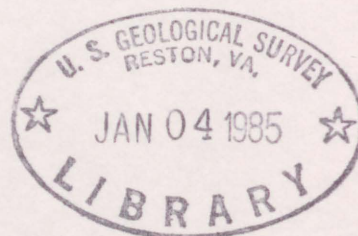


R
(200)
G03
Missouri
1983



Water Resources Data Missouri Water Year 1983



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT MO-83-1

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

1982

DECEMBER

S M T W T F S

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

1983

MARCH

S M T W T F S

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

JUNE

S M T W T F S

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

SEPTMBER

S M T W T F S

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



Water Resources Data Missouri

Water Year 1983

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



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT MO-83-1

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

UNITED STATES DEPARTMENT OF THE INTERIOR

William P. Clark, 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 for 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 local, State, 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 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 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:

Gary L. Alexander
Wayne R. Berkas
Dale W. Blevins
Suzanne F. Femmer
Frankie G. Franco
George H. Gray

Lester L. Grayson
Henry S. Hauck
Leonard G. Huber
Larry J. Lumpkin
Gilbert B. Malone
Michael C. Moody

Roger N. Nygaard
Hubert L. Reed
Sherry A. Ternes
Charles E. Watts
Robert E. Whitaker

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-84/070	2.	3. Recipient's Accession No.
4. Title and Subtitle Water Resources Data for Missouri Water Year 1983		5. Report Date September 1984	
7. Author(s)		6. USGS-WRD-MO84-1	
9. Performing Organization Name and Address U.S. Geological Survey Water Resources Division 1400 Independence Road, MS 200 Rolla, Missouri 65401		8. Performing Organization Rept. No.	
12. Sponsoring 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, 1982 to Sept. 30, 1983	
15. Supplementary Notes Prepared in cooperation with the State of Missouri and other agencies.		14.	
16. Abstract (Limit: 200 words) Water resources data for the 1983 water year for Missouri consist of records of stage, discharge, and water quality of lakes and reservoirs; contains records for water discharge at 110 gaging stations; stage and contents at 9 lakes and reservoirs; water quality at 24 gaging stations (including 1 lake) and data for 35 crest-stage, and 30 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 293
		20. Security Class (This Page) unclassified	22. Price

CONTENTS

Preface.....	Page III
List of hydrologic-data stations, in downstream order, for which records are published.....	VI
Introduction.....	1
Cooperation.....	1
Physiography.....	2
Hydrologic conditions.....	2
Streamflow.....	4
Chemical quality of streamflow.....	7
Downstream order and station numbers.....	8
Numbering system for wells and miscellaneous sites.....	8
Special networks and programs.....	8
Explanation of stage and water-discharge records.....	9
Collection and computation of data.....	9
Accuracy of field data and computed results.....	10
Other data available.....	11
Explanation of water-quality records.....	11
Collection and examination of data.....	11
Water analysis.....	11
Water temperature.....	11
Sediment.....	12
Definition of terms.....	13
Publications on techniques of water-resources investigations.....	17
Hydrologic-data station records.....	19
Discharge at partial-record stations.....	280
Crest-stage partial-record stations.....	280
Analyses of samples collected at water-quality partial-record stations.....	284
Index.....	286

ILLUSTRATIONS AND TABLES

Figure 1. Major drainage basins and physiographic divisions.....	3
2. Comparison of 1983 water year streamflow to long-term means.....	5
3. Comparison of December 2 to 6, 1982, peak discharge at gaging stations in Southeastern Missouri, to upper limits of known floods in Missouri.....	6
4. System for numbering miscellaneous sites (latitude and longitude).....	8
5. Map showing location of hydrologic-data stations.....	289
Table 1. Precipitation and departures from normal, in inches.....	2
2. Comparisons of peak discharge for the 1983 water year with those for period of record for selected stations.....	4
3. Comparisons of 1983 7-day low flows to 7-day, 2-year low flows and of 1983 minimum flows to those for the period of record at selected stations. (Flows in cubic feet per second).....	7

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

	Page
<u>UPPER MISSISSIPPI RIVER BASIN</u>	
<u>Mississippi River:</u>	
DES MOINES RIVER BASIN	
Des Moines River at St. Francisville (cms).....	19
FOX RIVER BASIN	
Fox River at Wayland (d).....	23
WYACONDA RIVER BASIN	
Wyaconda River above Canton (d).....	24
FABIUS RIVER BASIN	
North Fabius River at Monticello (d).....	25
Middle Fabius River near Monticello (ds).....	26
South Fabius River near Taylor (dc).....	29
NORTH RIVER BASIN	
North River at Palmyra (d).....	32
Mississippi River at Hannibal (c).....	33
BEAR CREEK BASIN	
Bear Creek at Hannibal (d).....	35
SALT RIVER BASIN	
Salt River at Hagers Grove (d).....	36
North Fork Salt River near Hunnewell (ds).....	38
Crooked Creek near Paris (d).....	43
South Fork Salt River at Santa Fe (d).....	45
Middle Fork Salt River at Paris (ds).....	47
Elk Fork Salt River near Madison (d).....	52
Lick Creek at Perry (d).....	54
Salt River near Center (d).....	56
Salt River near New London (dcms).....	58
Spencer Creek below Plum Creek near Frankford (d).....	64
Cuivre River near Troy (dc).....	66
Mississippi River at Alton, IL (ds).....	69
Mississippi River below Alton, IL (cm).....	73
<u>MISSOURI RIVER BASIN</u>	
<u>Missouri River:</u>	
TARKIO RIVER BASIN	
Tarkio River at Fairfax (d).....	75
Missouri River at Rulo, NB (d).....	76
NODAWAY RIVER BASIN	
Nodaway River near Burlington Junction (d).....	77
Nodaway River near Graham (d).....	78
Nodaway River near Oregon (c).....	79
Missouri River at St. Joseph (dcm).....	81
PLATTE-RIVER BASIN (IOWA-MISSOURI)	
One Hundred and Two River at Maryville (d).....	84
Platte River near Agency (d).....	85
Smithville Reservoir near Smithville.....	86
Little Platte River at Smithville (d).....	87
Platte River at Sharps Station (dcm).....	88
KANSAS RIVER BASIN	
Kansas River at De Soto, KS (d).....	91
Missouri River at Kansas City (d).....	92
BLUE RIVER BASIN	
Blue River near Kansas City (d).....	93
Blue River at 12th Street at Kansas City.....	94
LITTLE BLUE RIVER BASIN	
Little Blue River below Longview damsite in Kansas City (d).....	95
East Fork Little Blue River near Blue Springs (d).....	96
Little Blue River near Lake City (d).....	97
Missouri River at Waverly (d).....	98
GRAND RIVER BASIN	
Grand River near Gallatin (d).....	99
Thompson River at Trenton (d).....	100
Medicine Creek at Galt (d).....	102
Grand River near Sumner (dcm).....	103
CHARITON RIVER BASIN	
Chariton River at Livonia (d).....	106
Chariton River at Novinger (d).....	107
Chariton River near Prairie Hill (dcm).....	108
Mussel Fork near Musselfork (d).....	111
LITTLE CHARITON RIVER BASIN	
Longbranch Reservoir near Macon.....	112
East Fork Little Chariton River near Macon (d).....	113
East Fork Little Chariton River near Huntsville (dcm).....	114

MISSOURI RIVER BASIN--Continued

LAMINE RIVER BASIN	
Blackwater River at Blue Lick (d).....	117
Lamine River near Blackwater (cm).....	118
Missouri River at Boonville (d).....	120
OSAGE RIVER BASIN	
Osage River above Schell City (cm).....	121
Osage River near Schell City (d).....	124
Sac River near Dadeville (d).....	126
Turnback Creek above Greenfield (d).....	127
Little Sac River near Morrisville (d).....	128
Stockton Lake near Stockton.....	129
Sac River near Stockton (d).....	130
Sac River below Stockton (d).....	131
Cedar Creek near Pleasant View (d).....	132
Sac River near Caplinger Mills (d).....	133
Pomme de Terre River near Polk (d).....	134
Lindley Creek near Polk (d).....	135
Pomme de Terre Lake near Hermitage (d).....	136
Pomme de Terre River near Hermitage (d).....	137
South Grand River at Archie (d).....	138
Tebo Creek at Leesville (c).....	139
Harry S. Truman Reservoir at Warsaw.....	141
Osage River below Truman Dam at Warsaw (d).....	142
Niangua River:	
Spring Branch:	
Bennett Spring at Bennett Springs (d).....	143
Niangua River at Bennett Springs (cm).....	144
Lake of the Ozarks near Bagnell.....	146
Osage River near Bagnell (d).....	147
Osage River near St. Thomas (d).....	148
Osage River below St. Thomas (cm).....	149
GASCONADE RIVER BASIN	
Gasconade River near Hooker (c).....	151
Big Piney River at Devils Elbow (c).....	153
Gasconade River above Jerome (cm).....	155
Little Piney Creek at Newburg (d).....	157
Gasconade River at Jerome (d).....	158
Missouri River at Hermann (dcmt).....	159
LOWER MISSISSIPPI RIVER BASIN	
Mississippi River at St. Louis (dcmt).....	163
MERAMEC RIVER BASIN	
Meramec River:	
Meramec Spring near St. James (d).....	169
Meramec River near Steelville (d).....	170
Crooked Creek near Dillard (c).....	172
Meramec River near Sullivan (dc).....	173
Bourbeuse River near High Gate (d).....	177
Bourbeuse River at Union (d).....	179
Big River at Irondale (d).....	181
Big River near De Soto (d).....	183
Big River at Byrnesville (d).....	185
Meramec River near Eureka (dcms).....	187
Meramec River at Paulina Hills (c).....	193
Mississippi River at Chester, IL (ds).....	195
HEADWATER DIVERSION CHANNEL BASIN	
Castor River at Zalma (d).....	200
Mississippi River at Thebes, IL (dcms).....	201
ST. FRANCIS RIVER BASIN	
St. Francis River at Saco (c).....	207
Big Creek at Chloride (c).....	209
St. Francis River near Patterson (d).....	210
Wappapello Lake at Wappapello.....	211
St. Francis River at Wappapello (d).....	212
Right Chute of Little River:	
Little River ditch 251 near Lilbourn (d).....	213
Little River ditch 1 near Morehouse (d).....	214
Little River ditches near Kennett (cm).....	215
WHITE RIVER BASIN	
White River:	
James River near Strafford (d).....	217
James River near Springfield (d).....	218

LOWER MISSISSIPPI RIVER BASIN--Continued

<u>WHITE RIVER BASIN--Continued</u>	
James River at Galena (d).....	219
Table Rock Lake near Branson.....	220
White River near Branson (d).....	221
Taneycomo Lake at Branson (cm).....	222
North Fork River near Tecumseh (d).....	224
Bryant Creek near Tecumseh (d).....	225
Black River:	
East Fork Black River at Lesterville (d).....	226
Black River near Annapolis (d).....	227
Clearwater Reservoir near Piedmont.....	228
Black River at Leeper (d).....	229
Black River at Poplar Bluff (d).....	230
Current River:	
Jacks Fork at Eminence (d).....	231
Current River at Van Buren (d).....	232
Big Spring near Van Buren (d).....	233
Current River at Doniphan (d).....	234
Middle Fork Little Black River at Grandin (dt).....	235
North Prong Little Black River at Grandin (dcm).....	238
Little Black River near Grandin (dcts).....	239
Little Black River below Fairdealing (dcmts).....	246
Logan Creek at Oxly (dcmts).....	252
Ditch No. 2 near Sinsabaugh (cm).....	258
Little Black River at Success (dcmts).....	259
Spring River:	
Fourche River near Poynor (dt).....	265
Eleven Point River:	
Greer Spring at Greer (d).....	268
Eleven Point River near Bardley (d).....	269
ARKANSAS RIVER BASIN	
Arkansas River:	
Neosho River:	
Spring River near Waco (d).....	270
Center Creek near Cartersville (dcm).....	271
Center Creek near Smithfield (cm).....	274
Shoal Creek above Joplin (d).....	276
Elk River near Tiff City (dcm).....	277

WATER RESOURCES DATA FOR MISSOURI, 1983

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 (Oct. 1 to Sept. 30). 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 110 gaging stations; stage and contents at 9 lakes and reservoirs; water quality at 24 gaging stations (including 1 lake); and data for 35 crest-stage, and 30 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.

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-83-1." For archiving and general distribution, the reports for water year 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) 487-4650.

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. Schrieber, Jr., director.

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

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

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

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

U.S. Army, Corps of Engineers, in collecting records for 87 gaging stations and 1 water-quality station.

U.S. Department of Commerce, National Weather Service, National Oceanic and Atmospheric Administration.

National Park Service, Midwest Region

The following organizations aided in collecting records:

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

PHYSIOGRAPHY

Missouri has three distinct physiographic divisions - a Plains division in the north and west, the Southeast Lowlands division, and between them the Ozarks division (fig. 1).

The Plains 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. The area has numerous wide, flat valleys cut by rivers.

The Ozarks division in the southern part of the State 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 Southeast Lowlands division is a relatively flat region of about 3,000 square miles and is located in the extreme southeast part of the State. Elevations range from about 200 to 300 feet above sea level. The area is well drained and contains excellent farmland.

HYDROLOGIC CONDITIONS

Precipitation was greater than normal across the entire State during the 1983 water year. Rainfall of as much as 10.9 inches occurred December 2-5, 1982 in southeastern Missouri, causing flood peaks at many locations to exceed estimated 100-year recurrence intervals. Precipitation data for six National Weather Service divisions in Missouri are shown in the following table:

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

National Weather Service Division (fig. 2)	October-March		April-September		1983 Water Year	
	Precipitation	Departure from normal	Precipitation	Departure from normal	Precipitation	Departure from normal
Northwest Prairie	14.64	+3.52	20.11	-4.59	34.75	-1.07
Northeast Prairie	17.26	+3.70	21.27	-1.32	38.53	+2.38
West Central Plains	16.68	+3.02	21.91	-2.56	38.59	+4.46
West Ozarks	20.53	+4.94	23.69	-.50	44.22	+4.44
East Ozarks	24.06	+5.86	22.79	-.44	46.85	+5.42
Bootheel	22.58	+1.03	21.80	-2.26	44.38	-2.23

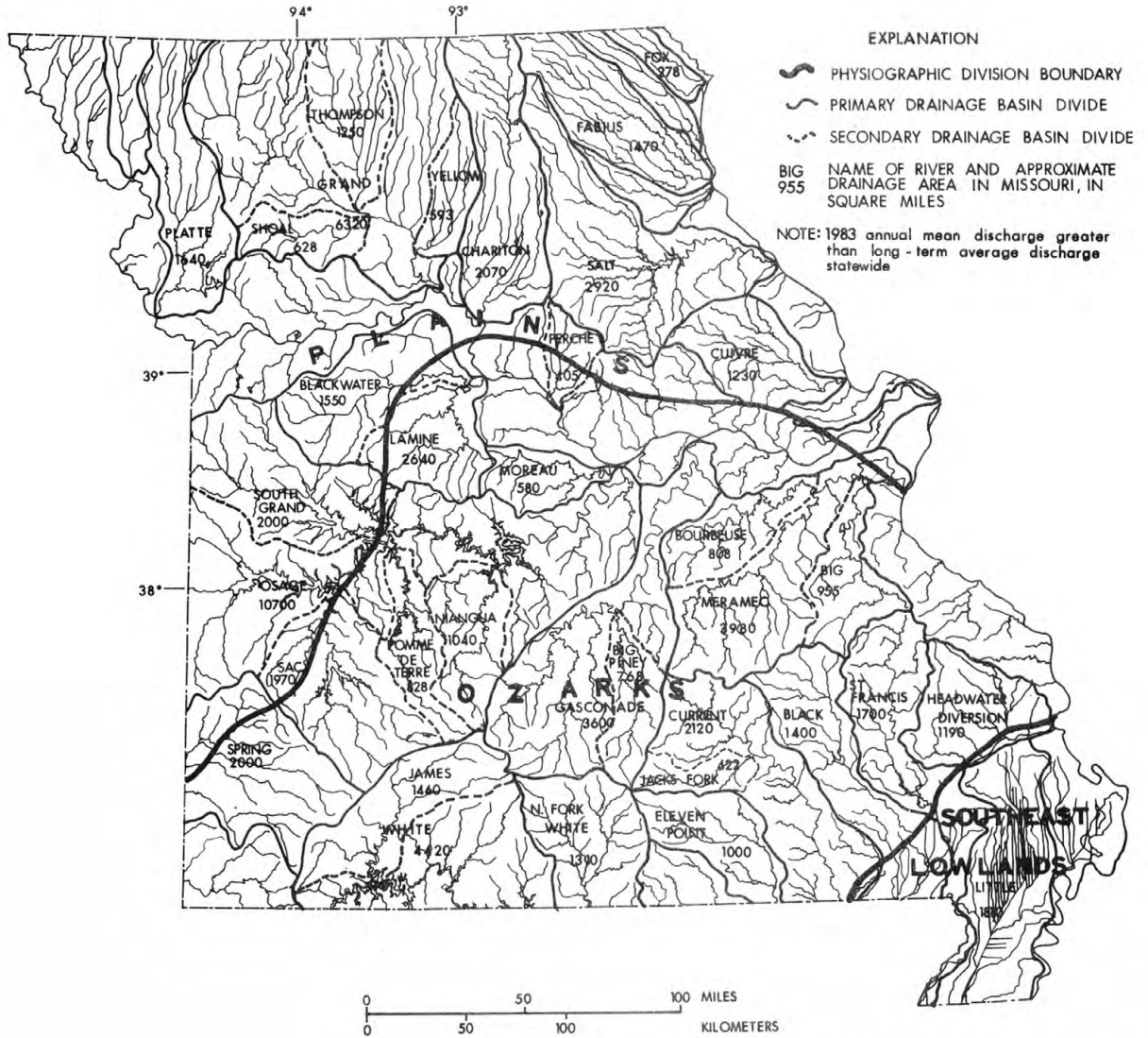


Figure 1.--Major drainage basins and physiographic divisions.

Streamflow

Streamflow generally reflects precipitation patterns unless a stream is regulated. Both monthly mean discharges during the 1983 water year and long-term monthly mean discharges at representative stations are shown in figure 2. Streamflow during many months was greater than long-term means reflecting the greater-than-normal precipitation (table 1). Mean annual discharges were greater than long-term annual discharges statewide.

Significant flooding occurred throughout about one-quarter of Missouri during December 2-6 and December 24-29, 1982. The storm of December 2-5 resulted in widespread, record-breaking flood elevations and discharges. Flood discharges with frequencies (recurrence intervals) greater than 100 years occurred in five major drainage basins: Osage, Gasconade, Meramec, St. Francis, and Current Rivers (fig. 1).

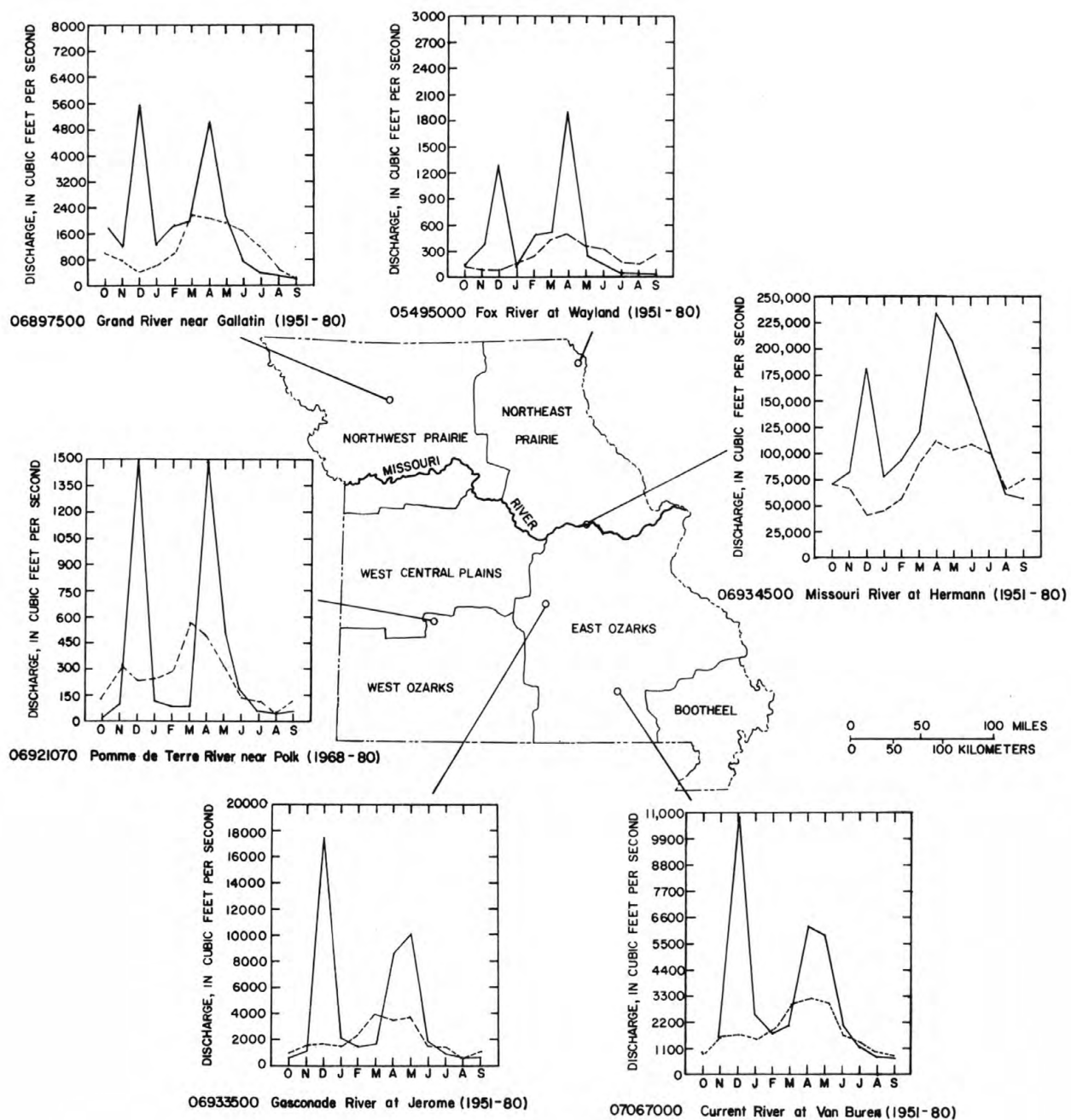
An enveloping curve developed by Crippin and Bue¹ (1977) that applies in southeastern Missouri is shown in figure 3. This curve defines the approximate upper limit for known floods, and is based on maximum measured discharges without regard to recurrence interval. Peak discharges for continuous record stations in southeastern Missouri for the flood of December 2-6 are plotted for comparison.

Listed in table 2 are 17 selected gaging stations comparing the peak discharge for the period of record and the peak discharge for the 1983 water year. The 7-day low flow for the 1983 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 1983 water year with those for period of record for selected stations

Station identification	Peak discharge 1983 water year		Peak discharge period of record	
	cubic feet per second	Date	cubic feet per second	Date
05508000 Salt River near New London	27,600	Apr. 6	107,000	Apr. 22, 1973
05587500 Mississippi River at Alton, Ill	422,000	Dec. 5	535,000	Apr. 29, 1973
06818000 Missouri River at St. Joseph	144,000	June 19	397,000	Apr. 22, 23, 1952
06893000 Missouri River at Kansas City	192,800	Apr. 2	573,000	July 14, 1951
06893890 East Fork Little Blue River near Blue Springs	2,350	May 1	6,100	Sept. 13, 1977
06894000 Little Blue River near Lake City	11,200	May 1	42,300	Aug. 13, 1982
06895500 Missouri River at Waverly	213,500	Apr. 3	549,000	July 16, 1951
06897500 Grand River near Gallatin	31,600	Dec. 7	69,100	June 24, 1947
06905500 Chariton River near Prairie Hill	30,400	Apr. 2	31,900	Apr. 23, 1973
06909000 Missouri River at Boonville	317,700	Apr. 7	550,000	July 17, 1951
06934500 Missouri River at Hermann	394,600	May 3	676,000	June 6, 7, 1903
07010000 Mississippi River at St. Louis	739,000	Dec. 7	1,019,000	June 10, 11, 1903
07016500 Bourbeuse River at Union	77,000	Dec. 5	77,000	Dec. 5, 1982
07018500 Big River at Byrnesville	36,800	Dec. 5	42,100	July 1, 1957
07019000 Meramec River near Eureka	145,000	Dec. 6	145,000	Dec. 6, 1982
07020500 Mississippi River at Chester, Ill	825,000	Dec. 9	886,000	July 3, 1947 Apr. 30, 1973
07022000 Mississippi River at Thebes, Ill	846,000	Dec. 9	893,000	May 27, 1943

¹Crippin, J. R., and Bue, C. D., 1977, Maximum floodflows in the conterminous United States: U.S. Geological Survey Water-Supply Paper 1887, 52 p.



EXPLANATION

Monthly Mean Discharge

— 1983 Water Year

--- Long Term

Figure 2.--Comparison of 1983 water-year streamflow to long-term means.

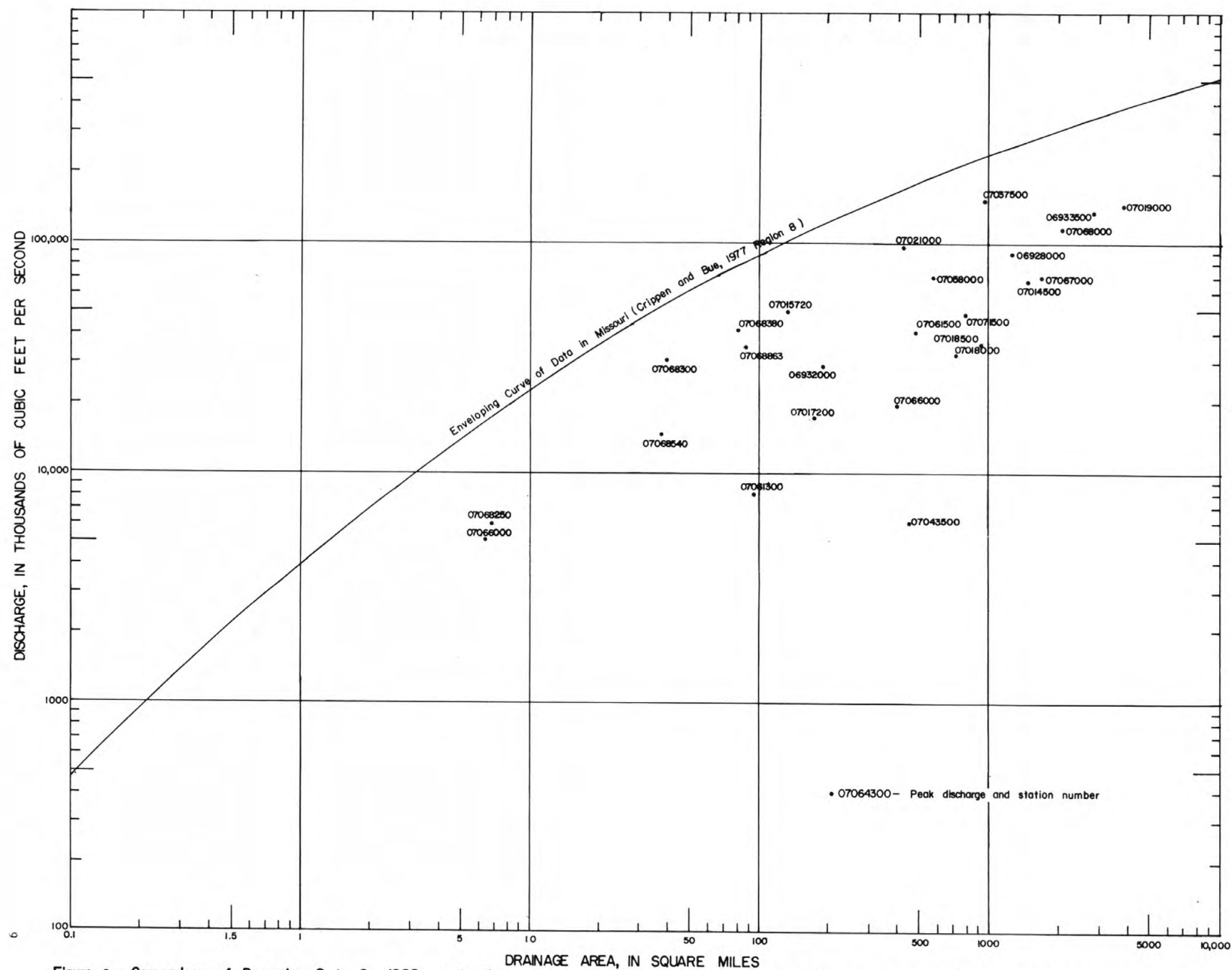


Figure 3.--Comparison of December 2 to 6, 1982, peak discharge at gaging stations in southeastern Missouri, to upper limits of known floods in Missouri.

Table 3.--Comparisons of 1983 7-day low flows to 7-day, 2-year low flows to 1983 minimum flows for the period of record at selected stations.

[Flows in cubic feet per second]

Station identification and period of record (water years) used	Average 7-day Low Flows		Minimum daily flows	
	1983	2-year	Period of record shown	
			Discharge	Year of occurrence
05495000 Fox River at Wayland 1922-81	2.5	1.3	0	Several years
06817500 Nodaway River near Burlington Jct. 1922-81	42	21.0	1.1	1934
06921070 Pomme de Terre River near Polk 1968-81	5.2	3.0	0.3	1980
07165000 Bourbeuse River at Union 1921-81	36	32.0	11	1956
07067000 Current River at Van Buren 1912-81	780	700	473	1956
07187000 Shoal Creek above Joplin 1941-81	88	92.0	12	1954

Chemical Quality of Streamflow

Quality of water samples were collected at 39 stations in Missouri; 19 of these stations are visited monthly, 16 are visited bimonthly and 4 are visited quarterly. Data collected on a routine basis at these stations were water temperature, specific conductance, dissolved oxygen, pH, alkalinity, inorganic constituents, nutrients, metals, biological, pesticides, radio-chemical, sediment, and streamflow. Water-quality data did not indicate unusual changes during the year.

Daily water temperature and specific conductance samples were collected at 1 station. Continuous water temperature data were recorded at six stations.

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.

Missouri streams for the most part are not contaminated 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 in selected streams are given in the following table:

Station identification	Milligrams per liter	
	Minimum	Maximum
Missouri River at Hermann	314	441
Missouri River at St. Joseph	379	523
Des Moines River at St. Francisville	352	497
Grand River near Sumner	255	301
Center Creek near Cartersville	177	263

Daily suspended-sediment samples were collected at 14 stations in Missouri. At 10 of these stations particle-size data of suspended sediment also were obtained. Suspended-sediment concentration in streams generally is greater in the Plains agricultural area than in the Ozarks wooded area. The following table lists two selected stations in the Plains followed by two selected stations in the Ozarks and their respective daily mean suspended-sediment concentrations:

Station identification	Milligrams per liter	
	Minimum	Maximum
Middle Fork Salt River at Paris	5	3,170
Salt River near New London	8	4,380
Meramec River near Eureka	4	2,910
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 mainstream station are listed before that station. A station on a tributary that enters between two mainstream stations is listed between them. A similar order is followed in listing stations on first rank, second rank, and other ranks of tributaries. The rank of any tributary 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. The 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 4 below.

