15	1.77	3.61	1.92	1.89	.83	1.47	.65	1.21	1.48
25	1.66	1.32	4.24	2.24	3.17	1.94	1.74	.84	1.36	.59	1.12	1.34
26	1.60	1.29	3.22	2.05	2.83	2.12	1.65	.83	1.37	.56	1.03	1.24
27	1.53	1.29	2.97	1.65	2.49	2.28	1.60	.90	1.31	.57	1.51	1.16
28	1.36	1.24	2.93	1.47	2.31	2.06	1.54	.84	1.65	.55	6.29	1.10
29	1.25	1.23	2.88	1.36	---	1.92	1.62	1.16	2.80	.60	11.95	1.05
30	1.18	1.21	2.73	3.01	---	1.80	1.55	1.09	1.91	.58	3.68	1.00
31	1.12	---	2.34	10.89	---	1.82	---	4.25	---	.55	2.73	---

07017200 BIG RIVER AT IRONDALE, MO

LOCATION.--Lat 37°49'48", long 90°41'27", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.15, T.36 N., R.3 E., Washington County, Hydrologic Unit 07140104, on right bank 50 ft (15 m) upstream from bridge on State Highway U., 0.2 mi (0.3 km) upstream from Mill Creek, and 0.8 mi (1.3 km) west of Irondale.

DRAINAGE AREA.--175 mi² (453 km²).

PERIOD OF RECORD.--July 1965 to current year.

GAGE.--Water-stage recorder and creststage gage. Datum of gage is 753.28 ft (229.600 m) National Geodetic Vertical Datum of 1929 (Missouri State Highway Commission benchmark). July 1-15, 1965, nonrecording gage at present site and datum.

REMARKS.--Records good except those for periods of no gage-height record, which are poor. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--17 years, 167 ft³/s (4.729 m³/s), 12.97 in/yr (329 mm/yr), 121,000 acre-ft/yr (149 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 43,200 ft³/s (1,220 m³/s) Nov. 1, 1972, gage height, 27.92 ft (8.510 m), from floodmarks, from rating curve extended above 13,000 ft³/s (368 m³/s) on basis of step back-water computations and indirect measurement of peak flow of February 1966 flood; minimum, 2.2 ft³/s (0.062 m³/s) Sept. 16, 1971.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 3,000 ft³/s (85.0 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 30	2245	8,200 232	12.53 3.819	July 7	1400	4,730 134	9.80 2.987
Feb. 16	2015	5,960 168	10.35 3.155	Aug. 27	0545	*21,000 595	18.67 5.619
Apr. 26	1800	3,230 91.5	8.29 2.527	Sept. 14	0330	4,620 131	9.20 2.804

Minimum daily discharge, 6.8 ft³/s (0.193 m³/s) Oct. 1, 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.8	36	529	68	759	214	145	218	390	51	19	180
2	6.8	75	249	65	472	206	189	187	224	49	18	513
3	7.0	120	176	155	363	196	859	161	168	62	17	314
4	8.0	210	134	592	272	206	341	143	173	50	16	199
5	9.0	300	109	292	227	186	249	125	181	40	14	172
6	8.0	210	96	224	201	170	199	112	127	33	26	157
7	8.4	150	86	178	191	160	165	187	101	1480	29	149
8	8.6	92	76	138	186	148	176	155	84	393	23	141
9	10	100	68	122	165	125	222	122	75	168	20	135
10	8.7	120	57	109	153	122	201	103	165	153	16	133
11	8.6	110	54	96	143	118	176	90	105	184	20	129
12	8.2	90	52	86	129	112	153	79	103	92	24	129
13	7.8	78	50	79	131	191	136	72	72	84	27	199
14	8.2	68	45	73	165	366	120	67	60	125	42	1920
15	15	61	43	67	438	781	116	73	56	68	56	529
16	30	72	41	60	2990	554	313	60	176	53	148	303
17	45	57	40	57	1940	80	1030	53	120	45	96	223
18	100	54	35	51	964	332	360	47	79	39	56	334
19	60	50	32	49	1310	263	260	46	98	37	42	229
20	40	47	32	45	1190	222	222	46	73	34	35	184
21	50	45	32	46	832	194	175	103	59	29	31	161
22	65	42	196	425	568	170	146	67	51	27	27	141
23	200	42	491	249	444	150	127	39	45	24	26	126
24	100	39	211	143	443	143	114	45	39	22	77	97
25	80	34	155	116	375	134	111	42	36	21	72	76
26	54	34	130	86	292	127	1420	42	39	21	75	66
27	60	37	117	79	266	116	956	219	194	25	6320	60
28	50	34	98	72	232	107	448	125	173	34	639	56
29	45	33	86	67	---	101	319	1320	84	26	323	50
30	40	373	75	3180	---	125	260	664	59	22	229	45
31	38	---	70	2300	---	241	---	431	---	20	184	---
TOTAL	1186.1	2813	3665	9369	15841	6360	9708	5243	3409	3511	8747	7150
MEAN	38.3	93.8	118	302	566	205	324	169	114	113	282	238
MAX	200	373	529	3180	2990	781	1420	1320	390	1480	6320	1920
MIN	6.8	33	32	45	129	80	111	39	36	20	14	45
CFSM	.22	.54	.67	1.73	3.23	1.17	1.85	.97	.65	.65	1.61	1.36
IN.	.25	.60	.78	1.99	3.37	1.35	2.06	1.11	.72	.75	1.86	1.52
AC-FT	2350	5580	7270	18580	31420	12620	19260	10400	6760	6960	17350	14180

CAL YR 1981 TOTAL 37770.5 MEAN 103 MAX 3700 MIN 6.6 CFSM .59 IN 8.03 AC-FT 74920
WTR YR 1982 TOTAL 77002.1 MEAN 211 MAX 6320 MIN 6.8 CFSM 1.21 IN 16.37 AC-FT 152700

MERAMEC RIVER BASIN

07017200 BIG RIVER AT IRONDALE, MO--continued

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.97	---	3.46	1.56	3.85	2.07	1.77	2.09	2.90	1.16	.95	1.93
2	.97	---	2.41	1.52	3.12	2.02	1.60	1.94	2.16	1.15	.93	2.06
3	.97	---	2.09	1.84	2.77	1.98	4.34	1.83	1.87	1.06	.91	2.57
4	1.01	---	1.90	3.64	2.41	2.01	2.66	1.72	1.72	1.16	.89	2.11
5	1.02	---	1.78	2.54	2.23	1.93	2.23	1.63	1.83	1.05	.88	1.93
6	1.02	---	1.72	2.30	2.16	1.86	2.02	1.55	1.65	.98	1.05	1.83
7	1.02	---	1.66	2.09	2.11	1.81	1.84	1.86	1.51	.98	1.11	1.79
8	1.02	---	1.61	1.88	2.09	1.75	1.85	1.80	1.41	2.97	.99	1.75
9	1.08	---	1.56	1.84	2.01	1.63	2.15	1.62	1.33	2.09	.96	1.74
10	---	---	1.52	1.77	1.96	1.62	2.03	1.52	2.12	1.77	.91	1.72
11	---	---	1.48	1.71	1.94	1.59	1.89	1.43	1.53	2.15	.89	1.72
12	---	---	1.46	1.66	1.75	1.55	1.78	1.38	1.39	1.66	1.00	1.71
13	---	---	1.43	1.64	1.66	1.82	1.70	1.32	1.32	1.49	.95	1.70
14	---	---	1.42	1.60	1.74	1.93	1.61	1.26	1.23	1.85	1.26	6.33
15	---	---	1.39	1.57	2.37	4.21	1.55	1.35	1.19	1.48	1.11	3.37
16	---	---	1.37	1.51	4.94	3.38	1.68	1.22	2.13	1.33	1.72	2.64
17	---	---	1.37	1.49	6.60	2.80	4.60	1.18	1.63	1.27	1.68	2.32
18	---	1.48	1.33	1.50	4.54	2.41	2.73	1.13	1.37	1.21	1.38	3.16
19	---	1.45	1.29	1.43	4.23	2.28	2.22	1.12	1.37	1.17	1.23	2.36
20	---	1.42	1.35	1.40	4.88	2.17	2.14	1.10	1.34	1.13	1.15	2.12
21	---	1.40	1.29	1.41	4.25	1.98	1.89	1.66	1.21	1.10	1.09	1.96
22	---	1.39	1.29	1.77	3.43	1.87	1.76	1.30	1.15	1.07	1.06	1.85
23	---	1.38	3.23	2.42	2.99	1.78	1.66	1.18	1.10	1.03	1.01	1.75
24	---	1.37	2.25	1.69	2.79	1.71	1.58	1.10	1.04	1.01	1.80	1.61
25	---	1.31	1.98	1.82	2.53	1.67	1.55	1.08	1.01	.99	1.54	1.45
26	---	1.31	1.86	1.61	2.34	1.66	3.66	1.08	1.03	.98	1.19	1.40
27	---	1.34	1.81	1.57	2.24	1.58	4.68	1.52	1.05	1.03	14.95	1.36
28	---	1.32	1.74	1.60	2.15	1.53	3.08	1.66	1.87	1.18	3.75	1.32
29	---	1.30	1.68	1.53	---	1.50	2.53	3.21	1.42	1.05	2.77	1.29
30	---	1.31	1.60	4.86	---	1.48	2.30	3.90	1.22	1.00	2.38	1.25
31	---	---	1.57	6.58	---	2.33	---	2.66	---	.97	2.27	---

MERAMEC RIVER BASIN

07018000 BIG RIVER NEAR DESOTO, MO

LOCATION.--Lat 38°07'20", long 90°40'33", in SW¼NW¼ sec.11, T.39 N., R.3 E., Jefferson County, Hydrologic Unit 07140104, near right bank on downstream side of pier of Mammoth Bridge, 300 ft (91 m) upstream from Mammoth Creek, 1.5 mi (2.4 km) downstream from Mineral Fork, 6.5 mi (10.5 km) west of De Soto, and at mile 59.2 (95.3 km). Records include flow from Mammoth Creek.

DRAINAGE AREA.--718 mi² (1,860 km²), includes that of Mammoth Creek.

PERIOD OF RECORD.--October 1948 to current year. Prior to May 1949 monthly discharge only, published in WSP 1311.

GAGE.--Water-stage recorder. Datum of gage is 538.79 ft (164.223 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for winter period, which are fair. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--34 years, 643 ft³/s (18.21 m³/s), 12.16 in/yr (309 mm/yr), 465,900 acre-ft/yr (574 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 55,800 ft³/s (1,580 m³/s) June 30, 1957, gage height, 27.15 ft (8.275 m); minimum discharge, 20 ft³/s (0.57 m³/s) Sept. 19, 1954; minimum gage height, 1.89 ft (0.576 m) Sept. 15, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of August 1915 reached a stage of about 29.4 ft (8.96 m), from flood-mark, 1.0 mi (1.6 km) downstream adjusted to gage site by comparison with recorded flood 5.5 ft (1.68 m) lower; discharge, 70,500 ft³/s (2,000 m³/s,) from rating curve extended above 37,000 ft³/s (1,050 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharge above basi of 8,000 ft³/s (227 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 31	0715	*18,000 510	18.30 5.578	July 17	2245	14,600 413	16.97 5.172
Feb. 17	0935	13,600 385	16.52 5.035	Aug. 28	0845	8,550 242	13.27 4.045

Minimum daily discharge, 87 ft³/s (2.464 m³/s) Oct. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	91	202	1520	270	10000	760	695	780	2200	281	180	1170
2	89	257	1100	274	2700	715	537	678	1320	238	174	2790
3	87	302	676	390	1700	678	2020	604	939	834	167	2170
4	90	678	503	1010	1300	660	1470	546	793	1750	163	1050
5	91	931	410	1100	1100	647	918	496	890	546	163	706
6	91	698	360	728	900	598	750	449	728	340	381	554
7	89	504	326	581	800	557	636	581	654	5970	336	463
8	90	404	300	486	740	524	605	703	773	7670	291	405
9	91	428	278	440	700	491	650	557	715	2080	244	376
10	103	445	259	390	660	475	703	459	672	1150	205	345
11	103	381	244	350	620	470	659	404	552	1320	189	321
12	101	337	235	320	600	449	597	362	529	918	180	306
13	100	305	227	300	580	587	544	336	434	635	185	310
14	117	283	220	280	570	974	494	321	372	524	221	2740
15	144	267	210	260	1000	2550	459	321	332	496	354	2670
16	140	295	201	255	3500	2060	470	310	592	429	709	1160
17	233	285	197	250	12500	1480	2070	277	678	372	524	781
18	295	263	194	240	5850	1130	1560	260	557	328	444	646
19	230	243	194	235	3870	932	932	325	424	302	332	636
20	216	227	194	230	6350	841	816	260	358	281	270	559
21	182	216	194	220	4440	747	690	310	358	847	235	456
22	295	206	296	500	2750	660	581	313	313	358	210	397
23	391	198	1480	1000	1910	592	518	310	270	270	202	357
24	340	192	1320	800	1480	548	459	260	244	241	213	336
25	321	185	741	640	1230	546	444	235	227	224	205	313
26	281	185	518	500	1020	530	1560	227	224	213	227	285
27	267	186	434	450	911	486	3420	372	221	210	1920	265
28	250	178	385	400	834	446	1730	491	502	202	5490	250
29	250	174	332	359	---	423	1140	2160	496	192	1290	238
30	230	454	306	4490	---	410	911	2150	345	194	850	229
31	210	---	288	15700	---	601	---	2130	---	189	735	---
TOTAL	5608	9909	14142	33448	70615	23567	29038	17987	17712	29604	17289	23284
MEAN	181	330	456	1079	2522	760	968	580	590	955	558	776
MAX	391	931	1520	15700	12500	2550	3420	2160	2200	7670	5490	2790
MIN	87	174	194	220	570	410	444	227	221	189	163	229
CFSM	.25	.46	.64	1.50	3.51	1.06	1.35	.81	.82	1.33	.78	1.08
IN.	.29	.51	.73	1.73	3.66	1.22	1.50	.93	.92	1.53	.90	1.21
AC=FT	11120	19650	28050	66340	140100	46750	57600	35680	35130	58720	34290	46180
CAL YR 1981	TOTAL	158953	MEAN	435	MAX	14000	MIN	87	CFSM	.61	IN	8.24
WTR YR 1982	TOTAL	292203	MEAN	801	MAX	15700	MIN	87	CFSM	1.12	IN	15.14
									AC=FT	315300		
									AC=FT	579600		

MERAMEC RIVER BASIN

07018000 BIG RIVER NEAR DESOTO, MO--continued

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.66	3.16	5.34	3.46	---	4.39	4.34	4.43	6.50	3.47	3.02	5.42
2	2.64	3.24	5.08	3.42	---	4.32	4.00	4.28	5.30	3.34	2.99	5.05
3	2.62	3.50	4.43	3.77	---	4.25	6.82	4.15	4.69	3.24	2.96	6.36
4	2.64	3.93	4.12	5.08	---	4.23	5.55	4.04	4.40	5.81	2.94	5.01
5	2.65	4.66	3.90	5.12	---	4.21	4.66	3.97	4.60	4.10	2.91	4.46
6	2.65	4.47	3.76	4.51	---	4.13	4.40	3.86	4.47	3.65	3.49	4.16
7	2.64	4.12	3.65	4.25	---	4.05	4.21	3.97	4.25	3.44	3.56	3.94
8	2.64	3.90	3.56	---	---	4.00	4.14	4.30	4.04	14.18	3.43	3.79
9	2.65	3.83	3.47	---	---	3.94	4.18	4.08	4.35	6.54	3.29	3.69
10	2.73	4.00	3.41	---	---	3.90	4.30	3.89	4.36	5.09	3.13	3.60
11	2.73	3.81	3.35	---	---	3.88	4.23	3.77	4.02	5.37	3.07	3.53
12	2.72	3.69	3.30	---	---	3.85	4.13	3.69	4.04	4.83	3.03	3.46
13	2.71	3.58	3.27	---	---	4.02	4.04	3.62	3.84	4.33	3.00	3.42
14	2.76	3.50	3.24	---	---	4.31	3.95	3.57	3.71	4.04	3.18	7.24
15	2.92	3.44	3.20	---	---	6.88	3.88	3.59	3.60	3.94	3.16	7.26
16	2.93	3.53	3.17	---	---	6.22	3.88	3.54	3.93	3.83	4.62	5.16
17	2.96	3.51	3.15	---	---	5.60	4.84	3.47	4.26	3.67	4.10	4.59
18	3.57	3.43	3.14	---	10.89	4.95	5.68	3.39	4.11	3.55	3.92	4.29
19	3.30	3.35	3.14	---	7.98	4.66	4.67	3.66	3.82	3.46	3.59	4.17
20	3.22	3.28	3.14	---	11.71	4.52	4.49	3.39	3.67	3.39	3.38	4.17
21	3.12	3.23	3.14	---	9.76	4.38	4.31	3.50	3.68	5.49	3.24	3.93
22	3.15	3.19	3.11	---	7.54	4.25	4.11	3.54	3.57	3.68	3.15	3.78
23	3.92	3.16	5.51	---	6.16	4.12	4.01	3.56	3.45	3.36	3.09	3.67
24	3.54	3.14	5.71	---	5.55	4.04	3.89	3.41	3.36	3.26	3.14	3.61
25	3.65	3.12	4.65	---	5.08	4.02	3.84	3.33	3.29	3.19	3.13	3.53
26	3.48	3.11	4.14	---	4.79	4.02	5.64	3.30	3.28	3.15	3.21	3.44
27	3.44	3.12	3.95	---	4.62	3.93	7.73	3.60	3.26	3.13	4.36	3.37
28	3.38	3.08	3.82	---	4.50	3.85	5.91	3.84	3.78	3.11	13.20	3.31
29	3.38	3.08	3.71	---	---	3.80	4.97	4.06	4.09	3.07	5.34	3.26
30	3.29	3.08	3.62	---	---	3.78	4.64	10.61	3.66	3.06	4.67	3.22
31	3.21	---	3.53	---	---	3.86	---	5.99	---	3.07	4.41	---

07018500 BIG RIVER AT BYRNESVILLE, MO

LOCATION.--Lat 38°21'45", long 90°39'05", in SE¼ sec.12, T.42 N., R.3 E., Jefferson County, Hydrologic Unit 07140104, on right bank on downstream side of pier of county highway bridge at Byrnesville, 4.0 mi (6.4 km) up-stream from Heads Creek, and at mile 14.1 (22.7 km).

DRAINAGE AREA.--917 mi² (2,375 km²).

PERIOD OF RECORD.--October 1921 to current year. Prior to June 1922 monthly discharge only, published in WSP 1311.

REVISED RECORDS.--WSP 667: 1927. WSP 877: 1938. WSP 1007: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 433.69 ft (132.189 m) National Geodetic Vertical Datum of 1929. Prior to Mar. 9, 1940, nonrecording gage at present site and datum.

Auxiliary water-stage recorder 4.0 mi (6.4 km) downstream at datum 433.83 ft (132.231 m) National Geodetic Vertical Datum of 1929. Prior to Dec. 9, 1969, nonrecording gage and Dec. 9, 1969, to Aug. 1, 1976, water stage recorder at present site and datum (discontinued as auxiliary gage, Sept. 30, 1976).

REMARKS.--Records good except those for periods of ice effect and no gage height record which are poor. Several observations of water temperature and specific conductance were made during the year. National Weather Service gage-height telemeter at station.

AVERAGE DISCHARGE.--61 years, 824 ft³/s (23.34 m³/s), 12.20 in/yr (310 mm/yr), 597,000 acre-ft/yr (736 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 42,100 ft³/s (1,190 m³/s) July 1, 1957, gage height, 26.41 ft (8.050 m); minimum discharge, 25 ft³/s (0.708 m³/s) Aug. 30, 1936, minimum gage height, 1.50 ft (0.457 m) Aug. 14, 1934.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Aug. 21, 1915, reached a stage of 30.2 ft (9.20 m) from floodmarks, discharge, 80,000 ft³/s (2,270 m³/s), by slope-area measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 7,000 ft³/s (198 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Feb. 1	2000	*17,100 481	20.15 6.142	July 9	0330	10,200 289	16.88 5.145
Feb. 18	1400	14,200 402	19.03 5.800	Aug. 28	2345	6,280 178	13.65 4.160

Minimum daily discharge, 118 ft³/s (3.342 m³/s) Oct. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	136	292	1820	437	14400	1030	683	1050	2960	312	225	982
2	131	424	1700	499	7000	959	750	915	2230	250	216	1610
3	125	663	1200	784	3500	904	680	810	1480	241	207	3400
4	124	768	847	1290	2300	862	1500	740	1250	1250	200	1820
5	122	997	683	1450	1500	832	2300	683	1090	1080	208	1050
6	137	1100	581	1260	1300	803	1400	634	1040	521	408	753
7	126	836	512	943	1200	756	1000	605	911	339	358	587
8	122	673	460	770	1100	716	820	689	2050	6350	268	473
9	118	623	411	659	1000	683	800	768	1570	6300	241	396
10	120	696	370	479	900	663	900	660	927	1850	242	345
11	122	640	342	450	803	663	1100	575	768	1340	241	305
12	130	547	330	400	790	664	1000	515	631	1330	234	275
13	130	483	332	380	780	878	900	471	575	978	226	255
14	160	430	312	350	778	1360	800	441	474	709	221	598
15	166	393	294	330	1230	2840	700	421	405	556	239	3300
16	194	427	280	310	4650	2960	620	416	370	492	316	1930
17	771	421	272	290	10100	2130	700	396	521	405	599	1130
18	686	403	233	280	13600	1640	1500	380	615	335	435	810
19	438	361	212	270	7420	1290	2600	365	553	288	358	670
20	325	333	231	260	6690	1090	1500	396	411	256	268	633
21	276	308	400	250	7250	971	1000	363	346	242	241	551
22	865	290	700	669	4470	857	824	375	328	709	242	438
23	854	277	1300	923	2920	766	723	389	292	337	241	367
24	627	266	1660	1280	2200	701	666	386	252	241	241	323
25	489	259	1150	970	1760	754	621	349	241	241	242	294
26	477	254	859	713	1450	751	638	326	241	242	242	268
27	403	256	744	636	1260	680	2600	365	242	242	296	275
28	358	246	651	561	1130	626	3230	449	241	241	3510	323
29	356	241	578	531	---	589	1730	821	344	241	3140	307
30	318	888	516	3370	---	567	1260	3700	413	236	1200	287
31	300	---	471	9750	---	561	---	4100	---	228	942	---
TOTAL	9706	14795	20451	31544	103481	31546	35545	23553	23771	28382	16247	24755
MEAN	313	493	660	1018	3696	1018	1185	760	792	916	524	825
MAX	865	1100	1820	9750	14400	2960	3230	4100	2960	6350	3510	3400
MIN	118	241	212	250	778	561	620	326	241	228	200	255
CFSM	.34	.54	.72	1.11	4.03	1.11	1.29	.83	.86	1.00	.57	.90
IN	.39	.60	.85	1.28	4.20	1.28	1.44	.96	.96	1.15	.66	1.00
AC-FT	19250	29350	40560	62570	205300	62570	70500	46720	47150	56300	32230	49100
CAL YR 1981	TOTAL	227473	MEAN 623	MAX 13700	MIN 94	CFSM .68	IN 9.23	AC-FT 451200				
WTR YR 1982	TOTAL	363776	MEAN 997	MAX 14400	MIN 118	CFSM 1.09	IN 14.76	AC-FT 721500				

MERAMEC RIVER BASIN

07018500 BIG RIVER AT BYRNESVILLE, MO--continued

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.42	3.36	7.08	3.88	19.12	5.66	4.53	5.58	8.83	3.92	2.93	5.18
2	2.39	3.88	7.08	3.76	---	5.46	---	5.24	8.05	3.66	2.87	6.43
3	2.36	4.58	6.18	4.88	---	5.33	---	4.99	6.51	3.50	2.82	10.94
4	2.36	5.06	5.31	6.29	---	5.21	---	4.79	5.67	3.50	2.78	7.73
5	2.35	5.64	4.81	6.38	---	5.12	---	4.63	5.58	6.02	2.74	5.91
6	2.49	6.03	4.49	6.31	---	5.05	---	4.50	5.58	4.65	3.74	5.22
7	2.40	5.28	4.27	5.48	---	4.92	---	4.41	5.31	4.00	4.07	4.79
8	2.36	4.78	4.10	4.98	---	4.79	---	4.50	5.05	12.87	3.74	4.45
9	2.33	4.54	3.92	4.64	---	4.70	---	4.89	7.01	16.17	3.50	4.20
10	2.35	4.79	3.78	3.97	---	4.63	---	4.59	5.63	7.71	3.27	4.02
11	2.35	4.68	3.66	---	---	4.60	---	4.32	5.28	6.19	3.13	3.87
12	2.42	4.39	3.56	---	5.12	4.63	---	4.14	4.85	6.44	2.97	3.75
13	2.43	4.17	3.62	---	5.02	5.27	---	3.99	4.74	5.66	2.91	3.64
14	2.46	3.99	3.51	---	4.91	5.20	---	3.87	4.44	5.09	2.88	3.67
15	2.70	3.84	3.42	---	5.45	8.76	---	3.82	4.21	4.66	3.03	9.11
16	2.66	3.99	3.34	---	9.39	9.60	---	3.79	4.10	4.45	3.57	7.80
17	3.70	3.92	3.32	---	16.28	8.07	---	3.73	4.29	4.26	4.93	6.06
18	4.82	3.89	3.20	---	18.84	7.15	---	3.64	4.82	4.00	4.35	5.35
19	4.05	3.74	2.94	---	14.81	6.34	---	3.60	4.72	3.81	4.11	4.96
20	3.64	3.62	3.08	---	13.15	5.90	---	3.75	4.26	3.65	3.74	4.78
21	3.33	3.50	---	---	15.21	5.60	---	3.59	4.04	3.56	3.44	4.69
22	4.64	3.40	---	---	11.73	5.32	5.05	3.59	3.95	5.47	3.22	4.34
23	5.31	3.34	---	5.21	9.40	5.09	4.76	3.71	3.83	4.06	3.09	4.11
24	4.70	3.29	7.00	6.21	8.15	4.89	4.60	3.71	3.65	3.53	3.01	3.94
25	4.14	3.23	6.01	5.62	7.35	4.93	4.45	3.54	3.51	3.32	3.04	3.82
26	4.19	3.19	5.22	4.77	6.65	5.07	4.40	3.43	3.40	3.21	3.02	3.72
27	3.91	3.22	4.91	4.62	6.20	4.85	7.56	3.59	3.59	3.49	3.94	3.60
28	3.73	3.16	4.63	4.37	5.90	4.68	10.37	3.78	3.36	3.14	7.90	3.87
29	3.61	3.13	4.38	4.23	---	4.55	7.07	4.58	3.57	3.06	10.31	3.86
30	3.54	3.12	4.18	6.16	---	4.45	6.06	9.01	4.25	2.98	6.17	3.78
31	3.46	---	4.01	15.84	---	4.46	---	11.85	---	2.94	5.41	---

MERAMEC RIVER BASIN

07019000 MERAMEC RIVER NEAR EUREKA, MO

LOCATION.--Lat 38°30'20", long 90°35'27", in SE¼ sec.32, T.44 N., R.4 E., St. Louis County, Hydrologic Unit 07140102, on right bank, 44 ft (13 m) upstream from bridge on north access roadway of I-44, 2.0 mi (3.2 km) east of Eureka, 3.0 mi (4.8 km) downstream from Big River, and at mile 34.1 (54.9 km).

DRAINAGE AREA.--3,788 mi² (9,811 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1903 to July 1906, October 1921 to current year. Monthly discharge only for January, February, and March 1904, published in WSP 1311.

REVISED RECORDS.--WSP 877: 1938(M). WSP 977: 1942. WSP 1007: Drainage area. WSP 1281: 1924-25.

GAGE.--Water-stage recorder. Datum of gage is 404.18 ft (123.194 m) National Geodetic Vertical Datum of 1929. Prior to Jan. 17, 1933, nonrecording gage at site 200 ft (61 m) upstream at different datum. Jan. 17, 1933, to Sept. 22, 1937, nonrecording gage, and Sept. 23, 1937, to Sept. 30, 1971, water-stage recorder at present site at datum 2.00 ft (0.610 m) higher.

REMARKS.--Records good except those for periods of ice effect and no gage-height record, which are fair. Several observations of water temperature and specific conductance made during the year. National Weather Service gageheight telemeter at station.

AVERAGE DISCHARGE.--63 years, 3,019 ft³/s (85.50 m³/s), 10.82 in/yr (275 mm/yr), 2,187,000 acre-ft/yr (2.70 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 120,000 ft³/s (3,400 m³/s) June 11, 1945, gage height, 38.94 ft (11.869 m), present datum; minimum, 196 ft³/s (5.55 m³/s) Aug. 27, 31, Sept. 1, 1936.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Aug. 22, 1915, reached a stage of 42.2 ft (12.86 m), from floodmarks, present datum, discharge, 175,000 ft³/s (4,960 m³/s), by slope-area measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 17,000 ft³/s (481 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Nov. 7	0330	26,100 739	16.20 4.938	June 9	0530	18,800 532	12.76 3.889
Feb. 2	unknown	36,700 1,039	20.86 6.358	Aug. 30	1030	21,900 620	14.31 4.362
Feb. 20	0415	*41,800 1,184	22.76 6.937				

Minimum daily discharge, 654 ft³/s (18.52 m³/s) Oct. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	710	1330	6470	2300	28500	3800	2320	2630	13500	1670	787	4780
2	678	1470	9510	2150	34000	3450	2520	2400	12400	1550	768	5900
3	662	2130	9840	3650	31400	3200	2380	2200	10500	1410	750	14400
4	654	7370	5770	5920	17300	3050	3530	2040	7460	1990	734	13500
5	678	18500	4150	7420	7470	2880	3120	1920	6330	2540	723	5740
6	1040	24300	3350	6220	5630	2730	2670	1810	5420	1590	982	3640
7	872	21800	2860	4660	4730	2570	2300	1780	4930	1380	1310	2770
8	702	8360	2510	3720	4180	2410	2150	1780	8280	5650	1500	2230
9	678	5490	2240	3110	3870	2270	2150	1920	16800	8920	1460	1850
10	678	4720	2020	2900	3440	2180	2220	1800	9120	4500	3060	1580
11	670	4300	1830	2700	3130	2140	2330	1690	5470	3060	3010	1420
12	678	3800	1700	2600	2950	2140	2430	1600	4960	2590	1500	1270
13	670	3280	1620	2500	2850	2760	2460	1530	4050	2100	1210	1180
14	801	2870	1510	2400	3110	3900	2280	1470	3240	2000	1110	1190
15	1020	2560	1410	2300	6190	8870	2100	1440	2770	1740	1150	4630
16	935	2590	1350	2200	12100	12600	1990	1400	2490	1460	2180	5580
17	3580	2410	1320	2100	27300	12200	2020	1360	2450	1360	7060	5840
18	4000	2200	1270	2000	34700	8130	3660	1320	2730	1230	10600	4000
19	2570	2030	1200	1850	40400	6080	4160	1310	2600	1160	5420	3050
20	1790	1870	1170	1700	41000	4920	3780	1320	2240	1080	3140	2980
21	1580	1710	1200	1600	52400	4590	3290	1310	2010	1050	2310	3320
22	2600	1580	1370	1700	20600	4020	3020	1280	1980	1360	1800	2420
23	2520	1500	3670	5130	13100	3450	2730	1310	1930	1230	1520	1900
24	3050	1420	4560	5680	9790	3040	2460	1260	1700	1030	1360	1600
25	2410	1360	5130	4550	7170	3070	2260	1230	1530	935	1260	1410
26	2350	1330	4550	4240	5840	3160	2150	1180	1430	866	1200	1270
27	2080	1310	3900	3270	4960	2880	3560	1230	1600	875	1540	1170
28	1830	1270	3420	2310	4270	2670	5400	1350	2350	853	5250	1090
29	1640	1220	3110	1880	---	2430	3620	2640	1700	823	18500	1030
30	1510	1940	2810	3540	---	2320	2970	5690	1980	815	20400	972
31	1410	---	2490	20900	---	2330	---	11700	---	804	8300	---
TOTAL	47046	138020	99310	119200	412380	126240	84030	64900	145950	59621	111894	103712
MEAN	1518	4601	3204	3845	14730	4072	2801	2094	4865	1923	3609	3457
MAX	4000	24300	9840	20900	41000	12600	5400	11700	16800	8920	20400	14400
MIN	654	1220	1170	1600	2850	2140	1990	1180	1430	804	723	972
CFSM	.40	1.22	.85	1.02	3.89	1.08	.74	.55	1.28	.51	.95	.91
IN.	.46	1.36	.98	1.17	4.05	1.24	.83	.64	1.43	.59	1.10	1.02
AC-FT	93320	273800	197000	236400	818000	250400	166700	128700	289500	118300	221900	205700

CAL YR 1981 TOTAL	1198568	MEAN	3284	MAX	38700	MIN	455	CFSM	.87	IN	11.77	AC-FT	2377000
WTR YR 1982 TOTAL	1512303	MEAN	4143	MAX	41000	MIN	654	CFSM	1.09	IN	14.85	AC-FT	3000000

MERAMEC RIVER BASIN

07019000 MERAMEC RIVER NEAR EUREKA, MO--continued

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	UCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.55	3.15	6.66	3.95	---	5.19	4.02	4.13	10.30	3.43	2.66	5.42
2	2.50	3.25	7.89	3.78	---	4.95	4.25	3.96	9.64	3.36	2.64	5.81
3	2.47	3.57	8.99	4.86	---	4.76	4.15	3.82	9.05	3.20	2.62	10.12
4	2.46	5.62	6.35	5.79	13.62	4.66	5.10	3.70	6.76	3.34	2.60	10.90
5	2.46	12.07	5.30	7.16	7.37	4.53	4.69	3.61	6.42	4.30	2.58	6.00
6	2.77	14.89	4.74	6.65	5.76	4.41	4.41	3.52	5.78	3.39	2.69	4.82
7	2.75	15.93	4.39	5.61	---	4.29	4.08	3.51	5.51	3.16	3.09	4.31
8	2.53	7.86	4.13	5.01	---	4.15	3.94	3.47	5.31	4.64	3.29	3.95
9	2.50	6.11	3.92	4.59	---	4.05	3.93	3.62	12.67	8.63	3.28	3.69
10	2.49	5.59	3.74	3.88	4.72	3.97	3.98	3.54	8.46	4.88	3.11	3.51
11	2.48	5.33	3.60	6.08	4.55	3.93	4.07	3.45	5.85	4.48	4.61	3.38
12	2.49	5.04	3.48	6.86	4.45	3.92	4.14	3.37	5.61	4.15	3.32	3.27
13	2.49	4.69	3.41	7.31	4.36	4.34	4.21	3.32	5.08	3.76	3.06	3.19
14	2.49	4.40	3.31	7.16	4.39	4.47	4.06	3.26	4.56	3.64	2.95	3.16
15	2.91	4.16	3.23	6.90	6.42	7.89	3.92	3.23	4.21	3.45	2.94	5.27
16	2.75	4.14	3.17	6.54	---	9.70	3.81	3.20	4.02	3.26	3.19	5.44
17	4.29	4.05	3.15	6.01	---	10.33	3.83	3.18	3.88	3.18	5.54	6.17
18	5.37	3.89	3.10	5.68	19.45	7.90	4.84	3.13	4.21	3.07	9.18	5.05
19	4.29	3.75	3.05	5.70	22.26	6.66	5.19	3.14	4.14	3.00	6.00	4.42
20	3.58	3.62	2.95	5.56	22.72	5.91	5.15	3.09	3.83	2.93	4.54	4.21
21	3.38	3.49	3.01	5.39	20.09	5.68	4.68	3.13	3.69	2.91	3.95	4.69
22	3.41	3.38	3.00	5.32	14.56	5.38	4.41	3.10	3.62	3.05	3.56	4.09
23	5.12	3.30	5.08	---	10.66	4.97	4.20	3.13	3.65	3.09	3.32	3.75
24	4.58	3.25	5.46	---	8.56	4.67	4.02	3.09	3.46	2.90	3.18	3.52
25	4.04	3.18	5.82	---	7.31	4.55	3.86	3.05	3.31	2.80	3.09	3.37
26	4.00	3.14	5.54	---	6.48	4.78	3.77	3.02	3.22	2.75	3.03	3.27
27	3.80	3.14	5.08	---	5.96	4.53	4.41	3.06	3.45	2.74	3.15	3.19
28	3.60	3.10	4.76	---	5.50	4.38	6.01	3.11	4.35	2.73	3.46	3.11
29	3.44	3.06	4.56	---	---	4.19	4.81	3.61	3.39	2.70	12.65	3.06
30	3.32	3.04	4.36	---	---	4.03	4.37	4.70	3.71	2.69	14.20	3.01
31	3.23	---	4.09	---	---	4.10	---	8.88	---	2.68	7.63	---

07019000 MERAMEC RIVER NEAR EUREKA, MO--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--January 1978 to current year.

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT: February 1969 to September 1970, October 1980 to May 1981, November 1981 to present.

REMARKS.--Numerous days of missing record due to observers quitting.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 2,910 mg/L January 31, 1982; minimum daily mean, 2 mg/L December 10, 13, 16, 17, and 20, 1980.

SUSPENDED-SEDIMENT LOADS: Maximum daily, 240,000 tons (218,000 metric tons) January 31, 1982; minimum daily, 3.2 tons (2.9 metric tons) December 20, 1980.

EXTREMES FOR CURRENT YEAR.--

SUSPENDED-SEDIMENT CONCENTRATION: Maximum daily mean, 2,910 mg/L January 31; minimum daily mean, 4 mg/L April 16.

SUSPENDED-SEDIMENT LOADS: Maximum daily, 240,000 tons (218,000 metric tons) January 31; minimum daily, 16 tons (15 metric tons) December 21.

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (FTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (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)
NOV										
05...	1430	20300	171	7.5	15.5	140	5.6	56	2700	7000
JAN										
07...	1230	4780	271	8.0	2.0	25	13.4	97	480	480
MAR										
11...	1315	2000	300	8.0	9.5	3.0	11.2	97	1	170
MAY										
13...	1350	1540	367	8.3	23.0	2.9	8.2	94	15	780
JUL										
16...	1300	1300	351	8.3	27.0	20	7.2	90	42	60
SEP										
24...	1500	1500	330	8.3	19.0	1.3	8.0	85	50	130

DATE	HARD- NESS (MG/L AS CaCO3) (00900)	HARD- NESS, NONCAR- BONATE (MG/L CaCO3) (00902)	CALCIUM DIS- SOLVED (MG/L AS Ca) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg) (00925)	SODIUM, DIS- SOLVED (MG/L AS Na) (00930)	PERCENT SODIUM (00932)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LITY FIELD (MG/L AS CaCO3) (00410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
NOV										
05...	85	10	18	9.6	2.4	6	.1	3.4	75	6.0
JAN										
07...	130	12	28	15	3.9	6	.2	1.9	108	17
MAR										
11...	170	36	35	19	3.7	5	.1	1.5	130	19
MAY										
13...	200	30	42	23	4.4	5	.2	1.5	170	19
JUL										
16...	180	32	40	20	3.9	4	.1	2.3	150	19
SEP										
24...	160	23	34	19	3.9	5	.1	2.1	140	20

MERAMEC RIVER BASIN

07019000 MERAMEC RIVER NEAR EUREKA, MO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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 SI02) (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)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)
NOV 05...	4.6	.1	8.6	126	--	.17	6910	.34	.170
JAN 07...	6.0	.1	7.2	161	--	.22	2080	.56	.140
MAR 11...	6.0	.1	7.0	177	181	.24	956	.64	.060
MAY 13...	5.9	<.1	3.7	205	202	.28	852	.14	.100
JUL 16...	4.9	<.1	8.4	200	196	.27	702	.35	<.060
SEP 24...	4.9	.1	.1	182	177	.25	737	.32	<.060

DATE	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4) (71846)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS TOTAL (MG/L AS P04) (71886)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P) (00671)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
NOV 05...	.22	1.00	.110	.34	.060	.050	413	22600	77
JAN 07...	.18	.68	.070	.21	.050	.030	26	336	42
MAR 11...	.08	.46	.020	.06	<.010	<.020	29	157	52
MAY 13...	.13	.65	.050	.15	.010	.010	12	50	30
JUL 16...	.08	.90	.030	.09	.010	.020	94	330	49
SEP 24...	.08	1.20	.050	.15	.040	.020	52	211	79

MERAMEC RIVER BASIN

07019000 MERAMEC RIVER NEAR EUREKA, MO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	ARSENIC TOTAL (UG/L AS AS) (01002)		ARSENIC SUS- PENDE TOTAL (UG/L AS AS) (01001)		ARSENIC DIS- SOLV TOTAL (UG/L AS AS) (01000)		BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)		BARIUM, SUS- PENDE RECOV- ERABLE (UG/L AS BA) (01006)		BARIUM, DIS- SOLV TOTAL (UG/L AS BA) (01005)		CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)		CADMIUM DIS- SOLV TOTAL (UG/L AS CD) (01025)		CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)		CHRO- MIUM, DIS- SOLV TOTAL (UG/L AS CR) (01030)	
NOV 05...	2		1		1		200		100		83		1		<1		10		<10	
JAN 07...	1		--		<1		100		1		99		1		<1		<10		<10	
MAY 13...	1		0		1		300		100		160		<1		<3		10		<10	
JUL 16...	1		0		1		100		0		200		<1		<1		10		<10	

DATE	COBAL TOTAL RECOV- ERABLE (UG/L AS CU) (01037)		COBAL DIS- SOLV TOTAL (UG/L AS CO) (01035)		COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)		COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU) (01041)		COPPER, DIS- SOLV TOTAL (UG/L AS CU) (01040)		IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)		IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE) (01044)		IRON, DIS- SOLV TOTAL (UG/L AS FE) (01046)		LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	
NOV 05...	4		<3		30		21		9		6100		5900		180		55	
JAN 07...	<1		<3		8		0		19		1200		1100		91		13	
MAY 13...	<1		<1		4		2		2		210		200		11		9	
JUL 16...	<1		<1		10		7		3		1300		1300		26		23	

DATE	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB) (01050)		LEAD, DIS- SOLV TOTAL (UG/L AS PB) (01049)		MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)		MANGA- NESE, SUS- PENDE RECOV- ERABLE (UG/L AS MN) (01054)		MANGA- NESE, DIS- SOLV TOTAL (UG/L AS MN) (01056)		MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)		MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG) (71895)		MERCURY DIS- SOLV TOTAL (UG/L AS HG) (71890)		NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	
NOV 05...	54		1		390		370		23		.2		--		<.1		12	
JAN 07...	6		7		80		60		23		.3		.0		.3		2	
MAY 13...	5		4		90		60		32		<.1		--		.1		1	
JUL 16...	--		<1		110		100		12		.3		.0		.3		11	

DATE	NICKEL, SUS- PENDE RECOV- ERABLE (UG/L AS NI) (01066)		NICKEL, DIS- SOLV TOTAL (UG/L AS NI) (01065)		SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE) (01147)		SELE- NIUM, SUS- PENDE RECOV- ERABLE (UG/L AS SE) (01145)		SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)		SILVER, DIS- SOLV TOTAL (UG/L AS AG) (01075)		ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)		ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN) (01091)		ZINC, DIS- SOLV TOTAL (UG/L AS ZN) (01090)	
NOV 05...	7		5		<1		<1		<1		<1		90		80		9	
JAN 07...	0		4		<1		<1		<1		<1		30		--		<3	
MAY 13...	0		2		<1		<1		<1		<1		10		--		<12	
JUL 16...	--		<1		<1		<1		<1		<1		60		50		11	

MERAMEC RIVER BASIN

07019000 MERAMEC RIVER NEAR EUREKA, MO--continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT

DATE	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SED. SUSP. FALL DIAM. % FINER THAN (00061)	SED. SUSP. FALL DIAM. % FINER THAN (70342)	SED. SUSP. FALL DIAM. % FINER THAN (70343)	SED. SUSP. FALL DIAM. % FINER THAN (70344)	SED. SUSP. FALL DIAM. % FINER THAN (70345)	SED. SUSP. FALL DIAM. % FINER THAN (70346)
		.062 MM	.125 MM	.250 MM	.500 MM	1.00 MM	
FEB , 1982							
16...	11500	93	94	98	100	100	

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
OCTOBER			NOVEMBER			DECEMBER			
1	710		1330	---	---	6470	20		349
2	678		1470	---	---	9510	47		1210
3	662		2130	---	---	9840	169		4490
4	654		7370	205	4080	5770	122		1900
5	678		18500	480	24000	4150	28		314
6	1040		24300	474	31100	3350	22		199
7	872		21800	435	25600	2860	32		247
8	702		8360	1210	27300	2510	28		190
9	678		5490	730	10800	2240	24		145
10	678		4720	403	5140	2020	24		131
11	670		4300	346	4020	1830	26		128
12	678		3800	198	2030	1700	20		92
13	670		3280	70	620	1620	19		83
14	801		2870	77	597	1510	13		53
15	1020		2560	102	705	1410	12		46
16	935		2590	141	986	1350	19		69
17	3580		2410	70	455	1320	12		43
18	4000		2200	58	345	1270	33		113
19	2570		2030	27	148	1200	14		45
20	1790		1870	19	96	1170	8		25
21	1580		1710	47	217	1200	5		16
22	2600		1580	29	124	1370	6		22
23	2520		1500	16	65	3670	51		505
24	3050		1420	14	54	4560	57		702
25	2410		1360	12	44	5130	27		374
26	2350		1330	10	36	4550	47		577
27	2080		1310	8	28	3900	59		621
28	1830		1270	12	41	3420	69		637
29	1640		1220	6	20	3110	108		907
30	1510		1940	13	68	2810	33		250
31	1410		---	---	---	2490	13		87
TOTAL	47046		138020	---	---	138719	99310	---	14570

MERAMEC RIVER BASIN

07019000 MERAMEC RIVER NEAR EUREKA, MO--continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JANUARY				FEBRUARY			MARCH		
1	2300	17	106	28500	---	---	3800	39	400
2	2150	76	441	34000	---	---	3450	37	345
3	3650	177	1740	31400	---	---	3200	50	432
4	5920	174	2780	17300	---	---	3050	34	280
5	7420	76	1520	7470	---	---	2880	20	156
6	6220	89	1490	5630	---	---	2730	18	133
7	4660	110	1380	4730	---	---	2570	20	139
8	3720	67	673	4180	---	---	2410	50	325
9	3110	22	185	3870	781	8160	2270	23	141
10	2900	---	---	3440	563	5230	2180	10	59
11	2700	---	---	3130	467	3950	2140	12	69
12	2600	---	---	2950	145	1150	2140	13	75
13	2500	---	---	2850	79	608	2760	24	179
14	2400	---	---	3110	104	873	3900	65	684
15	2300	---	---	6190	116	1940	8870	114	2730
16	2200	---	---	12100	311	16000	12600	201	6840
17	2100	---	---	27300	514	54100	12200	119	3920
18	2000	---	---	34700	372	34900	8130	70	1540
19	1850	---	---	40400	287	31300	6080	59	969
20	1700	---	---	41000	198	21900	4920	22	292
21	1600	---	---	32400	143	12500	4590	37	459
22	1700	---	---	20600	121	6730	4020	40	434
23	5130	33	457	13100	97	3430	3450	27	252
24	5680	141	2160	9790	83	2190	3040	23	189
25	4550	67	823	7170	76	1470	3070	23	191
26	4240	56	641	5840	90	1420	3160	18	154
27	3270	106	936	4960	110	1470	2880	16	124
28	2310	65	405	4270	82	945	2670	18	130
29	1880	48	244	---	---	---	2430	8	52
30	3540	1160	21500	---	---	---	2320	10	63
31	20900	2910	240000	---	---	---	2330	17	107
TOTAL	119200	---	277481	412380	---	210266	126240	---	21863
APRIL				MAY			JUNE		
1	2320	15	94	2630	25	178	13500	278	10100
2	2520	14	95	2400	23	149	12400	206	6900
3	2380	16	103	2200	16	95	10500	88	2490
4	3530	107	1020	2040	13	72	7460	368	7410
5	3120	31	261	1920	13	67	6330	256	4380
6	2670	13	94	1810	14	68	5420	168	2460
7	2300	14	87	1780	20	96	4930	108	1440
8	2150	14	81	1780	16	77	8280	828	18500
9	2150	17	99	1920	24	124	16800	1980	89800
10	2220	11	66	1800	20	97	9120	377	9280
11	2330	10	63	1690	14	64	5470	264	3900
12	2430	14	92	1600	20	86	4960	170	2280
13	2460	21	139	1530	17	70	4050	113	1240
14	2280	16	98	1470	10	40	3240	100	875
15	2100	11	62	1440	8	31	2770	71	531
16	1990	4	21	1400	12	45	2490	48	323
17	2020	23	125	1360	19	70	2450	84	556
18	3660	216	2130	1320	11	39	2730	96	708
19	4160	171	1920	1310	8	28	2600	73	512
20	3780	47	480	1320	10	36	2240	53	321
21	3290	28	249	1310	17	60	2010	58	315
22	3020	17	139	1280	22	76	1980	41	219
23	2730	10	74	1310	22	78	1930	38	198
24	2460	13	86	1260	14	48	1700	124	569
25	2260	18	110	1230	11	37	1530	89	368
26	2150	31	180	1180	13	41	1430	278	1070
27	3560	80	769	1230	19	63	1600	478	2060
28	5400	219	3190	1350	23	84	2350	492	3120
29	3620	75	733	2640	223	1590	1700	149	684
30	2970	39	313	5690	884	13600	1980	80	428
31	---	---	---	11700	504	15900	---	---	---
TOTAL	84030	---	12973	64900	---	33109	145950	---	173037

MERAMEC RIVER BASIN

07019000 MERAMEC RIVER NEAR EUREKA, MO--continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JULY			AUGUST			SEPTEMBER			
1	1670	117	528	787	25	53	4070		
2	1550	175	732	768	42	87	4990		
3	1410	98	373	750	36	73	13100		
4	1990	97	521	734	25	50	12300		
5	2540	169	1160	723	32	62	4840		
6	1590	168	721	982	40	106	3190		
7	1380	144	537	1310	62	219	2540		
8	5650	158	2000	1500	96	389	2120		
9	8920	590	10300	1460	68	268	1820		
10	4500	394	4790	3060	153	1260	1620		
11	3060	112	925	3010	181	1470	1480		
12	2590	154	1080	1500	74	300	1370		
13	2100	142	805	1210	64	209	1290		
14	2000	89	481	1110	78	234	1310		
15	1740	88	413	1150	84	261	3950		
16	1460	96	378	2180	98	577	4690		
17	1360	61	224	7060	613	9790	4940		
18	1230	48	159	10600	540	15500	3450		
19	1160	41	128	5420	158	2310	2730		
20	1080	48	140	3140	---	---	2670		
21	1050	66	187	2310	---	---	2910		
22	1360	85	312	1800	---	---	2200		
23	1230	60	199	1520	---	---	1790		
24	1030	44	122	1360	---	---	1540		
25	935	25	63	1260	---	---	1380		
26	866	26	61	1270	---	---	1270		
27	875	24	57	1540	---	---	1170		
28	853	14	32	4700	---	---	1090		
29	823	23	51	17300	---	---	1030		
30	815	26	57	19200	---	---	972		
31	804	49	106	7300	---	---	---		
TOTAL	59621	---	27642	108014	---	33218	93822		

MERAMEC RIVER BASIN

07019280 MERAMEC RIVER AT PAULINA HILLS, MO

WATER-QUALITY RECORDS

LOCATION.--Lat 38°27'48", long 90°24'53", Jefferson County, at bridge on State Highway 21 at Paulina Hills, 0.3 mi (0.5 km) downstream from Saline Creek, and 10 mi (16 km) upstream from mouth.

DRAINAGE AREA.--3,950 mi² (10,230 km²), approximately.

PERIOD OF RECORD.--Chemical analyses: August 1963 to July 1975, October 1981 to September 1982.

REMARKS.--Records of discharge are given for gaging station near Eureka, Mo.

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (MG/L) (00301)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L) (00335)
OCT										
07...	1500	1028	29001	1650	420	7.8	19.5	--	--	11
NOV										
05...	1400	1028	29001	22000	180	7.6	15.0	7.0	69	20
DEC										
02...	1245	1028	29001	10600	278	7.5	8.0	10.2	86	23
JAN										
07...	1145	1028	29001	5260	270	8.0	2.0	13.4	97	15
FEB										
18...	1230	1028	29001	38000	176	7.9	2.0	12.2	88	26
MAR										
11...	1215	1028	29001	2240	380	7.7	9.5	11.0	96	<5
APR										
07...	1145	1028	29001	2500	318	7.8	11.0	9.6	87	11
MAY										
13...	1230	1028	29001	1700	394	8.2	22.5	7.7	88	<5
JUN										
16...	1215	1028	29001	2740	286	8.2	21.0	6.8	76	11
JUL										
16...	1200	1028	29001	1430	362	7.9	26.0	6.2	76	10
AUG										
11...	1130	1028	29001	3100	335	7.5	24.0	5.6	66	11
SEP										
24...	1400	1028	29001	1660	322	8.0	19.0	7.8	83	10

DATE	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	HARD- NESS (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)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LITY 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)
OCT										
07...	1000	180	40	20	13	2.7	164	29	17	.1
NOV										
05...	3000	--	--	--	--	--	95	--	--	--
DEC										
02...	5500	--	--	--	--	--	115	--	--	--
JAN										
07...	1400	140	33	14	5.4	1.8	105	24	8.0	<.1
FEB										
18...	940	--	--	--	--	--	66	--	--	--
MAR										
11...	12	--	--	--	--	--	144	--	--	--
APR										
07...	200	170	38	17	5.8	1.9	131	23	3.0	<.1
MAY										
13...	52	--	--	--	--	--	166	--	--	--
JUN										
16...	210	--	--	--	--	--	128	--	--	--
JUL										
16...	54	170	40	18	5.5	2.1	148	20	8.0	.1
AUG										
11...	3100	--	--	--	--	--	138	--	--	--
SEP										
24...	220	--	--	--	--	--	138	--	--	--

MERAMEC RIVER BASIN

07019280 MERAMEC RIVER AT PAULINA HILLS, MO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L) (00530)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	CADMIUM TOTAL RECUV- ERABLE (UG/L AS CD) (01027)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	COPPER, TOTAL RECUV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECUV- ERABLE (UG/L AS FE) (01045)
OCT 07...	237	48	.34	.260	.290	<2	<2	<5	<5	1900
NOV 05...	--	248	.18	.260	.290	--	--	--	--	--
DEC 02...	--	84	.42	.370	.150	--	--	--	--	--
JAN 07...	164	37	.44	.110	.120	<2	<2	<5	<5	1900
FEB 18...	--	236	.42	.120	.240	--	--	--	--	--
MAR 11...	--	26	.78	.010	.090	--	--	--	--	--
APR 07...	192	40	.28	.100	.070	<2	<2	5	<5	1800
MAY 13...	--	28	.10	.070	.150	--	--	--	--	--
JUN 16...	--	22	.37	.100	.080	--	--	--	--	--
JUL 16...	225	40	.40	.060	.140	<2	<2	<5	<5	1600
AUG 11...	--	48	.20	.120	.160	--	--	--	--	--
SEP 24...	--	24	.36	.070	.090	--	--	--	--	--

[illegible]

MISSISSIPPI RIVER MAIN STEM

07020500 MISSISSIPPI RIVER AT CHESTER, IL

LOCATION.--Lat 37°54'10", long 89°51'10", in SW¼ sec.24, T.7 S., R.7 W., third principal meridian, Randolph County, Hydrologic Unit 07140105, on downstream side of left pier of main truss of highway bridge at Chester, 8.1 mi (13.0 km) downstream from Kaskaskia River, and at mile 109.9 (176.8 km) above Ohio River.

DRAINAGE AREA.--708,600 mi² (1,835,000 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Discharge: October 1927 to current year in reports of Geological Survey. Monthly discharge only for some periods, published in WSP 1311. Since August 1873, results of discharge measurements in reports of Mississippi River Commission.

Gage heights: July 1942 to current year in reports of Geological Survey. Since May 1891, in reports of Mississippi River Commission and National Weather Service.

REVISED RECORDS.--WRD MO-76-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 341.05 ft (103.952 m) National Geodetic Vertical Datum of 1929. Prior to Feb. 1, 1962, nonrecording gage 0.4 mi (0.6 km) downstream at present datum.

REMARKS.--Records excellent. Natural flow of stream affected by many reservoirs and navigation dams in upper Mississippi River basin and by many reservoirs and diversions for irrigation in Missouri River basin.

AVERAGE DISCHARGE.--55 years, 184,500 ft³/s (5,225 m³/s), 133,700,000 acre-ft/yr (165 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge determined, 886,000 ft³/s (25,100 m³/s) July 3, 1947, Apr. 30, 1973, (discharge including unmeasured overflow, was greater May 24, 1943; maximum gage height, 43.32 ft (13.204 m) Apr. 30, 1973; minimum daily discharge, 30,000 ft³/s (850 m³/s) Dec. 12, 1937; minimum gage height, -4.10 ft (-1.250 m) Jan. 2, 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 30, 1844, reached a stage of 39.8 ft (12.13 m) and a discharge of 1,350,000 ft³/s (38,200 m³/s) computed by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 550,000 ft³/s (15,580 m³/s) June 13 at 1200; maximum gage height, 32.24 ft (9.827 m) June 13; minimum daily discharge, 72,300 ft³/s (2,048 m³/s) Jan. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	143000	159000	124000	104000	342000	418000	402000	338000	469000	267000	213000	224000		
2	139000	156000	132000	106000	359000	378000	388000	334000	488000	263000	202000	261000		
3	132000	150000	146000	111000	318000	342000	383000	333000	505000	267000	195000	317000		
4	130000	154000	172000	122000	281000	326000	386000	332000	517000	297000	182000	350000		
5	130000	239000	189000	132000	253000	314000	382000	332000	526000	359000	182000	319000		
6	125000	301000	191000	128000	232000	297000	376000	328000	531000	399000	184000	280000		
7	125000	294000	188000	132000	208000	281000	372000	325000	531000	412000	185000	247000		
8	121000	253000	175000	124000	185000	262000	368000	316000	524000	411000	203000	220000		
9	124000	219000	162000	116000	167000	244000	363000	305000	518000	390000	221000	193000		
10	133000	196000	152000	110000	154000	235000	356000	306000	512000	364000	217000	177000		
11	132000	183000	141000	103000	145000	221000	346000	321000	516000	366000	211000	169000		
12	131000	165000	132000	103000	137000	218000	334000	314000	525000	360000	195000	153000		
13	128000	158000	135000	104000	132000	241000	326000	296000	527000	317000	175000	147000		
14	127000	151000	133000	96800	129000	265000	320000	280000	522000	290000	165000	153000		
15	132000	143000	128000	91400	132000	293000	320000	266000	513000	287000	156000	155000		
16	141000	138000	121000	86600	145000	330000	324000	261000	500000	298000	206000	169000		
17	164000	136000	124000	81600	186000	372000	333000	282000	477000	309000	308000	195000		
18	190000	131000	104000	78800	248000	414000	340000	316000	446000	313000	315000	202000		
19	192000	127000	93000	74700	297000	443000	358000	323000	421000	314000	288000	218000		
20	179000	130000	89800	72800	370000	457000	381000	335000	410000	331000	253000	223000		
21	173000	130000	98200	72300	406000	461000	405000	336000	408000	349000	213000	217000		
22	171000	124000	106000	74900	439000	464000	421000	338000	399000	367000	181000	207000		
23	179000	126000	117000	85600	471000	474000	418000	348000	372000	379000	169000	201000		
24	173000	126000	110000	88100	490000	496000	405000	358000	333000	386000	153000	195000		
25	161000	122000	102000	91300	495000	501000	391000	380000	291000	388000	140000	182000		
26	163000	115000	99800	94400	487000	497000	382000	397000	272000	370000	141000	167000		
27	168000	123000	102000	92100	471000	483000	371000	394000	262000	330000	150000	161000		
28	169000	123000	106000	89300	450000	465000	360000	382000	258000	285000	170000	154000		
29	168000	116000	105000	92900	---	444000	352000	395000	263000	263000	224000	143000		
30	167000	114000	104000	112000	---	425000	344000	427000	269000	245000	250000	138000		
31	162000	---	104000	220000	---	415000	---	444000	---	227000	231000	---		
TOTAL	4672000	4802000	3985800	3190600	8129000	11476000	11007000	10442000	13105000	10203000	6278000	6137000		
MEAN	150700	160100	128600	102900	290300	370200	366900	336800	436800	329100	202500	204600		
MAX	192000	301000	191000	220000	495000	501000	421000	444000	531000	412000	315000	350000		
MIN	121000	114000	89800	72300	129000	218000	320000	261000	258000	227000	140000	138000		
CFSM	.21	.23	.18	.15	.41	.52	.52	.48	.62	.46	.29	.29		
IN.	.25	.25	.21	.17	.43	.60	.58	.55	.69	.54	.33	.32		
AC-FT	9267000	9525000	7906000	6329000	16120000	22760000	21830000	20710000	25990000	20240000	12450000	12170000		
CAL YR 1981	TOTAL	67900600	MEAN	186000	MAX	520000	MIN	52200	CFSM	.26	IN	3.56	AC-FI	134700000
WIR YR 1982	TOTAL	93427400	MEAN	256000	MAX	531000	MIN	72300	CFSM	.36	IN	4.90	AC-FI	185300000

MISSISSIPPI RIVER MAIN STEM

07020500 MISSISSIPPI RIVER AT CHESTER, IL--continued

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.68	11.12	7.49	4.91	21.55	25.90	26.20	23.15	28.67	19.43	16.06	16.28
2	9.34	10.85	8.26	4.96	23.10	24.32	25.53	22.78	29.72	19.12	15.16	18.11
3	8.61	10.37	9.24	5.57	21.04	22.72	25.12	22.71	30.51	19.12	14.35	21.34
4	8.47	10.38	11.42	6.53	19.02	21.82	25.17	22.63	31.04	20.25	13.52	23.64
5	8.57	15.49	12.93	7.94	17.19	21.16	25.02	22.60	31.39	23.79	13.31	22.33
6	8.05	20.39	13.15	7.86	15.82	20.35	24.61	22.38	31.70	26.06	13.49	20.09
7	8.14	20.51	12.93	8.03	14.13	19.40	24.49	22.61	31.67	26.68	13.50	17.92
8	7.71	18.12	12.07	7.33	12.47	18.34	24.30	22.31	31.36	26.75	14.39	16.13
9	7.73	15.85	10.95	6.39	11.05	17.13	24.03	21.77	31.00	25.86	16.31	14.16
10	8.85	14.17	10.04	5.75	9.87	16.60	23.71	21.44	30.81	24.53	15.88	12.77
11	8.77	13.17	9.07	4.88	9.16	15.60	23.27	22.64	31.12	24.52	15.49	12.20
12	8.66	11.64	8.03	4.82	8.33	15.11	22.64	22.43	31.76	24.44	14.48	10.87
13	8.39	11.00	8.10	5.20	7.82	16.45	22.28	21.61	32.04	22.45	12.91	10.15
14	8.27	10.23	8.01	4.26	7.36	18.10	21.96	20.43	32.07	20.77	11.90	10.46
15	8.76	9.67	7.64	3.60	7.54	19.60	21.86	19.93	31.74	20.43	11.05	10.70
16	9.36	8.95	6.81	3.08	8.41	21.51	22.05	19.32	31.32	21.00	12.76	11.22
17	11.10	8.85	6.26	2.36	11.33	23.57	22.56	20.33	30.45	21.63	20.49	13.50
18	13.54	8.29	7.10	2.13	15.76	25.56	22.84	22.39	29.05	21.98	21.48	14.07
19	13.96	7.94	5.80	1.62	18.36	26.97	23.62	22.90	27.77	21.72	20.17	15.30
20	12.88	8.09	3.77	1.40	22.42	27.68	24.70	23.41	27.42	22.67	18.20	16.12
21	12.39	8.37	3.86	1.31	24.12	27.71	25.97	23.48	27.34	23.54	15.59	15.60
22	12.06	7.39	4.84	1.50	25.44	27.95	26.89	23.44	27.13	24.56	13.10	15.09
23	12.74	7.75	6.19	2.69	26.74	28.17	26.91	23.85	26.07	25.29	12.08	14.54
24	12.47	7.70	5.74	3.23	27.65	29.10	26.37	24.24	24.16	25.66	10.92	14.13
25	11.36	7.68	4.58	3.48	28.21	29.65	25.69	25.12	21.59	26.12	9.74	13.10
26	11.34	6.26	4.42	3.97	28.10	29.78	25.30	26.08	20.28	25.75	9.58	11.80
27	11.63	7.40	4.57	3.69	27.65	29.39	24.84	25.93	19.32	23.95	10.51	11.22
28	11.87	7.57	5.16	3.09	27.01	28.76	24.26	25.24	18.82	21.49	11.82	10.70
29	11.75	6.88	5.15	3.47	---	28.11	23.83	25.45	18.93	19.97	15.62	9.67
30	11.73	6.20	4.80	4.55	---	27.35	23.43	27.08	19.46	18.62	18.17	9.29
31	11.31	---	4.83	13.10	---	26.89	---	27.79	---	17.32	17.10	---

WTR YR 1982

MISSISSIPPI RIVER MAIN STEM

07020500 MISSISSIPPI RIVER AT CHESTER, IL--continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT: August 1980 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 2,510 mg/L May 25, 1981; minimum daily mean, 13 mg/L March 18, 1981.