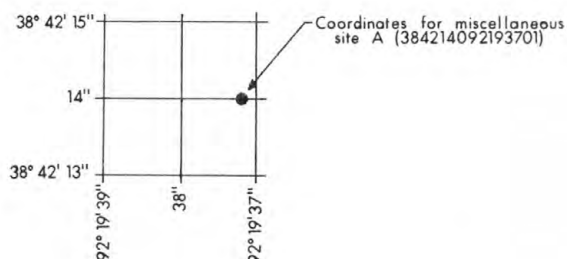


Figure 4. System for numbering miscellaneous sites (latitude and longitude).

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 period 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 tabulation of daily and monthly figures. For gaging stations on streams or canals a table showing the daily discharge and monthly and yearly discharge is given. For gaging stations on lakes and reservoirs a monthly summary table of stage and contents or a table showing the daily contents is given. Tables of daily mean gage heights 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, location, 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 14.

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 discharges 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 records, 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 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.

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 cost 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 temperature 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.

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 time 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.

The daily suspended sediment concentrations at Mississippi River at St. Louis are derived from turbidity reading from the Howard Bend water treatment plant and the East St. Louis water treatment plant. Approximately once a week two depth-integrated verticals are taken to adjust the relationship between suspended sediment and turbidity.

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 Inch-Pound 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 represent 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 represent 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.

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:

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

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

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

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

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

Hydrologic unit is a geographic area representing part of 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 a chemical element as the mass (micrograms) of the element sorbed per unit mass (gram) of sediment.

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). Number of planktonic organisms can be expressed in these terms.

Total organism count 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.

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).

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 or 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 yield 3.7×10^{10} radioactive disintegrations per second. A pococurie 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 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).

Recurrence interval as applied to floods, is the average number of years within which a given flood peak will be equaled or exceeded once. For example, a 100-year flood discharge will be exceeded on the average of once in 100 years. In terms of probability, there is a 1 percent chance that such a flood will occur in any year.

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 stream are influenced by environmental factors. Some major factors are degree of slope, length of slope, soil characteristics, land usage, and quantity and intensity of precipitation.

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

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

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

Suspended-sediment load is 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 bedload discharge. It is the total quantity of sediment, as measured by dry weight or volume, that passes a section during the given time.

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

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

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

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

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

Taxonomy is the division of biology concerned with the classification and naming of organisms. The classification of organisms is based upon a 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 manfly, Hexagenia limbata is the following:

Kingdom.....	Animal
Phylum.....	Arthropoda
Class.....	Insects
Order.....	Ephemeroptera
Family.....	Ephemeridae
Genus.....	Hexagenia
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 of 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 programmed text for self-instruction*, by G. D. Bennett: USGS--TWRI Book 3, Chapter B2. 1976. 172 pages.
- 3-B3. *Type curves for selected problems of flow to wells in confined aquifers*, by J. E. Reed: USGS--TWRI Book 3, Chapter B3. 1980. 106 pages.
- 3-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. Greenson, T. A. Ehle, G. A. Irwin, B. W. Liem, 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. I. 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.

DES MOINES RIVER BASIN

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 upstream from Sugar Creek.

DRAINAGE AREA.--14,300 mi².

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

PERIOD OF DAILY RECORD.--

SEDIMENT RECORDS: April 1978 to September 1982, April 1983 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 March 20, 1982; minimum daily, 41 tons April 6, 1981.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD 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 04...	1000	10400	778	8.5	8.5	20	10.6	91	800	--
JAN 06...	0930	23500	724	8.3	.5	23	13.8	95	420	2100
MAR 09...	1015	31700	541	8.1	6.5	95	11.0	88	2200	5000
MAY 12...	1030	21000	634	8.3	14.5	10	9.2	89	K20	320
JUL 20...	1100	24600	574	8.3	27.5	11	6.8	84	70	410
SEP 29...	1015	5100	590	8.2	19.5	32	7.8	83	420	600

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- LILITY FIELD (MG/L AS CACO3) (00410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
NOV 04...	420	160	110	34	13	6	.3	3.3	260	78
JAN 06...	360	140	94	30	10	6	.2	2.8	220	64
MAR 09...	270	86	70	22	7.3	6	.2	3.2	180	51
MAY 12...	310	95	83	26	8.3	5	.2	2.4	220	57
JUL 20...	270	84	70	24	8.2	6	.2	2.9	190	50
SEP 29...	280	100	68	27	16	11	.4	3.9	180	86

K--Results based on colony count outside the acceptable range (non-ideal colony count).

DES MOINES RIVER BASIN

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

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 DAY) (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...	35	.50	22	497	450	.68	14000	10.0	.070
JAN 06...	25	.40	18	458	380	.62	29100	12.0	.080
MAR 09...	16	.40	16	352	290	.48	30100	6.80	.150
MAY 12...	21	.40	15	390	350	.53	22100	9.20	.060
JUL 20...	19	.40	13	384	300	.52	25500	7.10	.050
SEP 29...	25	.40	10	364	340	.50	5010	2.40	.080

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 04...	.09	2.1	.220	.67	.160	.160	158	4440	6
JAN 06...	.10	.70	.200	.61	.110	.090	182	11500	14
MAR 09...	.19	1.7	.360	1.1	.230	.150	264	22600	61
MAY 12...	.08	2.7	.120	.37	.110	.080	143	8110	62
JUL 20...	.06	1.4	.170	.52	.110	.080	112	7440	70
SEP 29...	.10	2.0	.200	.61	.120	.090	25	344	84

DATE	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)
NOV 04...	20	3	110	.7	>1	>1	>3	4	35	>1
JAN 06...	20	1	110	.6	>1	>1	>3	3	27	3
MAY 12...	20	1	96	>.5	>1	>1	>3	2	11	2
JUL 20...	10	2	95	>.5	>1	>1	>3	4	20	>1

DATE	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 04...	40	15	>.1	>10	1	3	>1	310	>6	180
JAN 06...	29	18	>.1	>10	2	3	>1	260	>6	24
MAY 12...	24	7	.2	>10	2	3	>1	230	>6	17
JUL 20...	28	9	>.1	>10	4	2	>1	210	>6	14

DES MOINES RIVER BASIN

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

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)
OCT , 1982										
05...	0	1	5	31	70	90	98	100	100	100
AUG , 1983										
17...	2	5	15	46	74	86	--	98	100	100

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)
APRIL			MAY			JUNE			
1	34100	---	---	21300	291	16700	21300	206	11800
2	70800	---	---	21700	775	45400	20700	216	12100
3	64400	---	---	23000	658	40900	28000	473	35800
4	49600	---	---	21000	425	24100	29700	414	33200
5	28200	---	---	21000	405	23000	26500	335	24000
6	23500	---	---	21000	394	22300	25100	355	24100
7	26100	---	---	21300	278	16000	24700	287	19100
8	23500	---	---	21000	259	14700	24700	257	17100
9	28700	---	---	20800	345	19400	24400	595	39200
10	41600	---	---	20400	327	18000	24700	545	36300
11	37900	---	---	21900	317	18700	24700	288	19200
12	31700	---	---	21300	385	22100	24100	238	15500
13	30100	800	65000	21700	308	18000	24100	258	16800
14	38600	1650	172000	20700	338	18900	23900	328	21200
15	34700	1030	96500	20700	309	17300	23900	219	14100
16	30900	617	51500	20700	319	17800	23600	239	15200
17	30900	596	49700	20700	348	19400	23400	239	15100
18	32100	932	80800	20700	266	14900	23400	230	14500
19	31700	515	44100	20400	310	17100	23700	370	23700
20	31700	444	38000	22000	563	33400	30100	782	63600
21	31300	463	39100	22100	466	27800	24400	501	33000
22	29000	305	23900	21300	681	39200	23700	391	25000
23	22700	295	18100	21700	409	24000	24400	271	17900
24	22000	353	21000	22000	448	26600	24400	322	21200
25	21000	323	18300	21300	371	21300	24400	241	15900
26	21700	332	19500	21300	264	15200	24400	322	21200
27	21700	303	17800	21300	303	17400	25100	252	17100
28	21300	390	22400	21700	440	25800	24700	262	17500
29	21300	302	17400	21300	176	10100	25100	217	14700
30	20700	204	11400	21500	176	10200	25100	278	18800
31	---	---	---	21300	255	14700	---	---	---
TOTAL	953500	---	806500	660100	---	670400	740400	---	673900

DES MOINES RIVER BASIN

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

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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	25100	344	23300	24700	245	16300	11200	253	7650
2	25100	233	15800	24700	292	19500	11500	268	8320
3	25400	253	17400	24500	282	18700	9740	272	7150
4	25400	304	20800	24500	392	25900	8700	291	6840
5	25400	244	16700	23900	262	16900	6780	321	5880
6	25400	234	16000	23700	220	14100	5120	270	3730
7	25800	275	19200	23400	246	15500	4060	169	1850
8	25800	255	17800	24100	183	11900	3250	218	1910
9	26500	255	18200	24100	231	15000	3100	223	1870
10	24100	224	14600	23600	210	13400	2450	168	1110
11	24100	266	17300	23200	194	12200	2270	216	1320
12	24100	338	22000	21200	200	11400	2140	324	1870
13	24100	287	18700	20800	232	13000	2150	117	679
14	24400	333	21900	20400	147	8100	2060	205	1140
15	24700	277	18500	20100	185	10000	2110	311	1770
16	25100	277	18800	19600	190	10100	2200	126	748
17	24700	319	21300	19400	211	11100	2020	135	736
18	24400	283	18600	19200	295	15300	2150	164	952
19	24700	335	22300	20400	347	19100	1970	134	713
20	24400	278	18300	20400	388	21400	2630	287	2040
21	24500	222	14700	20100	303	16400	3160	286	2440
22	24400	191	12600	21300	292	16800	3220	238	2070
23	25400	207	14200	21300	343	19700	3860	380	3960
24	25800	212	14800	21300	457	26300	4830	322	4200
25	25400	186	12800	21100	725	41300	6520	255	4490
26	25100	238	16100	21100	547	31200	6540	282	4980
27	25100	280	19000	21100	370	21100	6700	225	4070
28	24700	280	18700	21100	349	19900	6300	252	4290
29	24700	338	22500	20400	348	19200	5300	251	3590
30	24700	317	21100	14200	357	13700	4720	241	3070
31	25100	344	23300	11500	305	9470	---	---	---
TOTAL	773600	---	567300	660400	---	533970	138750	---	95438

05495000 FOX RIVER AT WAYLAND, MO

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 downstream from bridge on U.S. Highway 136, 0.8 mi west of Wayland, and 5.0 mi downstream from Brush Creek, and at mile 15.2.

DRAINAGE AREA.--400 mi², approximately.

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

REVISED RECORDS.--WSP 785: 1934.

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

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

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

AVERAGE DISCHARGE.--61 years, 251 ft³/s, 8.52 in/yr, 181,800 acre-ft/yr.

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

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 3	0300	9,930	17.31
Dec. 6	1300	5,650	14.04
Mar. 28	0700	5,510	13.19
Apr. 3	0600	*14,800	19.25

Minimum daily discharge, 2.3 ft³/s Aug. 20, 21.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42	98	390	167	56	132	1770	283	76	35	3.3	4.0
2	39	1760	4350	155	95	120	10400	606	68	22	3.2	4.0
3	37	480	9420	108	178	111	13400	291	1130	20	2.9	3.4
4	35	186	4510	94	261	104	10200	194	1340	27	4.3	5.8
5	32	112	4280	95	203	103	3020	137	492	25	4.7	6.6
6	32	84	5260	93	159	1030	3350	112	200	24	5.5	4.9
7	32	71	3700	92	114	1410	1970	101	125	18	4.4	3.6
8	43	65	874	83	115	633	933	97	95	15	3.7	3.1
9	317	60	503	68	91	339	1410	78	78	13	3.3	2.9
10	655	58	330	67	80	206	3040	61	66	12	2.9	2.8
11	364	486	232	71	80	156	1640	57	57	11	2.9	2.8
12	148	2250	183	47	90	142	658	48	50	11	2.7	2.7
13	89	2400	181	56	152	134	468	179	45	10	2.8	2.7
14	70	1010	181	43	805	132	380	161	40	9.3	2.9	2.7
15	57	332	171	48	1970	125	352	117	37	8.4	2.8	4.4
16	51	206	153	48	2390	114	349	95	35	8.4	2.7	15
17	45	155	126	42	1800	98	243	81	32	8.0	2.6	9.3
18	41	127	131	34	954	87	219	71	34	7.2	2.5	6.5
19	46	122	138	44	749	79	219	77	39	7.2	2.4	7.5
20	93	127	136	41	729	84	208	219	33	6.7	2.3	8.7
21	135	123	119	44	583	101	183	664	128	6.3	2.3	9.3
22	69	114	103	40	422	97	159	385	72	5.6	3.6	6.7
23	52	114	103	42	329	85	144	257	44	5.2	3.7	5.6
24	46	132	227	47	343	77	133	204	34	5.4	3.9	4.6
25	42	116	1260	50	246	73	120	146	28	5.4	9.5	5.8
26	40	107	803	53	196	159	109	120	24	5.0	14	6.7
27	39	114	375	54	163	3450	107	107	23	4.8	7.8	7.8
28	39	474	1050	57	146	3900	112	95	24	4.8	5.5	6.3
29	47	1280	1340	52	---	2000	107	296	21	4.1	4.4	5.4
30	59	724	410	55	---	743	139	135	25	3.7	4.4	5.0
31	73	---	187	57	---	551	---	90	---	3.7	4.0	---
TOTAL	2909	13487	41226	2047	13499	16575	55542	5564	4495	352.2	127.9	166.6
MEAN	93.8	450	1330	66.0	482	535	1851	179	150	11.4	4.13	5.55
MAX	655	2400	9420	167	2390	3900	13400	664	1340	35	14	15
MIN	32	58	103	34	56	73	107	48	21	3.7	2.3	2.7
CAL YR 1982	TOTAL		279180	MEAN	765	MAX	11100	MIN	15			
WTR YR 1983	TOTAL		155990.7	MEAN	427	MAX	13400	MIN	2.3			

WYACONDA RIVER BASIN

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 upstream from Sugar Creek, and 2.5 mi west of Canton, and at mile 16.7.

DRAINAGE AREA.--393 mi².

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 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.--Seven discharge measurements furnished by Corps of Engineers.

AVERAGE DISCHARGE.--44 years, (water years 1933-72, 1980-current year) 238 ft³/s, 8.22 in/yr, 172,400 acre-ft/yr.

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

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 4	0515	9,710	24.83
Dec. 7	0415	4,500	19.53
Mar. 28	1745	4,280	18.22
Apr. 4	0445	*12,400	26.79

Minimum daily discharge, 1.8 ft³/s Sept. 14.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42	181	390	168	94	113	1300	562	74	19	3.1	4.9
2	39	1710	3220	140	110	106	6400	925	57	13	3.8	4.9
3	36	948	6850	114	285	102	11100	420	180	12	3.8	4.3
4	35	266	8800	102	205	100	11300	309	1480	12	3.3	3.8
5	35	153	5090	94	201	102	6390	210	376	31	4.5	3.6
6	35	112	4350	94	167	1120	4050	153	138	31	5.3	3.1
7	33	95	4600	90	158	1540	3110	126	95	23	4.3	3.0
8	41	87	1330	81	151	640	1150	112	73	16	4.3	2.9
9	157	81	412	70	127	303	1160	96	59	14	3.8	2.7
10	878	77	226	67	107	193	2510	86	48	12	3.0	2.5
11	319	177	193	75	133	151	1480	78	40	11	2.6	3.4
12	144	2190	174	48	199	136	659	77	35	10	2.8	2.9
13	93	2020	171	49	350	131	642	88	32	9.6	3.0	2.1
14	75	717	168	53	1160	131	441	148	29	9.0	2.9	1.8
15	64	271	157	60	1940	122	348	121	26	9.6	2.7	2.9
16	57	171	144	36	1940	114	281	101	24	9.0	2.9	4.5
17	50	144	133	31	1610	104	213	86	23	8.0	2.9	8.6
18	46	128	131	30	869	96	213	74	22	7.4	2.7	10
19	48	121	143	27	586	92	212	75	31	7.1	2.3	6.0
20	95	124	146	27	546	103	183	101	29	6.3	2.1	5.3
21	183	120	131	33	439	130	147	164	24	6.0	2.1	4.9
22	92	106	121	27	319	126	131	390	21	5.3	2.9	4.3
23	65	101	122	29	245	111	122	207	19	4.9	3.6	3.9
24	53	130	190	33	210	101	108	124	17	4.5	8.6	3.4
25	49	115	1480	35	170	96	94	110	16	4.3	11	3.4
26	46	105	1030	34	140	253	92	126	15	4.1	7.4	3.6
27	45	115	461	53	125	2680	90	87	13	3.4	5.8	3.1
28	45	470	1070	84	119	3690	96	75	19	3.3	5.8	3.3
29	53	1280	1310	72	---	2980	102	489	16	3.3	4.9	3.4
30	63	720	428	73	---	777	157	190	13	3.6	4.7	3.3
31	88	---	202	83	---	416	---	102	---	3.8	4.9	---
TOTAL	3104	13035	43373	2012	12705	16859	54281	6012	3044	316.5	127.8	119.8
MEAN	100	435	1399	64.9	454	544	1809	194	101	10.2	4.12	3.99
MAX	878	2190	8800	168	1940	3690	11300	925	1480	31	11	10
MIN	33	77	121	27	94	92	90	74	13	3.3	2.1	1.8

CAL YR 1982	TOTAL	264786	MEAN	725	MAX	9620	MIN	22
WTR YR 1983	TOTAL	154989.1	MEAN	425	MAX	11300	MIN	1.8

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 south of Monticello, and 19.0 mi upstream from Middle Fabius River.

DRAINAGE AREA.--452 mi².

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 540.83 ft National Geodetic Vertical Datum of 1929. Prior to Nov. 22, 1930, nonrecording gage at site 400 ft downstream at datum 0.03 ft 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.--Six discharge measurements furnished by Corps of Engineers.

AVERAGE DISCHARGE.--61 years, 285 ft³/s, 8.56 in/yr, 206,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,700 ft³/s Apr. 22, 1973, gage height, 33.03 ft, 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 June 30, 1933.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 3	1100	11,400	26.01	Apr. 3	0700	*14,700	28.58
Dec. 6	1015	7,870	22.74	Apr. 6	1315	5,290	19.23
Mar. 28	0430	6,080	20.53				

Minimum daily discharge, 3.1 ft³/s Aug. 21, 22.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	82	137	360	237	93	117	1950	588	70	25	7.1	11
2	75	2020	5110	192	162	108	9620	787	68	29	6.7	12
3	73	801	10800	157	196	113	14000	366	74	24	6.6	12
4	68	334	5670	119	154	105	7960	240	425	34	7.4	8.7
5	69	171	4790	128	232	113	3580	174	209	56	7.1	6.8
6	69	119	7170	148	210	680	4940	138	126	52	10	6.7
7	66	99	2470	134	180	1190	2220	120	88	34	9.1	5.4
8	75	89	762	128	175	510	918	110	76	25	8.1	4.1
9	228	83	496	114	168	307	1690	99	63	22	7.0	3.6
10	924	78	345	112	141	187	3320	89	56	20	6.6	4.2
11	275	87	307	125	172	161	1240	82	51	18	5.8	9.3
12	140	3430	341	65	291	151	678	81	46	17	5.1	4.8
13	104	2310	345	75	492	147	510	92	42	16	4.8	4.5
14	89	562	309	106	1900	144	423	190	39	16	5.0	3.4
15	82	287	207	84	2200	127	395	155	36	18	5.0	7.8
16	75	209	129	60	1890	113	325	120	34	16	4.8	15
17	70	179	122	75	1550	101	264	98	34	15	4.8	18
18	68	161	131	65	762	94	224	82	48	14	4.3	15
19	75	154	156	60	548	96	201	94	47	13	3.7	10
20	165	145	173	53	498	142	190	219	50	13	3.3	9.0
21	162	137	166	52	395	130	171	239	39	11	3.1	10
22	96	114	162	55	297	133	155	339	38	10	3.1	8.6
23	85	113	178	59	242	120	144	215	31	9.3	6.9	7.9
24	74	130	267	63	206	104	137	163	28	9.0	12	7.0
25	69	121	1360	65	175	101	120	145	26	7.9	12	6.5
26	67	110	991	62	152	278	109	175	25	8.0	10	6.9
27	65	112	445	58	133	3910	109	126	26	7.5	7.6	6.2
28	65	410	1330	57	124	4840	121	101	24	7.5	7.5	6.7
29	66	1400	1380	74	---	1410	123	94	25	7.4	5.2	6.1
30	90	655	397	76	---	652	349	87	25	11	7.4	5.3
31	99	---	279	89	---	489	---	76	---	9.1	9.7	---
TOTAL	3810	14757	47148	2947	13738	16873	56186	5684	1969	574.7	206.8	242.5
MEAN	123	492	1521	95.1	491	544	1873	183	65.6	18.5	6.67	8.08
MAX	924	3430	10800	237	2200	4840	14000	787	425	56	12	18
MIN	65	78	122	52	93	94	109	76	24	7.4	3.1	3.4
CAL YR 1982		TOTAL	304144		MEAN	833	MAX	11900	MIN	20		
WTR YR 1983		TOTAL	164136.0		MEAN	450	MAX	14000	MIN	3.1		

FABIUS RIVER BASIN

05498000 MIDDLE FABIUS RIVER NEAR MONTICELLO, MO

LOCATION.--Lat 40°05'37", long 91°44'08", in SE¼ 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 southwest of Monticello, 8 mi downstream from Radish Branch, and 17 miles upstream from mouth.

DRAINAGE AREA.--393 mi².

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 540.46 ft 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.--Seven discharge measurements furnished by Corps of Engineers.

AVERAGE DISCHARGE.--38 years, 265 ft³/s, 9.16 in/yr, 192,000 acre-ft/yr.

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

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

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 3	0200	7,190	19.89
Dec. 5	0745	8,100	20.88
Mar. 29	1815	4,040	15.49
Apr. 4	0645	*11,000	23.39

Minimum daily discharge, 1.8 ft³/s; Sept. 9.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	226	333	184	142	99	1770	705	51	8.7	4.2	3.5
2	30	983	4340	151	184	94	7470	1050	48	7.9	4.4	3.2
3	29	1160	6700	141	217	87	9020	564	52	7.9	4.2	2.9
4	27	288	6270	116	224	83	10400	276	48	13	3.8	2.5
5	26	149	7260	121	159	95	6460	188	91	31	3.5	2.3
6	25	106	4060	118	156	491	3300	148	90	40	3.5	2.1
7	25	87	4230	115	139	796	2810	125	55	37	3.6	1.9
8	27	78	2220	116	120	515	826	110	38	22	3.7	1.9
9	81	68	515	116	124	294	915	95	32	13	3.8	1.8
10	468	65	347	112	115	192	2280	85	28	10	3.7	2.5
11	316	141	313	115	170	141	1680	77	24	8.4	3.4	5.4
12	126	1180	236	102	315	123	567	74	20	7.6	3.2	4.1
13	82	2320	213	103	452	120	415	81	18	7.1	3.4	2.9
14	56	874	209	105	1250	118	315	150	17	7.3	4.3	2.2
15	44	274	167	84	1930	116	274	217	15	7.6	4.1	3.4
16	38	179	156	91	1450	103	258	147	15	6.3	3.8	3.9
17	33	146	149	80	1120	90	202	113	14	5.9	3.3	4.1
18	29	134	144	86	638	79	186	91	13	5.6	3.0	4.1
19	48	127	147	64	425	72	182	85	13	5.6	2.8	3.5
20	302	124	159	56	359	92	178	157	15	5.2	2.7	3.7
21	427	121	154	44	298	120	158	307	13	5.0	2.5	3.7
22	147	115	137	45	232	127	141	320	12	4.6	2.5	3.7
23	88	109	131	48	194	120	127	250	13	4.4	2.6	3.7
24	60	126	244	54	170	102	121	169	13	4.4	2.8	3.4
25	48	161	832	59	151	99	111	132	11	4.1	3.0	3.1
26	40	131	1050	61	127	318	102	108	11	3.9	2.9	3.1
27	38	115	404	67	113	2410	94	137	12	3.9	2.7	2.9
28	37	237	636	61	102	3450	110	94	9.6	3.9	3.4	2.8
29	39	986	1530	70	---	3800	119	72	10	3.7	4.2	2.6
30	37	682	459	83	---	1060	330	62	9.6	5.0	4.7	2.3
31	75	---	216	102	---	470	---	56	---	4.4	4.0	---
TOTAL	2881	11492	43961	2870	11076	15876	50921	6245	811.2	304.4	107.7	93.2
MEAN	92.9	383	1418	92.6	396	512	1697	201	27.0	9.82	3.47	3.11
MAX	468	2320	7260	184	1930	3800	10400	1050	91	40	4.7	5.4
MIN	25	65	131	44	102	72	94	56	9.6	3.7	2.5	1.8

CAL YR 1982	TOTAL	248157	MEAN	680	MAX	8340	MIN	18
WTR YR 1983	TOTAL	146638.5	MEAN	402	MAX	10400	MIN	1.8

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 September 1982, April 1983 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT CONCENTRATION: 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 April 18, 1982; minimum daily, 0.08 tons November 17, 1981.

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)
OCT . 1982										
05...	0	0	4	21	51	62	70	76	79	83
AUG . 1983										
17...	0	1	5	19	36	48	61	75	86	100

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)
APRIL			MAY			JUNE			
1	1770	---	---	705	1330	2530	51	106	15
2	7470	---	---	1050	1250	3750	48	91	12
3	9020	---	---	564	612	932	52	89	13
4	10400	---	---	276	273	203	48	100	13
5	6460	---	---	188	159	2710	91	134	33
6	3300	---	---	148	126	50	90	130	32
7	2810	---	---	125	109	37	55	133	20
8	826	---	---	110	100	30	38	145	15
9	915	---	---	95	111	28	32	151	13
10	2280	---	---	85	108	25	28	146	11
11	1680	---	---	77	89	19	24	132	8.6
12	567	---	---	74	95	19	20	130	7.0
13	415	---	---	81	108	24	18	142	6.9
14	315	207	176	150	121	49	17	146	6.7
15	274	156	115	217	142	83	15	132	5.4
16	258	139	97	147	147	58	15	141	5.7
17	202	125	68	113	115	35	14	156	5.9
18	186	113	57	91	98	24	13	120	4.2
19	182	102	50	85	94	22	13	113	4.0
20	178	99	48	157	121	60	15	119	4.8
21	158	102	44	307	249	206	13	107	3.8
22	141	101	38	320	374	323	12	123	4.0
23	127	108	37	250	256	173	13	131	4.6
24	121	108	35	169	149	68	13	125	4.4
25	111	100	30	132	127	45	11	133	4.0
26	102	94	26	108	121	35	11	140	4.2
27	94	98	25	137	117	43	12	143	4.6
28	110	96	29	94	115	29	9.6	161	4.2
29	119	96	31	72	107	21	10	166	4.5
30	330	1010	987	62	106	18	9.6	163	4.2
31	---	---	---	56	106	16	---	---	---
TOTAL	50921	---	1893	6245	---	11665	811.2	---	278.7

FABIUS RIVER BASIN

05498000 MIDDLE FABIUS RIVER NEAR MONTICELLO, MO--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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	8.7	138	3.2	4.2	162	1.8	3.5	48	.45
2	7.9	166	3.5	4.4	159	1.9	3.2	72	.62
3	7.9	172	3.7	4.2	144	1.6	2.9	72	.56
4	13	173	6.1	3.8	139	1.4	2.5	63	.43
5	31	159	13	3.5	141	1.3	2.3	62	.39
6	40	139	15	3.5	151	1.4	2.1	54	.31
7	37	136	14	3.6	168	1.6	1.9	47	.24
8	22	129	7.7	3.7	185	1.9	1.9	46	.24
9	13	158	5.6	3.8	161	1.7	1.8	51	.25
10	10	137	3.7	3.7	137	1.4	2.5	72	.49
11	8.4	131	3.0	3.4	148	1.4	5.4	75	1.1
12	7.6	127	2.6	3.2	157	1.4	4.1	66	.73
13	7.1	121	2.3	3.4	145	1.3	2.9	54	.42
14	7.3	115	2.3	4.3	141	1.6	2.2	53	.31
15	7.6	160	3.3	4.1	152	1.7	3.4	88	.81
16	6.3	152	2.6	3.8	148	1.5	3.9	91	.96
17	5.9	133	2.1	3.3	83	.74	4.1	71	.79
18	5.6	143	2.2	3.0	55	.45	4.1	78	.86
19	5.6	168	2.5	2.8	57	.43	3.5	81	.77
20	5.2	159	2.2	2.7	56	.41	3.7	75	.75
21	5.0	138	1.9	2.5	53	.36	3.7	37	.37
22	4.6	150	1.9	2.5	53	.36	3.7	13	.13
23	4.4	151	1.8	2.6	50	.35	3.7	23	.23
24	4.4	145	1.7	2.8	49	.37	3.4	30	.28
25	4.1	157	1.7	3.0	52	.42	3.1	29	.24
26	3.9	184	1.9	2.9	47	.37	3.1	35	.29
27	3.9	160	1.7	2.7	46	.34	2.9	34	.27
28	3.9	160	1.7	3.4	54	.50	2.8	33	.25
29	3.7	161	1.6	4.2	55	.62	2.6	36	.25
30	5.0	159	2.2	4.7	52	.66	2.3	40	.25
31	4.4	151	1.8	4.0	54	.58	---	---	---
TOTAL	304.4	---	120.5	107.7	---	31.86	93.2	---	14.04

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 southwest of Taylor, 5.0 mi downstream from Grassy Creek, and 5.3 mi upstream from confluence with North Fabius River.

DRAINAGE AREA.--620 mi².

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 National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to May 14, 1936, nonrecording gage at bridge 4.0 mi downstream at datum 21.94 ft 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.--Seven discharge measurements furnished by Corps of Engineers.

AVERAGE DISCHARGE.--49 years, 401 ft³/s, 8.78 in/yr, 290,500 acre-ft/yr.

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

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1928 reached a stage of 18.49 ft, from floodmarks, at present site and datum.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 4	1245	10,700	14.21
Apr. 4	0515	*13,500	16.34
May 1	2300	6,020	10.01

Minimum daily discharge, 1.3 ft³/s Sept. 6.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	56	524	286	115	139	2590	3320	81	21	6.5	3.6
2	34	706	5180	242	235	132	10400	4760	78	19	4.5	2.9
3	34	1780	9500	194	332	130	12900	2300	81	18	3.8	2.3
4	32	946	10200	151	301	126	12800	811	84	30	5.1	1.6
5	31	320	8520	151	293	132	11200	476	81	37	4.0	1.5
6	32	191	6980	145	233	588	8320	428	81	43	3.6	1.3
7	32	141	5740	137	218	1060	5220	406	74	62	3.5	1.5
8	30	115	3580	131	184	963	2450	386	62	52	3.1	1.7
9	32	99	1040	128	151	518	1780	323	58	34	3.8	1.7
10	64	88	586	130	153	330	2970	154	55	26	4.0	1.8
11	228	96	737	130	327	238	2670	136	47	22	3.6	2.2
12	189	423	509	126	676	189	1190	131	46	17	3.5	2.2
13	106	1690	365	110	829	171	895	126	43	16	3.3	2.5
14	74	1210	365	114	1410	164	641	136	40	14	3.3	2.2
15	59	446	274	97	1910	156	492	174	37	12	3.6	3.7
16	48	218	231	97	1570	151	372	228	37	10	3.8	6.5
17	41	158	207	100	1330	141	316	176	34	8.7	3.5	5.7
18	37	127	197	104	875	123	284	141	33	9.2	3.0	4.9
19	39	117	200	102	562	116	261	163	33	9.2	2.5	4.5
20	41	110	202	78	435	168	244	149	35	7.6	1.8	5.7
21	46	118	197	83	368	331	225	169	31	7.0	1.7	6.1
22	237	117	184	79	306	270	205	268	30	6.1	2.4	4.9
23	141	117	174	83	257	233	184	484	27	5.3	8.4	4.5
24	90	108	421	83	222	202	161	323	26	4.1	9.5	6.1
25	68	112	2540	84	197	180	156	241	25	4.1	7.6	6.5
26	56	138	1960	86	176	593	141	187	25	4.5	8.1	6.5
27	51	135	964	84	158	4210	132	182	24	4.5	7.2	6.1
28	49	255	1320	84	146	4160	178	159	22	4.5	5.9	5.7
29	53	611	1900	91	---	3530	215	127	22	4.5	4.6	5.3
30	51	917	1040	95	---	1560	2760	100	22	5.3	4.1	4.5
31	51	---	424	106	---	663	---	86	---	5.7	3.8	---
TOTAL	2112	11665	66261	3711	13969	21667	82352	17250	1374	523.3	137.1	116.2
MEAN	68.1	389	2137	120	499	699	2745	556	45.8	16.9	4.42	3.87
MAX	237	1780	10200	286	1910	4210	12900	4760	84	62	9.5	6.5
MIN	30	56	174	78	115	116	132	86	22	4.1	1.7	1.3
CAL YR 1982		TOTAL	353049		MEAN	967	MAX	10200	MIN	30		
WTR YR 1983		TOTAL	221137.6		MEAN	606	MAX	12900	MIN	1.3		

FABIUS RIVER BASIN

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

WATER-QUALITY RECORDS

PERIOD OF RECORD.--July 1972 to August 1973, October 1979 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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 (STAND- ARD 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)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)
OCT											
20...	1430	1028	29001	40	400	8.3	12.0	9.2	85	17	130
NOV											
04...	1145	1028	29001	827	198	7.2	11.0	8.3	75	70	8500
DEC											
15...	0915	1028	29001	264	400	7.3	2.0	13.0	94	19	1200
JAN											
06...	1215	1028	29001	153	420	8.2	2.5	9.6	71	23	220
FEB											
09...	1000	1028	29001	148	473	7.7	1.5	14.0	100	18	670
MAR											
09...	1215	1028	29001	518	369	8.0	6.0	10.4	84	40	4200
APR											
13...	0750	1028	29001	776	207	7.9	9.5	10.0	87	28	2100
MAY											
12...	1215	1028	29001	126	430	8.6	15.0	9.4	92	20	96
JUN											
08...	1230	1028	29001	62	450	8.0	24.0	10.1	119	26	60
JUL											
20...	1300	1028	29001	7.6	508	8.6	28.0	7.0	88	30	36
AUG											
17...	1200	1028	29001	3.5	465	8.3	31.0	6.0	80	8	120
SEP											
29...	1245	1028	29001	4.5	448	8.5	23.0	9.0	102	23	76

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										
20...	180	44	53	12	2.4	7.1	138	1.3	52	10
NOV										
04...	--	--	--	--	--	--	57	7.0	--	--
DEC										
15...	--	--	--	--	--	--	134	13	--	--
JAN										
06...	180	47	54	12	12	3.7	138	1.7	50	11
FEB										
09...	--	--	--	--	--	--	144	5.6	--	--
MAR										
09...	--	--	--	--	--	--	105	2.0	--	--
APR										
13...	120	30	36	7.1	6.1	2.9	89	2.2	36	2.0
MAY										
12...	--	--	--	--	--	--	164	.8	--	--
JUN										
08...	--	--	--	--	--	--	185	3.6	--	--
JUL										
20...	210	17	59	16	18	3.7	197	.9	53	14
AUG										
17...	--	--	--	--	--	--	157	1.5	--	--
SEP										
29...	--	--	--	--	--	--	174	1.0	--	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

[illegible]

NORTH RIVER BASIN

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 upstream from City Waterworks dam, 1,000 ft upstream from upstream bridge on dual U.S. Highways 24 and 61, 0.5 mi north of Palmyra, and 7.0 mi upstream from mouth.

DRAINAGE AREA.--373 mi².

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 464.81 ft National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Oct. 1, 1945, nonrecording gage at bridge 1,000 ft 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.--Seven discharge measurements furnished by Corps of Engineers.

AVERAGE DISCHARGE.--48 years, 252 ft³/s, 9.17 in/yr, 182,600 acre-ft/yr.

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

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

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 3	0215	*34,500	26.11
Apr. 1	1400	24,200	23.96
May 2	0145	10,000	18.96

Minimum daily discharge, 1.5 ft³/s Aug. 21.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	27	147	188	65	69	19100	3700	54	12	4.5	5.4
2	20	46	11000	163	186	67	13800	4490	53	11	3.9	4.0
3	20	104	21000	140	223	78	4780	1050	72	11	3.7	3.4
4	18	109	3650	124	152	65	6220	445	96	15	3.4	3.1
5	18	56	5210	122	135	70	5290	298	61	13	3.1	2.3
6	17	37	2310	116	111	143	2760	236	50	9.9	368	2.3
7	14	29	1050	112	82	400	1220	205	45	11	419	3.1
8	15	24	450	107	90	387	1270	184	41	12	57	4.2
9	19	23	314	101	89	211	1690	151	40	9.9	40	4.3
10	20	21	376	99	110	142	934	129	37	8.4	21	4.2
11	20	24	653	97	365	114	482	118	35	6.9	11	8.0
12	40	54	300	79	499	99	365	116	33	6.9	9.2	6.5
13	33	147	224	85	467	88	339	111	31	6.6	6.5	4.1
14	28	159	204	81	630	86	275	127	30	4.5	5.8	3.5
15	24	77	174	69	591	78	221	130	29	4.7	5.8	6.5
16	23	53	151	70	493	70	182	106	28	5.0	5.2	10
17	21	42	133	70	423	66	172	94	29	3.8	5.2	9.3
18	20	37	128	56	276	63	160	87	26	3.9	6.5	9.2
19	20	34	126	58	193	139	145	204	28	4.0	3.4	6.5
20	22	32	118	58	159	491	130	181	30	5.7	1.7	6.4
21	23	30	110	55	135	255	123	113	29	6.0	1.5	6.1
22	22	29	104	60	120	177	116	271	26	5.1	11	4.2
23	23	32	102	60	109	143	108	232	24	4.6	18	5.2
24	32	31	941	60	99	123	98	131	20	3.2	13	5.6
25	28	33	3800	60	90	226	88	253	21	2.2	9.9	5.2
26	24	33	973	60	81	4090	81	206	17	3.7	8.4	5.5
27	21	31	469	57	76	1770	91	113	16	4.0	6.5	4.0
28	22	119	1320	56	72	898	317	91	15	3.5	7.1	3.1
29	31	182	673	59	---	397	208	77	13	2.5	5.8	2.3
30	24	171	348	63	---	309	789	64	13	3.1	5.8	2.4
31	28	---	229	65	---	2360	---	56	---	5.2	5.2	---
TOTAL	711	1826	56787	2650	6121	13674	61554	13769	1042	208.3	1076.1	149.9
MEAN	22.9	60.9	1832	85.5	219	441	2052	444	34.7	6.72	34.7	5.00
MAX	40	182	21000	188	630	4090	19100	4490	96	15	419	10
MIN	14	21	102	55	65	63	81	56	13	2.2	1.5	2.3
CAL YR 1982		TOTAL	241987	MEAN	663	MAX	21000	MIN	14			
WTR YR 1983		TOTAL	159568.3	MEAN	437	MAX	21000	MIN	1.5			

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 current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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 (STAND- ARD 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)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)
OCT 20...	1600	1028	29001	81000	389	8.3	12.0	9.4	87	12	760
NOV 04...	1325	1028	29001	128000	327	7.9	10.5	8.6	77	24	3600
DEC 15...	0800	1028	29001	124000	498	7.8	1.0	13.4	94	23	1100
JAN 06...	1400	1028	29001	122000	569	8.3	1.0	14.2	100	17	1600
FEB 09...	0800	1028	29001	110000	512	8.0	2.0	13.8	100	19	400
MAR 09...	1345	1028	29001	152000	410	8.2	6.5	11.4	93	20	430
APR 12...	1715	1028	29001	233000	432	8.2	7.0	10.8	89	21	1100
MAY 12...	1345	1028	29001	156000	470	8.7	17.0	9.0	92	36	K44
JUN 07...	1630	1028	29001	126000	530	7.8	19.5	8.0	86	41	48
JUL 20...	1430	1028	29001	120000	488	8.3	30.0	5.8	75	27	110
AUG 16...	1530	1028	29001	78000	418	8.6	28.5	3.8	48	28	120
SEP 29...	1400	1028	29001	91000	379	7.9	18.5	8.0	83	30	360

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 20...	180	36	44	18	9.4	2.6	148	1.4	26	17
NOV 04...	--	--	--	--	--	--	126	3.1	--	--
DEC 15...	--	--	--	--	--	--	184	5.6	--	--
JAN 06...	270	77	69	24	9.0	2.6	194	1.9	43	22
FEB 09...	--	--	--	--	--	--	171	3.3	--	--
MAR 09...	--	--	--	--	--	--	154	1.9	--	--
APR 12...	220	63	57	18	6.1	2.6	154	1.9	42	12
MAY 12...	--	--	--	--	--	--	177	.7	--	--
JUN 07...	--	--	--	--	--	--	187	5.7	--	--
JUL 20...	220	42	54	21	18	2.4	180	1.7	40	17
AUG 16...	--	--	--	--	--	--	164	.8	--	--
SEP 29...	--	--	--	--	--	--	157	3.8	--	--

K--Results based on colony count outside the acceptable range (non-ideal colony count).

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SOLIDS, RESIDUE AT 180 DEG. C 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 20...	.10	240	122	1.40	.100	.130	<2	<2	<5	<5
	NOV 04...	--	--	194	1.45	.110	.310	--	--	--	--
DEC 15...	--	--	142	5.40	.150	.300	--	--	--	--	
JAN 06...	.20	375	79	8.20	.130	.150	<2	<2	<5	<5	
FEB 09...	--	--	5	4.50	.110	.130	--	--	--	--	
MAR 09...	--	--	66	2.60	.100	.240	--	--	--	--	
APR 12...	.10	273	136	5.60	<.010	.220	<2	2	11	5	
MAY 12...	--	--	90	3.00	.050	.200	--	--	--	--	
JUN 07...	--	--	110	1.20	.010	.270	--	--	--	--	
JUL 20...	.20	283	65	2.60	.030	.210	<2	<2	5	<5	
AUG 16...	--	--	110	1.30	.030	.230	--	--	--	--	
SEP 29...	--	--	99	1.00	.050	.080	--	--	--	--	

[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 upstream from upstream bridge on dual U.S. Highway 61 at Hannibal, and 4.8 mi upstream from mouth.

DRAINAGE AREA.--31.0 mi².

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 Division of Geology and Land Survey.

REVISED RECORDS.--WSP 1115: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 508.91 ft 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 datum 2.00 ft 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 downstream at present datum.

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

AVERAGE DISCHARGE.--40 years, 20.0 ft³/s, 8.76 in/yr, 14,490 acre-ft/yr.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 805 ft³/s May 1, gage height, 8.26 ft; minimum daily, 0.15 ft³/s Sept. 7.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.2	13	17	25	10	11	150	161	7.6	1.5	1.1	.48
2	2.1	37	292	19	54	11	149	115	7.3	.97	1.1	.39
3	2.1	10	260	16	43	10	129	112	9.0	1.1	1.0	.30
4	2.1	6.0	359	15	35	11	134	109	7.1	1.5	.91	.21
5	2.1	5.4	379	16	21	23	145	102	6.0	1.7	1.3	.17
6	7.1	5.0	353	16	15	56	142	93	6.0	1.6	2.5	.16
7	5.8	4.9	356	15	23	51	129	87	5.8	1.6	2.3	.15
8	3.3	5.0	351	14	31	49	129	81	5.4	1.6	1.8	.19
9	6.2	4.4	316	14	14	45	138	74	5.2	1.5	1.6	.20
10	3.5	3.7	290	15	28	40	127	47	5.0	1.5	1.3	.21
11	2.7	9.2	255	13	43	16	126	18	5.0	1.5	1.1	.39
12	2.9	25	224	12	46	14	123	14	4.7	1.4	1.0	.52
13	2.7	9.7	193	12	45	13	121	18	4.5	1.5	.86	.39
14	2.5	6.6	95	12	43	13	114	19	3.8	2.0	.76	.44
15	2.5	5.8	18	10	42	12	110	19	3.8	1.7	.68	1.3
16	2.5	5.6	16	9.7	39	11	106	14	4.2	1.9	.60	1.4
17	2.5	5.2	16	9.7	26	10	100	12	4.2	1.6	.54	.74
18	2.5	5.4	16	12	19	9.9	93	12	4.0	1.6	.47	.56
19	5.6	5.4	15	12	17	10	86	19	4.2	1.9	.42	.52
20	9.5	4.7	14	7.8	15	32	31	12	3.5	1.5	.37	.72
21	3.8	4.7	14	7.8	14	38	21	12	3.0	2.1	.33	.79
22	2.9	9.7	14	8.5	14	35	20	49	3.0	1.9	.30	.64
23	2.7	6.6	14	9.2	13	18	19	14	2.5	1.5	2.8	.71
24	2.6	6.0	92	9.2	12	14	17	10	2.6	1.4	2.2	.69
25	2.3	9.0	125	9.2	12	14	15	12	2.3	1.5	1.8	.64
26	2.5	8.7	115	9.2	11	29	15	9.7	2.1	1.8	1.5	.62
27	2.5	33	129	7.8	11	45	23	8.7	2.4	2.0	1.2	.59
28	2.9	28	137	7.8	11	46	61	8.3	2.0	1.9	1.0	.59
29	4.7	26	120	8.5	---	45	27	10	1.8	1.5	.82	.58
30	4.4	22	114	9.2	---	45	33	8.0	1.7	2.5	.66	.55
31	4.5	---	100	8.5	---	44	---	7.8	---	1.4	.52	---
TOTAL	108.2	330.7	4809	370.1	707	820.9	2633	1287.5	129.7	50.67	34.84	15.84
MEAN	3.49	11.0	155	11.9	25.3	26.5	87.8	41.5	4.32	1.63	1.12	.53
MAX	9.5	37	379	25	54	56	150	161	9.0	2.5	2.8	1.4
MIN	2.1	3.7	14	7.8	10	9.9	15	7.8	1.7	.97	.30	.15
CAL YR 1982	TOTAL		16444.1	MEAN	45.1	MAX	847	MIN	2.1			
WTR YR 1983	TOTAL		11297.45	MEAN	31.0	MAX	379	MIN	.15			

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 downstream from old channel carrying Bear Creek 0.25 mi west of Hagers Grove, 2.5 mi upstream from Ten Mile Creek, and at mile 143.8.

DRAINAGE AREA.--365 mi².

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 National Geodetic Vertical Datum of 1929.

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

AVERAGE DISCHARGE.--9 years, 280 ft³/s, 10.42 in/yr, 262,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 19.7 ft June 6, 1947, discharge, 26,900 ft³/s.

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

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 2	2400	15,700	17.87
Dec. 5	2130	9,760	16.98
Mar. 28	0015	5,790	14.95
Apr. 3	0500	*22,000	18.80

Minimum daily discharge, 1.8 ft³/s Aug. 20, 21.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	68	167	69	30	68	2920	1690	40	13	3.5	6.9
2	15	1600	7550	68	44	65	18400	1810	36	12	3.5	12
3	15	624	8840	43	43	64	18800	412	49	12	3.2	8.4
4	15	158	2820	56	65	64	3720	168	52	99	3.6	5.3
5	15	90	6350	46	40	77	3950	106	42	211	3.2	3.4
6	15	72	5180	37	32	430	3760	87	31	84	2.9	4.0
7	15	62	1410	40	39	724	1190	77	25	25	3.2	4.2
8	16	57	423	40	37	294	421	68	21	15	3.8	3.3
9	270	53	228	36	30	151	2600	60	20	10	4.8	3.5
10	245	45	216	38	41	104	2320	55	17	8.0	3.6	3.9
11	77	199	345	40	187	90	607	50	14	6.8	2.8	7.0
12	42	2340	112	42	328	86	270	51	14	5.7	2.5	5.3
13	28	1030	101	36	482	87	186	146	12	4.9	2.5	16
14	24	239	117	32	1180	84	158	429	10	4.6	2.9	9.8
15	19	138	128	28	758	78	174	184	11	5.6	3.2	11
16	16	101	139	36	655	74	92	98	12	4.8	2.3	11
17	14	85	147	31	519	68	70	75	14	4.7	2.2	18
18	14	78	145	29	267	65	72	61	13	4.5	2.4	19
19	15	76	137	29	205	64	78	67	16	4.3	2.0	9.3
20	142	80	136	27	172	93	74	85	16	4.1	1.8	7.9
21	66	76	145	26	120	134	67	160	26	3.9	1.8	7.9
22	42	67	152	27	102	113	61	222	29	4.0	4.2	6.6
23	30	74	151	26	95	99	61	204	20	4.0	6.5	7.0
24	26	128	243	27	89	95	65	136	17	4.1	15	10
25	23	97	1810	27	82	87	65	134	16	4.5	6.3	8.8
26	22	84	623	24	76	596	64	143	16	4.3	4.6	7.0
27	22	84	223	27	72	4180	62	94	16	3.8	3.9	6.0
28	21	563	1850	28	71	3010	82	90	18	3.8	3.9	5.6
29	28	907	779	28	---	667	95	88	15	3.8	3.6	5.0
30	98	340	138	32	---	302	604	58	15	5.2	8.3	4.3
31	59	---	98	40	---	289	---	45	---	4.0	8.3	---
TOTAL	1465	9615	40903	1115	5861	12402	61088	7153	653	584.4	222.6	237.4
MEAN	47.3	321	1319	36.0	209	400	2036	231	21.8	18.9	7.18	7.91
MAX	270	2340	8840	69	1180	4180	18800	1810	52	211	65	19
MIN	14	45	98	24	30	64	61	45	10	3.8	1.8	3.3
CAL YR 1982	TOTAL		234505	MEAN	642	MAX	10300	MIN	14			
WTR YR 1983	TOTAL		141299.4	MEAN	387	MAX	18800	MIN	1.8			

SALT RIVER BASIN

05502300 SALT RIVER AT HAGERS GROVE, MO--Continued

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.54	1.03	2.09	1.31	.99	1.06	2.78	2.56	.82	.49	.28	.45
2	.52	8.76	15.85	1.39	1.28	1.03	18.21	8.09	.78	.49	.28	.64
3	.51	4.74	17.69	1.08	1.14	1.00	18.80	3.23	.86	.55	.28	.47
4	.50	2.08	10.39	1.28	1.80	1.00	12.08	2.05	.94	.57	.28	.49
5	.50	1.61	15.20	1.19	1.45	1.07	9.46	1.59	.85	2.31	.27	.25
6	.51	1.40	16.25	1.08	1.14	2.40	13.41	1.32	.76	1.26	.24	.26
7	.49	1.29	7.89	1.10	1.34	4.68	6.63	1.19	.67	.81	.28	.30
8	.48	1.22	3.37	1.11	1.29	2.75	3.33	1.06	.63	.63	.30	.26
9	1.42	1.17	2.41	1.06	1.08	1.96	7.86	.93	.60	.51	.35	.26
10	2.74	1.11	1.97	1.09	1.09	1.57	9.30	.85	.57	.47	.28	.36
11	1.50	1.14	3.04	1.21	2.13	1.38	4.15	.78	.52	.43	.26	.57
12	1.00	9.30	1.54	1.07	3.06	1.30	2.50	.79	.55	.38	.18	.32
13	.83	6.12	1.43	1.13	2.92	1.31	2.19	1.94	.50	.36	.24	.64
14	.72	2.49	1.25	1.06	6.40	1.30	1.95	3.53	.45	.32	.24	.53
15	.65	1.93	1.13	.93	4.60	1.20	2.19	2.16	.45	.38	.27	.53
16	.59	1.66	1.01	1.04	4.03	1.17	1.60	1.50	.49	.34	.23	.53
17	.56	1.53	.90	1.00	3.81	1.06	1.35	1.18	.49	.34	.23	.50
18	.54	1.46	.92	.92	2.55	1.01	1.34	.96	.50	.33	.24	.72
19	.53	1.40	1.03	.99	2.20	.99	1.43	.92	.56	.32	.20	.52
20	1.22	1.48	1.09	.89	2.07	1.17	1.35	1.37	.56	.32	.19	.41
21	1.36	1.44	.99	.81	1.74	1.78	1.23	1.89	.52	.29	.19	.45
22	1.06	1.34	.92	.85	1.53	1.62	1.04	2.07	.70	.30	.17	.41
23	.86	1.32	.92	.83	1.43	1.41	1.03	2.02	.58	.30	1.30	.39
24	.77	1.78	1.08	.84	1.35	1.31	1.06	1.65	.58	.30	.64	.52
25	.72	1.65	8.80	.89	1.27	1.24	1.09	1.29	.52	.33	.39	.47
26	.71	1.52	4.40	.86	1.17	1.38	.94	1.63	.50	.31	.31	.42
27	.69	1.52	2.15	.87	1.12	12.39	.95	1.20	.54	.29	.29	.38
28	.67	3.01	7.85	.91	1.09	10.23	1.16	1.21	.58	.29	.30	.37
29	.70	5.47	5.20	.92	---	4.09	1.35	1.19	.50	.29	.33	.35
30	1.63	3.04	1.84	1.08	---	2.61	4.95	.98	.56	.37	.31	.32
31	1.28	---	1.58	1.32	---	2.47	---	.88	---	.30	.49	---
MEAN	.86	2.50	4.59	1.04	2.04	2.29	4.56	1.74	.60	.48	.32	.44
MAX	2.74	9.30	17.69	1.39	6.40	12.39	18.80	8.09	.94	2.31	1.30	.72
MIN	.48	1.03	.90	.81	.99	.99	.94	.78	.45	.29	.17	.25
WTR YR 1983		MEAN	1.78	MAX	18.80	MIN	.17					

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 downstream from Black Creek and 2 mi west of Hunnewell, Mo., at mile 105.8.

DRAINAGE AREA.--626 mi².

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 National Geodetic Vertical Datum of 1929.

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

AVERAGE DISCHARGE.--13 years (water years 1932-40, 1980 to current year), 403 ft³/s, 8.74 in/yr, 292,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,560 ft³/s April 23, 1973, gage height, 25.16 ft.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 4	0915	13,600	20.69
Dec. 7	1030	9,010	17.42
Apr. 4	0300	*16,800	22.07

Minimum daily discharge, 0.80 ft³/s Aug. 22-23.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	98	395	253	138	113	2490	1840	86	13	3.5	4.1
2	23	408	3170	204	128	109	10100	4150	72	11	3.5	5.1
3	22	1330	9280	187	170	104	15000	2370	104	11	3.1	7.7
4	21	483	13100	152	136	103	16300	656	137	10	2.2	6.7
5	20	205	10800	141	120	103	11900	339	97	21	1.7	8.3
6	18	126	8070	148	110	176	7680	241	72	214	1.6	7.7
7	17	95	8530	136	104	889	6190	198	56	101	2.4	5.7
8	16	79	2700	139	96	783	1580	170	47	43	2.8	4.6
9	18	69	760	136	105	395	1720	139	41	24	3.3	3.5
10	189	60	559	134	121	253	3990	120	36	18	2.7	3.5
11	269	65	790	141	272	181	2370	108	31	14	2.0	6.0
12	134	668	551	136	552	148	768	101	26	11	1.8	5.5
13	76	2170	374	97	653	139	531	106	22	10	1.7	4.6
14	53	742	300	127	1120	139	446	440	22	8.9	1.9	5.6
15	37	280	251	106	1340	137	395	566	21	9.7	1.9	8.9
16	30	187	212	83	957	127	350	305	21	9.6	1.9	15
17	25	139	187	89	953	118	256	198	19	12	1.6	14
18	23	116	180	76	606	104	214	166	17	8.7	1.4	12
19	22	108	186	64	395	98	203	328	21	7.3	1.1	10
20	23	103	196	65	331	170	199	217	26	6.2	.97	17
21	119	109	188	64	287	331	179	191	26	4.8	.88	17
22	109	103	168	58	228	310	161	646	21	4.4	.80	14
23	67	97	158	64	194	243	149	794	22	3.4	.80	12
24	46	97	314	70	174	198	136	341	21	2.3	1.3	7.1
25	35	160	2170	74	156	176	123	331	15	3.1	32	6.2
26	32	136	2450	73	137	866	114	251	13	3.2	14	5.3
27	27	114	759	67	125	3660	108	217	13	3.1	8.5	6.1
28	27	145	1400	65	123	5200	158	162	13	3.3	7.7	6.4
29	27	850	2290	82	---	3270	185	150	13	3.1	5.3	5.9
30	25	786	691	92	---	749	312	139	13	3.5	4.2	5.1
31	108	---	301	118	---	517	---	103	---	4.2	4.2	---
TOTAL	1682	10128	71480	3441	9831	19909	84307	16083	1144	601.8	122.75	240.6
MEAN	54.3	338	2306	111	351	642	2810	519	38.1	19.4	3.96	8.02
MAX	269	2170	13100	253	1340	5200	16300	4150	137	214	32	17
MIN	16	60	158	58	96	98	108	101	13	2.3	.80	3.5
CAL YR 1982			TOTAL 347213		MEAN 951	MAX 13100	MIN 16					
WTR YR 1983			TOTAL 218970.15		MEAN 600	MAX 16300	MIN .80					

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

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.53	3.19	4.50	3.90	3.35	3.26	4.71	6.41	3.19	2.47	2.14	2.10
2	2.51	2.95	7.67	3.68	3.29	3.24	18.10	11.84	3.11	2.44	2.13	2.09
3	2.49	7.38	16.48	3.61	3.65	3.21	21.24	9.88	3.13	2.41	2.13	2.30
4	2.47	4.91	20.56	3.56	3.22	3.20	22.03	5.51	3.48	2.41	2.06	2.18
5	2.45	3.76	19.52	3.39	3.24	3.20	20.15	4.29	3.28	2.35	1.99	2.26
6	2.41	3.36	16.32	3.47	3.41	3.35	16.23	3.94	3.12	3.94	1.96	2.26
7	2.39	3.16	17.33	3.38	3.00	5.68	15.60	3.76	3.00	3.29	2.03	2.18
8	2.38	3.04	9.72	3.41	2.91	5.84	7.69	3.64	2.92	2.87	2.06	2.11
9	2.41	2.97	5.66	3.39	3.17	4.52	6.79	3.51	2.86	2.61	2.11	2.06
10	2.63	2.93	4.83	3.39	3.26	3.95	11.58	3.38	2.80	2.53	2.06	2.03
11	4.07	2.92	5.57	3.41	3.81	3.63	9.91	3.31	2.77	2.45	2.00	2.17
12	3.43	3.01	5.08	3.43	4.79	3.47	5.79	3.28	2.70	2.34	1.98	2.16
13	3.05	9.04	4.42	3.01	4.94	3.41	4.88	3.30	2.65	2.31	1.95	2.11
14	2.83	5.76	4.11	3.34	5.79	3.42	4.63	4.54	2.64	2.27	1.97	2.12
15	2.69	4.06	3.92	2.98	7.18	3.41	4.44	5.15	2.63	2.31	1.97	2.27
16	2.62	3.65	3.76	2.76	6.04	3.34	4.37	4.19	2.60	2.29	1.97	2.47
17	2.54	3.41	3.64	2.84	6.05	3.31	3.98	3.77	2.59	2.42	1.92	2.48
18	2.50	3.30	3.59	2.64	5.12	3.22	3.82	3.53	2.56	2.29	1.91	2.42
19	2.49	3.25	3.61	2.87	4.42	3.17	3.76	4.29	2.60	2.24	1.87	2.34
20	2.53	3.20	3.65	2.89	4.18	3.45	3.76	3.81	2.67	2.21	1.84	2.53
21	2.48	3.25	3.64	2.90	4.04	4.17	3.67	3.74	2.71	2.14	1.82	2.55
22	3.28	3.21	3.54	2.88	3.82	4.15	3.59	4.92	2.64	2.15	1.82	2.48
23	2.98	3.17	3.50	2.92	3.67	3.89	3.52	6.05	2.60	2.09	1.82	2.46
24	2.78	3.14	3.54	2.97	3.59	3.70	3.47	4.32	2.63	2.01	1.85	2.24
25	2.66	3.49	8.01	3.01	3.51	3.59	3.41	4.24	2.53	2.05	2.84	2.21
26	2.62	3.43	10.05	3.00	3.41	3.88	3.35	4.05	2.47	2.08	2.46	2.18
27	2.56	3.26	5.65	2.88	3.34	10.85	3.30	3.87	2.46	2.08	2.28	2.19
28	2.54	3.39	6.16	2.94	3.29	13.18	3.56	3.57	2.46	2.10	2.27	2.23
29	2.56	5.49	9.60	3.06	---	12.30	3.68	3.53	2.47	2.09	2.18	2.21
30	2.53	5.87	5.56	3.12	---	5.61	3.70	3.51	2.49	2.12	2.08	2.18
31	3.37	---	4.12	3.24	---	4.83	---	3.30	---	2.15	2.10	---
MEAN	2.70	3.90	7.33	3.17	4.05	4.63	7.62	4.53	2.76	2.37	2.05	2.25
MAX	4.07	9.04	20.56	3.90	7.18	13.18	22.03	11.84	3.48	3.94	2.84	2.55
MIN	2.38	2.92	3.50	2.64	2.91	3.17	3.30	3.28	2.46	2.01	1.82	2.03
WTR YR 1983		MEAN	3.94	MAX	22.03	MIN	1.82					

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 June 9, 1982; minimum daily, 0.03 tons November 29, 30 and December 3, 1980.

EXTREMES FOR CURRENT YEAR.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 2,220 mg/L April 1; minimum daily mean 4 mg/L January 30.

SUSPENDED-SEDIMENT LOADS: Maximum daily, 25,300 tons April 3; minimum daily, 0.10 tons August 21.