SUSPENDED-SEDIMENT LOADS: Maximum daily, 3,170,000 tons (2,880,000 metric tons) June 6, 1982; minimum daily, 3,580 tons (3,280 metric tons) March 18, 1981.

EXTREMES FOR CURRENT YEAR.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 2,410 mg/L May 27; minimum daily mean, 160 mg/L December 21.

SUSPENDED-SEDIMENT LOADS: Maximum daily, 3,170,000 tons (2,880,000 metric tons) June 6; minimum daily, 36,300 tons (32,900 metric tons) January 19.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT

DATE	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SED. SUSP. FALL DIAM. % FINER THAN (70337)	SED. SUSP. FALL DIAM. % FINER THAN (70338)	SED. SUSP. FALL DIAM. % FINER THAN (70339)	SED. SUSP. FALL DIAM. % FINER THAN (70340)	SED. SUSP. FALL DIAM. % FINER THAN (70342)	SED. SUSP. FALL DIAM. % FINER THAN (70343)	SED. SUSP. FALL DIAM. % FINER THAN (70344)	SED. SUSP. FALL DIAM. % FINER THAN (70345)	SED. SUSP. FALL DIAM. % FINER THAN (70346)
MAY, 1982										
26...	415000	42	45	51	58	85	86	91	100	100
JUL										
09...	408000	52	56	61	66	85	87	92	100	100
DATE	RED 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)	BED MAT. SIEVE DIAM. % FINER THAN (80173)
SEP, 1982										
02...	0	0	16	56	84	93	97	99	100	100

MISSISSIPPI RIVER MAIN STEM

07020500 MISSISSIPPI RIVER AT CHESTER, IL--continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
OCTOBER			NOVEMBER			DECEMBER			
1	143000	220	84900	159000	190	81600	124000	210	70300
2	139000	210	78800	156000	250	105000	132000	260	92700
3	132000	240	85500	150000	190	77000	146000	300	118000
4	130000	170	59700	154000	190	79000	172000	390	181000
5	130000	180	63200	239000	370	239000	189000	425	217000
6	125000	175	59100	301000	640	520000	191000	520	268000
7	125000	210	70900	294000	575	456000	188000	500	254000
8	121000	260	84900	253000	510	348000	175000	410	194000
9	124000	240	80400	219000	420	248000	162000	420	184000
10	133000	240	86200	196000	360	191000	152000	425	174000
11	132000	250	89100	183000	310	153000	141000	360	137000
12	131000	210	74300	165000	240	107000	132000	320	114000
13	128000	190	65700	158000	250	107000	135000	310	113000
14	127000	200	68600	151000	250	102000	133000	270	97000
15	132000	180	64200	143000	220	84900	128000	240	82900
16	141000	200	76100	138000	275	102000	121000	230	75100
17	164000	250	111000	136000	210	77100	124000	285	95400
18	190000	270	139000	131000	190	67200	104000	260	73000
19	192000	250	130000	127000	200	68600	93000	210	52700
20	179000	280	135000	130000	300	105000	89800	180	43600
21	173000	280	131000	130000	305	107000	98200	160	42400
22	171000	260	120000	124000	280	93700	106000	190	54400
23	179000	300	145000	126000	410	139000	117000	470	148000
24	173000	290	135000	126000	240	81600	110000	270	80200
25	161000	300	130000	122000	240	79100	102000	260	71600
26	163000	300	132000	115000	190	59000	99800	260	70100
27	168000	230	104000	123000	230	76400	102000	245	67500
28	169000	210	75800	123000	250	83000	106000	270	77300
29	168000	230	104000	116000	220	68900	105000	170	48200
30	167000	220	99200	114000	190	58500	104000	210	59000
31	162000	220	96200	---	---	---	104000	290	81400
TOTAL	4672000	---	2998800	4802000	---	4164600	3985800	---	3436800
JANUARY			FEBRUARY			MARCH			
1	104000	310	87000	342000	---	---	418000	1030	1160000
2	106000	330	94400	359000	---	---	378000	810	827000
3	111000	250	74900	318000	---	---	342000	680	628000
4	122000	170	56000	281000	---	---	326000	620	546000
5	132000	340	121000	253000	---	---	314000	580	492000
6	128000	290	100000	232000	---	---	297000	570	457000
7	132000	---	---	208000	---	---	281000	510	387000
8	124000	---	---	185000	---	---	262000	420	297000
9	116000	---	---	167000	---	---	244000	375	247000
10	110000	---	---	154000	---	---	235000	360	228000
11	103000	---	---	145000	---	---	221000	330	197000
12	103000	---	---	137000	---	---	218000	350	206000
13	104000	---	---	132000	---	---	241000	560	364000
14	96800	---	---	129000	---	---	265000	680	487000
15	91400	---	---	132000	260	92700	293000	560	443000
16	86600	---	---	145000	220	86100	330000	640	570000
17	81600	---	---	186000	370	186000	372000	820	824000
18	78800	---	---	248000	470	315000	414000	1110	1240000
19	74700	180	36300	297000	700	561000	443000	1440	1720000
20	72800	200	39300	370000	1270	1270000	457000	1420	1750000
21	72300	240	46900	406000	860	943000	461000	1150	1430000
22	74900	230	46500	439000	830	984000	464000	1380	1730000
23	85600	250	57800	471000	1190	1510000	474000	1760	2250000
24	88100	270	64200	490000	1430	1890000	496000	1750	2340000
25	91300	280	69000	495000	1210	1620000	501000	1610	2180000
26	94400	290	73900	487000	1280	1680000	497000	1580	2120000
27	92100	270	67100	471000	1620	2060000	483000	1720	2240000
28	89300	260	62700	450000	1600	1940000	465000	1220	1530000
29	92900	---	---	---	---	---	444000	740	887000
30	112000	---	---	---	---	---	425000	625	717000
31	220000	---	---	---	---	---	415000	580	650000
TOTAL	3190600	---	1097000	8129000	---	15137800	11476000	---	31144000

MISSISSIPPI RIVER MAIN STEM

07020500 MISSISSIPPI RIVER AT CHESTER, IL--continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TUNS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TUNS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TUNS/DAY)
APRIL				MAY				JUNE	
1	402000	450	488000	338000	315	287000	469000	1520	1920000
2	388000	470	492000	334000	270	243000	488000	1750	2310000
3	383000	630	651000	333000	230	207000	505000	1650	2250000
4	386000	610	636000	332000	265	238000	517000	1380	1930000
5	382000	540	557000	332000	300	269000	526000	1580	2240000
6	376000	530	538000	328000	360	319000	531000	2210	3170000
7	372000	550	552000	325000	360	316000	531000	1980	2840000
8	368000	570	566000	316000	315	269000	524000	1650	2330000
9	363000	530	519000	305000	250	206000	516000	740	1030000
10	356000	560	538000	306000	280	231000	512000	890	1230000
11	346000	475	444000	321000	430	373000	516000	1140	1590000
12	334000	380	343000	314000	700	593000	525000	1720	2440000
13	326000	400	352000	296000	760	607000	527000	1200	1710000
14	320000	375	324000	280000	700	529000	522000	1040	1470000
15	320000	400	346000	266000	650	467000	513000	1020	1410000
16	324000	390	341000	261000	510	359000	500000	950	1280000
17	333000	410	369000	282000	550	419000	477000	880	1130000
18	340000	470	431000	316000	1120	956000	446000	850	1020000
19	358000	450	435000	323000	1680	1470000	421000	1050	1190000
20	381000	500	514000	335000	1550	1400000	410000	900	996000
21	405000	600	656000	336000	1170	1060000	408000	1510	1660000
22	421000	680	773000	338000	1280	1170000	399000	1980	2130000
23	418000	660	745000	348000	1660	1560000	372000	1530	1540000
24	405000	710	776000	358000	1750	1690000	333000	1280	1150000
25	391000	540	570000	380000	1630	1670000	291000	1150	904000
26	382000	470	485000	397000	1820	1950000	272000	920	676000
27	371000	410	411000	394000	2410	2560000	262000	700	495000
28	360000	360	350000	382000	2100	2170000	258000	605	421000
29	352000	300	285000	395000	2060	2200000	263000	550	391000
30	344000	325	302000	427000	1990	2290000	269000	510	370000
31	---	---	---	444000	1790	2150000	---	---	---
TOTAL	11007000	---	14789000	10442000	---	30228000	13105000	---	45223000
JULY				AUGUST				SEPTEMBER	
1	267000	440	317000	213000	470	270000	224000	925	559000
2	263000	460	327000	202000	400	218000	261000	1130	796000
3	267000	500	360000	195000	350	184000	317000	1330	1140000
4	297000	710	569000	182000	260	128000	350000	1740	1640000
5	359000	1100	1070000	182000	260	128000	319000	1490	1280000
6	399000	1350	1450000	184000	250	124000	280000	1440	1090000
7	412000	1680	1870000	185000	270	135000	247000	1220	814000
8	411000	1510	1680000	203000	290	159000	220000	825	490000
9	390000	1220	1280000	221000	420	251000	193000	640	334000
10	364000	1240	1220000	217000	350	205000	177000	460	220000
11	366000	1040	1030000	211000	300	171000	169000	360	164000
12	360000	980	953000	195000	340	179000	153000	335	138000
13	317000	960	822000	175000	310	146000	147000	360	143000
14	290000	870	681000	165000	440	196000	153000	310	128000
15	287000	910	705000	156000	480	202000	155000	270	113000
16	298000	1180	949000	206000	440	245000	169000	330	151000
17	309000	1110	926000	308000	1600	1330000	195000	460	242000
18	313000	860	727000	315000	2260	1920000	202000	440	240000
19	314000	1150	975000	288000	2070	1610000	218000	460	271000
20	331000	1380	1230000	253000	1640	1120000	223000	420	253000
21	349000	1390	1310000	213000	1260	725000	217000	500	293000
22	367000	1220	1210000	181000	1070	523000	207000	520	291000
23	379000	1040	1060000	169000	810	370000	201000	535	290000
24	386000	1130	1180000	153000	620	256000	195000	570	300000
25	388000	860	901000	140000	460	174000	182000	460	226000
26	370000	750	749000	141000	380	145000	167000	370	167000
27	330000	830	740000	150000	390	158000	161000	370	161000
28	285000	940	723000	170000	470	216000	154000	320	133000
29	263000	830	589000	224000	570	345000	143000	230	88800
30	245000	770	509000	250000	630	425000	138000	228	85000
31	227000	630	386000	231000	950	593000	---	---	---
TOTAL	10203000	---	28498000	6278000	---	12851000	6137000	---	12240800
YEAR	93427400		201808800						

HEADWATER DIVERSION CHANNEL BASIN

07021000 CASTOR RIVER AT ZALMA, MO

LOCATION.--Lat 37°08'48", long 90°04'32", in SE¼ sec.29, T.29 N., R.9 E., Bollinger County, Hydrologic Unit 07140107, on downstream side of left bridge pier on State Highway 51 in Zalma, and 2.5 mi (4.0 km) downstream from Perkins Creek.

DRAINAGE AREA.--423 mi² (1,096 km²).

PERIOD OF RECORD.--January 1920 to current year. Prior to October 1921 monthly discharge only published in WSP 1931.

REVISED RECORDS.--WSP 1147: 192223(M). WSP 1281: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 350.38 ft (106.796 m) National Geodetic Vertical Datum of 1929. Prior to June 9, 1953, nonrecording gage. Prior to Oct. 1, 1925, at site 500 ft (152 m) upstream at datum 49.82 ft (15.185 m) lower, Oct. 1, 1925, to Nov. 12, 1930, at site 500 ft (152 m) upstream at datum 0.18 ft (0.055 m) higher. Nov. 13, 1930, to June 8, 1953, at present site and datum. Since Dec. 18, 1949, auxiliary nonrecording gage, 6.0 mi (9.7 km) downstream.

REMARKS.--Records good except those periods when fall was used as a factor, which are poor. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--62 years, 503 ft³/s (14.24 m³/s), 16.15 in/yr (410 mm/yr), 364,400 acre-ft/yr (449 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 40,800 ft³/s (1,160 m³/s) Mar. 28, 1977, gage height, 27.05 ft (8.245 m); maximum gage height, 28.20 ft (8.595 m) Mar. 11, 1935; minimum discharge, 16 ft³/s (0.453 m³/s) Aug. 31, 1936, gage height, 0.81 ft (0.247 m).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of August 1915 reached a stage of 28.0 ft (8.53 m), present datum, from floodmark by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 33,000 ft³/s (935 m³/s) at 1615 Oct. 4, gage height, 26.56 ft (8.095 m), no other peak above base of 8,000 ft³/s (227 m³/s); minimum discharge, 52 ft³/s (1.473 m³/s) Oct. 4, gage height, 1.35 ft (0.411 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	56	94	146	187	13800	388	266	400	400	200	68	384		
2	56	100	201	188	4750	356	252	300	350	150	66	331		
3	55	102	196	343	1440	331	251	250	300	150	65	319		
4	55	111	186	1180	818	316	243	230	280	150	63	288		
5	56	123	175	1600	841	294	234	224	260	250	62	246		
6	58	125	167	1030	745	275	231	215	240	170	70	215		
7	58	123	160	744	945	257	224	1350	210	140	65	192		
8	57	121	155	590	645	240	234	3330	190	130	65	174		
9	56	115	147	500	616	226	261	1600	180	130	65	160		
10	56	109	142	430	578	223	260	970	180	250	63	149		
11	57	104	138	385	525	222	260	712	200	200	64	139		
12	58	101	135	355	454	214	259	578	200	170	67	132		
13	58	97	131	320	423	218	255	494	190	140	79	127		
14	63	94	130	295	398	280	249	400	180	120	93	134		
15	67	91	125	275	419	1990	239	320	170	100	96	923		
16	70	90	121	255	841	1970	263	300	2000	95	98	866		
17	71	89	120	238	2690	1580	348	280	1500	85	99	542		
18	80	86	114	223	3450	1120	600	260	700	80	94	581		
19	82	87	113	210	2060	1060	500	240	500	78	86	924		
20	82	85	113	210	1590	1010	420	220	400	77	80	529		
21	79	81	112	350	1390	799	380	200	300	84	76	398		
22	79	80	132	2190	1040	660	340	190	250	87	71	326		
23	90	81	239	6950	814	576	300	180	200	80	72	277		
24	98	82	305	6540	689	514	280	170	180	82	289	243		
25	97	80	282	2170	594	462	260	170	170	80	285	218		
26	103	80	263	1440	523	414	260	160	170	79	221	197		
27	110	79	251	1050	472	374	2000	160	160	77	1070	181		
28	112	79	239	772	429	337	1500	160	160	76	3400	168		
29	107	78	222	594	---	309	900	180	160	72	1150	154		
30	101	74	206	3590	---	287	600	200	300	71	624	142		
31	97	---	197	25300	---	273	---	350	---	69	472	---		
TOTAL	2324	2861	5365	58504	43979	17575	12669	14793	10680	3722	9238	9659		
MEAN	75.0	95.4	173	1887	1571	567	422	477	356	120	298	322		
MAX	112	125	305	25300	13600	1990	2000	3330	2000	250	3400	924		
MIN	55	78	112	187	398	214	224	160	160	69	62	127		
CFSM	.18	.23	.41	4.46	3.71	1.34	1.00	1.13	.84	.28	.70	.76		
IN	.20	.25	.47	5.15	3.87	1.55	1.11	1.30	.94	.33	.81	.85		
AC-FT	4610	5670	10640	116000	87230	34860	25130	29340	21180	7380	18320	19160		
CAL YR 1981	TOTAL	117479	MEAN	322	MAX	4100	MIN	55	CFSM	.76	IN	10.33	AC-FT	253000
WIR YR 1982	TOTAL	191364	MEAN	524	MAX	23300	MIN	55	CFSM	1.24	IN	16.83	AC-FT	379600

07022000 MISSISSIPPI RIVER AT THEBES, IL

LOCATION.--Lat 37°13'00", long 89°27'50", in NW¼ sec.17, T.15 S., R.3 W., Alexander County, Hydrologic Unit 07140105, near center span on downstream side of railroad bridge at Thebes, 5.0 mi (8.0 km) downstream from Headwater Diversion Channel, and at mile 43.7 (70.3 km) above Ohio River.

DRAINAGE AREA.--713,200 mi² (1,847,000 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Discharge: October 1932 to current year. Monthly discharge only for some periods, published in WSP 1311. Prior to April 1941, published as "at Cape Girardeau, Mo."

Gage heights: March 1933 to February 1938 and October 1939 to current year in reports of Geological Survey (prior to April 1941, published as "at Cape Girardeau, Mo."). Since November 1878, under name of "at Grays Point" in files of St. Louis District office of Corps of Engineers. January 1879 to May of 1896, published as "at Grays Point" and since May 1896, published as "at Cape Girardeau" in reports of Mississippi River Commission. February 1891 to February 1894 and since 1904, published as "at Cape Girardeau" in reports of National Weather Service.

REVISED RECORDS.--WSP 1341: 1844(M). WRD M0-76-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Mar. 17, 1933, to Dec. 21, 1934, nonrecording gage and Dec. 22, 1934, to Apr. 4, 1941, water-stage recorder, at site 8.2 mi (13.2 km) upstream at datum 4.65 ft (1.417 m) higher. Apr. 5, 1941, to Sept. 30, 1941, nonrecording gage at present site and datum and Oct. 1, 1941, to Oct. 11, 1943, at datum 0.07 ft (0.021 m) higher. Prior to Apr. 5, 1941, various auxiliary gages used. Since Oct. 1, 1943, former gage at Cape Girardeau used as auxiliary gage.

REMARKS.--Records good except for period of ice effect which are fair. Natural flow of stream affected by many reservoirs and navigation dams in upper Mississippi River basin and by many reservoirs and diversions for irrigation in Missouri River basin.

AVERAGE DISCHARGE.--50 years, 189,900 ft³/s (5,378 m³/s), 137,600,000 acre-ft/yr (170 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 893,000 ft³/s (25,300 m³/s) May 27, 1943, elevation, 340.33 ft (103.733 m), present datum; maximum elevation, 343.43 ft (104.678 m) Apr. 30, 1973; minimum discharge, 23,400 ft³/s (663 m³/s) Dec. 13, 1937, at site then in use; minimum elevation, 301.67 ft (91.949 m) Jan. 2, 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 4, 1844, reached an elevation of 345.14 ft (105.199 m), present datum, at Grays Point, from floodmarks, discharge, 1,375,000 ft³/s (38,900 m³/s), computed by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 557,000 ft³/s (15,770 m³/s) June 14 at 1900, maximum elevation, 335.52 ft (102.266 m) June 14 at 1900; minimum daily discharge, 81,000 ft³/s (2,294 m³/s) Jan. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	UCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	147000	169000	119000	107000	364000	462000	443000	346000	464000	281000	232000	232000	
2	144000	168000	130000	106000	421000	425000	424000	341000	486000	279000	218000	242000	
3	139000	164000	139000	110000	403000	384000	407000	337000	510000	281000	205000	289000	
4	134000	160000	162000	117000	361000	358000	402000	334000	529000	292000	194000	334000	
5	133000	183000	177000	130000	325000	342000	397000	331000	541000	336000	187000	339000	
6	131000	271000	187000	140000	298000	323000	390000	327000	544000	384000	187000	305000	
7	128000	296000	187000	144000	275000	302000	389000	333000	538000	413000	188000	271000	
8	127000	273000	182000	145000	248000	282000	383000	334000	524000	425000	192000	242000	
9	124000	236000	170000	138000	226000	264000	378000	324000	513000	416000	215000	215000	
10	129000	209000	153000	130000	208000	254000	372000	322000	504000	394000	221000	190000	
11	136000	191000	147000	122000	198000	243000	362000	331000	508000	378000	218000	177000	
12	136000	178000	139000	116000	190000	230000	350000	335000	521000	379000	208000	168000	
13	135000	165000	135000	117000	182000	236000	339000	325000	535000	358000	193000	156000	
14	132000	158000	139000	118000	173000	262000	330000	311000	540000	325000	178000	155000	
15	134000	151000	138000	108000	166000	302000	325000	298000	532000	307000	170000	161000	
16	139000	144000	130000	101000	168000	333000	325000	287000	524000	307000	169000	162000	
17	153000	139000	122000	93000	188000	372000	333000	290000	510000	314000	246000	177000	
18	176000	136000	120000	88300	240000	412000	337000	319000	486000	322000	309000	198000	
19	195000	132000	120000	84600	292000	454000	350000	340000	437000	322000	298000	209000	
20	191000	130000	105000	82400	355000	477000	372000	348000	447000	329000	274000	225000	
21	181000	133000	96600	81000	409000	483000	395000	354000	442000	343000	243000	226000	
22	177000	131000	98700	90800	445000	483000	417000	352000	440000	357000	207000	220000	
23	178000	128000	110000	93000	481000	486000	426000	358000	425000	371000	185000	210000	
24	181000	130000	115000	97000	506000	494000	420000	367000	395000	381000	174000	203000	
25	174000	129000	109000	103000	524000	505000	408000	379000	347000	387000	161000	192000	
26	167000	122000	104000	105000	524000	512000	398000	397000	311000	385000	151000	179000	
27	168000	119000	104000	105000	511000	509000	386000	405000	289000	362000	165000	167000	
28	173000	125000	106000	101000	491000	498000	375000	397000	274000	325000	175000	161000	
29	174000	122000	110000	109000	---	482000	363000	394000	271000	291000	199000	153000	
30	172000	116000	109000	134000	---	468000	353000	416000	276000	270000	242000	146000	
31	173000	---	108000	238000	---	456000	---	441000	---	251000	249000	---	
TOTAL	4781000	4908000	4071300	3554100	9172000	12093000	11349000	10773000	13663000	10565000	6453000	6304000	
MEAN	154200	163600	131300	114600	327600	390100	378300	347500	455400	340800	208200	210100	
MAX	195000	296000	187000	238000	524000	512000	443000	441000	544000	425000	309000	339000	
MIN	124000	116000	96600	81000	166000	230000	325000	287000	271000	251000	151000	146000	
CFSM	.22	.23	.18	.16	.46	.55	.53	.49	.64	.48	.29	.30	
IN.	.25	.26	.21	.19	.48	.63	.59	.56	.71	.55	.34	.33	
AC-FT	9483000	9735000	8075000	7050000	18190000	23990000	22510000	21370000	27100000	20960000	12800000	12500000	
CAL YR 1981 TOTAL	69505900	MEAN	190400	MAX	524000	MIN	58100	CFSM	.27	IN	3.63	AC-FT	137900000
WTR YR 1982 TOTAL	97686400	MEAN	267600	MAX	544000	MIN	81000	CFSM	.38	IN	5.10	AC-FT	193800000

MISSISSIPPI RIVER MAIN STEM

07022000 MISSISSIPPI RIVER AT THEBES, IL--continued

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14.29	15.73	11.82	10.47	27.19	32.60	32.45	26.49	31.40	23.36	20.96	20.65
2	14.09	15.46	12.65	10.39	30.46	31.21	31.51	26.23	32.40	23.10	20.12	20.86
3	13.77	15.28	13.40	10.74	30.04	29.61	30.57	26.09	33.23	23.05	19.27	23.42
4	13.23	14.95	14.77	11.45	27.99	28.03	30.25	25.97	34.02	23.43	18.58	20.01
5	13.16	15.70	16.60	12.84	25.95	27.14	30.02	25.87	34.66	25.33	17.91	26.92
6	13.17	22.14	17.74	13.83	24.45	26.06	29.56	25.77	34.91	27.97	17.80	25.02
7	12.74	24.14	17.77	13.99	23.11	24.93	29.25	25.88	34.91	29.25	17.99	23.21
8	12.74	23.11	17.37	14.25	21.57	23.83	28.89	25.97	34.59	29.77	18.00	21.39
9	12.33	20.86	16.32	13.71	20.05	22.50	28.58	25.42	34.29	29.63	19.47	19.80
10	12.56	19.22	15.38	12.94	18.95	21.65	28.33	25.19	34.14	28.82	20.12	18.12
11	13.37	18.06	14.38	12.29	18.14	21.13	27.78	25.43	34.13	27.67	19.94	18.96
12	13.33	17.09	13.54	11.59	17.61	20.19	27.09	25.70	34.63	27.95	19.42	16.37
13	13.23	15.86	12.76	11.58	16.91	20.22	26.45	25.47	35.17	27.32	18.22	15.13
14	12.98	15.32	12.92	12.08	16.27	21.75	25.97	24.59	35.45	25.63	17.03	14.84
15	13.03	14.70	12.66	15.22	15.47	24.09	25.60	23.83	35.31	24.56	16.29	15.54
16	13.34	14.11	12.33	13.86	15.37	25.65	25.65	23.27	34.90	24.37	15.53	15.40
17	14.23	13.58	11.59	9.83	16.77	27.50	26.07	23.14	34.45	24.81	20.07	16.35
18	16.10	13.40	11.38	8.38	19.81	29.59	26.16	24.61	33.42	25.24	24.48	18.19
19	17.73	12.99	11.95	7.79	23.13	31.67	26.66	25.97	32.30	25.15	24.19	18.63
20	17.65	12.66	10.29	7.46	26.27	32.84	27.78	26.28	31.40	25.45	22.91	19.72
21	16.79	12.97	9.24	7.25	28.95	33.34	28.82	26.72	31.07	26.33	21.09	19.83
22	16.45	12.80	9.21	7.21	30.62	33.68	29.76	26.54	30.85	27.13	19.00	19.52
23	16.33	12.36	10.43	12.12	32.03	33.91	30.30	26.89	30.26	27.96	17.32	18.94
24	16.75	12.53	11.47	12.65	33.21	34.33	30.03	27.28	28.92	28.48	16.55	18.55
25	16.29	12.63	10.84	11.69	34.02	35.02	29.56	27.72	26.83	28.83	15.43	17.95
26	15.56	12.15	10.15	12.35	34.09	35.33	28.84	28.62	25.02	29.08	14.45	17.05
27	15.63	11.60	10.11	13.09	34.10	35.25	28.43	29.17	23.95	28.05	15.64	15.96
28	15.96	12.30	10.32	13.22	33.26	34.89	27.77	28.79	23.32	26.44	16.36	15.44
29	15.99	12.29	10.87	13.06	---	34.27	27.30	28.49	22.89	24.53	17.86	14.83
30	15.91	11.67	10.82	13.53	---	33.54	26.78	29.39	23.08	23.26	20.90	14.11
31	15.91	---	10.65	19.77	---	33.17	---	30.46	---	22.13	21.71	---

WTR YR 1982

MISSISSIPPI RIVER MAIN STEM

07022000 MISSISSIPPI RIVER AT THEBES, IL--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--January 1973 to current year.

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT: October 1980 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 2,210 mg/L May 28, 1982; minimum daily mean, 13 mg/L January 28, 1981.

SUSPENDED-SEDIMENT LOADS: Maximum daily, 2,370,000 tons (2,150,000 metric tons) May 28, 1982; minimum daily, 2530 tons (2300 metric tons) January 28, 1981.

EXTREMES FOR CURRENT YEAR.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 2,210 mg/L May 28; minimum daily mean 15 mg/L October 14.

SUSPENDED-SEDIMENT LOADS: Maximum daily, 2,370,000 tons (2,150,000 metric tons) May 28; minimum daily, 38,900 tons (35,300 metric tons) January 21.

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (FTU) (00076)	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)
NOV										
02...	1530	164000	510	8.2	13.0	25	5.2	49	10000	3000
JAN										
08...	1630	145000	485	8.1	.5	38	10.2	71	2400	1400
MAR										
02...	1400	445000	375	7.9	6.0	200	5.8	47	500	11000
MAY										
03...	1530	336000	485	8.0	15.0	48	6.0	59	5800	4200
JUL										
21...	1030	341000	470	7.8	29.5	500	4.0	52	49000	6600
SEP										
22...	1200	225000	430	7.7	25.0	72	6.4	77	5300	500

DATE	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3) (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	PERCENT SODIUM (00932)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINEITY FIELD AS CACO3) (00410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
NOV										
02...	240	66	58	22	27	20	.8	3.4	184	87
JAN										
08...	230	82	56	21	25	19	.8	3.4	148	75
MAR										
02...	150	38	38	13	14	16	.5	5.7	110	41
MAY										
03...	210	65	53	20	18	15	.6	3.7	150	70
JUL										
21...	190	67	50	15	16	15	.5	4.8	120	51
SEP										
22...	180	15	46	17	26	23	.9	4.8	170	80

MISSISSIPPI RIVER MAIN STEM

07022000 MISSISSIPPI RIVER AT THEBES, IL--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)
NOV 02...	18	.3	5.5	342	324	.47	151000	2.2	.110
JAN 08...	19	.0	8.0	326	305	.44	128000	1.9	.240
MAR 02...	24	.2	8.3	220	210	.30	264000	2.3	.660
MAY 03...	19	.2	7.6	308	282	.42	279000	3.3	.090
JUL 21...	15	.3	9.8	266	243	.36	245000	3.4	.330
SEP 22...	15	.3	7.6	291	287	.40	177000	1.3	.130

DATE	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4) (71846)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS TOTAL (MG/L AS PO4) (71886)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P) (00671)	SEDI- MENT, DIS- CHARGE, SUS- PENDEED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDEED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
NOV 02...	.14	1.20	.170	.52	.110	.070	--	--	--
JAN 08...	.31	1.60	.130	.40	.060	.070	103	40300	83
MAR 02...	.85	1.30	.250	.77	.090	.080	839	1010000	81
MAY 03...	.12	1.60	.190	.58	.050	.070	469	425000	33
JUL 21...	.43	2.00	.140	.43	.110	.100	1620	1490000	73
SEP 22...	.17	2.10	.390	1.2	.190	.110	321	195000	86

MISSISSIPPI RIVER MAIN STEM

07022000 MISSISSIPPI RIVER AT THEBES, IL--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC SUS- PENDE TOTAL (UG/L AS AS) (01001)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	BARIUM, SUS- PENDE RECOV- ERABLE (UG/L AS BA) (01006)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	CHRO- MIUM, SUS- PENDE RECOV- ERABLE (UG/L AS CR) (01031)
NOV 02...	3	1	2	<100	--	84	<1	<1	<10	--
JAN 08...	2	1	1	<100	--	67	1	<1	<10	--
MAY 03...	2	1	1	100	30	73	<1	<3	<10	--
JUL 21...	10	8	2	400	300	110	<1	<1	30	20

DATE	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO) (01037)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU) (01041)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE) (01044)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)
NOV 02...	<10	1	<3	18	15	3	2800	2800	50	46
JAN 08...	<10	1	<3	18	15	3	4200	4100	54	8
MAY 03...	<10	15	<1	24	20	4	4200	4200	24	40
JUL 21...	10	10	<1	45	41	4	29000	29000	48	25

DATE	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB) (01050)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, SUS- PENDE RECOV- ERABLE (UG/L AS MN) (01054)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	NICKEL, SUS- PENDE RECOV- ERABLE (UG/L AS NI) (01066)
NOV 02...	45	1	200	200	4	.1	<.1	4	1
JAN 08...	7	1	140	130	8	3.1	<.1	5	4
MAY 03...	--	<1	210	200	11	.2	<.1	17	13
JUL 21...	24	1	1200	1200	2	.2	<.1	41	40

DATE	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE) (01146)	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, SUS- PENDE RECOV- ERABLE (UG/L AS ZN) (01091)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 02...	3	1	--	<1	<1	<1	40	20	21
JAN 08...	1	1	0	1	<1	<1	70	60	7
MAY 03...	4	1	0	1	<1	<1	40	--	<12
JUL 21...	1	<1	--	<1	<1	<1	130	100	26

MISSISSIPPI RIVER MAIN STEM

07022000 MISSISSIPPI RIVER AT THEBES, IL--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	PCB, TOTAL (UG/L) (39516)	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39519)	ALDRIN, TOTAL (UG/L) (39330)	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39333)	CHLOR- DANE, TOTAL (UG/L) (39350)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39351)	DDD, TOTAL (UG/L) (39360)	DDD, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39363)	DDE, TOTAL (UG/L) (39365)	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39368)	DDT, TOTAL (UG/L) (39370)	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39373)
NOV 02...	--	1	--	.0	--	1.0	--	1.0	--	.3	--	.0
JAN 08...	.00	--	.00	--	.00	--	.00	--	.00	--	.00	--

DATE	DI- AZINON, TOTAL (UG/L) (39570)	DI- ELDRIN, TOTAL (UG/L) (39380)	DI- ELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39383)	ENDO- SULFAN, TOTAL (UG/L) (39388)	ENDRIN, TOTAL (UG/L) (39390)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39393)	ETHION, TOTAL (UG/L) (39398)	HEPTA- CHLOR, TOTAL (UG/L) (39410)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39413)	HEPTA- CHLOR, TOTAL EPOXIDE (UG/L) (39420)	HEPTA- CHLOR, TOTAL EPOXIDE BOT. IN MATL. (UG/KG) (39423)
NOV 02...	--	--	.6	--	--	.0	--	--	.0	--	.1
JAN 08...	.03	.00	--	.00	.00	--	.00	.00	--	.00	--

DATE	LINDANE TOTAL (UG/L) (39340)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39343)	MALA- THIUN, TOTAL (UG/L) (39530)	METH- OXY- CHLOR, TOTAL (UG/L) (39480)	METH- OXY- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39481)	METHYL THION, TOTAL (UG/L) (39600)	METHYL THION, TOTAL (UG/L) (39790)	PARA- THION, TOTAL (UG/L) (39540)	TOX- APHENE, TOTAL (UG/L) (39400)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39403)	TOTAL TRI- THIUN (UG/L) (39786)
NOV 02...	--	.0	--	--	.0	--	--	--	--	.0	--
JAN 08...	.00	--	.00	.00	--	.00	.00	.00	0	--	.00

DATE	2,4-D, TOTAL (UG/L) (39730)	2,4,5-T TOTAL (UG/L) (39740)	SILVEX, TOTAL (UG/L) (39760)	PER- THANE TOTAL (UG/L) (39034)	PER- THANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (81886)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L) (39250)	PCN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39251)	ENDO- SULFAN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39389)	MIREX, TOTAL IN BOT- TOM MA- TERIAL (UG/L) (39755)	MIREX, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39758)	2, 4-DP TOTAL (UG/L) (82183)
NOV 02...	--	--	--	--	.00	--	.0	.0	--	.0	--
JAN 08...	.04	.00	.00	.00	--	.00	--	--	.00	--	.00

MISSISSIPPI RIVER MAIN STEM

07022000 MISSISSIPPI RIVER AT THEBES, IL--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	GRASS ALPHA, DIS- SOLVED (UG/L AS U-NAT) (80030)	GRASS ALPHA, SUSP. TOTAL (UG/L AS U-NAT) (80040)	GRASS BETA, DIS- SOLVED (PCI/L AS CS-137) (03515)	GRASS BETA, SUSP. TOTAL (PCI/L AS CS-137) (03516)	GRASS BETA, DIS- SOLVED (PCI/L AS SR/ YT-90) (80050)	GRASS 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)	GRASS ALPHA, SUSP. TOTAL (PCI/L AS U-NAT) (01516)
JAN 08...	<6.9	4.7	5.9	4.3	5.7	4.2	.09	2.6	3.2
MAY 03...	<8.2	8.8	4.4	5.4	4.3	5.2	.25	3.1	6.0

MISSISSIPPI RIVER MAIN STEM

07022000 MISSISSIPPI RIVER AT THEBES, IL--continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT

DATE	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	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 .062 MM (70342)	SED. SUSP. FALL DIAM. % FINER THAN .125 MM (70343)	SED. SUSP. FALL DIAM. % FINER THAN .250 MM (70344)	SED. SUSP. FALL DIAM. % FINER THAN .500 MM (70345)	SED. SUSP. FALL DIAM. % FINER THAN 1.00 MM (70346)
MAR , 1982										
02...	446000	37	43	50	63	88	91	100	100	100
MAY										
03...	365000	23	24	27	35	50	55	86	100	100
SEP										
22...	231000	46	50	56	63	86	90	99	100	100

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL

DATE	BED MAT. SIEVE DIAM. % FINER THAN .062 MM (80164)	BED MAT. SIEVE DIAM. % FINER THAN .125 MM (80165)	BED MAT. SIEVE DIAM. % FINER THAN .250 MM (80166)	BED MAT. SIEVE DIAM. % FINER THAN .500 MM (80167)	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM (80168)	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM (80169)	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM (80170)	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM (80171)	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM (80172)	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM (80173)
NOV , 1981										
02...	0	0	13	53	89	92	94	96	100	100
APR , 1982										
14...	0	0	20	66	85	92	94	96	98	100
JUL										
21...	0	1	13	62	96	99	99	100	100	100

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
OCTOBER			NOVEMBER			DECEMBER			
1	147000	137	54400	169000	176	80300	119000	321	103000
2	144000	130	50500	168000	197	89400	130000	421	148000
3	139000	127	47700	164000	210	93000	139000	341	128000
4	134000	132	47800	160000	208	89900	162000	369	161000
5	133000	133	47800	183000	320	158000	177000	468	224000
6	131000	135	47700	271000	620	454000	187000	452	228000
7	128000	142	49100	296000	614	491000	187000	473	239000
8	127000	156	53500	273000	584	430000	182000	502	247000
9	124000	176	58900	236000	425	271000	170000	493	226000
10	129000	174	60600	209000	395	223000	153000	476	197000
11	136000	133	48800	191000	405	209000	147000	425	169000
12	136000	167	61300	178000	352	169000	139000	371	139000
13	135000	126	45900	165000	372	166000	135000	336	122000
14	132000	115	41000	158000	301	128000	139000	354	133000
15	134000	200	72400	151000	470	192000	138000	284	106000
16	139000	145	54400	144000	274	107000	130000	---	---
17	153000	228	94200	139000	246	92300	122000	---	---
18	176000	304	144000	136000	264	96900	120000	---	---
19	195000	274	144000	132000	286	102000	120000	---	---
20	191000	217	112000	130000	234	82100	105000	---	---
21	181000	221	108000	133000	232	83300	96600	269	70200
22	177000	182	87000	131000	242	85600	98700	462	123000
23	178000	238	114000	128000	274	94700	110000	890	264000
24	181000	296	145000	130000	271	95100	115000	395	123000
25	174000	210	98700	129000	255	88800	109000	203	59700
26	167000	217	97800	122000	311	102000	104000	355	99700
27	168000	216	98000	119000	340	109000	104000	280	78600
28	173000	202	94400	125000	457	154000	106000	215	61500
29	174000	203	95400	122000	616	203000	110000	195	57900
30	172000	245	114000	116000	316	99000	109000	196	57700
31	173000	221	103000	---	---	---	108000	211	61500
TOTAL	4781000	---	2491300	4908000	---	4838400	4071300	---	3626800

MISSISSIPPI RIVER MAIN STEM

07022000 MISSISSIPPI RIVER AT THEBES, IL--continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TUNS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TUNS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TUNS/DAY)
JANUARY				FEBRUARY			MARCH		
1	107000	214	61800	364000	---	---	462000	911	1140000
2	106000	213	61000	421000	---	---	425000	852	978000
3	110000	265	78700	403000	---	---	384000	703	729000
4	117000	452	143000	361000	---	---	358000	646	624000
5	130000	368	129000	325000	---	---	342000	594	549000
6	140000	399	151000	298000	---	---	323000	526	459000
7	144000	---	---	275000	---	---	302000	449	366000
8	145000	---	---	248000	---	---	282000	411	313000
9	138000	---	---	226000	---	---	264000	393	280000
10	130000	---	---	208000	---	---	254000	343	235000
11	122000	---	---	198000	---	---	243000	271	178000
12	116000	---	---	190000	---	---	230000	287	178000
13	117000	---	---	182000	---	---	236000	332	212000
14	118000	---	---	173000	---	---	262000	378	267000
15	108000	---	---	166000	---	---	302000	405	330000
16	101000	---	---	168000	---	---	333000	483	434000
17	93000	---	---	188000	374	190000	372000	708	711000
18	88300	---	---	240000	514	333000	412000	796	885000
19	84600	---	---	292000	502	396000	454000	1050	1290000
20	82400	---	---	355000	585	561000	477000	1390	1790000
21	81000	178	38900	409000	752	830000	483000	1330	1730000
22	90800	181	44400	445000	885	1060000	483000	1190	1550000
23	93000	1290	324000	481000	1200	1560000	486000	1050	1380000
24	97000	1170	306000	506000	1250	1710000	494000	1190	1590000
25	103000	933	259000	524000	1300	1840000	505000	1480	2020000
26	105000	297	84200	524000	1220	1730000	512000	1570	2170000
27	105000	257	72900	511000	1150	1590000	509000	1420	1950000
28	101000	209	57000	491000	1020	1350000	498000	1120	1510000
29	109000	164	48300	---	---	---	482000	996	1300000
30	134000	---	---	---	---	---	468000	885	1120000
31	238000	---	---	---	---	---	456000	864	1060000
TOTAL	3554100	---	1859200	9172000	---	13150000	12093000	---	29328000
APRIL				MAY			JUNE		
1	443000	748	895000	346000	610	570000	464000	1630	2040000
2	424000	672	769000	341000	384	354000	486000	1620	2130000
3	407000	599	658000	337000	380	346000	510000	1690	2330000
4	402000	665	722000	334000	500	451000	529000	1510	2160000
5	397000	726	778000	331000	370	331000	541000	1230	1800000
6	390000	788	830000	327000	340	300000	544000	1120	1650000
7	389000	774	813000	333000	310	279000	538000	1030	1500000
8	383000	725	750000	334000	270	243000	524000	940	1330000
9	378000	642	655000	324000	270	236000	513000	820	1140000
10	372000	694	697000	322000	330	287000	504000	820	1120000
11	362000	666	651000	331000	420	375000	508000	980	1340000
12	350000	580	548000	335000	500	452000	521000	1120	1580000
13	339000	632	578000	325000	830	728000	535000	1230	1780000
14	330000	569	507000	311000	830	697000	540000	1170	1710000
15	325000	569	499000	298000	820	660000	532000	1190	1710000
16	325000	623	547000	287000	740	573000	524000	1060	1500000
17	333000	570	512000	290000	600	470000	510000	1010	1390000
18	337000	541	492000	319000	660	568000	486000	950	1250000
19	350000	490	463000	340000	1080	991000	437000	870	1030000
20	372000	404	406000	348000	1500	1410000	447000	800	966000
21	395000	641	684000	354000	1560	1490000	442000	1000	1190000
22	417000	748	842000	352000	1960	1860000	440000	1560	1850000
23	426000	853	981000	358000	1290	1250000	425000	1760	2020000
24	420000	811	920000	367000	1080	1070000	395000	1430	1530000
25	408000	825	909000	379000	1120	1150000	347000	1320	1240000
26	398000	762	819000	397000	1430	1530000	311000	1090	915000
27	386000	603	628000	405000	1880	2060000	289000	830	648000
28	375000	544	551000	397000	2210	2370000	274000	740	547000
29	363000	486	476000	394000	1870	1990000	271000	660	483000
30	353000	449	428000	416000	1810	2030000	276000	560	417000
31	---	---	---	441000	1770	2110000	---	---	---
TOTAL	11349000	---	20008000	10773000	---	29231000	13663000	---	42296000

MISSISSIPPI RIVER MAIN STEM

07022000 MISSISSIPPI RIVER AT THEBES, IL--continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JULY				AUGUST			SEPTEMBER		
1	281000	470	357000	232000	540	338000	232000	740	464000
2	279000	430	324000	218000	470	277000	242000	910	595000
3	281000	470	357000	205000	380	210000	289000	1160	905000
4	292000	550	434000	194000	360	189000	334000	1470	1330000
5	336000	820	744000	187000	290	146000	339000	1530	1400000
6	384000	1230	1280000	187000	280	141000	305000	1400	1150000
7	413000	1390	1550000	188000	270	137000	271000	1320	966000
8	425000	1610	1850000	192000	260	135000	242000	990	647000
9	416000	1430	1610000	215000	300	174000	215000	720	418000
10	394000	1330	1410000	221000	370	221000	190000	600	308000
11	378000	1360	1390000	218000	290	171000	177000	490	234000
12	379000	1080	1110000	208000	300	168000	168000	390	177000
13	358000	1180	1140000	193000	325	169000	156000	375	158000
14	325000	900	790000	178000	270	130000	155000	360	151000
15	307000	950	787000	170000	250	115000	161000	380	165000
16	307000	920	763000	169000	300	137000	162000	270	118000
17	314000	1140	966000	246000	570	379000	177000	310	148000
18	322000	1050	913000	309000	1660	1380000	198000	430	230000
19	322000	890	774000	298000	1950	1570000	209000	420	237000
20	329000	1180	1050000	274000	1790	1320000	225000	420	255000
21	343000	1370	1270000	243000	1500	984000	226000	360	220000
22	357000	1400	1350000	207000	1160	648000	220000	420	249000
23	371000	1270	1270000	185000	940	470000	210000	470	266000
24	381000	1100	1130000	174000	780	366000	203000	420	230000
25	387000	950	993000	161000	680	296000	192000	560	290000
26	385000	800	832000	151000	620	253000	179000	640	309000
27	362000	730	714000	165000	970	432000	167000	390	176000
28	325000	770	676000	175000	920	435000	161000	400	174000
29	291000	920	723000	199000	820	441000	153000	320	132000
30	270000	820	598000	242000	760	497000	146000	275	108000
31	251000	660	447000	249000	1050	706000	---	---	---
TOTAL	10565000	---	29602000	6453000	---	13035000	6304000	---	12210000
YEAR	97686400		201675700						

07037500 ST. FRANCIS RIVER NEAR PATTERSON, MO

LOCATION.--Lat 37°11'40", long 90°30'12", in NE¼ sec.16, T.29 N., R.5 E., Wayne County, Hydrologic Unit 08020202, near left bank on downstream side of pier of bridge on State Highway 34, 1 mi (1.6 km) upstream from Clark Creek, and 3 mi (4.8 km) east of Patterson.

DRAINAGE AREA.--956 mi² (2,476 km²).

PERIOD OF RECORD.--October 1920 to current year. Prior to June 1921, monthly discharge only, published in WSP 1311.

REVISED RECORDS.--WSP 732: 192223.

GAGE.--Water-stage recorder. Datum of gage is 370.45 ft (112.913 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1938, nonrecording gage at site 50 ft (15 m) upstream at datum 2.00 ft (0.610 m) higher. Oct. 1, 1938, to Apr. 12, 1939, nonrecording gage and Apr. 13, 1939, to Sept. 5, 1956, waterstage recorder at site 50 ft (15 m) upstream at present datum. Sept. 6, 1956, to Sept. 26, 1958, nonrecording gage at present site and datum.

REMARKS.--Records good except periods of no gage height record which are poor. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--62 years, 1,082 ft³/s (30.64 m³/s), 15.38 in/yr (391 mm/yr), 783,900 acre-ft/yr (967 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 79,200 ft³/s (2,240 m³/s) Mar. 11, 1935, gage height, 30.70 ft (9.357 m), from rating curve extended above 55,000 ft³/s (1,560 m³/s); maximum gage height, 31.0 ft (9.449 m) Apr. 14, 1945, (backwater from Wappapello Dam); minimum discharge, 8 ft³/s (0.23 m³/s) Aug. 28 to Sept. 1, 1936; minimum gage height, 1.32 ft (0.402 m) Aug. 16, 1941.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood on August 1915 reached a stage of 33.8 ft (10.302 m), present datum, from floodmarks, discharge, 100,000 ft³/s (2,830 m³/s), from rating curve extended above 55,000 ft³/s (1,560 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 21,000 ft³/s (595 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)	
Jan. 31	1515	47,200	1,337	25.24	7.693
Aug. 27	2330	36,900	1,045	23.05	7.026
Sept. 14	2345	27,200	770	20.64	6.291

Minimum discharge, 41 ft³/s (1.16 m³/s) Oct. 2-4, gage height, 3.41 ft (1.039 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	44	130	1200	380	20500	967	802	1410	617	458	54	930		
2	42	130	900	409	5200	887	886	1220	675	312	51	789		
3	41	140	500	698	3250	830	797	1070	504	253	49	789		
4	42	180	400	3150	2510	778	1350	952	419	231	48	902		
5	48	220	350	3480	2020	744	1310	862	411	514	46	710		
6	51	240	330	1970	1790	719	1070	763	381	412	45	576		
7	48	240	320	1460	1630	678	928	1630	360	275	48	489		
8	48	240	300	1130	1350	635	900	2040	327	212	68	425		
9	46	240	290	897	1280	598	945	1500	290	198	67	374		
10	45	230	280	750	1210	575	1000	1110	296	377	58	335		
11	46	220	250	650	1120	565	1000	879	368	332	63	296		
12	48	215	240	560	1000	559	935	776	364	254	67	270		
13	50	205	230	520	918	574	874	667	297	209	83	247		
14	62	195	220	480	853	754	813	583	261	198	131	10600		
15	65	185	215	440	888	3090	763	524	241	168	123	18300		
16	75	164	188	400	1980	5130	807	472	2400	147	192	4440		
17	80	153	166	370	12600	5810	960	422	3820	129	441	2190		
18	90	145	159	350	11000	3000	1810	374	1670	117	262	2990		
19	100	137	157	340	5770	4330	1490	341	1030	105	197	3860		
20	100	131	157	320	6230	3120	1270	304	747	96	172	1930		
21	100	130	151	310	5090	2110	1240	272	598	96	154	1570		
22	100	125	147	2330	3230	1690	1100	267	496	104	136	1130		
23	160	125	285	8640	2250	1470	966	351	419	114	122	930		
24	200	125	698	4080	1780	1280	879	227	347	90	198	776		
25	170	125	714	2110	1500	1140	816	216	290	82	1270	659		
26	150	120	587	1650	1300	1050	815	206	264	77	1320	587		
27	180	120	553	1180	1160	973	3300	196	244	72	12900	528		
28	150	120	492	998	1070	889	3570	186	239	67	18300	465		
29	145	120	422	883	---	807	2100	203	242	63	3140	393		
30	135	800	390	6960	---	749	1650	230	579	60	1670	347		
31	130	---	380	40800	---	738	---	438	---	57	1190	---		
TOTAL	2791	5650	11671	88695	100479	47239	37146	20691	19196	5879	42665	58827		
MEAN	90.0	188	376	2861	3589	1524	1238	667	640	190	1376	1961		
MAX	200	800	1200	40800	20500	5810	3570	2040	3820	514	18300	18300		
MIN	41	120	147	310	853	559	763	186	239	57	45	247		
CFSM	.09	.20	.39	2.99	3.75	1.59	1.30	.70	.67	.20	1.44	2.05		
IN.	.11	.22	.45	3.45	3.91	1.84	1.45	.81	.75	.23	1.66	2.29		
AC-FT	5540	11210	23150	175900	199300	93700	73680	41040	38080	11660	84630	116700		
CAL YR 1981	TOTAL	226505	MEAN	621	MAX	10600	MIN	41	CFSM	.65	IN	8.81	AC-FT	449300
WTR YR 1982	TOTAL	440929	MEAN	1208	MAX	40800	MIN	41	CFSM	1.26	IN	17.16	AC-FT	874600

ST. FRANCIS BASIN

07039000 WAPPAPELLO LAKE AT WAPPAPELLO, MO

LOCATION.--Lat 36°55'42", long 90°17'04", in NW¼SE¼ sec.3, T.26 N., R.7 E., Wayne County, Hydrologic Unit 08020202, at intake tower at dam on St. Francis River, 0.8 mi (1.2 km) southwest of Wappapello, and at mile 309 (497 km).

DRAINAGE AREA.--1,310 mi² (3,390 km²), approximately.

PERIOD OF RECORD.--April 1941 to current year.

GAGE.--Water-stage recorder. Datum of gage is 347.74 ft (105.991 m) National Geodetic Vertical Datum of 1929. Prior to June 19, 1941, nonrecording gage at same site and datum.

REMARKS.--Lake is formed by earth-fill dam. Closure of channel at dam began July 10, 1940; river began to flow through outlet structure July 24, 1940. Stop logs placed in outlet structure and storage began Apr. 1, 1941; conservation pool level reached Apr. 20, 1941. Capacity at bottom of outlet tunnels (gage height, -9.0 ft or -2.743 m), 2,600 acre-ft (3.21 km³); at conservation pool level (gage height, 7.0 ft or 2.134 m), 30,900 acre-ft (38.1 km³); at spillway crest (gage height, 47.0 ft or 14.326 m), 613,200 acre-ft (756 km³); at maximum pool level (gage height, 62.4 ft or 19.020 m), uncontrollable above spillway crest, 1,022,000 acre-ft (1.26 km³). Figures given herein represent total contents. Under normal operating conditions lake surface will not be drawn below conservation pool level, which is maintained for purposes of conservation and recreation. Storage above this level used for flood control.

COOPERATION.--Records furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 729,800 acre-ft (900 km³) Apr. 16, 1945, gage height, 51.35 ft (15.651 m); minimum, since initial filling to conservation pool level, 23,340 acre-ft (28.8 km³) Mar. 1, 2, 3, 1970; minimum gage height, 4.20 ft (1.280 m) Sept. 26, 27, 1967.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 215,000 acre-ft (265 km³) Feb. 2, gage height, 25.63 ft (7.812 m); minimum, 28,700 acre-ft (35.4 km³) Jan. 15, gage height, 6.42 ft (1.957 m).

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

6.0	27,100	17.0	109,600
7.0	30,900	22.0	166,200
10.0	48,000	27.0	235,200
13.0	71,400	33.0	332,900

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	UCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36200	30600	31400	30900	190000	55000	30500	61500	63100	63400	62800	108000
2	34400	30700	31200	30600	215000	49900	30200	60300	63500	63600	62600	107000
3	31400	30600	32400	31300	212000	45800	32400	59200	63900	63700	62600	105000
4	30700	30700	32500	33100	204000	40100	32900	60200	63800	63800	62600	103000
5	30600	30700	31700	37600	194000	34600	35100	61500	63700	63800	62500	101000
6	30800	30700	31000	41300	184000	31700	38000	62800	63300	64100	62300	98300
7	30700	30700	30700	41300	173000	30900	39400	66900	62900	63900	62100	95700
8	30600	30700	30500	40700	161000	31000	41300	70800	62600	63900	62000	92800
9	30600	30800	30200	40000	150000	31600	43400	71600	62300	63600	62200	90000
10	30400	30700	30300	38300	138000	31600	44700	70900	62600	63600	62200	86900
11	30400	30600	30300	35800	126000	31400	44900	69000	62600	64000	62700	83800
12	30300	30400	30400	33900	114000	31100	44100	67000	62900	63800	62600	80700
13	30300	30300	30500	32400	103000	31000	43400	64500	63200	63500	62800	77900
14	30300	30200	30600	30500	91400	30500	42500	62000	63100	63100	63500	74900
15	30700	30700	30500	28700	82300	33700	41400	61100	63100	63100	63000	92400
16	30700	30800	30400	29500	74600	38300	42100	61100	64400	63100	62700	118000
17	30600	30800	30400	30200	78300	44500	44000	62000	69600	63300	62600	122000
18	30500	30600	30400	30900	94200	47700	44700	63100	73500	63300	62900	121000
19	30200	30400	30200	31300	96600	48000	46700	63900	72800	63400	62800	124000
20	30200	30700	30300	31700	95900	50800	48600	64200	69800	63400	62700	126000
21	30400	30200	30400	31900	96400	50200	51200	64300	67200	63400	62600	124000
22	30200	30200	30700	31400	92800	47400	53800	64600	64700	63700	62500	122000
23	30200	30400	31300	52200	86900	44100	54900	64300	63100	63700	62500	118000
24	30100	30800	30900	62500	80800	40400	55300	63900	63100	63600	63700	115000
25	30300	30700	31500	63200	76700	36800	55500	63700	63000	63500	66000	112000
26	31100	30700	31300	60400	77900	33200	56300	63300	63000	63500	67900	108000
27	30600	30900	30500	57500	69700	31400	55500	63100	63000	63500	70300	104000
28	30200	30900	30800	54800	61900	30800	60700	62700	63000	63500	88600	100000
29	30400	31000	30800	50700	---	30800	63100	62600	63000	63200	113000	96100
30	30700	31200	30900	48900	---	30400	62800	62200	62900	63100	114000	92600
31	30700	---	30800	117000	---	30600	---	62000	---	63000	111000	---

WTR YR 1982

(+)	354.95	355.06	354.97	365.70	359.88	354.92	360.00	359.89	360.01	360.02	365.13	363.28
(-)	-31700	+500	-400	+86200	-55100	-31300	+32200	-800	+900	+100	+48000	-18400
MAX	36200	31200	32500	117000	2150000	55000	63100	71600	73500	64100	114000	126000
MIN	30100	30200	30200	28700	61900	30400	30200	59200	62300	63000	62000	74900

CAL YR 1981.....\$ + 100

WTR YR 1982.....\$ -53300

(+) Elevation, in feet NGVD, at end of month.

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

07039500 ST. FRANCIS RIVER AT WAPPAPELLO, MO

LOCATION.--Lat 36°55'41", long 90°15'55", in NW¼SE¼ sec.2, T.26 N., R.7 E., Wayne County Hydrologic Unit 08020202, on right bank at downstream side of highway bridge, 0.5 mi (0.8 km) southeast of Wappapello and 1.25 mi (2.0 km) downstream from Wappapello Dam.

DRAINAGE AREA.--1,311 mi² (2,929 km²).