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)
APR , 1983										
12...	709	63	72	79	89	99	100	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)
AUG , 1983										
16...	0	1	4	14	17	22	30	44	67	100

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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	24	50	3.2	98	86	23	395	273	291
2	23	44	2.7	408	331	365	3170	1160	9930
3	22	49	2.9	1330	773	2780	9280	808	20200
4	21	59	3.4	483	377	492	13100	550	19500
5	20	64	3.5	205	189	105	10800	338	9860
6	18	73	3.6	126	120	41	8070	426	9280
7	17	91	4.2	95	102	26	8530	345	7950
8	16	78	3.4	79	104	22	2700	477	3480
9	18	85	4.1	69	103	19	760	326	669
10	189	116	59	60	98	16	559	237	358
11	269	199	145	65	119	21	790	236	503
12	134	166	60	668	229	413	551	191	284
13	76	111	23	2170	786	4610	374	148	149
14	53	106	15	742	432	865	300	137	111
15	37	118	12	280	225	170	251	126	85
16	30	131	11	187	144	73	212	97	56
17	25	95	6.4	139	121	45	187	95	48
18	23	110	6.8	116	105	33	180	86	42
19	22	99	5.9	108	91	27	186	103	52
20	23	85	5.3	103	96	27	196	101	53
21	119	77	25	109	103	30	188	96	49
22	109	91	27	103	91	25	168	98	44
23	67	108	20	97	89	23	158	92	39
24	46	106	13	97	75	20	314	105	89
25	35	145	14	160	87	38	2170	1010	5920
26	32	141	12	136	91	33	2450	1010	6680
27	27	113	8.2	114	87	27	759	632	1300
28	27	98	7.1	145	108	42	1400	1030	3890
29	27	114	8.3	850	439	1010	2290	1520	9400
30	25	98	6.6	786	544	1150	691	764	1430
31	108	100	29	---	---	---	301	439	357
TOTAL	1682	---	550.6	10128	---	12571	71480	---	112099

SALT RIVER BASIN

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

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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	253	265	181	138	6	2.2	113	71	22
2	204	184	101	128	10	3.5	109	71	21
3	187	166	84	170	15	6.9	104	86	24
4	152	126	52	136	7	2.6	103	98	27
5	141	106	40	120	7	2.3	103	90	25
6	148	103	41	110	7	2.1	176	95	45
7	136	108	40	104	8	2.3	889	380	912
8	139	113	42	96	11	2.9	783	426	901
9	136	105	39	105	14	4.0	395	204	218
10	134	95	34	121	25	8.2	253	124	85
11	141	92	35	272	43	32	181	112	55
12	136	104	38	552	160	238	148	109	44
13	97	86	23	653	228	402	139	79	30
14	127	101	35	1120	520	1570	139	62	23
15	106	93	27	1340	939	3400	137	85	31
16	83	79	18	957	524	1350	127	97	33
17	89	98	24	953	396	1020	118	83	26
18	76	103	21	606	250	409	104	67	19
19	64	103	18	395	216	233	98	67	18
20	65	93	16	331	161	144	170	88	40
21	64	86	15	287	129	100	331	88	79
22	58	87	14	228	112	69	310	90	75
23	64	86	15	194	112	59	243	93	61
24	70	89	17	174	108	51	198	81	43
25	74	85	17	156	83	35	176	68	32
26	73	90	18	137	83	31	866	260	608
27	67	87	16	125	72	24	3660	1530	15100
28	65	65	11	123	70	23	5200	1310	18400
29	82	12	2.7	---	---	---	3270	632	5580
30	92	4	.99	---	---	---	749	217	439
31	118	9	2.9	---	---	---	517	618	863
TOTAL	3441	---	1038.59	9831	---	9227.0	19909	---	43879
APRIL			MAY			JUNE			
1	2490	2220	14900	1840	931	4630	86	122	28
2	10100	869	23700	4150	1080	12100	72	114	22
3	15000	625	25300	2370	563	3600	104	130	37
4	16300	555	24400	656	291	515	137	157	58
5	11900	368	11800	339	182	167	97	115	30
6	7680	501	10400	241	144	94	72	121	24
7	6190	518	8660	198	128	68	56	126	19
8	1580	433	1850	170	103	47	47	125	16
9	1720	510	2370	139	85	32	41	103	11
10	3990	735	7920	120	95	31	36	106	10
11	2370	370	2370	108	88	26	31	122	10
12	768	249	516	101	86	23	26	128	9.0
13	531	196	281	106	86	25	22	146	8.7
14	446	190	229	440	170	202	22	156	9.3
15	395	162	173	566	365	558	21	147	8.3
16	350	133	126	305	279	230	21	191	11
17	256	122	84	198	167	89	19	184	9.4
18	214	106	61	166	144	65	17	149	6.8
19	203	109	60	328	367	325	21	159	9.0
20	199	94	51	217	170	100	26	175	12
21	179	78	38	191	170	88	26	184	13
22	161	86	37	646	384	670	21	184	10
23	149	104	42	794	493	1060	22	194	12
24	136	99	36	341	225	207	21	176	10
25	123	80	27	331	303	271	15	176	7.1
26	114	88	27	251	188	127	13	185	6.5
27	108	89	26	217	157	92	13	196	6.9
28	158	95	41	162	133	58	13	191	6.7
29	185	81	40	150	138	56	13	163	5.7
30	312	119	100	139	123	46	13	144	5.1
31	---	---	---	103	114	32	---	---	---
TOTAL	84307	---	135665	16083	---	25634	1144	---	431.5

SALT RIVER BASIN

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

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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	13	153	5.4	3.5	150	1.4	4.1	57	.63
2	11	162	4.8	3.5	109	1.0	5.1	65	.90
3	11	167	5.0	3.1	100	.84	7.7	71	1.5
4	10	176	4.8	2.2	108	.64	6.7	53	.96
5	21	183	10	1.7	124	.57	8.3	40	.90
6	214	307	177	1.6	114	.49	7.7	43	.89
7	101	311	85	2.4	103	.67	5.7	49	.75
8	43	241	28	2.8	94	.71	4.6	34	.42
9	24	188	12	3.3	88	.78	3.5	36	.34
10	18	157	7.6	2.7	78	.57	3.5	33	.31
11	14	115	4.4	2.0	72	.39	6.0	29	.47
12	11	104	3.1	1.8	62	.30	5.5	32	.48
13	10	113	3.1	1.7	39	.18	4.6	40	.50
14	8.9	117	2.8	1.9	29	.15	5.6	39	.59
15	9.7	113	3.0	1.9	30	.15	8.9	40	.96
16	9.6	103	2.7	1.9	44	.23	15	38	1.5
17	12	107	3.5	1.6	50	.22	14	26	.98
18	8.7	103	2.4	1.4	72	.27	12	27	.87
19	7.3	127	2.5	1.1	78	.23	10	32	.86
20	6.2	107	1.8	.97	49	.13	17	38	1.7
21	4.8	91	1.2	.88	42	.10	17	31	1.4
22	4.4	82	.97	.80	59	.13	14	22	.83
23	3.4	91	.84	.80	65	.14	12	22	.71
24	2.3	96	.60	1.3	64	.22	7.1	27	.52
25	3.1	115	.96	32	60	5.2	6.2	27	.45
26	3.2	143	1.2	14	52	2.0	5.3	21	.30
27	3.1	136	1.1	8.5	53	1.2	6.1	20	.33
28	3.3	120	1.1	7.7	53	1.1	6.4	28	.48
29	3.1	112	.94	5.3	61	.87	5.9	23	.37
30	3.5	120	1.1	4.2	61	.69	5.1	26	.36
31	4.2	143	1.6	4.2	61	.69	---	---	---
TOTAL	601.8	---	380.51	122.75	---	22.26	240.6	---	22.26
YEAR	218970.15		341520.72						

SALT RIVER BASIN

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 north of Paris, 1.4 mi north of State Route 15, and at mile 8.9.

DRAINAGE AREA.--80.0 mi².

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 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 lower.

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

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,430 ft³/s April 2, gage height, 11.40 ft from crest-stage gage. Minimum daily discharge, no flow many days.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.0	2.1	5.8	16	4.9	7.4	1190	616	6.7	1.1	3.4	.00
2	.96	1.5	755	13	6.4	6.8	3670	644	5.7	1.1	3.1	.00
3	.96	1.2	2130	10	7.6	6.6	1410	105	197	.96	1.5	.00
4	.96	1.0	520	8.0	7.8	6.6	292	49	98	.91	.80	.00
5	.88	.90	1370	7.4	8.0	7.2	1030	26	23	.96	.40	.00
6	.88	.80	884	7.0	6.8	6.2	658	16	8.7	.87	.24	.00
7	.80	.72	122	6.4	6.0	140	158	11	6.4	.61	.24	.00
8	.64	.70	71	6.4	5.8	86	83	9.5	5.0	.55	.24	.00
9	.48	.80	49	6.0	6.0	43	328	8.5	4.3	.40	.20	.00
10	.36	.90	62	6.0	7.0	23	236	7.9	3.8	.30	.04	.00
11	.32	1.0	125	5.8	10	17	123	7.2	3.4	.17	.00	.00
12	.32	10	62	5.4	16	14	71	7.0	2.9	.09	.00	.00
13	.32	8.0	38	5.1	21	13	40	7.0	2.7	.00	.00	.00
14	.32	6.2	26	4.3	32	13	32	7.1	2.5	.00	.00	.00
15	.40	4.8	22	3.8	50	11	23	8.1	2.4	.07	.00	.00
16	.64	4.1	15	4.0	52	9.9	18	8.3	2.4	.45	.00	.00
17	.64	4.9	11	4.0	47	9.4	13	7.2	2.9	.48	.00	.00
18	.64	5.2	10	3.8	28	9.0	13	36	2.8	.32	.00	.00
19	.64	5.1	10	3.6	18	8.8	13	216	23	.14	.00	.00
20	.72	5.1	10	3.6	14	95	11	71	8.4	.00	.00	.00
21	.72	5.1	9.4	3.6	12	128	9.7	20	5.6	.00	.00	.00
22	.72	4.9	9.4	3.6	11	59	9.4	667	3.7	.00	.00	.00
23	.72	4.9	8.7	3.6	9.7	29	8.7	297	2.9	.00	.00	.00
24	.72	5.1	208	3.6	9.1	20	7.4	40	2.3	.00	.00	.00
25	.72	5.1	503	3.6	8.4	16	7.0	65	2.0	1.1	.00	.00
26	.80	5.1	164	3.8	7.8	540	6.6	34	1.8	.96	.00	.00
27	.92	5.1	56	3.8	7.6	955	7.0	14	1.7	.27	.00	.00
28	1.1	5.6	250	3.8	7.4	268	38	8.9	1.5	.04	.00	.00
29	1.6	7.0	83	4.0	---	74	37	17	1.5	.00	.00	.00
30	2.0	9.7	33	4.3	---	48	27	29	1.3	.00	.00	.00
31	2.6	---	24	4.3	---	46	---	8.6	---	.00	.00	---
TOTAL	25.50	122.62	7646.3	171.6	427.3	2715.9	9569.8	3068.3	436.3	11.85	10.16	.00
MEAN	.82	4.09	247	5.54	15.3	87.6	319	99.0	14.5	.38	.33	.00
MAX	2.6	10	2130	16	52	955	3670	667	197	1.1	3.4	.00
MIN	.32	.70	5.8	3.6	4.9	6.2	6.6	7.0	1.3	.00	.00	.00
CAL YR 1982	TOTAL		34307.32	MEAN	94.0	MAX	2130	MIN	.32			
WTR YR 1983	TOTAL		24205.63	MEAN	66.3	MAX	3670	MIN	.00			

SALT RIVER BASIN

05503800 CROOKED CREEK NEAR PARIS, MO--Continued

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.23	---	2.55	---	2.34	2.32	2.77	2.81	2.61	2.40	2.30	1.93
2	2.22	---	4.15	---	2.40	2.29	10.79	5.38	2.58	2.40	2.51	1.91
3	2.22	---	8.31	---	2.47	2.28	8.04	3.26	2.57	2.39	2.43	1.89
4	2.22	---	4.10	---	---	2.28	3.45	2.96	3.25	2.38	2.39	1.85
5	2.22	---	7.02	2.43	---	2.29	5.40	2.83	2.83	2.39	2.37	1.85
6	2.23	---	6.76	2.43	---	2.64	5.57	2.76	2.68	2.39	2.35	1.84
7	2.24	---	3.29	2.42	---	3.40	3.49	2.72	2.60	2.38	2.34	1.80
8	2.24	---	2.97	2.42	---	3.09	3.10	2.70	2.57	2.38	2.34	1.78
9	2.24	---	2.85	2.42	---	2.77	3.60	2.66	2.53	2.37	2.33	1.77
10	2.24	---	2.79	2.42	---	2.58	4.36	2.65	2.52	2.36	2.30	1.74
11	2.25	---	3.22	2.42	---	2.50	3.34	2.63	2.50	2.34	2.27	1.75
12	2.25	---	2.79	2.37	---	2.46	3.04	2.62	2.48	2.33	2.23	1.75
13	2.25	---	2.78	2.41	---	2.44	2.92	2.62	2.48	2.32	2.21	1.75
14	2.25	---	2.66	2.37	---	2.44	2.87	2.62	2.47	2.30	2.19	1.73
15	2.26	---	2.63	2.36	---	2.40	2.83	2.65	2.46	2.29	2.16	1.74
16	2.30	---	2.59	2.35	2.87	2.40	2.79	2.66	2.46	2.38	2.12	1.80
17	2.30	2.41	2.51	2.35	2.86	2.37	2.74	2.64	2.46	2.38	2.12	1.80
18	2.30	2.41	2.49	---	2.68	2.35	2.74	2.59	2.48	2.37	2.10	1.80
19	2.30	2.40	2.49	---	2.57	2.34	2.74	3.84	2.59	2.34	2.09	1.79
20	2.31	2.40	2.49	2.27	2.52	2.94	2.71	3.13	2.65	2.32	2.08	1.77
21	2.31	2.40	2.48	2.27	2.48	3.33	2.70	2.80	2.59	2.31	2.05	1.77
22	2.31	2.40	2.47	2.27	2.44	2.88	2.68	5.55	2.51	2.28	2.03	1.77
23	2.31	2.39	2.46	2.27	2.40	2.64	2.67	4.19	2.48	2.26	2.05	1.76
24	2.31	2.40	2.46	2.27	2.39	2.54	2.64	2.93	2.46	2.23	2.05	1.74
25	2.31	2.40	4.57	2.27	2.38	2.50	2.63	3.08	2.44	2.33	2.04	1.74
26	---	2.40	3.54	2.27	2.34	3.83	2.62	2.90	2.44	2.43	2.02	1.72
27	---	2.40	---	2.28	2.33	5.90	2.60	2.75	2.43	2.37	2.00	1.71
28	---	2.42	---	2.28	2.32	3.94	2.92	2.68	2.42	2.33	1.98	1.71
29	---	2.48	---	2.28	---	2.99	2.90	2.68	2.42	2.32	1.95	1.69
30	---	2.63	---	2.31	---	2.79	2.84	2.88	2.41	2.28	1.93	1.68
31	---	---	---	2.31	---	2.76	---	2.67	---	2.28	1.93	---
MEAN	---	---	---	---	---	2.80	3.55	3.03	2.55	2.34	2.17	1.78
MAX	---	---	---	---	---	5.90	10.79	5.55	3.25	2.43	2.51	1.93
MIN	---	---	---	---	---	2.28	2.60	2.59	2.41	2.23	1.93	1.68

SALT RIVER BASIN

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 south of Santa Fe, 1.0 mi upstream from Elm Creek, and at mile 96.2 above mouth of Salt River.

DRAINAGE AREA.--298 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1939 to current year. Published as "near Santa Fe" October 1969 to September 1975.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 613.05 ft 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 upstream at datum 26.04 ft higher.

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

AVERAGE DISCHARGE.--44 years, 195 ft³/s, 8.89 in/yr, 141,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 28,800 ft³/s Oct. 13, 1969, gage height, 28.24 ft, 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 and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 3	1930	11,500	19.03
Dec. 25	0800	5,740	12.92
Apr. 2	0530	10,800	18.41
Apr. 5	1730	3,160	9.35
May 2	UNKNOWN	*14,500	21.25

Minimum daily discharge, 0.71 ft³/s Aug. 25 and 26.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	95	132	102	39	40	3560	6450	34	26	11	1.1
2	12	1660	3990	89	44	39	9430	13900	32	24	8.6	1.1
3	11	688	9580	77	53	39	5460	4600	66	16	5.7	1.1
4	13	122	8020	67	57	38	900	563	193	13	4.5	.92
5	16	72	4710	64	52	39	1900	346	80	11	3.5	.85
6	12	55	3730	62	50	56	2360	233	74	12	3.5	1.1
7	13	47	1000	61	47	384	620	177	64	10	3.5	1.1
8	12	43	482	59	47	270	300	124	43	8.7	3.0	1.1
9	13	40	315	58	45	173	1120	98	39	7.4	2.6	1.1
10	13	37	294	57	53	84	1070	80	35	7.1	2.6	1.1
11	14	36	496	57	62	66	524	71	32	6.5	2.3	1.3
12	17	45	321	52	71	58	249	68	31	6.4	1.8	1.3
13	14	87	163	46	69	55	275	68	30	6.1	1.8	1.1
14	13	80	123	44	72	53	405	145	102	5.5	1.8	1.1
15	11	55	102	42	69	52	223	643	62	4.9	1.8	3.1
16	11	44	96	40	69	49	118	208	47	4.7	1.5	3.6
17	9.8	38	89	37	68	46	79	105	35	4.5	1.1	2.9
18	9.5	36	86	34	63	43	68	74	31	4.5	1.1	5.6
19	11	35	83	32	58	42	63	78	28	4.3	.92	2.9
20	36	34	83	31	54	116	58	136	2500	3.7	.85	2.3
21	63	34	78	31	51	837	55	75	118	3.2	.99	2.2
22	44	33	74	31	49	250	55	1830	62	2.6	.92	1.5
23	28	53	76	31	47	95	54	1000	48	2.4	.92	1.1
24	21	71	643	33	45	77	50	203	36	2.1	.85	1.1
25	16	61	4850	33	45	66	46	110	31	4.8	.71	2.0
26	12	75	1830	33	43	76	44	92	28	4.8	.71	2.2
27	10	219	352	34	42	950	39	65	24	8.3	.78	2.0
28	9.9	1480	1900	34	41	650	1100	56	25	7.2	.78	1.8
29	11	1080	788	34	---	181	712	52	27	4.5	.92	1.3
30	20	279	214	36	---	105	652	45	40	7.5	.99	1.1
31	21	---	143	38	---	97	---	38	---	6.8	1.1	---
TOTAL	530.2	6734	44843	1479	1505	5126	31589	31733	3997	240.5	73.14	52.07
MEAN	17.1	224	1447	47.7	53.8	165	1053	1024	133	7.76	2.36	1.74
MAX	63	1660	9580	102	72	950	9430	13900	2500	26	11	5.6
MIN	9.5	33	74	31	39	38	39	38	24	2.1	.71	.85
CAL YR 1982		TOTAL	167519.3	MEAN	459	MAX	10800	MIN	3.6			
WTR YR 1983		TOTAL	127901.91	MEAN	350	MAX	13900	MIN	.71			

SALT RIVER BASIN

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

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.02	2.30	3.36	3.18	2.50	2.36	3.08	8.99	2.41	5.77	1.90	1.69
2	1.99	6.85	3.58	3.08	2.55	2.35	18.05	17.80	2.36	2.11	1.89	1.69
3	1.98	5.01	18.61	2.98	2.57	2.34	14.94	14.21	2.64	2.00	1.79	1.69
4	1.97	3.31	17.98	2.91	2.61	2.33	5.10	4.55	3.63	1.96	1.75	1.66
5	2.11	2.87	10.98	2.85	2.61	2.33	5.29	4.00	3.07	1.92	1.72	1.65
6	2.01	2.64	10.81	2.82	2.54	2.47	8.91	3.66	2.73	1.93	1.70	1.68
7	2.00	2.55	5.34	2.81	2.46	4.24	4.67	3.46	2.86	1.91	1.72	1.69
8	2.03	2.48	4.35	2.80	2.48	3.73	3.86	3.27	---	1.88	1.69	1.69
9	2.06	2.44	3.92	2.79	2.48	3.56	5.21	3.14	2.48	1.84	1.67	1.70
10	2.01	2.40	3.72	2.78	2.56	3.04	5.74	3.03	2.42	1.83	1.67	1.70
11	2.06	2.39	4.31	2.78	2.69	2.79	4.53	2.96	---	1.81	1.66	1.73
12	2.02	2.46	3.97	2.74	2.85	2.67	3.71	2.91	---	1.81	1.63	1.73
13	2.23	2.92	3.47	2.69	2.80	2.61	3.76	2.89	---	1.80	1.63	1.70
14	2.21	2.98	3.33	2.64	2.76	2.59	4.11	2.97	---	1.79	1.63	1.69
15	2.16	2.66	3.21	2.61	2.73	2.56	3.69	4.99	---	1.77	1.63	1.85
16	2.16	2.50	3.16	2.53	2.73	2.58	3.27	3.61	---	1.76	1.60	1.97
17	2.12	2.42	3.09	2.56	2.72	2.53	3.03	3.20	---	1.75	1.59	1.89
18	2.11	2.37	3.06	2.47	2.66	2.50	2.93	2.99	---	1.75	1.57	2.04
19	2.12	2.36	3.04	2.48	2.60	2.47	2.86	2.93	---	1.74	1.54	1.94
20	2.15	2.34	3.04	2.45	2.56	2.61	2.79	3.54	---	1.74	1.54	1.88
21	2.81	2.34	3.00	2.44	2.52	5.37	2.73	2.93	---	1.71	1.57	1.89
22	2.67	2.33	2.96	2.43	2.49	3.81	2.72	8.40	---	1.67	1.58	1.84
23	2.45	2.43	3.01	2.43	2.47	3.19	2.71	6.04	---	1.66	1.59	1.81
24	2.35	2.86	2.98	2.45	2.45	2.92	2.66	3.61	---	1.64	1.60	1.79
25	2.26	2.73	12.84	2.45	2.43	2.79	2.61	3.20	---	1.76	1.58	1.87
26	2.19	2.64	8.53	2.45	2.42	2.73	2.56	3.11	---	1.77	1.58	1.88
27	2.14	3.57	3.99	2.45	2.39	5.18	2.54	2.91	---	1.84	1.59	1.87
28	2.11	6.58	7.07	2.45	2.37	4.88	5.71	2.77	---	1.84	1.60	1.85
29	2.15	5.99	5.06	2.45	---	3.58	4.97	2.70	---	1.75	1.64	1.82
30	2.28	3.87	3.66	2.47	---	3.21	4.71	2.59	---	1.88	1.64	1.79
31	2.35	---	3.33	2.49	---	3.11	---	2.48	---	1.83	1.68	---
MEAN	2.17	3.12	5.57	2.64	2.57	3.08	4.78	4.51	---	1.94	1.65	1.79
MAX	2.81	6.85	18.61	3.18	2.85	5.37	18.05	17.80	---	5.77	1.90	2.04
MIN	1.97	2.30	2.96	2.43	2.37	2.33	2.54	2.48	---	1.64	1.54	1.65

SALT RIVER BASIN

05506500 MIDDLE FORK SALT RIVER AT PARIS, MO

LOCATION.--Lat 39°29'05", long 91°59'50", in NE¼NW¼ 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 downstream from Wabash Railroad bridge, 12.5 mi upstream from Elk Fork Salt River, and at mile 104.5 above mouth of Salt River.

DRAINAGE AREA.--356 mi².

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 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 upstream at present datum.

REMARKS.--Records fair. 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.--44 years, 246 ft³/s, 9.38 in/yr, 178,200 acre-ft/yr.

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

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 4	0930	8,630	18.13
Apr. 3	1645	*11,000	20.74

Minimum daily discharge, 0.07 ft³/s Aug. 14-15.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	14	222	145	54	43	2090	1040	63	18	5.4	1.6
2	12	18	2630	125	64	41	6530	2380	56	12	3.2	1.6
3	13	45	4760	98	69	39	10000	1400	601	9.8	2.1	1.5
4	14	277	7810	74	63	39	7440	658	358	11	1.7	1.7
5	14	115	6020	84	64	43	4370	288	120	9.7	2.3	5.1
6	14	55	4410	76	55	623	3630	197	79	8.1	3.4	7.8
7	14	36	2950	73	40	1390	2620	137	55	6.8	3.8	5.0
8	14	27	1600	69	39	825	1330	118	42	6.6	2.8	3.5
9	21	23	351	69	42	394	1220	104	35	9.9	1.8	2.1
10	69	19	249	70	52	213	1760	88	29	12	1.3	1.6
11	216	19	515	71	93	137	1420	72	25	11	.76	3.0
12	90	23	543	62	199	106	593	69	22	8.0	.37	3.2
13	45	225	237	61	229	93	344	90	19	6.1	.17	3.1
14	28	442	199	59	261	86	276	689	17	4.5	.07	2.1
15	20	150	128	49	289	80	240	610	17	3.6	.07	6.3
16	15	70	104	39	258	71	197	282	16	3.1	.13	4.7
17	12	47	92	43	208	63	158	160	18	2.5	.30	7.8
18	9.3	38	84	35	197	57	137	153	14	2.5	.37	6.4
19	9.1	35	81	37	141	52	124	1260	426	2.1	.37	3.8
20	12	32	78	33	104	279	114	297	464	1.4	.25	3.9
21	9.4	29	76	30	90	636	100	153	113	1.2	.13	4.2
22	11	31	71	30	78	484	91	924	55	1.2	1.3	5.5
23	23	42	65	31	67	273	86	856	35	1.2	2.0	4.2
24	28	36	163	32	62	197	80	1060	25	1.4	.76	2.5
25	21	32	1200	33	58	158	70	450	19	10	.64	1.8
26	15	41	1200	34	53	1230	60	175	17	5.0	.64	1.8
27	11	44	601	34	49	2610	70	216	20	3.6	.45	1.4
28	13	50	799	34	46	2220	225	138	14	2.8	.30	.81
29	13	170	901	36	---	1520	240	164	38	2.2	.21	.58
30	11	411	543	39	---	523	228	136	24	5.1	.21	.39
31	11	---	210	44	---	327	---	81	---	7.2	1.0	---
TOTAL	819.8	2596	38892	1749	3024	14852	45843	14445	2836	189.6	38.30	98.98
MEAN	26.4	86.5	1255	56.4	108	479	1528	466	94.5	6.12	1.24	3.30
MAX	216	442	7810	145	289	2610	10000	2380	601	18	5.4	7.8
MIN	9.1	14	65	30	39	39	60	69	14	1.2	.07	.39
CAL YR 1982		TOTAL	168050.9	MEAN	460	MAX	7810	MIN	3.9			
WTR YR 1983		TOTAL	125383.68	MEAN	344	MAX	10000	MIN	.07			

SALT RIVER BASIN

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

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.88	2.88	4.12	3.79	3.29	3.22	4.75	4.03	3.37	2.94	2.78	2.68
2	2.88	2.95	8.49	3.72	3.36	3.20	14.26	9.07	3.30	2.87	2.72	2.68
3	2.88	2.93	11.58	3.58	3.42	3.18	19.72	7.00	4.95	2.83	2.68	2.69
4	2.89	4.41	17.84	3.46	3.16	3.18	17.51	5.42	4.52	2.85	2.65	2.69
5	2.89	3.71	15.00	3.50	3.39	3.20	12.10	4.22	3.70	2.84	2.65	2.71
6	2.89	3.33	12.37	3.44	3.33	3.38	11.39	3.94	3.48	2.81	2.73	2.85
7	2.90	3.15	10.31	3.42	3.20	7.02	9.43	3.78	3.31	2.79	2.74	2.81
8	2.89	3.06	7.91	3.40	3.19	5.71	7.16	3.70	3.20	2.78	2.72	2.78
9	2.95	3.01	4.59	3.40	3.21	4.68	5.55	3.64	3.13	2.80	2.68	2.73
10	2.98	2.97	4.15	3.40	3.23	4.09	7.55	3.52	3.08	2.86	2.65	2.71
11	4.16	2.95	4.70	3.42	3.56	3.82	6.97	3.44	3.03	2.84	2.61	2.77
12	3.58	3.02	5.14	3.38	4.03	3.68	5.15	3.42	3.00	2.80	2.56	2.77
13	3.26	2.98	4.21	3.36	4.22	3.59	4.49	3.44	2.96	2.78	2.54	2.77
14	3.08	4.88	4.12	3.33	4.36	3.54	4.28	5.12	2.93	2.74	2.50	2.73
15	2.97	3.86	3.84	3.28	4.41	3.51	4.17	5.25	2.92	2.73	2.49	2.76
16	2.90	3.43	3.71	3.19	4.33	3.45	4.02	4.31	2.91	2.71	2.50	2.83
17	2.88	3.25	3.64	3.17	4.15	3.40	3.88	3.87	2.94	2.69	2.55	2.88
18	2.84	3.16	3.59	3.13	4.12	3.35	3.80	3.65	2.88	2.69	2.57	2.87
19	2.82	3.12	3.57	3.16	3.89	3.31	3.73	7.15	3.69	2.67	2.57	2.81
20	2.85	3.10	3.55	3.12	3.67	3.88	3.69	4.37	5.00	2.64	2.56	2.74
21	2.82	3.07	3.54	3.09	3.58	5.17	3.62	3.83	3.69	2.62	2.54	2.79
22	2.85	3.05	3.51	3.09	3.50	4.91	3.57	5.82	3.31	2.62	2.53	2.83
23	2.98	3.19	3.47	3.09	3.43	4.31	3.55	5.31	3.15	2.63	2.71	2.82
24	3.09	3.14	3.44	3.11	3.38	4.02	3.52	6.08	3.02	2.60	2.62	2.77
25	3.00	3.09	6.00	3.12	3.35	3.86	3.46	4.88	2.96	2.83	2.61	2.73
26	2.91	3.16	6.46	3.12	3.31	5.42	3.40	3.89	2.91	2.77	2.60	2.73
27	2.87	3.21	5.14	3.14	3.28	9.39	3.37	4.12	2.99	2.73	2.59	2.71
28	2.83	3.25	5.51	3.11	3.23	8.45	4.14	3.77	2.89	2.71	2.57	2.68
29	2.88	3.35	5.76	3.15	---	7.27	4.05	3.70	3.22	2.69	2.55	2.66
30	2.85	4.70	5.17	3.19	---	4.98	4.12	3.79	3.02	2.73	2.52	2.63
31	2.85	---	4.07	3.23	---	4.40	---	3.49	---	2.79	2.58	---
MEAN	2.98	3.31	6.08	3.29	3.59	4.47	6.35	4.55	3.32	2.75	2.61	2.75
MAX	4.16	4.88	17.84	3.79	4.41	9.39	19.72	9.07	5.00	2.94	2.78	2.88
MIN	2.82	2.88	3.44	3.09	3.16	3.18	3.37	3.42	2.88	2.60	2.49	2.63
WTR YR 1983		MEAN	3.84	MAX	19.72	MIN	2.49					

SALT RIVER BASIN
05506500 MIDDLE FORK SALT RIVER AT PARIS, MO

WATER-QUALITY RECORDS

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 June 9, 1982; minimum daily, 0.01 tons on many days.

EXTREMES FOR CURRENT YEAR.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 2,360 mg/L December 2; minimum daily mean, 6 mg/L January 12.

SUSPENDED-SEDIMENT LOADS: Maximum daily, 17,900 tons December 3; minimum daily, 0.01 tons August 21, 28, and 29.

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL

	BED MAT. SIEVE DIAM. % FINER THAN	BED MAT. SIEVE DIAM. % FINER THAN	BED MAT. SIEVE DIAM. % FINER THAN	BED MAT. SIEVE DIAM. % FINER THAN	BED MAT. SIEVE DIAM. % FINER THAN	BED MAT. SIEVE DIAM. % FINER THAN	BED MAT. SIEVE DIAM. % FINER THAN	BED MAT. SIEVE DIAM. % FINER THAN	BED MAT. SIEVE DIAM. % FINER THAN	BED MAT. SIEVE DIAM. % 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)
AUG , 1983										
16...	1	1	3	24	60	71	78	86	97	100

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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	12	63	2.0	14	65	2.5	222	335	201
2	12	71	2.3	18	60	2.9	2630	2360	16800
3	13	72	2.5	45	74	9.0	4760	1390	17900
4	14	100	3.8	277	127	95	7810	555	11700
5	14	131	5.0	115	137	43	6020	344	5590
6	14	134	5.1	55	134	20	4410	251	2990
7	14	128	4.8	36	125	12	2950	233	1860
8	14	130	4.9	27	118	8.6	1600	228	985
9	21	98	5.6	23	112	7.0	351	186	176
10	69	139	26	19	98	5.0	249	140	94
11	216	154	90	19	116	6.0	515	133	185
12	90	139	34	23	121	7.5	543	246	361
13	45	167	20	225	137	83	237	269	172
14	28	146	11	442	253	302	199	113	61
15	20	111	6.0	150	232	94	128	128	44
16	15	125	5.1	70	191	36	104	122	34
17	12	91	3.0	47	159	20	92	98	24
18	9.3	95	2.4	38	139	14	84	124	28
19	9.1	70	1.7	35	119	11	81	105	23
20	12	94	3.1	32	106	9.2	78	91	19
21	9.4	79	2.0	29	117	9.2	76	104	21
22	11	81	2.4	31	147	12	71	125	24
23	23	77	4.8	42	157	18	65	104	18
24	28	63	4.8	36	139	14	163	139	61
25	21	77	4.4	32	94	8.1	1200	1600	5180
26	15	74	3.0	41	97	11	1200	1000	3240
27	11	70	2.1	44	102	12	601	716	1160
28	13	80	2.8	50	99	13	799	462	997
29	13	62	2.2	170	91	42	901	767	1870
30	11	84	2.5	411	175	194	543	727	1070
31	11	73	2.2	---	---	---	210	512	290
TOTAL	819.8	---	271.5	2596	---	1121.0	38892	---	73178

SALT RIVER BASIN

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

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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	145	325	127	54	20	2.9	43	82	9.5
2	125	284	96	64	22	3.8	41	85	9.4
3	98	252	67	69	134	25	39	106	11
4	74	222	44	63	115	20	39	105	11
5	84	190	43	64	23	4.0	43	117	14
6	76	142	29	55	12	1.8	623	364	612
7	73	42	8.3	40	12	1.3	1390	1010	3790
8	69	18	3.4	39	49	5.2	825	441	982
9	69	11	2.1	42	176	20	394	234	249
10	70	9	1.7	52	194	27	213	161	93
11	71	8	1.5	93	133	33	137	135	50
12	62	9	1.5	199	137	74	106	150	43
13	61	6	.99	229	147	91	93	134	34
14	59	11	1.8	261	179	126	86	113	26
15	49	15	2.0	289	163	127	80	99	21
16	39	22	2.3	258	160	111	71	88	17
17	43	13	1.5	208	157	88	63	101	17
18	35	18	1.7	197	161	86	57	111	17
19	37	16	1.6	141	151	57	52	97	14
20	33	11	.98	104	143	40	279	115	87
21	30	8	.65	90	133	32	636	172	295
22	30	15	1.2	78	129	27	484	161	210
23	31	13	1.1	67	140	25	273	129	95
24	32	13	1.1	62	137	23	197	97	52
25	33	17	1.5	58	131	21	158	115	49
26	34	23	2.1	53	125	18	1230	824	2740
27	34	22	2.0	49	123	16	2610	1240	8740
28	34	21	1.9	46	92	11	2220	483	2900
29	36	27	2.6	---	---	---	1520	322	1320
30	39	18	1.9	---	---	---	523	193	273
31	44	18	2.1	---	---	---	327	162	143
TOTAL	1749	---	455.52	3024	---	1117.0	14852	---	22923.9
APRIL			MAY			JUNE			
1	2090	949	5360	1040	242	680	63	115	20
2	6530	970	17100	2380	778	5000	56	114	17
3	10000	442	11900	1400	361	1360	601	230	373
4	7440	360	7230	658	253	449	358	295	285
5	4370	324	3820	288	229	178	120	246	80
6	3630	288	2820	197	111	59	79	124	26
7	2620	222	1570	137	96	36	55	125	19
8	1330	211	758	118	85	27	42	113	13
9	1220	193	636	104	72	20	35	129	12
10	1760	287	1360	88	90	21	29	122	9.6
11	1420	208	797	72	85	17	25	123	8.3
12	593	112	179	69	67	12	22	105	6.2
13	344	94	87	90	66	16	19	104	5.3
14	276	106	79	689	292	543	17	114	5.2
15	240	74	48	610	307	506	17	117	5.4
16	197	66	35	282	134	102	16	131	5.7
17	158	60	26	160	107	46	18	120	5.8
18	137	62	23	153	100	41	14	128	4.8
19	124	62	21	1260	924	3140	426	244	281
20	114	48	15	297	347	278	464	576	722
21	100	54	15	153	139	57	113	304	93
22	91	59	15	924	233	581	55	215	32
23	86	74	17	856	355	820	35	178	17
24	80	72	16	1060	535	1530	25	139	9.4
25	70	55	10	450	227	276	19	129	6.6
26	60	61	9.9	175	146	69	17	133	6.1
27	70	67	13	216	210	122	20	110	5.9
28	225	82	50	138	98	37	14	102	3.9
29	240	85	55	164	98	43	38	123	13
30	228	80	49	136	123	45	24	129	8.4
31	---	---	---	81	114	25	---	---	---
TOTAL	45843	---	54113.9	14445	---	16136	2836	---	2099.6

SALT RIVER BASIN

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

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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	18	102	5.0	5.4	98	1.4	1.6	31	.13
2	12	97	3.1	3.2	96	.83	1.6	26	.11
3	9.8	105	2.8	2.1	93	.53	1.5	37	.15
4	11	94	2.8	1.7	97	.45	1.7	31	.14
5	9.7	102	2.7	2.3	93	.58	5.1	20	.28
6	8.1	112	2.5	3.4	85	.78	7.8	22	.46
7	6.8	110	2.0	3.8	100	1.0	5.0	33	.45
8	6.6	99	1.8	2.8	100	.76	3.5	29	.27
9	9.9	86	2.3	1.8	104	.51	2.1	20	.11
10	12	94	3.1	1.3	103	.36	1.6	33	.14
11	11	111	3.3	.76	112	.23	3.0	36	.29
12	8.0	105	2.3	.37	133	.13	3.2	32	.28
13	6.1	132	2.2	.17	118	.05	3.1	52	.44
14	4.5	141	1.7	.07	115	.02	2.1	51	.29
15	3.6	124	1.2	.07	115	.02	6.3	45	.77
16	3.1	142	1.2	.13	47	.02	4.7	25	.32
17	2.5	99	.67	.30	32	.03	7.8	55	1.2
18	2.5	115	.78	.37	28	.03	6.4	50	.86
19	2.1	112	.64	.37	32	.03	3.8	35	.36
20	1.4	142	.54	.25	35	.02	3.9	46	.48
21	1.2	125	.40	.13	24	.01	4.2	63	.71
22	1.2	108	.35	1.3	30	.11	5.5	54	.80
23	1.2	116	.38	2.0	19	.10	4.2	48	.54
24	1.4	121	.46	.76	21	.04	2.5	41	.28
25	10	131	3.5	.64	28	.05	1.8	28	.14
26	5.0	115	1.6	.64	37	.06	1.8	22	.11
27	3.6	142	1.4	.45	17	.02	1.4	19	.07
28	2.8	116	.88	.30	13	.01	.81	15	.03
29	2.2	105	.62	.21	26	.01	.58	31	.05
30	5.1	121	1.7	.21	43	.02	.39	37	.04
31	7.2	105	2.0	1.0	40	.11	---	---	---
TOTAL	189.6	---	55.92	38.30	---	8.32	98.98	---	10.30
YEAR	125383.68		171490.96						

SALT RIVER BASIN

05506800 ELK FORK SALT RIVER NEAR MADISON, MO

LOCATION.--Lat 39°26'05", long 92°10'04", in SE¼NE¼SW¼ sec.29, T.54 N., R.11 W., Monroe County, Hydrologic Unit 070110006, on downstream side of highway, 25 ft to the left of bridge on State Highway AA, 500 ft downstream from Allen Creek, 3.5 mi southeast of Madison, and at mile 29.8.

DRAINAGE AREA.--200 mi².

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 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.--15 years, 172 ft³/s, 11.68 in/yr, 124,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 42,300 ft³/s Apr. 21, 1973, gage height, 33.4 ft, 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, from floodmark, discharge, 31,200 ft³/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 and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 3	0900	8,270	21.27	Apr. 5	1330	3,290	14.28
Dec. 5	2230	3,600	14.89	May 2	0900	4,860	17.08
Mar. 26	2130	3,220	14.13	June 19	1100	3,750	15.20
Apr. 2	1615	*13,800	25.47				

Minimum daily discharge, 0.15 ft³/s Aug. 21.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.1	5.2	23	53	19	12	2580	1600	28	28	4.5	9.0
2	6.2	5.0	3340	47	21	11	11400	3510	27	17	3.3	4.7
3	6.6	30	7320	41	22	11	4480	344	772	12	2.0	2.9
4	6.4	13	1970	33	20	10	690	138	434	11	1.5	1.7
5	5.8	7.6	3180	30	17	9.0	2370	88	94	13	1.3	1.1
6	5.5	5.9	2150	30	17	1550	1720	69	58	11	.92	.92
7	5.3	4.3	331	30	16	1020	346	62	42	8.4	.77	.77
8	5.1	3.1	153	30	15	391	169	58	33	6.4	.56	.41
9	5.1	3.0	93	29	15	150	1290	49	29	5.5	.48	.28
10	5.7	3.3	96	29	19	85	836	42	26	4.8	.48	.24
11	6.0	4.6	367	28	29	64	374	38	21	4.3	.41	.92
12	3.9	6.3	123	23	39	57	158	38	16	3.9	.28	25
13	3.8	8.1	78	22	40	53	109	165	14	3.7	.34	16
14	3.7	16	56	20	40	49	99	322	15	3.1	.34	5.7
15	3.5	14	54	17	41	45	81	257	15	3.1	.34	4.3
16	3.9	11	48	14	44	41	64	88	16	13	.24	4.0
17	3.0	8.5	44	15	42	35	54	57	15	5.7	.21	12
18	2.5	7.2	42	13	37	30	50	403	11	3.9	.21	9.3
19	2.8	6.6	42	12	32	28	46	2110	2230	3.2	.18	4.3
20	3.3	6.5	41	12	28	223	41	499	2000	2.5	.18	2.9
21	5.1	6.1	36	12	25	530	37	148	164	2.4	.15	1.7
22	5.7	5.6	33	12	23	176	35	985	78	2.1	.41	1.6
23	4.7	5.9	33	13	22	106	36	276	51	1.6	.77	3.6
24	4.5	5.9	169	13	20	87	33	102	36	1.5	.41	2.7
25	4.5	5.9	1620	13	18	63	28	76	30	2.0	1.7	1.9
26	4.1	6.2	374	13	14	1820	31	59	25	2.2	1.7	1.5
27	4.1	6.3	155	13	14	2790	30	53	21	3.6	1.1	.99
28	3.9	13	875	14	12	615	731	55	30	2.2	.92	.77
29	3.9	85	260	16	---	181	285	48	85	1.6	.77	.63
30	5.0	42	81	18	---	126	230	37	45	2.7	.92	.48
31	6.4	---	60	18	---	122	---	31	---	2.2	1.1	---
TOTAL	146.1	351.1	23247	683	701	10490.0	28433	11807	6461	187.6	28.49	122.31
MEAN	4.71	11.7	750	22.0	25.0	338	948	381	215	6.05	.92	4.08
MAX	6.6	85	7320	53	44	2790	11400	3510	2230	28	4.5	25
MIN	2.5	3.0	23	12	12	9.0	28	31	11	1.5	.15	.24
CAL YR 1982		TOTAL	102339.7	MEAN	280	MAX	9350	MIN	2.5			
WTR YR 1983		TOTAL	82657.60	MEAN	226	MAX	11400	MIN	.15			

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

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.62	3.72	4.24	4.30	3.83	3.75	4.95	5.58	3.87	3.77	3.30	3.54
2	3.61	3.71	11.93	4.22	3.86	3.75	24.18	17.01	3.82	3.61	3.23	3.33
3	3.61	4.52	21.11	4.12	3.91	3.75	19.12	6.24	6.17	3.51	3.17	3.24
4	3.62	4.00	10.77	4.02	3.89	3.74	6.47	5.25	6.90	3.51	3.15	3.17
5	3.60	3.84	14.75	3.97	3.79	3.76	11.11	4.81	4.92	3.48	3.12	3.11
6	3.58	3.75	13.58	3.96	3.78	10.51	12.32	4.57	4.42	3.55	3.10	3.09
7	3.57	3.69	6.25	3.96	3.77	9.24	6.34	4.47	4.09	3.47	3.07	3.07
8	3.59	3.62	5.33	3.96	3.75	6.62	5.40	4.43	3.90	3.40	3.06	3.02
9	3.62	3.62	4.83	3.95	3.75	5.31	8.86	4.27	3.86	3.36	3.06	3.01
10	3.63	3.62	4.64	3.95	3.79	4.76	8.25	4.16	3.76	3.32	3.06	2.99
11	3.74	3.70	6.58	3.96	3.97	4.50	6.52	4.09	3.68	3.30	3.06	3.11
12	3.67	3.76	5.08	3.88	4.10	4.36	5.33	4.07	3.67	3.28	3.06	3.74
13	3.65	3.74	4.79	3.86	4.14	4.28	4.96	4.11	3.61	3.27	3.06	3.61
14	3.65	4.01	4.35	3.84	4.12	4.23	4.89	6.27	3.60	3.24	3.06	3.39
15	3.63	4.05	4.28	3.80	4.12	4.17	4.74	6.15	3.59	3.24	3.06	3.30
16	3.61	3.92	4.24	3.76	4.16	4.11	4.51	4.84	3.62	3.65	3.05	3.26
17	3.62	3.86	4.17	3.76	4.15	4.05	4.35	4.42	3.63	3.37	3.04	3.51
18	3.57	3.82	4.15	3.73	4.08	3.99	4.28	4.21	3.55	3.29	3.02	3.49
19	3.58	3.80	4.15	3.70	4.02	3.96	4.20	11.70	12.80	3.24	3.00	3.33
20	3.62	3.79	4.12	3.69	3.97	4.85	4.13	6.74	13.73	3.21	3.00	3.21
21	3.60	3.78	4.06	3.69	3.92	7.38	4.08	5.29	5.43	3.20	3.00	3.18
22	3.76	3.75	4.01	3.70	3.90	5.49	4.05	9.30	4.70	3.19	3.00	3.12
23	3.70	3.77	4.01	3.71	3.88	4.93	4.05	6.03	4.29	3.16	3.08	3.26
24	3.69	3.77	4.01	3.72	3.85	4.81	4.03	4.97	4.06	3.12	3.04	3.22
25	3.69	3.77	10.89	3.72	3.81	4.51	3.98	4.72	3.91	3.15	3.17	3.17
26	3.67	3.78	6.44	3.72	3.78	9.73	3.93	4.47	3.80	3.16	3.17	3.14
27	3.67	3.78	5.13	3.73	3.77	14.01	3.91	4.21	3.73	3.26	3.11	3.10
28	3.67	3.94	8.19	3.72	3.76	7.47	7.73	4.35	3.93	3.16	3.09	3.06
29	3.71	5.11	5.92	3.77	---	5.52	5.92	4.27	4.47	3.16	3.08	3.06
30	3.65	4.56	4.73	3.80	---	5.10	5.84	4.05	4.14	3.29	3.06	3.04
31	3.75	---	4.45	3.82	---	5.09	---	3.94	---	3.17	3.11	---
MEAN	3.64	3.88	6.62	3.85	3.91	5.54	6.75	5.58	4.79	3.33	3.09	3.23
MAX	3.76	5.11	21.11	4.30	4.16	14.01	24.18	17.01	13.73	3.77	3.30	3.74
MIN	3.57	3.62	4.01	3.69	3.75	3.74	3.91	3.94	3.55	3.12	3.00	2.99
WTR YR 1983		MEAN	4.52	MAX	24.18	MIN	2.99					

SALT RIVER BASIN

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 west of Perry and at mile 11.9.

DRAINAGE AREA.--104 mi².

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

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 625.00 ft National Geodetic Vertical Datum of 1929. Prior to November 1967 nonrecording gage at same site and datum.

REMARKS.--Records good except for periods of no record which are poor. 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 Oct. 12, 1969 determined by Corps of Engineers: no flow on many days each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge 9,360 ft³/s May 1 at 2045, gage height, 21.30 ft, no flow on many days.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.5	26	50	23	5.2	5.1	150	2960	5.6	.60	.71	.00
2	1.6	323	1970	20	5.6	4.8	4800	1970	5.8	.56	.32	.00
3	.52	85	3290	16	7.0	4.7	300	154	273	.40	.16	.00
4	.60	30	1230	13	14	4.3	200	64	91	.44	.10	.00
5	.77	16	1340	12	9.3	4.7	350	40	27	.42	.12	.00
6	.86	10	624	12	7.9	10	380	30	14	.41	.25	.00
7	3.5	7.6	120	12	6.7	72	100	22	9.3	.39	.24	.00
8	5.3	5.6	58	11	5.8	45	50	17	7.0	.29	2.2	.00
9	7.0	4.3	36	11	6.1	25	220	14	5.3	.20	.60	.00
10	3.5	3.8	30	11	12	16	240	12	3.8	.20	.32	.00
11	3.2	4.3	50	11	39	13	88	10	2.8	.17	.16	.00
12	3.2	20	35	9.1	40	11	54	10	2.7	.15	.10	.00
13	3.0	41	20	9.0	32	10	204	28	2.1	.11	.04	.00
14	2.2	21	18	8.5	33	9.3	168	46	1.8	20	.00	.00
15	1.7	12	16	7.6	36	9.2	49	35	1.6	16	.00	.28
16	1.3	9.0	14	6.7	36	9.0	25	23	1.8	1.5	.00	.06
17	1.1	6.7	13	5.8	30	8.7	19	13	1.8	.52	.00	.00
18	1.0	5.8	13	4.7	20	8.3	18	10	1.1	.34	.00	.00
19	2.0	6.1	12	4.0	14	8.0	16	9.6	1.0	.25	.00	.00
20	18	6.4	11	3.8	12	24	12	7.8	90	.16	.00	.00
21	16	5.6	11	3.5	9.6	154	11	7.4	4.0	.13	.00	.00
22	11	5.0	11	3.5	8.9	45	10	1070	2.3	.07	.00	.00
23	7.0	57	10	3.8	8.5	16	10	166	1.8	.06	.00	.00
24	4.0	46	1050	4.0	8.2	14	9.3	46	1.4	.03	.00	.00
25	2.7	21	2420	4.3	7.5	13	8.7	34	1.2	.08	.00	.00
26	2.0	51	208	4.4	6.5	16	8.2	18	1.0	.05	.00	.00
27	1.3	125	115	4.4	5.8	163	8.5	12	.90	.02	.00	.00
28	2.1	918	755	4.5	5.4	95	826	11	1.1	.00	.00	.00
29	4.0	252	101	4.6	---	35	104	9.3	1.6	.00	.00	.00
30	4.3	88	39	4.8	---	20	278	7.3	.77	7.6	.00	.00
31	2.8	---	28	5.0	---	17	---	6.4	---	3.1	.00	---
TOTAL	120.05	2212.2	13698	258.0	432.0	890.1	8716.7	6862.8	564.57	54.25	30.07	.34
MEAN	3.87	73.7	442	8.32	15.4	28.7	291	221	18.8	1.75	.97	.01
MAX	18	918	3290	23	40	163	4800	2960	273	20	25	.28
MIN	.52	3.8	10	3.5	5.2	4.3	8.2	6.4	.77	.00	.00	.00
CAL YR 1982	TOTAL		50616.81	MEAN		139	MAX	3290	MIN		.44	
WTR YR 1983	TOTAL		33839.08	MEAN		92.7	MAX	4800	MIN		.00	

05507600 LICK CREEK AT PERRY, MO--Continued

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.17	5.37	6.18	5.83	---	5.39	---	10.07	5.40	5.10	5.11	4.77
2	5.23	5.76	7.30	5.77	---	5.38	---	13.59	5.35	5.09	5.03	4.77
3	5.10	6.51	15.28	5.71	---	5.38	---	6.82	6.21	5.06	4.97	4.76
4	5.09	5.99	9.98	5.66	---	5.37	---	6.23	6.45	5.06	4.94	4.75
5	5.14	5.74	10.07	5.63	5.54	---	---	5.99	5.88	5.06	4.93	4.74
6	5.15	5.59	8.88	5.61	5.50	---	---	5.87	5.66	5.05	4.97	4.72
7	5.20	5.49	6.71	5.61	5.46	---	---	5.79	5.52	5.05	5.76	4.72
8	5.36	5.42	6.27	5.61	5.43	---	---	5.72	5.44	5.03	5.26	4.72
9	5.49	5.38	---	5.59	5.41	---	6.68	5.65	5.39	5.00	5.10	4.72
10	5.35	5.36	---	5.59	5.58	---	7.37	5.60	5.34	5.00	5.03	4.71
11	5.31	5.35	---	5.60	6.02	---	6.52	5.56	5.29	4.99	4.99	4.77
12	5.32	5.73	---	5.52	6.08	---	6.11	5.55	5.28	4.98	4.94	4.78
13	5.34	6.21	---	5.53	5.97	---	6.91	5.53	5.25	4.96	4.92	4.78
14	5.28	5.87	---	5.51	5.97	---	7.08	5.80	5.22	4.95	4.89	4.76
15	5.24	5.65	---	5.48	6.00	---	6.18	5.93	5.21	5.67	4.88	4.77
16	5.21	5.55	---	5.44	6.01	---	5.92	5.83	5.19	5.21	4.87	4.93
17	5.18	5.47	5.70	5.42	5.94	---	5.81	5.64	5.22	5.09	4.86	4.87
18	5.17	5.42	5.69	5.40	5.79	---	5.81	5.55	5.17	5.04	4.84	4.83
19	5.15	5.43	5.69	---	5.69	---	5.75	5.54	---	5.00	4.82	4.82
20	5.76	5.44	5.65	---	5.63	---	5.69	5.49	---	4.97	4.81	4.79
21	5.88	5.43	5.63	---	5.56	---	5.63	5.46	---	4.96	4.80	4.88
22	5.62	5.38	5.61	---	5.54	---	5.60	9.89	---	4.93	4.78	4.86
23	5.48	6.42	5.60	---	5.51	---	5.61	6.93	---	4.92	4.78	4.84
24	5.37	6.17	5.82	---	5.50	---	5.58	6.08	---	4.91	4.78	4.83
25	5.32	5.89	14.68	---	5.48	---	5.55	5.97	---	4.94	4.77	4.82
26	5.25	5.75	7.13	---	5.45	---	5.51	5.73	---	4.92	4.77	4.81
27	5.21	6.82	6.37	---	5.42	---	5.48	5.61	---	4.90	4.76	4.81
28	5.18	9.97	9.56	---	5.41	---	10.37	5.58	---	4.89	4.75	4.81
29	5.35	7.34	6.60	---	---	---	6.60	5.53	---	4.88	4.74	4.81
30	5.38	6.50	6.07	---	---	---	8.35	5.46	---	5.13	4.73	4.81
31	5.32	---	5.91	---	---	---	---	5.42	---	5.31	4.77	---
MEAN	5.31	5.95	---	---	---	---	---	6.30	---	5.03	4.91	4.79
MAX	5.88	9.97	---	---	---	---	---	13.59	---	5.67	5.76	4.93
MIN	5.09	5.35	---	---	---	---	---	5.42	---	4.88	4.73	4.71

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 northwest of Center, at mile 53.1.

DRAINAGE AREA.--2,350 mi², 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 National Geodetic Vertical Datum of 1929. Prior to Oct. 1979 nonrecording gage at same site and datum.

REMARKS.--Records fair. Several observations of water temperature and specific conductance were made during the year. Flow regulated by Clarence Cannon and Mark Twain Lake since September 1979.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge 27,700 ft³/s Dec. 6, gage height, 23.29 ft; minimum daily discharge 13.0 ft³/s Sept. 8, 9, and 10.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

MEAN VALUES												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	140	118	1870	1500	315	304	5840	6550	486	163	39	28
2	130	1210	9180	1200	400	289	19400	16900	393	150	37	24
3	125	2540	21300	1000	530	273	23600	19700	788	118	36	24
4	118	2010	24800	800	450	261	26000	18700	3400	108	38	18
5	108	1100	26800	660	520	264	27000	13200	1030	93	44	15
6	103	663	27500	620	460	328	27200	6510	828	80	59	14
7	110	433	27500	590	410	3120	27000	1910	569	104	110	15
8	100	322	26800	565	380	4890	25600	1060	455	203	123	13
9	103	255	25600	550	375	3130	24700	892	355	154	80	13
10	105	214	23600	520	400	1680	23000	763	295	120	53	13
11	103	198	20700	490	600	2330	21500	650	254	99	40	15
12	355	224	16600	470	1000	1930	18600	587	211	84	54	16
13	338	906	9310	450	1400	1290	13200	556	186	74	28	16
14	233	2310	2680	425	1650	478	5050	684	166	67	26	17
15	175	1320	1230	400	2000	768	2170	2470	148	73	26	24
16	137	691	948	375	2250	503	1590	2350	135	86	26	26
17	111	463	792	350	1790	289	1250	1250	128	61	26	17
18	94	357	702	325	1660	420	1070	882	123	47	20	20
19	87	298	635	310	1220	605	912	1700	135	43	15	30
20	92	264	602	280	927	675	813	3960	5120	42	20	36
21	117	242	584	270	763	2980	739	1710	5110	41	28	40
22	153	231	565	260	654	3340	664	3200	1030	39	19	36
23	254	236	527	250	556	1890	610	6860	630	35	19	36
24	207	301	1050	240	486	1200	565	3950	374	30	20	40
25	154	350	4000	230	437	932	506	2520	301	31	18	38
26	133	347	11800	240	393	1040	460	1510	222	29	16	38
27	117	509	9700	250	359	8300	434	991	191	25	17	38
28	106	1870	8000	265	328	13000	2550	872	166	27	18	36
29	108	3130	5940	255	---	11800	4150	719	180	30	30	34
30	105	2410	7260	230	---	7310	3220	630	183	39	40	30
31	107	---	2500	255	---	2530	---	615	---	37	34	---
TOTAL	4428	25522	321075	14625	22713	78149	309393	124851	23592	2332	1159	760
MEAN	143	851	10360	472	811	2521	10310	4027	786	75.2	37.4	25.3
MAX	355	3130	27500	1500	2250	13000	27200	19700	5120	203	123	40
MIN	87	118	527	230	315	261	434	556	123	25	15	13
CAL YR 1982	TOTAL		1212263	MEAN		3321	MAX	27500	MIN		87	
WTR YR 1983	TOTAL		928599	MEAN		2544	MAX	27500	MIN		13	

SALT RIVER BASIN

05507800 SALT RIVER NEAR CENTER, MO--Continued

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.90	3.80	7.42	8.98	---	4.39	7.02	8.24	5.03	4.03	3.47	3.33
2	3.84	5.34	6.85	8.98	---	4.35	19.02	17.89	4.76	4.05	3.48	3.30
3	3.83	7.75	19.91	8.98	---	4.32	21.24	19.53	4.68	3.91	3.46	3.30
4	3.81	7.67	21.82	8.98	---	4.28	22.46	19.40	9.35	3.86	3.45	3.27
5	3.78	6.24	22.83	8.98	---	4.27	22.81	17.35	8.30	3.79	3.46	3.22
6	3.74	5.30	23.18	8.99	---	4.38	23.12	12.53	5.87	3.74	3.48	3.18
7	3.76	4.77	23.21	8.99	---	7.75	23.05	7.31	5.21	3.69	3.79	3.19
8	3.74	4.49	22.99	8.99	---	10.66	22.68	6.18	5.14	4.18	3.93	3.18
9	3.74	4.30	22.56	8.99	---	9.01	22.11	5.86	4.69	3.99	3.77	3.15
10	3.74	4.17	21.68	8.99	---	7.10	21.40	5.61	4.47	3.85	3.56	3.14
11	3.74	4.12	20.40	8.99	---	6.10	20.62	5.31	4.34	3.77	3.44	3.20
12	4.61	4.19	18.51	9.09	---	5.51	19.52	5.23	4.23	3.69	3.40	3.21
13	4.62	4.26	14.81	9.08	---	5.18	16.84	5.17	4.14	3.65	3.36	3.21
14	4.26	7.97	8.63	9.05	---	5.01	11.28	5.27	4.07	3.62	3.32	3.22
15	4.06	6.64	6.55	9.04	---	4.93	7.75	8.09	4.02	3.60	3.32	3.23
16	3.94	5.37	6.11	9.04	7.75	4.88	6.87	8.20	3.96	3.72	3.32	3.35
17	3.85	4.85	5.82	9.04	7.14	4.79	6.49	6.55	3.93	3.60	3.32	3.22
18	3.79	4.55	5.62	9.04	7.01	3.62	6.19	5.84	3.89	3.54	3.30	3.22
19	3.75	4.40	5.46	9.04	6.34	4.76	5.86	5.58	3.95	3.50	3.22	3.32
20	3.76	4.30	5.36	9.04	5.78	4.63	5.67	9.75	10.65	3.50	3.20	3.37
21	3.83	4.24	5.33	---	5.43	8.21	5.52	7.31	11.43	3.49	3.33	3.42
22	3.93	4.20	5.28	---	5.22	9.19	5.38	6.97	6.40	3.48	3.26	3.40
23	4.30	4.23	5.19	---	5.01	7.40	5.27	12.35	4.31	3.47	3.26	3.40
24	4.16	4.34	5.17	---	4.82	6.29	5.18	9.91	4.75	3.44	3.27	3.42
25	3.99	4.53	9.09	---	4.72	5.79	5.06	8.15	4.48	3.44	3.26	3.41
26	3.92	4.46	9.06	---	4.62	5.52	4.96	6.97	4.28	3.43	3.23	3.41
27	3.86	4.74	9.02	---	4.53	12.49	4.85	6.06	4.17	3.41	3.21	3.41
28	3.82	5.93	8.98	---	4.46	15.30	6.54	5.81	4.07	3.41	3.25	3.40
29	3.84	8.91	9.06	---	---	15.50	9.92	5.51	4.04	3.43	3.33	3.38
30	3.82	7.90	9.03	---	---	13.19	8.92	5.32	4.17	3.49	3.42	3.36
31	3.82	---	8.97	---	---	8.24	---	5.35	---	3.47	3.40	---
MEAN	3.92	5.27	12.06	---	---	7.00	12.45	8.54	5.23	3.65	3.40	3.29
MAX	4.62	8.91	23.21	---	---	15.50	23.12	19.53	11.43	4.18	3.93	3.42
MIN	3.74	3.80	5.17	---	---	3.62	4.85	5.17	3.89	3.41	3.20	3.14

SALT RIVER BASIN

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 upstream from upstream bridge on dual U.S. Highway 61, 2.0 mi north of New London, 8.0 mi upstream from Spencer Creek and at mile 35.5.