PERIOD OF RECORD.--October 1940 to current year. Since January 1939 in reports of Mississippi River Commission. Gage-height records collected in this vicinity since April 1920 are contained in reports of the Corps of Engineers.

REVISED RECORDS.--WSP 1211: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 325.25 ft (99.106 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 14, 1940, nonrecording gages in the vicinity at same datum.

REMARKS.--Records good above 500 ft³/s (14.2 m³/s) and fair below. Discharge computed using gate openings and pool elevation at Wappapello Lake. Flow regulated by Wappapello Lake.

COOPERATION.--Records furnished by Corps of Engineers.

AVERAGE DISCHARGE.--41 years, 1,502 ft³/s (42.54 m³/s), 1,088,000 acre-ft/yr (1.34 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,300 ft³/s (632 m³/s) Apr. 16, 1945, gage height, 25.60 ft (7.803 m); no flow at times in some years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since 1920, 30.7 ft (9.36 m) May 15, 1933 discharge, 82,500 ft³/s (2,340 m³/s), determined by Corps of Engineers. Maximum discharge, 85,000 ft³/s (2,410 m³/s), determined by Corps of Engineers, Aug. 1915 (stage unknown).

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 8,530 ft³/s (241.6 m³/s) Feb. 9; minimum daily discharge, no flow several days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	1530	360	510	609	6330	4540	895	2240	422	224	98	2690		
2	1460	394	550	632	8360	4270	688	2040	480	239	68	2310		
3	920	360	899	719	8360	4000	162	1660	586	255	.00	2220		
4	458	360	1200	1020	8310	3880	93	662	640	274	.00	2180		
5	300	360	1080	1500	8190	3500	31	311	641	292	24	2160		
6	180	360	808	1770	8090	2720	23	451	635	389	35	2130		
7	95	360	720	2100	7980	1610	25	1030	628	484	36	2100		
8	150	360	715	2020	8060	871	29	1350	572	493	.00	2070		
9	110	360	502	1960	8530	775	80	1470	385	497	.00	2050		
10	110	360	313	1920	8410	905	344	1850	235	494	.00	2020		
11	110	360	316	1980	7900	1040	678	2210	214	492	.00	2000		
12	110	360	316	1880	7350	1140	1020	2240	198	486	.00	1970		
13	40	370	316	1830	6870	1160	1340	2210	186	484	88	1950		
14	40	70	316	1750	6420	1270	1410	2000	176	312	400	1920		
15	200	50	316	1330	6040	2010	1210	1500	167	164	409	2020		
16	180	285	316	227	5690	2610	736	686	285	134	373	2210		
17	260	401	316	100	5510	3210	763	134	718	131	336	2280		
18	640	309	310	110	6260	3870	916	115	1260	126	329	2390		
19	90	309	310	183	6810	3700	1090	154	1730	125	343	2420		
20	40	280	180	239	6900	3710	598	195	1800	123	364	2460		
21	40	240	170	661	6930	3830	66	248	1600	122	290	2500		
22	150	160	230	1400	6860	3730	141	299	1400	120	232	2480		
23	540	40	530	2940	6600	3550	635	371	825	118	159	2450		
24	100	100	700	3630	6180	3350	860	445	271	116	125	2420		
25	40	140	790	3900	4640	3150	1090	527	222	113	531	2380		
26	180	140	990	3700	2170	2820	1320	603	229	111	809	2340		
27	580	140	990	3230	3950	2080	1540	558	246	109	1430	2290		
28	256	140	650	2980	4620	1450	1710	460	264	107	2460	2270		
29	40	185	600	2810	---	1010	2150	445	282	105	2840	2250		
30	90	340	600	2950	---	901	2250	435	260	103	2950	2230		
31	245	---	613	4910	---	891	---	428	---	101	2950	---		
TOTAL	9284	8053	17172	56990	188320	77553	23893	29327	17557	7443	17679.00	67160		
MEAN	299	268	554	1838	6726	2502	796	946	585	240	570	2239		
MAX	1530	401	1200	4910	8530	4540	2250	2240	1800	497	2950	2690		
MIN	40	40	170	100	2170	775	23	115	167	101	.00	1920		
CFSM	.23	.20	.42	1.40	5.13	1.91	.61	.72	.45	.18	.44	1.71		
IN.	.26	.23	.49	1.62	5.34	2.20	.68	.83	.50	.21	.50	1.91		
AC-FT	18410	15970	34060	113000	373500	153800	47390	58170	34820	14760	35070	133200		
CAL YR 1981	TOTAL	292849.00	MEAN	802	MAX	3360	MIN	40	CFSM	.61	IN	8.31	AC-FT	580900
WTR YR 1982	TOTAL	520431.00	MEAN	1426	MAX	8530	MIN	.00	CFSM	1.09	IN	14.77	AC-FT	1032000

LOCATION.--Lat 36°33'20", long 89°40'12", SW¼SE¼ sec.8, T.22 N., R.13 E., New Madrid County, Hydrologic Unit 08020204, on right bank 150 ft (46 m) upstream from bridge on U.S Highway 62, 3.7 mi (6.0 km) southwest of Lilbourn, and 4.0 mi (6.4 km) northwest of Marston.

PERIOD OF RECORD.--October 1945 to current year. Prior to January 1946 monthly discharge only, published in WSP 1311.

GAGE.--Water-stage recorder, nonrecording gage and creststage gage. Datum of gage is 263.46 ft (80.303 m) National Geodetic Vertical Datum of 1929 (levels by Missouri State Highway Commission). Prior to Oct. 27, 1967, nonrecording gage at present site and datum.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,580 ft³/s (186 m³/s) Mar. 29, 1975, gage height, 14.17 ft (4.319 m); maximum gage height, 15.16 ft (4.621 m) Feb. 15, 1950; minimum discharge, 29 ft³/s (0.82 m³/s) Sept. 20, 1954; minimum gage height, 1.94 ft (0.591 m) Sept. 21, 22, 23, 25, 26, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,430 ft³/s (125 m³/s) Jan. 23, gage height, 12.08 ft (3.682 m); minimum daily, 53 ft³/s (1.501 m³/s) Oct. 1-3.

CAL YR 1981	TOTAL	53521	MEAN 147	MAX 3140	MIN 46	CFSM .63	IN 8.47	AC-FT	106200
WTR YR 1982	TOTAL	77795	MEAN 213	MAX 4240	MIN 53	CFSM .91	IN 12.31	AC-FT	154300

LOCATION.--Lat 36°50'03", long 89°43'48", in SW¼SE¼ sec.2, T.25 N., R.12 E., Stoddard County, Hydrologic Unit 08020204, on downstream side of second pier right of left abutment of bridge on State Highway 114, 1.5 mi (2.4 km) downstream from Little River ditch 39, and 2.0 mi (3.2 km) west of Morehouse.

PERIOD OF RECORD.--October 1945 to current year. Prior to January 1946 monthly discharge only, published in WSP 1311.

GAGE.--Water-stage recorder. Datum of gage is 280.76 ft (85.576 m) National Geodetic Vertical Datum of 1929. Prior to Nov. 17, 1949, June 11, 1951, to Feb. 22, 1962, nonrecording gage at same site and datum. Nov. 17, 1949, to June 10, 1951 nonrecording gage at site 50 ft (15 m) downstream at present datum.

REMARKS.--Records good except those for no gage-height record which are poor. Several observations of water temperature and specific conductance were made during the year. This Little River ditch 1 flows into Little River ditch 251 at point 35.3 mi (56.8 km) downstream, and is independent of the ditch for which records are published as Little River 1 near Kennett.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,530 ft³/s (242 m³/s) Feb. 1, 1982, gage height, 15.2 ft (4.683 m); maximum gage height, 19.81 ft (6.038 m) Mar. 11, 1964; minimum discharge, 21 ft³/s (0.59 m³/s) Sept. 18, 1954, gage height, 3.13 ft (0.954 m).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 1945 reached a stage of 19.85 ft (6.050 m) from floodmark, discharge, 5,830 ft³/s (165 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,530 ft³/s (242 m³/s) Feb. 1, gage height, 15.2 ft (4.633 m), from floodmarks; minimum daily, 65 ft³/s (1.841 m³/s) Aug. 22.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	78	89	134	138	8500	330	240	187	1280	296	84	417
2	76	89	159	138	8500	320	235	180	742	244	84	347
3	76	89	153	226	7800	310	235	176	361	201	82	190
4	79	90	130	474	5850	300	320	176	284	183	79	157
5	83	92	113	537	3700	300	270	172	328	173	75	146
6	79	90	106	455	2430	290	250	173	287	156	72	128
7	78	89	105	337	2030	290	250	295	234	141	74	124
8	78	88	104	253	1680	280	245	300	211	132	72	113
9	79	88	101	210	1380	280	240	213	200	361	76	107
10	81	85	98	177	947	280	235	193	264	413	71	102
11	80	86	98	150	664	270	230	185	480	381	70	100
12	78	86	98	150	576	270	225	178	231	398	70	99
13	79	85	96	250	477	270	220	173	202	291	75	98
14	83	85	96	220	446	270	220	169	189	212	90	95
15	81	86	95	190	507	2880	220	165	186	169	128	195
16	80	88	95	175	1180	2770	220	157	208	152	118	126
17	83	86	95	165	2840	1760	220	153	292	135	97	107
18	83	86	100	160	2540	1270	500	149	208	125	83	103
19	83	88	111	155	1610	922	400	147	185	115	75	155
20	83	86	105	150	1250	583	350	146	175	111	71	110
21	83	84	103	150	867	400	300	146	170	104	67	99
22	83	85	141	1830	604	350	270	142	175	103	65	96
23	84	89	586	6800	487	320	250	136	170	114	66	94
24	84	88	630	6700	421	300	232	134	160	134	101	97
25	86	86	433	5500	390	290	222	138	154	131	401	110
26	90	90	329	3260	370	280	233	157	150	116	386	97
27	94	85	237	2420	350	270	209	151	215	106	600	93
28	94	84	197	1980	340	260	197	146	604	98	1440	91
29	90	84	167	1710	---	250	196	147	310	94	691	89
30	89	99	150	2820	---	240	194	185	315	90	443	87
31	89	---	148	7700	---	240	---	369	---	87	334	---
TOTAL	2566	2625	5313	45580	58736	17445	7628	5538	8970	5566	6240	3972
MEAN	82.6	87.5	171	1470	2098	563	254	179	299	180	201	132
MAX	94	99	630	7700	8500	2880	500	369	1280	413	1440	417
MIN	76	84	95	138	340	240	194	134	150	87	65	87
CFSM	.18	.19	.38	3.27	4.66	1.25	.56	.40	.66	.40	.45	.29
IN	.21	.22	.44	3.77	4.86	1.44	.63	.46	.74	.46	.52	.33
AC-FT	5090	5210	10540	90410	116500	34600	15130	10980	17790	11040	12380	7880
CAL YR 1981	TOTAL	86112	MEAN 236	MAX 3520	MIN 67	CFSM .52	IN 7.12	AC-FT	170800			
WTR YR 1982	TOTAL	170179	MEAN 466	MAX 8500	MIN 65	CFSM 1.04	IN 14.07	AC-FT	337500			

ST. FRANCIS RIVER BASIN

07046001 LITTLE RIVER DITCHES NEAR KENNETT, MO

WATER-QUALITY RECORDS

LOCATION.--Lat 36°14'08", long 89°58'41", in NW¼ sec. 3, T.18 N., R.10 E., Dunklin County, at bridges on State highway 84, 4 mi (6.4 km) east of Kennett.

PERIOD OF RECORD.--November 1969 to June 1970, August 1972 to September 1973, July 1977 to current year.

REMARKS.--Analyses represent a composite of water from five ditches.

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHUS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00300)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L) (00335)
OCT									
06...	0740	1026	29001	246	360	8.1	21.5	4.6	52
NOV									
03...	0940	1028	29001	460	419	8.1	17.0	5.0	52
DEC									
02...	0830	1026	29001	630	346	8.1	6.5	9.8	80
JAN									
06...	0850	1028	29001	2000	188	7.5	7.0	6.8	56
FEB									
08...	1400	1028	29001	1250	290	7.4	3.0	10.0	74
MAR									
03...	0830	1026	29001	1020	322	7.9	11.0	7.4	67
APR									
12...	1645	1028	29001	770	395	8.1	18.0	7.6	79
MAY									
03...	1230	1026	29001	535	395	8.1	24.0	6.2	73
JUN									
01...	1400	1028	29001	1570	380	8.1	25.5	2.6	32
JUL									
12...	1345	1028	29001	750	240	7.5	30.5	3.6	47
AUG									
18...	1530	1028	29001	271	340	8.0	30.5	3.6	50
SEP									
07...	1345	1028	29001	694	288	8.2	29.0	4.0	52

DATE	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	HARD- NESS (MG/L AS CAC03) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY, FIELD (MG/L AS CAC03) (00410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)
OCT										
06...	280	210	59	14	13	2.1	177	19	10	.1
NOV										
03...	20	--	--	--	--	--	164	--	--	--
DEC										
02...	2500	--	--	--	--	--	108	--	--	--
JAN										
06...	1200	68	18	5.6	4.8	3.6	43	16	9.0	<.1
FEB										
08...	160	--	--	--	--	--	112	--	--	--
MAR										
03...	80	--	--	--	--	--	125	--	--	--
APR										
12...	100	230	69	15	15	22	157	22	42	.2
MAY										
03...	22	--	--	--	--	--	157	--	--	--
JUN										
01...	420	--	--	--	--	--	141	--	--	--
JUL										
12...	560	260	80	14	14	3.4	108	24	12	.2
AUG										
18...	2500	--	--	--	--	--	141	--	--	--
SEP										
07...	92	--	--	--	--	--	112	--	--	--

WHITE RIVER BASIN

07050580 JAMES RIVER NEAR STRAFFORD, MO

LOCATION.--Lat 37°12'11", long 93°04'47", in SW¼NW¼NW¼ sec.24, T.29 N., R.20 W., Greene County, Hydrologic Unit 11010002, on right bank 15 ft (5 m) downstream from proposed bridge site on county road, 1.6 mi (2.6 km) downstream from County Line Damsite, 1 mi (1.6 km) downstream from Davis Creek and 4 mi (6.4 km) south of Strafford.

DRAINAGE AREA.--165 mi² (427 km²).

PERIOD OF RECORD.--October 1973 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1207 ft (368 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except periods of no gage-height record which are poor. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--9 years, 147 ft³/s (4.163 m³/s) 12.10 in/yr (307 mm/yr) 106,500 acre-ft/yr (131 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,900 ft³/s (705 m³/s) Sept. 27, 1977, gage height, 18.90 ft (5.761 m); minimum, 1.2 ft³/s (0.034 m³/s) June 14-19, 1977, gage height, 2.01 ft (0.613 m).

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

Date	Time	Discharge (ft ³ /s)	(m ³ /s)	Gage height (ft)	(m)
Jan. 30	2200	*11,600	329	15.64	4.767
June 16	0030	5,650	160	12.40	3.780

Minimum, 3.8 ft³/s (0.108 m³/s) Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	4.0	127	90	40	998	91	53	184	369	120	18	57		
2	4.5	208	72	38	713	79	52	150	252	100	16	38		
3	4.0	165	62	41	562	73	49	124	258	90	15	30		
4	5.0	125	56	86	455	71	46	104	913	60	14	25		
5	6.0	88	48	84	361	64	43	80	802	70	12	21		
6	5.0	63	40	82	280	62	39	65	471	60	12	18		
7	4.0	55	36	69	226	60	39	65	345	50	12	14		
8	4.0	49	30	60	188	58	39	60	263	45	11	12		
9	5.0	40	27	55	163	57	38	51	203	50	10	11		
10	5.0	36	26	48	135	55	36	45	163	60	10	10		
11	6.0	32	26	42	116	55	34	40	131	50	9.9	9.4		
12	8.0	29	25	38	106	54	32	37	120	45	12	8.4		
13	9.0	26	21	36	88	54	31	34	93	40	337	8.0		
14	30	25	20	33	84	315	29	39	77	40	180	7.8		
15	90	24	19	31	228	743	29	122	775	35	91	7.8		
16	80	22	18	28	786	477	29	120	2420	35	62	7.5		
17	90	21	17	31	694	361	27	85	713	30	47	7.4		
18	200	20	16	25	468	280	26	65	458	30	38	7.1		
19	130	18	15	24	369	231	27	54	342	27	31	7.1		
20	90	18	15	24	309	200	31	55	255	26	27	6.7		
21	80	17	14	24	260	172	31	48	200	24	24	6.2		
22	313	17	69	372	223	148	29	40	163	23	22	5.8		
23	231	16	467	562	191	131	28	35	129	23	20	5.9		
24	163	16	283	342	168	114	26	32	800	21	19	5.7		
25	120	16	195	239	144	93	26	32	600	19	18	5.3		
26	77	16	144	172	129	75	133	30	300	18	17	5.2		
27	60	17	109	135	118	67	155	36	250	18	171	4.9		
28	52	16	81	106	101	61	117	42	150	19	195	4.6		
29	43	15	60	79	---	59	246	44	100	20	115	4.3		
30	36	42	53	4010	---	58	239	40	90	21	100	4.0		
31	35	---	48	3430	---	55	---	566	---	19	87	---		
TOTAL	1989.5	1379	2202	10386	8663	4473	1759	2524	12205	1308	1752.9	365.1		
MEAN	64.2	46.0	71.0	335	309	144	58.6	81.4	407	42.2	56.5	12.2		
MAX	313	208	467	4010	998	743	246	566	2420	120	337	57		
MIN	4.0	15	14	24	84	54	26	30	77	18	9.9	4.0		
CFSM	.39	.28	.43	2.03	1.87	.87	.36	.49	2.47	.26	.34	.07		
IN.	.45	.31	.50	2.34	1.95	1.01	.40	.57	2.75	.29	.40	.08		
AC-FT	3950	2740	4370	20600	17180	8870	3490	5010	24210	2590	3480	724		
CAL YR 1981	TOTAL	22613.8	MEAN	62.0	MAX	2320	MIN	2.0	CFSM	.38	IN	5.10	AC-FT	44850
WIR YR 1982	TOTAL	49006.5	MEAN	134	MAX	4010	MIN	4.0	CFSM	.81	IN	11.05	AC-FT	97200

WHITE RIVER BASIN

07050700 JAMES RIVER NEAR SPRINGFIELD, MO

LOCATION.--Lat 37°08'59", long 93°12'10", in NE¼NW¼ sec.11, T.28 N., R.21 W., Greene County, Hydrologic Unit 11010002, on left bank on county road at Kinser bridge, 1.1 mi (1.8 km) downstream from Pearson Creek, and 2.5 mi (4.0 km) southeast of Springfield.

DRAINAGE AREA.--246 mi² (637 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 1,143.27 ft (348.469 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Dec. 19, 1955, nonrecording gage at same site and datum.

REMARKS.--Records good. Several observations of water temperatures were made during the year.

AVERAGE DISCHARGE.--27 years, 211 ft³/s (5.976 m³/s), 11.65 in/yr (296 mm/yr), 152,900 acre-ft/yr (189 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,800 ft³/s (702 m³/s) Dec. 17, 1957, gage height, 18.20 ft (5.547 m); minimum, 0.1 ft³/s (0.003 m³/s) Sept. 16, 24, 25, 1956, gage height, 2.18 ft (0.664 m).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in July 1909 reached a stage about 22 ft (6.7 m) from information by local resident, discharge not determined.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,000 ft³/s (113 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 31	0215	*14,700 416	15.38 4.825
June 16	0745	6,710 190	13.60 4.145

Minimum discharge, 3.3 ft³/s (0.09 m³/s) Sept. 13-15; gage height 2.46 ft (0.750 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	8.8	127	108	86	1600	142	99	238	524	149	30	63		
2	8.7	275	99	80	1010	134	98	181	376	168	22	46		
3	8.4	249	88	83	773	127	98	150	343	128	12	38		
4	8.9	200	75	122	606	140	93	122	936	108	15	33		
5	10	153	64	143	511	138	90	105	1200	88	14	28		
6	9.0	124	60	146	429	129	85	99	699	72	15	23		
7	8.6	103	47	135	368	122	82	99	506	63	15	15		
8	8.6	91	42	118	318	117	81	93	394	60	14	12		
9	9.0	76	38	107	272	113	80	86	311	66	14	10		
10	9.1	68	34	96	228	109	77	80	244	72	12	12		
11	9.5	59	30	77	222	108	75	74	194	75	13	10		
12	9.7	50	31	77	194	106	73	70	174	60	16	9.7		
13	9.9	48	28	76	174	108	71	71	153	50	256	6.7		
14	37	43	25	67	155	239	69	76	123	43	225	4.0		
15	106	40	25	67	153	924	68	105	404	43	112	4.8		
16	92	36	22	64	206	671	67	135	3510	43	67	6.2		
17	129	31	22	55	955	523	65	109	891	41	50	10		
18	285	28	20	54	659	422	64	96	574	37	39	20		
19	196	27	20	60	524	353	68	86	456	30	31	19		
20	117	24	15	69	442	308	77	82	362	31	25	18		
21	87	22	16	70	388	263	74	80	290	31	22	17		
22	188	22	41	274	335	213	71	73	228	32	22	17		
23	443	21	458	730	293	182	67	68	281	32	15	16		
24	300	18	389	514	258	169	65	65	1010	36	14	16		
25	217	15	301	389	219	162	64	75	481	35	14	16		
26	151	20	237	289	192	150	99	95	395	33	14	16		
27	108	18	191	233	173	135	172	85	376	32	52	16		
28	90	17	153	190	160	124	142	91	311	32	174	16		
29	77	16	127	156	---	115	231	108	239	32	99	14		
30	66	39	102	2970	---	110	318	111	179	33	76	13		
31	67	---	94	7010	---	106	---	568	---	31	73	---		
TOTAL	2874.2	2060	3002	14607	11817	6762	2883	3576	16164	1786	1572	545.4		
MEAN	92.7	68.7	96.8	471	422	218	96.1	115	539	57.6	50.7	18.2		
MAX	443	275	458	7010	1600	924	318	568	3510	168	256	63		
MIN	8.4	15	15	54	153	106	64	65	123	30	12	4.0		
CFSM	.38	.28	.39	1.92	1.72	.89	.39	.47	2.19	.23	.21	.07		
IN.	.43	.31	.45	2.21	1.79	1.02	.44	.54	2.44	.27	.24	.08		
AC-FT	5700	4090	5950	28970	23440	13410	5720	7090	32060	3540	3120	1080		
CAL YR 1981	TOTAL	29017.1	MEAN	79.5	MAX	2510	MIN	2.0	CFSM	.32	IN	4.39	AC-FT	57560
WTR YR 1982	TOTAL	67648.6	MEAN	185	MAX	7010	MIN	4.0	CFSM	.75	IN	10.23	AC-FT	134200

WHITE RIVER BASIN

07051600 JAMES RIVER NEAR WILSON CREEK, MO

WATER-QUALITY RECORDS

LOCATION.--Lat 37°04'35", long 93°22'15", in SE¼ NW¼ sec.5, T.27 N., R.22 W., Christian County, Hydrologic Unit 11010002, at Nelson Mill Bridge on county road 2.5 mi (4.0 km) southeast of Wilson Creek, and 2 mi (3.2 km) upstream from Wilsons Creek.

PERIOD OF RECORD.--August 1967 to current year (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00300)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L) (00335)
OCT									
20...	1515	1028	29001	218	369	7.7	16.5	7.4	18
NOV									
24...	1045	1028	29001	54	422	7.8	9.0	10.0	5
DEC									
15...	1400	1028	29001	23	410	7.8	8.0	9.6	<5
JAN									
19...	1550	1028	29001	74	396	8.0	5.5	9.2	<5
FEB									
09...	1415	1028	29001	255	326	8.0	7.0	11.0	7
MAR									
02...	1200	1028	29001	170	319	7.9	11.0	9.4	<5
APR									
13...	1115	1028	29001	86	356	8.3	19.0	9.9	42
MAY									
04...	1340	1028	29001	162	344	8.1	20.0	7.8	27
JUN									
01...	1530	1028	29001	660	339	8.1	20.5	6.4	<5
JUL									
06...	1530	1028	29001	95	368	8.0	27.0	6.8	10
AUG									
03...	1430	1028	29001	29	410	8.1	26.5	7.6	7
SEP									
10...	1015	1028	29001	39	426	8.2	22.0	8.4	--

DATE	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	HARD- NESS (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)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY FIELD (MG/L AS CACO3) (00410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)
OCT										
20...	1000	220	76	7.4	7.0	3.6	147	14	7.5	<.1
NOV										
24...	38	--	--	--	--	--	171	--	--	--
DEC										
15...	27	--	--	--	--	--	176	--	--	--
JAN										
19...	44	190	64	6.3	6.0	2.4	157	27	11	<.1
FEB										
09...	16	--	--	--	--	--	138	--	--	--
MAR										
02...	42	--	--	--	--	--	141	--	--	--
APR										
13...	3500	180	57	8.0	4.6	2.4	153	15	60	<.1
MAY										
04...	560	--	--	--	--	--	134	--	--	--
JUN										
01...	480	--	--	--	--	--	154	--	--	--
JUL										
06...	290	180	59	8.0	4.0	2.2	154	19	9.0	<.1
AUG										
03...	120	--	--	--	--	--	154	--	--	--
SEP										
10...	410	--	--	--	--	--	167	--	--	--

07052100 WILSONS CREEK NEAR SPRINGFIELD, MO

LOCATION--Lat. 37°10'06", long 93°22'14", in NE¼NE¼ sec.6, T.28 N., R.22 W., Greene County, Hydrologic Unit 11010002, on right bank just downstream from bridge on county road, 1 mi (1.6 km) upstream from Southwest Sewage Treatment Plant of Springfield and South Creek and in Springfield.

DRAINAGE AREA.--31.4 mi² (81.3 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1972 to current year.

GAGE.--Waterstage recorder. Datum of gage is 1,149.65 ft (350.413 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. Runoff affected by urbanized area. Station discontinued.

AVERAGE DISCHARGE.--10 years, 27.1 ft³/s (0.77 m³/s), 11.72 in/yr (298 mm/yr), 19,630 acre-ft/yr (24.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,480 ft³/s (98.6 m³/s) May 20, 1979, gage height, 9.48 ft (2.890 m); no flow at times most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,000 ft³/s (23 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Oct. 15	1115	1380 39.1	6.51 1.984
Jan. 30	1915	1,400 39.6	6.56 1.999
Aug. 13	1130	*2,130 60.3	7.65 2.332

No flow several days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	.00	74	14	7.0	56	9.4	5.2	9.4	13	26	.00	6.6		
2	.00	32	11	9.6	43	9.0	47	8.1	21	13	.00	8.0		
3	.00	22	9.8	27	35	10	14	7.1	83	8.2	.00	6.0		
4	.00	28	9.0	13	27	10	7.3	7.3	178	6.3	.00	5.4		
5	.00	16	7.8	9.7	23	8.6	6.3	5.9	46	4.9	.00	4.0		
6	.00	14	7.8	9.4	19	7.8	5.9	5.4	31	3.4	.00	3.2		
7	.00	12	7.4	8.7	18	7.4	5.7	6.5	24	3.1	.00	2.9		
8	.00	11	6.9	9.2	16	7.0	7.3	3.7	19	16	.00	3.6		
9	.00	10	7.1	8.0	14	7.0	5.5	2.6	16	7.5	.00	3.1		
10	.00	9.8	6.2	8.1	14	7.0	5.2	1.9	14	18	.00	1.5		
11	.00	9.2	5.8	11	13	6.2	4.7	1.7	31	6.5	2.9	.38		
12	4.2	8.7	5.5	12	13	5.8	4.3	9.0	14	2.2	13	.35		
13	3.2	7.8	4.7	13	13	19	4.3	28	12	60	341	.00		
14	128	7.4	5.8	15	19	94	4.0	34	10	13	16	9.3		
15	257	6.6	5.8	15	22	21	.70	20	61	7.4	8.6	2.6		
16	22	5.8	5.8	13	24	15	3.6	8.4	35	5.8	7.1	2.4		
17	282	5.8	5.4	15	19	13	3.6	7.4	12	4.3	5.6	.31		
18	46	5.8	4.5	13	16	12	.00	5.8	13	2.3	4.4	13		
19	18	5.6	4.1	11	14	11	14	4.1	17	.90	3.6	1.8		
20	14	4.7	4.1	8.5	13	11	8.2	3.0	9.2	.45	2.7	1.0		
21	12	4.7	4.3	9.4	13	9.4	4.9	5.6	24	.09	1.5	1.0		
22	12	4.0	92	72	12	8.6	3.8	2.1	9.5	8.6	.68	1.0		
23	23	3.6	17	18	12	8.2	2.9	.00	8.2	3.8	.38	.80		
24	16	3.6	11	14	11	7.8	2.2	.00	8.2	1.6	.42	.80		
25	15	3.6	9.8	13	11	7.4	1.7	45	86	.20	33	.60		
26	16	3.6	9.1	12	10	7.0	53	25	18	.00	3.7	.60		
27	12	3.2	8.7	11	10	6.6	7.1	13	13	5.5	107	.50		
28	11	2.9	8.0	11	9.8	6.2	8.7	20	11	.38	14	.50		
29	9.9	2.9	7.7	10	---	5.8	61	54	8.9	.09	10	.50		
30	9.4	118	7.3	542	---	5.5	11	8.8	18	.00	25	.50		
31	82	---	7.0	149	---	5.5	---	105	---	.00	8.2	---		
TOTAL	992.70	446.3	320.4	1097.6	519.8	369.2	313.10	457.80	864.0	229.51	608.78	82.24		
MEAN	32.0	14.9	10.3	35.4	18.6	11.9	10.4	14.8	28.8	7.40	19.6	2.74		
MAX	282	118	92	542	56	94	61	105	178	60	341	13		
MIN	.00	2.9	4.1	7.0	9.8	5.5	.00	.00	8.2	.00	.00	.00		
CFSM	1.02	.48	.33	1.13	.59	.38	.33	.47	.92	.24	.62	.09		
IN	1.18	.53	.38	1.30	.62	.44	.37	.54	1.02	.27	.72	.10		
AC-FT	1970	885	636	2180	1030	732	621	908	1710	455	1210	163		
CAL YR 1981	TOTAL	8273.19	MEAN	22.7	MAX	647	MIN	.00	CFSM	.72	IN	9.80	AC-FT	16410
WTR YR 1982	TOTAL	6301.43	MEAN	17.3	MAX	542	MIN	.00	CFSM	.55	IN	7.47	AC-FT	12500

WHITE RIVER BASIN

07052100 WILSONS CREEK NEAR SPRINGFIELD, MO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1973 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1972 to current year (discontinued).

PH: October 1972 to current year (discontinued).

WATER TEMPERATURES: October 1972 to current year (discontinued).

DISSOLVED OXYGEN: October 1972 to current year (discontinued).

INSTRUMENTATION.--Water-quality monitor since October 1972.

REMARKS.--Period of missing record exceed 20 percent of year. No flow and not enough flow to pump well on many days.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE (water years 1973, 1977-80): Maximum, 1,580 micromhos Feb. 7, 8, 1980; minimum, 70 micromhos Sept. 24, 1977.

PH (water years 1975-80): Maximum, 9.1 units Feb. 22, Mar. 25, 1977; minimum, 6.4 units Oct. 18, 1979.

WATER TEMPERATURES: Maximum, 29.5°C July 9, 1978; minimum, 0.0°C on many days during winter periods.

DISSOLVED OXYGEN (water years 1975-80): Maximum, 19.3 mg/L Mar. 5, 1980; minimum, 0.4 mg/L May 26, 1976.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

WHITE RIVER BASIN

07052100 WILSONS CREEK NEAR SPRINGFIELD, MO--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	16.5	11.0	16.5	13.5	20.0	15.5	27.0	24.0	---	---	26.0	23.5
2	18.0	14.0	20.5	14.0	18.0	16.5	27.0	23.0	---	---	26.0	24.0
3	14.5	10.0	21.5	15.5	18.0	16.5	27.5	24.5	---	---	24.0	20.5
4	14.5	9.5	23.5	17.5	18.0	16.5	27.5	25.0	---	---	22.5	20.5
5	14.0	8.0	22.5	19.0	19.5	15.0	27.5	25.0	---	---	22.0	20.0
6	11.0	6.0	21.0	16.5	20.5	16.0	27.5	25.5	---	---	21.5	19.5
7	9.5	6.5	19.0	14.0	21.0	18.0	26.0	25.0	---	---	23.0	21.0
8	7.5	6.0	19.5	14.5	23.5	19.0	26.0	24.0	---	---	23.0	21.5
9	9.5	4.5	21.0	16.5	21.5	20.0	26.0	23.5	---	---	24.0	22.0
10	12.0	6.0	21.0	17.5	---	---	26.5	24.5	---	---	24.0	22.0
11	15.0	8.5	22.5	18.5	---	---	25.5	23.0	---	---	23.5	22.0
12	17.5	11.0	21.5	18.5	---	---	25.5	23.0	---	---	24.0	22.5
13	20.0	14.5	20.0	18.0	---	---	24.5	22.5	---	---	---	---
14	20.0	14.0	22.0	17.5	---	---	25.5	21.5	---	---	---	---
15	18.0	16.5	22.5	17.0	---	---	25.5	23.0	---	---	24.0	21.5
16	20.5	17.0	21.5	19.5	---	---	26.5	24.0	---	---	21.5	20.0
17	19.0	15.0	22.0	19.0	22.5	17.5	27.5	25.0	---	---	21.5	19.5
18	---	---	22.5	19.5	22.5	19.0	28.5	26.0	24.0	22.0	21.5	20.0
19	---	---	21.5	19.5	23.0	20.5	28.5	25.5	24.0	22.0	20.0	18.0
20	17.0	11.5	22.0	20.0	23.0	18.5	28.5	25.5	24.5	22.5	---	---
21	15.0	10.5	23.0	20.0	23.0	19.5	28.0	26.0	25.5	23.5	---	---
22	16.0	9.5	22.0	20.5	24.5	20.5	27.5	25.0	24.5	22.0	---	---
23	16.0	11.0	---	---	23.5	21.5	26.0	23.5	25.5	23.5	---	---
24	15.5	12.0	---	---	24.0	21.0	26.0	23.5	25.5	24.0	---	---
25	15.5	13.5	---	---	24.0	21.0	25.5	23.5	24.5	22.0	---	---
26	17.0	14.0	---	---	26.5	21.0	---	---	24.5	22.0	---	---
27	18.5	13.0	23.0	19.5	23.5	21.5	27.0	24.0	24.5	22.5	---	---
28	16.0	12.5	24.0	19.5	24.5	20.5	26.5	25.0	23.0	21.5	---	---
29	14.0	11.5	25.0	21.5	25.5	21.5	25.0	24.0	24.0	20.5	---	---
30	16.0	11.5	25.5	22.0	26.5	22.5	26.0	23.5	25.0	21.0	---	---
31	---	---	22.5	17.5	---	---	---	---	26.0	23.0	---	---
MONTH	20.5	4.5	25.5	13.5	26.5	15.0	28.5	21.5	26.0	20.5	26.0	18.0

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	426	272	482	316	---	---	608	528	---	---
2	---	---	540	407	584	482	---	---	630	494	---	---
3	---	---	577	540	570	548	---	---	720	470	---	---
4	---	---	590	393	580	562	---	---	622	452	---	---
5	---	---	595	511	622	574	---	---	628	532	---	---
6	---	---	620	590	624	584	---	---	642	592	---	---
7	---	---	645	615	628	584	---	---	634	614	---	---
8	---	---	630	595	608	572	---	---	644	602	---	---
9	---	---	615	600	596	534	---	---	646	612	---	---
10	---	---	650	585	614	538	---	---	802	632	548	510
11	---	---	690	595	628	596	---	---	774	634	524	470
12	---	---	700	610	622	572	---	---	812	632	506	450
13	---	---	635	565	592	558	---	---	936	782	684	384
14	---	---	700	580	638	566	---	---	876	706	410	122
15	---	---	695	595	1220	638	---	---	706	566	478	294
16	---	---	705	630	1020	704	---	---	602	510	586	474
17	---	---	730	620	712	644	---	---	574	518	880	460
18	---	---	770	700	962	690	---	---	---	---	590	450
19	---	---	725	590	798	620	---	---	---	---	630	510
20	---	---	605	570	946	636	---	---	---	---	520	450
21	---	---	635	570	1000	906	1060	810	---	---	560	500
22	662	134	635	600	---	---	812	198	---	---	750	460
23	526	394	645	635	---	---	598	434	---	---	620	540
24	582	526	696	645	---	---	624	582	---	---	574	530
25	598	582	750	546	---	---	660	624	560	470	582	536
26	594	484	696	598	---	---	662	620	588	526	630	582
27	780	538	624	580	---	---	682	582	---	---	660	574
28	908	636	622	570	---	---	706	612	---	---	600	560
29	720	616	590	576	---	---	690	608	---	---	590	526
30	718	634	590	100	---	---	640	170	---	---	540	470
31	736	204	---	---	---	---	528	316	---	---	530	478
MONTH	908	134	770	100	1220	316	1060	170	936	452	880	122

WHITE RIVER BASIN

07052100 WILSONS CREEK NEAR SPRINGFIELD, MO--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	502	450	582	528	554	402	754	410	---	---	640	572
2	522	166	584	550	580	342	610	452	---	---	644	586
3	380	214	586	522	364	170	770	578	---	---	624	544
4	478	380	590	512	548	136	---	---	---	---	626	572
5	518	478	604	524	546	444	---	---	---	---	628	594
6	572	518	658	588	578	534	660	610	---	---	632	584
7	602	570	684	614	784	530	740	610	---	---	636	620
8	600	566	634	544	628	576	688	336	---	---	642	624
9	628	558	658	536	---	---	518	332	---	---	644	628
10	562	518	604	558	---	---	630	324	---	---	648	596
11	538	514	622	572	---	---	452	380	---	---	---	---
12	562	526	682	578	---	---	540	452	---	---	---	---
13	560	520	682	216	---	---	828	190	---	---	---	---
14	584	536	442	192	---	---	448	214	---	---	---	---
15	566	540	402	244	---	---	---	---	---	---	---	---
16	566	468	560	396	---	---	648	472	---	---	---	---
17	476	320	582	560	552	418	696	600	---	---	---	---
18	---	---	602	558	586	542	798	664	610	598	---	---
19	---	---	672	602	464	362	734	670	608	592	---	---
20	436	284	648	602	536	464	808	714	610	596	---	---
21	558	418	858	638	566	324	724	612	610	602	---	---
22	582	552	770	722	500	352	634	336	606	592	---	---
23	590	564	---	---	648	500	404	350	610	596	---	---
24	604	562	---	---	676	614	456	404	608	598	---	---
25	604	534	---	---	674	248	472	456	598	500	---	---
26	562	156	---	---	656	342	---	---	610	572	---	---
27	510	358	470	320	740	564	570	506	604	386	---	---
28	604	478	470	240	852	578	660	570	616	580	---	---
29	560	156	352	150	854	690	664	498	620	580	---	---
30	528	458	452	300	858	426	618	564	620	568	---	---
31	---	---	480	158	---	---	---	---	634	606	---	---
MONTH	628	156	858	150	858	136	828	190	634	386	648	544

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	9.2	8.3	9.0	8.0	---	---	12.4	11.3	---	---
2	---	---	10.6	8.4	10.6	8.8	---	---	12.7	11.6	---	---
3	---	---	10.1	8.4	10.6	8.9	---	---	12.7	11.5	---	---
4	---	---	8.8	7.1	11.4	8.9	---	---	12.8	11.6	---	---
5	---	---	10.5	8.5	12.2	9.4	---	---	12.9	11.6	---	---
6	---	---	11.2	8.9	12.0	9.0	---	---	13.0	11.4	---	---
7	---	---	12.0	9.4	12.2	8.2	---	---	13.3	11.3	---	---
8	---	---	12.1	9.0	12.9	8.0	---	---	13.3	11.6	---	---
9	---	---	12.3	9.0	13.4	8.8	---	---	13.7	11.5	---	---
10	---	---	13.3	9.6	13.2	9.0	---	---	13.8	11.4	19.6	9.7
11	---	---	13.6	9.5	12.7	9.1	---	---	14.2	11.6	19.6	8.8
12	---	---	14.1	9.3	12.8	9.2	---	---	14.2	11.6	17.6	8.2
13	---	---	14.3	9.2	13.2	8.8	---	---	14.5	11.6	12.3	7.7
14	---	---	14.9	9.0	14.1	8.8	---	---	15.4	11.3	10.7	7.3
15	---	---	12.1	8.4	13.1	8.5	---	---	13.8	10.9	13.4	6.9
16	---	---	14.0	7.9	17.0	9.9	---	---	13.8	11.0	14.8	9.8
17	---	---	13.8	8.0	16.7	10.3	---	---	14.4	11.2	15.2	9.8
18	---	---	13.4	7.3	17.0	12.6	---	---	---	---	15.3	9.7
19	---	---	9.6	6.3	17.2	13.1	---	---	---	---	12.8	9.5
20	---	---	13.0	8.2	16.2	12.9	---	---	---	---	15.3	9.5
21	---	---	12.7	9.0	14.7	11.8	15.9	11.0	---	---	15.0	9.6
22	12.0	10.7	12.5	8.4	---	---	11.9	10.3	---	---	14.6	10.0
23	12.8	12.0	15.4	10.3	---	---	13.2	11.1	---	---	15.2	9.9
24	13.0	11.9	16.5	9.5	---	---	14.1	11.3	---	---	15.7	9.7
25	12.5	11.8	15.5	9.3	---	---	14.6	11.4	19.3	8.9	13.6	9.2
26	11.9	11.1	12.3	7.6	---	---	15.1	11.4	---	---	15.0	9.7
27	12.8	11.3	15.1	8.2	---	---	15.7	11.3	---	---	16.4	9.4
28	12.7	11.2	13.8	8.8	---	---	16.7	11.2	---	---	15.2	9.3
29	12.3	10.2	12.6	8.3	---	---	15.8	11.2	---	---	15.8	9.3
30	12.6	9.9	9.7	8.0	---	---	11.7	11.0	---	---	14.1	10.8
31	9.8	8.2	---	---	---	---	11.7	11.1	---	---	14.9	7.4
MONTH	13.0	8.2	16.5	6.3	17.2	8.0	16.7	10.3	19.3	8.9	19.6	6.9

WHITE RIVER BASIN

07052100 WILSONS CREEK NEAR SPRINGFIELD, MO--Continued

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	14.7	7.4	13.1	8.2	7.9	7.0	---	---	---	---	7.6	6.1
2	12.7	6.9	13.1	7.5	7.4	6.1	---	---	---	---	7.7	6.1
3	10.0	7.4	13.4	7.0	8.3	6.2	---	---	---	---	8.1	6.5
4	11.4	7.5	15.3	6.7	8.0	7.7	---	---	---	---	8.1	6.2
5	9.4	7.4	13.4	6.2	8.7	8.0	---	---	---	---	8.1	6.1
6	11.6	8.1	11.4	5.7	8.9	8.2	---	---	---	---	8.4	6.1
7	10.2	8.0	14.0	7.0	8.9	8.2	---	---	---	---	8.2	5.9
8	9.8	8.3	14.3	5.6	9.4	8.2	8.2	4.6	---	---	8.1	5.8
9	11.9	8.2	15.3	5.3	9.2	8.2	6.6	4.9	---	---	7.9	5.1
10	12.7	7.7	14.9	5.2	---	---	6.7	4.8	---	---	8.1	5.3
11	13.5	7.5	14.8	5.3	---	---	6.2	4.9	---	---	7.6	5.0
12	14.3	7.1	10.0	5.0	---	---	6.1	4.5	---	---	6.7	5.0
13	15.0	6.6	5.9	4.5	---	---	5.9	1.4	---	---	---	---
14	15.0	6.0	6.5	5.0	---	---	7.0	4.6	---	---	---	---
15	12.2	5.6	6.9	5.0	---	---	---	---	---	---	5.6	4.8
16	14.0	5.9	6.9	5.1	---	---	7.7	6.1	---	---	7.3	5.6
17	9.0	4.8	8.7	5.4	---	---	7.4	5.7	---	---	6.4	5.2
18	---	---	9.1	5.8	9.0	7.8	7.4	5.3	8.1	6.8	7.3	6.2
19	---	---	9.9	5.8	9.0	7.4	8.0	4.6	8.3	6.6	7.4	5.9
20	10.1	7.1	9.9	5.8	9.0	7.9	8.3	4.4	8.8	6.5	---	---
21	12.0	7.2	10.0	5.7	9.1	6.2	8.5	4.4	8.7	6.2	---	---
22	13.2	8.3	9.5	5.1	7.7	6.2	6.9	4.5	8.7	6.2	---	---
23	14.2	8.1	---	---	8.2	6.8	6.7	4.4	7.9	5.9	---	---
24	14.6	7.8	---	---	8.6	7.0	7.1	4.8	7.6	5.6	---	---
25	14.3	7.7	---	---	7.7	6.7	7.1	4.7	---	---	---	---
26	9.9	7.5	---	---	8.4	7.4	---	---	---	---	---	---
27	14.5	7.3	8.3	6.7	8.8	7.6	8.1	6.4	---	---	---	---
28	10.9	7.7	7.7	6.6	9.3	6.6	8.3	5.3	5.7	4.9	---	---
29	9.7	8.2	7.7	6.6	---	---	7.2	5.5	7.9	4.4	---	---
30	12.9	8.4	8.1	7.2	---	---	9.3	4.3	7.0	6.2	---	---
31	---	---	7.7	7.1	---	---	---	---	7.3	6.1	---	---
MONTH	15.0	4.8	15.3	4.5	9.4	6.1	9.3	1.4	8.8	4.4	8.4	4.8

PH (STANDARD UNITS), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH
1	---	---	8.0	7.7	---	---
2	---	---	8.2	8.0	---	---
3	---	7.9	8.3	8.1	---	---
4	---	7.9	8.4	8.2	---	---
5	---	8.1	8.4	8.2	---	---
6	---	8.1	8.4	8.2	---	---
7	---	8.2	8.5	8.2	---	---
8	---	8.3	8.5	8.1	---	---
9	---	8.3	8.5	8.2	---	---
10	---	8.4	8.5	8.2	---	---
11	---	8.4	8.5	8.2	---	---
12	---	8.5	8.5	8.2	---	---
13	---	8.5	8.5	8.2	---	---
14	---	8.5	8.6	8.2	---	---
15	---	8.4	8.4	8.2	---	---
16	---	8.5	8.6	8.1	---	---
17	---	8.5	8.7	8.2	---	---
18	---	8.4	8.6	8.4	---	---
19	---	8.3	8.6	8.4	---	---
20	---	8.5	8.5	8.3	---	---
21	---	8.5	8.5	8.3	---	---
22	---	8.4	---	8.2	---	---
23	---	8.4	---	8.2	---	---
24	---	8.5	---	8.3	---	---
25	---	8.4	---	8.4	---	---
26	---	8.3	---	8.4	---	---
27	---	8.5	---	8.5	---	---
28	---	8.4	---	8.5	---	---
29	---	8.4	---	8.5	---	---
30	---	8.2	---	8.2	---	---
31	---	---	---	7.7	---	---
MONTH	---	8.5	8.7	8.5	8.7	8.5

WHITE RIVER BASIN

07052100 WILSONS CREEK NEAR SPRINGFIELD, MO--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.5	8.1	8.4	8.0	8.1	7.9	8.0	7.3	---	---	8.1	7.9
2	8.4	7.8	8.5	8.0	8.2	7.8	8.0	7.4	---	---	8.2	8.0
3	8.2	7.8	8.4	8.0	8.0	7.7	8.2	7.9	---	---	8.2	8.1
4	8.4	8.0	8.4	7.9	8.0	7.6	8.2	8.0	---	---	8.3	8.0
5	8.4	8.1	8.4	7.9	8.0	7.8	8.2	8.1	---	---	8.3	8.1
6	8.6	8.3	8.3	8.0	8.1	8.0	8.2	8.2	---	---	8.4	8.1
7	8.5	8.3	8.5	8.0	8.1	8.0	8.2	8.1	---	---	8.4	8.1
8	8.5	8.4	8.4	7.8	8.2	8.0	8.2	7.2	---	---	8.4	8.1
9	8.5	8.3	8.3	7.9	8.2	8.1	7.8	7.2	---	---	8.3	8.0
10	8.5	8.2	8.3	7.9	---	---	8.1	7.3	---	---	8.3	8.1
11	8.5	8.2	8.2	7.9	---	---	7.9	7.4	---	---	8.2	8.0
12	8.5	8.2	8.1	7.7	---	---	8.0	7.7	---	---	8.2	7.9
13	8.4	8.1	7.6	7.5	---	---	7.9	7.1	---	---	---	---
14	8.4	8.1	7.7	7.5	---	---	7.8	7.2	---	---	---	---
15	8.3	8.0	7.7	7.5	---	---	8.2	7.8	---	---	---	---
16	8.2	7.7	7.9	7.6	---	---	8.2	8.0	---	---	7.9	7.5
17	8.0	7.6	8.2	7.9	8.4	8.0	8.2	8.0	---	---	7.9	7.5
18	---	---	8.3	8.0	8.4	7.8	8.2	8.0	8.3	8.1	8.0	7.4
19	---	---	8.3	8.1	8.0	7.5	8.2	7.9	8.3	8.1	7.8	7.4
20	8.2	7.7	8.3	8.1	8.3	7.9	8.1	7.7	8.4	8.1	---	---
21	8.3	8.0	8.3	8.1	8.4	7.4	8.1	7.6	8.4	8.1	---	---
22	8.4	8.1	8.2	8.0	8.1	7.4	8.0	7.0	8.4	8.1	---	---
23	8.4	8.1	---	---	8.3	7.9	7.5	7.0	8.2	8.1	---	---
24	8.4	8.1	---	---	8.5	8.2	7.9	7.4	8.2	8.0	---	---
25	8.4	8.1	---	---	8.2	7.4	7.7	7.5	8.2	7.2	---	---
26	8.1	7.7	---	---	8.1	7.5	---	---	8.0	7.5	---	---
27	8.5	7.8	8.0	7.8	8.3	8.0	8.0	7.7	7.9	7.2	---	---
28	8.3	8.0	7.9	7.7	8.2	8.1	7.9	7.7	7.9	7.3	---	---
29	8.0	7.7	8.0	7.7	8.4	8.0	7.8	7.6	8.2	7.9	---	---
30	8.4	7.8	8.0	7.7	8.4	7.4	7.9	7.4	8.1	7.3	---	---
31	---	---	8.0	7.6	---	---	---	---	8.0	7.5	---	---
MONTH	8.6	7.6	8.5	7.5	8.5	7.4	8.2	7.0	8.4	7.2	8.4	7.4

07052160 WILSONS CREEK NEAR BATTLEFIELD, MO

LOCATION.--Lat 37°07'02", long 93°24'14", in SW¼NW¼ sec.24, T.28 N., R.23 W., Greene County, Hydrologic Unit 11010002, on left bank 300 ft (91 m) downstream from bridge on county road, 0.3 mi (0.5 km) upstream from McElhaney Branch, and 1.8 mi (2.9 km) west of Battlefield.

DRAINAGE AREA.--55.0 mi² (142.4 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1968 to September 1970, October 1972 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,100 ft (335.3 m) National Geodetic Vertical Datum of 1929. Prior to Sept. 20, 1972, at site 300 ft (91 m) upstream.

REMARKS.--Records good. Natural flow regulated at low flow and affected by sewage effluent.

AVERAGE DISCHARGE.--12 years, 90.7 ft³/s (2.569 m³/s), 22.39 in/yr (569 mm/yr), 65,700 acre-ft/yr (81.0 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,240 ft³/s (205 m³/s), May 20, 1979, gage height, 14.03 ft (4.276 m); minimum, 7.6 ft³/s (0.22 m³/s) Aug. 25, 27, 29, 1970, gage height, 1.42 ft (0.432 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,200 ft³/s (34.0 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s)	(m ³ /s)	Gage height (ft)	(m)
Jan. 30	2100	*2,040	57.8	7.62	2.323
Aug. 13	1345	1,600	45.3	6.75	2.057

Minimum, 22 ft³/s (0.62 m³/s) Oct. 4, gage height, 1.51 ft (0.460 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31	266	99	62	441	74	52	79	90	85	36	68
2	32	225	80	62	312	73	91	68	79	75	40	65
3	30	163	74	53	252	77	75	69	154	58	38	60
4	28	152	67	56	194	77	58	66	481	54	44	53
5	31	121	62	66	183	76	58	65	305	52	42	47
6	34	106	62	72	149	76	53	63	207	53	42	44
7	33	96	58	71	134	72	53	63	163	51	40	48
8	33	88	53	64	132	71	55	57	141	57	39	48
9	33	86	54	62	126	68	49	53	120	61	39	48
10	30	82	50	69	109	63	45	55	115	62	40	46
11	29	77	52	69	102	66	42	58	124	53	59	42
12	34	72	49	69	99	60	47	58	105	48	96	39
13	39	71	47	69	95	75	46	98	94	103	440	45
14	180	67	46	69	96	168	46	101	84	66	127	61
15	337	59	46	67	113	116	46	86	118	52	85	43
16	106	58	47	56	137	111	50	64	162	47	75	41
17	398	57	44	53	132	108	56	67	92	45	71	41
18	242	53	42	53	123	103	45	65	83	41	65	58
19	118	52	49	53	116	99	97	64	91	44	56	39
20	92	52	36	54	113	94	74	61	69	43	54	35
21	82	48	39	61	107	86	51	68	83	43	48	35
22	253	49	120	180	101	82	52	60	75	60	44	35
23	141	44	109	138	94	78	48	58	66	47	46	35
24	106	50	83	114	89	75	46	60	65	40	45	35
25	92	49	72	107	89	73	43	84	146	38	90	35
26	91	42	71	99	85	70	110	134	99	41	51	30
27	76	39	67	94	85	70	62	79	77	45	301	30
28	71	37	62	88	77	62	57	87	72	43	135	30
29	69	37	60	85	---	63	144	123	67	43	85	30
30	65	203	57	924	---	60	92	72	72	42	102	30
31	170	---	58	836	---	54	---	187	---	40	78	---
TOTAL	3106	2601	1915	3975	3885	2500	1843	2372	3699	1632	2553	1296
MEAN	100	86.7	61.8	128	139	80.6	61.4	76.5	123	52.6	82.4	43.2
MAX	398	266	120	924	441	168	144	187	481	103	440	68
MIN	28	37	36	53	77	54	42	53	65	38	36	30
CFSM	1.82	1.58	1.12	2.33	2.53	1.47	1.12	1.39	2.24	.96	1.50	.79
IN	2.10	1.76	1.30	2.69	2.63	1.69	1.25	1.60	2.50	1.10	1.73	.88
AC-FT	6160	5160	3800	7880	7710	4960	3660	4700	7340	3240	5060	2570
CAL YR 1981	TOTAL	26869	MEAN 73.6	MAX 1070	MIN 24	CFSM 1.34	IN 18.17	AC-FT 53290				
WTR YR 1982	TOTAL	31377	MEAN 86.0	MAX 924	MIN 28	CFSM 1.56	IN 21.22	AC-FT 62240				

WHITE RIVER BASIN

07052160 WILSONS CREEK NEAR BATTLEFIELD, MO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1973 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1972 to current year (discontinued).

PH: October 1972 to current year (discontinued).

WATER TEMPERATURES: October 1972 to current year (discontinued).

DISSOLVED OXYGEN: October 1972 to current year (discontinued).

INSTRUMENTATION.--Water-quality monitor since October 1972.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 1,680 micromhos Sept. 26, 1981; minimum, 100 micromhos June 23, 1976.

PH (water years 1974-79): Maximum, 8.4 units May 14, 1974; minimum, 6.5 units May 14, 1974.

WATER TEMPERATURES: Maximum, 28.0°C July 17, Aug. 5, 6, 7, 8, 12, 1980; minimum, 2.0°C Jan. 18, 1980.

DISSOLVED OXYGEN (water years 1974-79): Maximum, 17.9 mg/L Mar. 14, 1981; minimum, 0.0 mg/L on many days during the year.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 1,540 micromhos Oct. 3; minimum, 184 micromhos August 13.

PH: Number of missing days of record exceed 20 percent of year.

WATER TEMPERATURES: Maximum, 27.0°C Aug. 5, July 24, 26, 27; minimum, 3.5°C Dec. 22.