DRAINAGE AREA.--2,480 mi², approximately.

WATER-DISCHARGE RECORDS

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

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

REMARKS.--Records good. Flow regulated by Clarence Cannon and Mark Twain Lake since September 1979.

AVERAGE DISCHARGE.--61 years. 1,691 ft³/s, 9.26 in/yr, 1,225,000 acre-ft/yr.

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

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 14, 1958, reached a stage of 27.6 ft, present datum, based on comparison of June 1928 flood crest at stone marker 1.0 mi downstream of gage.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 7	1345	27,400	21.47
Apr. 6	0015	*27,600	21.54
May 4	0200	20,200	18.28

Minimum daily discharge, 17 ft³/s, Sept. 8 and 10.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	159	128	2100	1590	312	330	6580	8270	533	171	44	36
2	148	452	11700	1170	476	311	20400	17300	479	172	46	29
3	138	3440	23500	984	595	291	22800	19400	519	153	44	27
4	130	5320	24400	833	472	281	25100	19600	2870	135	41	25
5	121	2250	26200	710	580	290	26900	15500	2240	120	42	23
6	231	984	27100	645	520	499	27300	8570	985	108	43	22
7	174	505	27200	625	444	1960	26900	2810	638	100	183	19
8	143	376	26700	600	400	5050	26400	1260	520	151	111	17
9	115	284	26000	575	392	3540	25800	1030	413	190	98	18
10	107	238	24600	560	400	2020	23600	840	336	140	74	17
11	107	232	22200	540	580	1240	22100	750	283	112	54	20
12	174	304	18200	520	1040	892	19700	670	242	98	42	21
13	432	391	11600	476	1500	706	15600	620	215	85	35	21
14	300	2320	3690	472	1670	619	7250	653	193	77	32	21
15	219	1510	1330	424	2120	547	2570	1920	177	74	31	25
16	171	786	1110	396	2460	522	1740	2640	161	82	29	35
17	140	535	923	360	1980	464	1420	1480	149	83	27	32
18	123	404	778	320	1780	142	1180	991	140	67	25	25
19	125	340	711	316	1420	729	1040	944	146	59	23	28
20	138	295	668	336	1050	532	908	4040	3460	55	20	30
21	121	264	649	296	838	2420	816	2300	6090	52	18	38
22	153	239	628	272	716	3450	748	2470	1800	50	28	39
23	207	249	593	268	616	2300	686	7460	513	49	35	36
24	248	266	1730	260	520	1390	627	4950	547	47	28	36
25	189	345	9600	248	463	1040	592	2800	329	47	25	38
26	153	384	12400	260	426	934	552	1840	267	45	27	39
27	138	427	11300	264	387	6910	510	1120	213	43	23	38
28	130	1380	8230	268	357	12900	1780	913	187	39	20	36
29	135	3280	6850	268	---	12500	4340	792	168	38	19	33
30	130	2580	7670	264	---	8810	3810	667	197	51	22	31
31	128	---	3800	276	---	3300	---	648	---	47	39	---
TOTAL	5127	30508	344160	15396	24514	76919	319749	135248	25010	2740	1328	855
MEAN	165	1017	11100	497	876	2481	10660	4363	834	88.4	42.8	28.5
MAX	432	5320	27200	1590	2460	12900	27300	19600	6090	190	183	39
MIN	107	128	593	248	312	142	510	620	140	38	18	17
CAL YR 1982	TOTAL	1299379	MEAN	3560	MAX	27200	MIN	88				
WTR YR 1983	TOTAL	981554	MEAN	2689	MAX	27300	MIN	17				

05508000 SALT RIVER NEAR NEW LONDON, MO--Continued

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.02	2.91	6.50	5.62	3.41	3.49	5.91	7.15	3.94	2.92	2.30	2.24
2	2.98	3.41	6.84	5.00	3.78	3.44	18.32	16.45	3.85	2.90	2.33	2.16
3	2.96	6.70	19.74	4.74	4.05	3.40	19.31	17.82	3.61	2.86	2.32	2.13
4	2.93	10.18	20.00	4.50	3.73	3.38	20.28	18.15	6.87	2.78	2.28	2.11
5	2.90	6.67	20.87	4.29	3.90	3.35	21.10	16.53	6.67	2.71	2.27	2.08
6	2.87	5.04	21.24	4.15	3.91	3.81	21.43	11.45	4.80	2.66	2.32	2.08
7	3.10	4.00	21.42	4.10	3.63	3.92	21.27	7.20	4.12	2.61	2.48	2.04
8	3.11	3.67	21.21	4.06	3.50	9.21	21.08	5.10	3.86	2.67	2.83	2.01
9	2.86	3.45	20.94	4.01	3.62	7.99	20.77	4.75	3.60	3.02	2.77	2.01
10	2.82	3.31	20.44	3.99	3.63	6.20	20.12	4.47	3.39	2.85	2.62	2.02
11	2.81	3.24	19.38	3.97	3.92	5.16	19.31	4.29	3.26	2.73	2.42	2.04
12	2.81	3.60	17.65	3.92	4.64	4.61	18.30	4.14	3.15	2.64	2.28	2.05
13	3.86	3.36	14.43	3.78	5.32	4.28	16.43	4.01	3.06	2.56	2.22	2.07
14	3.50	6.64	8.34	3.85	5.62	4.09	11.67	4.01	2.99	2.51	2.20	2.08
15	3.25	5.90	5.50	3.70	5.86	3.99	6.81	5.26	2.93	2.49	2.18	2.07
16	3.09	4.65	5.05	3.56	6.60	3.92	5.79	6.94	2.87	2.51	2.17	2.21
17	2.97	4.05	4.71	3.56	6.03	3.85	5.36	5.54	2.83	2.61	2.14	2.23
18	2.91	3.74	4.52	3.29	5.77	2.97	5.05	4.74	2.80	2.47	2.12	2.17
19	2.88	3.57	4.38	3.31	5.38	5.19	4.82	4.41	2.82	2.39	2.10	2.16
20	2.97	3.45	4.29	3.47	4.85	3.72	4.64	8.57	2.85	2.35	2.06	2.14
21	2.88	3.37	4.24	3.44	4.51	6.19	4.47	6.75	10.40	2.33	2.03	2.27
22	2.93	3.30	4.20	3.35	4.30	7.80	4.36	5.84	6.09	2.31	2.14	2.28
23	3.09	3.32	4.14	3.34	4.11	6.55	4.23	10.94	3.41	2.31	2.24	2.27
24	3.37	3.32	4.13	3.33	3.94	5.37	4.11	9.43	3.89	2.29	2.13	2.25
25	3.16	3.58	11.59	3.30	3.81	4.82	4.02	6.93	3.38	2.30	2.11	2.27
26	3.02	3.66	14.03	3.31	3.72	4.59	3.98	6.08	3.25	2.28	2.12	2.29
27	2.96	3.74	13.66	3.33	3.63	9.58	3.87	4.95	3.05	2.27	2.10	2.29
28	2.93	5.00	11.95	3.34	3.56	13.67	4.69	4.56	2.97	2.24	2.05	2.27
29	2.95	7.60	10.41	3.34	---	14.20	8.50	4.39	2.89	2.22	2.04	2.25
30	2.92	6.82	10.77	3.33	---	12.53	8.09	4.12	2.99	2.38	2.03	2.23
31	2.91	---	8.26	3.35	---	7.78	---	4.08	---	2.33	2.26	---
MEAN	3.02	4.51	11.77	3.80	4.38	5.90	11.27	7.39	3.89	2.53	2.28	2.16
MAX	3.86	10.18	21.42	5.62	6.60	14.20	21.43	18.15	10.40	3.02	3.48	2.29
MIN	2.81	2.91	4.13	3.29	3.41	2.97	3.87	4.01	2.60	2.22	2.03	2.01
WTR YR 1983		MEAN	5.25	MAX	21.43	MIN	2.01					

SALT RIVER BASIN

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, 4,380 mg/L December 2, 1982; minimum daily mean, 8 mg/L October 1, 1981.

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

EXTREMES FOR CURRENT YEAR.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 4,380 mg/L December 2; minimum daily mean, 20 mg/L August 20.

SUSPENDED-SEDIMENT LOADS: Maximum daily, 138,000 tons December 2; minimum daily, 1.1 tons August 20.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD 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 04...	1425	2080	325	7.6	11.5	200	8.6	79	6800	15000
JAN 06...	1445	640	362	7.9	3.0	120	12.6	93	900	6200
MAY 12...	1415	650	388	8.2	18.5	27	7.6	80	K150	270
JUL 20...	1545	56	444	8.7	33.0	13	10.0	136	48	200

DATE	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS, NONCAR- BONATE (MG/L AS F) (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...	130	24	40	8.1	13	16	.5	8.9	110	44
JAN 06...	160	63	50	8.7	9.8	11	.4	3.9	98	49
MAY 12...	170	42	53	9.6	11	12	.4	3.4	130	54
JUL 20...	170	25	50	12	21	20	.7	4.4	150	50

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...	18	.20	8.6	216	210	.29	1210	.690	.120
JAN 06...	10	.20	12	230	200	.31	397	1.30	.130
MAY 12...	9.4	.20	11	245	230	.33	430	.820	<.060
JUL 20...	19	.30	2.4	242	250	.33	37	<.100	.080

K--Results based on colony count outside the acceptable range (non-ideal colony count).

05508000 SALT RIVER NEAR NEW LONDON, MO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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, CHARGE, PENDEED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, PENDEED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
NOV 04...	.15	2.7	.370	1.1	.080	.070	405	2270	92
JAN 06...	.17	2.5	.200	.61	.030	<.010	195	337	75
MAY 12...	--	1.3	.120	.37	.040	.020	121	212	83
JUL 20...	.10	1.5	.140	.43	.010	.030	64	9.7	72

DATE	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)
NOV 04...	160	1	93	<.5	<1	<1	<3	7	250	2
JAN 06...	130	1	99	<.5	<1	<1	<3	2	170	3
MAY 12...	40	1	110	<.5	1	<1	<3	2	38	2
JUL 20...	<10	1	93	<.5	<1	<1	<3	5	13	<1

DATE	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 04...	17	12	.1	<10	2	<1	<1	120	<6	10
JAN 06...	15	330	.1	<10	3	1	<1	130	<6	16
MAY 12...	11	210	.2	<10	2	1	<1	160	<6	20
JUL 20...	19	6	<.1	<10	2	1	<1	190	<6	10

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)
APR , 1983 13...	14800	65	69	72	80	91	94	97	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)
AUG , 1983 17...	1	2	8	35	50	55	60	71	90	100

SALT RIVER BASIN
05508000 SALT RIVER NEAR NEW LONDON, MO--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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	159	36	15	128	159	55	2100	945	5360
2	148	42	17	452	462	564	11700	4380	138000
3	138	37	14	3440	1020	9470	23500	1490	94500
4	130	44	15	5320	576	8270	24400	1010	66500
5	121	138	45	2250	521	3170	26200	825	58400
6	231	134	84	984	440	1170	27100	628	46000
7	174	239	112	505	273	372	27200	514	37700
8	143	235	91	376	250	254	26700	443	31900
9	115	158	49	284	208	159	26000	310	21800
10	107	172	50	238	228	147	24600	233	15500
11	107	149	43	232	193	121	22200	265	15900
12	174	155	73	304	200	164	18200	326	16000
13	432	159	185	391	178	188	11600	352	11000
14	300	159	129	2320	365	2290	3690	388	3870
15	219	181	107	1510	683	2780	1330	329	1180
16	171	178	82	786	490	1040	1110	274	821
17	140	192	73	535	236	341	923	196	488
18	123	157	52	404	230	251	778	154	323
19	125	165	56	340	194	178	711	156	299
20	138	169	63	295	205	163	668	130	234
21	121	175	57	264	214	153	649	130	228
22	153	157	65	239	189	122	628	142	241
23	207	140	78	249	169	114	593	127	203
24	248	148	99	266	204	147	1730	636	2970
25	189	158	81	345	266	248	9600	2290	59400
26	153	140	58	384	165	171	12400	1460	48900
27	138	152	57	427	150	173	11300	962	29400
28	130	165	58	1380	179	667	8230	861	19100
29	135	165	60	3280	692	6130	6850	815	15100
30	130	161	57	2580	449	3130	7670	838	17400
31	128	153	53	---	---	---	3800	961	9860
TOTAL	5127	---	2078	30508	---	42202	344160	---	768577
JANUARY			FEBRUARY			MARCH			
1	1590	613	2630	312	122	103	330	33	29
2	1170	504	1590	476	99	127	311	33	28
3	984	435	1160	595	79	127	291	34	27
4	833	478	1080	472	64	82	281	38	29
5	710	337	646	580	33	52	290	67	52
6	645	239	416	520	26	37	499	131	177
7	625	261	440	444	33	40	1960	990	5240
8	600	206	334	400	23	25	5050	1370	18700
9	575	200	311	392	27	29	3540	697	6660
10	560	108	163	400	38	41	2020	278	1520
11	540	53	77	580	31	49	1240	183	613
12	520	55	77	1040	67	188	892	97	234
13	476	63	81	1500	147	595	706	71	135
14	472	80	102	1670	164	739	619	70	117
15	424	43	49	2120	155	887	547	57	84
16	396	59	63	2460	458	3040	522	58	82
17	360	78	76	1980	546	2920	464	55	69
18	320	68	59	1780	388	1860	142	76	29
19	316	78	67	1420	254	974	729	161	317
20	336	95	86	1050	172	488	532	116	167
21	296	84	67	838	131	296	2420	196	1280
22	272	95	70	716	110	213	3450	183	1700
23	268	85	62	616	92	153	2300	254	1580
24	260	78	55	520	84	118	1390	199	747
25	248	92	62	463	62	78	1040	150	421
26	260	79	55	426	51	59	934	190	479
27	264	66	47	387	45	47	6910	1040	19400
28	268	84	61	357	33	32	12900	1340	46700
29	268	94	68	---	---	---	12500	966	32600
30	264	80	57	---	---	---	8810	732	17400
31	276	65	48	---	---	---	3300	487	4340
TOTAL	15396	---	10159	24514	---	13399	76919	---	160956

05508000 SALT RIVER NEAR NEW LONDON, MO--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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	6580	844	15000	8270	1000	22300	533	178	256
2	20400	1620	89200	17300	1400	65400	479	158	204
3	22800	1180	72600	19400	904	47400	519	177	248
4	25100	786	53300	19600	645	34100	2870	659	5110
5	26900	667	48400	15500	484	20300	2240	721	4360
6	27300	585	43100	8570	391	9050	985	404	1070
7	26900	579	42100	2810	370	2810	638	272	469
8	26400	503	35900	1260	338	1150	520	228	320
9	25800	401	27900	1030	223	620	413	193	215
10	23600	393	25000	840	184	417	336	169	153
11	22100	360	21500	750	173	350	283	118	90
12	19700	343	18200	670	151	273	242	125	82
13	15600	367	15500	620	139	233	215	124	72
14	7250	380	7440	653	138	243	193	126	66
15	2570	396	2750	1920	231	1200	177	119	57
16	1740	374	1760	2640	394	2810	161	121	53
17	1420	261	1000	1480	314	1250	149	147	59
18	1180	211	672	991	202	540	140	170	64
19	1040	176	494	944	287	732	146	154	61
20	908	161	395	4040	1310	14300	3460	510	4760
21	816	150	330	2300	936	5810	6090	1210	19900
22	748	143	289	2470	658	4390	1800	493	2400
23	686	143	265	7460	1460	29400	513	261	362
24	627	136	230	4950	753	10100	547	245	362
25	592	144	230	2800	530	4010	329	192	171
26	552	112	167	1840	509	2530	267	171	123
27	510	130	179	1120	274	829	213	139	80
28	1780	354	1700	913	249	614	187	132	67
29	4340	944	11100	792	231	494	168	147	67
30	3810	820	8440	667	179	322	197	120	64
31	---	---	---	648	190	332	---	---	---
TOTAL	319749	---	545141	135248	---	284309	25010	---	41365
JULY			AUGUST			SEPTEMBER			
1	171	126	58	44	92	11	36	51	5.0
2	172	128	59	46	121	15	29	40	3.1
3	153	130	54	44	126	15	27	37	2.7
4	135	136	50	41	121	13	25	41	2.8
5	120	135	44	42	118	13	23	48	3.0
6	108	133	39	43	123	14	22	44	2.6
7	100	117	32	183	117	58	19	42	2.2
8	151	123	50	111	122	37	17	35	1.6
9	190	139	71	98	134	35	18	43	2.1
10	140	139	53	74	121	24	17	40	1.8
11	112	132	40	54	119	17	20	41	2.2
12	98	131	35	42	127	14	21	40	2.3
13	85	146	34	35	129	12	21	41	2.3
14	77	132	27	32	129	11	21	37	2.1
15	74	125	25	31	134	11	25	43	2.9
16	82	139	31	29	133	10	35	39	3.7
17	83	152	34	27	112	8.2	32	52	4.5
18	67	163	29	25	39	2.6	25	47	3.2
19	59	153	24	23	25	1.6	28	46	3.5
20	55	131	19	20	20	1.1	30	52	4.2
21	52	123	17	18	32	1.6	38	44	4.5
22	50	95	13	28	32	2.4	39	41	4.3
23	49	123	16	35	40	3.8	36	52	5.1
24	47	140	18	28	40	3.0	36	45	4.4
25	47	136	17	25	33	2.2	38	49	5.0
26	45	117	14	27	28	2.0	39	41	4.3
27	43	132	15	23	32	2.0	38	51	5.2
28	39	131	14	20	33	1.8	36	48	4.7
29	38	128	13	19	32	1.6	33	50	4.5
30	51	129	18	22	38	2.3	31	49	4.1
31	47	131	17	39	36	3.8	---	---	---
TOTAL	2740	---	980	1328	---	350.0	855	---	103.9
YEAR	981554		1869619.9						

SALT RIVER BASIN

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 downstream from bridge on U.S. Highway 61, 0.75 mi downstream from Plum Creek, 2.5 northwest of Frankford, and at mile 4.5.

DRAINAGE AREA.--206 mi².

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 National Geodetic Vertical Datum of 1929. March 24, 1930 to September 30, 1936 nonrecording gage at site 0.75 mi upstream at datum 3.63 ft 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. Several observations of water temperature and specific conductance were made during the year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 12,860 ft³/s May 1, at 2115, gage height, 15.63 ft; minimum daily discharge, 0.18 ft³/s Aug. 18, 19.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.6	46	112	116	31	32	4740	4900	48	14	27	.41
2	6.8	393	4120	100	114	32	7770	4730	46	10	13	.30
3	7.1	157	9010	85	112	30	1200	423	1500	8.3	7.7	.30
4	5.5	67	1930	74	89	30	441	258	465	7.2	5.4	.41
5	4.6	43	1680	70	69	37	1400	190	156	6.1	3.8	.41
6	8.2	32	1140	73	52	205	875	171	96	5.9	157	.41
7	80	25	331	68	45	279	315	133	74	6.4	430	.30
8	71	21	205	63	46	236	208	126	60	4.9	47	.30
9	40	20	151	58	39	128	737	103	45	4.0	15	.40
10	26	19	172	57	70	81	631	90	38	4.1	4.8	.41
11	20	22	318	53	108	63	328	96	34	3.7	1.7	.30
12	19	116	157	46	92	56	300	94	32	3.2	1.0	.30
13	14	106	104	45	108	50	572	78	29	4.2	.54	.30
14	13	63	91	43	114	47	365	329	26	3.4	.24	.27
15	12	38	84	38	108	45	177	231	27	3.0	.27	.54
16	13	32	74	36	104	42	130	118	30	5.1	.27	.78
17	13	27	67	34	96	39	111	90	25	7.4	.21	.78
18	12	24	65	30	75	36	119	74	33	4.3	.18	.78
19	16	28	61	28	63	35	108	70	43	2.9	.18	.78
20	46	27	56	28	56	118	95	61	47	1.9	.20	.78
21	59	23	51	27	50	261	85	60	43	1.4	.24	.89
22	37	21	49	28	46	124	78	2500	23	1.1	.27	.65
23	24	62	49	31	44	81	73	402	20	.82	.78	.89
24	16	114	1720	32	41	65	67	166	16	.63	.65	.89
25	13	63	6010	30	39	57	60	165	12	.62	1.0	1.0
26	13	81	559	28	35	60	56	115	10	.83	1.3	1.1
27	14	220	279	27	33	244	56	87	9.8	.54	.89	1.1
28	14	1120	1250	27	32	193	1560	75	11	.36	.78	1.1
29	24	445	315	27	---	109	337	69	10	.49	.65	1.1
30	23	177	175	30	---	93	322	57	12	589	.54	1.0
31	20	---	136	28	---	90	---	51	---	118	.41	---
TOTAL	691.8	3632	30521	1460	1911	2998	23316	16112	3020.8	823.79	723.00	18.99
MEAN	22.3	121	985	47.1	68.3	96.7	777	520	101	26.6	23.3	.63
MAX	80	1120	9010	116	114	279	7770	4900	1500	589	430	1.1
MIN	4.6	19	49	27	31	30	56	51	9.8	.36	.18	.27
CAL YR 1982	TOTAL		93700.3	MEAN		257	MAX	9010	MIN		4.6	
WTR YR 1983	TOTAL		85228.38	MEAN		234	MAX	9010	MIN		.18	

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

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.92	3.24	3.82	3.83	3.19	3.24	3.65	4.80	3.37	3.05	3.22	2.79
2	2.91	5.22	3.69	3.75	3.70	3.24	14.30	12.07	3.47	3.02	3.04	2.78
3	2.93	4.09	13.59	3.65	3.79	3.23	7.02	4.98	4.44	2.96	2.93	2.78
4	2.91	3.56	8.12	3.58	3.41	3.23	4.90	4.40	5.14	2.95	2.88	2.78
5	2.84	3.37	6.85	3.54	3.46	3.24	5.33	4.21	4.06	2.93	2.85	2.79
6	2.88	3.25	6.76	3.58	3.39	3.88	6.27	4.02	3.71	2.90	2.82	2.80
7	3.69	3.19	4.72	3.53	2.74	4.56	4.67	3.89	3.56	2.88	5.26	2.78
8	3.59	3.16	4.27	3.51	2.95	4.45	4.25	3.80	3.48	2.90	3.41	2.77
9	3.34	3.13	4.01	3.46	3.27	3.66	4.99	3.71	3.38	2.84	3.10	2.79
10	3.20	3.11	3.91	3.46	3.33	3.67	5.37	3.71	3.39	2.90	2.96	2.79
11	3.09	3.13	4.74	3.43	3.67	3.53	4.73	3.62	3.34	2.86	2.87	2.78
12	3.10	3.57	4.06	3.37	3.49	3.45	4.20	3.63	3.30	2.84	2.80	2.78
13	3.04	3.79	3.78	3.36	3.38	3.42	5.67	3.57	3.32	2.89	2.79	2.78
14	3.03	3.58	3.68	3.35	3.60	3.40	4.91	3.68	3.23	2.86	2.73	2.76
15	3.02	3.32	3.65	3.31	3.43	3.36	4.13	4.33	3.19	2.83	2.74	2.78
16	3.03	3.23	3.58	3.28	3.73	3.34	3.90	3.85	3.20	2.81	2.74	2.82
17	3.02	3.20	3.53	3.28	3.69	3.31	3.78	3.68	3.17	2.97	2.71	2.82
18	3.03	3.14	3.52	3.20	3.55	3.29	3.85	3.56	3.14	2.88	2.67	2.82
19	3.03	3.30	3.50	3.21	3.49	3.27	3.79	3.55	3.34	2.83	2.66	2.82
20	3.33	3.24	3.45	3.21	3.43	3.37	3.71	3.48	3.37	2.80	2.69	2.82
21	3.51	3.17	3.41	3.20	3.38	4.58	3.65	3.45	3.39	2.77	2.66	2.83
22	3.31	3.13	3.39	3.20	3.35	3.91	3.61	11.58	3.18	2.75	2.71	2.81
23	3.19	3.16	3.39	3.23	3.33	3.64	3.56	4.93	3.19	2.73	2.77	2.82
24	3.08	3.91	3.44	3.24	3.31	3.52	3.54	4.05	3.06	2.71	2.85	2.83
25	3.04	3.51	14.36	3.22	3.30	3.46	3.49	4.03	3.03	2.70	2.79	2.84
26	3.02	3.40	5.32	3.21	3.27	3.43	3.49	3.81	2.99	2.69	2.80	2.84
27	3.12	4.48	4.43	3.20	3.25	4.13	3.45	3.63	3.00	2.69	2.80	2.85
28	3.00	8.17	7.34	3.19	3.24	4.24	8.68	3.57	3.02	2.68	2.82	2.85
29	3.12	5.06	4.70	3.19	---	3.81	4.73	3.53	3.01	2.69	2.78	2.85
30	3.20	4.14	4.10	3.22	---	3.69	4.35	3.45	3.07	2.82	2.80	2.84
31	3.13	---	3.93	3.20	---	3.68	---	3.40	---	3.89	2.77	---
MEAN	3.12	3.70	5.00	3.36	3.40	3.63	4.87	4.39	3.38	2.87	2.92	2.81
MAX	3.69	8.17	14.36	3.83	3.79	4.58	14.30	12.07	5.14	3.89	5.26	2.85
MIN	2.84	3.11	3.39	3.19	2.74	3.23	3.45	3.40	2.99	2.68	2.66	2.76
WTR YR 1983		MEAN	3.62	MAX	14.36	MIN	2.66					

CUIVRE RIVER BASIN

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 downstream from confluence of North and West Forks Cuivre River and 2 mi north of Troy.

DRAINAGE AREA.--903 mi².

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 National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1930, nonrecording gage at site 3 mi downstream at datum 4.31 ft lower. Oct. 1, 1930 to July 1939, nonrecording gage at present site and datum.

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

AVERAGE DISCHARGE.--53 years (water years 1922-71, 1980 to current year) 651 ft³/s, 9.79 in/yr, 471,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 120,000 ft³/s October 5, 1941, gage height 33.4 ft 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 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 and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 28	1530	10,600	19.95	Apr. 28	1545	13,200	21.58
Dec. 3	0900	*89,200	31.28	May 2	0345	57,500	28.74
Dec. 25	1400	26,200	25.70	May 22	1645	17,300	23.42
Apr. 2	0715	28,400	25.96				

Minimum daily discharge, 2.5 ft³/s Sept. 24.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	118	2060	729	761	134	111	6350	20200	236	96	21	4.5
2	112	4300	7490	680	572	108	21400	41300	225	76	19	4.5
3	111	1480	74100	553	741	107	8450	6700	614	63	14	4.2
4	106	643	36100	439	532	104	2920	1650	928	57	11	4.2
5	103	407	10400	353	450	129	2650	1090	644	53	9.0	4.2
6	1340	307	4150	344	316	2200	4460	872	716	48	21	4.2
7	1120	258	1950	337	232	1840	1810	728	551	44	21	4.5
8	509	225	1410	324	228	1410	1110	620	326	39	55	3.9
9	311	203	1310	296	217	900	4100	530	256	35	66	3.6
10	223	188	1150	267	223	611	2890	458	208	33	41	3.9
11	184	179	1240	236	362	464	1850	419	181	31	28	3.9
12	169	770	880	208	454	360	1110	399	158	30	20	4.8
13	142	971	716	196	442	309	2640	380	139	27	15	4.5
14	124	502	638	185	406	292	3640	509	132	26	12	3.9
15	112	336	548	185	419	263	1300	683	365	24	11	3.9
16	104	263	477	180	396	235	860	527	216	22	9.0	4.8
17	99	226	427	172	340	215	674	438	149	21	8.5	4.8
18	96	205	412	160	291	201	644	383	126	19	7.0	5.1
19	309	195	383	136	249	184	584	524	324	16	7.0	4.8
20	2490	189	347	130	214	324	495	425	2500	14	6.5	3.9
21	561	178	322	125	190	920	435	360	542	14	5.4	3.0
22	308	167	289	130	174	848	393	10800	313	12	4.8	2.8
23	230	190	477	154	162	509	370	4910	190	11	10	2.7
24	185	272	4750	140	151	367	331	1240	137	10	9.5	2.5
25	159	276	14200	130	139	298	296	596	110	15	6.5	3.0
26	142	1130	6240	125	129	276	298	471	95	14	6.5	3.3
27	131	2020	1890	122	120	773	307	399	89	13	7.0	3.0
28	126	7260	4860	122	115	916	7390	349	125	11	9.0	3.0
29	133	3720	3920	122	---	644	4350	315	169	10	6.0	2.8
30	132	1320	1010	130	---	474	4420	282	120	11	5.7	2.7
31	974	---	844	122	---	419	---	256	---	15	5.4	---
TOTAL	10963	30440	183659	7564	8398	16811	88527	98813	10884	910	477.8	114.9
MEAN	354	1015	5924	244	300	542	2951	3188	363	29.4	15.4	3.83
MAX	2490	7260	74100	761	741	2200	21400	41300	2500	96	66	5.1
MIN	96	167	289	122	115	104	296	256	89	10	4.8	2.5
CAL YR 1982	TOTAL	539437	MEAN	1478	MAX	74100	MIN	63				
WTR YR 1983	TOTAL	457561.7	MEAN	1254	MAX	74100	MIN	2.5				

05514500 CUIVRE RIVER NEAR TROY, MO.--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1982 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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 (STAND- ARD 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)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)
OCT 21...	0830	1028	29001	569	234	7.7	9.5	7.4	64	60	>12000
NOV 04...	1625	1028	29001	557	290	7.7	10.0	8.8	78	43	4300
DEC 15...	1100	1028	29001	530	374	7.3	4.0	11.8	90	19	1300
JAN 06...	1615	1028	29001	344	415	7.9	4.5	11.4	88	10	400
FEB 09...	1530	1028	29001	225	410	7.5	3.5	12.4	93	13	50
MAR 09...	1545	1028	29001	828	357	7.9	6.5	8.6	70	28	6400
APR 14...	0820	1028	29001	4780	209	7.7	10.5	8.8	78	39	14000
MAY 12...	1615	1028	29001	302	395	8.1	20.0	7.0	76	10	180
JUN 09...	0815	1028	29001	256	338	8.1	20.0	7.5	81	28	2100
JUL 20...	1815	1028	29001	14	435	8.2	34.0	6.8	94	22	78
AUG 17...	1600	1028	29001	8.5	437	7.6	27.5	1.8	22	21	210
SEP 29...	1645	1028	29001	3.6	449	7.7	22.0	8.8	98	18	29

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- LITY 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 21...	95	16	29	5.5	4.0	8.9	79	3.0	18	14
NOV 04...	--	--	--	--	--	--	100	3.9	--	--
DEC 15...	--	--	--	--	--	--	141	14	--	--
JAN 06...	180	30	58	9.5	8.0	3.3	154	3.7	31	12
FEB 09...	--	--	--	--	--	--	143	8.7	--	--
MAR 09...	--	--	--	--	--	--	115	2.8	--	--
APR 14...	98	23	31	4.9	4.6	3.4	75	2.9	16	3.0
MAY 12...	--	--	--	--	--	--	157	2.4	--	--
JUN 09...	--	--	--	--	--	--	131	2.0	--	--
JUL 20...	210	25	64	11	8.2	3.6	180	2.2	23	14
AUG 17...	--	--	--	--	--	--	174	8.4	--	--
SEP 29...	--	--	--	--	--	--	200	7.7	--	--

05514500 CUIVRE RIVER NEAR TROY, MO.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	FLUORIDE, DIS- SOLVED (MG/L AS F) (00950)	SOLIDS, RESIDUE AT 180 DEG. C SUS- SOLVED (MG/L) (70300)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDE (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 21...	.10	250	316	1.30	.160	.600	<2	<2	19	<5
NOV 04...	--	--	92	.890	.090	.320	--	--	--	--
DEC 15...	--	--	34	1.78	.140	.130	--	--	--	--
JAN 06...	1.0	265	42	2.30	.210	.060	<2	<2	<5	<5
FEB 09...	--	--	10	1.70	.070	.070	--	--	--	--
MAR 09...	--	--	48	1.20	.100	.140	--	--	--	--
APR 14...	.10	190	600	.640	.170	.410	3	<2	18	6
MAY 12...	--	--	38	1.47	.020	.090	--	--	--	--
JUN 09...	--	--	78	1.83	.110	.220	--	--	--	--
JUL 20...	.10	248	15	<.050	.030	.090	<2	<2	<5	<5
AUG 17...	--	--	23	.060	.150	.080	--	--	--	--
SEP 29...	--	--	16	.250	.010	<.050	--	--	--	--

[illegible]

MISSISSIPPI RIVER AT ALTON, IL

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 downstream from Missouri and Illinois Bridge and Belt Railroad bridge, 7.7 mi upstream from Missouri River, and at mile 202.7 upstream from Ohio River.

DRAINAGE AREA.--171,5000 mi², 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 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 upstream, at datum 403.79 ft higher. Mar. 20, 1933, to Jan. 4, 1937, and Nov. 11, 1937, to Jan. 31, 1938, nonrecording gage 300 ft upstream at datum 395.48 ft higher. Since July 11, 1940, auxiliary water-stage recorder 5.9 mi 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 acre-ft	Date	Maximum Discharge ft ³ /s
May 21 to June 4, 1943	1,075,000	May 24, 1943	90,000
Apr. 29 to May 13, 1944	891,000	Apr. 30, 1944	90,000
June 29 to July 19, 1947	687,000	July 2, 1947	65,000
July 5-31, 1951	2,534,000	July 20, 1951	110,000
Apr. 3-7, 23-26, 1973	Unknown	Unknown	Unknown

AVERAGE DISCHARGE.--56 years, 101,254 ft³/s 73,360,000 acre-ft/yr.

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

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 1944 reached a stage of 432.10 ft, present datum.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 422,000 ft³/s Dec. 5 at 2400; maximum elevation, 428.68 ft May 4 at 1500; minimum, 29,900 ft³/s Sept. 14, gage height 399.32 ft Sept. 15.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	51200	137000	182000	239000	95100	202000	292000	317000	232000	143000	98800	77200
2	54800	144000	177000	229000	92100	197000	280000	358000	230000	158000	99500	63700
3	74800	161000	277000	223000	112000	191000	293000	384000	233000	161000	103000	67700
4	68300	165000	297000	211000	92200	188000	326000	402000	228000	171000	97200	58800
5	61700	153000	378000	200000	88100	188000	353000	404000	226000	181000	95400	54200
6	77000	149000	394000	196000	88100	194000	370000	400000	227000	188000	92500	60600
7	85700	144000	376000	190000	81400	197000	388000	369000	216000	200000	86200	60300
8	73600	121000	376000	179000	75100	202000	396000	332000	197000	206000	85700	57400
9	85100	115000	389000	173000	83800	206000	399000	311000	181000	207000	87700	61900
10	94000	110000	396000	164000	96100	207000	401000	294000	168000	207000	88600	58200
11	99300	103000	380000	154000	96500	206000	403000	277000	162000	206000	84500	55400
12	115000	111000	356000	143000	100000	210000	405000	260000	164000	198000	85900	50000
13	107000	121000	339000	138000	104000	212000	405000	252000	163000	197000	85000	41700
14	100000	155000	324000	134000	103000	212000	404000	252000	165000	196000	82300	36100
15	103000	168000	296000	128000	113000	214000	396000	246000	157000	191000	77500	37300
16	102000	162000	253000	115000	138000	222000	377000	237000	150000	183000	73500	57800
17	97300	168000	219000	107000	147000	227000	360000	242000	146000	172000	64400	53800
18	96100	171000	223000	94000	161000	233000	346000	236000	141000	161000	68400	51700
19	103000	173000	223000	87900	164000	240000	337000	232000	144000	152000	65500	57100
20	108000	176000	218000	84400	170000	251000	332000	228000	157000	146000	74800	51600
21	93200	177000	206000	82000	171000	258000	328000	225000	157000	148000	70800	75300
22	109000	176000	202000	82700	167000	259000	326000	266000	154000	144000	80100	70100
23	108000	180000	200000	88200	172000	260000	325000	315000	133000	142000	85500	67900
24	102000	179000	206000	94100	181000	259000	325000	318000	125000	139000	81500	64800
25	107000	178000	252000	96600	191000	256000	325000	307000	122000	144000	77100	83500
26	111000	178000	283000	97900	194000	255000	320000	272000	122000	138000	69100	93900
27	102000	182000	279000	99200	200000	254000	315000	229000	106000	127000	76400	91900
28	113000	188000	264000	98500	203000	255000	311000	224000	113000	122000	71700	102000
29	119000	197000	253000	97800	---	270000	307000	226000	117000	116000	71100	105000
30	116000	181000	250000	96300	---	285000	310000	229000	128000	110000	87700	104000
31	128000	---	252000	96500	---	292000	---	236000	---	108000	91800	---
TOTAL	2965100	4723000	8720000	4219100	3679500	7102000	10455000	8880000	4964000	5062000	2559200	1970900
MEAN	95650	157400	281300	136100	131400	229100	348500	286500	165500	163300	82550	65700
MAX	128000	197000	396000	239000	203000	292000	405000	404000	233000	207000	103000	105000
MIN	51200	103000	177000	82000	75100	188000	280000	224000	106000	108000	64400	36100

CAL YR 1982 TOTAL 62592200 MEAN 171500 MAX 396000 MIN 43000
WTR YR 1983 TOTAL 65299800 MEAN 178900 MAX 405000 MIN 36100

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 CONCENTRATION: 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 July 7 and 8, 1981; minimum daily, 1,290 tons March 17, 1981.

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)
OCT , 1982										
22...	112000	62	69	72	85	97	100	100	100	100
NOV										
22...	177000	44	54	58	70	91	91	91	98	100
DEC										
08...	377000	75	79	83	90	97	98	99	100	100
FEB , 1983										
28...	207000	42	48	55	67	95	97	99	100	100
MAR										
29...	268000	39	41	49	63	84	87	92	99	100
APR										
07...	387000	76	81	84	88	96	97	98	100	100
JUL										
12...	198000	48	56	62	70	--	--	--	--	--

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)
OCT , 1982										
22...	0	0	9	64	86	86	87	89	89	100
NOV										
22...	0	0	6	64	87	90	91	93	100	100
JAN , 1983										
27...	0	0	1	40	79	87	90	92	94	100
MAR										
29...	0	0	6	52	84	95	98	100	100	100
JUL										
12...	0	0	2	42	79	95	97	99	99	100

MISSISSIPPI RIVER MAIN STEM

05587500 MISSISSIPPI RIVER AT ALTON, IL--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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	51200	48	6640	137000	129	47700	182000	---	---
2	54800	46	6810	144000	147	57200	177000	---	---
3	74800	46	9290	161000	161	70000	277000	---	---
4	68300	82	15100	165000	174	77500	297000	---	---
5	61700	64	10700	153000	190	78500	378000	---	---
6	77000	61	12700	149000	204	82100	394000	---	---
7	85700	64	14800	144000	215	83600	376000	---	---
8	73600	54	10700	121000	217	70900	376000	278	282000
9	85100	52	11900	115000	212	65800	389000	---	---
10	94000	58	14700	110000	204	60600	396000	---	---
11	99300	71	19000	103000	188	52300	380000	---	---
12	115000	86	26700	111000	167	50000	356000	---	---
13	107000	100	28900	121000	152	49700	339000	---	---
14	100000	95	25700	155000	162	67800	324000	---	---
15	103000	96	26700	168000	179	81200	296000	---	---
16	102000	102	28100	162000	189	82700	253000	---	---
17	97300	98	25700	168000	192	87100	219000	---	---
18	96100	99	25700	171000	189	87300	223000	---	---
19	103000	96	26700	173000	170	79400	223000	---	---
20	108000	95	27700	176000	148	70300	218000	---	---
21	93200	94	23700	177000	119	56900	206000	184	102000
22	109000	105	30900	176000	93	44200	202000	---	---
23	108000	102	29700	180000	---	---	200000	---	---
24	102000	78	21500	179000	---	---	206000	---	---
25	107000	76	22000	178000	---	---	252000	---	---
26	111000	85	25500	178000	---	---	283000	---	---
27	102000	98	27000	182000	---	---	279000	---	---
28	113000	92	28100	188000	---	---	264000	---	---
29	119000	87	28000	197000	---	---	253000	---	---
30	116000	150	47000	181000	---	---	250000	---	---
31	128000	143	49400	---	---	---	252000	---	---
TOTAL	2965100	---	707040	4723000	---	1502800	8720000	---	384000
JANUARY			FEBRUARY			MARCH			
1	239000	---	---	95100	---	---	202000	206	112000
2	229000	---	---	92100	---	---	197000	182	96800
3	223000	---	---	112000	---	---	191000	136	70100
4	211000	---	---	92200	---	---	188000	133	67500
5	200000	---	---	88100	---	---	188000	113	57400
6	196000	162	85700	88100	---	---	194000	99	51900
7	190000	---	---	81400	---	---	197000	124	66000
8	179000	---	---	75100	---	---	202000	174	94900
9	173000	---	---	83800	141	31900	206000	183	102000
10	164000	---	---	96100	99	25700	207000	167	93300
11	154000	---	---	96500	97	25300	206000	167	92900
12	143000	---	---	100000	81	21900	210000	186	105000
13	138000	---	---	104000	81	22700	212000	203	116000
14	134000	---	---	103000	90	25000	212000	212	121000
15	128000	---	---	113000	98	29900	214000	235	136000
16	115000	---	---	138000	127	47300	222000	230	138000
17	107000	---	---	147000	142	56400	227000	291	178000
18	94000	---	---	161000	186	80900	233000	317	199000
19	87900	---	---	164000	218	96500	240000	281	182000
20	84400	---	---	170000	219	101000	251000	252	171000
21	82000	---	---	171000	226	104000	258000	250	174000
22	82700	---	---	167000	227	102000	259000	266	186000
23	88200	---	---	172000	225	104000	260000	257	180000
24	94100	---	---	181000	221	108000	259000	235	164000
25	96600	---	---	191000	210	108000	256000	203	140000
26	97900	---	---	194000	227	119000	255000	181	125000
27	99200	73	19600	200000	251	136000	254000	170	117000
28	98500	145	38600	203000	232	127000	255000	166	114000
29	97800	---	---	---	---	---	270000	200	146000
30	96300	---	---	---	---	---	285000	303	233000
31	96500	---	---	---	---	---	292000	184	145000
TOTAL	4219100	---	143900	3679500	---	1472500	7102000	---	3974800

MISSISSIPPI RIVER MAIN STEM

05587500 MISSISSIPPI RIVER AT ALTON, IL--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)
APRIL			MAY			JUNE			
1	292000	183	144000	317000	127	109000	232000	248	155000
2	280000	224	169000	358000	128	124000	230000	256	159000
3	293000	275	218000	384000	135	140000	233000	261	164000
4	326000	334	294000	402000	138	150000	228000	258	159000
5	353000	407	388000	404000	171	187000	226000	251	153000
6	370000	415	415000	400000	205	221000	227000	240	147000
7	388000	362	379000	369000	223	222000	216000	223	130000
8	396000	309	330000	332000	232	208000	197000	203	108000
9	399000	258	278000	311000	232	195000	181000	179	87500
10	401000	214	232000	294000	163	129000	168000	169	76700
11	403000	175	190000	277000	155	116000	162000	166	72600
12	405000	157	172000	260000	146	102000	164000	165	73100
13	405000	150	164000	252000	138	93900	163000	160	70400
14	404000	146	159000	252000	138	93900	165000	152	67700
15	396000	143	153000	246000	147	97600	157000	144	61000
16	377000	139	141000	237000	156	99800	150000	109	44100
17	360000	135	131000	242000	165	108000	146000	108	42600
18	346000	127	119000	236000	173	110000	141000	107	40700
19	337000	120	109000	232000	172	108000	144000	106	41200
20	332000	114	102000	228000	165	102000	157000	104	44100
21	328000	107	94800	225000	168	102000	157000	106	44900
22	326000	99	87100	266000	206	148000	154000	126	52400
23	325000	87	76300	315000	245	208000	133000	138	49600
24	325000	101	88600	318000	178	153000	125000	181	61100
25	325000	108	94800	307000	141	117000	122000	177	58300
26	320000	109	94200	272000	159	117000	122000	117	38500
27	315000	111	94400	229000	174	108000	106000	128	36600
28	311000	118	99100	224000	175	106000	113000	128	39100
29	307000	121	100000	226000	186	113000	117000	108	34100
30	310000	124	104000	229000	205	127000	128000	94	32500
31	---	---	---	236000	229	146000	---	---	---
TOTAL	10455000	---	5220300	8880000	---	4161200	4964000	---	2343800
JULY			AUGUST			SEPTEMBER			
1	143000	92	35500	98800	162	43200	77200		
2	158000	93	39700	99500	86	23100	63700		
3	161000	119	51700	103000	84	23400	67700		
4	171000	155	71600	97200	48	12600	58800		
5	181000	188	91900	95400	42	10800	54200		
6	188000	222	113000	92500	48	12000	60600		
7	200000	249	134000	86200	54	12600	60300		
8	206000	230	128000	85700	54	12500	57400		
9	207000	217	121000	87700	70	16600	61900		
10	207000	207	116000	88600	61	14600	58200		
11	206000	206	115000	84500	57	13000	55400		
12	198000	203	109000	85900	47	10900	50000		
13	197000	204	109000	85000	41	9410	41700		
14	196000	203	107000	82300	39	8670	36100		
15	191000	202	104000	77500	42	8790	37300		
16	183000	183	90400	73500	39	7740	57800		
17	172000	148	68700	64400	39	6780	53800		
18	161000	142	61700	68400	49	9050	51700		
19	152000	140	57500	65500	57	10100	57100		
20	146000	130	51200	74800	57	11500	51600		
21	148000	110	44000	70800	57	10900	75300		
22	144000	111	43200	80100	57	12300	70100		
23	142000	100	38300	85500	84	19400	67900		
24	139000	114	42800	81500	---	---	64800		
25	144000	131	50900	77100	---	---	83500		
26	138000	120	44700	69100	---	---	93900		
27	127000	106	36300	76400	---	---	91900		
28	122000	92	30300	71700	75	14500	102000		
29	116000	70	21900	71100	---	---	105000		
30	110000	122	36200	87700	---	---	104000		
31	108000	139	40500	91800	---	---	---		
TOTAL	5062000	---	2205000	2559200	---	334440	1970900		
YEAR	65299800		22449780						

05587550 MISSISSIPPI RIVER BELOW ALTON, 1L
(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 downstream from gaging station, 4.7 mi upstream from Missouri River and at mile 199.7 upstream from Ohio River.

DRAINAGE AREA.--171,500 mi², approximately above gaging station.

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD 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, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
NOV 05...	0930	153000	420	8.1	10.0	120	8.2	73	2200	13000
JAN 07...	0930	190000	532	8.1	1.5	45	13.8	96	950	4800
MAR 10...	1000	207000	438	8.1	7.5	65	11.6	95	640	7100
MAY 13...	1100	249000	494	8.6	17.0	40	8.8	89	K110	1600
JUL 21...	1030	148000	508	8.1	30.0	24	5.4	70	180	160
SEP 30...	1000	104000	391	8.0	19.0	32	7.0	73	84	96

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 DIS- SOLVED (MG/L AS CACO3) (00410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
NOV 05...	190	43	49	17	12	12	.4	3.2	150	39
JAN 07...	250	73	63	23	8.8	7	.2	2.6	180	46
MAR 10...	210	58	52	19	9.8	9	.3	3.2	150	39
MAY 13...	240	66	58	22	9.6	8	.3	2.6	170	50
JUL 21...	240	68	59	22	9.7	8	.3	2.7	170	44
SEP 30...	190	35	45	20	12	12	.4	2.5	160	30

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...	21	.20	9.8	262	240	.36	108000	2.50	.110
JAN 07...	19	.20	13	342	280	.47	175000	6.00	.150
MAR 10...	17	.20	11	274	240	.37	153000	3.90	.200
MAY 13...	19	.20	4.8	298	270	.41	200000	4.50	>.060
JUL 21...	18	.30	12	298	270	.41	119000	4.20	.060
SEP 30...	18	.20	8.4	248	230	.34	69600	1.20	.070

K--Results based on colony count outside the acceptable range (non-ideal colony count).

MISSISSIPPI RIVER MAIN STEM

05587550 MISSISSIPPI RIVER BELOW ALTON, IL--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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, CHARGE, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
NOV 05...	.14	2.4	.380	1.2	.100	.080	285	118000	90
JAN 07...	.19	1.8	.200	.61	.100	.070	64	32800	98
MAR 10...	.26	1.7	.280	.86	.160	.110	172	96100	82
MAY 13...	--	2.0	.200	.61	.070	.050	200	134000	77
JUL 21...	.08	1.4	.230	.71	.150	.120	166	66300	74
SEP 30...	.09	1.6	.240	.74	.140	.110	186	52200	95

DATE	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)
NOV 05...	50	2	68	>.5	>1	>1	>3	9	95	>1
JAN 07...	50	1	82	.5	>1	>1	>3	2	49	3
MAY 13...	40	1	70	>.5	>1	>1	>3	5	18	2
JUL 21...	>10	>1	82	>.5	>1	>1	>3	9	18	2

DATE	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 05...	22	6	.1	>10	2	>1	>1	120	>6	35
JAN 07...	20	26	>.1	>10	1	1	1	150	>6	9
MAY 13...	14	5	.4	10	1	1	>1	140	>6	6
JUL 21...	20	9	>.1	>10	>1	1	>1	140	>6	17

MISSOURI RIVER BASIN BELOW SIOUX CITY, IOWA

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 west of Fairfax, and 2 mi downstream from Cow Branch, and at mile 13.3.

DRAINAGE AREA.--508 mi².

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

REVISED RECORDS.--WSP 856: 1937.

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

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

AVERAGE DISCHARGE.--61 years, 201 ft³/s, 5.37 in/yr, 145,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,300 ft³/s June 20, 1942, from rating curve extended above 11,000 ft³/s; maximum gage height, 24.43 ft March 3, 1979; no flow on several days in July and August 1934, January 28 to February 10, 1977, February 6-12, 1979.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 18	1615	4,940	16.00
June 29	1230	*6,760	18.10

Minimum, 23 ft³/s September 7 and 10, gage height, 5.04 ft.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	279	154	171	300	214	244	1410	410	365	668	134	41
2	267	154	162	250	230	238	1180	726	342	545	125	39
3	252	149	166	200	240	230	878	529	347	482	117	35
4	246	142	159	210	250	230	733	487	333	424	111	32
5	240	148	180	220	245	269	700	424	358	381	107	30
6	238	149	308	220	240	356	1000	407	381	363	104	28
7	230	148	234	250	225	347	803	398	324	342	114	26
8	220	144	199	284	225	301	684	370	306	324	137	26
9	600	139	161	279	220	250	969	356	290	308	108	26
10	300	139	150	400	215	246	1530	347	279	292	96	24
11	250	236	140	370	220	244	1010	349	275	277	92	35
12	205	575	130	265	220	240	994	361	292	261	85	26
13	199	236	140	319	400	244	1070	482	290	248	85	25
14	191	195	175	322	1200	238	958	472	518	238	82	25
15	187	184	165	256	998	246	853	427	393	230	84	41
16	187	184	160	267	516	492	743	372	310	220	80	53
17	189	176	160	270	472	460	674	365	331	212	76	36
18	189	173	170	270	400	326	634	482	2220	205	69	31
19	187	175	182	270	474	297	592	961	1270	195	65	28
20	183	169	166	265	480	292	559	619	662	180	63	82
21	178	158	161	255	393	269	537	510	529	166	76	59
22	176	153	158	255	358	263	529	607	457	156	93	43
23	173	149	161	250	336	258	516	495	414	151	126	37
24	169	137	169	240	312	254	482	445	388	146	77	35
25	166	142	214	230	279	252	465	430	367	151	64	33
26	164	154	187	210	269	460	462	395	352	148	54	31
27	162	141	207	195	261	1160	445	400	372	139	47	30
28	166	182	1150	240	250	871	440	447	578	128	47	30
29	207	209	500	300	---	1150	427	400	5120	137	44	28
30	180	184	380	270	---	1320	414	363	1320	240	41	27
31	161	---	350	230	---	1770	---	349	---	151	41	---
TOTAL	6741	5378	7115	8162	10142	13817	22691	14185	19783	8108	2644	1042
MEAN	217	179	230	263	362	446	756	458	659	262	85.3	34.7
MAX	600	575	1150	400	1200	1770	1530	961	5120	668	137	82
MIN	161	137	130	195	214	230	414	347	275	128	41	24
CAL YR 1982	TOTAL		221160	MEAN	606	MAX	10800	MIN	67			
WTR YR 1983	TOTAL		119808	MEAN	328	MAX	5120	MIN	24			

MISSOURI RIVER MAIN STEM

06813500 MISSOURI RIVER AT RULO, NB

LOCATION.--Lat 40°03'13", long 95°25'19", in NW¼NW¼ sec.17, T.1 N., R.18 E., Richardson County, Hydrologic Unit 10240005, on right bank at downside side of bridge on U.S. Highway 159 at Rulo, 3.2 mi upstream from Nemaha River, and at mile 498.0.

DRAINAGE AREA.--414,900 mi², approximately. The 3,959 mi² in Great Divide basin are not included.

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

PERIOD RECORD.--October 1949 to current year in reports of Geological Survey. Gage-height record collected at site 80 ft 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 National Geodetic Vertical Datum of 1929. Prior to Sept. 13, 1950, nonrecording gage at site 80 ft 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.--34 years, 40,190 ft³/s, 29,120,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 358,000 ft³/s Apr. 22, 1952, gage height, 25.60 ft; minimum daily, 4,420 ft³/s Jan. 13, 1957; minimum gage height, 0.65 ft Jan. 7, 1971, result of freeze-up.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 122,000 ft³/s July 2, gage height, 21.38 ft; minimum daily, 34,000 Dec. 31; minimum gage height, 2.17 ft Feb. 6.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

MEAN VALUES												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44800	50500	62800	34200	41600	74200	86000	63100	55600	116000	57100	50900
2	47700	50400	62300	34800	38600	74800	104000	72900	55700	121000	56200	50800
3	52600	50400	61800	34800	37000	75100	98100	88500	55000	121000	56100	50900
4	53400	49800	62000	34600	36600	74700	87300	94400	55600	116000	56000	50000
5	53200	49600	61900	35200	35800	77100	77700	93800	56500	107000	56400	49100
6	51400	49400	61100	36000	35700	78800	75800	85400	56700	96700	55400	48500
7	51700	50700	59000	38000	36000	82100	75700	78100	56500	87300	54800	50000
8	51100	50400	57500	39600	36400	90400	75700	76000	57500	81000	54700	49400
9	51800	50300	54300	40800	35800	89800	75400	74000	57900	77200	53900	48900
10	57700	51300	52500	42400	35800	82000	76000	67800	57300	74500	53600	48300
11	64500	52000	51700	44500	36500	72700	75400	66000	58500	71800	52500	48900
12	56300	58900	49200	43000	37200	68300	74700	63200	58500	69100	51900	47900
13	55300	66400	47200	41000	37600	66500	77700	63200	60800	66900	51100	48200
14	53800	68700	44700	40400	41100	64500	84900	66100	82500	64500	49900	49700
15	53200	65700	42600	41600	48900	64800	93900	65800	97800	62500	50300	50200
16	51900	64000	41000	40800	54900	68900	94300	64200	100000	61200	49600	49800
17	51600	63200	40100	39700	59200	74700	88600	62300	91700	60200	49600	51000
18	52100	64000	40000	39100	60100	71400	87700	64200	104000	59200	49100	50400
19	51500	64400	40700	38500	63200	66000	87000	75900	116000	58300	48700	49800
20	51800	65700	41500	37800	79300	63200	83900	79000	114000	57000	48200	51800
21	52500	66900	41300	38200	87100	62400	78100	73300	113000	57000	48700	54400
22	52800	65500	40800	38600	74800	61400	74600	71600	110000	57900	48700	53300
23	52000	64300	40900	38800	72600	60900	72000	66100	108000	57800	49900	51600
24	50900	64500	40700	39900	74500	60100	70000	63600	109000	56800	49600	50100
25	50900	64400	41400	39500	71700	60300	67200	66600	108000	58100	48700	49900
26	51300	63800	44000	38700	69300	63800	66300	64500	97700	58100	49600	49500
27	51200	62200	46800	38300	66100	77900	65100	60400	90900	56100	49500	50400
28	52100	60800	45200	37500	68200	67700	63900	59800	95200	54500	51000	50300
29	51800	61700	41900	38300	---	62900	63900	57900	101000	55000	51000	52000
30	51300	62600	36500	42600	---	63500	62100	56400	109000	56800	50600	52600
31	50700	---	34000	47000	---	70500	---	55300	---	57000	51000	---
TOTAL	1624900	1772500	1487400	1214200	1471600	2191400	2363000	2159400	2489700	2253500	1603400	1508600
MEAN	52420	59080	47980	39170	52560	70690	78770	69660	82990	72690	51720	50290
MAX	64500	68700	62800	47000	87100	90400	104000	94400	116000	121000	57100	54400
MIN	44800	49400	34000	34200	35700	60100	62100	55300	55000	54500	48200	47900
CAL YR 1982	TOTAL 16940500			MEAN 46410		MAX 121000	MIN 11600					
WTR YR 1983	TOTAL 22139600			MEAN 60660		MAX 121000	MIN 34000					

NODAWAY RIVER BASIN

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 upstream from Mill Creek, 0.5 mi downstream from Norfolk and Western Railroad Co. bridge, and 1.5 mi west of Burlington Junction.

DRAINAGE AREA.--1,240 mi², approximately.

PERIOD OF RECORD.--March 1922 to September 1983 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 895.17 ft National Geodetic Vertical Datum of 1929. Prior to October 1, 1970 at datum 1.00 ft higher. Prior to June 29, 1939, nonrecording gage. Prior to Oct. 2, 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 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.--61 years, 558 ft³/s, 6.11 in/yr, 404,300.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,230 ft³/s Dec. 28, gage height, 9.33 ft, no peak above base of 8,500 ft³/s; minimum daily 33 ft³/s Sept. 30.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	524	406	734	1560	724	900	5820	1130	750	2540	281	65
2	480	436	678	1510	574	888	4210	2300	740	1720	233	60
3	440	454	641	1390	240	860	4260	2460	740	1390	222	56
4	410	364	566	1180	679	852	3100	1830	750	1230	194	52
5	375	338	1030	1160	867	950	2750	1560	700	1040	176	50
6	350	338	4180	1100	948	1060	3300	1320	750	867	168	50
7	320	330	2470	1040	1000	1810	3580	1320	700	734	160	50
8	1700	330	1630	1190	800	2520	3010	1400	650	699	160	80
9	3140	320	1350	1050	709	1520	3070	1210	600	622	155	70
10	2110	372	1080	1600	709	1350	5010	1050	550	562	140	65
11	1110	766	909	2030	684	1170	3740	1000	500	510	133	75
12	869	4830	620	1230	580	1090	3420	987	550	456	128	80
13	754	2320	620	1040	1170	1050	3890	1800	540	407	120	57
14	699	1220	790	1080	2830	1030	3440	1780	1780	410	120	40
15	640	962	760	1060	4810	1020	3190	1580	3550	402	120	51
16	549	825	564	730	3050	1080	2600	1320	1800	376	115	65
17	524	765	723	624	2600	1690	2280	1130	1200	398	108	56
18	490	728	711	606	2300	1680	2010	1470	3320	338	100	65
19	454	690	732	594	2430	1380	1790	3380	4110	297	95	58
20	432	684	678	594	3080	1250	1710	4190	2000	255	90	104
21	454	646	624	596	2450	1170	1680	2410	1400	222	85	87
22	460	564	581	589	1850	1090	1580	2340	1100	213	150	71
23	420	445	520	699	1590	1050	1520	2280	900	200	160	61
24	379	402	575	694	1440	1030	1410	1710	700	190	126	54
25	353	360	1100	669	1250	1010	1340	1490	680	190	95	49
26	340	340	1660	599	1100	1120	1260	1200	660	185	82	45
27	325	360	1220	584	942	2120	1130	1150	1230	180	82	40
28	368	515	7090	477	925	2460	1180	1200	1200	175	78	37
29	486	822	3250	899	---	2750	1080	1000	5460	170	73	35
30	724	881	2360	2010	---	3310	977	1140	4290	410	73	33
31	450	---	2230	1460	---	5560	---	1090	---	468	70	---
TOTAL	21129	22813	42676	31644	42331	47820	79337	51227	43900	17856	4092	1761
MEAN	682	760	1377	1021	1512	1543	2645	1652	1463	576	132	58.7
MAX	3140	4830	7090	2030	4810	5560	5820	4190	5460	2540	281	104
MIN	320	320	520	477	240	852	977	987	500	170	70	33
CAL YR 1982	TOTAL		548162	MEAN	1502	MAX	12600	MIN	95			
WTR YR 1983	TOTAL		406586	MEAN	1114	MAX	7090	MIN	33			

NODAWAY RIVER BASIN

06817700 NODAWAY RIVER NEAR GRAHAM, MO

LOCATION.--Lat 40°12'08", long 95°04'07", NE¼NE¼NE¼ sec.9, T.62 N., R.37 W., Holt County, Hydrologic Unit 10240010, at right downstream end of bridge on Highway A 0.15 mi east of Maitland and 1.5 mi west of Graham.