DISSOLVED OXYGEN: Maximum, 14.2 mg/L Nov. 27; minimum, 2.5 mg/L July 2.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	22.5	20.0	16.5	16.0	13.0	12.0	11.5	10.0	11.5	10.0	14.5	11.0
2	21.5	17.0	17.0	15.0	14.0	12.5	12.0	10.0	12.0	10.5	13.5	12.0
3	20.0	17.5	17.0	16.0	14.5	12.5	12.0	9.0	11.5	11.0	14.5	12.5
4	23.0	18.5	17.0	16.0	14.0	12.0	11.0	8.5	11.5	10.5	13.0	11.0
5	24.5	21.0	17.5	16.0	14.5	11.5	12.0	10.0	10.5	9.5	13.0	11.0
6	23.0	20.0	17.5	15.5	14.5	12.5	11.5	10.0	10.5	9.0	12.5	10.5
7	20.0	18.0	17.0	15.0	15.5	13.5	10.5	8.0	11.0	9.0	13.0	9.5
8	19.5	16.5	17.0	15.5	15.0	12.5	10.5	7.5	11.0	10.0	13.5	9.5
9	20.5	18.0	16.0	15.0	15.0	12.0	10.5	9.0	11.0	9.0	13.5	10.5
10	20.0	18.5	17.5	15.0	13.0	12.0	9.0	6.0	10.5	9.0	15.5	11.5
11	19.0	17.5	17.5	14.5	13.0	12.0	9.5	6.5	12.0	9.5	16.5	13.0
12	20.0	18.0	17.5	15.0	13.5	12.0	9.5	8.5	12.0	10.0	17.0	14.0
13	19.5	18.5	18.0	15.0	13.0	12.5	9.5	8.0	12.5	10.5	15.5	13.5
14	20.0	17.0	17.5	14.5	13.0	12.0	11.0	7.0	13.0	10.5	14.0	10.0
15	19.0	17.0	17.0	15.0	13.0	12.0	12.0	9.0	12.5	11.0	15.0	11.5
16	19.0	18.0	17.0	14.0	14.0	12.0	9.5	6.5	13.0	11.5	16.5	13.5
17	---	---	17.0	14.0	12.5	9.5	9.0	6.5	12.5	12.0	16.5	13.5
18	---	---	18.0	14.0	10.5	8.0	11.5	8.0	12.5	12.0	17.0	14.5
19	---	---	16.5	13.0	10.5	8.5	11.5	10.0	14.0	11.5	16.5	15.0
20	---	---	14.0	13.0	10.5	9.0	11.5	10.5	14.5	11.5	17.5	14.5
21	---	---	15.0	12.0	12.0	10.5	11.0	10.5	14.5	12.0	16.0	13.0
22	17.5	14.5	15.5	12.0	12.0	3.5	10.5	4.5	15.0	12.0	15.5	12.0
23	16.0	15.0	13.5	13.5	11.0	7.0	10.5	9.0	16.0	12.5	16.0	12.0
24	16.0	14.5	16.0	13.0	12.0	9.5	11.0	9.0	13.5	12.0	17.0	13.0
25	15.5	15.0	16.5	13.5	12.0	10.0	11.5	10.0	12.5	11.0	14.5	12.5
26	16.0	14.5	16.5	13.5	12.5	10.5	12.0	9.5	12.0	11.0	16.0	11.5
27	17.0	14.5	14.5	12.0	12.0	10.0	12.5	10.0	13.5	10.5	16.0	12.0
28	16.5	15.0	14.5	13.5	11.5	10.0	13.0	10.5	14.0	10.5	15.0	11.5
29	17.5	15.5	14.5	14.0	12.0	9.0	12.5	11.0	---	---	16.0	11.5
30	18.0	15.5	14.0	8.5	12.0	10.0	12.5	6.5	---	---	18.0	13.5
31	17.5	15.5	---	---	12.5	10.0	11.0	7.5	---	---	18.5	13.5
MONTH	24.5	14.5	18.0	8.5	15.5	3.5	13.0	4.5	16.0	9.0	18.5	9.5

WHITE RIVER BASIN

07052160 WILSONS CREEK NEAR BATTLEFIELD, MO--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	18.5	12.5	---	---	19.5	17.0	23.5	21.0	25.0	20.0	24.0	20.5
2	18.5	16.0	---	---	18.0	17.0	24.5	21.0	26.0	21.0	24.0	21.0
3	17.0	13.0	---	---	18.0	17.0	24.5	21.0	26.0	22.0	23.5	20.0
4	17.0	13.0	---	---	17.5	16.0	25.0	20.5	26.5	22.5	23.0	19.5
5	15.0	12.0	---	---	17.0	15.5	24.5	20.5	27.0	22.5	22.5	19.0
6	16.0	11.5	18.0	16.0	17.5	16.0	23.5	20.5	25.0	23.0	22.0	18.5
7	13.5	12.0	20.0	15.0	18.0	16.5	23.0	20.5	25.0	23.0	23.0	20.0
8	13.0	12.0	20.5	14.5	19.5	17.0	24.0	20.0	25.5	23.0	23.0	20.5
9	16.0	11.0	21.0	15.0	19.0	17.5	24.0	20.5	25.5	21.5	24.0	21.0
10	16.5	11.0	20.5	15.5	19.5	17.0	24.5	21.0	25.5	21.0	24.0	20.5
11	17.5	11.5	21.5	16.5	19.0	17.0	24.0	20.5	23.5	22.0	24.0	21.0
12	19.0	13.5	19.0	17.5	18.0	17.0	23.5	20.0	23.5	21.0	24.0	21.5
13	20.5	14.5	19.5	17.5	19.0	17.0	23.0	20.0	22.0	20.5	24.5	21.5
14	21.0	14.0	20.5	17.5	20.0	17.0	23.5	20.5	21.5	20.0	24.5	21.0
15	19.0	15.5	---	---	21.0	18.0	24.0	20.5	22.0	20.5	23.0	21.5
16	21.0	16.5	---	---	20.0	18.0	25.0	21.0	23.0	20.5	22.5	20.5
17	20.0	15.0	---	---	20.5	17.0	25.5	21.0	23.5	21.0	---	---
18	18.0	13.5	22.0	17.5	20.5	18.0	25.5	21.5	24.0	20.5	---	---
19	16.0	13.5	21.0	17.5	20.5	18.5	25.0	21.5	24.5	20.5	---	---
20	18.5	14.0	21.5	18.0	21.0	17.0	25.5	21.5	24.5	20.5	---	---
21	17.5	13.0	22.5	19.0	21.0	17.5	25.5	21.5	24.5	21.5	---	---
22	19.0	13.0	20.5	18.0	21.5	18.5	25.5	22.0	24.0	20.5	---	---
23	18.5	13.0	22.0	17.5	20.5	18.5	25.0	21.0	24.0	21.5	---	---
24	18.0	13.5	19.5	18.0	22.0	18.5	25.0	21.0	25.0	21.5	---	---
25	17.5	15.5	---	---	22.5	19.0	24.5	21.0	24.0	22.0	---	---
26	---	---	20.5	18.5	21.5	20.0	25.5	21.5	25.5	21.5	---	---
27	---	---	21.0	18.0	21.0	19.5	25.0	21.5	23.5	20.0	---	---
28	---	---	21.0	18.5	22.0	19.0	24.5	21.5	20.5	19.5	---	---
29	---	---	22.0	19.0	22.5	19.0	24.0	22.0	21.5	19.5	---	---
30	---	---	22.5	19.5	23.5	19.5	25.5	21.5	22.5	19.5	---	---
31	---	---	21.0	17.5	---	---	25.0	21.5	23.5	20.5	---	---
MONTH	21.0	11.0	22.5	14.5	23.5	15.5	25.5	20.0	27.0	19.5	24.5	18.5

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	1040	952	514	454	748	560	736	706	578	538	678	608
2	1440	1020	526	476	752	704	726	666	606	574	742	666
3	1540	1390	574	526	742	724	684	580	638	594	774	720
4	1390	1190	606	558	750	722	590	554	626	610	726	672
5	1190	1040	616	558	762	736	688	564	632	612	752	716
6	1250	976	614	588	782	744	784	672	612	582	776	726
7	1300	1180	622	588	856	730	778	700	592	582	766	716
8	1200	1090	640	618	886	800	754	708	600	584	740	694
9	1190	1100	642	622	830	710	804	696	618	600	818	710
10	1260	1170	696	634	740	690	814	766	660	616	826	724
11	1170	1070	786	684	702	682	818	784	706	660	794	706
12	1070	930	718	646	706	678	816	744	714	666	806	690
13	936	884	682	664	900	678	766	708	720	666	876	602
14	896	250	716	678	880	754	772	720	742	692	832	302
15	688	218	720	670	756	680	862	770	692	630	544	484
16	662	494	692	638	814	706	860	836	678	628	620	544
17	---	---	688	640	834	790	864	808	682	628	688	608
18	---	---	738	686	818	768	870	806	642	622	650	598
19	---	---	788	708	942	760	948	870	672	630	672	644
20	---	---	902	788	972	872	970	816	690	652	688	672
21	---	---	892	800	872	796	976	932	698	652	716	646
22	688	386	860	770	830	286	956	434	820	686	702	640
23	600	518	770	748	574	558	666	604	818	602	706	660
24	660	578	782	742	664	574	656	614	724	600	710	596
25	660	620	916	778	658	628	650	606	688	658	728	690
26	654	590	988	878	632	608	660	618	680	650	738	700
27	680	592	920	804	616	600	672	638	688	662	758	710
28	780	648	805	742	606	598	810	670	716	634	754	670
29	798	700	784	746	690	606	864	762	---	---	742	670
30	776	696	776	254	702	668	872	312	---	---	742	690
31	774	398	---	---	730	702	538	374	---	---	710	660
MONTH	1540	218	988	254	972	286	976	312	820	538	876	302

WHITE RIVER BASIN

07052160 WILSONS CREEK NEAR BATTLEFIELD, MO--Continued

SPECIFIC CONDUCTANCE (MICROMHUS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	698	570	---	---	618	506	626	535	1030	968	800	724
2	700	344	---	---	750	614	590	525	1010	952	824	770
3	574	352	---	---	616	332	640	590	1070	948	888	824
4	594	566	---	---	446	252	670	640	960	906	964	860
5	602	568	---	---	556	446	675	660	1020	922	982	882
6	634	568	802	650	566	550	705	670	1140	1020	910	870
7	662	602	800	656	650	562	756	700	1100	986	888	852
8	680	608	782	664	728	630	844	750	1130	1030	922	872
9	638	596	786	662	724	688	750	690	1030	936	930	888
10	642	580	796	750	704	624	784	628	1040	942	1000	894
11	638	602	856	742	722	618	676	620	1120	776	1060	966
12	640	596	774	686	654	576	706	654	934	468	1070	930
13	720	614	870	544	710	575	718	314	722	184	934	866
14	768	630	732	500	705	590	654	520	716	522	920	718
15	770	698	---	---	720	458	730	654	712	688	924	844
16	742	642	---	---	500	335	810	725	790	708	948	848
17	742	546	---	---	552	500	812	744	894	790	---	---
18	718	612	750	680	620	552	776	734	850	804	---	---
19	694	252	768	704	714	540	786	732	918	832	---	---
20	620	474	852	738	576	528	852	784	938	892	---	---
21	680	542	872	808	598	498	942	820	924	874	---	---
22	892	616	876	818	604	504	---	---	910	854	---	---
23	996	798	858	790	646	564	872	708	868	826	---	---
24	996	808	824	784	620	570	934	818	960	858	---	---
25	1030	916	---	---	642	240	962	838	978	526	---	---
26	---	---	626	584	504	358	960	852	852	762	---	---
27	---	---	708	560	534	488	870	806	838	294	---	---
28	---	---	710	568	580	532	896	838	670	498	---	---
29	---	---	650	358	620	574	926	822	692	646	---	---
30	---	---	616	542	666	576	---	---	746	630	---	---
31	---	---	640	298	---	---	1030	938	742	664	---	---
MONTH	1030	252	876	298	750	240	1030	314	1140	184	1070	718

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	7.5	4.1	---	---	9.4	8.3	11.0	8.1	9.6	8.7	---	---
2	7.3	4.2	---	---	10.0	7.9	10.5	8.0	10.0	8.8	---	---
3	7.5	4.1	9.4	7.7	10.2	7.7	10.1	8.7	9.3	8.4	---	---
4	9.5	5.0	9.3	7.2	10.7	8.1	10.4	8.6	9.2	8.4	---	---
5	9.3	4.9	9.3	7.1	11.1	8.0	10.5	8.2	9.0	7.2	---	---
6	8.0	4.0	9.5	7.0	11.1	8.1	11.0	8.0	9.3	8.0	---	---
7	8.7	4.5	11.0	6.9	11.2	8.3	11.3	8.3	9.8	9.0	---	---
8	9.5	5.1	11.0	7.6	10.5	8.4	11.6	8.4	9.9	9.0	---	---
9	9.6	5.5	9.9	7.6	11.6	8.3	11.8	8.5	11.3	9.3	---	---
10	8.0	5.3	11.3	7.0	11.0	8.5	10.9	8.1	11.1	9.1	---	---
11	8.6	5.4	11.7	7.0	11.1	8.9	11.6	8.3	11.6	9.2	---	---
12	8.2	5.4	11.6	6.4	11.0	9.2	10.9	8.1	10.8	8.0	---	---
13	6.1	4.8	12.7	6.4	11.4	9.2	11.6	7.7	9.4	6.1	---	---
14	7.1	6.0	12.7	6.2	11.7	9.1	11.3	7.3	7.1	5.1	---	---
15	9.3	6.3	9.9	6.0	10.4	8.9	11.6	7.2	5.6	4.1	---	---
16	9.6	8.1	13.7	6.4	13.3	8.7	11.3	7.3	6.5	4.1	---	---
17	---	---	13.7	6.6	12.5	9.3	11.4	7.4	10.7	6.0	---	---
18	---	---	13.4	6.4	13.0	8.8	11.9	7.6	11.0	10.1	---	---
19	---	---	7.8	5.9	12.8	9.4	11.2	7.4	11.8	10.0	---	---
20	---	---	11.7	6.4	11.8	9.3	11.6	7.3	12.3	10.4	---	---
21	---	---	12.1	6.5	11.4	9.6	12.5	8.1	12.4	10.5	---	---
22	10.8	8.8	13.5	6.7	11.9	9.2	10.4	8.1	12.2	10.5	---	---
23	9.9	7.7	8.8	7.4	11.9	8.9	11.0	9.2	12.2	10.4	---	---
24	---	---	13.9	7.6	11.2	9.3	10.8	8.7	11.3	7.3	---	---
25	---	---	13.8	7.7	11.0	8.8	11.2	8.7	13.2	7.3	10.8	5.4
26	---	---	12.5	7.7	11.3	9.0	11.4	8.6	13.1	7.4	11.5	7.7
27	---	---	14.2	7.5	10.8	8.8	11.4	8.2	13.9	6.9	10.9	7.4
28	---	---	13.0	7.7	10.9	8.4	11.6	8.0	---	---	10.6	7.0
29	---	---	11.8	7.8	11.1	8.4	10.3	8.0	---	---	10.5	7.0
30	---	---	10.1	8.0	11.1	8.3	9.1	7.1	---	---	11.0	6.3
31	---	---	---	---	10.1	8.1	9.1	8.3	---	---	12.2	6.7
MONTH	10.8	4.0	14.2	5.9	13.3	7.7	12.5	7.1	13.9	4.1	12.2	5.4

WHITE RIVER BASIN

07052160 WILSONS CREEK NEAR BATTLEFIELD, MO--Continued

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	12.1	6.7	---	---	7.5	6.1	4.9	3.5	9.1	6.6	8.3	6.3
2	10.6	6.4	---	---	6.4	5.6	5.0	2.5	9.6	6.6	8.9	5.9
3	9.2	6.0	---	---	9.3	5.4	4.8	2.8	8.9	5.6	9.0	6.5
4	9.2	5.9	---	---	8.6	3.2	4.9	2.6	9.5	6.4	9.0	6.6
5	7.3	5.5	---	---	9.1	8.2	4.7	2.6	8.3	5.5	9.1	6.6
6	7.3	4.8	9.3	7.0	9.4	8.4	9.0	2.7	8.3	4.9	9.2	6.6
7	6.2	4.9	11.2	7.2	9.2	8.1	9.2	6.1	8.6	6.3	9.1	6.5
8	5.8	4.7	12.0	7.7	9.5	8.0	9.0	6.2	9.0	6.4	8.9	6.5
9	6.6	4.5	12.0	7.4	9.0	7.7	8.3	6.2	9.2	6.8	9.1	6.3
10	6.5	4.3	11.2	6.7	9.0	7.2	8.7	6.2	9.0	6.5	9.0	6.3
11	6.6	4.3	10.5	6.0	8.3	6.5	8.7	6.5	8.1	6.5	8.7	6.0
12	6.7	4.6	8.4	5.6	8.4	6.5	8.8	6.6	8.2	6.3	8.3	5.8
13	6.4	4.4	7.3	5.4	8.7	7.1	7.9	6.4	7.8	6.3	8.5	5.8
14	6.3	4.2	6.9	5.4	8.5	7.3	7.4	5.8	8.4	7.7	7.6	5.6
15	6.1	4.4	---	---	8.4	7.3	8.3	6.3	8.5	7.9	6.8	5.3
16	6.5	4.4	---	---	9.0	7.6	8.4	6.2	8.4	7.4	7.9	5.7
17	6.1	4.1	---	---	9.6	7.4	8.5	6.2	8.3	7.2	---	---
18	5.8	3.8	11.6	7.2	9.4	6.9	8.6	6.2	8.6	6.8	---	---
19	4.8	4.1	11.5	7.4	8.5	6.3	8.5	6.2	8.8	6.6	---	---
20	6.1	4.1	11.7	7.3	8.6	6.2	8.9	6.3	9.1	4.7	---	---
21	11.1	4.6	11.6	7.0	7.9	5.7	8.5	5.8	6.2	4.5	---	---
22	11.8	7.6	11.0	6.8	7.2	4.8	8.0	5.2	6.1	3.6	---	---
23	11.3	7.3	11.3	6.4	6.2	4.6	9.0	5.8	5.0	3.4	---	---
24	11.1	7.1	8.9	6.0	6.8	4.7	9.5	6.1	4.8	3.1	---	---
25	10.2	6.9	---	---	5.3	4.1	9.4	6.5	8.1	3.5	---	---
26	---	---	8.7	7.1	5.4	4.4	9.5	6.5	8.7	6.4	---	---
27	---	---	9.3	6.9	5.2	4.4	9.1	6.1	7.5	5.9	---	---
28	---	---	8.4	6.6	5.4	4.2	9.2	6.4	7.8	6.9	---	---
29	---	---	6.8	6.0	5.1	3.9	8.9	6.3	8.2	7.3	---	---
30	---	---	7.5	6.0	4.9	3.5	9.3	6.0	8.5	7.2	---	---
31	---	---	6.6	5.8	---	---	9.3	5.8	8.4	6.9	---	---
MONTH	12.1	3.8	12.0	5.4	9.6	3.2	9.5	2.5	9.6	3.1	9.2	5.3

PH (STANDARD UNITS), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	7.6	7.4	7.4	7.2	7.4	7.3	7.7	7.5	7.2	7.2	7.9	7.5
2	7.5	7.2	7.4	7.2	7.6	7.4	7.7	7.5	7.3	7.2	7.8	7.6
3	7.5	7.3	7.5	7.3	7.6	7.4	7.7	7.5	7.3	7.2	7.9	7.6
4	7.8	7.4	7.5	7.4	7.6	7.4	7.6	7.4	7.4	7.2	7.7	7.5
5	7.8	7.5	7.6	7.4	7.7	7.4	7.6	7.4	7.4	7.3	7.7	7.5
6	7.7	7.4	7.6	7.4	7.7	7.5	7.6	7.4	7.4	7.2	7.7	7.5
7	7.7	7.4	7.7	7.4	7.8	7.5	7.6	7.4	7.5	7.4	7.8	7.5
8	7.8	7.5	7.7	7.5	7.8	7.5	7.6	7.4	7.4	7.3	7.9	7.5
9	7.8	7.5	7.6	7.5	7.8	7.6	7.7	7.5	7.6	7.3	8.0	7.5
10	7.7	7.6	7.9	7.5	7.7	7.5	7.6	7.4	7.6	7.4	7.9	7.5
11	7.8	7.5	7.9	7.5	7.7	7.5	7.7	7.5	7.7	7.5	7.9	7.5
12	7.7	7.6	7.9	7.5	7.7	7.5	7.7	7.5	7.7	7.5	7.8	7.5
13	7.5	7.4	8.0	7.5	7.8	7.6	7.7	7.5	7.7	7.5	7.8	7.6
14	7.6	7.2	8.0	7.5	7.8	7.6	7.8	7.4	7.8	7.6	7.6	7.4
15	7.5	7.2	7.8	7.5	7.7	7.6	7.8	7.4	7.7	7.3	7.6	7.4
16	7.4	7.2	8.1	7.4	7.9	7.6	7.7	7.4	7.5	7.2	7.7	7.5
17	---	---	8.0	7.5	7.8	7.5	7.8	7.4	7.6	7.4	7.7	7.5
18	---	---	8.1	7.6	7.8	7.5	7.8	7.5	7.6	7.5	7.6	7.4
19	---	---	7.7	7.5	7.8	7.5	7.7	7.4	7.7	7.5	7.5	7.4
20	---	---	7.9	7.5	7.8	7.6	7.8	7.5	7.8	7.5	7.5	7.4
21	---	---	8.0	7.6	7.7	7.6	7.9	7.6	7.8	7.5	7.6	7.4
22	7.6	7.2	8.1	7.6	7.7	7.4	7.7	7.4	7.8	7.5	7.6	7.4
23	7.4	7.2	7.8	7.7	7.6	7.3	7.5	7.3	7.9	7.6	7.7	7.4
24	7.5	7.4	7.9	7.5	7.5	7.3	7.6	7.4	7.7	7.6	7.8	7.5
25	7.6	7.5	8.0	7.5	7.6	7.4	7.6	7.4	7.8	7.5	7.7	7.5
26	7.7	7.6	7.8	7.5	7.6	7.5	7.7	7.4	7.7	7.5	7.8	7.6
27	7.7	7.5	8.0	7.5	7.6	7.4	7.7	7.4	7.8	7.5	7.8	7.6
28	7.8	7.6	7.9	7.5	7.6	7.5	7.6	7.4	7.9	7.5	7.9	7.6
29	7.8	7.6	7.8	7.5	7.7	7.4	7.6	7.5	---	---	8.0	7.6
30	7.9	7.6	7.7	7.2	7.7	7.5	7.6	7.2	---	---	7.8	7.5
31	7.8	7.3	---	---	7.7	7.5	7.3	7.2	---	---	7.8	7.5
MONTH	7.9	7.2	8.1	7.2	7.9	7.3	7.9	7.2	7.9	7.2	8.0	7.4

WHITE RIVER BASIN

07052160 WILSONS CREEK NEAR BATTLEFIELD, MO--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	7.9	7.5	---	---	7.7	7.5			---	---		
2	7.8	7.5	---	---	7.7	7.5			---	---		
3	7.7	7.4	---	---	7.7	7.4			---	---		
4	7.7	7.4	---	---	7.5	7.3			---	---		
5	7.6	7.5	---	---	7.4	7.3			8.0	7.3		
6	7.7	7.4	7.7	7.5	7.4	7.3			7.8	7.3		
7	7.7	7.5	---	---	7.4	7.3			7.8	7.4		
8	7.7	7.5	---	---	7.5	7.3			7.9	7.4		
9	7.9	7.5	---	---	7.5	7.4			7.9	7.1		
10	7.9	7.5	---	---	7.5	7.3			7.9	7.0		
11	7.9	7.5	---	---	7.6	7.3			7.5	7.1		
12	8.0	7.6	---	---	7.4	7.3			7.4	7.1		
13	7.9	7.6	---	---	7.6	7.3			7.4	7.1		
14	8.0	7.6	---	---	7.6	7.4			7.5	7.1		
15	7.9	7.6	---	---	7.7	7.3			7.8	7.3		
16	8.0	7.6	---	---	---	---			7.6	7.4		
17	8.1	7.6	---	---	---	---			8.1	7.3		
18	8.0	7.6	8.0	7.5	---	---			8.3	7.2		
19	7.7	7.4	8.0	7.7	---	---			8.4	7.2		
20	7.8	7.5	8.0	7.6	---	---			8.5	7.2		
21	7.8	7.4	8.0	7.6	---	---			8.6	7.7		
22	7.9	7.4	8.0	7.6	---	---			8.5	7.5		
23	7.9	7.5	8.1	7.7	---	---			8.4	7.7		
24	7.9	7.5	7.8	7.6	---	---			8.6	7.6		
25	7.9	7.6	---	---	---	---			8.3	7.5		
26	---	---	7.6	7.5	---	---			8.6	7.4		
27	---	---	7.7	7.5	---	---			---	---		
28	---	---	7.7	7.6	---	---			---	---		
29	---	---	7.7	7.5	---	---			---	---		
30	---	---	7.7	7.5	---	---			---	---		
31	---	---	7.7	7.4	---	---			---	---		
MONTH	8.1	7.4	8.1	7.4	7.7	7.3			8.6	7.0		

WHITE RIVER BASIN

07052250 JAMES RIVER NEAR BOAZ, MO

WATER-QUALITY RECORDS

LOCATION.--Lat 37°00'25", long 93°21'50", in NE¼NE¼NW¼ sec.32, T.27 N., R.22 W., Christian County, Hydrologic Unit 11010002, at Frazier bridge, 0.2 mi (0.3 km) upstream from Turkey Hollow, and 2 mi (3.2 km) southeast of Boaz.

PERIOD OF RECORD.--August 1967 to current year (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	STREAM FLOW, INSTANTANEOUS (CFS) (00061)	SPECIFIC CONDUCTANCE (UMHOS) (00095)	PH (UNITS) (00400)	TEMPERATURE (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DEMAND, (PER-CENT SATURATION) (MG/L) (00301)	OXYGEN, DEMAND, CHEMICAL (LOW LEVEL) (MG/L) (00335)
OCT										
20...	1430	1028	29001	335	430	8.0	16.5	7.2	73	7
NOV										
24...	1000	1028	29001	104	535	8.0	9.0	11.2	97	6
DEC										
15...	1300	1028	29001	128	605	7.9	8.0	11.0	92	7
JAN										
19...	1500	1028	29001	149	528	8.3	5.5	12.8	102	6
FEB										
09...	1330	1028	29001	530	388	7.9	6.5	11.0	69	<5
MAR										
02...	1300	1028	29001	263	395	8.3	11.0	11.6	105	8
APR										
13...	1240	1028	29001	151	472	8.5	18.5	11.8	124	14
MAY										
04...	1300	1028	29001	230	426	8.2	20.0	7.8	65	8
JUN										
01...	1400	1028	29001	746	358	8.0	20.5	6.6	73	11
JUL										
06...	1430	1028	29001	222	427	8.3	26.5	7.2	89	6
AUG										
03...	1330	1028	29001	80	642	8.0	26.5	6.0	74	9
SEP										
10...	0915	1028	29001	100	590	7.9	22.5	7.1	81	--

DATE	TIME	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	HARDNESS (MG/L AS CaCO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS Ca) (00915)	MAGNESIUM DIS-SOLVED (MG/L AS Mg) (00925)	SODIUM, DIS-SOLVED (MG/L AS Na) (00930)	POTASSIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKALINITY FIELD (MG/L AS CaCO3) (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)
OCT											
20...	1400	230	83	6.4	11	3.2	157	22	15	<.1	
NOV											
24...	44	--	--	--	--	--	194	--	--	--	--
DEC											
15...	32	--	--	--	--	--	180	--	--	--	--
JAN											
19...	21	230	80	7.1	18	3.2	174	40	28	<.1	
FEB											
09...	250	--	--	--	--	--	138	--	--	--	--
MAR											
02...	45	--	--	--	--	--	161	--	--	--	--
APR											
13...	72	220	76	6.0	18	2.9	169	27	52	.1	
MAY											
04...	320	--	--	--	--	--	154	--	--	--	--
JUN											
01...	610	--	--	--	--	--	151	--	--	--	--
JUL											
06...	82	190	67	6.0	10	2.7	157	21	17	<.1	
AUG											
03...	42	--	--	--	--	--	151	--	--	--	--
SEP											
10...	300	--	--	--	--	--	151	--	--	--	--

WHITE RIVER BASIN

07052250 JAMES RIVER NEAR BOAZ, MO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

[illegible][illegible]

WHITE RIVER BASIN

07052500 JAMES RIVER AT GALENA, MO

LOCATION.--Lat 36°48'19", long 93°27'41", in SW¼SE¼SW¼ sec.6, T.24 N., R.23 W., Stone County, Hydrologic Unit 11010002, on downstream side of right pier of first arch span from left end of bridge on State Highways 13 and 248 in Galena, 0.7 mi (1.1 km) upstream from Railey Creek, and 42.3 mi (68.1 km) above mouth.

DRAINAGE AREA.--987 mi² (2,556 km²).

PERIOD OF RECORD.--October 1921 to current year (October 1921, monthly discharge only published in WSP 1311).

REVISED RECORDS.--WSP 977: 1935(M), 1941(M).

GAGE.--Water-stage recorder. Datum of gage is 921.37 ft (280.834 m) National Geodetic Vertical Datum of 1929. Prior to Dec. 11, 1927, nonrecording gage at site 500 ft (152 m) downstream at datum 1.48 ft (0.451 m) higher. Dec. 11, 1927, to July 22, 1939, nonrecording gage, and July 23, 1939, to Sept. 30, 1953, water-stage recorder at present site and at datum 2.00 ft (0.610 m) higher.

REMARKS.--Records good. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--61 years, 936 ft³/s (26.51 m³/s), 12.88 in/yr (327 mm/yr), 678,100 acre-ft/yr (836 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 52,700 ft³/s (1,490 m³/s) May 20, 1943, gage height, 29.82 ft (9.089 m) present datum; minimum discharge, 10 ft³/s (0.28 m³/s) Sept. 20, 1954; minimum gage height, 1.15 ft (0.351 m) Jan. 13, 1964 (result of ice conditions upstream).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 28,400 ft³/s (804 m³/s) at 2145 hours Jan. 31, gage height 19.92 ft (6.072 m) no other peak above base of 12,000 ft³/s (340 m³/s); minimum, 101 ft³/s (2.86 m³/s) Oct. 7, gage height, 2.14 ft (0.652 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	112	884	638	544	13300	829	529	982	1630	1030	228	806
2	110	1560	682	507	6380	784	527	869	1460	908	211	674
3	110	1540	678	496	3990	751	551	763	1250	1060	201	605
4	111	1360	625	557	3190	738	511	689	1710	891	195	545
5	108	1170	567	604	2670	701	483	618	3650	785	184	493
6	105	995	518	677	2320	673	463	565	2930	705	179	443
7	104	863	480	686	2040	646	442	522	2130	639	178	405
8	106	768	446	672	1880	613	434	488	1700	581	182	382
9	107	697	405	633	1740	587	425	449	1420	551	179	341
10	122	634	380	595	1570	572	412	414	1210	519	170	347
11	122	573	356	540	1430	550	389	391	1080	497	173	303
12	112	529	331	500	1320	536	376	378	1010	464	1670	274
13	115	486	317	470	1210	522	372	403	925	430	2580	254
14	174	447	307	450	1130	591	360	459	846	462	2310	272
15	329	421	308	440	1140	1010	355	477	813	415	1270	281
16	640	392	284	430	1440	1980	348	578	5230	366	920	250
17	590	370	284	410	2570	1760	360	597	5310	406	714	238
18	1260	354	267	410	2620	1510	361	560	2670	349	611	237
19	1270	334	225	420	2170	1330	344	500	2110	313	528	257
20	942	317	216	400	1870	1190	413	485	1720	294	459	233
21	706	302	228	529	1690	1080	420	484	1450	268	401	214
22	774	291	287	575	1510	960	394	453	1280	277	359	209
23	1420	282	790	1370	1360	873	376	415	1110	323	328	208
24	1560	282	1290	1850	1240	813	361	392	1730	310	298	207
25	1170	266	1240	1530	1130	766	355	396	2120	260	318	204
26	922	263	1080	1290	1030	718	459	478	1640	249	335	199
27	756	243	946	1080	949	675	613	590	1560	240	1170	190
28	626	248	833	951	894	637	698	657	1500	248	2710	187
29	535	235	731	848	---	596	788	698	1360	307	1540	184
30	471	271	653	3520	---	577	971	684	1190	281	1130	179
31	462	---	592	21400	---	551	---	686	---	248	967	---
TOTAL	16051	17377	16984	45384	65783	26119	13890	17120	55744	14676	22698	9621
MEAN	518	579	548	1464	2349	843	463	552	1858	473	732	321
MAX	1560	1560	1290	21400	13300	1980	971	982	5310	1060	2710	806
MIN	104	235	216	400	894	522	344	378	813	240	170	179
CFSM	.53	.59	.56	1.48	2.38	.85	.47	.56	1.88	.48	.74	.33
IN.	.60	.65	.64	1.71	2.48	.98	.52	.65	2.10	.55	.86	.36
AC-FT	31840	34470	33690	90020	130500	51810	27550	33960	110600	29110	45020	19080

CAL YR 1981 TOTAL 187651 MEAN 514 MAX 6130 MIN 93 CFSM .52 IN 7.07 AC-FT 372200
WTR YR 1982 TOTAL 321447 MEAN 881 MAX 21400 MIN 104 CFSM .89 IN 12.12 AC-FT 637600

07053400 TABLE ROCK LAKE NEAR BRANSON, MO

LOCATION.--Lat 36°35'46", long 93°18'35", in NW¼ sec.22, T.22 N., R.22 W., Taney County, Hydrologic Unit 11010001, at dam on White River, 3 mi (4.8 km) upstream from Fall Creek, and 6.1 mi (9.82 km) southwest of Branson.

DRAINAGE AREA.--4,020 mi² (10,412 km²).

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

GAGE.--Water-stage recorder. Datum of gage is at National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to July 18, 1958, nonrecording gage at same site and datum.

REMARKS.--Lake is formed by a combination concretegravity and embankment type dam. Storage began on Sept. 9, 1956. Storage for purpose of filling to power pool level at elevation 881 ft (268.5 m) and capacity 1,520,500 acre-ft (1.87 km³) began Nov. 24, 1958, and was reached Dec. 19, 1959. Capacity is 3,567,500 acre-ft (4.40 km³) at top of spillway gates, elevation 933 ft (284.4 m). Capacity is 3,462,000 acre-ft (4.27 km³) at top of flood control pool, elevation 931 ft (283.8 m). Capacity between elevations 915 ft (278.9 m) and 931 ft (283.8 m) is reserved for flood control, 760,000 acre-ft (0.937 km³). Capacity between elevation 881 ft (268.5 m) and 915 ft (278.9 m) of 1,181,500 acre-ft (1.46 km³) is used for power generation. The capacity at the lowest outlet, elevation 721.96 ft (220.053 m), is 3,530 acre-ft (4.35 km³). Lake is used for flood control, power, and recreational purposes. Figures represent total contents. Contents computed from daily readings at 2400 and prior to Oct. 1, 1963 to five significant figures.

COOPERATION.--Records furnished by the Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 3,541,800 acre-ft (4.37 km³) May 10, 1961, elevation, 932.52 ft (284.232 m); minimum, since initial filling to bottom of power pool level, 1,535,500 acre-ft (1.89 km³) Feb. 8, 1965, elevation, 881.54 ft (268.693 m).

EXTREMES FOR CURRENT YEAR.--Maximum daily contents, 2,880,000 acre-ft (3.55 km³) Feb. 2; minimum daily contents, 2,610,000 acre-ft (3.22 km³) Oct. 1-13, Mar. 27 to Apr. 1.

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

905	2,297,000	915	2,702,000
910	2,493,000	919	2,878,000

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	261000	267000	269000	271000	287000	270000	261000	265000	275000	278000	274000	279000
2	261000	268000	270000	271000	288000	270000	262000	266000	276000	278000	273000	278000
3	261000	269000	270000	272000	287000	270000	262000	266000	277000	278000	273000	277000
4	261000	269000	270000	271000	286000	269000	263000	267000	278000	279000	272000	278000
5	261000	270000	270000	270000	284000	269000	263000	267000	278000	279000	272000	278000
6	261000	270000	270000	270000	282000	269000	262000	267000	278000	279000	272000	278000
7	261000	270000	270000	271000	281000	269000	263000	267000	278000	279000	272000	278000
8	261000	270000	270000	271000	279000	269000	263000	268000	279000	279000	272000	278000
9	261000	270000	270000	270000	277000	268000	263000	268000	278000	279000	272000	278000
10	261000	270000	270000	268000	275000	268000	263000	268000	277000	279000	272000	278000
11	261000	270000	270000	267000	273000	269000	263000	268000	277000	279000	273000	278000
12	261000	270000	270000	266000	273000	269000	263000	268000	277000	279000	273000	279000
13	261000	271000	270000	265000	272000	267000	263000	269000	278000	279000	276000	279000
14	262000	271000	269000	265000	271000	267000	263000	269000	279000	278000	277000	279000
15	262000	271000	270000	265000	271000	266000	263000	269000	279000	277000	277000	278000
16	262000	271000	269000	264000	271000	267000	264000	270000	283000	276000	278000	278000
17	262000	271000	269000	265000	272000	267000	264000	270000	285000	275000	278000	278000
18	262000	270000	269000	264000	272000	267000	264000	271000	284000	275000	278000	278000
19	263000	269000	269000	264000	272000	267000	264000	272000	283000	275000	278000	278000
20	263000	269000	269000	263000	272000	267000	263000	272000	281000	274000	277000	278000
21	263000	269000	269000	262000	272000	266000	263000	273000	280000	274000	278000	277000
22	264000	269000	270000	263000	272000	265000	263000	273000	280000	274000	278000	277000
23	265000	269000	270000	263000	271000	265000	263000	273000	279000	274000	278000	277000
24	265000	269000	270000	264000	271000	264000	263000	273000	279000	274000	278000	277000
25	265000	269000	271000	264000	270000	263000	263000	273000	280000	273000	278000	277000
26	265000	269000	271000	264000	270000	262000	263000	274000	279000	273000	279000	277000
27	265000	269000	271000	264000	270000	261000	263000	274000	280000	273000	280000	276000
28	266000	269000	271000	264000	270000	261000	264000	274000	279000	274000	281000	276000
29	266000	269000	271000	264000	---	261000	265000	274000	279000	274000	281000	277000
30	266000	269000	271000	271000	---	261000	265000	275000	278000	274000	281000	277000
31	266000	---	271000	283000	---	261000	---	275000	---	274000	280000	---

WTR YR 1982

(+)	914.10	914.81	915.20	917.88	915.03	912.88	913.82	916.14	916.84	915.84	917.30	916.54
(#)	+50	+30	+20	+120	-130	-90	+40	+100	+30	-40	+60	-30
MAX	266000	271000	271000	283000	288000	270000	265000	275000	285000	279000	281000	279000
MIN	261000	267000	269000	262000	270000	261000	261000	265000	275000	273000	272000	276000

CAL YR 1981.....# +73000

WTR YR 1982.....# +16000

(+) Elevation, in feet NGVD, at end of month.
(#) Change in contents, in thousands of acre-feet.

NOTE: Add zero to all values in daily table.

07053500 WHITE RIVER NEAR BRANSON, MO

LOCATION.--Lat 36°35'51", long 93°17'42", in SE¼NE¼ sec.22, T.22 N., R.22 W., Taney County, Hydrologic Unit 11010003, on left bank 0.9 mi (1.4 km) downstream from Table Rock Dam, 2.1 mi (3.4 km) upstream from Fall Creek, 5 mi (8.0 km) southwest of Branson, 7.4 mi (11.9 km) upstream from Missouri Pacific bridge, and at mile 527.8 (849.2 km).

DRAINAGE AREA.--4,022 mi² (10,417 km²).

PERIOD OF RECORD.--July 1909 to December 1910 (gage heights and discharge measurements only), October 1951 to current year.

GAGE.--Water-stage recorder. Datum of gage is 696.00 ft (212.141 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). July 19, 1909 to Dec. 31, 1910, nonrecording gage at site 7.4 mi (11.9 km) downstream at different datum. Oct. 1, 1951 to Mar. 6, 1952, nonrecording gage at same site and datum.

REMARKS.--Records good except Feb. 22, 23 which are poor. Discharge computations based on power releases, conduit releases, fish hatchery releases, and pool elevation at Table Rock Lake. Fish hatchery releases began on Feb. 18, 1959. Regulated by Table Rock Lake since Sept. 9, 1956.

COOPERATION.--Records furnished by Corps of Engineers.

AVERAGE DISCHARGE.--31 years, 3,463 ft³/s (98.1 m³/s), 2,509,000 acre-ft/yr (3.09 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 89,100 ft³/s (2.523 m³/s) May 16, 1956, gage height, 36.9 ft (11.25 m); minimum, prior to building dam, 24 ft³/s (0.68 m³/s) Sept. 20, 1954; no outflow from reservoir at various times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Apr. 16, 1945 reached a stage of 52.8 ft (16.09 m), from floodmark, discharge, 203,000 ft³/s (5,750 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 14,600 ft³/s (413 m³/s) Jan. 10; minimum daily, 40 ft³/s (1.13 m³/s) many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1430	1310	480	40	9240	2190	3520	320	240	5300	710	6630
2	570	140	720	40	13000	2140	3490	40	130	3660	4610	6560
3	160	500	810	40	13600	5490	4090	130	440	210	6920	4730
4	140	1330	490	6980	13600	5320	1150	140	1140	180	8070	130
5	1650	1310	710	4220	13600	5110	8890	970	4600	180	4450	130
6	940	690	40	1490	13600	1710	7970	280	5940	3840	2580	180
7	160	2060	500	4820	13000	1530	6040	140	6010	160	210	130
8	340	210	1580	1730	12900	3610	7800	130	6040	150	190	560
9	210	1990	1400	5120	14100	5430	6510	130	9310	1440	200	670
10	180	680	1710	14600	13300	3280	3010	550	7860	230	370	660
11	160	470	1030	12300	13100	1860	40	830	4600	160	350	140
12	130	450	40	12400	6560	5440	470	690	130	180	470	130
13	130	170	40	10100	6700	6740	450	1110	120	2700	330	940
14	130	150	3430	3870	4840	9170	310	1760	190	7340	230	3700
15	150	1110	2260	2230	4840	10900	40	130	140	8180	180	4780
16	130	240	1280	7850	4350	6630	40	270	150	6700	190	2260
17	130	640	2420	3030	4000	4790	40	140	6810	6480	1480	1680
18	130	1410	3810	4000	6660	5060	40	140	13300	1240	3260	200
19	230	3460	1410	3580	6460	5310	6240	250	10000	5640	5500	370
20	600	4580	460	3950	3430	5110	1080	140	12400	5320	4750	1050
21	660	1370	1480	4970	3050	6210	1620	140	11700	2610	150	3750
22	590	350	2810	3230	6070	7660	870	140	6040	3900	140	360
23	720	980	1410	560	6140	4630	1070	480	9000	2450	1180	1880
24	180	350	550	40	6370	4450	650	5910	9220	420	950	600
25	120	140	390	5300	6630	6180	470	5600	7450	3020	120	150
26	2060	130	40	750	5250	5780	2520	500	4700	4910	150	140
27	220	130	430	2740	1670	7970	1100	430	3100	1440	2600	420
28	200	130	2040	1100	1630	820	530	640	8030	1100	150	740
29	450	130	2490	4060	---	6060	40	130	7620	210	160	350
30	250	990	2060	40	---	3160	40	150	6910	1140	5690	440
31	140	---	1400	3620	---	4800	---	140	---	780	6040	---
TOTAL	13290	27600	39720	128800	227690	154540	70130	22550	163320	81270	62580	44460
MEAN	429	920	1281	4155	8132	4985	2338	727	5444	2622	2019	1482
MAX	2060	4580	3810	14600	14100	10900	8890	5910	13300	8180	8070	6630
MIN	120	130	40	40	1630	820	40	40	120	150	120	130
CFSM	.11	.23	.32	1.03	2.02	1.24	.56	.18	1.35	.65	.50	.37
IN	.12	.26	.37	1.19	2.11	1.43	.65	.21	1.51	.75	.58	.41
AC-FT	26360	54740	78780	255500	451600	306500	139100	44730	323900	161200	124100	88190

CAL YR 1981 TOTAL 305150 MEAN 836 MAX 7740 MIN 40 CFSM .21 IN 2.82 AC-FT 605300
WTR YR 1982 TOTAL 1035950 MEAN 2838 MAX 14600 MIN 40 CFSM .71 IN 9.58 AC-FT 2055000

07053700 LAKE TANEYCOMO AT BRANSON, MO

WATER-QUALITY RECORDS

LOCATION.--Lat 36°38'09", long 93°15'52" in SE¼ NW¼ sec.4, T22 N., R21 W., Taney County, Hydrologic Unit 11010003, 1000 ft (300 m) downstream from Turkey Creek, at bridge on Business Route 65 in Branson.

PERIOD OF RECORD.--July 1977 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00300) (00301)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L) (00335)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)
OCT									
20...	1230	1028	29001	243	7.6	13.0	8.6	81	18
NOV									
23...	1250	1028	29001	236	7.2	10.0	8.0	71	8
DEC									
10...	1515	80513	80513	--	--	--	--	--	3
10...	1520	80513	80010	245	8.0	8.0	7.9	--	--
10...	1525	80513	80010	250	7.9	7.0	7.7	--	--
15...	1130	1028	29001	236	7.3	8.5	8.8	75	<5
JAN									
19...	1320	1028	29001	221	7.8	6.5	10.6	86	<5
FEB									
09...	1145	1028	29001	224	8.0	4.5	10.8	83	8
MAR									
02...	1445	1028	29001	232	8.1	5.5	11.0	87	5
APR									
13...	1445	1028	29001	250	8.3	11.0	11.8	107	31
MAY									
04...	1100	1028	29001	260	8.3	13.5	10.8	103	11
19...	1715	80513	80513	--	--	--	--	--	4
19...	1720	80513	80010	275	8.3	20.0	12.9	--	--
19...	1725	80513	80010	260	8.3	13.0	12.4	--	--
JUN									
01...	1230	1028	29001	256	8.0	16.0	10.2	103	<5
JUL									
06...	1215	1028	29001	252	7.9	17.0	7.4	76	10
AUG									
03...	1145	1028	29001	260	7.6	10.0	6.6	58	10
18...	1640	80513	80513	--	--	--	--	--	110
18...	1645	80513	80010	240	7.6	12.0	6.2	--	77
18...	1650	80513	80010	250	7.7	11.5	5.7	--	--
SEP									
09...	1525	1028	29001	258	8.2	17.0	8.8	91	--

07057500 NORTH FORK RIVER NEAR TECUMSEH, MO

LOCATION.--Lat 36°37'22", long 92°14'53", in NE&SE¼ sec.35, T.23 N., R.12 W., Ozark County, Hydrologic Unit 11010006, on right bank 3.2 mi (5.2 km) downstream from Spring Creek, and 3.5 mi (5.6 km) northeast of Tecumseh.

DRAINAGE AREA.--561 mi² (1,453 km²).

PERIOD OF RECORD.--October 1944 to current year.

GAGE.--Water-stage recorder. Datum of gage is 584.67 ft (178.207 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to May 12, 1945, nonrecording gage at same site at datum 0.22 ft (0.067 m) lower.

REMARKS.--Records good. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--38 years, 701 ft³/s (19.85 m³/s), 16.97 in/yr (431 mm/yr), 507,900 acre-ft/yr (626 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 37,900 ft³/s (1,073 m³/s) Apr. 22, 1974, gage height, 22.15 ft (6.751 m); minimum, 187 ft³/s (5.30 m³/s) Sept. 14-18, 1954, gage height, 2.06 ft (0.628 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 10,000 (283 m³/s) at 1800 Jan. 31, gage height, 9.53 ft (2.905 m), no other peak above base of 6,500 ft³/s (184 m³/s); minimum, 236 ft³/s (6.684 m³/s) Oct. 2, 3, gage height, 2.17 ft (0.661 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	240	337	370	293	3190	643	501	723	959	713	357	310
2	240	334	424	298	1940	624	508	701	834	713	352	308
3	240	329	379	318	1480	617	591	672	769	664	348	307
4	249	325	351	349	1170	611	566	651	730	631	337	302
5	245	325	333	386	992	591	546	628	718	598	332	301
6	245	334	325	410	882	591	520	608	731	572	331	296
7	240	348	318	400	801	552	488	677	688	552	330	293
8	240	336	310	376	764	533	488	851	649	552	334	291
9	240	325	303	365	740	520	476	750	637	559	328	295
10	240	316	297	343	691	508	458	680	964	565	321	293
11	240	308	293	338	654	501	446	635	841	533	328	292
12	243	303	288	338	627	495	440	601	772	508	332	291
13	248	298	287	325	598	495	434	572	714	495	349	298
14	276	294	284	315	578	559	425	566	665	488	354	308
15	308	292	282	323	598	894	416	577	642	494	350	303
16	297	290	281	307	1110	1190	431	561	1070	476	343	297
17	282	286	275	291	3660	1240	487	560	1140	464	337	292
18	300	282	269	310	2100	1060	578	806	974	452	331	295
19	336	282	266	302	1550	965	555	1330	858	440	325	290
20	313	276	262	297	1280	902	592	1090	777	434	314	287
21	289	273	268	294	1120	809	592	905	713	425	310	282
22	325	273	278	670	992	742	555	779	670	416	306	282
23	487	273	311	888	911	698	532	691	637	408	305	282
24	526	270	338	761	841	664	514	637	624	397	303	286
25	446	268	328	653	779	644	515	619	705	391	316	283
26	419	268	315	578	727	604	624	625	750	386	310	281
27	398	264	312	527	691	572	770	633	713	386	371	285
28	382	263	308	493	670	552	751	635	833	383	390	283
29	369	263	301	466	---	533	740	1330	850	379	355	281
30	355	292	297	888	---	527	735	1350	757	369	333	278
31	343	---	297	6450	---	520	---	998	---	363	317	---
TOTAL	9601	8927	9550	19352	32136	20956	16274	23441	23384	15206	10349	8772
MEAN	310	298	308	624	1148	676	542	756	779	491	334	292
MAX	526	348	424	6450	3660	1240	770	1350	1140	713	390	310
MIN	240	263	262	291	578	495	416	560	624	363	303	278
CFSM	.55	.53	.55	1.11	2.05	1.21	.97	1.35	1.39	.88	.60	.52
IN.	.64	.59	.63	1.28	2.13	1.39	1.08	1.55	1.55	1.01	.69	.58
AC-FT	19040	17710	18940	38380	63740	41570	32280	46500	46380	30160	20530	17400
CAL YR 1981	TOTAL	134701	MEAN 369	MAX 2930	MIN 240	CFSM .66	IN 8.93	AC-FT 267200				
WTR YR 1982	TOTAL	197948	MEAN 542	MAX 6450	MIN 240	CFSM .97	IN 13.13	AC-FT 392600				

WHITE RIVER BASIN

07058000 BRYANT CREEK NEAR TECUMSEH, MO

LOCATION.--Lat 36°37'33", long 92°18'16", in E½ sec.32, T.23 N., R.12 W., Ozark County, Hydrologic Unit 11010006, on left bank 0.8 mi (1.3 km) downstream from Pine Creek, 3 mi (4.8 km) northwest of Tecumseh, and 5 mi (8.0 km) upstream from mouth.

DRAINAGE AREA.--570 mi² (1,476 km²).

PERIOD OF RECORD.--October 1944 to current year.

REVISED RECORDS.--WSP 1117: Drainage area. WSP 1441: 1945, 1946-47(M), 1950. WSP 1731: 1945-47, 1950.

GAGE.--Water-stage recorder. Datum of gage is 573.15 ft (174.696 m) National Geodetic Vertical Datum of 1929. (levels by Corps of Engineers). Prior to July 30, 1945, nonrecording gage at same site and datum.

REMARKS.--Records good. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--38 years, 503 ft³/s (14.24 m³/s), 11.98 in/yr (304 mm/yr), 364,400 acre-ft/yr (449 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 33,200 ft³/s (940 m³/s) Mar. 11, 1973, gage height, 21.93 ft (6.684 m); minimum, 96 ft³/s (2.72 m³/s) Sept. 16, 17, 1954; minimum gage height, 1.98 ft (0.604 m) Aug. 13, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,600 ft³/s (102 m³/s) May 29, gage height, 8.02 ft (2.444 m), no peak discharge above base of 6,000 ft³/s (170 m³/s); minimum discharge, 100 ft³/s (2.83 m³/s) Oct. 7; minimum gage height, 2.46 ft (0.750 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	108	187	242	148	2060	380	306	413	787	410	171	204
2	108	182	262	148	1270	366	315	395	669	385	162	192
3	108	173	242	164	935	363	370	373	629	359	158	178
4	116	173	220	212	716	363	327	348	601	339	172	172
5	120	172	204	224	588	346	309	328	581	315	156	159
6	115	172	194	224	512	326	294	311	588	296	132	153
7	110	172	186	220	452	316	279	419	556	288	140	146
8	104	172	181	208	424	302	272	432	523	410	144	144
9	104	173	174	196	412	297	270	377	499	382	148	140
10	104	165	166	188	372	289	255	345	494	337	144	132
11	104	161	164	196	342	288	246	319	449	291	153	132
12	108	156	160	200	338	289	236	297	434	266	171	132
13	112	156	155	180	321	288	228	283	415	246	195	132
14	144	156	152	164	310	377	222	325	393	270	238	136
15	204	156	152	168	325	598	216	466	385	244	236	132
16	184	154	152	160	1180	670	214	429	761	234	233	132
17	168	152	146	180	1970	730	235	427	728	220	217	132
18	148	152	142	180	1210	655	225	1100	576	215	188	128
19	156	148	140	170	917	600	221	880	507	209	175	124
20	156	141	136	160	762	567	230	667	464	196	162	120
21	136	144	132	160	658	524	232	568	437	188	153	116
22	168	144	144	468	590	477	222	494	412	187	141	112
23	344	142	159	524	541	452	209	434	372	181	148	108
24	332	140	160	392	502	437	208	398	363	170	147	116
25	269	140	156	332	461	414	209	387	492	168	164	120
26	261	142	156	276	428	388	336	765	439	170	170	116
27	249	144	156	248	414	362	525	711	480	165	237	116
28	233	142	154	232	398	343	474	568	743	171	357	116
29	220	140	152	216	---	333	456	1470	546	167	346	108
30	205	168	149	850	---	328	434	984	460	162	284	104
31	193	---	148	2230	---	319	---	896	---	156	224	---
TOTAL	5191	4719	5236	9618	19408	12787	8575	16609	15783	7797	5866	4052
MEAN	167	157	169	310	693	412	286	536	526	252	189	135
MAX	344	187	262	2230	2060	730	525	1470	787	410	357	204
MIN	104	140	132	148	310	288	208	283	363	156	132	104
CFSM	.29	.28	.30	.54	1.22	.72	.50	.94	.92	.44	.33	.24
IN.	.34	.31	.34	.63	1.27	.83	.56	1.08	1.03	.51	.38	.26
AC-FT	10300	9360	10390	19080	38500	25360	17010	32940	31310	15470	11640	8040
CAL YR 1981	ICTAL	64646	MEAN 177	MAX 1590	MIN 104	CFSM .31	IN 4.22	AC-FT 128200				
WTR YR 1982	ICTAL	115641	MEAN 317	MAX 2230	MIN 104	CFSM .56	IN 7.55	AC-FT 229400				

WHITE RIVER BASIN

07061300 EAST FORK BLACK RIVER AT LESTERVILLE, MO

LOCATION.--Lat 37°27'03", long 90°49'38", in NE¼SE¼ sec.16, T.32 N., R.2 E., Reynolds County, Hydrologic Unit 11010007, at bridge on State Highway 21 at Lesterville, and 0.8 mi (1.3 km) upstream from Black River.

DRAINAGE AREA.--94.5 mi² (244.8 km²).

PERIOD OF RECORD.--January 1960 to current year.

GAGE.--Water-stage recorder. Datum of gage is 655.34 ft (199.748 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. Several observations of water temperature were made during the year. Low flow regulated by Union Electric Company Taum Sauk pumped-storage power plant lower reservoir, 4 mi (6.4 km) upstream, since Feb. 19, 1963, capacity 6,350 acreft (7.83 hm³).

AVERAGE DISCHARGE.--22 years, 105 ft³/s (2.974 m³/s), 76,100 acre-ft/yr (93.8 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,400 ft³/s (295 m³/s) Nov. 2, 1972, gage height, 11.13 ft (3.392 m); no flow Oct. 15 to Nov. 21, 1963, July 17-21, July 31 to Aug. 20, 1964, Nov. 13, 14, 1971.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of March 1935 reached a stage of about 13.8 ft (4.21 m) from information by local resident.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,850 ft³/s (137 m³/s) Aug. 27, gage height, 7.77 ft (2.368 m); minimum, 2.2 ft³/s (0.062 m³/s) Aug. 3-5, gage height, 1.38 ft (0.421 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.1	47	247	36	2320	88	524	113	107	46	2.3	364
2	3.1	62	185	67	324	73	406	109	167	59	2.3	199
3	3.3	137	139	91	210	53	121	107	168	42	2.2	137
4	3.5	153	42	235	206	99	116	105	165	41	2.2	111
5	3.5	178	46	242	189	16	186	110	140	40	2.2	107
6	3.6	108	47	149	35	38	234	121	131	39	2.6	106
7	3.5	68	119	93	98	39	182	114	46	39	2.7	81
8	3.4	56	71	88	111	42	82	90	35	40	2.6	51
9	3.3	48	86	73	99	42	114	89	12	39	2.5	49
10	3.1	42	22	115	91	42	112	84	8.2	39	2.4	38
11	3.0	34	31	102	66	107	111	86	6.9	38	7.7	10
12	2.9	72	40	52	57	34	111	85	13	37	4.5	7.0
13	2.8	83	22	81	78	10	110	83	14	34	12	13
14	3.8	82	22	34	53	55	110	61	13	29	11	903
15	4.0	47	20	47	88	686	109	32	121	23	23	1930
16	7.3	8.6	9.1	37	1330	431	108	30	1040	8.7	109	1610
17	9.4	5.4	7.8	33	2450	375	109	24	871	5.6	65	717
18	13	4.6	7.4	33	957	175	110	12	234	4.3	55	175
19	11	4.1	12	29	563	218	200	11	58	3.7	51	281
20	13	3.9	19	28	641	60	277	10	50	3.2	48	345
21	22	3.9	19	28	359	54	229	9.4	47	2.8	46	387
22	36	3.7	27	82	287	53	99	9.0	45	3.2	44	196
23	47	3.7	97	330	102	52	46	8.6	44	2.9	44	84
24	63	3.5	86	161	161	50	44	8.6	43	2.7	68	45
25	37	3.3	26	296	130	49	44	8.6	44	2.5	437	69
26	51	3.5	27	77	96	50	125	8.6	43	2.5	730	67
27	34	3.3	40	173	101	49	634	20	49	2.6	4630	64
28	43	3.1	153	185	76	48	1000	41	198	2.6	1050	58
29	47	3.1	89	105	---	49	667	42	379	2.5	749	46
30	47	6.5	54	1460	---	70	301	44	155	2.5	699	32
31	46	---	41	3120	---	225	---	45	---	2.4	539	---
TOTAL	576.6	1281.2	1855.3	7682	11278	3432	6621	1720.8	4447.1	639.7	9446.2	8282.0
MEAN	18.6	42.7	59.8	248	403	111	221	55.5	148	20.6	305	276
MAX	63	178	247	3120	2450	686	1000	121	1040	59	4630	1930
MIN	2.8	3.1	7.4	28	35	10	44	8.6	6.9	2.4	2.2	7.0
CFSM	.20	.45	.63	2.62	4.27	1.18	2.34	.59	1.57	.22	3.23	2.92
IN.	.23	.50	.73	3.02	4.44	1.35	2.61	.68	1.75	.25	3.72	3.26
AC-FT	1140	2540	3680	15240	22370	6810	13130	3410	8820	1270	18740	16430
CAL YR 1981	TOTAL	31717.3	MEAN	86.9	MAX	2810	MIN	1.6	CFSM	.92	IN	12.49
WIR YR 1982	TOTAL	57261.9	MEAN	157	MAX	4630	MIN	2.2	CFSM	1.66	IN	22.54
										AC-FT	62910	
										AC-FT	113600	

07061500 BLACK RIVER NEAR ANNAPOLIS, MO

LOCATION.--Lat 37°20'10", long 90°47'19", in SW¼NW¼ sec.25, T.31 N., R.2 E., Reynolds County, Hydrologic Unit 11010007, on right bank 0.4 mi (0.6 km) downstream from Mayberry Branch, 7 mi (11.2 km) southwest of Annapolis, 11 mi (17.7 km) downstream from East Fork, and at mile 278.5 (448.1 km).

DRAINAGE AREA.--484 mi² (1,254 km²).

PERIOD OF RECORD.--April 1939 to current year.

GAGE.--Water-stage recorder. Datum of gage is 569.72 ft (173.651 m) National Geodetic Vertical Datum of 1929. (levels by Corps of Engineers). Prior to Aug. 21, 1942, at site 415 ft (126 m) upstream at same datum.

REMARKS.--Records good. Several observations of water temperature were made during the year. Small regulation from upstream reservoir since Feb. 1963.

AVERAGE DISCHARGE.--43 years, 560 ft³/s (15.86 m³/s), 15.71 in/yr (399 mm/yr), 405,700 acreft/yr (500 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 49,700 ft³/s (1,410 m³/s) Nov. 2, 1972, gage height, 21.55 ft (6.568 m); minimum discharge, 65 ft³/s (1.84 m³/s) Aug. 16,17,18, 1965; minimum gage height, 0.66 ft (0.201 m) July 26-28, 1980.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 7,000 ft³/s (198 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 31	1400	19,800 561	13.39 4.081
Feb. 17	1000	10,600 300	10.14 3.091
Aug. 27	1500	*30,000 849	16.66 5.078

Minimum discharge, 103 ft³/s (2.92 m³/s) Aug. 5, 6, gage height, 0.62 ft (0.189 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	105	212	980	240	5910	542	754	862	780	293	110	1180
2	105	276	516	260	2540	472	796	733	770	261	107	980
3	105	472	387	330	1720	452	661	663	673	252	107	805
4	111	3310	311	450	1380	480	876	606	658	232	105	650
5	121	4530	310	860	1140	375	776	560	702	218	105	560
6	123	1530	310	780	805	354	807	540	711	207	105	520
7	122	1460	290	750	696	338	733	552	577	200	110	450
8	120	750	290	780	720	318	576	501	458	218	112	390
9	117	650	310	540	681	303	658	458	387	277	116	350
10	119	560	348	450	596	291	683	422	339	290	116	310
11	119	490	280	410	507	310	655	394	308	263	272	280
12	120	450	240	370	498	333	626	377	287	238	516	240
13	120	470	260	330	463	264	598	356	275	218	371	240
14	135	430	212	330	445	325	565	337	257	211	556	3800
15	157	410	212	290	445	1260	534	293	242	244	574	5500
16	174	286	212	280	1560	1750	554	265	1570	209	2140	2600
17	179	257	182	280	8390	1650	734	248	1560	189	1530	2000
18	194	235	182	240	4770	1160	946	228	848	173	873	1700
19	240	220	182	240	2650	1490	855	216	511	162	681	1750
20	230	193	155	240	2580	1090	903	206	424	153	542	1460
21	262	172	155	240	2120	870	811	197	370	145	445	898
22	356	166	182	240	1660	737	616	199	330	138	375	671
23	329	165	212	950	1250	646	476	193	297	133	338	485
24	259	168	310	830	1050	581	428	185	273	128	488	368
25	311	168	310	700	873	537	402	181	264	126	2410	318
26	276	155	310	520	745	498	564	185	264	123	1950	310
27	311	155	310	541	628	451	2280	185	284	121	13600	310
28	276	155	290	491	586	418	2140	219	389	119	5480	312
29	243	143	290	432	---	387	1690	281	608	119	2370	295
30	243	700	280	1660	---	381	1250	1200	498	116	1840	267
31	243	---	280	14800	---	439	---	854	---	114	1530	---
TOTAL	5925	19338	9098	29854	47408	19502	24947	12696	15914	5890	39974	29999
MEAN	191	645	293	963	1693	629	832	410	530	190	1289	1000
MAX	356	4530	980	14800	8390	1750	2280	1200	1570	293	13600	5500
MIN	105	143	155	240	405	264	402	181	242	114	105	240
CFSM	.40	1.33	.61	1.99	3.50	1.30	1.72	.85	1.10	.39	2.66	2.07
IN	.46	1.49	.70	2.29	3.64	1.50	1.92	.98	1.22	.45	3.07	2.31
AC-FT	11750	38360	18050	59220	94030	38680	49480	25180	31570	11680	79290	59500

CAL YR 1981	TOTAL	166420	MEAN	456	MAX	8460	MIN	105	CFSM	.94	IN	12.79	AC-FT	330100
WTR YR 1982	TOTAL	260545	MEAN	714	MAX	14800	MIN	105	CFSM	1.48	IN	20.03	AC-FT	516800

07062000 CLEARWATER LAKE NEAR PIEDMONT, MO

LOCATION.--Lat 37°08'00", long 90°46'31", NW¼ sec.6, T.28 N., R.3 E., Wayne County, Hydrologic Unit 11010007, in intake tower at dam on Black River, 2.3 mi (3.70 km) upstream from Brewer Bay, 4.5 mi (7.24 km) west of Piedmont, and at mile 257.4 (414.16 km).

DRAINAGE AREA.--898 mi² (2,326 km²).

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

GAGE.--Water-stage recorder. Datum of gage is at National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Lake is formed by earthfill dam. Storage began June 3, 1948; conservation pool level reached July 4, 1948. Capacity at crest of spillway 413,700 acre-ft (510 hm³) at elevation 567 ft (172.8 m), of which 391,800 acre-ft (483 hm³) is available for floodcontrol storage, and 21,920 acre-ft (27.0 hm³) is permanent storage which under normal operating conditions will be maintained for purposes of conservation and recreation at elevation 494 ft (150.6 m). Lake used for flood control and incidental recreational purposes.

COOPERATION.--Records furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 399,400 acre-ft (492 hm³) May 28, 1957, elevation, 565.59 ft (172.392 m); minimum, since initial filling to conservation pool level, 15,800 acre-ft (19.5 hm³) Jan. 20, 23, 1972, elevation, 490.00 ft (149.352 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 102,000 acre-ft (126 hm³) Feb. 4, elevation, 522.43 ft (159.237 m); minimum, 21,900 acre-ft (27.0 hm³) Mar. 28-30; minimum elevation, 493.97 ft (150.562 m) Mar. 29.

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

493	20,300	520	91,600
498	28,900	530	137,000
504	41,500	540	193,000
510	57,300	551	269,000

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22100	22500	22800	22200	88400	56000	22600	31100	30800	29400	27500	92600
2	22200	22700	23600	22300	95800	50800	23400	31100	30300	29000	27500	94000
3	22200	23400	24000	22800	100000	45600	23900	30600	29900	28600	27500	94800
4	22200	31400	23600	23300	102000	40900	24800	29900	29700	28100	27500	94700
5	22500	36500	22600	23800	101000	35600	25300	29300	29600	27900	27500	94400
6	22700	37200	22100	23500	99200	31900	25200	29200	29600	27900	27800	93100
7	22700	36300	22200	23000	97200	28600	24700	29400	29300	27900	27900	91000
8	22600	35000	22600	22200	96000	25600	23800	29300	29000	28000	27900	88800
9	22500	32600	23100	22000	95200	23000	22700	29000	28900	28100	27900	86200
10	22400	30100	22700	22000	91800	22200	22400	28900	28800	28300	27900	83300
11	22300	27500	22400	22000	87300	22200	22400	28900	28700	28400	28300	80400
12	22200	25500	22000	22200	82700	22200	22400	28900	28600	28500	28700	77700
13	22100	24800	22000	22200	77900	22200	22400	28900	28500	28500	29300	75300
14	22200	24400	22000	22200	73200	22500	22300	28900	28400	28400	30300	75800
15	22100	24100	22000	22200	69000	24100	22100	28800	28600	28500	31400	85400
16	22100	23500	22000	22200	68800	26700	22000	28700	29800	28400	38400	90000
17	22200	22900	22100	22200	83200	26700	22100	28900	31200	28100	42300	93200
18	22200	22500	22100	22200	90700	25300	22900	29000	31400	27900	44200	94300
19	22300	22300	22100	22200	91400	24300	23700	29100	31300	27600	44800	95100
20	22400	22300	22100	22300	91200	23400	24300	29200	30900	27500	44600	95800
21	22400	22200	22100	22300	90300	22200	24500	29300	30000	27400	44100	96400
22	22600	22300	22300	23900	87700	22100	24400	29300	28800	27300	43400	96600
23	22700	22300	22300	26100	83900	22400	23900	29300	28200	27300	42200	96400
24	22500	22300	22200	28200	79800	22500	23400	29300	28200	27300	42200	95400
25	22300	22200	22100	28700	75400	22400	22900	29300	28200	27400	45600	93600
26	22300	22300	22100	27500	70900	22300	23800	29100	28200	27400	49400	91400
27	22200	22300	22100	24800	66400	22000	27500	28900	28300	27500	66300	89300
28	22100	22300	22100	22800	61400	21900	30300	28900	28500	27500	84800	87000
29	22100	22300	22200	22400	---	21900	30900	29000	29100	27500	89200	84700
30	22200	22500	22200	29700	---	21900	30800	30000	29600	27500	92200	82200
31	22200	---	22100	69800	---	22100	---	30800	---	27500	92700	---

WTR YR 1982

(+)	494.20	497.37	494.09	514.00	511.40	494.12	499.00	499.04	398.41	497.28	520.26	517.54
(#)	+100	+300	-400	+47700	-800	-39300	+8700	0	-1200	-2100	+65200	-10500
MAX	22700	37200	24000	69800	102000	56000	30900	31100	31400	29400	92700	96600
MIN	22100	22200	22000	22000	61400	21900	22000	28700	28200	27300	27500	75300

CAL YR 1981.....\$ 0
WTR YR 1982.....\$ +60100

(+) Elevation, in feet NGVD, at end of month.
(#) Change in contents, in acre-feet.

07062500 BLACK RIVER AT LEEPER, MO

LOCATION.--Lat 37°03'32", long 90°41'12", in NE¼SE¼NE¼ sec.35, T.28 N., R.3 E., Wayne County, Hydrologic Unit 11010007, on downstream side of center bridge pier of bridge on State Highway 49, 1 mile south of Leeper, 4 miles downstream from McKenzie Creek, 8 miles downstream from Clearwater Dam, and at mile 249.

DRAINAGE AREA.--987 mi² (2,560 km²).

PERIOD OF RECORD.--June 1921 to current year.

REVISED RECORDS.--WSP 762: 1933(M). WSP 1007: 1943. WSP 1281: 1922-23, 1927-29(M).

GAGE.--Water-stage recorder. Datum of gage is 415.68 ft (126.699 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 22, 1937, nonrecording gage, Oct. 22, 1937, to Jan. 21, 1942, water-stage recorder, and Jan. 22 to Apr. 6, 1942, nonrecording gage, all at site 1,900 ft (579 m) downstream at datum 3.85 ft (1.173 m) lower. From Apr. 7, 1942 to Jan. 28, 1981, records were obtained from water-stage recorder attached to downstream pier on Highway 34 bridge.

REMARKS.--Records good. Flow regulated by Clearwater Lake since June 3, 1948. Several observations of water temperatures were made during the year.

AVERAGE DISCHARGE.--61 years, 941 ft³/s (26.65 m³/s), 681,800 acre-ft/yr (841 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 78,400 ft³/s (2,220 m³/s) May 14, 1933, gage height, 20.01 ft (6.099 m), site and datum then in use, from rating curve extended above 55,000 ft³/s (1,560 m³/s); minimum, 62 ft³/s (1.76 m³/s) Sept. 22-25, 1966, gage height, 0.42 ft (1.128 m), result of closure of Clearwater Dam; minimum, prior to regulation, 133 ft³/s (3.77 m³/s) Aug. 11, 1934.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of March 1904 reached a stage of about 22.3 ft (6.80 m), present site and datum, from floodmarks, discharge, 125,000 ft³/s (3,540 m³/s), from rating curve extended above 55,000 ft³/s (1,560 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 4,300 ft³/s (122 m³/s) Jan. 31, gage height, 7.28 ft (2.242 m); minimum 152 ft³/s (4.30 m³/s) Oct. 6, gage height, 1.73 ft (0.527 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	232	360	384	460	1200	3610	670	1330	786	570	235	1590
2	230	373	504	420	882	3740	681	1220	1110	605	240	1240
3	230	417	642	420	774	3650	681	1280	1130	615	235	510
4	230	701	770	555	1020	3330	675	1380	1090	615	235	988
5	213	1200	1090	792	2380	3570	768	1350	941	555	221	1010
6	152	1410	955	1360	2430	3110	1070	1020	929	420	230	1170
7	221	1790	645	1370	2400	2400	1160	1100	929	370	230	1590
8	238	1780	497	1360	2320	2330	1440	1040	882	365	230	1830
9	288	1870	255	1210	1630	2180	1430	1010	686	370	230	1940
10	299	2180	601	840	2580	1400	1340	888	655	370	230	1930
11	300	2140	623	655	3270	735	976	834	600	365	265	1920
12	301	1910	557	515	3480	692	959	730	515	360	265	1910
13	300	1240	505	530	3430	681	953	713	505	360	430	1890
14	310	970	411	570	3390	713	950	708	485	355	285	1990
15	305	970	403	550	3330	757	959	702	400	355	255	1910
16	300	957	381	510	2450	635	959	692	455	365	1400	1230
17	305	941	343	490	1770	1950	953	525	846	420	570	976
18	303	828	335	455	2580	2560	810	485	1080	425	455	947
19	300	575	335	445	3130	2480	804	480	858	426	697	935
20	300	495	330	420	3520	2170	846	480	792	395	1010	929
21	300	407	335	390	3510	2110	1020	480	894	337	1040	923
22	312	384	340	1160	3580	1490	1040	490	1080	332	1030	923
23	333	350	360	751	3830	1040	1040	485	988	305	1140	917
24	492	369	525	420	3800	1000	1030	475	500	260	1220	1010
25	511	369	525	655	3740	982	1030	450	460	250	410	1520
26	548	363	485	1410	3680	970	852	525	450	250	345	1570
27	531	344	475	2340	3640	959	410	525	450	245	650	1670
28	505	340	450	2200	3580	888	724	495	450	235	455	1670
29	433	340	445	1410	---	768	1930	445	425	235	490	1670
30	364	362	455	2810	---	692	1970	470	305	235	876	1730
31	356	---	480	4300	---	681	---	625	---	235	1180	---
TOTAL	10042	26735	15441	31773	77326	54273	30130	23432	21676	11600	16784	42038
MEAN	324	891	498	1025	2762	1751	1004	756	723	374	541	1401
MAX	548	2180	1090	4300	3830	3740	1970	1380	1130	615	1400	1990
MIN	152	340	255	390	774	635	410	445	305	235	221	510
CFSM	.34	.93	.52	1.07	2.89	1.83	1.05	.79	.76	.39	.57	1.46
IN.	.39	1.04	.60	1.24	3.01	2.11	1.17	.91	.84	.45	.65	1.63
AC-FT	19920	53030	30630	63020	153400	107700	59760	46480	42990	23010	33290	83380
CAL YR 1981	TOTAL	233643	MEAN 640	MAX 2610	MIN 152	CFSM .67	IN 9.08	AC-FT 463400				
WTR YR 1982	TOTAL	361250	MEAN 990	MAX 4300	MIN 152	CFSM 1.03	IN 14.04	AC-FT 716500				

WHITE RIVER BASIN

07063000 BLACK RIVER AT POPLAR BLUFF, MO

LOCATION.--Lat 36°45'34", long 90°23'17", in SW¼NW¼ sec.2, T.24 N., R.6 E., Butler County, Hydrologic Unit 11010007, on right bank at City Light and Water Plant in Poplar Bluff, 1,500 ft (457 m) upstream from bridge on U.S. Highway 60, 4.8 mi (7.7 km) downstream from Indian Creek, and at mile 211.2 (339.8 km).

DRAINAGE AREA.--1,245 mi² (3,225 km²).

PERIOD OF RECORD.--October 1936 to September 1937, October 1939 to current year. Gage-height records collected at site 1,800 ft (549 m) downstream September 1923 to July 1935, and since July 1935 at site 1,500 ft (457 m) downstream are contained in reports of National Weather Service.

REVISED RECORDS.--WSP 927: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 317.38 ft (96.737 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1940, nonrecording gage at site 1,500 ft (457 m) downstream are at datum 2.00 ft (0.610) higher, Oct. 1, 1940, to June 7, 1955, at site 1,500 ft (457 m) downstream at present datum.

REMARKS.--Records good. Flow regulated by Clearwater Lake. Several observations of water temperatures made during the year.

AVERAGE DISCHARGE.--44 years, 1,263 ft³/s (35.77 m³/s), 915,000 acre-ft/yr (1,128 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 52,600 ft³/s (1,490 m³/s) May 12, 1943, from rating curve extended above 44,000 ft³/s (1,246 m³/s); maximum gage height, 20.80 ft (6.340 m) June 10, 1945, from graph based on gage readings; minimum discharge, 180 ft³/s (5.10 m³/s) Sept. 25, 26, 1966, gage height, 0.65 ft (0.198 m), closure of Clearwater Dam for repairs; minimum prior to regulation, 236 ft³/s (6.68 m³/s) Aug. 12, 1944.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of March 1904 reached a maximum discharge of 100,000 ft³/s (2,830 m³/s) and flood on Mar. 12, 1935 reached a stage of 21.1 ft (6.43 m), present datum (affected by levees constructed since 1904).

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 17,100 ft³/s (484 m³/s) Feb. 1, gage height, 19.69 ft (6.002 m); minimum, 270 ft³/s (7.65 m³/s) Oct. 7.

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	340	539	640	729	17100	3870	1030	2070	872	529	421	1520
2	340	549	625	732	6750	3890	1020	1650	982	714	421	1880
3	340	566	724	867	3700	4000	1030	1520	1220	781	419	1700
4	340	654	844	1210	1950	3970	1000	1560	1270	800	419	1100
5	340	885	968	1300	1830	3720	1000	1610	1240	805	416	1280
6	320	1260	1200	1310	2600	3800	1070	1560	1140	751	416	1290
7	270	1490	1130	1570	2750	3440	1200	2060	1120	633	413	1410
8	330	1800	917	1580	2740	2780	1400	2910	1110	574	413	1710
9	390	1860	763	1540	2720	2580	1620	1900	1060	616	410	1880
10	400	1950	545	1470	2220	2390	1630	1600	952	585	410	2000
11	400	2220	777	1260	2830	1750	1530	1410	911	570	408	2010
12	408	2240	839	1110	3450	1250	1280	1290	862	557	408	1950
13	413	2010	788	997	3690	1170	1240	1180	784	542	432	2000
14	420	1450	740	861	3710	1180	1220	1110	759	533	588	1980
15	431	1150	643	870	3760	2920	1220	1080	734	527	491	2050
16	423	1080	618	852	3890	2210	1240	1060	715	524	479	1970
17	425	1040	594	830	3590	1690	1310	1010	723	534	3900	1470
18	445	1020	541	830	2900	2460	1290	880	1000	581	2270	1200
19	428	967	526	821	3190	3060	1190	797	1190	590	1140	1110
20	422	813	516	732	3590	3080	1190	769	1070	592	1130	1080
21	421	734	532	723	3910	2760	1200	757	1010	569	1280	1060
22	432	661	582	1920	3940	2530	1290	745	1090	504	1280	1040
23	457	627	815	6190	3960	1930	1300	729	1210	476	1260	1030
24	459	582	671	3870	4120	1550	1300	714	1140	454	1610	1030
25	589	581	775	1750	4120	1440	1290	705	815	438	2280	1150
26	666	582	790	1430	4060	1380	1360	690	724	429	1830	1520
27	721	569	763	1820	4010	1340	1240	760	697	427	1250	1610
28	702	542	742	2440	3950	1310	849	748	691	427	1850	1690
29	680	531	708	2400	---	1240	1150	714	677	424	1390	1700
30	621	571	696	2810	---	1140	1950	665	642	424	1150	1710
31	554	---	708	11000	---	1080	---	692	---	424	1300	---
TOTAL	13927	31523	22720	57824	111030	72910	37639	36945	28410	17334	31884	46130
MEAN	449	1051	733	1865	3965	2352	1255	1192	947	559	1029	1538
MAX	721	2240	1200	11000	17100	4000	1950	2910	1270	805	3900	2050
MIN	270	531	516	723	1830	1080	849	665	642	424	408	1030
CFSM	.36	.84	.59	1.50	3.19	1.89	1.01	.96	.76	.45	.83	1.24
IN.	.42	.94	.68	1.73	3.32	2.18	1.12	1.10	.85	.52	.95	1.38
AC-FT	27620	62530	45070	114700	220200	144600	74660	73260	56350	34360	63240	91500
CAL YR 1981	TOTAL	322481	MEAN	884	MAX	3320	MIN	270	CFSM	.71	IN	9.64
WTR YR 1982	TOTAL	508276	MEAN	1393	MAX	17100	MIN	270	CFSM	1.12	IN	15.19
									AC-FT			639600
									AC-FT			1008000

07067000 CURRENT RIVER AT VAN BUREN, MO

LOCATION.--Lat 36°59'29", long 91°00'53", in NE¼NW¼ sec.25, T.27 N., R.1 W., Carter County, Hydrologic Unit 11010008, near right bank on downstream side of pier of bridge on U.S. Highway 60 in Van Buren, 0.4 mi (0.6 km) downstream from Pike Creek, 4.7 mi (7.6 km) upstream from Big Spring, and at mile 90.4 (145.5 km).

DRAINAGE AREA.--1,667 mi² (4,318 km²).

PERIOD OF RECORD.--October 1912 to current year. Prior to July 1921 monthly discharge only, published in WSP 1311.

REVISED RECORDS.--WSP 877: 1938. WSP 897: 1939. WSP 927: Drainage area. WSP 1281: 1929.

GAGE.--Water-stage recorder. Datum of gage is 442.78 ft (134.959 m) National Geodetic Vertical Datum of 1929. Prior to Sept. 1, 1926, nonrecording gage at site 100 ft (30 m) downstream at different datum. Sept. 1, 1926, to Oct. 19, 1934, nonrecording gage and Oct. 20, 1934, to Sept. 30, 1939, water-stage recorder, at present site at datum 3.00 ft (0.914 m) higher, set to read same as gage 100 ft (30 m) downstream.

REMARKS.--Records good except periods of no gage-height record which are poor.

AVERAGE DISCHARGE.--70 years, 1,843 ft³/s (52.19 m³/s), 15.02 in/yr (382 mm/yr), 1,335,000 acre-ft/yr (1.650 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 125,000 ft³/s (3,540 m³/s) Aug. 21, 1915, gage height, 25.9 ft (7.89 m), present datum, from rating curve extended above 62,000 ft³/s (1,760 m³/s); minimum discharge, 473 ft³/s (13.4 m³/s) Oct. 7, 8, 1956; minimum gage height, 1.54 ft (0.469 m) Oct. 2, 3, 1981.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 26, 1904, reached a stage of 29.0 ft (8.84 m), present datum, from floodmarks.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 14,000 ft³/s (396 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s)	(m ³ /s)	Gage height (ft)	(m)
Feb. 1	0900	*30,600	867	15.12	4.609
Feb. 17	2330	14,900	422	10.68	3.255

Minimum discharge, 555 ft³/s (15.72 m³/s) Oct. 2, 3, gage height, 1.54 ft (0.469 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	563	838	1140	897	23400	2170	1690	2420	2390	1730	806	2360
2	563	971	1640	933	7360	2080	1650	2330	2190	1550	799	2270
3	563	2800	1600	1060	5320	2010	1850	2230	2030	1470	793	2190
4	573	5840	1400	1620	4280	1980	2020	2140	1910	1410	787	1980
5	595	4060	1230	1940	3610	1910	1930	2060	2740	1340	774	1790
6	587	3010	1110	1910	3140	1830	1840	1960	3110	1270	819	1650
7	577	2410	1040	1760	2750	1770	1730	2010	2670	1220	832	1540
8	574	2020	995	1580	2530	1700	1750	2090	2370	1230	799	1460
9	574	1750	950	1430	2420	1640	1890	2160	2160	1240	812	1390
10	574	1550	901	1320	2220	1610	1920	2010	2880	1300	812	1330
11	574	1400	869	1250	2060	1580	1890	1890	3900	1280	884	1280
12	585	1270	846	1250	1950	1560	1840	1800	3030	1190	971	1250
13	599	1180	826	1220	1860	1560	1810	1720	2550	1140	1230	1220
14	640	1080	812	1150	1790	1620	1770	1680	2230	1100	2450	3330
15	735	1030	796	1120	1820	2500	1700	1650	2010	1060	3030	3550
16	706	991	781	1090	2490	3960	1740	1620	2210	1040	7610	2750
17	691	950	776	1030	10100	4030	1950	1580	2540	1050	4160	2190
18	750	908	757	1040	10300	3630	2590	1530	2330	1040	3200	1850
19	793	881	745	1030	6270	3480	2460	1790	2120	1000	2600	1650
20	812	847	737	1010	4990	3430	2320	3240	2020	970	2300	1510
21	756	820	749	1000	4310	3050	2150	2400	1870	939	2090	1390
22	819	799	788	2140	3790	2700	1990	2090	1740	916	1940	1300
23	1100	788	934	3080	3390	2450	1880	1880	1640	891	1920	1230
24	1440	775	1050	3080	3120	2310	1810	1730	1550	884	1920	1180
25	1230	767	1170	2550	2830	2200	1810	1650	1570	865	2480	1140
26	1130	765	1120	2190	2590	2080	2420	1640	1600	858	2660	1110
27	1060	759	1080	1980	2430	1950	2970	1610	1660	845	3470	1090
28	1000	741	1050	1810	2280	1860	2740	1570	1900	845	6580	1070
29	963-	727	997	1700	---	1790	2570	1630	1780	838	4010	1040
30	904	786	949	4770	---	1770	2490	4690	1670	825	3170	1010
31	858	---	918	23700	---	1740	---	2960	---	812	2780	---
TOTAL	23888	43513	30756	73640	125400	69950	61170	63760	66370	34148	69488	50100
MEAN	771	1450	992	2375	4479	2256	2039	2057	2212	1102	2242	1670
MAX	1440	5840	1640	23700	23400	4030	2970	4690	3900	1730	7610	3550
MIN	563	727	737	897	1790	1560	1650	1530	1550	812	774	1010
CFSM	.46	.87	.60	1.43	2.69	1.35	1.22	1.23	1.33	.66	1.35	1.00
TN	.53	.97	.69	1.64	2.80	1.56	1.37	1.42	1.48	.76	1.55	1.12
AC-FT	47380	86310	61000	146100	248700	138700	121300	126500	131600	67730	137800	99370
CAL YR 1981	TOTAL	394544	MEAN	1081	MAX	12800	MIN	563	CFSM	.65	IN	8.80
WTR YR 1982	TOTAL	712183	MEAN	1951	MAX	23700	MIN	563	CFSM	1.17	IN	15.89
										AC-FT	782600	
										AL-FT	1413000	

07067500 BIG SPRING NEAR VAN BUREN, MO

LOCATION.--Lat 36°57'05", long 90°59'36", in SW¼NE¼ sec.6, T.26 N., R.1 E., Carter County, Hydrologic Unit 11010008, on right bank 400 ft (122 m) downstream from spring outlet, 0.4 mi (0.6 km) upstream from Current River, and 3.5 mi (5.6 km) southeast of Van Buren.

PERIOD OF RECORD.--October 1921 to current year. Prior to Oct. 1, 1923, published as "near Chicopee". Monthly discharge only for some periods, published in WSP 1311.

REVISED RECORDS.--WSP 1311: 192223, 1928(M), 1929.

GAGE.--Nonrecording gage. Datum of gage is 429.08 ft (130.784 m) National Geodetic Vertical Datum of 1929. Prior to Feb. 19, 1971, nonrecording gage, prior to Oct. 1, 1934 at datum 1.0 ft (0.3 m) higher. Water-stage recorder Feb. 19, 1971 to March 15, 1978, at present datum.

REMARKS.--Records good except those for periods of backwater from Current River, which are poor.

AVERAGE DISCHARGE.--61 years, 435 ft³/s (12.32 m³/s), 315,200 acre-ft/yr (389 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,300 ft³/s (36.8 m³/s), estimated, sometime in June 1928, during period of backwater from Current River; minimum, 236 ft³/s (6.68 m³/s) Oct. 6, 1956.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 1,220 ft³/s (34.6 m³/s) Feb. 4, during period of backwater from Current River; minimum daily discharge, 282 ft³/s (7.99 m³/s) Dec. 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	320	345	332	302	530	569	489	615	467	496	352	401
2	320	435	329	302	520	559	489	601	448	483	350	451
3	320	535	326	358	700	552	486	587	438	467	350	464
4	320	550	315	455	1220	539	483	580	435	464	347	438
5	320	520	315	442	1000	532	477	566	432	445	347	413
6	310	495	312	429	1000	526	467	552	539	442	347	398
7	300	475	307	401	785	506	461	566	473	429	347	388
8	290	450	307	388	739	503	461	560	445	426	344	379
9	290	430	302	376	676	493	464	549	422	413	344	370
10	295	413	302	361	683	489	467	536	645	454	338	367
11	300	404	302	358	664	480	461	513	964	458	338	364
12	307	388	302	353	645	474	461	513	743	438	338	361
13	312	376	302	347	626	467	455	503	649	426	347	358
14	320	367	300	344	623	461	451	500	604	413	499	615
15	335	358	300	338	615	573	445	483	580	404	608	580
16	340	353	300	338	676	832	445	477	594	401	620	467
17	370	347	297	329	780	854	493	473	580	391	652	407
18	380	338	295	323	1070	719	523	467	566	388	509	382
19	360	332	295	323	1200	867	546	464	546	385	416	379
20	340	329	297	321	1100	815	513	583	529	379	388	367
21	325	323	297	315	1030	703	493	526	509	373	367	355
22	350	321	295	626	894	615	483	493	493	373	361	352
23	385	318	287	759	793	594	474	470	470	367	347	347
24	380	312	285	719	719	580	477	467	470	367	355	350
25	360	315	282	619	672	569	474	454	467	364	388	344
26	380	315	307	559	626	552	503	451	461	361	397	341
27	440	307	307	536	605	536	703	458	458	361	419	341
28	450	307	307	519	594	523	623	454	506	358	500	338
29	400	307	302	489	---	513	638	454	506	358	675	335
30	365	307	300	519	---	513	626	500	493	355	516	329
31	335	---	302	525	---	496	---	536	---	352	445	---
TOTAL	10619	11372	9408	13373	21785	18004	15031	15951	15932	12591	12951	11781
MEAN	343	379	303	431	778	581	501	515	531	406	418	393
MAX	450	550	332	759	1220	867	703	615	964	496	675	615
MIN	290	307	282	302	520	461	445	451	422	352	338	329
AC-FT	21060	22560	18660	26530	43210	35710	29810	31640	31600	24970	25690	23370
CAL YR 1981	TOTAL	129224	MEAN	354	MAX	758	MIN	282	AC-FT	256300		
WTR YR 1982	TOTAL	168798	MEAN	462	MAX	1220	MIN	282	AC-FT	334800		

WHITE RIVER BASIN

07068000 CURRENT RIVER AT DONIPHAN, MO

LOCATION.--Lat 36°37'19", long 90°50'51", in NW¼NW¼ sec.27, T.23 N., R.2 E., Ripley County, Hydrologic Unit 11010008, on right bank 0.5 mi (0.8 km) upstream from U.S. Highway 160, 1 mi (1.6 km) west of Doniphan, 2.5 mi (4.0 km) upstream from Brian Creek, and at mile 51.3 (82.5 km).

DRAINAGE AREA.--2,038 mi² (5,278 km²).

PERIOD OF RECORD.--October 1918 to current year. Prior to July 1921 monthly discharge only, published in WSP 1311.

REVISED RECORDS.--WSP 877: 193738(M). WSP 927: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 321.21 ft (97.905 m), National Geodetic Vertical Datum of 1929. July 3, 1936, to Sept. 30, 1971, datum is 1.00 ft (0.305 m) higher. Prior to July 3, 1936, nonrecording gages at several sites 0.5 mi (0.8 km) downstream at various datums.

REMARKS.--Records good. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--64 years, 2,686 ft³/s (76.07 m³/s), 17.90 in/yr (455 mm/yr), 1,946,000 acre-ft/yr (2,400 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 94,400 ft³/s (2,670 m³/s) Mar. 12, 1935, gage height, 23.0 ft (7.01 m), present site and datum, from rating curve extended above 60,000 ft³/s (1,700 m³/s); minimum, 852 ft³/s (24.1 m³/s) Oct. 8-19, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of March 1904 reached a stage of 25.9 ft (7.89 m), from floodmarks, present site and datum, discharge, 130,000 ft³/s (3,680 m³/s) from rating curve extended above 60,000 ft³/s (1,700 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 14,000 ft³/s (396 m³/s) maximum (*):

Date	Time	Discharge (ft ³ /s)	(m ³ /s)	Gage height (ft)	(m)
Jan. 31	1230	*31,600	895	14.46	4.407
Aug. 16	1045	20,100	569	10.30	3.139

Minimum discharge, 1,060 ft³/s (30.0 m³/s) Oct. 2, gage height, 0.82 ft (0.250 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	1070	1400	1520	1480	26900	3320	2590	3540	3470	2630	1580	3580	
2	1060	1500	1930	1530	21500	3160	2530	3390	3020	2500	1560	3430	
3	1060	4000	2300	1740	9580	3060	2510	3370	2900	2380	1550	3530	
4	1100	7000	2160	2190	7510	3010	2720	3200	2780	2300	1530	3230	
5	1110	8000	1970	2660	6290	2940	2740	3030	2760	2230	1520	2970	
6	1120	6000	1830	2790	5510	2860	2630	2930	4140	2150	1550	2730	
7	1100	4000	1720	2670	4920	2770	2540	4460	3770	2110	1620	2590	
8	1090	3200	1650	2490	4430	2690	2490	3770	3400	2090	1560	2490	
9	1080	2800	1590	2320	4300	2630	2540	3630	3180	2130	1540	2400	
10	1080	2400	1530	2220	4020	2560	2610	3430	3530	2160	1540	2350	
11	1090	2200	1480	2100	3680	2520	2600	3160	5240	2190	1600	2290	
12	1090	2050	1440	2000	3530	2480	2560	3020	4920	2120	1650	2240	
13	1110	1900	1420	1950	3410	2470	2540	2900	4050	2030	1890	2210	
14	1200	1800	1390	1950	3300	2610	2480	2820	3540	1970	2220	2370	
15	1200	1700	1370	1900	3250	3680	2450	2780	3190	1930	4080	5250	
16	1200	1700	1350	1850	3440	4720	2440	2710	3070	1890	14800	4420	
17	1200	1670	1330	1750	6510	5690	2560	2650	3230	1870	10800	3540	
18	1200	1630	1310	1750	13300	5250	2900	2600	3350	1870	5340	2970	
19	1250	1590	1290	1700	12000	5700	3320	2560	3040	1840	4200	2650	
20	1300	1540	1280	1700	7530	5160	3180	3510	2890	1810	3500	2430	
21	1300	1500	1300	1700	6530	4690	3000	3700	2800	1780	3060	2240	
22	1400	1460	1340	2500	5670	4120	2840	3230	2650	1760	2840	2140	
23	1700	1440	1450	3500	5150	3750	2710	2940	2540	1720	2680	2040	
24	2000	1420	1580	4500	4750	3500	2630	2650	2440	1700	2640	1980	
25	2200	1380	1710	4000	4390	3270	2600	2550	2420	1680	2880	1930	
26	2000	1370	1760	3500	4080	3100	3430	2540	2430	1660	3510	1880	
27	1800	1360	1710	3150	3830	2970	4420	2630	2450	1650	3390	1840	
28	1700	1340	1670	3080	3480	2840	4240	2490	2680	1630	6600	1800	
29	1600	1320	1620	3130	---	2740	3900	2470	2680	1620	6760	1760	
30	1500	1380	1570	4840	---	2690	3740	3580	2560	1610	4120	1730	
31	1400	---	1520	28500	---	2650	---	5190	---	1590	4110	---	
TOTAL	41310	72050	49090	103140	192790	105600	86440	97430	95120	60600	108220	79010	
MEAN	1333	2402	1584	3327	6885	3406	2881	3143	3171	1955	3491	2634	
MAX	2200	8000	2300	28500	26900	5700	4420	5190	5240	2630	14800	5250	
MIN	1060	1320	1280	1480	3250	2470	2440	2470	2420	1590	1520	1730	
CFSM	.65	1.18	.78	1.63	3.38	1.67	1.41	1.54	1.56	.96	1.71	1.29	
IN.	.75	1.32	.90	1.88	3.52	1.93	1.58	1.78	1.74	1.11	1.98	1.44	
AC-FT	81940	142900	97370	204600	382400	209500	171500	193300	188700	120200	214700	156700	
CAL YR 1981 TOTAL	626850	MEAN	1717	MAX	10400	MIN	1060	CFSM	.84	IN	11.44	AC-FT	1243000
WTR YR 1982 TOTAL	1090800	MEAN	2988	MAX	28500	MIN	1060	CFSM	1.47	IN	19.91	AC-FT	2164000

07068000 CURRENT RIVER AT DONIPHAN, MO.--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: July 1969 to July 1975, Oct. 1979 thru Sept. 1980, Oct. 1981, thru Sept. 1982 (discontinued).

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHUS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PEK- CENT SATUR- ATION) (00301)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L) (00335)	COLI- FORM, FECAL, 0.7 UM-MF (CULS./ 100 ML) (31625)
OCT											
07...	0730	1028	29001	1110	320	7.5	16.0	6.0	61	8	24
NOV											
04...	1630	1028	29001	7000	282	7.7	15.5	7.2	72	13	680
DEC											
03...	1030	1028	29001	2300	325	7.9	9.0	10.8	93	3	21
JAN											
07...	0800	1028	29001	2780	310	7.9	5.5	3.8	30	<5	12
FEB											
11...	0830	1028	29001	3700	225	7.5	3.5	11.4	86	6	4
MAR											
03...	1630	1028	29001	3050	240	7.8	10.0	9.8	87	<5	2
APR											
14...	0710	1028	29001	2510	280	8.0	15.5	8.0	80	37	66
MAY											
06...	0730	1028	29001	2940	275	7.8	18.5	6.8	72	<5	20
JUN											
02...	1535	1028	29001	3000	310	7.9	21.0	5.6	62	<5	56
JUL											
14...	1545	1028	29001	1970	310	8.1	26.0	5.2	63	35	16
AUG											
17...	1930	1028	29001	7930	197	7.3	23.0	3.0	34	15	900
SEP											
09...	1530	1028	29001	2390	315	7.9	23.0	6.4	74	--	23

DATE	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS, NONCAR- BONATE (MG/L CACO3) (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY FIELD (MG/L AS CACO3) (00410)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2) (00405)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)
OCT										
07...	205	18	46	22	2.6	1.2	187	11	<10	3.1
NOV										
04...	--	--	--	--	--	--	134	5.2	--	--
DEC										
03...	--	--	--	--	--	--	164	4.0	--	--
JAN										
07...	161	20	33	19	1.7	<1.0	141	3.4	<10	2.0
FEB										
11...	--	--	--	--	--	--	115	7.0	--	--
MAR										
03...	--	--	--	--	--	--	95	2.9	--	--
APR										
14...	157	26	33	18	<2.0	<1.0	131	2.5	<10	6.0
MAY										
06...	--	--	--	--	--	--	141	4.3	--	--
JUN										
02...	--	--	--	--	--	--	151	3.7	--	--
JUL										
14...	162	1	35	18	1.5	1.0	161	2.5	4.0	2.0
AUG										
17...	--	--	--	--	--	--	95	9.2	--	--
SEP										
09...	--	--	--	--	--	--	161	3.9	--	--

WHITE RIVER BASIN

0706800 CURRENT RIVER AT DONIPHAN, MO--continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	FLUO- RICE, DIS- SOLVED (MG/L AS F) (00950)	SOLIDS, RESIDUE AT 180 DEG. C DISE- SOLVED (MG/L) (70300)	SOLIDS, RESIDUE AT 105 DEG. C SUS- PENDED (MG/L) (00530)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)
OCT 07...	<.1	183	2	1.6	.010	.010	<2	<2	<5	<5
NOV 04...	--	--	78	.26	.120	.060	--	--	--	--
DEC 03...	--	--	5	<.36	.020	<.050	--	--	--	--
JAN 07...	<.1	169	2	1.2	.050	.040	<2	<2	<5	5
FEB 11...	--	--	7	.73	.050	<.020	--	--	--	--
MAR 03...	--	--	2	.63	.010	.030	--	--	--	--
APR 14...	<.1	179	2	.22	<.010	<.050	3	<2	<5	4
MAY 06...	--	--	2	.19	.040	<.050	--	--	--	--
JUN 02...	--	--	5	.32	.020	<.050	--	--	--	--
JUL 14...	<.1	183	4	.24	.020	.030	<2	2	<5	5
AUG 17...	--	--	90	.24	.110	.120	--	--	--	--
SEP 09...	--	--	2	--	--	--	--	--	--	--

[illegible]

WHITE RIVER BASIN

07068250 MIDDLE FORK LITTLE BLACK RIVER AT GRANDIN, MO

LOCATION.--Lat 36°49'50", long 90°49'21", NE¼SW¼SW¼ sec.11, T.25 N., R.2 E., Carter County, Hydrologic Unit 11010008, on downstream side of center pier of Highway 21 bridge in Grandin and 0.6 mi (1.0 km) upstream from North Prong Little Black River.

DRAINAGE AREA.--6.85 square miles (17.74 km²).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 571.84 ft (171.297 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4220 ft³/s (120 m³/s) August 15, 1982, gage height, 10.02 ft (3.054 m); no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 760 ft³/s (21.5 m³/s) and maximum (*):

Date	Time	Discharge		Gage height	
		(ft ³ /s)	(m ³ /s)	(ft)	(m)
Jan. 30	2000	2,000	56.6	7.50	2.286
May 7	0315	852	24.1	5.43	1.655
Aug. 15	0800	*4,220	120	10.02	3.054

No flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.08	.10	.26	47	1.6	2.0	9.6	.98	.90	.00	74
2	.00	.13	.08	1.4	21	1.5	2.1	7.2	.90	.82	.00	94
3	.00	.19	.06	38	16	1.4	1.7	5.9	.82	.74	.00	36
4	.00	.40	.10	48	9.6	1.3	1.5	4.5	.82	.62	.00	11
5	.00	1.8	.10	17	7.2	1.2	1.6	3.4	.82	.50	.00	6.1
6	.00	1.2	.10	11	4.8	1.1	1.3	3.1	.68	.39	.00	4.5
7	.00	.92	.10	6.9	3.6	.90	1.2	276	.62	.39	.00	3.7
8	.00	.70	.10	5.0	4.0	.82	1.5	39	.62	.34	.00	2.4
9	.00	.61	.10	3.8	12	.74	1.2	17	.56	.74	.00	2.0
10	.00	.53	.10	3.4	8.0	.82	1.1	10	1.5	.56	.00	1.4
11	.00	.46	.10	3.4	5.3	.68	1.1	7.6	1.2	.39	.00	1.2
12	.00	.46	.10	3.4	4.8	.68	1.1	5.6	1.1	.29	.00	1.1
13	.00	.40	.10	2.1	3.6	.82	.98	6.2	.90	.19	.34	1.0
14	.00	.40	.10	1.6	4.2	25	.98	3.6	.82	.14	.14	5.2
15	.00	.30	.10	1.6	9.2	104	1.1	3.6	.98	.14	.62	18
16	.00	.35	.10	1.4	37	59	1.5	2.8	1.4	.14	599	41
17	.01	.26	.08	1.4	33	23	8.8	2.5	.98	.10	51	10
18	.06	.22	.08	1.4	16	139	10	2.1	.82	.10	10	4.7
19	.04	.19	.06	1.1	10	102	10	2.0	.68	.06	4.3	3.7
20	.04	.19	.08	.92	7.6	30	13	1.8	.56	.03	3.0	3.1
21	.04	.16	.08	.70	5.9	15	8.0	3.4	.50	.06	2.7	2.7
22	.08	.16	.10	214	4.2	10	5.6	1.8	.44	.06	2.5	2.3
23	.04	.10	.10	70	3.4	7.6	4.0	1.4	.34	.10	2.5	1.8
24	.04	.08	.10	16	3.1	5.9	3.6	1.2	.29	.10	2.5	1.3
25	.06	.08	.10	8.9	2.5	4.8	4.0	1.2	.29	.06	6.0	1.0
26	.16	.08	.13	5.0	2.1	3.8	161	1.6	.34	.06	13	.70
27	.13	.08	.22	3.4	2.0	2.9	49	8.8	.74	.03	7.0	.40
28	.10	.04	.26	2.1	1.6	2.6	18	3.4	.74	.03	5.0	.20
29	.10	.04	.22	2.1	---	2.5	19	2.0	.62	.03	4.0	.20
30	.08	.04	.26	649	---	2.3	14	1.5	.90	.03	3.5	.10
31	.08	---	.26	363	---	2.2	---	1.3	---	.00	7.5	---
TOTAL	1.06	10.65	3.67	1487.28	288.7	555.16	349.96	441.1	22.96	8.14	724.60	534.80
MEAN	.034	.36	.12	48.0	10.3	17.9	11.7	14.2	.77	.26	23.4	11.2
MAX	.16	1.8	.26	649	47	139	161	276	1.5	.90	599	94
MIN	.00	.04	.06	.26	1.6	.68	.98	1.2	.29	.00	.00	.10
CFSM	.005	.05	.02	7.01	1.50	2.61	1.71	2.07	.11	.04	3.42	1.64
IN.	.01	.06	.02	8.08	1.57	3.01	1.90	2.40	.12	.04	3.93	1.82
AC-FT	2.1	21	7.3	2950	573	1100	694	875	46	16	1440	664

CAL YR 1981	TOTAL	386.21	MEAN	1.06	MAX	45	MIN	.00	CFSM	.16	IN	2.10	AC-FT	766
WTR YR 1982	TOTAL	4228.08	MEAN	11.6	MAX	649	MIN	.00	CFSM	1.69	IN	22.96	AC-FT	8390

WHITE RIVER BASIN

07068250 MIDDLE FORK LITTLE BLACK RIVER AT GRANDIN, MO--continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1980 to current year.

INSTRUMENTATION.--Water temperature recorder since October 1980.

REMARKS.--Water temperatures are not published for periods of no flow and when the temperature probe was out of the water.

EXTREMES FOR PERIOD OF RECORD.--

WATER TEMPERATURE: Maximum, 28.5°C July 20, 1981; minimum, 0°C on many days.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 24.0°C May 20, 22, 29; minimum 0°C on many days.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	---	---	---	13.5	13.0	13.5	8.5	6.5	7.0	3.5	1.5	3.0
2	---	---	---	13.5	12.0	13.0	8.5	5.0	6.5	4.5	2.0	3.5
3	---	---	---	14.0	13.0	13.5	9.0	5.0	7.0	6.0	4.5	5.5
4	---	---	---	14.5	12.0	13.0	9.5	4.5	6.5	6.0	4.5	5.5
5	---	---	---	15.5	12.0	14.0	8.5	3.0	5.5	6.0	3.5	5.0
6	---	---	---	14.0	11.0	12.0	8.0	4.5	6.0	9.0	6.0	7.0
7	---	---	---	14.0	9.5	11.5	11.0	5.0	8.0	6.0	3.0	4.5
8	---	---	---	14.0	10.0	11.5	9.5	6.0	7.0	3.5	1.0	2.0
9	---	---	---	12.0	10.0	11.5	8.5	4.0	5.5	2.0	1.0	1.5
10	---	---	---	11.5	8.5	9.5	6.0	1.5	4.0	1.0	.0	.5
11	---	---	---	13.0	7.0	9.5	4.5	4.5	4.5	1.0	.0	.0
12	---	---	---	12.0	7.0	9.5	6.5	3.5	5.0	.0	.0	.0
13	---	---	---	13.0	6.5	9.0	5.0	2.0	4.0	.5	.0	.0
14	---	---	---	13.0	6.5	9.0	8.0	4.0	4.5	1.0	.0	.0
15	---	---	---	11.5	7.0	10.0	6.5	4.0	5.0	1.0	.0	.0
16	---	---	---	13.5	8.5	10.5	6.0	3.5	5.0	1.5	.0	.5
17	18.0	16.5	17.0	13.5	6.5	9.5	6.0	.0	3.5	2.0	.0	.5
18	15.0	9.5	13.0	13.0	7.0	10.5	1.5	.0	.5	.5	.0	.0
19	13.0	6.5	9.0	12.0	8.5	11.0	1.5	.0	.5	1.0	.0	.5
20	14.0	6.0	9.5	8.5	5.0	6.5	1.0	.0	1.0	1.5	.5	1.0
21	16.0	9.0	12.0	8.0	3.0	5.0	1.0	.5	1.0	2.0	1.5	1.5
22	12.0	9.0	10.5	10.0	4.5	6.5	2.0	1.0	1.5	4.0	1.5	2.0
23	10.0	4.5	7.0	9.0	6.0	8.0	4.5	1.0	2.0	4.0	2.0	3.0
24	8.5	2.0	4.5	9.5	6.5	7.0	5.0	.5	2.0	4.0	1.0	2.0
25	8.0	3.0	6.0	9.5	4.5	7.0	3.5	.5	2.0	5.0	2.0	3.5
26	9.5	8.0	8.5	14.0	9.5	11.5	4.5	2.0	3.5	3.0	.5	1.5
27	13.0	5.5	8.5	9.0	6.5	8.0	4.5	1.0	3.0	4.0	.5	3.0
28	12.0	5.5	9.0	8.5	6.0	7.0	5.0	3.0	4.0	6.0	2.0	4.0
29	14.5	8.0	10.0	8.0	7.0	7.0	5.0	1.0	3.0	4.5	3.0	3.5
30	15.0	7.0	10.0	9.0	7.0	8.0	4.0	.5	2.0	6.0	4.5	5.5
31	14.0	9.5	12.0	---	---	---	5.0	2.0	4.0	4.5	3.0	3.5
MONTH	18.0	2.0	10.0	15.5	3.0	10.0	11.0	.0	4.0	9.0	.0	2.5

WHITE RIVER BASIN

07068250 MIDDLE FORK LITTLE BLACK RIVER AT GRANDIN, MO--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	3.5	1.0	1.5	---	---	---	---	---	---	16.0	9.0	13.0
2	4.0	1.0	3.0	---	---	---	---	---	---	16.0	10.0	13.0
3	3.5	1.0	2.0	---	---	---	---	---	---	17.0	10.0	14.5
4	3.0	.5	1.5	---	---	---	---	---	---	18.5	11.5	15.5
5	3.0	1.0	1.5	---	---	---	---	---	---	19.0	11.0	15.0
6	1.5	.0	.5	---	---	---	---	---	---	17.0	13.0	12.0
7	3.0	.0	1.0	---	---	---	---	---	---	15.0	11.5	13.5
8	2.0	.0	1.0	---	---	---	---	---	---	16.0	9.5	13.0
9	2.0	.0	1.0	---	---	---	---	---	---	17.0	9.5	13.5
10	.5	.0	.0	---	---	---	---	---	---	18.5	10.0	14.5
11	3.5	.0	1.5	---	---	---	---	---	---	19.5	11.0	15.5
12	2.0	1.0	1.5	---	---	---	---	---	---	19.0	11.5	16.0
13	4.0	.0	2.0	---	---	---	---	---	---	19.5	13.5	16.0
14	5.5	.0	3.0	8.5	8.0	8.5	---	---	---	18.0	14.0	15.5
15	5.0	3.0	4.0	11.5	8.0	9.5	---	---	---	20.5	14.0	18.5
16	4.5	3.5	4.0	14.5	10.0	11.5	---	---	---	21.5	13.5	18.5
17	5.0	4.0	4.5	15.0	8.5	11.5	15.0	10.5	12.0	23.0	15.0	19.0
18	5.5	4.0	5.0	16.0	9.5	12.0	14.0	6.5	10.5	20.5	15.0	18.0
19	9.5	4.0	6.0	14.5	11.0	12.0	11.0	9.0	10.0	23.5	14.5	19.0
20	10.5	3.5	9.0	16.0	10.5	13.5	15.0	9.5	11.5	24.0	15.0	19.0
21	10.5	4.0	7.0	14.0	9.5	11.5	13.0	6.5	10.5	23.0	15.0	19.5
22	9.5	3.5	8.5	13.0	7.0	10.0	13.0	5.5	10.0	24.0	15.5	20.0
23	14.0	4.0	9.5	13.5	6.0	10.0	14.0	5.5	10.5	---	---	---
24	9.5	5.0	8.0	15.5	8.0	13.5	14.0	6.0	10.5	---	---	---
25	5.0	3.5	4.5	10.5	7.0	9.5	13.5	10.0	11.5	---	---	---
26	4.0	2.0	3.5	10.5	4.5	8.5	11.0	9.5	10.0	---	---	---
27	8.0	3.0	5.5	10.0	5.0	8.0	14.0	9.5	11.0	21.0	15.5	18.5
28	---	---	---	---	---	---	14.0	8.0	9.5	23.0	16.0	19.0
29	---	---	---	---	---	---	11.0	9.0	10.0	24.0	18.0	21.0
30	---	---	---	---	---	---	14.5	8.0	11.0	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	14.0	.0	3.5	16.0	4.5	10.5	15.0	5.5	10.5	24.0	9.0	16.5
JUNE			JULY			AUGUST			SEPTEMBER			
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	19.5	18.0	18.5
3	---	---	---	---	---	---	---	---	---	20.0	15.5	18.0
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	18.5	18.0	18.0	18.0	16.0	16.5
17	---	---	---	---	---	---	21.5	17.0	16.5	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	21.5	17.0	17.5	20.0	15.5	17.5

WHITE RIVER BASIN

07068300 NORTH PRONG LITTLE BLACK RIVER NEAR GRANDIN, MO

LOCATION.--lat 36°46'48", long 90°48'01", SE¼NE¼NW¼ sec.36, T.25 N., R.2 E., Ripley County, Hydrologic Unit 11010008, on the right bank, 700 ft (213 m) upstream from Highway NN and 5.4 miles (8.6 km) above South Prong Little Black River.

DRAINAGE AREA.--39.4 square miles (102.0 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 8, 1980 to current year.

GAGE.--Water-stage recorder. Datum of gage is 468.61 ft (142.832 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,800 ft³/s (2,780 m³/s) Aug. 16, 1982, gage height, 12.84 ft (3.914 m); no flow at times.

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

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 22	1645	1,720 48.7	6.85 2.088	May 7	0515	2,470 70.0	7.96 2.426
Jan. 31	0300	4,470 127	10.13 3.088	Aug. 16	1230	*8,940 253	12.84 3.914

Minimum, 1.3 ft³/s (0.04 m³/s) Oct. 1, gage height 0.77 ft (0.235 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	5.9	13	12	307	20	17	42	11	34	4.8	63
2	1.3	13	13	18	207	19	17	37	10	15	4.4	131
3	1.4	25	12	65	117	19	17	33	10	11	4.2	75
4	1.8	35	11	220	66	18	16	30	11	9.9	4.0	40
5	2.7	28	11	70	56	17	16	28	11	8.7	3.7	28
6	2.2	21	11	52	48	17	16	28	10	7.7	3.7	23
7	1.9	17	11	41	44	17	15	730	9.5	7.3	5.0	20
8	1.8	16	10	36	44	16	16	152	8.7	9.1	4.8	16
9	1.8	14	9.6	31	64	16	16	64	8.2	12	5.0	15
10	1.8	12	9.6	25	54	16	16	45	11	13	4.4	14
11	1.9	11	9.3	24	46	16	15	36	8.3	10	4.2	13
12	2.0	11	9.3	23	44	16	15	30	8.1	8.8	4.2	12
13	2.3	10	9.0	22	39	17	15	27	7.9	7.9	4.0	11
14	3.5	9.4	9.0	20	39	87	15	25	7.4	7.4	18	10
15	3.7	9.0	8.7	18	51	368	15	24	9.5	6.5	29	30
16	3.0	8.4	8.1	17	97	170	15	22	16	6.3	1750	88
17	3.2	8.1	7.8	17	100	75	22	20	11	5.8	308	30
18	4.6	7.8	7.0	16	56	187	25	18	9.5	5.4	121	20
19	3.6	7.7	6.7	16	43	253	28	17	8.9	5.2	44	16
20	3.1	7.2	6.5	16	37	81	40	16	8.0	4.8	32	14
21	3.0	6.5	7.5	16	34	50	35	21	7.9	6.3	24	12
22	5.1	6.5	13	678	30	41	30	17	7.6	19	20	11
23	7.0	6.3	18	342	28	34	27	14	6.8	8.7	18	10
24	4.8	6.7	17	106	26	30	25	13	6.5	7.8	18	10
25	4.2	28	17	66	24	27	25	12	7.0	7.0	43	8.7
26	12	6.3	16	49	22	24	216	16	7.4	6.5	26	8.7
27	8.3	6.3	15	42	21	22	116	32	9.1	6.0	45	8.1
28	5.5	6.3	15	37	20	20	59	21	12	5.8	63	7.2
29	5.1	6.3	14	1290	---	19	54	17	9.4	5.6	38	6.5
30	5.0	12	13	1220	---	18	50	14	8.1	5.2	26	6.3
31	5.0	---	13	1740	---	18	---	13	---	5.2	23	---
TOTAL	113.9	367.7	351.1	6345	1764	1748	1004	1614	276.8	278.9	2740.4	757.5
MEAN	3.67	12.3	11.3	205	63.0	56.4	33.5	52.1	9.23	9.00	88.4	25.3
MAX	12	35	18	1740	307	368	216	730	16	34	1750	131
MIN	1.3	5.9	6.5	12	20	16	15	12	6.5	4.8	3.7	6.3
CFSM	.09	.31	.29	5.20	1.60	1.43	.85	1.32	.23	.23	2.24	.64
IN	.11	.35	.33	5.99	1.67	1.65	.95	1.52	.26	.26	2.59	.72
AC-FT	226	729	696	12590	3500	3470	1990	3200	549	553	5440	1500

CAL YR 1981	TOTAL	4340.10	MEAN 11.9	MAX 212	MIN .00	CFSM .30	IN 4.10	AC-FT 8610
WTR YR 1982	TOTAL	17361.30	MEAN 47.6	MAX 1750	MIN 1.3	CFSM 1.21	IN 16.39	AC-FT 34440

07068300 NORTH PRONG LITTLE BLACK RIVER NEAR GRANDIN, MO--continued

WATER-QUALITY RECORDS

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

DATE	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	Ph (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (FTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED SATUR- ATION (00301)	COLI- FORM, FECAL, JM-MF (CULS./ 100 ML) (31625)	SIREP- TOCOCCHI FECAL, KF AGAR (CULS. PER 100 ML) (31673)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L) (00530)	NITRO- GEN, NITRATE TOTAL (MG/L AS N) (00620)
OCT , 1981											
07...	1.9	240	7.4	16.0	.70	7.6	77	56	470	3	.17
DEC											
03...	12	153	7.5	7.0	1.2	11.2	93	80	200	3	.28
FEB , 1982											
11...	49	75	6.8	4.0	2.5	12.8	98	6	--	5	.72
APR											
14...	15	130	7.6	17.0	.60	5.2	54	110	620	2	.29
JUN											
04...	12	122	7.4	21.0	1.6	5.6	62	290	340	2	.20
AUG											
19...	49	90	7.1	23.0	3.7	5.4	62	K300	1300	4	.30

DATE	NITRO- GEN, NITRIIE 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)	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 TOTAL (MG/L AS PO4) (71886)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P) (70507)
OCT , 1981										
07...	.020	.19	.080	.25	.33	.52	2.3	.010	.03	.010
DEC										
03...	<.020	.28	<.070	<.14	<.21	<.28	1.2	<.010	<.03	.050
FEB , 1982										
11...	<.020	.72	<.060	.61	.61	1.3	5.9	.010	.03	<.010
APR										
14...	<.020	.29	<.060	.34	.34	.63	2.8	<.010	<.03	.010
JUN										
04...	<.020	.20	<.060	.70	.70	.90	4.0	.030	.09	.010
AUG										
19...	<.020	.30	.060	.54	.60	.90	4.0	.050	.15	<.010

WHITE RIVER BASIN

07068380 LITTLE BLACK RIVER NEAR GRANDIN, MO

LOCATION.--Lat 36°44'47", long 90°44'08", in SW¼SW¼NW¼ sec.10, T.24 N., R.3 E., Ripley County, Hydrologic Unit 11010008, on the downstream side of center bridge pier on Highway K, 7.8 miles (12.6 km) southeast of Grandin and 0.1 mile (0.2 km) below the confluence of South Prong Little Black River and North Prong Little Black River.

DRAINAGE AREA.--79.5 square miles (205.9 km²).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 400.44 ft (122.054 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,000 ft³/s (453 m³/s) August 16, 1982, gage height, 11.90 ft (3.627 m); minimum, 5.1 ft³/s (0.14 m³/s) October 25, 1980.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft³/s (56 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s)	Discharge (m ³ /s)	Gage height (ft)	Gage height (m)
Jan. 22	2030	6,340	180	8.88	2.707
Jan. 31	0300	12,300	348	10.97	3.344
May 7	0845	5,300	150	8.40	2.560
Aug. 16	1500	*16,000	453	11.90	3.627

Minimum, 5.1 ft³/s (0.14 m³/s) Oct. 1, gage height, 1.20 ft (0.366 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	6.6	15	28	16	37	57	30	24	128	22	12	8.9		
2	6.3	14	25	15	39	49	29	22	87	20	11	9.2		
3	6.9	15	22	15	35	45	29	21	82	21	11	9.2		
4	6.9	15	21	14	32	67	34	21	77	22	10	8.9		
5	7.2	15	20	14	31	93	33	22	84	46	10	8.2		
6	7.5	16	19	15	32	79	30	24	250	148	10	8.2		
7	7.8	16	20	16	32	66	28	21	315	64	15	8.2		
8	7.8	16	22	15	32	56	27	19	186	45	13	7.8		
9	7.8	16	39	15	31	49	27	19	118	37	11	7.8		
10	7.8	16	31	15	118	43	26	28	84	29	10	7.5		
11	7.8	17	26	15	178	40	25	27	69	27	14	7.5		
12	7.8	17	24	14	166	36	25	23	57	24	15	7.5		
13	7.8	17	24	14	138	35	24	29	49	22	13	9.2		
14	7.8	18	22	15	85	32	22	461	42	20	12	9.2		
15	8.2	18	22	15	62	32	21	325	35	19	11	9.2		
16	13	18	20	15	57	32	21	182	37	17	12	9.2		
17	15	24	20	14	57	29	21	117	34	17	13	10		
18	9.2	28	20	14	53	27	21	90	29	16	12	11		
19	8.6	24	19	14	48	27	21	174	31	16	11	11		
20	7.5	22	18	16	46	26	39	136	32	15	11	11		
21	7.5	22	17	21	44	26	36	92	28	13	9.6	13		
22	8.6	21	17	20	79	31	37	72	33	13	9.2	15		
23	7.8	23	17	19	82	29	40	60	45	22	8.9	17		
24	6.0	23	17	18	72	27	36	54	34	26	8.9	18		
25	5.1	21	17	18	62	26	34	57	29	18	11	18		
26	5.4	22	16	18	54	26	32	93	27	16	12	15		
27	22	24	16	18	49	25	29	226	24	15	10	7.5		
28	24	22	15	17	54	25	28	156	22	17	9.2	6.3		
29	17	22	15	18	---	29	26	99	20	17	8.9	5.7		
30	15	24	15	20	---	32	24	86	21	14	8.6	5.7		
31	14	---	17	20	---	31	---	150	---	13	8.6	---		
TOTAL	297.7	581	641	503	1805	1227	855	2930	2109	831	341.9	299.9		
MEAN	9.60	19.4	20.7	16.2	64.5	39.6	28.5	94.5	70.3	26.8	11.0	10.0		
MAX	24	28	39	21	178	93	40	461	315	148	15	18		
MIN	5.1	14	15	14	31	25	21	19	20	13	8.6	5.7		
CFSM	.12	.24	.26	.20	.81	.50	.36	1.19	.88	.34	.14	.13		
IN.	.14	.27	.30	.24	.84	.57	.40	1.37	.99	.39	.16	.14		
AC-FT	590	1150	1270	998	3580	2430	1700	5810	4180	1650	678	595		
CAL YR 1981	TOTAL	12447.5	MEAN	34.1	MAX	461	MIN	5.1	CFSM	.43	IN	5.82	AC-FT	24690
WTR YR 1982	TOTAL	12421.5	MEAN	34.0	MAX	461	MIN	5.1	CFSM	.43	IN	5.81	AC-FT	24640

WHITE RIVER BASIN

07068380 LITTLE BLACK RIVER NEAR GRANDIN, MO

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: August 1980 to current year.

SUSPENDED-SEDIMENT DISCHARGE: July 1980 to current year.

INSTRUMENTATION.--Water temperature recorder since August 1980.

REMARKS.--Temperature record is not complete due to malfunction of temperature recorder.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 30.5°C August 20 and 21, 1980; minimum 0.0°C January 18 and 19, 1982.

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 330 mg/L January 31, 1982; minimum daily mean,

<1 mg/L on many days.

SUSPENDED-SEDIMENT LOADS: Maximum daily, 5980 tons (5430 metric tons) January 31, 1982; minimum daily, 0.0 tons on many days.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 28.5°C July 6 and 7; minimum, 0.0 Jan. 18 and 19.

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 330 mg/L January 31; minimum daily mean, 1 mg/L on many days.

SUSPENDED-SEDIMENT LOADS: Maximum daily, 5980 tons (5430 metric tons) January 31, minimum daily, 0.06 tons (0.05 metric tons) on many days.

DATE	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00001)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (FTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI KF AGAR (COLS. PER 100 ML) (31673)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L) (00530)	NITRO- GEN, NITRATE TOTAL (MG/L AS N) (00620)
OCT , 1981											
07...	6.4	300	7.4	16.0	1.2	7.0	71	96	60	2	.10
DEC											
03...	28	240	7.7	9.0	1.0	11.2	97	59	250	5	.13
FEB , 1982											
11...	102	105	7.3	2.0	2.5	10.6	77	22	30	3	.53
APR											
14...	30	190	7.8	17.0	1.1	6.8	70	64	400	3	.14
JUN											
03...	24	202	7.8	22.0	1.1	5.8	66	35	77	<1	.10
AUG											
16...	13800	50	6.6	21.5	84	2.2	25	--	--	217	<.06

DATE	NITRO- GEN, NITRITE TOTAL (MG/L AS N) (00015)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00010)	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 N03) (71887)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS TOTAL (MG/L AS P04) (71886)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P) (70507)
OCT , 1981										
07...	.020	.12	.070	.18	.25	.37	1.6	.010	.03	.020
DEC										
03...	<.020	.13	<.070	<.14	<.21	.13	.58	<.010	<.03	.050
FEB , 1982										
11...	<.020	.53	<.060	.37	.37	.90	4.0	.010	.03	<.010
APR										
14...	<.020	.14	<.060	.36	.36	.50	2.2	<.010	<.03	<.010
JUN										
03...	<.020	.10	.060	1.0	1.10	1.2	5.3	.020	.06	<.010
AUG										
16...	.040	<.10	.100	2.1	2.20	2.2	9.8	.170	.52	.080

WHITE RIVER BASIN

07068380 LITTLE BLACK RIVER NEAR GRANDIN, MO--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	19.5	19.0	19.0	14.0	13.5	13.5	10.0	9.5	9.5	3.5	3.5	3.5
2	19.0	15.5	17.0	14.0	14.0	14.0	10.0	9.0	9.0	3.5	3.5	3.5
3	16.5	13.5	15.0	14.5	14.0	14.0	9.5	9.0	9.0	4.0	3.5	3.5
4	15.0	14.0	14.5	15.0	14.5	14.5	10.0	9.0	9.5	4.0	4.0	4.0
5	17.0	14.0	15.5	15.0	14.0	14.0	9.5	7.0	8.5	4.0	2.0	3.0
6	18.0	17.0	18.0	14.5	13.0	13.5	9.0	8.5	8.5	5.5	3.5	4.0
7	18.0	15.5	16.5	13.5	11.0	12.0	10.0	8.5	9.5	5.5	2.0	4.5
8	16.0	14.5	15.0	13.0	11.0	11.5	10.0	9.0	9.5	3.5	2.0	3.0
9	16.5	15.0	16.0	13.0	12.0	12.0	9.5	8.5	9.0	2.0	1.5	2.0
10	16.5	16.0	16.0	12.0	10.5	11.0	8.5	6.0	7.0	3.0	1.5	2.0
11	18.5	16.0	17.0	11.0	9.0	10.0	6.5	6.5	6.5	2.0	.5	1.5
12	18.0	16.5	17.0	11.0	9.0	10.0	6.5	6.0	6.5	1.0	.5	.5
13	17.0	16.5	16.5	10.5	9.0	10.0	7.0	6.0	6.5	1.5	.5	1.0
14	17.0	16.5	16.5	10.0	8.5	9.5	7.0	6.0	6.5	2.0	.5	1.5
15	16.5	16.0	16.0	10.5	9.0	7.0	6.5	6.0	6.5	1.5	.5	1.0
16	17.0	16.5	16.5	11.5	10.5	11.0	6.5	6.0	6.0	3.0	.5	1.0
17	17.0	17.0	17.0	11.5	9.5	10.5	6.5	6.0	6.5	3.5	1.0	2.0
18	17.0	16.0	16.0	11.5	9.0	10.5	6.0	4.0	4.5	.5	.0	1.0
19	16.0	13.0	14.0	13.0	11.5	12.0	4.0	3.0	3.5	.5	.0	.5
20	14.5	12.0	13.5	11.5	9.5	10.5	3.5	1.5	3.0	.5	.5	.5
21	14.5	13.0	14.0	9.5	7.0	8.0	3.0	2.0	2.0	1.0	1.0	1.0
22	14.5	13.5	14.0	8.5	7.0	8.0	3.5	3.0	3.5	3.0	1.0	1.5
23	13.5	11.5	12.0	9.5	9.0	8.5	4.0	3.5	3.5	3.0	3.0	3.0
24	12.0	9.5	10.5	10.0	9.0	9.0	4.0	3.5	3.5	2.0	1.5	2.0
25	10.5	8.5	9.5	10.0	8.5	8.5	3.5	2.0	3.0	3.0	2.0	2.0
26	10.5	9.5	10.0	13.0	9.5	10.5	4.0	3.0	3.5	3.0	1.5	2.0
27	11.5	9.5	10.5	13.0	11.0	11.0	4.5	3.5	4.0	2.0	1.0	1.5
28	11.5	9.5	10.5	10.0	10.0	10.0	5.0	4.5	4.5	3.5	2.0	3.0
29	13.0	10.5	11.5	10.0	10.0	9.5	5.0	4.5	4.5	3.5	3.5	3.5
30	13.0	11.0	12.0	10.0	10.0	10.0	4.5	3.0	3.5	5.0	3.5	4.0
31	13.5	12.0	13.0	---	---	---	3.5	3.0	3.0	5.0	3.0	4.0
MONTH	19.5	8.5	14.5	15.0	7.0	11.0	10.0	1.5	6.0	5.5	.0	2.5
	FEBRUARY			MARCH			APRIL			MAY		
1	3.0	1.5	2.0	8.0	5.0	6.5	14.5	10.5	13.0	14.5	12.0	13.5
2	2.0	2.0	2.0	8.5	6.5	7.0	14.0	14.0	14.0	15.0	13.5	14.0
3	3.0	2.0	2.0	8.5	8.5	8.5	14.0	11.0	13.0	15.5	14.0	15.0
4	2.0	1.5	2.0	8.0	7.0	8.0	13.0	10.0	11.0	17.0	15.0	16.0
5	2.0	2.0	2.0	8.0	6.0	7.0	11.5	10.5	11.0	18.0	15.5	16.5
6	1.5	1.0	1.5	7.0	6.0	6.0	10.5	8.0	9.5	18.0	16.5	16.5
7	3.0	.5	1.5	6.5	4.5	5.5	10.0	8.5	9.0	16.5	14.0	15.0
8	1.0	.5	1.0	6.0	4.0	5.0	8.5	7.0	7.0	14.5	12.0	14.0
9	1.5	1.0	1.5	7.0	5.0	6.0	8.5	6.0	7.0	15.5	13.0	15.0
10	2.0	.5	1.5	9.5	6.5	8.0	9.5	6.0	8.0	16.5	14.0	15.5
11	1.5	.5	1.0	11.0	9.5	10.0	13.0	8.0	10.0	17.0	15.0	16.5
12	1.5	1.5	1.5	11.5	11.0	11.0	14.5	10.5	12.0	18.0	16.0	16.5
13	2.0	1.0	1.5	12.0	11.0	11.5	16.0	13.0	14.5	18.0	16.5	18.0
14	3.0	1.5	2.0	11.5	9.0	10.5	17.0	14.0	15.5	18.5	18.0	18.5
15	4.0	3.0	3.5	9.5	8.0	8.5	16.5	13.5	15.0	20.0	18.0	19.0
16	4.0	4.0	4.0	13.0	9.5	11.0	16.0	15.5	15.5	20.5	18.5	19.5
17	4.5	4.0	4.5	13.0	10.5	11.5	17.0	14.5	15.5	21.5	19.5	20.5
18	5.0	5.0	5.0	13.0	11.0	11.5	15.5	12.0	14.0	21.5	19.5	20.5
19	6.5	5.0	5.5	13.0	11.0	11.5	14.5	13.5	13.5	21.0	19.5	20.5
20	7.0	5.5	6.0	14.0	11.5	13.0	15.0	13.0	14.0	22.0	20.5	21.0
21	8.0	6.5	7.0	14.0	11.5	13.0	15.0	12.0	13.5	23.0	20.5	21.5
22	8.0	6.0	6.5	12.0	9.5	10.5	14.0	11.0	12.0	23.0	21.0	22.0
23	8.5	6.0	7.0	10.5	8.5	9.5	13.5	10.5	12.0	23.5	21.0	22.0
24	8.5	8.5	8.5	12.0	9.5	11.0	13.5	10.5	12.0	23.0	20.5	21.5
25	8.5	6.0	7.0	12.0	10.0	11.0	13.5	13.0	13.0	23.0	21.0	21.5
26	6.0	4.5	5.0	10.0	8.0	9.0	13.5	11.5	13.0	22.0	21.0	21.5
27	5.0	4.0	4.5	9.5	7.0	8.5	14.0	11.5	13.0	22.0	21.5	21.5
28	6.5	4.5	5.5	9.0	6.5	8.0	14.0	11.5	13.0	24.0	23.5	23.0
29	---	---	---	10.0	7.0	8.5	13.5	12.0	13.0	25.5	24.5	24.5
30	---	---	---	11.0	10.0	10.5	13.5	11.0	12.0	26.5	24.5	25.0
31	---	---	---	14.5	11.0	12.0	---	---	---	26.0	24.5	25.5
MONTH	8.5	.5	3.5	14.5	4.0	9.5	17.0	6.0	12.5	26.5	12.0	19.0

07068380 LITTLE BLACK RIVER NEAR GRANDIN, MO--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	25.0	23.0	24.0	25.5	23.0	23.0	---	---	---	---	---	---
2	24.5	21.5	23.0	25.5	23.0	23.0	---	---	---	---	---	---
3	23.0	21.5	22.0	26.0	24.5	25.0	---	---	---	---	---	---
4	22.0	21.0	21.5	27.0	24.5	26.0	---	---	---	---	---	---
5	20.5	20.0	20.5	28.0	25.5	26.5	---	---	---	---	---	---
6	22.0	19.5	20.5	28.5	25.5	27.0	---	---	---	---	---	---
7	24.0	21.0	22.0	28.5	25.5	26.0	---	---	---	---	---	---
8	25.5	23.0	24.0	26.5	24.5	25.5	---	---	---	---	---	---
9	25.5	23.0	24.0	26.5	24.5	25.0	---	---	---	23.5	21.5	23.0
10	25.0	23.0	24.0	26.5	24.5	25.0	---	---	---	23.5	21.5	23.0
11	24.0	21.0	22.0	26.5	24.5	26.0	---	---	---	23.0	22.0	22.0
12	21.5	21.0	21.5	26.5	24.0	25.5	---	---	---	---	---	---
13	23.0	21.0	22.0	26.0	24.0	25.0	---	---	---	---	---	---
14	23.5	21.0	22.0	---	---	---	---	---	---	---	---	---
15	24.0	22.0	23.5	---	---	---	---	---	---	---	---	---
16	24.0	21.5	23.0	---	---	---	22.0	21.5	21.5	---	---	---
17	23.5	21.5	22.0	---	---	---	22.5	21.5	22.0	---	---	---
18	24.0	21.0	23.0	---	---	---	23.0	21.5	22.5	---	---	---
19	24.0	23.0	23.5	---	---	---	23.0	21.5	22.5	---	---	---
20	24.0	21.5	23.0	---	---	---	---	---	---	---	---	---
21	24.0	22.0	23.0	---	---	---	---	---	---	---	---	---
22	24.5	21.5	23.0	---	---	---	---	---	---	---	---	---
23	24.5	23.0	24.0	---	---	---	---	---	---	---	---	---
24	25.0	22.0	24.0	---	---	---	---	---	---	---	---	---
25	25.0	22.0	23.5	---	---	---	---	---	---	---	---	---
26	23.5	21.5	22.0	---	---	---	---	---	---	---	---	---
27	23.0	22.0	23.0	---	---	---	---	---	---	---	---	---
28	24.0	22.0	23.0	---	---	---	---	---	---	---	---	---
29	25.5	22.0	24.0	---	---	---	---	---	---	---	---	---
30	25.5	24.0	25.0	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	25.5	19.5	23.0	28.5	23.0	25.5	23.0	21.5	22.0	23.5	21.5	22.5
YEAR	28.5	.0	12.0									

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
	OCTOBER			NOVEMBER			DECEMBER		
1	5.4	5	.09	24	2	.08	32	2	.15
2	5.4	6	.10	39	3	.11	28	5	.34
3	5.7	5	.09	54	12	.49	27	7	.42
4	6.6	4	.07	68	5	.20	27	8	.45
5	7.5	6	.12	56	3	.12	26	3	.16
6	6.6	6	.12	45	2	.09	25	1	.05
7	6.3	5	.11	39	2	.09	24	2	.11
8	6.6	6	.13	36	2	.09	24	2	.12
9	8.9	3	.06	34	1	.04	24	2	.21
10	11	2	.04	31	2	.09	22	2	.17
11	13	5	.11	29	2	.09	22	1	.07
12	16	13	.27	28	1	.05	22	2	.13
13	18	18	.38	27	2	.09	21	2	.13
14	21	25	.53	26	5	.24	22	3	.18
15	20	7	.15	24	10	.49	20	2	.12
16	19	11	.39	24	8	.39	22	1	.05
17	20	15	.61	22	3	.19	20	1	.05
18	25	10	.25	22	8	.60	20	1	.05
19	22	17	.39	22	9	.58	19	2	.10
20	21	8	.16	20	4	.24	19	2	.10
21	20	5	.10	20	3	.18	21	2	.09
22	26	4	.09	20	2	.11	31	3	.14
23	30	4	.08	20	3	.19	45	100	4.6
24	26	6	.10	20	3	.19	38	28	1.3
25	24	8	.11	20	3	.17	35	70	3.2
26	40	13	.19	20	3	.18	33	54	2.3
27	33	7	.42	19	3	.19	32	2	.09
28	25	5	.32	20	3	.18	31	4	.16
29	22	7	.32	18	8	.48	29	3	.12
30	20	8	.32	30	4	.26	28	2	.08
31	21	4	.15	---	---	---	27	2	.09
TOTAL	552.0	---	6.37	877	---	6.49	816	---	15.33

WHITE RIVER BASIN

07068380 LITTLE BLACK RIVER NEAR GRANDIN, MO--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TUNS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TUNS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TUNS/DAY)
JANUARY				FEBRUARY				MARCH	
1	27	2	.09	416	132	13	41	1	.15
2	34	10	.41	270	14	1.5	59	1	.13
3	92	12	.49	212	7	.66	37	2	.24
4	401	5	.19	164	8	.69	37	2	.36
5	234	10	.38	126	8	.67	35	3	.75
6	146	18	.73	112	8	.69	35	1	.21
7	90	19	.82	102	5	.43	34	1	.18
8	72	14	.57	100	7	.60	31	2	.30
9	61	16	.65	164	21	1.8	31	3	.40
10	55	13	.53	140	17	5.4	31	4	.46
11	48	6	.24	108	7	3.4	31	3	.32
12	45	4	.15	96	4	1.8	31	3	.29
13	40	2	.08	87	4	1.5	36	6	.57
14	35	4	.16	86	4	.92	82	10	4.5
15	29	3	.12	112	12	2.0	807	31	81
16	30	3	.12	224	15	2.3	325	8	.69
17	28	2	.08	278	7	1.1	200	4	.31
18	28	3	.11	182	3	.43	270	14	1.0
19	27	4	.15	124	3	.39	452	19	1.4
20	28	3	.13	96	5	.62	226	5	.35
21	29	2	.11	78	6	.71	138	3	.21
22	1830	33	247	69	6	1.3	93	2	.17
23	1170	31	111	61	4	.89	77	2	.16
24	292	13	.63	57	1	.19	65	2	.15
25	170	6	.29	51	1	.17	56	5	.35
26	106	4	.19	48	1	.15	48	2	.14
27	82	4	.19	46	1	.13	43	1	.07
28	70	4	.18	44	1	.15	40	3	.20
29	74	4	.19	---	---	---	37	3	.23
30	2620	158	2760	---	---	---	36	4	.35
31	5400	330	5980	---	---	---	34	4	.33
TOTAL	13393	---	9105.98	3653	---	43.59	3478	---	95.97
APRIL				MAY				JUNE	
1	31	4	.32	116	6	.39	24	2	.69
2	32	3	.23	94	12	.71	22	3	.70
3	32	3	.23	82	7	.40	24	4	.89
4	29	2	.18	72	8	.45	26	6	1.2
5	30	4	.36	65	7	.42	24	5	1.1
6	28	4	.32	60	3	.19	22	6	4.1
7	27	1	.08	1650	39	220	20	10	8.5
8	31	1	.07	328	82	4.2	19	9	4.5
9	29	1	.07	178	5	.26	19	7	2.2
10	28	1	.07	118	5	.38	25	9	2.0
11	28	4	.27	88	2	.15	20	6	1.1
12	27	4	.27	70	2	.12	19	7	1.1
13	29	6	.39	61	2	.16	18	6	.79
14	30	7	.42	53	3	3.7	17	5	.57
15	28	4	.23	51	4	3.5	17	7	.66
16	31	4	.23	44	4	2.0	35	8	.80
17	38	8	.45	39	3	.95	24	5	.46
18	42	7	.40	36	3	.73	20	5	.39
19	47	7	.40	34	3	1.4	19	5	.42
20	71	8	.84	31	2	.73	17	4	.35
21	66	8	.78	35	3	.75	16	4	.30
22	55	6	.60	31	2	.39	17	4	.36
23	48	5	.54	28	3	.49	15	5	.61
24	45	5	.49	25	4	.58	15	7	.64
25	42	6	.55	25	6	.92	16	6	.47
26	410	58	80	31	6	1.5	17	6	.44
27	328	14	1.1	50	37	23	19	8	.52
28	190	4	.30	40	29	12	24	8	.48
29	168	3	.21	32	7	1.9	25	14	.76
30	148	3	.19	29	2	.46	20	9	.51
31	---	---	---	26	2	.81	---	---	---
TOTAL	2168	---	90.59	3622	---	283.64	615	---	37.61

WHITE RIVER BASIN

07068380 LITTLE BLACK RIVER NEAR GRANDIN, MO--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TUNS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TUNS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TUNS/DAY)
JULY				AUGUST			SEPTEMBER		
1	32	11	.65	10	2	.06	72	1	.02
2	25	7	.38	10	2	.06	200	1	.02
3	22	6	.34	9.0	3	.09	108	1	.02
4	19	7	.42	10	3	.08	67	1	.02
5	17	11	1.4	9.0	3	.08	54	1	.02
6	16	5	2.0	10	3	.08	44	1	.02
7	15	4	.69	10	2	.08	39	3	.07
8	16	5	.61	10	2	.07	36	2	.04
9	23	6	.60	9.0	3	.09	34	1	.02
10	24	5	.39	10	3	.08	32	2	.04
11	20	7	.51	10	6	.23	31	3	.06
12	17	4	.26	11	7	.28	29	2	.04
13	16	5	.30	29	8	.28	27	1	.02
14	14	3	.16	36	7	.23	26	1	.02
15	11	2	.10	49	8	.24	32	1	.02
16	13	3	.14	6410	148	2810	140	5	.12
17	14	3	.14	446	17	.60	48	4	.11
18	13	2	.09	196	5	.16	37	2	.06
19	12	2	.09	110	5	.15	29	1	.03
20	11	2	.08	75	5	.15	23	1	.03
21	14	3	.11	62	4	.10	21	2	.07
22	15	3	.11	56	3	.07	20	2	.08
23	15	2	.12	68	2	.05	20	2	.09
24	14	3	.21	76	2	.05	19	2	.10
25	14	3	.15	104	16	.48	17	2	.10
26	13	3	.13	94	8	.26	16	2	.08
27	13	2	.08	104	3	.08	15	2	.04
28	11	2	.09	132	9	.22	15	2	.03
29	11	2	.09	110	5	.12	15	2	.03
30	11	2	.08	89	9	.21	15	2	.03
31	11	2	.07	77	7	.16	---	---	---
TOTAL	492	---	10.59	8441.0	---	2814.89	1281	---	1.45
YEAR	39388.0		12512.50						

07068510 LITTLE BLACK RIVER BELOW FAIRDEALING, MO

LOCATION.--Lat 36°37'54", long 90°34'31", NE¼SE¼NE¼ sec.24, T.23 N., R.4 E., Butler County, Hydrologic Unit 11010008, on the left bank 200 feet (61 m) east of river and just north of a gravel road, 5 miles (8 km) below Beaverdam Creek and 3.1 miles (5.0 km) southeast of Fairdealing.

DRAINAGE AREA.--194 square miles (502 km²).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 295.18 feet (89.971 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,100 ft³/s (399 m³/s) Jan. 31, 1982, gage height, 19.31 ft (3.075 m); minimum, 28 ft³/s (0.793 m³/s) Oct. 3, 1982.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,000 ft³/s (85 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s)	(m ³ /s)	Gage height (ft)	(m)
Jan. 23	0945	5,830	165	17.10	5.212
Jan. 31	1000	*14,100	399	19.31	5.886
Mar. 15	1845	3,180	90.1	14.47	4.410
Aug. 17	0500	7,260	206	18.13	5.526

Minimum discharge, 28 ft³/s (1.79 m³/s) Oct. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	29	43	77	70	3580	134	104	337	82	66	46	116		
2	29	53	80	81	1100	125	100	276	74	69	47	115		
3	29	72	71	164	702	117	104	232	72	67	48	199		
4	30	116	64	424	502	116	99	200	78	61	50	198		
5	35	136	60	569	387	111	96	175	83	58	48	152		
6	33	125	58	337	319	103	96	153	78	56	48	123		
7	31	109	57	234	260	99	90	511	72	52	47	106		
8	30	95	55	180	233	93	90	2350	68	55	44	94		
9	30	84	54	147	351	86	99	898	65	52	45	86		
10	30	77	53	129	458	85	98	404	73	55	47	80		
11	30	72	51	110	348	86	93	285	76	60	49	79		
12	30	68	50	106	288	84	92	232	72	57	51	74		
13	31	65	49	102	255	84	94	198	67	54	58	72		
14	32	63	49	93	233	146	146	173	66	53	97	71		
15	33	61	49	85	280	2310	136	161	60	51	106	70		
16	36	59	48	80	610	2310	151	152	65	49	642	74		
17	33	58	48	71	1170	1050	424	136	77	47	5580	96		
18	34	56	47	71	825	539	261	124	73	47	1980	83		
19	35	55	46	70	518	1560	199	116	63	48	566	64		
20	35	54	45	76	381	1010	213	119	62	47	264	54		
21	34	52	46	105	312	523	243	110	59	51	186	49		
22	34	51	65	926	259	344	221	103	59	62	150	46		
23	38	50	167	4980	222	260	190	99	59	60	129	45		
24	39	50	160	2730	196	224	167	89	56	60	117	45		
25	38	49	123	1100	172	200	154	85	56	56	137	44		
26	41	49	106	832	154	173	306	85	60	51	151	44		
27	50	48	96	342	146	151	1280	118	60	52	144	44		
28	56	47	88	273	144	134	696	135	60	51	154	43		
29	49	46	81	278	---	125	429	121	62	47	176	42		
30	46	52	75	977	---	117	389	104	65	46	154	42		
31	43	---	71	7000	---	112	---	91	---	45	132	---		
TOTAL	1103	2015	2189	22742	14407	12611	6860	8372	2022	1685	11495	2450		
MEAN	35.6	67.2	70.6	734	515	407	229	270	67.4	54.4	371	81.7		
MAX	56	136	167	7000	3580	2310	1280	2350	83	69	5580	199		
MIN	29	43	45	70	144	84	90	85	56	45	44	42		
CFSM	.18	.35	.36	3.78	2.66	2.10	1.18	1.39	.35	.28	1.91	.42		
IN.	.21	.39	.42	4.36	2.76	2.42	1.32	1.61	.39	.32	2.20	.47		
AC-FT	2190	4000	4340	45110	28580	25010	13610	16610	4010	3340	22800	4860		
CAL YR 1981	TOTAL	31190	MEAN	85.5	MAX	1090	MIN	29	CFSM	.44	IN	5.98	AC-FT	61870
WTR YR 1982	TOTAL	87951	MEAN	241	MAX	7000	MIN	29	CFSM	1.24	IN	16.86	AC-FT	174500

WHITE RIVER BASIN

07068510 LITTLE BLACK RIVER BELOW FAIRDEALING, MO

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: May 1981 to current year.

SUSPENDED-SEDIMENT DISCHARGE: July 1980 to current year.

INSTRUMENTATION.--Water temperature recorder since May 1981.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 31°C July 6, 7, 8, 9, 14 and 15, 1980; minimum, 0°C on many days.

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 643 mg/L August 16, 1982; minimum daily mean, 1 mg/L on many days.

SUSPENDED-SEDIMENT LOADS: Maximum daily, 6100 tons (5530 metric tons) January 31, 1982; minimum daily, 0.12 tons (0.11 metric tons) December 19, 1982.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 28.5°C July 19, 20, 21 and August 5; minimum, 0.0°C on many days.

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 643 mg/L August 16; minimum daily mean, 1 mg/L on many days.

SUSPENDED-SEDIMENT LOADS: Maximum daily, 6100 tons (5530 metric tons) January 31; minimum daily, 0.12 tons (0.11 metric tons) Dec. 19.

DATE	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (FTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	COLI- FORM, FECAL, UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI KF AGAR (COLS. PER 100 ML) (31673)	SULIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L) (00530)	NITRO- GEN, NITRATE TOTAL (MG/L AS N) (00620)
OCT , 1981											
06...	32	320	7.4	17.5	5.4	5.2	54	81	380	9	.10
DEC											
02...	80	272	7.6	8.0	4.4	9.9	83	370	1100	6	<.08
FEB , 1982											
09...	393	142	7.2	2.0	8.8	10.2	74	160	480	23	.77
APR											
13...	89	250	7.8	16.5	4.6	7.0	71	46	48	5	<.08
JUN											
02...	78	222	7.4	21.0	14	5.2	58	81	180	26	.08
AUG											
16...	2170	50	6.7	21.0	62	2.8	31	K300	>800	224	.07

DATE	NITRO- GEN, NITRIIE 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)	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- PHURUS, TOTAL (MG/L AS P) (00665)	PHOS- PHURUS TOTAL (MG/L AS PO4) (71886)	PHOS- PHURUS, ORTHO, TOTAL (MG/L AS P) (70507)
OCT , 1981										
06...	.030	.13	.110	.36	.47	.60	2.7	.020	.06	.030
DEC										
02...	<.020	<.10	<.070	.23	.23	.23	1.0	.020	.06	.070
FEB , 1982										
09...	<.020	.77	.080	.63	.71	1.5	6.6	.030	.09	.020
APR										
13...	<.020	<.10	<.060	.34	.34	.34	1.5	<.010	<.03	.010
JUN										
02...	<.020	.10	.100	.70	.80	.90	4.0	.040	.12	.030
AUG										
16...	.030	.10	.100	1.7	1.80	1.9	8.4	.150	.46	.050

WHITE RIVER BASIN

07068510 LITTLE BLACK RIVER BELOW FAIRDEALING, MO--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1				---	---	---	9.0	8.5	9.0	4.0	3.5	3.5
2				---	---	---	8.5	8.0	8.0	3.5	3.0	3.5
3				---	---	---	8.0	7.5	8.0	5.5	3.5	4.5
4				15.5	15.0	15.0	8.0	7.5	8.0	5.5	5.0	5.5
5				15.5	14.5	15.0	7.5	7.0	7.0	5.0	4.5	4.5
6				15.0	13.5	14.5	7.5	7.0	7.0	6.5	4.5	5.5
7				13.5	12.0	13.0	8.5	7.0	8.0	6.5	5.0	6.0
8				12.5	11.0	12.0	8.5	8.0	8.5	5.0	3.0	3.5
9				12.5	11.5	12.0	8.5	7.5	8.0	3.0	2.0	2.5
10				11.5	11.0	11.0	7.5	6.0	6.5	2.0	.0	1.0
11				11.0	10.0	10.5	6.5	5.5	6.0	.0	.0	.0
12				10.5	9.5	10.0	6.0	5.0	5.5	.0	.0	.0
13				10.0	9.5	9.5	5.5	5.0	5.0	.0	.0	.0
14				9.5	9.0	9.5	6.0	5.5	5.5	.0	.0	.0
15				10.0	9.0	9.5	6.0	5.5	6.0	.0	.0	.0
16				10.5	10.0	10.5	6.5	6.0	6.0	.0	.0	.0
17				11.0	10.0	10.5	6.5	4.5	6.0	.0	.0	.0
18				11.0	10.0	10.5	4.5	2.5	3.5	.0	.0	.0
19				12.0	11.0	11.5	2.5	.5	1.5	.0	.0	.0
20				11.0	9.5	10.5	1.0	.5	.5	.0	.0	.0
21				9.5	7.5	8.5	1.0	.5	1.0	1.5	.0	.0
22				8.5	7.5	7.5	2.5	1.0	2.0	2.5	1.0	1.5
23				8.0	7.5	8.0	3.0	2.0	2.5	3.0	2.0	2.5
24				8.5	7.5	8.0	3.0	2.5	3.0	2.0	1.5	2.0
25				8.0	7.5	8.0	3.0	2.0	2.5	3.0	2.0	2.5
26				10.5	8.0	9.5	3.5	2.5	3.0	3.0	2.5	2.5
27				10.5	9.5	10.0	4.5	3.5	4.0	3.0	2.0	2.5
28				10.0	9.0	9.5	5.5	4.0	5.0	4.0	3.0	3.5
29				9.5	9.0	9.0	5.5	4.5	5.0	4.5	3.5	4.0
30				9.0	9.0	9.0	4.5	3.5	4.0	6.0	3.5	5.0
31				---	---	---	4.5	3.5	4.0	5.5	2.0	3.0
MONTH				15.5	7.5	10.5	9.0	.5	5.0	6.5	.0	2.0
FEBRUARY			MARCH			APRIL			MAY			
1	2.0	1.0	1.5	8.5	7.0	8.0	16.0	13.5	15.0	16.0	15.0	15.5
2	2.5	1.5	2.0	9.5	8.0	9.0	16.0	15.0	15.5	17.5	16.0	17.0
3	2.5	2.5	2.5	10.0	9.5	9.5	15.5	14.0	15.0	18.0	17.0	17.5
4	2.5	2.0	2.0	10.0	9.5	9.5	14.5	13.0	14.0	20.0	18.0	19.0
5	2.0	1.5	2.0	9.5	8.5	9.0	13.5	12.0	13.0	20.5	19.0	20.0
6	1.5	1.0	1.5	8.5	7.5	8.0	11.5	10.5	11.0	20.5	20.0	20.5
7	1.0	.0	.5	8.0	6.5	7.0	11.0	10.0	10.5	20.5	16.0	18.0
8	1.5	.5	1.0	8.0	6.0	7.0	9.5	9.0	9.0	17.0	15.5	16.0
9	1.5	1.0	1.5	8.0	6.5	7.5	9.5	8.0	8.5	17.0	16.0	16.5
10	1.5	.5	.5	10.0	7.5	9.0	10.0	8.0	9.0	18.0	16.5	17.5
11	1.0	.0	.5	12.5	10.0	11.0	12.0	9.0	10.5	19.0	17.5	18.0
12	1.5	1.0	1.5	14.0	12.0	13.0	14.5	11.0	12.5	20.0	18.0	19.0
13	2.0	1.0	1.5	14.5	13.0	14.0	17.0	13.5	15.0	20.5	19.0	20.0
14	3.0	1.5	2.0	14.0	10.0	12.0	18.5	13.5	16.5	20.5	20.0	20.0
15	3.5	2.5	3.0	10.5	9.0	9.5	19.0	17.0	18.0	21.0	20.0	20.5
16	5.0	3.5	4.0	14.5	10.5	12.5	18.0	15.5	17.5	22.0	20.5	21.0
17	5.5	5.0	5.5	15.0	14.5	14.5	17.5	15.0	16.5	23.0	21.0	22.0
18	6.5	5.5	6.0	15.0	14.5	15.0	16.5	15.5	15.5	23.0	21.5	22.0
19	7.5	6.5	7.0	15.5	14.5	15.0	15.5	14.5	15.0	23.0	21.5	22.0
20	8.5	7.5	8.0	16.0	15.0	15.5	16.0	14.5	15.5	23.5	21.5	22.5
21	9.5	8.5	9.0	16.0	15.0	15.5	16.0	15.0	15.5	24.0	22.0	23.0
22	9.5	8.5	9.0	15.0	13.0	14.0	15.5	14.5	15.0	24.0	22.0	23.0
23	10.0	9.0	9.5	13.0	11.0	12.0	15.0	14.0	14.5	24.0	22.0	23.0
24	10.5	10.0	10.0	13.5	11.5	12.5	15.0	14.0	14.5	23.5	21.5	22.5
25	10.0	8.0	9.0	13.0	12.0	12.5	15.0	14.5	15.0	22.5	21.5	22.0
26	8.0	6.0	7.0	12.0	11.0	11.0	15.5	15.0	15.0	22.0	21.0	21.5
27	6.0	5.5	6.0	11.0	10.0	10.5	15.0	14.0	15.0	22.5	21.0	21.5
28	7.5	6.0	6.5	10.5	9.5	10.0	15.0	15.0	15.0	23.0	21.5	22.0
29	---	---	---	11.0	9.5	10.0	15.0	14.5	15.0	24.5	22.5	23.5
30	---	---	---	11.5	10.5	11.0	15.0	14.0	14.5	25.0	23.5	24.5
31	---	---	---	15.0	11.5	13.5	---	---	---	25.0	24.0	24.5
MONTH	10.5	.0	4.5	16.0	6.0	11.0	19.0	8.0	14.0	25.0	15.0	20.5

07068510 LITTLE BLACK RIVER BELOW FAIRDEALING, MO--Continued
 TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	24.0	22.5	23.5	24.5	24.0	24.5	26.5	25.0	26.0	24.5	23.5	24.0
2	23.0	21.5	22.0	25.0	23.5	24.5	27.0	25.0	26.0	24.5	23.5	24.0
3	21.5	20.5	21.0	26.0	24.5	25.0	27.0	25.5	26.5	23.5	22.5	23.0
4	21.0	20.5	20.5	27.0	25.0	26.0	28.0	26.0	27.0	22.5	21.5	22.0
5	20.5	19.5	20.0	28.0	26.0	27.0	28.5	26.5	27.5	22.0	21.0	21.5
6	20.5	18.5	19.5	28.0	26.5	27.0	27.5	26.5	27.0	22.0	20.5	21.0
7	22.5	20.0	21.0	27.0	26.0	26.5	27.5	26.5	27.0	22.5	21.0	21.5
8	24.0	21.5	23.0	27.0	25.5	26.0	26.5	26.0	26.5	23.0	21.0	22.0
9	24.5	23.5	24.0	26.0	25.0	25.5	27.0	25.5	26.0	23.0	21.5	22.5
10	24.5	23.0	24.0	27.0	25.0	26.0	26.5	25.0	25.5	23.0	21.5	22.5
11	23.5	22.0	22.5	27.0	25.0	26.0	25.5	24.0	24.5	23.0	22.0	22.5
12	22.0	21.0	21.5	26.5	25.0	25.5	24.0	23.0	23.5	22.5	22.0	22.5
13	22.5	21.0	21.5	26.5	25.0	25.5	23.0	21.5	22.0	23.5	22.0	22.5
14	23.0	21.0	22.0	27.0	25.0	26.0	22.0	21.0	21.5	24.5	23.0	23.5
15	24.0	22.5	23.0	27.0	25.0	26.0	21.5	21.0	21.5	24.0	23.5	24.0
16	23.0	22.0	22.5	27.0	25.5	26.0	21.5	21.0	21.5	23.5	22.5	23.0
17	23.0	21.0	22.5	28.0	26.0	26.5	23.5	21.0	22.5	22.5	21.0	22.0
18	23.5	21.0	22.5	28.0	26.5	27.0	23.5	22.5	23.0	22.5	21.5	22.0
19	23.5	22.0	23.0	28.5	26.5	27.0	23.0	22.5	23.0	21.5	20.5	21.0
20	24.0	22.0	23.0	28.5	26.5	27.5	23.5	22.5	23.0	21.0	20.0	20.5
21	23.5	22.5	23.0	28.5	26.5	27.0	24.5	23.5	24.0	20.0	17.5	18.5
22	24.5	22.5	23.5	27.5	26.0	27.0	24.0	23.0	23.5	17.5	16.5	17.0
23	25.0	23.0	24.0	27.0	26.0	26.5	24.0	23.0	23.5	16.5	16.0	16.5
24	25.0	23.5	24.0	26.0	25.5	25.5	23.5	23.0	23.5	17.5	16.5	17.0
25	24.0	22.5	23.5	26.5	25.0	26.0	24.0	23.0	23.5	17.5	17.0	17.0
26	23.5	22.5	23.0	27.0	26.0	26.5	23.0	22.5	23.0	17.0	16.5	17.0
27	23.0	22.5	23.0	28.0	26.0	26.5	23.0	22.0	22.5	17.0	16.0	16.5
28	24.0	22.5	23.0	27.0	26.5	26.5	22.0	21.5	22.0	17.5	16.0	17.0
29	24.5	22.5	24.0	27.0	25.5	26.5	22.0	21.0	21.5	18.0	17.0	17.5
30	25.0	24.0	24.5	26.5	26.0	26.0	22.5	21.5	22.0	19.0	17.5	18.0
31	---	---	---	26.5	25.0	26.0	24.0	22.5	23.5	---	---	---
MONTH	25.0	18.5	22.5	28.5	23.5	26.0	28.5	21.0	24.0	24.5	16.0	20.5
YEAR	28.5	.0	15.0									

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TUNS/DAY)	MEAN DISCHARGE (CFS)	MEAN CUNCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TUNS/DAY)	MEAN DISCHARGE (CFS)	MEAN CUNCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TUNS/DAY)
OCTOBER				NOVEMBER				DECEMBER	
1	29	14	1.1	43	34	3.9	77	26	5.4
2	29	14	1.1	53	57	8.2	80	5	1.1
3	29	10	.78	72	61	12	71	7	1.3
4	30	6	.49	116	30	9.4	64	5	.86
5	35	5	.47	136	8	2.9	60	4	.65
6	33	5	.45	125	5	1.7	58	4	.63
7	31	7	.59	109	5	1.5	57	5	.77
8	30	8	.65	95	7	1.8	55	6	.89
9	30	11	.89	84	1	.23	54	7	1.0
10	30	12	.97	77	1	.21	53	8	1.1
11	30	10	.81	72	2	.39	51	7	.96
12	30	16	1.3	68	1	.18	50	5	.68
13	31	18	1.5	65	1	.18	49	6	.79
14	32	24	2.1	63	1	.17	49	5	.66
15	33	16	1.4	61	2	.33	49	6	.79
16	36	8	.78	59	1	.16	48	6	.78
17	33	8	.71	58	2	.31	48	3	.39
18	34	11	1.0	56	4	.60	47	1	.13
19	35	9	.85	55	4	.59	46	1	.12
20	35	7	.66	54	6	.87	45	2	.24
21	34	5	.46	52	4	.56	46	2	.25
22	34	4	.37	51	4	.55	65	7	1.2
23	38	7	.72	50	4	.54	167	166	75
24	39	6	.63	50	3	.41	160	168	73
25	38	6	.62	49	6	.79	123	61	20
26	41	7	.77	49	7	.93	106	25	7.2
27	50	10	1.4	48	8	1.0	96	8	2.1
28	56	12	1.8	47	9	1.1	88	7	1.7
29	49	13	1.7	46	10	1.2	81	10	2.2
30	46	14	1.7	52	23	3.2	75	16	3.2
31	43	20	2.3	---	---	---	71	12	2.3
TOTAL	1103	---	31.07	2015	---	55.90	2189	---	207.39

WHITE RIVER BASIN

07068510 LITTLE BLACK RIVER BELOW FAIRDEALING, MO--Continued

SEDIMENT DISCHARGE, SUSPENDED (TUNS/DAY), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TUNS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TUNS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TUNS/DAY)
JANUARY			FEBRUARY			MARCH			
1	70	5	.95	3580	54	522	134	6	2.2
2	81	6	1.3	1100	25	74	125	7	2.4
3	164	44	19	702	19	36	117	10	3.2
4	424	63	70	502	12	16	116	13	4.1
5	569	28	43	387	11	11	111	12	3.6
6	337	13	12	319	6	5.2	103	13	3.6
7	234	18	11	260	3	2.1	99	10	2.7
8	180	13	6.3	233	5	3.1	93	8	2.0
9	147	5	2.0	351	13	12	86	9	2.1
10	129	5	1.7	458	12	15	85	10	2.3
11	110	7	2.1	348	5	4.7	86	10	2.3
12	106	5	1.4	288	4	3.1	84	16	3.6
13	102	3	.83	255	4	2.8	84	18	4.1
14	93	3	.75	233	4	2.5	146	36	14
15	85	5	1.1	280	9	6.8	2310	262	1630
16	80	4	.86	610	254	418	2310	38	237
17	71	4	.77	1170	33	104	1050	28	79
18	71	4	.77	825	13	29	539	36	52
19	70	14	2.6	518	10	14	1560	94	396
20	76	8	1.6	381	9	9.3	1010	35	95
21	105	53	15	312	8	6.7	523	26	37
22	1250	340	1350	259	10	7.0	344	24	22
23	4980	179	2280	222	8	4.8	260	18	13
24	2730	30	221	196	8	4.2	224	20	12
25	1100	20	59	172	6	2.8	200	19	10
26	832	20	45	154	4	1.7	173	13	6.1
27	342	12	11	148	4	1.6	151	12	4.9
28	273	10	7.4	144	5	1.9	134	12	4.3
29	278	11	8.3	---	---	---	125	18	6.1
30	977	71	306	---	---	---	117	20	6.3
31	7000	304	6100	---	---	---	112	21	6.4
TOTAL	23066	---	10582.73	14407	---	1321.3	12611	---	2669.3
APRIL			MAY			JUNE			
1	104	22	6.2	337	27	25	82	38	8.4
2	100	23	6.2	276	30	22	74	39	7.8
3	104	24	6.7	232	33	21	72	44	8.6
4	99	20	5.3	200	33	18	78	42	8.8
5	96	18	4.7	175	36	17	83	34	7.6
6	96	13	3.4	153	45	19	78	32	6.7
7	90	14	3.4	511	182	454	72	32	6.2
8	90	11	2.7	2350	42	266	68	34	6.2
9	99	6	1.6	898	20	48	65	40	7.0
10	98	8	2.1	404	23	25	73	46	9.1
11	93	12	3.0	285	26	20	76	31	6.4
12	92	16	4.0	232	21	13	72	34	6.6
13	94	25	6.3	198	30	16	67	39	7.1
14	146	37	15	173	28	13	66	37	6.6
15	136	21	7.7	161	37	16	60	33	5.3
16	151	65	27	152	26	11	65	39	6.8
17	424	118	139	136	23	8.4	77	37	7.7
18	261	41	29	124	28	9.4	73	34	6.7
19	199	34	18	116	27	8.5	63	37	6.3
20	213	30	17	119	30	9.6	62	36	6.0
21	243	27	18	110	38	11	59	33	5.3
22	221	26	16	103	37	10	59	34	5.4
23	190	25	13	99	37	9.9	59	30	4.8
24	167	36	16	89	35	8.4	56	33	5.0
25	154	30	12	85	36	8.3	56	32	4.8
26	306	30	25	85	34	7.8	60	35	5.7
27	1280	93	321	118	38	12	60	34	5.5
28	696	30	56	135	39	14	60	32	5.2
29	429	25	29	121	36	12	62	37	6.2
30	369	26	27	104	34	9.5	65	38	6.7
31	---	---	---	91	37	9.1	---	---	---
TOTAL	6860	---	841.3	8372	---	1151.9	2022	---	196.5

07068510 LITTLE BLACK RIVER BELOW FAIRDEALING, MO--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JULY			AUGUST			SEPTEMBER			
1	66	34	6.1	46	18	2.2	116	26	8.1
2	69	35	6.5	47	18	2.3	115	18	5.6
3	67	36	6.5	48	19	2.5	199	42	23
4	61	34	5.6	50	21	2.8	198	23	12
5	58	24	3.8	48	21	2.7	152	12	4.9
6	56	24	3.6	48	18	2.3	123	19	6.3
7	52	28	3.9	47	16	2.0	106	18	5.2
8	55	32	4.8	44	15	1.8	94	20	5.1
9	52	27	3.8	45	19	2.3	86	23	5.3
10	55	24	3.6	47	18	2.3	80	21	4.5
11	60	26	4.2	49	17	2.2	79	17	3.6
12	57	20	3.1	51	18	2.5	74	16	3.2
13	54	18	2.6	58	23	3.6	72	17	3.3
14	53	21	3.0	97	30	7.9	71	17	3.3
15	51	21	2.9	106	24	6.9	70	20	3.8
16	49	20	2.6	642	643	3050	74	28	5.6
17	47	18	2.3	5580	86	1510	96	20	5.2
18	47	19	2.4	1980	39	208	83	20	4.5
19	48	17	2.2	568	24	37	64	17	2.9
20	47	21	2.7	264	26	19	54	13	1.9
21	51	22	3.0	186	24	12	49	13	1.7
22	62	25	4.2	150	21	8.5	46	12	1.5
23	60	20	3.2	129	20	7.0	45	13	1.6
24	60	23	3.7	117	21	6.6	45	14	1.7
25	56	21	3.2	137	36	13	44	13	1.5
26	51	18	2.5	151	33	13	44	14	1.7
27	52	16	2.2	144	24	9.3	44	13	1.5
28	51	16	2.2	154	19	7.9	43	18	2.1
29	47	16	2.0	176	19	9.0	42	15	1.7
30	46	16	2.0	154	20	8.3	42	16	1.8
31	45	19	2.3	132	22	7.8	---	---	---
TOTAL	1685	---	106.7	11495	---	4972.7	2450	---	134.1
YEAR	88275		22270.89						

WHITE RIVER BASIN

07068540 LOGAN CREEK AT OXLY, MO

LOCATION.--Lat 36°35'40", long 90°41'42", in SW¼SE¼SW¼ sec.36, T.23 N., R.3 E., Ripley County, Hydrologic Unit 11010008, on the downstream side of Highway 142 bridge at west edge of Oxly, 0.7 mile (1.1 km) below Cypress Creek at 5 miles (8.0 km) above Harris Creek.

DRAINAGE AREA.--37.5 square miles (97.1 km²).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 303.34 feet (92.458 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,760 ft³/s (191 m³/s) Aug. 16, 1982, gage height, 13.20 ft (4.023 m); minimum, 2.40 ft³/s (0.068 m³/s) September 15, 1980.

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

Date	Time	Discharge (ft ³ /s)	Discharge (m ³ /s)	Gage height (ft)	Gage height (m)
Jan. 22	2200	1,080	30.6	7.16	2.182
Jan. 31	----	5,280	150	12.25	3.734
Mar. 15	0200	1,600	45.3	8.35	2.545
Aug. 16	1300	*6,760	191	13.20	4.023

Minimum discharge, 2.4 ft³/s (0.07 m³/s) Sept. 13, gage height, 1.89 ft (0.576 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.1	5.0	16	9.2	161	22	12	41	10	23	4.4	13
2	3.0	9.2	11	23	107	21	13	34	8.4	11	4.6	13
3	2.8	14	12	90	94	20	15	28	10	9.2	4.6	13
4	3.1	12	7.8	129	71	20	13	25	14	8.1	4.8	10
5	3.0	9.6	7.8	55	54	18	14	23	13	7.4	4.6	8.4
6	2.8	8.1	6.8	36	47	17	15	21	11	6.8	4.2	7.8
7	2.6	7.4	6.5	29	47	16	13	131	9.6	6.8	4.6	7.1
8	2.6	6.8	6.2	22	47	15	15	73	8.4	7.1	4.4	6.8
9	2.6	6.2	6.0	20	107	14	16	43	20	6.8	5.0	6.5
10	2.7	5.2	5.7	18	84	14	15	31	10	6.8	4.6	6.2
11	2.8	5.4	5.4	18	59	14	13	25	29	6.5	12	6.0
12	2.8	5.0	5.2	17	47	14	13	21	20	5.7	9.2	6.2
13	2.8	4.8	5.0	15	40	14	13	19	16	5.4	54	6.5
14	3.7	5.2	5.2	11	44	74	85	17	13	5.4	34	6.2
15	3.8	4.4	5.2	11	95	429	47	18	11	5.0	40	7.4
16	3.1	4.6	4.2	10	182	151	52	17	18	4.6	1620	7.1
17	3.6	4.4	4.2	9.6	155	94	210	15	23	4.4	175	6.0
18	4.2	4.4	4.4	8.4	100	63	88	14	16	4.4	56	5.7
19	3.6	4.2	4.4	8.1	70	49	63	13	13	4.2	35	5.7
20	3.4	4.2	4.4	19	55	57	73	13	10	4.6	25	5.4
21	3.7	4.4	5.2	29	46	30	47	13	9.2	6.0	20	5.2
22	4.8	4.0	20	1520	37	25	35	11	8.1	8.1	16	5.2
23	5.0	4.2	66	640	33	22	30	10	7.8	4.8	15	5.0
24	4.4	4.8	25	147	30	21	25	9.6	7.1	4.4	15	5.0
25	4.6	4.6	20	40	27	18	24	11	7.8	4.2	34	4.8
26	8.8	5.0	17	39	25	16	200	13	11	4.2	20	4.8
27	9.2	5.0	14	39	24	14	122	60	9.2	4.6	22	4.8
28	5.7	5.0	13	34	24	13	66	23	11	4.8	23	4.6
29	4.4	5.2	11	63	---	13	64	16	14	4.8	20	4.6
30	3.8	11	10	1100	---	13	58	13	14	4.8	17	4.4
31	3.7	---	10	1900	---	13	---	11	---	4.6	14	---
TOTAL	120.2	183.3	344.6	6109.3	1912	1314	1469	812.6	382.6	196.5	2322.0	202.4
MEAN	3.88	6.11	11.1	197	68.3	42.4	49.0	26.2	12.8	6.40	74.9	6.75
MAX	9.2	14	66	1900	182	429	210	131	29	23	1620	13
MIN	2.6	4.0	4.2	8.1	24	13	12	9.6	7.1	4.2	4.2	4.4
CFSM	.10	.16	.30	5.25	1.82	1.13	1.31	.70	.34	.17	2.00	.18
IN	.12	.18	.34	6.06	1.90	1.30	1.46	.81	.38	.20	2.30	.20
AC-FT	238	364	684	12120	3790	2610	2910	1610	759	394	4610	401

CAL YR 1981	TOTAL	4648.3	MEAN	12.7	MAX	129	MIN	2.6	CFSM	.34	IN	4.61	AC-FT	9220
WTR YR 1982	TOTAL	15370.5	MEAN	42.1	MAX	1900	MIN	2.6	CFSM	1.12	IN	15.25	AC-FT	30490

07068540 LOGAN CREEK AT OXLY, MO

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: May 1981 to current year.

SUSPENDED SEDIMENT: August 1980 to current year.

INSTRUMENTATION.--Water temperature recorder since May 1981.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 27.0°C on August 3, 4, 5 and 6, 1982; minimum, 1.0°C on many days.

SUSPENDED SEDIMENT CONCENTRATIONS: Maximum daily mean, 110 mg/L January 30, 1982; minimum daily mean, <1 mg/L on many days.

SUSPENDED SEDIMENT LOADS: Maximum daily, 960 tons (871 metric tons) January 31, 1982; minimum daily, 0.00 tons on many days.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 27.0°C on August 3, 4, 5 and 6; minimum, 1.0°C on many days.

SUSPENDED SEDIMENT CONCENTRATIONS: Maximum daily mean, 110 mg/L January 30; minimum daily mean, <1 mg/L September 29 and 31.

SUSPENDED SEDIMENT LOADS: Maximum daily, 960 tons (871 metric tons) January 31; minimum daily, 0.00 tons on many days.

DATE	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- LIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (FTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	COLI- FORM, FECAL, 0.7 KF AGAR UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L) (00530)	NITRO- GEN, NITRATE TOTAL (MG/L AS N) (00620)
OCT , 1981											
06...	2.8	300	7.3	19.0	1.8	7.0	75	42	540	21	<.08
DEC											
02...	11	255	7.6	9.0	1.5	10.0	86	80	200	2	<.08
FEB , 1982											
09...	119	85	6.9	2.0	9.5	11.4	83	130	840	9	1.4
APR											
13...	13	240	8.0	19.0	1.5	5.2	55	18	40	4	<.08
JUN											
02...	9.0	315	7.3	20.5	3.2	4.2	47	57	83	4	<.08
AUG											
17...	108	108	6.8	22.0	10	4.2	48	K900	1200	14	.30

DATE	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)	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, TOTAL (MG/L AS PO4) (71886)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P) (70507)
OCT , 1981										
06...	.020	<.10	.090	.18	.27	.27	1.2	.010	.03	.020
DEC										
02...	<.020	<.10	<.070	<.14	<.21	<.21	<.93	<.010	<.03	.060
FEB , 1982										
09...	.020	1.4	.100	.73	.83	2.2	9.9	.020	.06	<.010
APR										
13...	<.020	<.10	<.060	.30	.30	.30	1.4	<.010	<.03	<.010
JUN										
02...	<.020	<.10	.070	.83	.90	.90	4.0	.020	.06	.020
AUG										
17...	<.020	.30	.080	.42	.50	.80	3.5	.060	.18	<.010

WHITE RIVER BASIN

07068540 LOGAN CREEK AT OXLY, MO--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	21.5	20.0	20.5	14.5	14.0	14.0	9.0	8.5	9.0	4.5	4.0	4.5
2	20.0	17.0	18.0	14.5	14.5	14.5	9.0	8.0	8.5	4.5	4.0	4.0
3	18.5	14.5	16.5	15.0	14.5	14.5	9.0	8.0	8.5	5.0	4.0	4.5
4	16.5	15.5	16.0	15.5	15.0	15.0	9.0	8.0	8.5	5.5	5.0	5.0
5	20.0	16.0	18.0	15.5	15.0	15.0	8.5	6.5	8.0	4.5	3.5	4.5
6	20.0	18.5	19.5	15.0	13.0	14.0	8.0	7.0	8.0	7.0	4.5	6.0
7	18.5	16.0	16.5	14.0	12.0	13.0	9.5	7.0	8.5	6.5	5.0	5.5
8	16.0	14.0	15.5	13.5	11.5	12.0	9.5	8.5	9.0	5.0	3.5	4.0
9	16.5	15.0	16.0	13.5	12.0	12.0	9.0	7.0	8.0	3.5	3.0	3.0
10	17.0	16.5	16.5	13.0	10.5	11.0	8.0	6.0	6.5	3.0	1.0	1.5
11	18.0	16.5	17.0	11.5	9.5	10.5	6.5	6.0	6.0	1.5	1.0	1.0
12	18.0	16.5	17.0	11.0	9.5	10.0	6.0	5.5	6.0	1.5	1.0	1.0
13	18.0	17.0	17.0	10.5	9.0	10.0	6.0	5.0	5.5	1.5	1.0	1.0
14	18.0	16.5	17.0	10.5	8.5	9.5	6.5	5.5	6.0	1.5	1.0	1.5
15	18.0	16.5	17.0	10.5	8.5	10.0	6.5	5.5	6.0	1.5	1.5	1.5
16	18.0	17.0	17.0	11.5	10.0	10.5	6.5	5.5	6.0	2.0	1.0	1.5
17	18.5	18.0	18.0	11.5	9.0	10.0	6.5	4.5	5.5	1.5	1.0	1.0
18	18.5	15.0	16.5	11.0	9.0	10.0	4.5	3.0	3.5	1.0	1.0	1.0
19	15.5	13.5	14.5	12.0	11.0	11.0	3.0	1.5	2.0	2.0	1.0	1.5
20	15.0	13.0	14.0	10.5	9.5	10.0	3.5	1.5	3.0	3.0	2.0	2.0
21	15.5	13.0	14.5	9.0	6.5	8.0	3.5	3.5	3.5	1.5	1.0	1.5
22	15.0	14.0	14.5	8.0	6.0	7.0	4.0	3.5	4.0	5.0	1.0	2.0
23	14.0	12.0	13.0	8.5	7.0	8.0	4.0	2.0	3.0	5.0	3.0	4.0
24	12.0	9.5	10.0	9.0	7.0	8.0	3.5	3.0	3.5	3.5	2.0	3.0
25	10.5	8.5	9.5	8.5	6.5	8.0	3.5	3.0	3.5	4.5	3.0	3.5
26	11.0	10.0	10.5	11.0	8.5	10.0	4.5	4.0	4.5	4.0	2.0	3.5
27	12.0	10.0	11.0	10.5	9.5	10.0	4.5	4.0	4.5	4.0	2.0	3.0
28	12.0	10.0	11.0	9.5	9.0	9.5	5.5	5.0	5.0	5.5	3.5	4.5
29	13.0	10.5	11.5	9.0	9.0	9.0	5.5	4.5	5.0	5.0	4.0	4.5
30	14.0	11.0	12.0	9.0	9.0	9.0	4.5	3.5	4.0	6.5	4.0	5.0
31	14.0	12.0	13.5	---	---	---	4.5	3.5	4.0	5.0	3.0	3.5
MONTH	21.5	8.5	15.0	15.5	6.0	11.0	9.5	1.5	5.5	7.0	1.0	3.0
FEBRUARY			MARCH			APRIL			MAY			
1	3.0	1.5	2.0	10.0	6.5	8.5	16.5	13.5	15.5	19.0	15.0	18.0
2	3.5	2.0	3.0	10.5	8.5	10.0	16.5	16.0	16.0	20.0	17.0	18.5
3	3.5	3.0	3.5	10.5	10.0	10.5	16.0	13.5	15.0	20.0	17.0	19.0
4	3.5	3.0	3.5	10.5	10.0	10.0	15.0	13.0	14.0	20.5	18.5	20.0
5	3.5	3.0	3.0	9.5	8.0	9.0	14.0	13.0	13.5	21.5	19.0	20.5
6	3.0	1.5	2.0	9.5	8.0	8.5	13.0	10.5	11.5	21.5	20.0	20.5
7	2.0	1.0	1.5	8.0	6.0	13.0	12.0	10.5	11.0	20.5	17.0	18.5
8	2.0	1.5	2.0	8.0	7.0	13.0	10.5	9.0	9.5	19.0	15.5	17.0
9	2.0	1.5	2.0	9.0	6.5	13.5	10.5	8.5	9.5	19.5	16.0	18.0
10	2.0	1.0	1.5	12.0	8.5	10.0	11.0	8.5	10.0	20.0	17.0	19.0
11	3.0	1.0	2.0	14.0	11.5	13.0	14.0	9.5	11.5	20.5	18.0	19.5
12	3.0	2.0	2.0	14.5	14.0	14.5	15.0	13.0	14.5	21.0	19.0	20.0
13	3.5	1.5	3.0	14.5	14.0	14.5	19.0	15.0	16.5	21.0	19.5	20.0
14	4.5	2.0	3.5	14.5	10.5	12.0	18.5	15.5	17.0	21.0	20.0	20.5
15	4.5	4.0	4.0	13.0	9.0	10.5	18.0	15.0	16.5	22.0	20.0	21.0
16	5.5	4.5	4.5	16.5	13.0	14.5	18.0	16.5	16.5	23.0	20.5	21.5
17	6.0	5.0	5.5	16.5	14.0	15.5	17.0	14.5	15.5	23.0	21.0	22.0
18	6.5	6.0	6.0	17.0	14.0	15.5	16.0	12.0	14.5	23.0	21.0	22.0
19	9.0	6.5	8.0	18.5	16.0	17.0	15.0	13.5	14.0	23.0	21.0	22.0
20	9.5	7.0	8.5	19.0	16.5	18.0	16.5	13.5	13.5	23.5	21.0	22.0
21	10.0	8.0	9.0	18.5	15.5	16.5	16.5	13.5	15.0	24.0	22.0	23.5
22	10.0	8.0	9.0	15.5	12.0	14.0	15.5	13.0	14.0	23.5	22.0	23.0
23	11.0	8.0	9.5	14.0	11.0	13.0	15.5	11.5	14.0	23.5	21.5	22.0
24	11.0	10.0	10.5	15.0	11.5	13.5	15.5	12.0	14.0	23.0	20.5	21.5
25	10.0	7.0	8.5	15.0	12.0	13.5	15.5	14.5	15.0	22.0	21.0	21.5
26	7.0	5.5	6.0	12.0	9.5	11.0	15.5	14.5	15.0	21.5	20.5	21.0
27	6.5	5.0	5.5	11.5	9.0	10.0	16.5	14.0	15.5	23.0	21.0	21.5
28	9.0	6.0	7.0	10.5	8.5	10.0	16.5	14.0	15.5	23.5	21.0	22.0
29	---	---	---	12.0	9.0	11.0	16.5	14.0	15.5	24.5	23.0	23.5
30	---	---	---	13.0	12.0	13.0	16.5	15.0	15.5	24.5	23.5	24.0
31	---	---	---	16.5	13.5	14.5	---	---	---	24.5	23.5	23.5
MONTH	11.0	1.0	5.0	19.0	6.0	12.5	19.0	8.5	14.0	24.5	15.0	21.0

07068540 LOGAN CREEK AT OXLY, MO--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	23.5	21.0	22.0	24.0	23.0	23.5	25.5	23.5	24.5	25.0	24.0	24.5
2	21.5	20.0	21.0	24.0	22.0	23.5	26.5	23.5	25.0	25.0	23.5	24.0
3	21.0	20.0	20.5	25.0	24.0	24.5	27.0	24.0	25.5	23.5	21.0	22.0
4	21.0	20.5	20.5	26.0	24.5	25.5	27.0	25.0	26.0	22.0	20.0	21.5
5	20.5	19.5	20.0	26.5	25.0	26.0	27.0	25.0	26.0	21.5	19.5	20.5
6	21.0	19.0	20.0	26.5	25.0	25.5	27.0	25.5	26.0	21.5	19.5	20.5
7	23.0	20.5	21.0	26.0	25.0	25.5	26.5	25.0	26.0	22.0	20.5	21.5
8	24.0	21.5	23.5	25.5	24.0	24.5	26.0	24.5	25.5	23.0	21.0	22.0
9	24.0	23.0	23.5	25.0	24.0	24.5	26.5	24.5	25.5	23.0	21.0	22.0
10	23.0	21.0	21.5	25.5	24.0	24.5	25.5	23.0	24.5	23.0	21.0	22.0
11	22.0	20.5	21.0	26.0	24.5	25.0	25.0	23.0	24.0	22.0	21.5	21.5
12	21.0	20.0	20.5	25.5	23.5	24.5	22.0	21.0	21.5	22.0	21.0	21.5
13	22.0	20.5	21.0	26.0	23.0	24.5	22.0	21.0	21.5	23.5	21.5	22.0
14	22.0	20.5	21.5	25.5	23.5	24.5	22.0	20.5	21.0	24.5	23.0	23.5
15	23.0	21.5	22.0	26.0	23.5	24.5	22.0	21.5	21.5	24.0	23.0	23.5
16	23.0	21.5	22.0	26.0	24.0	25.0	22.0	21.5	21.5	23.0	21.5	22.0
17	23.0	20.5	21.5	26.5	24.5	25.5	22.0	22.0	22.0	23.0	20.5	21.5
18	23.0	21.0	22.0	26.5	25.0	25.5	24.5	23.0	23.5	23.5	22.0	23.0
19	23.0	21.5	22.0	25.5	25.0	26.0	24.5	22.0	23.5	22.0	20.0	21.0
20	23.0	21.0	22.0	26.5	25.0	25.5	24.5	23.0	23.5	21.0	19.5	20.5
21	23.0	21.0	22.0	26.0	24.5	25.5	25.0	23.5	24.5	20.0	18.0	18.5
22	23.5	21.0	22.0	26.5	24.0	25.5	25.0	23.0	23.5	18.5	16.0	17.0
23	23.5	21.5	23.0	26.0	25.0	25.5	24.5	23.5	24.0	18.0	15.5	16.5
24	23.5	21.5	23.0	25.5	24.0	25.0	24.0	24.0	24.0	19.0	16.5	18.0
25	23.5	21.5	22.0	26.0	24.0	25.0	24.5	23.5	24.0	18.5	18.0	18.5
26	21.5	21.0	21.5	26.0	24.5	25.5	24.0	23.0	23.5	18.0	16.5	17.0
27	21.5	21.5	21.5	26.5	24.0	25.5	24.0	23.0	23.5	18.5	16.5	18.0
28	23.0	21.5	22.0	26.0	24.5	25.5	23.0	22.0	23.0	19.0	16.5	18.0
29	23.5	21.5	23.0	26.0	24.0	25.0	23.0	21.5	22.0	20.0	17.0	19.0
30	24.5	23.0	23.5	26.0	24.5	25.0	23.5	22.0	23.0	20.0	18.0	19.0
31	---	---	---	25.5	24.0	24.5	24.5	23.5	24.0	---	---	---
MONTH	24.5	19.0	22.0	26.5	22.0	25.0	27.0	20.5	24.0	25.0	15.5	20.5
YEAR	27.0	1.0	15.0									

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TUNS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TUNS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TUNS/DAY)
OCTOBER				NOVEMBER			DECEMBER		
1	3.1	2	.02	5.0	14	.19	16	5	.22
2	3.0	3	.02	9.2	7	.17	11	2	.06
3	2.8	4	.03	14	2	.08	12	3	.10
4	3.1	4	.03	12	1	.03	7.8	5	.11
5	3.0	2	.02	9.6	8	.21	7.8	5	.11
6	2.8	1	.00	8.1	14	.31	6.8	6	.11
7	2.6	1	.00	7.4	5	.10	6.5	3	.05
8	2.6	1	.00	6.8	1	.02	6.2	6	.10
9	2.6	1	.00	6.2	1	.02	6.0	3	.05
10	2.7	1	.00	5.2	2	.03	5.7	4	.06
11	2.8	1	.00	5.4	2	.03	5.4	2	.03
12	2.8	1	.00	5.0	1	.01	5.2	3	.04
13	2.8	2	.02	4.8	1	.01	5.0	4	.05
14	3.7	6	.06	5.2	2	.03	5.2	2	.03
15	3.8	2	.02	4.4	3	.04	5.2	2	.03
16	3.1	2	.02	4.6	4	.05	4.2	2	.02
17	3.6	2	.02	4.4	2	.02	4.2	1	.01
18	4.2	2	.02	4.4	2	.02	4.4	2	.02
19	3.6	2	.02	4.2	3	.03	4.4	2	.02
20	3.4	1	.00	4.2	3	.03	4.4	1	.01
21	3.7	2	.02	4.4	6	.07	5.2	2	.03
22	4.8	2	.03	4.0	6	.06	20	14	.76
23	5.0	1	.01	4.2	5	.06	66	33	5.9
24	4.4	1	.01	4.8	4	.05	25	11	.74
25	4.6	3	.04	4.6	4	.05	20	13	.70
26	8.8	2	.05	5.0	4	.05	17	5	.23
27	9.2	1	.02	5.0	5	.07	14	3	.11
28	5.7	2	.03	5.0	7	.09	13	3	.11
29	4.4	1	.01	5.2	4	.06	11	2	.06
30	3.8	1	.01	11	13	.39	10	1	.03
31	3.7	2	.02	---	---	---	10	3	.08
TOTAL	120.2	---	0.55	183.3	---	2.38	344.6	---	9.98

WHITE RIVER BASIN

07068540 LOGAN CREEK AT OXLY, MO--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JANUARY			FEBRUARY			MARCH			
1	9.2	2	.05	161	12	5.2	22	2	.12
2	23	14	.67	107	6	1.7	21	2	.11
3	90	22	5.3	94	4	1.0	20	2	.11
4	129	19	6.6	71	4	.77	20	2	.11
5	55	12	1.8	54	4	.58	18	3	.15
6	36	3	.29	47	3	.38	17	2	.09
7	29	3	.23	47	3	.38	16	2	.09
8	22	4	.24	47	4	.51	15	2	.08
9	20	4	.22	107	13	3.8	14	2	.08
10	18	6	.29	84	5	1.1	14	1	.04
11	18	4	.19	59	4	.64	14	2	.08
12	17	4	.18	47	4	.51	14	2	.08
13	15	4	.16	40	3	.32	14	2	.08
14	11	3	.09	44	3	.36	74	11	9.5
15	11	2	.06	95	6	1.5	429	54	83
16	10	2	.05	182	27	13	151	14	5.7
17	9.6	4	.10	155	14	5.9	94	7	1.8
18	8.4	7	.16	100	4	1.1	63	4	.68
19	8.1	3	.07	70	4	.76	49	3	.40
20	19	3	.15	55	4	.59	37	3	.30
21	29	17	1.3	46	3	.37	30	4	.32
22	1520	33	162	37	3	.30	25	2	.14
23	640	37	64	33	4	.36	22	2	.12
24	147	32	13	30	5	.41	21	2	.11
25	40	14	1.5	27	3	.22	18	1	.05
26	39	3	.32	25	2	.14	16	2	.09
27	39	3	.32	24	2	.13	14	2	.08
28	34	4	.37	24	2	.13	13	1	.04
29	63	5	.85	---	---	---	13	1	.04
30	1100	110	879	---	---	---	13	1	.04
31	1900	93	960	---	---	---	13	1	.04
TOTAL	6109.3	---	2099.76	1912	---	42.16	1314	---	103.47
APRIL			MAY			JUNE			
1	12	1	.03	41	3	.33	10	4	.11
2	13	2	.07	34	2	.18	8.4	3	.07
3	15	2	.08	28	1	.08	10	3	.08
4	13	2	.07	25	2	.14	14	2	.08
5	14	1	.04	23	2	.12	13	2	.07
6	15	1	.04	21	2	.11	11	2	.06
7	13	1	.04	131	8	2.8	9.6	2	.05
8	15	1	.04	73	10	2.0	8.4	2	.05
9	16	4	.17	43	5	.58	20	4	.22
10	15	2	.08	31	4	.33	10	42	1.1
11	13	2	.07	25	3	.20	29	18	1.4
12	13	4	.14	21	2	.11	20	10	.54
13	13	6	.21	19	2	.10	16	5	.22
14	85	28	6.4	17	2	.09	13	4	.14
15	47	13	1.6	18	2	.10	11	3	.09
16	52	9	1.3	17	2	.09	18	3	.15
17	210	25	16	15	3	.12	23	5	.31
18	88	9	2.1	14	4	.15	16	3	.13
19	63	7	1.2	13	5	.18	13	4	.14
20	73	6	1.2	13	5	.18	10	4	.11
21	47	6	.76	13	3	.11	9.2	2	.05
22	35	5	.47	11	2	.06	8.1	2	.04
23	30	4	.32	10	2	.05	7.8	3	.06
24	25	4	.27	9.6	2	.05	7.1	2	.04
25	24	12	.78	11	2	.06	7.8	1	.02
26	200	25	17	13	2	.07	11	2	.06
27	122	12	4.0	60	18	2.9	9.2	9	.22
28	66	9	1.6	23	16	.99	11	3	.09
29	64	6	1.0	16	7	.30	14	2	.08
30	58	4	.63	13	4	.14	14	4	.15
31	---	---	---	11	4	.12	---	---	---
TOTAL	1469	---	57.71	812.6	---	12.84	382.6	---	5.93

WHITE RIVER BASIN

07068540 LOGAN CREEK AT OXLY, MO--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JULY				AUGUST			SEPTEMBER		
1	23	11	.68	4.4	5	.06	13	2	.07
2	11	5	.15	4.6	9	.11	13	2	.07
3	9.2	3	.07	4.6	7	.09	13	2	.07
4	8.1	5	.11	4.8	6	.08	10	2	.05
5	7.4	2	.04	4.6	6	.07	8.4	1	.02
6	6.8	2	.04	4.2	8	.09	7.8	2	.04
7	6.8	5	.09	4.6	5	.06	7.1	2	.04
8	7.1	2	.04	4.4	9	.11	6.8	3	.06
9	6.8	1	.02	5.0	4	.05	6.5	2	.04
10	6.8	2	.04	4.6	3	.04	6.2	2	.03
11	6.5	3	.05	12	13	.42	6.0	2	.03
12	5.7	4	.06	9.2	6	.15	6.2	2	.03
13	5.4	4	.06	54	18	2.6	6.5	2	.04
14	5.4	4	.06	34	24	2.2	6.2	2	.03
15	5.0	4	.05	40	22	2.4	7.4	1	.02
16	4.6	4	.05	1620	93	674	7.1	1	.02
17	4.4	3	.04	175	8	3.8	6.0	1	.02
18	4.4	4	.05	56	7	1.1	5.7	1	.02
19	4.2	5	.06	35	5	.47	5.7	1	.02
20	4.6	5	.06	25	2	.14	5.4	1	.01
21	6.0	5	.08	20	1	.05	5.2	1	.01
22	8.1	4	.09	16	1	.04	5.2	1	.01
23	4.8	6	.08	15	1	.04	5.0	1	.01
24	4.4	5	.06	15	1	.04	5.0	1	.01
25	4.2	6	.07	34	2	.18	4.8	1	.01
26	4.2	10	.11	20	2	.11	4.8	1	.01
27	4.6	7	.09	22	2	.12	4.8	1	.01
28	4.8	6	.08	23	2	.12	4.6	<1	.00
29	4.8	7	.09	20	2	.11	4.6	1	.01
30	4.8	7	.09	17	1	.05	4.4	---	.00
31	4.6	5	.06	14	2	.08	---	---	---
TOTAL	198.5	---	2.72	2322.0	---	688.98	202.4	---	0.81
YEAR	15370.5		3027.29						

WHITE RIVER BASIN

07068600 LITTLE BLACK RIVER AT SUCCESS, AR

LOCATION.--Lat 36°27'24", long 90°43'32", in NE¼NW¼ sec.23, T.21 N., R.3 E., Clay County, Hydrologic Unit 11010008, on road fill at the left downstream end of State Highway 211 bridge, 1 mile (1.6 km) downstream from Cypress Ditch and at the northwest corner of Success.

DRAINAGE AREA.--386 square miles (1000 km²).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 265.89 feet (81.043 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except for period of once daily gage height, which are fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6800 ft³/s (193 m³/s) Feb. 2, 1982, gage height, 23.81 ft (7.257 m); minimum, 24 ft³/s (0.68 m³/s) August 12, 1982.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,000 ft³/s (85 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Feb. 2	1230	*6,800 193	23.81 7.257
Jan. 27	0200	3,290 93.2	19.00 5.791

Minimum discharge, 24 ft³/s (0.68 m³/s) Aug. 12, gage height, 2.46 ft (0.750 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31	55	75	118	4790	244	185	471	135	252	36	256
2	31	63	88	121	6790	230	178	366	100	167	34	218
3	30	80	101	260	6710	214	184	413	100	117	32	206
4	32	90	103	497	6010	201	179	370	104	99	32	223
5	33	297	94	672	5270	197	174	312	102	19	32	257
6	33	257	86	677	4560	169	166	285	110	10	32	222
7	37	161	84	544	3950	184	161	320	117	52	34	178
8	40	121	80	415	3140	173	161	624	84	46	37	153
9	39	100	78	324	2490	166	162	884	76	42	46	126
10	36	89	76	261	1640	161	164	909	240	48	37	115
11	36	82	74	219	1270	160	166	794	350	76	32	106
12	35	77	74	226	971	159	161	598	249	70	36	102
13	34	73	72	198	785	158	156	372	160	64	97	99
14	34	70	71	175	652	166	201	274	122	54	390	49
15	35	68	70	163	670	760	310	234	101	49	419	108
16	36	66	60	148	851	1210	291	214	160	41	1040	135
17	38	65	68	155	1170	1270	399	198	206	36	1210	114
18	41	63	66	130	1430	1280	630	183	167	32	2160	113
19	40	63	65	120	1860	1230	465	163	142	32	1680	133
20	40	61	58	119	1630	1260	471	150	112	32	1000	124
21	41	60	72	161	1270	1220	414	152	88	32	1530	100
22	43	60	71	670	967	1090	362	156	75	32	1490	90
23	46	60	158	1740	712	923	324	138	71	52	1390	84
24	46	60	301	2150	503	714	286	129	69	69	1200	61
25	46	60	271	2570	376	557	261	129	69	73	969	80
26	62	60	218	3040	306	364	383	135	80	63	765	75
27	70	60	181	3160	272	269	655	130	86	44	626	70
28	68	60	159	2860	260	244	725	165	100	34	596	68
29	72	60	143	2390	---	219	714	173	90	34	624	67
30	70	65	133	2060	---	205	616	160	95	35	443	66
31	62	---	124	2820	---	196	---	196	---	35	316	---
TOTAL	1537	2606	3384	29183	61505	15593	9704	9797	3760	1961	12169	3874
MEAN	43.1	66.9	109	941	2197	503	323	316	126	63.3	618	129
MAX	72	297	301	3160	6790	1200	725	909	350	252	2160	257
MIN	30	55	58	118	260	158	156	129	64	32	32	66
CFSM	.11	.23	.28	2.44	5.69	1.30	.84	.62	.33	.16	1.60	.33
IN.	.13	.25	.33	2.61	5.93	1.50	.94	.94	.36	.19	1.85	.37
AC-FI	2650	5170	6710	57860	122000	30930	19250	19430	7470	3850	38620	7600

WATER YEAR 1982 TOTAL 161081 MEAN 444 MAX 6790 MIN 30 CFSM 1.15 IN 15.60 AC-FI 321100

WHITE RIVER BASIN

07068600 LITTLE BLACK RIVER AT SUCCESS, AR

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: August 1980 to current year.

SUSPENDED-SEDIMENT DISCHARGE: October 1980 to current year.

INSTRUMENTATION.--Water temperature recorder since August 1980.

REMARKS.--The missing temperature data was due to malfunctioning of the temperature recorder.

EXTREMES FOR PERIOD OF RECORD.--

WATER TEMPERATURE: Maximum, 39.5°C on many days in August 1980; minimum, 0.0°C on many days in January and February 1982.

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 2,390 mg/L January 24, 1982; minimum daily mean, <1 January 14, 15 and 22, 1981.

SUSPENDED-SEDIMENT LOADS: Maximum daily, 13,900 tons (12,600 metric tons) January 24, 1982; minimum daily, 0.16 tons (0.15 metric tons) January 15, 16, 19, 21 and 22, 1981.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 29.5°C August 5; minimum, 0.0°C on many days in January and February.

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 2,390 mg/L January 24; minimum daily mean, 2 mg/L Dec. 12.

SUSPENDED-SEDIMENT LOADS: Maximum daily, 13,900 tons (12,600 metric tons) January 24; minimum daily, 0.40 tons (0.36 metric tons) December 12.

DATE	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED SATUR- ATION (00301)	COLI- FORM, FECAL, UM-MF (COLS./ 100 ML) (31625)	STREP- TOCCOCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L) (00530)	NITRO- GEN, NITRATE TOTAL (MG/L) (00620)
OCT , 1981											
06...	33	330	7.4	19.0	4.0	7.4	79	92	160	27	.35
DEC											
03...	103	282	7.9	7.0	6.5	10.0	83	140	740	15	<.08
FEB , 1982											
10...	1640	85	6.6	.5	39	10.6	74	190	1100	39	.40
APR											
13...	154	265	7.6	19.0	15	7.2	78	42	50	34	<.08
JUN											
02...	104	251	7.5	20.5	34	2.8	31	47	240	66	.18
AUG											
17...	1210	80	6.7	23.0	30	3.6	41	140	>800	38	.17

DATE	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)	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, TOTAL (MG/L AS PO4) (71886)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P) (70507)
OCT , 1981										
06...	.030	.38	.080	.35	.43	.81	3.6	.050	.15	.040
DEC										
03...	<.020	<.10	<.070	.25	.25	.25	1.1	.030	.09	.050
FEB , 1982										
10...	.020	.42	.070	.86	.93	1.4	6.0	.070	.21	.050
APR										
13...	<.020	<.10	<.060	.52	.52	.52	2.3	<.010	<.03	.030
JUN										
02...	.020	.20	.080	1.2	1.30	1.5	6.6	.080	.25	.060
AUG										
17...	.030	.20	.150	1.4	1.50	1.7	7.5	.120	.37	.060

WHITE RIVER BASIN

07068600 LITTLE BLACK RIVER AT SUCCESS, AR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	---	---	---	14.5	13.0	13.5	9.0	8.0	8.5	3.5	2.5	3.0
2	---	---	---	14.0	14.0	14.0	8.0	7.5	8.0	5.0	2.5	3.0
3	---	---	---	14.5	14.0	14.5	8.0	7.5	8.0	4.5	3.0	4.0
4	---	---	---	15.0	14.5	14.5	8.5	7.5	8.0	4.5	4.5	4.5
5	---	---	---	15.0	14.5	15.0	7.0	6.5	7.0	5.0	4.0	4.5
6	19.0	18.0	18.5	14.5	13.5	14.0	7.5	7.0	7.5	6.5	5.0	6.0
7	18.0	16.0	17.0	13.5	12.5	13.0	9.0	7.5	8.0	6.5	4.0	5.5
8	16.5	15.5	16.0	13.0	12.5	13.0	9.0	8.0	8.5	4.0	3.0	3.5
9	17.0	15.5	16.5	14.0	13.0	13.0	8.5	7.0	8.0	3.0	2.5	3.0
10	17.5	17.0	17.5	12.5	11.5	12.0	7.0	6.0	6.5	2.5	.5	1.0
11	18.0	17.0	17.5	11.5	10.5	11.0	6.0	5.5	6.0	.5	.0	.0
12	17.5	17.0	17.0	11.5	10.5	11.0	6.0	5.0	5.5	.0	.0	.0
13	18.0	17.0	17.5	10.5	10.0	10.5	5.5	5.0	5.0	.5	.0	.0
14	17.5	16.5	17.0	10.5	9.5	10.0	6.0	5.0	5.5	.5	.0	.0
15	17.5	16.5	17.0	11.0	9.5	10.5	6.0	5.5	5.5	.5	.0	.5
16	18.0	17.5	18.0	11.5	10.5	11.0	6.5	5.5	6.0	.5	.0	.0
17	18.0	18.0	18.0	10.5	10.0	10.5	6.5	3.5	5.5	.5	.0	.0
18	17.5	15.5	16.5	12.0	10.0	11.0	3.5	1.5	2.5	.5	.0	.0
19	15.0	14.0	14.5	13.0	11.5	12.5	1.0	.5	1.0	.5	.0	.5
20	14.5	13.0	14.0	11.5	8.5	10.0	1.0	.5	.5	.5	.5	.5
21	15.0	14.0	14.5	8.5	7.0	7.5	1.0	.5	.5	.5	.5	.5
22	15.0	13.0	14.0	8.0	7.0	7.5	5.0	1.0	2.0	1.5	.5	.5
23	12.5	10.5	12.0	8.5	7.5	8.0	2.5	2.0	2.5	2.0	1.5	1.5
24	10.5	9.5	10.0	8.5	8.0	8.0	2.0	1.5	2.0	1.5	.5	1.0
25	12.5	9.0	9.5	8.5	7.5	8.0	2.0	1.0	1.5	2.0	.5	1.0
26	12.0	10.0	10.5	11.5	9.0	10.5	3.0	2.0	2.5	1.5	.0	1.0
27	11.0	9.5	10.0	11.0	9.5	10.5	3.5	2.5	3.0	1.5	.0	.5
28	11.0	9.5	10.5	9.5	9.0	9.5	4.0	3.5	3.5	3.5	1.5	2.0
29	12.0	10.5	11.5	9.5	9.0	9.0	5.0	3.0	3.5	3.5	2.5	3.0
30	13.0	11.0	12.0	10.5	9.0	9.5	3.0	2.0	2.5	6.0	2.5	4.5
31	13.0	12.5	13.0	---	---	---	3.5	3.0	3.0	6.0	2.5	4.0
MONTH	19.0	9.0	14.5	15.0	7.0	11.0	9.0	.5	5.0	6.5	.0	2.0
FEBRUARY			MARCH			APRIL			MAY			
1	2.5	1.0	1.5	9.0	7.0	8.0	16.5	14.0	15.0	17.5	16.0	16.5
2	1.5	.5	1.0	9.5	8.5	9.0	16.5	15.5	16.0	18.0	16.5	17.5
3	1.5	.5	1.0	10.0	9.5	9.5	16.5	14.0	15.5	18.5	17.0	17.5
4	1.0	.0	.5	10.0	9.5	9.5	15.5	13.5	14.5	20.0	18.0	19.0
5	.5	.0	.0	9.5	8.0	9.0	14.5	14.0	14.0	20.5	19.0	20.0
6	.5	.0	.0	9.0	8.0	8.5	14.0	10.5	12.0	20.5	19.0	20.0
7	1.0	.0	.5	8.5	6.5	7.5	12.0	10.5	11.0	19.5	18.5	19.0
8	.5	.0	.5	8.0	6.5	7.5	10.5	9.5	10.0	19.5	17.0	18.0
9	1.0	.0	.5	9.0	7.0	8.0	10.5	8.5	9.5	19.5	17.5	18.0
10	.5	.0	.0	11.0	8.5	9.5	11.0	9.0	10.0	21.0	19.0	19.5
11	1.0	.0	.5	13.0	11.0	11.5	13.0	10.0	11.0	22.0	20.5	21.0
12	1.0	.5	.5	14.0	13.0	13.0	14.5	12.0	13.0	22.0	20.5	21.0
13	1.5	.0	.5	14.0	13.5	14.0	17.0	14.0	15.5	21.0	20.0	20.5
14	2.5	.5	1.0	14.0	10.0	12.5	18.0	15.5	17.0	21.0	20.5	20.5
15	2.5	2.0	2.0	11.0	9.5	10.5	17.5	16.0	17.0	22.0	20.0	21.0
16	4.0	2.5	3.0	15.5	11.0	12.0	17.5	15.5	17.0	23.0	21.0	22.0
17	5.0	4.0	4.5	16.5	15.0	15.5	17.5	16.5	17.0	23.5	21.5	22.5
18	6.0	5.0	5.5	19.0	16.5	17.0	16.5	15.5	16.0	23.0	21.5	22.5
19	7.5	6.5	6.5	20.5	18.5	19.5	16.0	15.0	15.5	23.0	21.5	22.5
20	9.0	7.5	8.5	20.5	19.0	20.0	17.0	15.5	16.0	24.0	22.0	23.0
21	10.5	9.5	10.0	21.0	17.5	19.0	16.0	15.0	15.5	24.5	23.0	23.5
22	10.5	9.5	10.0	18.0	15.0	16.0	15.5	14.5	15.0	24.0	22.5	23.5
23	11.0	9.5	10.5	15.5	14.0	15.0	15.5	14.0	15.0	23.5	22.0	23.0
24	11.0	9.5	10.5	16.0	14.5	15.0	15.5	14.0	15.0	23.0	22.0	22.5
25	10.0	7.5	8.5	17.0	14.5	15.5	15.5	15.0	15.5	22.5	21.5	22.0
26	7.5	6.0	7.0	14.0	11.0	12.0	16.0	14.5	15.5	22.0	21.0	21.5
27	7.0	5.5	6.0	12.0	11.0	11.5	16.5	15.0	15.5	23.5	21.5	22.5
28	8.5	6.5	7.0	11.5	10.0	11.0	16.0	15.0	15.5	24.0	22.5	23.5
29	---	---	---	12.0	10.0	11.0	16.0	15.0	15.5	24.5	23.5	24.0
30	---	---	---	12.5	12.0	12.0	16.5	15.0	15.5	25.0	24.0	24.5
31	---	---	---	16.0	13.0	13.5	---	---	---	24.5	23.5	24.0
MONTH	11.0	.0	4.0	21.0	6.5	12.5	18.0	8.5	14.5	25.0	16.0	21.0

WHITE RIVER BASIN

07068600 LITTLE BLACK RIVER AT SUCCESS, AR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	23.5	22.0	22.5	---	---	---	27.0	23.0	25.0	24.5	22.0	23.5
2	22.0	21.0	21.5	---	---	---	27.5	23.5	25.5	22.5	21.5	22.0
3	21.5	20.5	21.0	---	---	---	29.0	23.5	26.0	23.0	22.0	22.5
4	21.0	20.5	21.0	---	---	---	29.0	25.0	26.5	23.0	22.5	23.0
5	20.5	20.0	20.0	---	---	---	29.5	25.0	27.0	---	---	---
6	20.5	19.0	19.5	---	---	---	27.0	25.5	26.0	---	---	---
7	---	---	---	---	---	---	27.0	24.5	25.5	---	---	---
8	---	---	---	---	---	---	26.5	24.0	25.0	---	---	---
9	---	---	---	---	---	---	27.0	24.5	25.5	---	---	---
10	---	---	---	---	---	---	26.5	23.0	24.5	---	---	---
11	---	---	---	---	---	---	24.0	21.5	22.5	---	---	---
12	---	---	---	---	---	---	22.5	20.5	21.5	---	---	---
13	---	---	---	26.5	21.0	26.0	22.0	21.0	21.5	---	---	---
14	---	---	---	26.5	25.0	26.0	22.5	21.5	21.5	---	---	---
15	---	---	---	26.5	25.0	26.0	22.5	22.0	22.5	---	---	---
16	---	---	---	27.5	24.5	26.0	22.5	22.0	22.5	---	---	---
17	---	---	---	27.5	24.5	26.0	23.5	22.5	23.0	---	---	---
18	---	---	---	27.5	24.5	26.0	24.0	23.5	24.0	---	---	---
19	---	---	---	28.0	24.5	26.5	24.5	24.0	24.5	---	---	---
20	---	---	---	29.0	25.0	26.5	25.5	24.5	25.0	---	---	---
21	---	---	---	28.5	24.5	26.5	26.0	25.5	26.0	---	---	---
22	---	---	---	28.0	24.5	26.0	25.5	25.0	25.5	---	---	---
23	---	---	---	26.0	25.5	26.0	26.0	25.5	25.5	---	---	---
24	---	---	---	26.0	25.0	25.5	26.0	25.5	26.0	---	---	---
25	---	---	---	26.5	25.5	26.0	25.5	24.5	25.5	---	---	---
26	---	---	---	26.5	26.0	26.5	25.5	24.5	25.0	---	---	---
27	---	---	---	28.0	25.5	26.5	24.5	24.0	24.0	---	---	---
28	---	---	---	26.5	24.5	25.5	24.0	23.0	23.5	---	---	---
29	---	---	---	26.5	23.0	25.0	24.5	23.5	24.0	---	---	---
30	---	---	---	26.0	24.0	25.0	25.0	24.0	24.5	---	---	---
31	---	---	---	26.5	23.5	24.5	25.5	24.5	25.0	---	---	---
MONTH	23.5	19.0	21.0	29.0	21.0	26.0	29.5	20.5	24.5	24.5	21.5	23.0
YEAR	29.5	.0	13.5									

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
	OCTOBER			NOVEMBER			DECEMBER		
1	31	66	5.5	55	22	3.3	75	14	2.8
2	31	41	3.4	63	36	6.1	88	13	3.1
3	30	18	1.5	80	44	9.5	101	13	3.5
4	32	24	2.1	90	45	11	103	11	3.1
5	33	27	2.4	297	81	65	94	7	1.8
6	33	24	2.1	257	33	23	88	6	1.4
7	37	21	2.1	161	38	17	84	9	2.0
8	40	22	2.4	121	32	10	80	10	2.2
9	39	22	2.3	100	30	8.1	78	9	1.9
10	36	22	2.1	89	24	5.8	76	7	1.4
11	36	26	2.5	82	21	4.6	74	3	.60
12	35	24	2.3	77	21	4.4	74	2	.40
13	34	28	2.6	73	18	3.5	72	4	.78
14	34	32	2.9	70	16	3.0	71	4	.77
15	35	36	3.4	68	19	3.5	70	7	1.3
16	36	40	3.9	66	22	3.9	68	4	.73
17	38	40	4.1	65	20	3.5	68	3	.55
18	41	34	3.8	63	18	3.1	66	4	.71
19	40	22	2.4	63	22	3.7	65	5	.88
20	40	20	2.2	61	18	3.0	58	5	.78
21	41	24	2.7	60	11	1.8	72	4	.78
22	43	20	2.3	60	11	1.8	71	6	1.2
23	46	12	1.5	60	8	1.3	158	62	26
24	46	10	1.2	60	8	1.3	301	106	86
25	46	10	1.2	60	7	1.1	271	47	34
26	62	27	4.5	60	6	.97	218	51	30
27	70	50	9.5	60	8	1.3	181	33	16
28	68	43	7.9	60	9	1.5	159	29	12
29	72	35	6.8	60	9	1.5	143	27	10
30	70	34	6.4	65	11	1.9	133	31	11
31	62	26	4.4	---	---	---	124	19	6.4
TOTAL	1337	---	104.4	2606	---	209.47	3384	---	264.08

WHITE RIVER BASIN

07068600 LITTLE BLACK RIVER AT SUCCESS, AR--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JANUARY			FEBRUARY			MARCH			
1	118	18	5.7	4790	88	1140	244	22	14
2	121	32	10	6790	60	1100	230	25	16
3	260	97	68	6710	84	1520	214	31	18
4	497	125	168	6010	45	730	201	28	15
5	672	101	183	5270	34	484	197	38	20
6	677	67	122	4560	29	357	189	33	17
7	544	88	129	3950	22	235	184	27	13
8	415	36	40	3140	23	195	173	28	13
9	324	23	20	2490	28	188	166	33	15
10	261	23	16	1840	34	169	161	49	21
11	219	20	12	1270	51	175	160	52	22
12	226	19	12	971	71	186	159	69	30
13	198	21	11	785	51	108	158	46	20
14	175	27	13	652	28	49	166	46	21
15	163	59	26	670	26	47	700	262	495
16	148	27	11	851	24	55	1210	224	732
17	155	18	7.5	1170	35	111	1270	83	285
18	130	43	15	1430	36	139	1280	60	207
19	120	10	3.2	1860	38	191	1230	51	169
20	119	11	3.5	1630	49	216	1260	62	211
21	181	36	18	1270	38	130	1220	53	175
22	670	172	311	967	42	110	1090	47	138
23	1740	163	766	712	62	119	923	47	117
24	2150	2390	13900	503	76	103	714	52	100
25	2570	1050	7290	376	56	57	557	51	77
26	3040	44	361	306	24	20	384	48	50
27	3160	39	333	272	23	17	289	46	36
28	2860	37	286	260	20	14	244	43	28
29	2390	32	206	---	---	---	219	42	25
30	2060	47	261	---	---	---	205	48	27
31	2820	84	640	---	---	---	196	52	28
TOTAL	29183	---	25247.9	61505	---	7965	15593	---	3155
APRIL			MAY			JUNE			
1	185	57	28	471	61	78	135	116	42
2	178	67	32	366	74	73	100	124	33
3	184	81	40	413	78	87	100	115	31
4	179	72	35	370	77	77	104	115	32
5	174	57	27	312	75	63	102	90	25
6	166	52	23	285	74	57	110	92	27
7	161	38	17	320	94	81	117	100	32
8	161	23	10	624	104	175	84	86	20
9	162	20	8.7	884	71	169	76	91	19
10	164	22	9.7	909	51	125	240	164	106
11	166	43	19	794	28	60	350	213	201
12	161	46	20	598	46	74	249	145	97
13	156	42	18	372	67	67	166	134	60
14	201	42	23	274	68	50	122	126	42
15	310	58	49	234	61	39	101	110	30
16	291	156	123	214	72	42	160	140	60
17	399	126	136	198	74	40	206	93	52
18	630	107	182	183	67	33	167	85	38
19	465	127	159	163	71	31	142	91	35
20	471	105	134	150	74	30	112	113	34
21	414	68	76	152	80	33	88	94	22
22	362	47	46	156	85	36	75	75	15
23	324	62	54	138	84	31	71	76	15
24	286	87	67	129	94	33	69	74	14
25	261	121	85	129	114	40	69	71	13
26	383	113	117	135	96	35	80	64	14
27	655	112	198	130	87	31	88	70	17
28	725	63	123	165	110	49	100	85	23
29	714	53	102	173	113	53	90	95	23
30	616	62	103	160	112	48	95	95	24
31	---	---	---	196	128	68	---	---	---
TOTAL	9704	---	2064.4	9797	---	1908	3768	---	1196

WHITE RIVER BASIN

07068600 LITTLE BLACK RIVER AT SUCCESS, AR--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JULY				AUGUST			SEPTEMBER		
1	252	101	69	36	21	2.0	256	75	52
2	167	86	39	34	20	1.8	218	73	43
3	117	112	35	32	20	1.7	206	68	38
4	99	82	22	32	16	1.4	223	71	43
5	79	71	15	32	16	1.4	257	75	52
6	70	68	13	32	23	2.0	222	73	44
7	52	63	8.8	34	23	2.1	178	62	30
8	46	75	9.3	37	27	2.7	153	61	25
9	42	70	7.9	46	34	4.2	126	64	22
10	48	60	7.8	37	26	2.6	115	54	17
11	76	65	13	32	26	2.2	106	50	14
12	70	71	13	38	43	4.4	102	54	15
13	64	67	12	97	148	39	99	48	13
14	54	83	12	390	212	223	99	46	12
15	49	94	12	419	130	147	108	47	14
16	41	76	8.4	1040	168	472	135	46	17
17	36	58	5.6	1210	85	278	114	49	15
18	32	44	3.8	2160	44	257	113	53	16
19	32	35	3.0	1880	43	218	133	60	22
20	32	41	3.5	1600	41	177	124	48	16
21	32	53	4.6	1530	32	132	106	40	11
22	32	48	4.1	1490	29	117	90	34	8.3
23	52	44	6.2	1390	31	116	84	32	7.3
24	69	48	8.9	1200	26	84	81	35	7.7
25	73	46	9.1	969	30	78	80	29	6.3
26	63	39	6.6	765	44	91	75	28	5.7
27	44	43	5.1	628	49	83	70	26	4.9
28	34	45	4.1	596	57	92	68	23	4.2
29	34	34	3.1	624	57	96	67	25	4.5
30	35	25	2.4	443	65	78	66	25	4.5
31	35	28	2.6	316	71	61	---	---	---
TOTAL	1961	---	369.9	19169	---	2867.5	3874	---	584.4
YEAR	161881		45936.05						

WHITE RIVER BASIN

07068863 FOURCHE RIVER NEAR POYNOR, MO

LOCATION.--Lat 36°30'43", long 90°56'52", in N½SE¼ sec.34, T.22 N., R.1 E., Ripley County, Hydrologic Unit 11010009, on right bank, 0.5 mi (0.8 km) downstream from West Fork Fourche Creek, and 2 mi (3.2 km) southwest of Poynor.

DRAINAGE AREA.--87.2 mi² (225.8 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1976 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 340 ft (104 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good except for periods of no gage-height record which are poor.

AVERAGE DISCHARGE.--6 years, 92.1 ft³/s (2.61 m³/s), 14.34 in/yr (369 mm/yr), 66,700 acre-ft/yr (82.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,400 ft³/s (719 m³/s) Mar. 27, 1977, gage height, 15.91 ft (4.849 m); minimum, 4.0 ft³/s (0.11 m³/s) Sept. 16, 1980, gage height, 0.84 ft (0.256 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,500 ft³/s (71 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 24	----	*8,730 247	10.40 3.170	June 10	0145	4,430 125	7.77 2.368
Jan. 30	1930	2,730 77.3	6.35 1.935	June 27	1730	2,710 76.7	6.33 1.929
Mar. 14	2400	4,240 120	7.63 2.326	June 30	2130	4,230 122	7.69 2.344
Apr. 26	1430	2,990 84.7	6.59 2.009	Aug. 16	0900	4,510 128	7.83 2.387
May 7	0600	2,970 84.1	6.57 2.003				

Minimum discharge, 8.2 ft³/s (0.23 m³/s) Aug. 10, gage height, 1.16 ft (0.354 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	6.1	8.6	22	18	929	61	44	116	37	408	11	20		
2	6.5	13	21	36	722	57	45	97	34	161	11	173		
3	6.9	396	19	183	479	56	47	84	37	105	10	130		
4	7.3	129	16	438	338	55	39	73	39	81	9.6	63		
5	7.7	76	15	149	222	48	41	64	36	66	9.1	45		
6	9.0	59	14	101	178	45	39	60	34	57	9.2	35		
7	8.5	48	14	73	161	43	36	1170	31	49	9.9	29		
8	8.0	42	13	57	157	41	40	314	29	61	9.2	27		
9	8.0	37	12	52	282	40	41	154	28	55	8.5	25		
10	7.0	32	12	42	203	39	37	116	1020	51	8.2	23		
11	7.0	28	12	34	165	39	35	94	149	41	7.7	23		
12	7.0	25	12	28	155	38	34	82	92	35	7.9	23		
13	6.6	25	12	26	141	38	32	72	71	31	46	22		
14	6.2	26	12	25	141	372	31	67	58	28	32	22		
15	8.2	34	12	25	180	1250	29	69	50	26	197	97		
16	8.2	25	12	25	398	401	42	60	73	24	1060	93		
17	8.2	19	11	25	475	239	170	54	66	22	210	51		
18	7.3	16	10	20	302	173	86	48	53	21	125	39		
19	7.3	16	8.6	20	225	129	81	46	44	19	53	33		
20	7.3	16	8.6	20	182	112	121	47	37	18	33	29		
21	7.3	16	8.6	20	157	93	94	44	34	16	24	27		
22	7.3	16	16	20	135	81	78	41	77	16	20	26		
23	6.5	10	48	20	120	77	68	37	48	15	19	26		
24	6.5	10	36	3000	101	76	61	35	38	14	16	28		
25	6.9	10	30	500	78	68	71	36	137	13	19	29		
26	7.3	10	28	200	72	61	1250	41	110	13	19	27		
27	7.3	9.0	25	150	66	56	527	110	522	12	29	27		
28	7.7	9.0	22	86	66	52	245	68	308	12	35	27		
29	7.3	8.6	20	121	---	50	178	54	157	13	28	26		
30	7.3	14	18	753	---	49	145	46	642	13	25	26		
31	7.7	---	18	1520	---	48	---	40	---	12	22	---		
TOTAL	229.4	1183.2	537.8	7787	6830	3987	3787	3439	4091	1508	2125.3	1271		
MEAN	7.40	39.4	17.3	251	244	129	126	111	136	48.6	68.6	42.4		
MAX	9.0	396	48	3000	929	1250	1250	1170	1020	408	1060	173		
MIN	6.1	8.6	8.6	18	66	38	29	35	28	12	7.7	20		
CFSM	.09	.45	.20	2.88	2.80	1.48	1.45	1.27	1.56	.56	.79	.49		
IN	.10	.50	.23	3.32	2.91	1.70	1.62	1.47	1.75	.64	.91	.54		
AC-FT	455	2350	1070	15450	13550	7910	7510	6820	8110	2990	4220	2520		
CAL YR 1981	TOTAL	9420.9	MEAN	25.8	MAX	396	MIN	4.9	CFSM	.30	IN	4.02	AC-FT	18690
WIR YR 1982	TOTAL	36775.7	MEAN	101	MAX	3000	MIN	6.1	CFSM	1.16	IN	15.69	AC-FT	72940

WHITE RIVER BASIN

07068863 FOURCHE RIVER NEAR POYNOR, MO.--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: January 1976 to current year.

INSTRUMENTATION.--Temperature recorder since January 1976.

REMARKS.--Temperature recorder inoperative Jan. 16, thru Jan. 28, temperature range between 1.0°C-5.5°C; May 10 thru June 3, temperature range between 18°C-26°C. Temperature recorder inoperative when minimum for current year occurred.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 33.0°C July 15, 1977, July 7, 1980, July 20, 1981; minimum, 0.0°C Dec. 25, 27, 1980, Jan. 2, 4, 5, 6, 7, 8, 12, 16, 17, 1981.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 30.0°C July 20-22.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	20.0	18.0	15.5	15.0	11.0	10.0	5.5	4.5	5.0	4.0	10.0	6.5
2	18.0	15.0	15.5	15.5	10.0	9.0	4.5	4.5	5.5	4.5	10.5	8.5
3	16.5	14.5	15.5	15.0	10.0	9.0	6.0	4.5	5.5	4.5	10.5	9.5
4	16.0	15.0	15.5	15.0	10.5	9.5	6.0	5.5	4.5	3.5	9.5	9.0
5	21.0	15.5	15.5	15.0	9.5	7.0	5.5	4.0	4.0	4.0	10.0	7.0
6	20.0	18.5	15.5	14.0	10.0	9.0	9.5	6.0	4.0	2.0	9.0	7.0
7	---	---	14.5	12.0	12.0	9.0	9.0	5.5	3.0	1.5	8.5	5.5
8	---	---	14.5	13.0	11.5	9.5	5.5	3.5	3.0	3.0	8.5	5.5
9	---	---	15.0	14.0	10.5	8.5	4.0	3.5	4.0	3.0	9.5	6.5
10	---	---	14.5	12.0	9.0	6.5	3.5	1.5	3.5	1.5	12.0	9.0
11	---	---	13.0	11.0	8.0	8.0	2.0	1.5	4.0	1.5	14.0	11.5
12	---	---	13.0	11.0	9.0	7.0	2.0	1.5	4.0	3.0	14.0	13.5
13	---	---	13.0	10.5	8.5	6.5	2.0	1.5	4.5	3.0	14.0	13.0
14	18.0	17.0	13.0	10.0	9.0	7.0	2.0	1.5	5.5	3.0	13.0	10.0
15	17.0	16.5	13.0	11.0	9.0	8.0	2.0	1.5	6.0	5.0	12.0	9.0
16	18.0	17.0	14.0	12.0	8.5	7.0	---	---	6.5	5.5	15.5	12.0
17	18.0	18.0	14.0	11.0	8.5	5.0	---	---	6.5	6.0	15.0	12.0
18	18.0	15.5	14.5	10.5	5.0	3.5	---	---	6.0	6.5	15.5	13.5
19	16.0	14.0	14.5	13.0	4.5	3.5	---	---	4.5	7.0	16.0	14.5
20	16.5	14.0	13.0	10.0	4.0	3.0	---	---	10.0	7.0	17.0	14.5
21	16.5	15.0	10.0	8.0	4.0	4.0	---	---	10.5	8.5	16.5	13.5
22	16.5	14.5	11.0	8.5	4.5	4.0	---	---	10.0	8.5	13.5	11.5
23	14.5	13.5	11.5	9.5	4.5	3.5	---	---	11.5	6.5	13.5	10.5
24	14.0	11.0	12.0	9.5	4.5	3.5	---	---	11.0	10.0	14.0	11.5
25	13.5	11.5	11.5	9.0	4.0	3.0	---	---	10.0	7.0	14.0	11.5
26	13.5	13.0	15.0	11.0	5.5	4.0	---	---	7.0	5.0	12.0	9.0
27	14.5	12.0	13.5	11.0	5.5	4.5	---	---	6.0	4.0	11.5	9.5
28	14.5	12.0	12.0	11.0	6.5	5.5	---	---	9.0	5.5	11.5	8.5
29	15.5	13.5	11.5	11.0	5.5	5.0	6.5	5.5	---	---	13.0	9.0
30	15.5	13.5	11.5	11.0	5.0	3.5	8.5	5.5	---	---	13.0	12.0
31	15.5	14.5	---	---	5.5	4.5	6.5	4.5	---	---	15.5	12.0
MONTH	21.0	11.0	15.5	8.0	12.0	3.0	9.5	1.5	11.5	1.5	17.0	5.5

07071000 GREER SPRING AT GREER, MO

LOCATION.--Lat 36°47'11", long 91°20'53", in SE¼SW¼ sec.36, T.25 N., R.4 W., Oregon County, Hydrologic Unit 11010011, on right bank 300 ft (91 m) downstream from lower outlet of spring, 1 mi (1.6 km) north of Greer, and 1 mi (1.6 km) upstream from Eleven Point River.

PERIOD OF RECORD.--August to December 1904 (gage heights and discharge measurements only), October 1921 to current year. October to December 1921 monthly discharge only, published in WSP 1311.

GAGE.--Water-stage recorder. Datum of gage is 564.00 ft (171.907 m) National Geodetic Vertical Datum of 1929. Aug. 10 to Dec. 31, 1904, nonrecording gage at site 250 ft (76 m) downstream at different datum. Nov. 17, 1921, to June 25, 1934, nonrecording gage at site 250 ft (76 m) downstream at datum 0.74 ft (0.226 m) lower than present datum.

REMARKS.--Records good. Occasional runoff from drainage area of 2.97 mi² (7.69 km²) included in records.

AVERAGE DISCHARGE.--61 years, 333 ft³/s (9.431 m³/s) 241,300 acre-ft/yr (298 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,510 ft³/s (42.8 m³/s) Nov. 17, 1958, includes about 900 ft³/s (25 m³/s) of surface runoff, gage height, 2.63 ft (0.802 m) from rating curve extended about 700 ft³/s (20 m³/s) maximum excluding surface runoff, 903 ft³/s (25.57 m³/s) May 26, 1927; minimum, 104 ft³/s (2.95 m³/s) Nov. 16-19, 1956, Jan. 18, 19, 1957.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 664 ft³/s (18.8 m³/s) Jan. 31, gage height, 1.50 ft (0.457 m); minimum, 112 ft³/s (3.17 m³/s) many days, gage height, 0.25 ft (0.076 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	115	121	148	112	622	409	322	405	305	287	210	231
2	115	142	148	112	601	405	327	395	301	287	214	235
3	115	180	142	130	586	405	336	391	287	278	206	248
4	115	210	136	223	570	391	340	377	287	270	206	244
5	115	206	130	223	555	382	340	368	278	260	206	240
6	115	206	127	218	535	377	331	359	278	260	206	235
7	115	202	127	197	515	363	322	349	274	252	206	235
8	115	197	124	180	490	345	318	345	266	244	206	231
9	115	189	124	176	475	340	318	336	266	244	206	227
10	115	176	124	172	470	331	314	331	278	240	206	223
11	115	176	121	164	465	327	309	327	292	240	206	223
12	112	172	121	152	437	322	309	322	297	235	206	223
13	112	168	115	152	423	318	309	318	301	231	206	218
14	112	160	118	148	414	331	305	314	292	227	210	227
15	115	156	118	142	409	382	297	309	292	223	223	240
16	115	152	118	145	446	409	297	309	318	218	240	231
17	115	148	115	142	535	414	331	305	327	218	235	227
18	115	145	112	139	540	409	345	305	318	214	231	223
19	115	142	112	133	535	405	345	309	309	214	223	223
20	115	139	112	133	530	400	345	314	301	214	223	223
21	115	139	112	130	525	386	340	314	297	210	218	214
22	118	133	115	252	510	377	336	309	287	210	223	210
23	136	130	115	391	490	368	327	301	278	210	223	210
24	139	127	112	372	470	363	327	297	292	210	218	206
25	133	127	112	349	461	359	327	297	301	206	223	202
26	130	127	118	331	456	349	363	301	297	206	218	202
27	127	124	118	309	442	345	400	301	292	206	223	202
28	127	121	118	297	423	336	395	305	287	210	231	197
29	127	121	112	282	---	331	395	297	287	210	231	193
30	124	124	112	395	---	331	405	292	282	206	235	189
31	124	---	115	664	---	327	---	292	---	210	235	---
TOTAL	3691	4660	3751	6965	13930	11337	10075	10094	8767	7150	6753	6632
MEAN	119	155	121	225	498	366	336	326	292	231	218	221
MAX	139	210	148	664	622	414	405	405	327	287	240	248
MIN	112	121	112	112	409	318	297	292	266	206	206	189
AC-FT	7320	9240	7440	13820	27630	22490	19980	20020	17390	14180	13390	13150
CAL YR 1981 TOTAL	65823		MEAN 180	MAX 485	MIN 112	AC-FT 130600						
WIR YR 1982 TOTAL	93805		MEAN 257	MAX 664	MIN 112	AC-FT 186100						

WHITE RIVER BASIN

07071500 ELEVEN POINT RIVER NEAR BARDLEY, MO

LOCATION.--Lat 36°38'55", long 91°12'03", in NE¼SE¼ sec.17, T.23 N., R.2 W., Oregon County, Hydrologic Unit 11010011, on downstream side of right pier of main truss of bridge on U.S. Highway 160, 7 mi (11.3 km) southwest of Bardley, 7.5 mi (12.1 km) upstream from Fredericks Fork, and at mile 53.7 (86.4 km).

DRAINAGE AREA.--793 mi² (2,050 km²).

PERIOD OF RECORD.--October 1921 to current year. October 1921 monthly discharge only, published in WSP 1311.

REVISED RECORDS.--WSP 827: 192728, 1935. WSP 927: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 410.84 ft (125.224 m) National Geodetic Vertical Datum of 1929. Prior to June 26, 1934, nonrecording gage at site 100 ft (30 m) upstream at datum 0.06 ft (0.018 m) higher. June 26, 1934, to Oct. 19, 1939, nonrecording gage, at present site and datum.

REMARKS.--Records good. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--60 years, 747 ft³/s (21.16 m³/s), 12.79 in/yr (326 mm/yr), 541,200 acre-ft/yr (667 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 40,000 ft³/s (1,133 m³/s) Apr. 14, 1927, gage height, 18.74 ft (0.48 m), from floodmarks from rating curve extended above 25,000 ft³/s (708 m³/s); minimum, 152 ft³/s (4.30 m³/s) Jan. 27, 1956, Jan. 11, 1957; minimum gage height, 1.06 ft (0.323 m) Sept. 6-11, 1925, (present site and datum).

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 19.7 ft (6.00 m) in August 1915, from floodmarks, discharge, 44,000 ft³/s (1,250 m³/s) from rating curve extended above 25,000 ft³/s (708 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 12,200 ft³/s (346 m³/s) Jan. 31, gage height, 11.32 ft (3.450 m), no other peak above base of 4,000 ft³/s (113 m³/s); minimum, 192 ft³/s (5.44 m³/s) Oct.3-4, gage height, 2.03 ft (0.619 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	196	213	260	208	7600	825	578	1120	513	623	421	381
2	196	253	270	225	2730	793	579	1060	509	625	415	736
3	195	418	262	297	2210	767	585	1010	506	612	411	714
4	197	525	248	418	1870	751	587	958	510	590	407	543
5	203	458	238	476	1660	697	586	895	496	569	401	482
6	200	399	232	442	1500	676	571	852	483	551	413	451
7	198	364	228	398	1360	647	552	939	475	557	403	430
8	196	341	234	356	1280	621	545	908	465	548	394	414
9	196	322	224	334	1230	600	542	841	462	988	389	405
10	196	306	218	313	1160	590	529	789	637	1260	383	396
11	196	294	214	302	1100	585	521	745	688	733	391	391
12	196	282	212	296	1070	574	512	713	615	576	381	383
13	196	278	212	289	981	564	511	687	621	533	411	379
14	216	272	212	278	928	659	507	670	661	594	410	386
15	213	266	210	276	912	1060	499	637	619	612	453	411
16	204	263	208	270	1040	1140	501	629	753	586	503	403
17	211	256	205	264	2140	1090	621	610	906	568	471	388
18	215	250	203	264	2010	1030	702	601	789	543	440	379
19	207	244	200	256	1620	956	682	803	726	529	413	373
20	203	240	198	249	1450	918	673	695	661	516	398	369
21	200	234	202	246	1350	859	641	637	635	506	388	361
22	219	230	211	395	1240	814	611	617	607	495	380	354
23	236	228	224	978	1170	784	594	589	589	485	375	351
24	236	226	226	1060	1110	756	579	569	614	476	382	352
25	234	222	228	853	1030	721	581	565	613	464	394	350
26	240	220	227	713	957	681	904	557	614	457	379	346
27	232	219	224	624	903	653	1320	567	646	450	400	345
28	222	216	224	576	864	630	1350	556	775	446	412	341
29	214	215	218	537	---	612	1250	539	681	440	405	337
30	216	232	211	2770	---	608	1190	526	645	437	393	339
31	213	---	208	11600	---	600	---	514	---	430	383	---
TOTAL	6497	8486	6891	26563	44475	23261	20403	22398	18514	17799	12599	12290
MEAN	210	283	222	857	1588	750	680	723	617	574	406	410
MAX	240	525	270	11600	7600	1140	1350	1120	906	1260	503	736
MIN	195	213	198	208	864	564	499	514	462	430	375	337
CFSM	.27	.36	.26	1.08	2.00	.95	.86	.91	.78	.72	.51	.52
IN	.30	.40	.32	1.25	2.09	1.09	.96	1.05	.87	.83	.59	.58
AC-FT	12890	16830	13670	52690	88220	46140	40470	44430	36720	35300	24990	24380
CAL YR 1981	101AL	111422	MEAN 305	MAX 1170	MIN 195	CFSM .39	IN 5.23	AC-FI 221000				
WIR YR 1982	101AL	220176	MEAN 603	MAX 11600	MIN 195	CFSM .76	IN 10.33	AC-FI 436700				

07185700 SPRING RIVER AT LARUSSELL, MO

LOCATION.--Lat 37°09'13", long 94°03'21", SW¼SW¼ sec.12, T.28 N., R.29 W., Lawrence County, Hydrologic Unit 11070207, on right bank on upstream side of Bower Mills Bridge, 0.8 mi (1.3 km) north of Larussell, and 2.5 mi (4.0 km) upstream from Cave Spring Branch.

DRAINAGE AREA.--306 mi² (793 km²).

PERIOD OF RECORD.--April 1957 to December 1981 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 1014.63 ft (309.259 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 18, 1961, nonrecording gage at same site and datum.

REMARKS.--Records poor. Several observations of water temperature made during the year.

AVERAGE DISCHARGE.--24 years (1958-1981), 243 ft³/s (6.882 m³/s), 10.78 in/yr (274 mm/yr), 176,100 acre-ft/yr (217 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,500 ft³/s (637 m³/s) Nov. 1, 1972, gage height, 17.58 ft (5.358 m); minimum discharge, 15 ft³/s (0.425 m³/s) Dec. 21, 1963, result of ice conditions upstream; minimum gage height, 3.87 ft (1.180 m) Sept. 12, 13, 1959.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge during period October 1981 to December 1981, 600 ft³/s (16.99 m³/s) Oct. 18, no peak above base of 3,000 ft³/s (85 m³/s); minimum daily flow, 50 ft³/s (1.42 m³/s) Oct. 4-10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	55	550	392									
2	55	520	287									
3	55	500	262									
4	55	520	241									
5	50	540	223									
6	50	500	213									
7	50	470	203									
8	50	420	195									
9	50	380	180									
10	50	350	170									
11	55	320	165									
12	60	300	160									
13	70	280	155									
14	90	260	150									
15	150	250	145									
16	200	240	140									
17	400	230	135									
18	600	220	130									
19	400	210	125									
20	300	200	125									
21	204	190	130									
22	253	180	140									
23	350	170	160									
24	300	172	200									
25	250	167	240									
26	230	161	230									
27	210	152	240									
28	200	146	230									
29	190	142	210									
30	180	225	200									
31	300	---	210									
TOTAL	5512	8965	5986									
MEAN	178	299	193									
MAX	600	550	392									
MIN	50	142	125									
CFSM	.56	.58	.63									
IN.	.67	1.09	.73									
AC-FT	10930	17780	11870									
CAL YR 1981	TOTAL 65326	MEAN 179	MAX 3410	MIN 32	CFSM .59	IN 7.94	AC-FT 129600					

07186000 SPRING RIVER NEAR WACO, MO

LOCATION.--Lat 37°14'44", long 94°33'58", on line between SE¼ sec. 7 and NE¼ sec. 18, T.29 N., R.33 W., Jasper County, Hydrologic Unit 11070207, on left bank on downstream side of left pier of county highway bridge, 0.8 mi (1.3 km) downstream from Blackberry Creek, 1.5 mi (2.4 km) east of Waco, and 47.6 mi (76.6 km) upstream from mouth.

DRAINAGE AREA.--1,164 mi² (3,015 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1924 to current year.

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 833.23 ft (253.969 m) National Geodetic Vertical Datum of 1929. Prior to Feb. 23, 1935, nonrecording gage at same site and datum.

REMARKS.--Records good except during periods of no gage-height record, which are poor. Low flow slightly regulated by gristmills above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--58 years, 837 ft³/s (23.70 m³/s), 9.77 in/yr (248 mm/yr), 606,400 acre-ft/yr (748 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 103,000 ft³/s (2,920 m³/s) May 19, 1943, gage height, 30.94 ft (9.431 m), from floodmark; minimum discharge, 4.2 ft³/s (0.119 m³/s) Aug. 28, 1954; minimum gage height, 0.80 ft (0.244 m) July 24, 1934.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 12,400 ft³/s (351 m³/s) Jan. 31, gage height, 15.99 ft (4.874 m), no peak above base of 13,000 ft³/s (368 m³/s); minimum discharge, 56 ft³/s (1.59 m³/s) Oct. 7-10; minimum gage height, 1.68 ft (0.512 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	61	4440	2590	359	10100	601	435	933	2250	891	166	1810
2	59	4290	1830	395	4400	573	420	747	1400	1080	159	785
3	59	2600	867	445	2100	562	495	634	1040	667	152	516
4	59	2580	639	2450	1660	551	606	568	6420	515	143	418
5	59	3230	530	2460	1400	535	530	515	7380	440	137	356
6	58	1830	470	1260	1220	525	470	546	3950	390	134	318
7	58	1090	435	747	1110	495	425	573	2020	351	173	286
8	56	897	400	557	1040	470	405	510	1340	327	253	262
9	56	801	363	500	971	450	390	435	1110	309	276	238
10	56	783	345	440	891	430	372	377	952	4900	253	223
11	58	678	323	410	837	420	354	341	1320	3080	288	210
12	70	623	309	390	801	410	336	332	2010	1450	215	195
13	86	568	292	380	777	415	327	573	1320	595	2570	207
14	89	525	276	370	831	2960	314	2560	958	940	6030	212
15	131	485	268	360	1930	6270	300	3210	825	514	2950	457
16	296	460	260	350	2550	4500	296	2400	1030	397	1090	604
17	747	435	250	340	2220	2610	292	1580	879	343	678	277
18	3290	410	236	340	1710	1280	276	1040	723	308	520	238
19	2920	381	222	330	1460	1000	272	837	1970	279	420	200
20	897	359	211	330	1240	891	276	729	1340	262	350	185
21	444	341	208	327	1100	789	272	1060	861	243	305	180
22	433	327	218	490	984	705	253	783	1120	232	260	170
23	639	318	257	1100	903	656	246	656	1080	601	232	160
24	557	305	377	1090	825	623	233	546	694	390	204	160
25	500	292	400	711	753	590	257	525	1170	264	208	160
26	420	284	390	500	694	557	4060	997	1150	222	194	160
27	350	272	405	450	650	535	1930	1370	1060	204	400	160
28	309	260	400	405	628	510	978	1480	1150	204	4000	150
29	276	253	390	366	---	480	837	1610	1170	194	900	150
30	246	678	363	6120	---	460	1150	1420	873	187	800	150
31	678	---	350	11800	---	465	---	2100	---	180	1880	---
TOTAL	14017	30795	14674	36592	45785	32318	17807	31967	50565	20959	26340	9597
MEAN	452	1027	480	1180	1635	1043	594	1032	1686	676	850	320
MAX	3290	4440	2590	11800	10100	6270	4060	3210	7380	4900	6030	1810
MIN	56	253	208	327	628	410	233	332	694	180	134	150
CFSM	.39	.88	.41	1.01	1.41	.90	.51	.89	1.45	.58	.73	.28
IN.	.45	.98	.48	1.17	1.46	1.03	.57	1.02	1.62	.67	.84	.31
AC-FT	27600	61080	29500	72580	90810	64100	35320	63450	100300	41570	52250	19040
CAL YR 1981	ICIAL	188304	MEAN 516	MAX 8340	MIN 47	CFSM .44	IN 6.02	AC-FT 373500				
WIR YR 1982	ICIAL	331636	MEAN 909	MAX 11800	MIN 56	CFSM .78	IN 10.60	AC-FT 657800				

ARKANSAS RIVER BASIN

07186400 CENTER CREEK NEAR CARTERVILLE, MO

LOCATION.--Lat 37°08'26", long 94°22'57", in NW¼NW¼NW¼ sec.24, T.28 N., R.32 W., Jasper County, Hydrologic Unit 11070207, at downstream side of right pier of bridge on State Highway HH, 1.5 mi (2.4 km) downstream from Grove Creek, 3 mi (4.8 km) east of Carterville, and 17 mi (27.4 km) above mouth.

DRAINAGE AREA.--232 mi² (601 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1962 to current year.

GAGE.--Water-stage recorder. Datum of gage is 913.21 ft (278.346 m) National Geodetic Vertical Datum of 1929. (levels by Missouri State Highway Commission).

REMARKS.--Records fair except those of no gage-height record which are poor. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--20 years, 184 ft³/s (5.211 m³/s), 10.77 in/yr (274 mm/yr), 133,300 acre-ft/yr (164 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 36,300 ft³/s (1,030 m³/s) July 3, 1976, gage height, 17.68 ft (5.388 m); minimum, 9.4 ft³/s (0.266 m³/s) Aug. 20, 21, 1972; minimum gage height, 0.28 ft (0.085 m) Oct. 20, 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 2, 1959, reached a stage of 18.57 ft (5.660 m), from floodmark.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,500 ft³/s (71 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 31	0100	*4,280 121	9.23 2.813
Apr. 26	0500	2,520 71.4	6.79 2.070
June 4	1600	2,510 71.1	6.78 2.067

Minimum, 25 ft³/s (0.71 m³/s) Oct. 1-12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	25	346	59	82	1050	176	144	285	597	228	62	189		
2	25	329	57	79	697	172	146	260	450	203	61	158		
3	25	310	56	98	584	169	173	236	618	182	59	139		
4	25	388	57	147	490	164	166	216	1600	170	55	129		
5	25	365	72	168	436	157	159	205	1170	161	52	120		
6	25	329	91	169	386	152	150	195	759	151	51	110		
7	25	294	103	164	357	147	144	180	611	146	58	106		
8	25	267	104	150	340	143	141	171	527	141	82	101		
9	25	243	104	141	324	140	135	162	459	135	61	96		
10	25	219	102	128	303	137	130	156	402	133	56	92		
11	25	201	99	120	281	135	126	150	462	127	73	88		
12	25	185	93	115	269	133	123	153	465	122	66	85		
13	30	171	88	110	246	134	120	168	391	118	310	106		
14	40	160	80	105	241	136	117	402	369	126	464	98		
15	70	150	70	100	319	492	116	668	350	117	183	88		
16	150	139	65	95	388	397	115	583	335	110	149	83		
17	250	128	60	90	351	342	111	597	296	105	132	86		
18	150	122	55	85	332	303	106	444	278	101	116	120		
19	100	115	50	80	307	274	108	377	266	95	109	104		
20	90	104	50	79	287	250	103	332	244	92	101	98		
21	88	96	50	89	270	228	98	335	233	87	94	90		
22	153	92	50	169	251	209	95	296	222	89	87	85		
23	120	88	55	191	239	196	94	260	208	90	83	80		
24	105	83	60	191	225	185	92	238	199	83	78	85		
25	97	78	70	189	210	180	132	233	200	81	102	74		
26	90	76	80	179	198	168	1190	257	191	78	96	70		
27	79	71	90	169	191	161	388	354	186	86	103	67		
28	70	66	85	160	184	153	318	597	472	76	422	63		
29	65	67	90	150	---	148	334	540	268	73	177	59		
30	57	62	86	2260	---	150	309	382	215	69	165	56		
31	162	---	86	3030	---	150	---	771	---	66	324	---		
TOTAL	2264	5344	2319	9082	9756	6338	5683	10203	13043	3641	4031	2925		
MEAN	73.0	178	74.8	293	348	204	189	329	435	117	130	97.5		
MAX	250	388	104	3030	1050	492	1190	771	1600	228	464	189		
MIN	25	62	50	79	184	133	92	150	186	66	51	56		
CFSM	.32	.77	.32	1.26	1.50	.88	.82	1.42	1.88	.50	.56	.42		
IN.	.36	.86	.37	1.46	1.56	1.02	.91	1.64	2.09	.58	.65	.47		
AC-FT	4490	10600	4600	16010	19350	12570	11270	20240	25870	7220	8000	5800		
CAL YR 1981	TOTAL	25256	MEAN	69.2	MAX	388	MIN	13	CFSM	.30	IN	4.05	AC-FT	50100
WTR YR 1982	TOTAL	74629	MEAN	204	MAX	3030	MIN	25	CFSM	.88	IN	11.97	AC-FT	148000

ARKANSAS RIVER BASIN

07186400 CENTER CREEK NEAR CARTERVILLE, MO.--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Aug. 1962 to Sept. 1975, Oct. 1979 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00001)	SPE- CIFIC CON- DUCT- ANCE (UMHDS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	OXYGEN DEMAND, CHEM- ICAL (LON LEVEL) (MG/L) (00335)	
OCT											
21...	0915	1028	29001	90	404	7.4	13.5	6.4	61	10	
NOV											
24...	1430	1028	29001	83	348	7.9	9.5	11.4	49	5	
DEC											
16...	1000	1028	29001	65	396	7.8	5.5	9.4	75	<5	
JAN											
20...	1045	1028	29001	57	390	7.8	3.5	11.6	87	--	
FEB											
10...	1100	1028	29001	300	298	7.9	4.0	11.8	90	<5	
MAR											
03...	1215	1028	29001	167	316	8.2	11.5	11.6	106	<5	
APR											
14...	1015	1028	29001	119	318	8.1	17.5	8.0	83	13	
MAY											
05...	1020	1028	29001	175	328	7.8	18.0	6.0	62	2	
JUN											
02...	1000	1028	29001	480	265	7.7	16.0	7.6	77	<5	
JUL											
07...	1030	1028	29001	147	330	7.8	24.0	6.6	78	<5	
AUG											
04...	1100	1028	29001	56	372	7.8	25.5	5.8	71	5	
SEP											
09...	0900	1028	29001	90	338	8.1	22.5	5.6	64	--	
DATE		COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	HARD- NESS (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)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY FIELD (MG/L AS CaCO3) (00410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)
OCT											
21...	280	150	56	3.5	11	3.4	118	35	11	.2	
NOV											
24...	20	--	--	--	--	--	121	--	--	--	
DEC											
16...	84	--	--	--	--	--	131	--	--	--	
JAN											
20...	38	170	60	3.7	11	1.6	131	24	11	.4	
FEB											
10...	28	--	--	--	--	--	105	--	--	--	
MAR											
03...	34	--	--	--	--	--	112	--	--	--	
APR											
14...	110	220	81	4.0	9.9	1.6	115	13	28	.3	
MAY											
05...	490	--	--	--	--	--	115	--	--	--	
JUN											
02...	440	--	--	--	--	--	102	--	--	--	
JUL											
07...	190	150	55	3.0	5.0	1.0	115	11	8.0	.2	
AUG											
04...	230	--	--	--	--	--	125	--	--	--	
SEP											
09...	210	--	--	--	--	--	126	--	--	--	

ARKANSAS RIVER BASIN

07186400 CENTER CREEK NEAR CARTERVILLE, MO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

[illegible][illegible]

ARKANSAS RIVER BASIN

07186480 CENTER CREEK NEAR SMITHFIELD, MO.

WATER-QUALITY RECORDS

LOCATION.--Lat 37°09'20", long 94°36'10", NW¼ sec.14, T.28 N., R.34 W., Jasper County, Hydrologic Unit 11070207, at bridge on county road 1 mi (1.6 km) south of Smithfield.

PERIOD OF RECORD.--October 1968 to July 1975, July 1977 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHDS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L) (00355)
OCT 21...	1230	1028	29001	110	510	7.6	15.0	6.2	81	28
NOV 24...	1515	1028	29001	86	435	8.0	10.0	11.6	103	8
DEC 16...	1115	1028	29001	96	460	7.9	6.0	11.4	92	7
JAN 20...	1200	1028	29001	80	450	7.6	3.5	12.0	90	6
FEB 10...	1145	1028	29001	440	360	7.8	3.5	11.4	66	<5
MAR 03...	1313	1028	29001	205	389	8.0	11.5	11.0	101	5
APR 14...	1105	1028	29001	150	386	8.2	18.0	9.8	102	33
MAY 05...	1100	1028	29001	255	386	8.0	19.0	8.0	85	<5
JUN 02...	1100	1028	29001	540	310	7.7	17.0	7.8	80	6
JUL 07...	1130	1028	29001	130	375	8.0	24.0	7.6	89	<5
AUG 04...	1200	1028	29001	70	421	8.1	25.5	6.0	73	8
SEP 09...	1040	1028	29001	100	362	8.1	23.5	8.8	102	--

DATE	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	HARD- NESS (MG/L AS CAC03) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY FIELD (MG/L AS CAC03) (00410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)
OCT 21...	1200	220	81	4.9	15	3.7	105	102	4.9	.2
NOV 24...	2	--	--	--	--	--	148	--	--	--
DEC 16...	15	--	--	--	--	--	121	--	--	--
JAN 20...	230	210	78	4.0	10	1.6	131	62	10	.3
FEB 10...	84	--	--	--	--	--	108	--	--	--
MAR 03...	21	--	--	--	--	--	115	--	--	--
APR 14...	27	180	66	3.0	8.6	1.5	112	42	18	.3
MAY 05...	220	--	--	--	--	--	116	--	--	--
JUN 02...	570	--	--	--	--	--	102	--	--	--
JUL 07...	68	170	64	3.0	5.3	1.6	125	35	5.0	.3
AUG 04...	110	--	--	--	--	--	131	--	--	--
SEP 09...	450	--	--	--	--	--	153	--	--	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

[illegible]

ARKANSAS RIVER BASIN

07187000 SHOAL CREEK ABOVE JOPLIN, MO

LOCATION.--Lat 37°01'23", long 94°30'58", in SE¼NE¼NE¼ sec.34, T.27 N., R.33 W., Newton County, Hydrologic Unit 11070207, on right bank 250 ft (76 m) upstream from mouth of Spring Creek, 1,400 ft (427 m) downstream from bridge on State Highway 86, 0.5 mi (0.8 km) south of city limits of Joplin and 13.2 mi (21.2 km) above mouth.

DRAINAGE AREA.--427 mi² (1,106 km²).

PERIOD OF RECORD.--October 1941 to current year.

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 886.87 ft (270.318 m) National Geodetic Vertical Datum of 1929. Prior to July 21, 1966, water-stage recorder at site 1.8 mi (2.9 km) upstream, at datum 15.5 ft (4.72 m) higher.

REMARKS.--Records good except during periods of no gage-height record which are poor. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--41 years, 389 ft³/s (11.02 m³/s), 12.37 in/yr (314 mm/yr), 281,800 acre-ft/yr (347 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 62,100 ft³/s (1,730 m³/s) May 18, 1943, gage height, 16.8 ft (5.12 m) former site and datum; minimum, 12 ft³/s (0.340 m³/s) Sept. 7, 1954.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,600 ft³/s (102 m³/s) Jan. 31, gage height, 7.48 ft (2.280 m), no peak above base of 6,000 ft³/s (170 m³/s); minimum, 50 ft³/s (1.416 m³/s) Oct. 1-12, gage height, 2.12 ft (0.646 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	50	330	244	173	1940	334	368	302	1080	454	158	272		
2	50	470	255	167	1320	325	362	266	896	511	158	249		
3	50	479	242	183	1090	321	385	277	939	444	149	237		
4	50	466	227	201	922	317	363	261	1610	401	143	234		
5	50	507	210	203	810	304	342	254	1860	380	138	220		
6	50	469	202	205	720	291	328	259	1430	352	138	206		
7	50	430	195	210	658	283	311	240	1180	330	140	196		
8	50	461	186	197	612	272	303	228	1040	321	196	183		
9	50	370	176	187	573	264	293	218	961	308	183	180		
10	50	340	167	177	530	260	277	212	888	295	149	180		
11	50	317	164	162	488	252	265	204	910	279	170	170		
12	50	294	156	196	466	252	249	202	910	268	177	170		
13	60	276	152	173	438	249	242	246	853	256	196	170		
14	70	265	149	171	411	438	238	713	811	249	505	180		
15	100	251	145	183	417	869	231	1060	809	237	279	250		
16	150	240	140	170	499	884	232	1020	1110	234	260	700		
17	300	226	137	160	552	833	230	954	1800	223	234	350		
18	500	216	130	150	556	771	217	752	778	213	292	250		
19	400	208	125	145	534	725	217	649	682	210	200	210		
20	200	198	121	142	505	675	213	576	607	202	190	196		
21	235	189	122	140	482	650	206	546	558	194	177	190		
22	244	183	135	153	460	587	200	494	522	194	167	180		
23	238	170	170	187	444	542	193	449	486	194	155	167		
24	243	170	200	220	417	522	190	417	466	186	155	164		
25	233	161	201	225	390	494	205	406	494	183	155	164		
26	224	157	208	225	370	465	435	396	505	176	161	161		
27	205	152	210	216	361	440	376	401	528	170	190	158		
28	191	146	203	208	347	414	327	427	534	167	411	149		
29	178	141	195	195	---	399	330	494	546	167	267	146		
30	166	197	186	808	---	408	325	471	482	176	228	146		
31	208	---	179	2800	---	395	---	896	---	164	268	---		
TOTAL	4785	8457	5532	8932	17314	14215	8453	14310	26277	8138	6389	6428		
MEAN	154	282	178	288	618	459	282	462	876	263	206	214		
MAX	500	507	255	2800	1940	884	435	1060	1860	511	505	700		
MIN	50	141	121	140	347	249	190	202	466	164	138	146		
CFSM	.76	.66	.42	.67	1.45	1.08	.66	1.08	2.05	.62	.48	.50		
IN.	.42	.74	.48	.78	1.51	1.24	.74	1.25	2.29	.71	.56	.56		
AC-FT	9490	16770	10970	17720	34340	26200	16770	28380	52120	16140	12670	12750		
CAL YR 1981	TOTAL	54733	MEAN	150	MAX	1520	MIN	30	CFSM	.35	IN	4.77	AC-FT	108600
WTR YR 1982	TOTAL	129230	MEAN	354	MAX	2800	MIN	50	CFSM	.83	IN	11.26	AC-FT	256300

ARKANSAS RIVER BASIN

07187000 SHOAL CREEK ABOVE JOPLIN, MO.--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Oct. 1968 thru Dec. 1968, Oct. 1979 thru Sept. 1980, Oct. 1981 thru Sept. 1982 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00300)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L) (00335)
OCT									
21...	0800	1028	29001	237	290	7.6	13.0	8.4	79
NOV									
24...	1315	1028	29001	167	298	8.2	8.5	11.8	101
DEC									
16...	0815	1028	29001	145	305	7.9	5.0	11.0	86
JAN									
20...	0900	1028	29001	150	292	7.9	1.0	12.6	89
FEB									
10...	0940	1028	29001	560	268	8.2	3.0	12.2	90
MAR									
03...	1100	1028	29001	321	276	8.1	11.5	10.2	94
APR									
14...	0900	1028	29001	230	269	8.3	17.5	9.1	95
MAY									
05...	0900	1028	29001	260	272	7.9	19.0	7.6	81
JUN									
02...	0830	1028	29001	1000	240	7.7	16.0	8.0	81
JUL									
07...	0915	1028	29001	380	282	7.9	24.0	7.0	82
AUG									
04...	1000	1028	29001	124	305	7.8	25.5	6.8	83
SEP									
09...	1150	1028	29001	143	304	8.0	23.5	8.4	98

DATE	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	HARD- NESS (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)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINEITY 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)
OCT										
21...	300	320	116	6.6	8.4	3.2	121	10	8.0	<.1
NOV										
24...	7	--	--	--	--	--	138	--	--	--
DEC										
16...	17	--	--	--	--	--	141	--	--	--
JAN										
20...	33	140	52	3.4	5.2	1.3	125	<10	7.0	<.1
FEB										
10...	54	--	--	--	--	--	102	--	--	--
MAR										
03...	44	--	--	--	--	--	121	--	--	--
APR										
14...	51	190	68	4.0	8.2	1.4	126	<10	15	<.1
MAY										
05...	100	--	--	--	--	--	118	--	--	--
JUN										
02...	2000	--	--	--	--	--	108	--	--	--
JUL										
07...	190	140	50	3.0	4.0	1.6	115	10	6.0	<.1
AUG										
04...	72	--	--	--	--	--	115	--	--	--
SEP										
09...	160	--	--	--	--	--	144	--	--	--

ARKANSAS RIVER BASIN

07187000 SHOAL CREEK ABOVE JOPLIN, MO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

[illegible][illegible]

07189000 ELK RIVER NEAR TIFF CITY, MO

LOCATION.--Lat 36°37'50", long 94°35'12", in NE¼ sec.22, T.22 N., R.34 W., McDonald County, Hydrologic Unit 11070208, on downstream side of second pier from right bank of bridge on State Highway 43, 0.8 mi (1.3 km) downstream from Blackfoot Branch, 2.8 mi (4.5 km) upstream from Buffalo Creek, 3.0 mi (4.8 km) southeast of Tiff City, and at mile 15.8 (25.4 km).

DRAINAGE AREA.--872 mi² (2,258 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1939 to current year.

REVISED RECORDS.--WSP 927: 1940. WSP 1117: Drainage area.

GAGE.--Waterstage recorder. Datum of gage is 750.61 ft (228.786 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Sept. 6, 1960, to Aug. 25, 1961, at site 100 ft (30.5 m) downstream.

REMARKS.--Records good.

AVERAGE DISCHARGE.--43 years, 769 ft³/s (21.78 m³/s), 11.97 in/yr (304 mm/yr), 557,000 acre-ft/yr (687 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 137,000 ft³/s (3,880 m³/s) Apr. 19, 1941, gage height, 28.4 ft (8.66 m), from floodmark, from rating curve extended above 60,000 ft³/s (1,700 m³/s) on basis of slope-area measurement of peak flow; minimum daily, 5.1 ft³/s (0.14 m³/s), Sept. 5, 6, 1954.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 9,000 ft³/s (255 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 31	1730	*15,500 439	*14.85 4.526
June 16	1700	9,870 280	11.85 3.612

Minimum daily discharge, 51 ft³/s (1.44 m³/s) Oct. 2-5, 8, 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53	670	357	322	6600	445	377	397	468	918	323	709
2	51	1320	502	305	3330	427	372	390	492	852	258	482
3	51	1260	512	298	2300	417	370	381	506	760	215	374
4	51	1100	483	298	1680	407	357	371	660	658	187	306
5	51	1180	446	295	1300	393	343	357	1410	585	169	266
6	53	1160	412	289	1050	375	331	353	1330	529	157	236
7	52	1020	383	285	903	359	320	336	1110	479	147	209
8	51	864	358	279	807	344	311	320	964	444	146	191
9	51	741	336	274	722	332	306	304	848	410	176	177
10	53	648	316	260	668	321	299	293	790	378	206	165
11	55	575	300	250	624	312	292	283	757	343	185	155
12	61	521	289	240	597	314	286	278	810	318	172	146
13	79	477	279	235	565	305	281	336	773	298	168	152
14	180	438	271	222	536	449	276	1800	712	262	164	148
15	319	405	263	220	545	1110	271	2840	722	262	176	142
16	330	378	255	209	685	1480	267	1880	5840	247	168	142
17	287	353	248	200	668	1280	261	1340	3470	229	157	139
18	289	333	240	200	689	1080	270	1030	1940	211	148	139
19	310	311	231	208	635	929	277	847	1420	191	140	134
20	278	298	223	204	773	828	280	729	1180	176	133	132
21	256	284	220	200	716	738	273	645	1030	163	127	128
22	418	273	228	218	669	667	263	573	909	158	123	123
23	666	264	290	246	627	613	258	519	810	153	116	118
24	687	256	406	266	588	571	253	479	739	149	111	117
25	563	251	469	313	550	535	255	458	699	144	116	117
26	477	242	470	318	516	501	301	447	744	141	115	114
27	415	238	448	313	490	471	419	422	883	135	119	109
28	362	230	425	302	465	444	418	411	1030	140	137	106
29	321	225	396	295	---	422	410	405	1420	204	154	102
30	289	260	367	850	---	405	405	394	1110	287	165	99
31	313	---	342	10900	---	393	---	426	---	377	820	---
TOTAL	7472	16575	10765	19334	30898	17667	9402	20044	35576	10621	5698	5677
MEAN	241	553	347	624	1104	570	313	647	1186	343	184	189
MAX	687	1320	512	10900	6600	1480	419	2840	5840	918	820	709
MIN	51	225	220	200	465	305	253	278	468	135	111	99
CFSM	.28	.63	.40	.72	1.27	.65	.36	.74	1.36	.39	.21	.22
IN.	.32	.71	.46	.82	1.32	.75	.40	.86	1.52	.45	.24	.24
AC-FT	14620	32880	21350	36350	61290	35040	18650	39760	70560	21070	11300	11260

CAL YR 1981	TOTAL	93807	MEAN	257	MAX	1730	MIN	51	CFSM	.30	IN	4.00	AC-FT	186100
WTR YR 1982	TOTAL	189729	MEAN	520	MAX	10900	MIN	51	CFSM	.60	IN	8.09	AC-FT	376300

DISCHARGE AT PARTIAL-RECORD STATIONS

Crest-stage partial-record stations

The following table contains annual maximum discharges for crest-stage stations. A crest-stage gage is a device which will register the peak stage occurring between inspections of the gage. A stage-discharge relation for each gage is developed from discharge measurements made by indirect measurements of peak flow or by current meter. The date of the maximum discharge is not always certain but is usually determined by comparison with nearby continuous-record stations, weather records, or local inquiry. Only the maximum discharge for each water year is given. Information on some lower floods may have been obtained but is 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, water year, 1982.

Annual Maximum Discharge at Crest-stage partial-record stations, water year, 1902.							Annual Maximum	
Station no.	Station name	Location	Drainage area (sq mi)	Period of record	Date	Gage height (feet)	Dis-charge (ft ³ /s)	
Fox River basin								
05495100	Big Branch Tributary near Wayland	Lat 40°18'52", long 91°34'34", in NW¼SW¼ sec.29, T.64 N., R.6 W., Clark County, at culvert under U.S. Highway 61 and 5.6 mi (9.0 km) south of Wayland.	0.07 (1.81)	1955-65 1966-69 1970-82	1-30-82	6.90	130	
Fabius River basin								
05497500	Middle Fabius River near Baring	Lat 40°19'55", long 92°12'50", in NW¼NW¼ sec.26, T.64 N., R.12 W., Scotland County, at bridge on State Highway 15, 1 mi (1.6 km) Downstream from confluence of North and South Forks of Middle Fabius River, and 6 mi (9.7 km) North of Baring.	185 (479)	1931-60 1961-82	7-5-82	25.80	12,000	
North River basin								
05500500	North River at Bethel	Lat 39°52'29", long 92°01'26", in NW¼NW¼ sec.33, R.59 N., R.10 W., Shelby County, on left downstream abutment of State Highway 15 bridge at Bethel.	58 (150)	1937-73† 1975-82	6-9-82	20.63	5,600	
South River basin								
05501200	Nichols Branch near Palmyra	Lat 39°44'17", long 91°31'52", in SE¼SE¼ sec.11, T.57 N., R.6 W., Marion County, on left bank just upstream from double-barrel culvert (each barrel is 11 ft) wide by 9 ft high by 70.5 ft long) 1/3 of a mi upstream from mouth and 4 mi south of Palmyra.	2.58 (6.68)	1954-59 1960-82	+	+	+	
Salt River basin								
05503000	Oak Dale Branch near Emden	Lat 39°45'30", long 91°55'08", in NW¼NW¼ sec.9, T.57 N., R.9 W., Shelby County, 25' (7.62 m) upstream from highway culvert 4 miles (6.4 km) southwest of Emden.	2.64 (6.84)	1956-75† 1976-82	+	+	+	
Kings Lake basin								
05513600	Camp Creek near Elsberry	Lat 39°06'54", long 90°46'26", in SW portion survey 1724, T.50 N., R.2 E., at downstream end of double 12 ft. box culvert (right side of barrel) on State Highway 79 about one mile upstream from C.B. & O. railroad crossing and 3.6 mi south of Elsberry, Lincoln County, Missouri.	1.50 (3.88)	1954- 1976-82	7-21-82	2.99	220	
Missouri River basin								
06817980	Blacksnake Creek at St. Joseph	Lat 39°47'59", long 94°50'26", in NE¼NW¼NW¼ sec.33, T.58 N., R.35 N., on left downstream end of concrete culvert under Savannah Avenue, 175 ft east of junction with U.S. Highway 59, 500 ft south west of Chicago and Northeast RR Crossing, and 3 mi upstream from mouth.	4.36 (11.29)	1977- 1978-82	7-1-82	7.60	+	
Platte River (Iowa-Missouri) basin								
06818900	Platte River at Ravenwood	Lat 40°20'24", long 94°41'09", in SE¼SE¼ sec.14, T.64 N., R.34 W., Nodaway County, on downstream side of left pier of U.S. Highway 136 bridge, 0.8 mi (1.3 km) west of Ravenwood.	486 (1259)	1922-71† 1972-82	11-30-81	13.45	6,800	

DISCHARGE AT PARTIAL-RECORD STATIONS

Annual maximum discharge at crest-stage partial-record stations--Continued

Station no.	Station name	Location	Drainage area (sq mi)	Period of record	Annual Maximum Date	Gage height (feet)	Dis- charge (ft ³ /s)
Platte River (Iowa-Missouri) basin--Continued							
06820300	Big Slough near Wilcox	Lat 40°23'23", long 94°55'32", on south line of SW $\frac{1}{4}$ sec.35, T.65 N., R.36 W., at culvert on U.S. Highway 71, 3 mi southeast of Wilcox, Nodaway County.	1.30 (3.37)	1949-	8-30-82	5.08	600
06821130	First Creek near Nashua	Lat 39°17'20", long 94°35'05", in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.26, T.52 N., R.33 W., Clay County, at culvert on farm road 150 ft (45.7 m) east of U.S. Highway 169, and 1 mi (1.6 km) south of Nashua.	0.55 (1.42)	1959-65 1966-74f 1975-82	8-13-82	12.53	260
Line Creek basin							
06821280	Line Creek at Riverside	Lat 39°10'32", long. 94°36'46", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.4 T.50 N., R.33 W., Platte County, just downstream on left bank from bridge at U.S. High- way 71 at Riverside, 100 ft up- stream from Jumping Branch, approximately 1 mi upstream from mouth and 1 mi south of I-29.	19.2 (49.7)	1975-	+	+	+
Blue River basin							
96893570	Roundgrove Creek at Raytown	Lat 39°02'29", long. 94°28'59", in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.30 T.48 N., R.32 W., Jackson County, downstream of bridge, 0.5 mi NW of junction with Rock Creek Road, 1.1 mi SE of I-435, and 1.8 mi upstream from mouth.	5.87 (15.20)	1976-	8-12-82	---	10,200
Shoal Creek basin							
06893670	Shoal Creek at Claycomo	Lat 39°12'27", long 94°28'45", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.27, T.51 N., R.32 W., Clay County, 100 ft downstream from U.S. Highway 69 bridge, 2.5 mi upstream from confluence with Little Shoal Creek, 10 mi upstream from mouth and 1 mi northeast of Claycomo.	29.8 (77.2)				
06893680	Mill Creek at 56th Street at Gladstone	Lat 39°11'43", long 94°32'54", in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.31, T.51 N., R.32 W., Clay County, culvert at junction of 56th St. and Antioch Road, at corporate boundary line between Gladstone and Kansas City and at river mile 6.17.	1.24 (3.21)	1976-	8-12-82	35.56	2,060
06893710	Cates Branch at Liberty	Lat 39°13'16", long 94°24'53", in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.20, T.51 N., R.31 W., Clay County, at culvert on Sherril Drive, 0.2 mi west of U.S. Highway 291, 1.2 mi south of junction of Highways 33 and 291 at Liberty.	1.95 (5.05)	1976-	8-12-82	10.00	1,850
Crooked Creek basin							
06894070	Crooked Creek near Richmond	Lat 39°20'00", long 93°58'45", in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.7, T.52 N., R.27 W., Henry County, on downstream side of right bridge pier on County Highway N, 0.3 mi west of Blairs- town, 0.8 mi downstream from Bear Creek and 1.5 mi upstream from Brushy Creek.	159 (412)	1948-70 1971-82	+	+	+
Platte River (Iowa-Missouri) basin							
06809000	Wakenda Creek at Carrollton	Lat 39°20'50", ling 93°29'45", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.5, T.52 N., R.23 W., Carroll County, on left bank near upstream side of U.S. Highway 65 bridge in Carrollton.	248 (642)	1948-70† 1972-82	+	+	+

DISCHARGE AT PARTIAL-RECORD STATIONS

Annual maximum discharge at crest-stage partial-record stations--Continued

Station no.	Station name	Location	Drainage area (sq mi)	Period of record	Annual Maximum Date	Gage height (feet)	Dis- charge (ft ³ /s)
Grand River basin							
06897000	East Fork Big Creek near Bethany	Lat 40°17'50", long 94°01'36", in SE¼ sec.34, T.64 N., R.28 W., Harrison County on right bank 50 ft (15.2 m) downstream from bridge on old U.S. Highway 69, 2 mi (3.2 km) north of Bethany and 4 mi (6.4 km) upstream from confluence with West Fork.	95 (246)	1934-	5-31-82	15.44	+
06897700	Grand River Tributary near Utica	Lat 39°44'22", long 93°38'18", in SW¼NE¼ sec.19, T.57 N., R.24 W., Livingston County, at culvert under Highway 36, 0.2 mi (0.3 km) west of Utica.	1.44 (3.73)	1958-	5-21-82	12.13	500
Chariton River basin							
06904300	Shoal Creek near Hartford	Lat 40°29'00", long 92°46'20", in NE¼NE¼ sec.25, T.66 N., R.17 W., Putnam County, at bridge on U.S. Highway 136, 3 mi (4.8 km) north- east of Hartford.	155 (401)	1963-	7-2-82	22.30	8000
06905000	Chariton River at Elmer	Lat 39°57'08", long 92°39'54", in E¼ sec., T.59 N., R.16 W., Macon County, at bridge on State Highway J, 0.8 m (1.3 km) southwest of Elmer.	1,660 (4,300)	1921-30† 1961-82	7-18-82	26.53	21,000
06906400	Middle Fork Chariton River at Thomas Hill	Lat 39°30'51", long 92°39'53", in NE¼NE¼ sec.2, T.54 N., R.16 W., Randolph County, at bridge on State Highway 3, ½ mile SW of Thomas Hill.	150 (388)	1962-	6-9-82	10.98	440
Missouri River basin							
06906500	Missouri River at Glasgow	Lat 39°13'20", long 92°50'55", in center sec. 17, T.51 N., R.17 W., at bridge on State Highway 240 in Glasgow, 75 ft downstream from Chicago and Alton Railway bridge, 1 mi downstream from Chariton River, and 226.8 mi above mouth.	502,895 (1,302,500)	1949-	6-11-82	+	+
Lamine River basin							
06907000	Lamine River at Clifton City	Lat 3°07'00", long 93°05'50", in NW¼ sec.16, T.46 N., R.19 W., Cooper County, on downstream side of highway bridge, 0.8 mi (1.28 km) east of Clifton City.	598 (1549)	1922-71† 1972-82	+	+	+
06907080	Brushy Creek at Sedalia	Lat 38°42'51", long 93°15'46", in SW¼SW¼ sec.32, T.46 N., R.21 W., Pettis County, on U.S. Highway 50, west of Industrial Road, and 350 ft east of Ruth Ann Drive in Sedalia, Mo.	0.94 (2.43)	1978-	+	+	+
06907700	Blackwater River at Valley City	Lat 38°52'10", long 93°37'15", in SW¼NW¼ sec.13, T.47 N., R.25 W., Johnson County, attached to down- stream end of left steel pier of bridge on County highway E, ½ mi upstream from Blackjack Creek, ½ mi northwest of Valley City, one mi downstream from Clear Creek, 8 mi northwest of Knobnoster, 9 mi northeast of Warrensburg.	547 (1416)	1958-		34.84	+
06908500	Shiloh Branch near Marshall	Lat 39°07'00", long 93°05'05", in NW¼ sec.15, T.50 N., R.20 W., Saline County, at culvert on State Highway 41, in front of Shiloh Church, 5.5 mi (8.8 km) east of Marshall.	2.87 (7.43)	1952-65 1981-82			<100

DISCHARGE AT PARTIAL-RECORD STATIONS

Annual maximum discharge at crest-stage partial-record stations--Continued

Annual maximum discharge at crest-stage partial-record stations--Continued							
Station no.	Station name	Location	Drainage area (sq mi)	Period of record	Date	Gage height (feet)	Dis- charge (ft ³ /s)
Bonne Femme Creek basin							
06909400	Cottonwood Creek Tributary at Estill	Lat 39°07'00", long 92°44'38", in NW¼SW¼NE¼ sec.17, T.49 N., R.16 W., Howard County, at culvert under State Highway 5, 0.2 mi (0.03 km) north of Estill and 2 mi (3.2 km) north of New Franklin.	0.30 (0.78)	1958-82	+	6.15	150
Moniteau Creek basin							
06909500	Moniteau Creek near Fayette	Lat 39°07'15", long 92°33'40", in SE¼SE¼ sec.14, T.50 N., R.15 W., Howard County, at "Buoy" bridge, 1 mi (1.6 km) downstream from Hungry Mother Creek, 7 mi (11.2 km) east of Fayette and 15 mi (24 km) up- stream from mouth.	81 (210)	1948-60 1962-69† 1979-82			<3000
Moreau River basin							
06910500	Moreau River near Jefferson City	Lat 38°31'44", long 92°11'31", in SE¼NW¼SE¼ sec.25, T.44 N., R.12 W., Cole County, on downstream side of bridge on Tanner Bridge Road, 3 mi (4.8 km) south of Jefferson City.	561 (1453)	1947-74† 1975-82	8-26-82	21.97	10,000
Osage River basin							
06918200	North Fork Panther Creek Tributary	Lat 38°11'38", long 94°04'53", in SW¼NW¼ sec.2, T.39 N., R.29 W., Bates County, at culvert under State Highway 52, 0.25 mi south of Hudson, 3 mi west of Appleton City, and 18 mi southeast of Butler.	0.08 (0.21)	1955-	3-15-82	3.87	40
06918750	Franca Branch near Brighton	Lat 37°29'57", long 93°21'00", in SE¼NW¼SE¼ sec.16, T.32 N., R.22 W., Polk County, at culvert under State Highway 13, 3 mi (4.9 km) north of Brighton, and 8.7 mi (14.0 km) southeast of Bolivar.	0.59 (3.96)	1955-			<30
06919200	Sac River Tributary near Caplinger Mills	Lat 37°48'22", long 93°51'00", in NE¼NE¼ sec.13, T.35 N., R.27 W., Cedar County, at culvert under State Highway 39, 6.2 mi (10 km) south of junction of U.S. Highway 54 and State Highway 39, 2.5 m (4.0 km) west of Caplinger Mills and 10.5 mi (16.9 km) southeast of Eldorado Springs.	0.14 (0.36)	1955-62 1963-82	3-16-82	6.16	50
06021720	Big Creek at Blairstown	Lat 38°33'17", long 93°57'54", in NE¼SW¼ sec.36, T.44 N., R.28 W., Henry County, on downstream side of right bridge pier on County Highway N, 0.3 mi west of Blairs- town, 0.8 mi down stream from Bear Creek and 1.5 mi upstream from Brushy Creek.	414 (1072)	1960-	8-13-82	23.07	7,180
06921800	Granddaddy Creek near Urich	Lat 38°21'48", long 94°00'47", in NW¼NW¼SW¼ sec.10, T.41 N., R.28 W., Henry County at culvert under State Highway K, 0.3 mi (0.5 km) north of junction of State Highway K and State Highway 18 and 6.5 mi (10.5 km) south of Urich.	0.92 (2.38)	1958-75 1976-82	1-30-82	6.68	140
06925200	Starks Creek at Preston	Lat 37°56'27", long 93°11'48", in SW¼NW¼ sec.24, T.37 N., R.21 W., Hickory County, attached to right downstream wingwall of U.S. High- way 54 bridge, 0.6 mi (1.0 km) east of Preston.	4.18 (10.83)	1956-76† 1977-82	5-29-82	8.32	920
06927000	Maries River at Westphalia	Lat 38°25'55", long 91°59'23", in NE¼ sec.35, T.43 N., R.10 W., Osage County, at bridge on U.S. Highway 63, 0.8 mi (1.3 km) southeast of Westphalia, 1.2 mi (1.9 km) downstream from Little Maries Creek, and at mile 9.9 (15.8 km).	257 (666)	1947-70† 1971-82		12.17	9,000

DISCHARGE AT PARTIAL-RECORD STATIONS

Annual maximum discharge at crest-stage partial-record stations--Continued

Station no.	Station name	Location	Drainage area (sq mi)	Period of record	Annual Maximum Date	Gage height (feet)	Dis-charge (ft ³ /s)
Gasconade River basin							
06927600	Wheeler Branch near Mountain Grove	Lat 37°06'52", long 92°16'37", in SW¼NE¼ sec.17, T.28 N., R.12 W., Wright County, on State Highway D, 0.8 mi (1.3 km) southwest of Mountain Grove.	1.34 (3.47)	1955-	+	+	+
06928000	Gasconade River near Hazelgreen	Lat 37°45'33", long 92°27'06", in SE¼SE¼ sec.15, T.35 N., R.14 W., Laclede County, at bridge on South Access road, 400 ft (122 m) upstream from east bound lane of Interstate 44, 1.5 mi (2.4 km) west of Hazelgreen.	1250 (3240)	1929-71† 1973-82	2-1-82	20.90	29,700
06934000	Gasconade River at Rich Fountain	Lat 38°23'20", long 91°49'15", in SE¼ sec.16, T.42 N., R.8 W., on downstream side of bridge on State Highway 89, 100 ft downstream from Brush Creek Slough, 800 ft upstream from Swan Creek, and 4 mi east of Rich Fountain, and 53 mi above mouth.		1921-59 1959-82	+	+	+
Meramec River basin							
07011200	Love Creek near Salem	Lat 37°38'10", long 91°33'35", in W¼NE¼ sec.23, T.34 N., R.6 W., Dent County, at culvert under State Highways 32 and 72, 0.5 mi (0.8 km) west of Salem.	0.89 (2.13)	1955-59 1960-63f 1964-82	1-31-82	4.65	365
07011600	Love Branch at Rolla	Lat 37°56'23", long 91°46'11", in NE¼NE¼SE¼ sec.11, T.37 N., R.8 W., Phelps County, at culvert under State Highway 72, 0.5 mi (0.8 km) from junction U.S. 63 and 72, in Rolla.	1.72 (4.45)	1978-	1-31-82	4.63	1,550
07015800	Langenberg Branch near Rosebud	Lat 38°23'03", long 91°25'41", in SE¼NE¼ sec.13, T.42 N., R.5 W., Gasconade County, at culvert under State Highway 28, 1.7 mi west of Rosebud.	0.64 (1.66)	1960-64 1966-70f 1971-82	8-15-82	9.03	132
St. Francis River basin							
07035500	Barnes Creek near Fredericktown	Lat 37°34'20", long 90°23'00", in SW¼SE¼ sec.4, T.33 N., R.6 E., Madison County, on Highway 72 bridge, 5.3 mi (8.5 km) west of Fredericktown.	4.03 (10.44)	1956-75† 1976-82	8-27-82	8.80	2,000
White River basin							
07050800	Maple Grove Branch near Ozark	Lat 37°04'20", long 93°13'05", in SE¼NE¼ sec.3, T.27 N., R.21 W., Christian County, at culvert under State Highway NN, 3.4 mi (5.5 km) north of Ozark.	0.64 (1.66)	1967-65 1966-71f 1972-82	8-27-82	11.13	+
07066800	Sycamore Creek near Winona	Lat 37°02'49", long 91°19'30", in SW¼ sec.31, T.28 N., R.3 W., Shannon County, on left bank just upstream from culvert under State Highway 19, about 3 mi north of Winona.	0.86 (2.22)	1954-	1-31-82	4.63	150
Arkansas River basin							
07185600	South Fork Stahl Creek near Miller	Lat 37°11'11", long 93°50'20", in NE¼NE¼ sec.35, T.29 N., R.27 W., Lawrence County, at culvert on State Highway 39, 2 mi (3.2 km) south of Miller.	0.94 (2.43)	1951-70 1976-79d 1982-	+	+	+

† Not determined.

‡ Operated as continuous-record gaging station.

f Discharge measurements, daily gage-height, and rainfall records available.

g Figures of drainage area in parantheses are in square kilometers (km²).

< Less than.

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

Water-quality partial-record stations are particular sites where chemical-quality, biological and or sediment data are collected systematically over a period of years for use in hydrologic analysis. The data are collected usually less than quarterly.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	COLI- FORM, FECAL, 0.7 UM-MF (CULS./ 100 ML) (31625)	STREP- TOCJCLI FECAL, KF AGAR (CULS. PER 100 ML) (31673)
07064400 - MONTAUK SPRINGS AT MONTAUK, MD (LAT 37 27 36 LONG 091 40 59)								
JUN , 1982 29...	106	218	7.2	14.0	7.4	71	25	K1300
07064440 - CURRENT RIVER BELOW MONTAUK STATE PARK (LAT 37 27 01 LONG 091 29 41)								
JUN , 1982 29...	114	232	7.7	16.0	10.6	107	62	1200
07064530 - WELCH SPRING NEAR AKERS MD (LAT 37 23 38 LONG 091 34 25)								
JUN , 1982 29...	337	280	7.1	14.0	8.0	77	27	88
07064555 - PULLTITE SPRING NEAR ROUND SPRING, MD (LAT 37 20 03 LONG 091 29 24)								
JUL , 1982 01...	119	202	7.2	14.0	7.4	71	35	130
07065000 - ROUND SPRING AT ROUND SPRING MD (LAT 37 16 57 LONG 091 24 27)								
JUL , 1982 01...	38	261	7.3	14.0	8.0	77	K20	1300
07065500 - ALLEY SPRING AT ALLEY MD (LAT 37 09 14 LONG 091 26 29)								
JUN , 1982 30...	147	225	7.3	14.0	8.4	81	52	130
07066110 - JACKS FORK ABOVE TWO RIVERS (LAT 37 10 53 LONG 091 17 36)								
JUN , 1982 30...	464	305	8.0	22.0	8.8	100	62	48
07066510 - CURRENT RIVER ABOVE POWDER MILL (LAT 37 10 32 LONG 091 12 48)								
JUN , 1982 30...	1150	284	7.9	22.0	8.0	91	36	32
07066550 - BLUE SPRING NEAR EMINENCE, MD. (LAT 37 09 58 LONG 091 09 47)								
JUN , 1982 30...	128	302	7.5	14.0	8.6	83	180	120
07067500 - BIG SPRING NEAR VAN BUREN MD (LAT 36 57 05 LONG 090 59 36)								
JUN , 1982 30...	540	292	7.3	14.0	8.4	81	13	460
07067800 - CURRENT RIVER BELOW HAWES CAMPGROUND (LAT 36 49 08 LONG 090 56 48)								
JUL , 1982 01...	2600	285	7.8	20.5	7.4	82	160	360

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS--Continued
 WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	ALKA- LITY FIELD (MG/L AS CACU3) (00410)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	CADMIUM TOTAL RECUV- ERABLE (UG/L AS CD) (01027)	LEAD, TOTAL RECUV- ERABLE (UG/L AS Pb) (01051)	SILVER, TOTAL RECUV- ERABLE (UG/L AS AG) (01077)	ZINC, TOTAL RECUV- ERABLE (UG/L AS ZN) (01092)
07064400	- MONTAUK SPRINGS AT MONTAUK, MO (LAT 37 27 36 LONG 091 40 59)							
JUN , 1982 29...	98	<.060	1.5	.070	<1	4	<1	10
07064440	- CURENT RIVER BELOW MONTAUK STATE PARK (LAT 37 27 01 LONG 091 29 41)							
JUN , 1982 29...	110	<.060	1.1	.060	<1	2	<1	10
07064530	- WELCH SPRING NEAR AKERS MU (LAT 37 23 38 LONG 091 34 25)							
JUN , 1982 29...	130	<.060	1.2	.050	<1	4	<1	10
07064555	- PULLTITE SPRING NEAR ROUND SPRING, MO (LAT 37 20 03 LONG 091 29 24)							
JUL , 1982 01...	98	<.060	1.0	.050	<1	3	<1	10
07065000	- ROUND SPRING AT ROUND SPRING MU (LAT 37 16 57 LONG 091 24 27)							
JUL , 1982 01...	130	<.060	1.4	.060	<1	1	<1	20
07065500	- ALLEY SPRING AT ALLEY MU (LAT 37 09 14 LONG 091 26 29)							
JUN , 1982 30...	110	<.060	1.2	.040	<1	3	<1	10
07066110	- JACKS FORK ABOVE TWO RIVERS (LAT 37 10 53 LONG 091 17 36)							
JUN , 1982 30...	160	<.060	.76	.040	<1	<1	<1	10
07066510	- CURRENT RIVER ABOVE POWDER MILL (LAT 37 10 32 LONG 091 12 48)							
JUN , 1982 30...	150	<.060	.97	.040	<1	<1	<1	50
07066550	- BLUE SPRING NEAR EMINENCE, MO. (LAT 37 09 58 LONG 091 09 47)							
JUN , 1982 30...	130	<.060	1.1	.040	<1	<1	<1	10
07067500	- BIG SPRING NEAR VAN BUREN MO (LAT 36 57 05 LONG 090 59 36)							
JUN , 1982 30...	150	<.060	1.2	.040	<1	2	<1	20
07067800	- CURRENT RIVER BELOW HAWES CAMPGROUND (LAT 36 49 08 LONG 090 56 48)							
JUL , 1982 01...	150	<.060	.93	.040	<1	4	<1	10

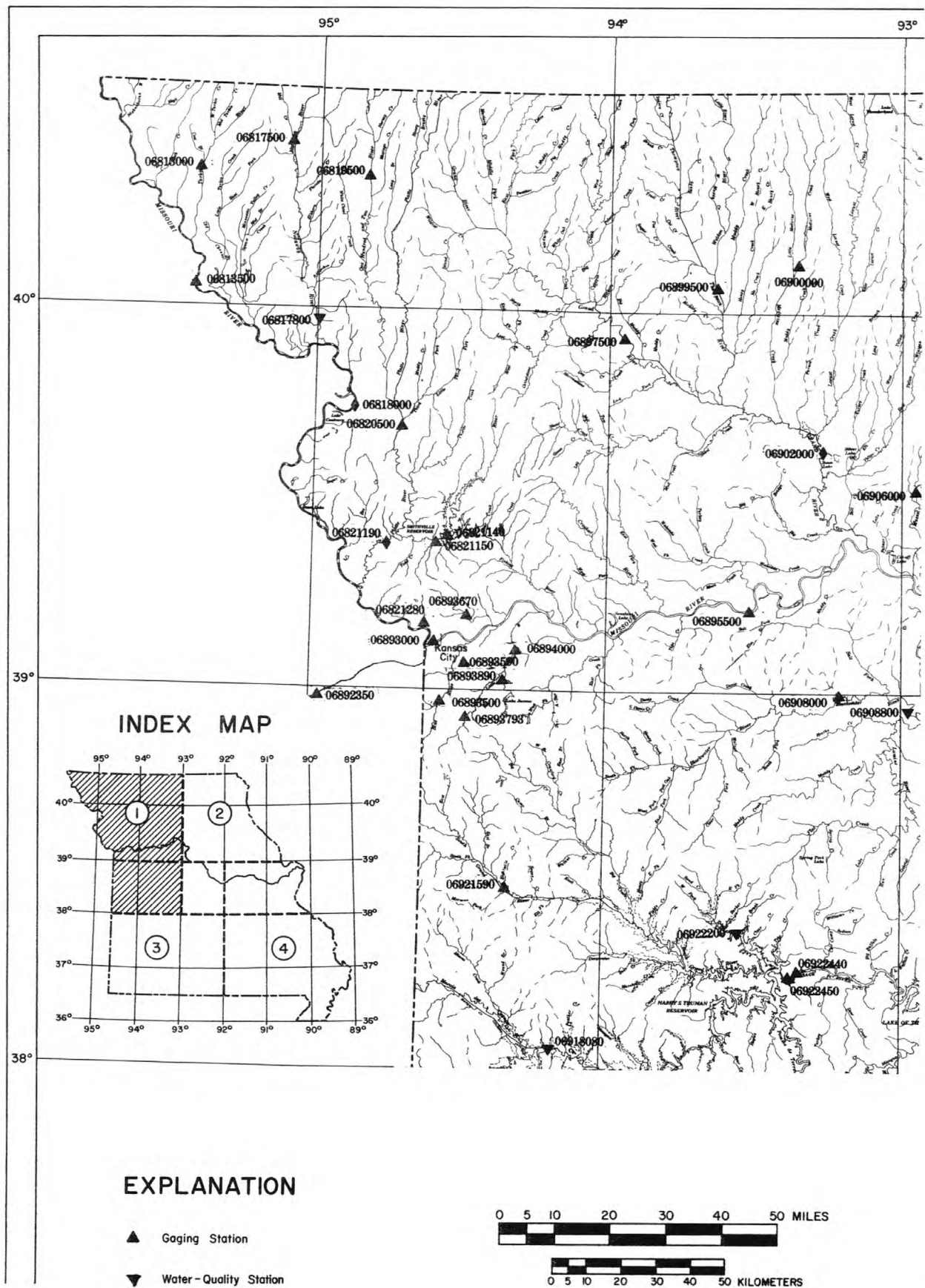
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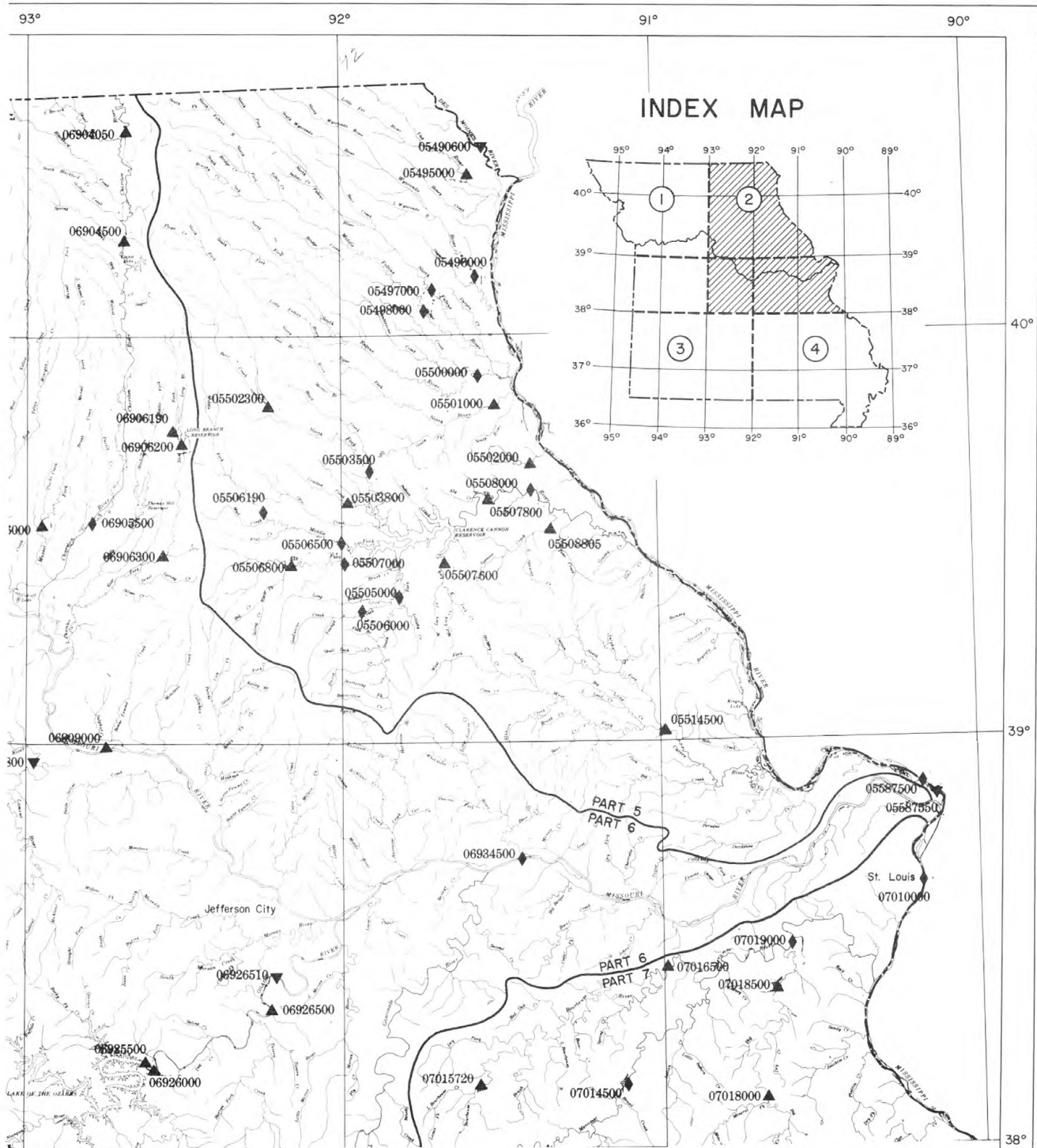
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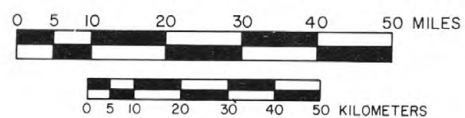
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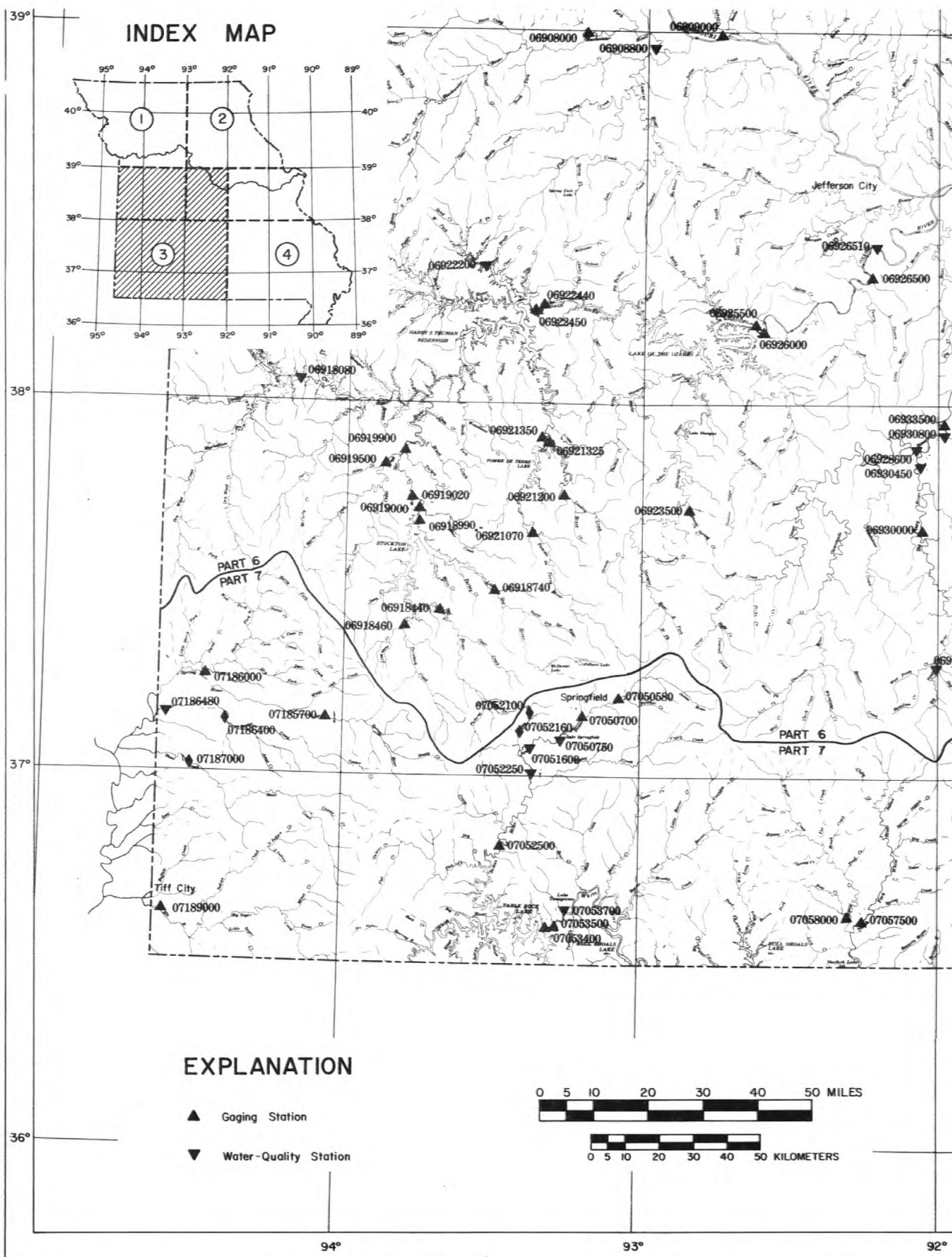


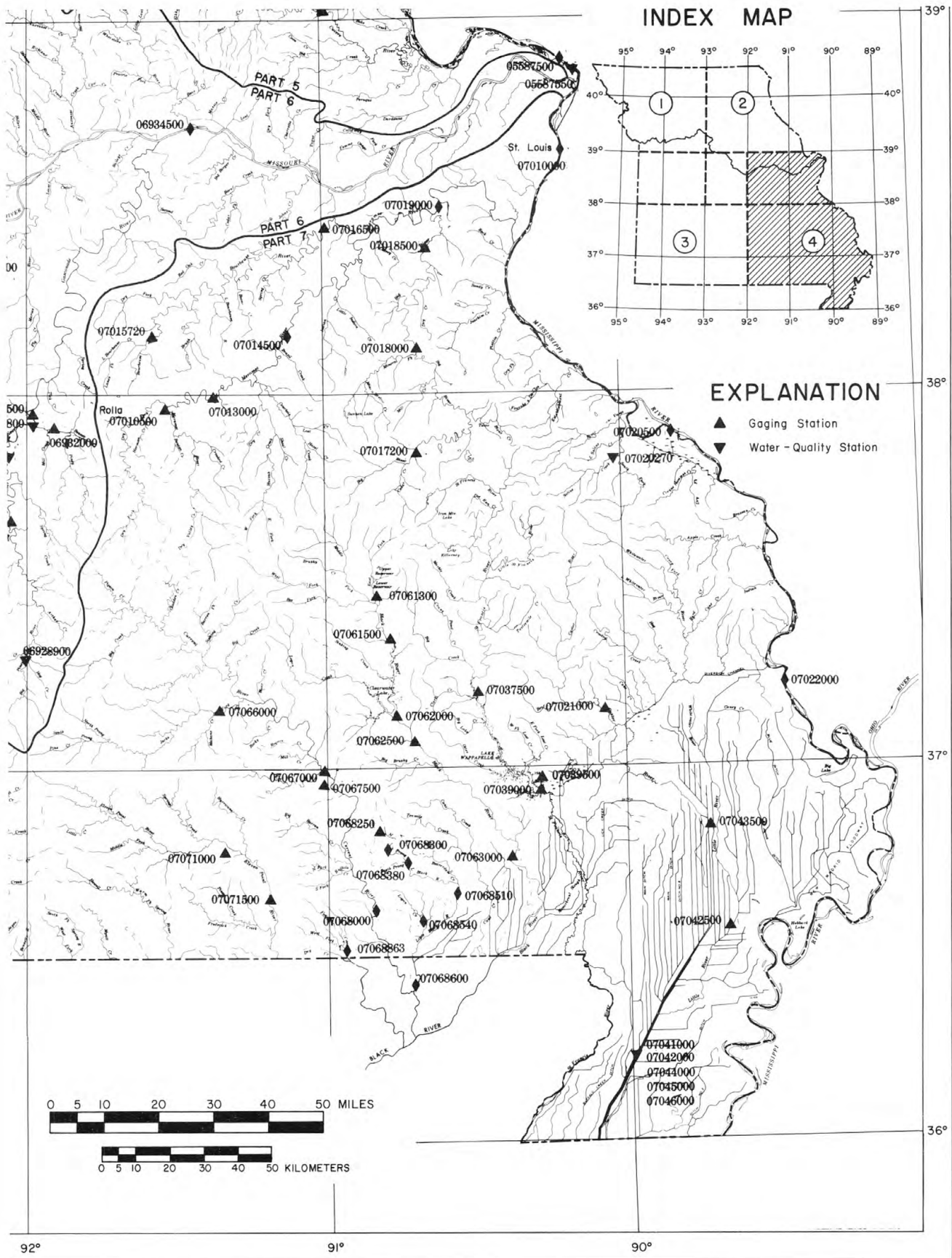


EXPLANATION

- ▲ Gaging Station
- ▼ Water-Quality Station







FACTORS FOR CONVERTING INCH-POUND UNITS TO INTERNATIONAL SYSTEM UNITS (SI)

The following factors may be used to convert the inch-pound units published herein to the International System of Units (SI). This report contains both the inch-pound and SI unit equivalents in the station manuscript descriptions.

Multiply inch-pound units	By	To obtain SI units
<i>Length</i>		
inches (in)	2.54×10^1	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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