DRAINAGE AREA.--1,380 mi², approximately.

PERIOD OF RECORD.--October 1982 to present.

GAGE.--Water-stage recorder. Datum of gage is 852.09 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,400 ft³/s December 28, 1982, gage height, 13.59 ft; minimum discharge, 52 ft³/s Sept. 30, 1983, gage height, 1.69 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 10,400 ft³/s December 28, gage height, 13.59 ft; minimum discharge, 52 ft³/s Sept. 30, gage height 1.69 ft.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	588	969	1960	900	1130	6870	1070	874	3490	414	88
2	---	566	885	1700	711	1090	5070	1830	849	1990	303	86
3	---	683	839	1500	417	1060	4750	3260	854	1610	257	79
4	---	575	789	1310	854	1020	3860	2310	869	1520	232	73
5	---	519	969	1310	1050	1090	2970	2100	814	1090	213	71
6	---	519	4160	1150	1130	1350	3470	1650	916	921	204	71
7	---	510	3840	1200	1200	1740	3900	1650	880	814	204	71
8	---	502	2200	1350	1000	2910	2890	1620	764	716	225	75
9	---	494	1530	1200	900	1760	3040	1630	702	660	228	71
10	---	477	1300	1740	900	1320	5590	1390	651	642	201	67
11	---	697	1300	2250	880	1180	4560	1160	628	592	184	75
12	---	4670	789	1400	800	1120	3570	1100	702	557	176	77
13	---	3800	669	1250	1080	1080	3900	1890	688	514	158	67
14	---	1710	890	1300	3340	1080	4000	2440	1180	477	156	63
15	---	1220	1120	1250	5520	1060	3330	2030	3040	499	156	79
16	---	1070	1040	950	4200	1080	4600	1540	2000	433	150	92
17	---	974	990	800	3000	1910	2380	1250	1380	414	131	97
18	---	934	1050	775	3070	1720	2120	1320	3760	402	101	83
19	---	895	1100	774	2320	1320	1960	3850	3790	383	97	79
20	---	874	996	779	3700	1230	1800	5430	2270	357	92	101
21	---	854	932	775	3260	1140	1690	2820	1520	331	86	134
22	557	794	885	770	2250	1060	1590	2540	1280	300	106	97
23	544	740	874	880	1930	1010	1540	2280	1040	280	247	88
24	514	674	895	875	1760	985	1440	1790	932	270	158	83
25	506	619	1130	850	1540	969	1330	1470	849	273	128	75
26	498	601	2110	775	1370	1270	1250	1330	784	266	113	67
27	485	628	1640	750	1230	3670	1180	1280	764	257	101	65
28	490	688	8670	660	1180	3040	1180	1360	1090	241	99	59
29	557	880	4730	1050	---	3290	1100	1100	5580	228	92	54
30	707	1080	2950	2200	---	3810	1080	990	5060	283	88	52
31	735	---	2270	1650	---	5740	---	921	---	646	88	---
TOTAL	---	29835	54511	37183	51492	53234	88010	58401	46510	21456	5188	2339
MEAN	---	995	1758	1199	1839	1717	2934	1884	1550	692	167	78.0
MAX	---	4670	8670	2250	5520	5740	6870	5430	5580	3490	414	134
MIN	---	477	669	660	417	969	1080	921	628	228	86	52

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 east of Oregon.

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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 (STAND- ARD 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)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)
OCT 07...	1130	1028	29001	960	490	8.0	15.0	9.4	93	10	280
NOV 03...	0830	1028	29001	370	448	8.2	9.5	9.4	82	10	800
DEC 15...	1130	1028	29001	2070	480	8.0	1.0	12.8	90	11	1200
JAN 05...	0830	1028	29001	3000	430	8.3	.5	12.0	83	14	1800
FEB 09...	0800	1028	29001	1400	500	7.8	.0	13.2	90	21	1600
MAR 08...	0815	1028	29001	2600	397	8.0	8.5	7.4	63	44	14000
APR 14...	1000	1028	29001	4100	350	8.2	7.0	9.6	79	15	K3200
MAY 11...	0900	1028	29001	1190	418	7.8	16.5	7.4	76	40	2200
JUN 09...	1000	1028	29001	660	520	7.4	22.0	8.0	--	21	--
JUL 19...	0830	1028	29001	476	337	8.3	28.0	6.0	76	37	320
AUG 04...	1000	1028	29001	780	380	8.5	27.0	7.4	--	44	210
SEP 28...	0800	1028	29001	77	467	7.9	20.5	7.6	84	16	400

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...	230	51	66	16	12	3.2	180	3.5	31	10
NOV 03...	--	--	--	--	--	--	177	2.1	--	--
DEC 15...	--	--	--	--	--	--	172	3.3	--	--
JAN 05...	190	26	53	14	10	2.8	164	1.6	31	11
FEB 09...	--	--	--	--	--	--	190	5.8	--	--
MAR 08...	--	--	--	--	--	--	148	2.9	--	--
APR 14...	180	51	49	13	8.6	2.2	125	1.5	29	8.0
MAY 11...	--	--	--	--	--	--	148	4.5	--	--
JUN 09...	--	--	--	--	--	--	157	12	--	--
JUL 19...	140	30	32	14	10	2.1	108	1.0	39	12
AUG 04...	--	--	--	--	--	--	151	.9	--	--
SEP 28...	--	--	--	--	--	--	177	4.3	--	--

K--Results based on colony count outside the acceptable range (non-ideal colony count).

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SOLIDS, RESIDUE AT 180 DEG. C SUS- SOLVED (MG/L) (70300)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDE (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...	.30	277	11	3.00	.050	.280	<2	6	9	93
	NOV 03...	--	--	104	3.20	.050	.240	--	--	--	--
DEC 15...	--	--	104	5.50	.120	.230	--	--	--	--	
JAN 05...	.20	232	328	5.60	.120	.250	<2	<2	7	<5	
FEB 09...	--	--	--	4.90	.190	.540	--	--	--	--	
MAR 08...	--	--	1600	3.50	.070	1.00	--	--	--	--	
APR 14...	.10	260	1220	5.40	.090	--	10	6	<5	<5	
MAY 11...	--	--	206	5.20	.060	.620	--	--	--	--	
JUN 09...	--	--	220	5.00	.050	.430	--	--	--	--	
JUL 19...	.20	182	114	2.00	.010	.290	<2	<2	6	<5	
AUG 04...	--	--	160	1.30	.010	.600	--	--	--	--	
SEP 28...	--	--	43	<.050	.010	<.050	--	--	--	--	

[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 and Grand Island Railroad bridge in St. Joseph. River mile 448.2.

DRAINAGE AREA.--420,300 mi², 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 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 higher.

REMARKS.--Records good. Discharge measurements made weekly except during ice-flow periods. Some regulation from many upstream reservoirs.

AVERAGE DISCHARGE.--55 years, 40,200 ft³/s, 29,120,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 397,000 ft³/s Apr. 22, 23, 1952, gage height, 26.82 ft; minimum, 2,300 ft³/s Jan. 9, 1937; minimum gage height, 0.00 ft Dec. 18, 19, 1940.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of April 29, 1881 reached a stage of 27.2 ft, present datum, discharge, about 370,000 ft³/s, computed by Corps of Engineers.
Flood of June 1844 reached a stage of 24.5 ft; discharge, about 370,000 ft³/s, computed by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 144,000 ft³/s June 19, gage height, 20.89 ft; minimum daily, 39,900 ft³/s Jan. 1.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	46600	53800	65900	39900	52300	83700	105000	65100	64000	126000	62800	53000
2	49400	52900	65900	40300	46700	87300	126000	74700	64100	128000	61900	52800
3	53100	53100	65200	40600	44400	88800	117000	101000	62400	128000	61000	52800
4	57200	53400	66500	40300	42600	90100	105000	111000	62500	127000	61000	52100
5	57200	53100	70600	40900	41100	91300	92700	114000	63100	118000	59600	51100
6	54600	53200	73900	42000	41300	93800	88500	109000	63400	115000	58400	50100
7	53300	55200	73000	43200	41200	94400	88100	100000	62700	95600	57800	51000
8	54000	56300	66800	45100	42000	107000	87800	96000	63100	88300	57700	50900
9	59300	55500	63000	46500	41800	115000	86700	92000	63000	84000	57700	50100
10	58000	56000	62000	47600	41600	107000	90500	87000	61900	81900	56800	49100
11	71900	57800	58000	50600	42100	92400	92400	80800	62400	79700	56000	49400
12	62000	66400	55000	49600	43100	84300	91300	77400	62900	78000	54900	49200
13	58600	75600	52000	46200	44400	81900	92700	82000	64500	75600	54600	48400
14	56100	77400	49400	45800	48300	78300	99600	83000	78000	72600	53500	49500
15	55200	72000	47300	46700	59600	76600	110000	78700	107000	69800	53600	51200
16	54200	67300	44800	47200	68900	81000	113000	78900	114000	68000	53300	50600
17	53300	65400	42500	45200	71100	91400	105000	79100	106000	67000	53200	51600
18	53600	65300	42600	43700	73100	92800	99700	77500	115000	65700	52800	51900
19	54000	65500	43300	42600	72600	82200	97400	90900	141000	65100	52300	51300
20	54300	67300	44200	41500	90600	75900	91800	106000	131000	64200	51700	52800
21	55000	69700	44500	41600	104000	73000	85400	102000	130000	63400	52000	55100
22	55700	70400	44200	42900	84600	71500	81700	93600	128000	64300	52500	56300
23	55600	68800	44500	42800	75400	69400	78300	85000	124000	64200	53100	53500
24	55500	69200	45200	44100	77700	67900	75200	79600	121000	62900	53100	52200
25	54800	69200	45900	44300	78200	65300	72500	80100	118000	62900	52000	51700
26	56000	67200	47600	43800	76600	69600	70600	81900	112000	63800	52100	51300
27	55900	65500	53900	43100	75300	106000	69500	73200	99600	61900	52500	51400
28	56900	63600	62100	43000	75400	90300	67800	72100	100000	59800	53200	51000
29	57100	64000	57100	43800	---	83600	66800	69300	111000	60000	53800	52500
30	56300	65500	46100	47200	---	81000	64600	67400	121000	61700	53500	54200
31	55100	---	40700	57100	---	84700	---	65100	---	62600	52900	---
TOTAL	1729800	1895600	1683700	1379200	1696000	2657500	2712600	2653400	2776600	2485000	1711300	1548100
MEAN	55800	63190	54310	44490	60570	85730	90420	85590	92550	80160	55200	51600
MAX	71900	77400	73900	57100	104000	115000	126000	114000	141000	128000	62800	56300
MIN	46600	52900	40700	39900	41100	65300	64600	65100	61900	59800	51700	48400
CAL YR 1982	TOTAL		19397000	MEAN		53140	MAX	154000	MIN		11700	
WTR YR 1983	TOTAL		24928800	MEAN		68300	MAX	141000	MIN		39900	

MISSOURI RIVER MAIN STEM

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

WATER-QUALITY RECORDS
(National stream-quality accounting network station)

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD 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...	0940	53300	775	8.3	11.0	30	9.4	85	10000	2500
JAN										
05...	0945	41000	740	8.0	1.0	32	11.6	81	7400	9800
MAR										
08...	1230	108000	590	8.0	8.0	350	9.2	78	4600	42000
MAY										
11...	1115	81000	735	8.1	15.5	140	8.2	82	2100	18000
JUL										
19...	1115	65500	765	8.3	27.5	50	5.6	70	12000	9600
SEP										
28...	1030	51000	820	8.3	18.0	25	7.4	77	1000	580

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 AS CACO3) (00410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
NOV										
03...	270	90	68	24	61	33	2	5.6	180	190
JAN										
05...	270	87	67	24	59	32	2	5.3	180	180
MAR										
08...	240	69	61	21	30	21	.9	6.0	170	110
MAY										
11...	300	100	77	27	40	22	1	7.1	200	150
JUL										
19...	290	99	74	25	52	28	1	7.0	190	170
SEP										
28...	260	87	65	23	73	37	2	6.4	170	220

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									
03...	19	.50	11	514	490	.70	74000	1.50	.090
JAN									
05...	19	.40	12	495	480	.67	54800	2.20	.160
MAR									
08...	14	.40	14	379	360	.52	111000	3.80	.310
MAY									
11...	18	.40	13	471	450	.64	103000	3.80	.080
JUL									
19...	19	.50	17	495	480	.67	87500	2.00	.050
SEP									
28...	19	.50	11	523	520	.71	72000	.610	.060

MISSOURI RIVER MAIN STEM

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
NOV 03...	.12	1.2	.190	.58	.070	.080	1260	181000	7
JAN 05...	.21	.70	.200	.61	.080	.060	696	77000	14
MAR 08...	.40	4.0	.970	3.0	.220	.130	2060	601000	68
MAY 11...	.10	2.0	.350	1.1	.100	.080	1480	324000	49
JUL 19...	.06	2.2	.340	1.0	.130	.100	390	69000	83
SEP 28...	.08	1.3	.160	.49	.040	.050	431	59300	23

DATE	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)
NOV 03...	10	3	99	<.5	<1	<1	<3	7	17	2
JAN 05...	30	2	100	.6	<1	<1	<3	5	20	3
MAY 11...	60	3	140	<.5	<1	<1	<3	2	35	1
JUL 19...	10	5	130	<.5	<1	<1	<3	6	15	<1

DATE	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 03...	60	4	.1	<10	3	2	<1	510	<6	9
JAN 05...	52	18	<.1	<10	10	2	<1	510	<6	8
MAY 11...	36	3	.3	<10	2	4	<1	480	<6	5
JUL 19...	49	5	<.1	<10	3	3	<1	510	6	26

PLATTE RIVER BASIN (IOWA-MISSOURI)

06819500 ONE HUNDRED AND TWO RIVER AT MARYVILLE, MO

LOCATION.--Lat 40°20'45", long 94°49'56", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ 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 upstream from bridge on U.S. Highway 136, 0.3 mi downstream from Thill Branch, 1 mi east of Maryville and at mile 64.0.

DRAINAGE AREA.--515 mi².

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 National Geodetic Vertical Datum of 1929. Nonrecording gage prior to September 15, 1958. Prior to June 20, 1934, at present site and datum. June 20, 1934, to October 31, 1971, at site 3 mi upstream at datum 5.68 ft higher.

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

AVERAGE DISCHARGE.--51 years, 226 ft³/s, 6.14 in/yr, 163,700 acre-ft /yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 28,000 ft³/s October 12, 1973, gage height, 19.25 ft; no flow at times in several years.

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

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 9	0630	8,710	13.33
Dec. 28	0715	*11,200	14.80
May 19	0745	8,750	13.31

Minimum, 2.8 ft³/s September 6, 7, gage height, 3.51 ft.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	211	119	307	469	410	460	2340	714	265	517	93	5.5
2	170	117	271	438	240	445	3030	1270	245	324	256	5.5
3	170	125	239	301	140	425	2150	2000	228	463	313	3.9
4	158	101	196	337	371	400	1500	850	210	440	195	3.3
5	158	96	1390	408	367	570	1030	550	200	215	130	3.6
6	225	106	4020	390	349	870	1780	500	300	150	70	3.2
7	240	112	1120	641	316	1300	1170	500	251	119	82	4.4
8	831	116	704	496	297	2000	918	658	192	99	100	8.3
9	6040	109	371	535	274	432	1960	530	161	201	68	25
10	1200	102	519	1240	293	441	2960	435	123	154	41	15
11	649	850	334	789	549	431	1260	334	114	230	26	19
12	446	2260	200	332	707	419	1380	327	124	158	14	18
13	303	587	279	466	1040	459	1320	1710	159	134	14	10
14	273	379	347	508	4620	452	987	1460	2410	64	14	6.5
15	234	288	300	324	4850	474	835	1190	580	57	14	22
16	196	251	220	269	2500	509	647	661	288	51	14	30
17	173	246	230	299	1350	484	562	519	723	45	14	25
18	169	232	278	212	760	502	507	772	3190	41	9.5	22
19	161	239	292	223	1400	475	473	6140	1300	37	8.9	17
20	129	265	236	236	2500	468	438	4580	535	33	9.5	35
21	126	232	208	249	1950	465	411	4200	334	29	8.9	64
22	110	184	217	253	1550	463	401	3950	246	26	20	34
23	111	170	238	258	1250	454	392	3800	187	24	51	25
24	106	134	345	292	950	498	354	1820	154	21	21	23
25	98	117	1040	334	780	476	317	1070	130	18	14	29
26	91	148	594	274	610	1760	312	670	119	14	13	28
27	90	117	980	291	500	1920	334	450	158	36	11	20
28	96	199	7560	411	480	2310	348	500	2360	43	13	16
29	288	521	1100	1380	---	2730	378	390	1620	53	13	17
30	219	390	638	950	---	2860	588	300	1120	38	9.5	14
31	142	---	592	640	---	2370	---	285	---	41	8.3	---
TOTAL	13613	8912	25365	14245	31403	28322	31082	43135	18026	3875	1668.6	552.2
MEAN	439	297	818	460	1122	914	1036	1391	601	125	53.8	18.4
MAX	6040	2260	7560	1380	4850	2860	3030	6140	3190	517	313	64
MIN	90	96	196	212	140	400	312	285	114	14	8.3	3.2
CAL YR 1982		TOTAL	279191		MEAN	765	MAX	11400	MIN	26		
WTR YR 1983		TOTAL	220198.8		MEAN	603	MAX	7560	MIN	3.2		

PLATTE RIVER BASIN (IOWA-MISSOURI)

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 downstream from bridge of U.S. Highway 169, 1.5 mi downstream from Third Fork, 3.5 mi northeast of Agency, and at mile 66.8.

DRAINAGE AREA.--1,760 mi², 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 National Geodetic Vertical Datum of 1929. May 22, 1924 to Aug. 9, 1930, nonrecording gage at site 4 mi 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, 1932-83), 921 ft³/s, 7.11 in/yr, 667,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 53,000 ft³/s from loop rating, July 20, 1965, gage height, 35.05 ft; 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 and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 9	2115	10,700	21.47	Apr. 3	0500	11,300	21.88
Dec. 6	2100	*14,900	23.20	Apr. 10	1915	7,510	18.35
Dec. 29	0100	14,600	23.10	May 22	0215	9,390	20.36

Minimum discharge, 30 ft³/s Sept. 30, gage height, 4.40 ft.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	283	801	1100	1800	1080	882	6730	1250	802	2150	88	57
2	302	634	1010	1560	671	827	10500	1610	718	1290	84	65
3	303	319	926	1270	431	801	10800	1500	681	909	81	60
4	301	331	839	1140	372	783	6500	1470	688	1870	79	55
5	299	308	4410	1110	547	951	7530	1160	986	1530	77	54
6	244	283	13300	1150	637	1250	5950	1090	739	694	75	43
7	243	279	11800	1250	622	1620	3930	1030	688	553	73	37
8	313	313	4640	1280	613	1320	2450	1040	671	472	71	36
9	7580	360	2110	1300	547	1140	3430	1310	539	413	71	34
10	8020	347	2020	1610	547	921	6610	1040	479	382	92	50
11	4000	582	2650	2680	577	805	5710	930	451	339	92	66
12	1980	2770	1290	1740	652	809	3790	992	433	260	106	74
13	1190	4410	1040	1160	1120	778	3210	1920	434	257	96	79
14	969	1550	1100	1110	3520	763	2950	3810	1150	246	90	76
15	836	879	1140	1040	5950	789	2050	3140	2550	235	85	74
16	757	725	1040	884	5210	759	1850	2270	1680	235	87	54
17	734	664	939	824	3100	738	1460	1480	888	213	60	47
18	711	630	1010	778	2380	784	1310	1320	3820	201	59	42
19	680	622	988	775	1850	760	1230	2180	6040	222	56	45
20	733	631	979	775	2020	779	1170	6010	3560	233	50	79
21	611	631	911	730	2060	750	1110	7230	1360	233	48	69
22	475	645	884	787	1740	740	1120	8840	1020	217	54	66
23	482	631	869	802	1560	741	1110	5040	841	188	91	64
24	539	575	954	802	1390	741	1050	2260	700	154	87	72
25	518	541	1580	814	1210	696	988	1730	615	151	66	66
26	522	536	2270	799	1100	1160	945	1180	686	135	62	57
27	521	523	2280	724	977	5170	954	1010	728	108	74	47
28	618	783	11900	766	920	4810	1960	2000	644	86	45	47
29	1160	952	13300	1020	---	3420	1250	1410	3290	79	37	37
30	1030	1020	8690	2020	---	4140	1060	969	4850	97	40	30
31	1010	---	2730	2580	---	4670	---	839	---	94	40	---
TOTAL	37964	24275	100699	37080	43403	45297	100707	69060	42731	14266	2216	1682
MEAN	1225	809	3248	1196	1550	1461	3357	2228	1424	460	71.5	56.1
MAX	8020	4410	13300	2680	5950	5170	10800	8840	6040	2150	106	79
MIN	243	279	839	724	372	696	945	839	433	79	37	30
CAL YR 1982		TOTAL	997797		MEAN	2734	MAX	27500		MIN	130	
WTR YR 1983		TOTAL	519380		MEAN	1423	MAX	13300		MIN	30	

PLATTE RIVER BASIN (IOWA-MISSOURI)

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 northeast of Smithville and 5.0 mi north of Kansas City.

DRAINAGE AREA.--213 mi².

PERIOD OF RECORD.--July 1976 to current year. Records collected at same site since 1976 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 13, 1976. An uncontrolled limited service type spillway, 50 ft wide, is located at the right abutment. Capacity of surcharge pool (elevations 876.2 ft to 891.1 ft), 182,209 acre-ft; of flood control pool (elevations 864.2 ft to 876.2 ft), 101,800 acre-ft; and of multipurpose pool (elevation 799.0 ft to 864.2 ft), 144,600 acre-ft. 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, 184,400 acre-ft Apr. 16, 1983, elevation 869.37 ft; minimum, 2,360 acre-ft Jan. 13, 1980, elevation, 819.0 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents 184,400 acre-ft Apr. 16, elevation, 869.37 ft; minimum 138,100 acre-ft Sept. 26, 27, 30, elevation 863.29 ft.

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	146200	144900	145600	162500	149100	148900	151300	166800	162400	155000	144900	141000
2	145900	144500	146100	162800	149100	148800	163900	166400	160600	155100	144800	140800
3	145900	144300	146300	162900	148700	148600	166300	166200	158600	154900	144700	140700
4	145700	144500	146300	162000	148200	148400	166600	164600	156600	155200	144500	140600
5	145400	144400	148300	160200	148000	148800	170900	162800	155000	156000	144500	140400
6	145300	143800	148600	158500	147700	149400	177300	160900	153300	155500	144400	140200
7	145000	143800	152300	157400	147500	149700	177900	160000	151400	155200	144300	140000
8	144800	143800	157000	156100	147500	149900	178500	158700	150800	154700	144200	139900
9	145600	143800	157000	154700	147400	149400	180100	156900	150600	154100	144000	139700
10	145600	143800	157600	153300	147400	149000	182400	155000	150200	153800	143900	139500
11	145500	144500	160100	153000	147300	148700	182800	153200	149800	153400	143800	139600
12	145400	144900	160300	152400	147700	148600	183200	152700	149500	153000	143400	139400
13	145300	144900	160500	152300	148400	148400	183700	162900	149100	152700	143200	139200
14	145300	144900	159300	152200	149700	148200	183900	167300	150000	152100	143000	139000
15	145100	145700	158200	151800	150600	148000	184100	168600	149900	151600	142900	139100
16	144900	144800	156300	151500	150900	147900	184400	169000	149600	151100	142800	139000
17	144800	144700	154800	151200	151100	147600	184300	169200	149200	150700	142800	139000
18	144700	144700	154700	150800	151100	147300	184100	169300	149900	150300	142800	138800
19	144600	144700	154600	150400	151100	146900	183700	168300	153400	150000	142700	139000
20	144500	144800	154300	150000	151100	146600	183600	166600	153600	149400	142500	139300
21	144300	144900	154100	149900	150900	146300	182300	164900	153800	148900	142300	138700
22	144300	144900	154000	149600	150800	145900	180800	164200	153800	148500	142200	138600
23	144200	145100	153800	149300	150500	145800	179200	163900	153600	148000	142000	138300
24	144200	145300	153700	149000	150300	145600	177400	164000	153200	147500	141800	138200
25	144100	145300	154100	148800	150000	145300	175600	164600	152800	147100	141800	138200
26	144000	145300	154300	148700	149700	146200	172400	164600	152400	146600	141800	138100
27	144000	145300	154500	148300	149500	147300	169300	164200	153800	146100	141700	138100
28	143800	145300	160300	147800	149200	148500	169100	164200	154400	145600	141600	138200
29	144900	145300	161600	148600	---	148900	168200	164200	154400	145300	141400	138200
30	144900	145600	162000	148800	---	149400	166700	164200	154900	145200	141500	138100
31	144900	---	162300	148900	---	149700	---	164100	---	145100	141100	---

WTR YR

(+)	864.25	864.35	866.59	864.80	864.84	864.90	867.16	866.62	865.61	864.28	863.71	863.29
(-)	-1100	+700	+16700	-13400	+300	+500	+17000	-2600	-9200	-9800	-4000	-3000

MAX	146200	145700	162300	162900	151100	149900	184400	169300	162400	156000	144900	141000
MIN	143800	143800	145600	147800	147300	145300	151300	152700	149100	145100	141100	138100

CAL YR.(+) +140600

WTR YR.....(+) - 7900

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

(-) Change 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 NW¼SW¼ 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 upstream from town bridge in Smithville, 1,500 ft upstream from bridge on U.S. Highway 159, 0.5 mi downstream from Wilkerson Creek, 2.4 mile downstream from Smithville Lake and at mile 11.1.

DRAINAGE AREA.--234 mi².

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 National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Mar. 23, 1966, nonrecording gage at site 1,500 ft 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.--18 years, 158 ft³/s, 9.17 in/yr, 114,500 acre-ft/yr.

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

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of 1947 reached a stage of 37.4 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,670 ft³/s at 0015 May 13, gage height, 26.99 ft; minimum daily discharge, 2.3 ft³/s April 15.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	106	8.2	12	174	218	212	433	280	897	19	8.8	9.8
2	113	8.5	16	174	219	215	785	267	895	20	8.5	9.8
3	112	8.3	12	350	216	213	201	784	897	144	8.4	9.8
4	112	8.2	10	768	214	216	288	949	885	227	8.4	9.8
5	112	8.4	38	768	213	239	927	938	891	223	8.5	9.8
6	92	9.0	92	768	213	57	120	811	876	222	8.4	9.8
7	32	10	23	768	212	136	30	433	499	222	8.6	10
8	13	12	20	764	210	218	20	909	204	221	8.7	10
9	13	14	15	764	210	212	100	899	206	224	8.7	10
10	9.3	17	23	430	213	210	49	891	208	221	8.3	10
11	9.3	21	24	187	243	209	14	512	206	222	8.9	10
12	9.3	21	21	186	262	210	10	480	207	222	8.9	10
13	22	9.8	20	186	257	208	6.6	865	216	221	8.9	10
14	49	9.8	790	186	245	206	5.3	936	375	228	9.0	9.1
15	50	10	772	186	231	206	2.3	132	217	224	9.0	11
16	49	8.5	768	187	228	206	71	212	215	194	9.0	11
17	49	8.8	687	187	222	206	144	279	215	220	8.4	12
18	48	8.8	647	188	219	205	142	549	1220	217	7.8	12
19	49	12	640	190	218	206	141	954	71	215	8.9	13
20	32	12	194	192	215	210	352	956	27	213	8.9	13
21	12	12	194	193	214	207	993	661	19	211	9.0	14
22	8.5	10	194	194	213	205	1000	264	123	211	9.1	14
23	8.5	10	194	196	212	205	997	189	228	215	9.1	15
24	8.5	23	190	197	211	201	987	42	220	211	9.2	15
25	9.0	12	190	198	209	200	1380	65	221	214	9.5	16
26	8.5	8.8	190	200	211	405	1820	172	647	215	9.5	17
27	8.5	12	50	201	213	347	792	259	135	209	9.5	17
28	9.8	25	19	203	212	136	645	357	34	85	9.5	18
29	10	16	19	234	---	43	994	42	42	8.9	9.5	19
30	8.2	12	19	225	---	40	981	32	31	9.0	9.7	20
31	8.2	---	50	218	---	37	---	480	---	9.0	9.8	---
TOTAL	1180.6	366.1	6133	9862	6173	6026	14430.2	15599	11127	5516.9	276.4	374.9
MEAN	38.1	12.2	198	318	220	194	481	503	371	178	8.92	12.5
MAX	113	25	790	768	262	405	1820	956	1220	228	9.8	20
MIN	8.2	8.2	10	174	209	37	2.3	32	19	8.9	7.8	9.1
CAL YR 1982	TOTAL		56198.2	MEAN		154	MAX	7190	MIN		3.8	
WTR YR 1983	TOTAL		77065.1	MEAN		211	MAX	1820	MIN		2.3	

PLATTE RIVER BASIN (IOWA-MISSOURI)

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 102400012, on downstream side of center pier at Sharps bridge, 0.2 mi upstream from Jowler Creek, 3.3 mi downstream from Little Platte River, 3.6 mi south of Camden Point, and at mile 25.1.

DRAINAGE AREA.--2,380 mi².

WATER-DISCHARGE RECORDS

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

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

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,100 ft³/s June 1, 1982, gage height 33.81 ft; minimum discharge, 19 ft³/s Dec. 4, 1980, minimum gage height, 4.00 ft Dec. 13, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 14,400 ft³/s Dec. 31, gage height, 29.15 ft, minimum gage height, 30.05 ft April 5, backwater from debris; minimum discharge, 35 ft³/s Sept. 30, minimum gage height, 4.12 ft.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	647	1100	1270	9470	3950	1280	6010	2420	2010	4800	187	84
2	607	898	1370	3500	2320	1220	9260	2480	1990	2720	170	89
3	595	773	1240	2140	1570	1160	11000	2800	1930	1610	154	77
4	570	631	1080	2510	1010	971	11800	3320	1880	1600	145	69
5	558	612	2920	2420	1130	1040	12100	3040	1960	3070	137	65
6	542	585	8820	2400	1350	1340	11600	2700	2220	2120	127	58
7	526	536	11400	2560	1560	2340	11000	1890	1730	1140	123	53
8	491	529	13700	2660	1370	2200	8750	2320	1010	921	121	57
9	2180	525	12200	2750	1370	1790	5580	2420	924	796	120	55
10	7760	514	6540	2740	1380	1460	5570	2670	806	728	112	49
11	9730	578	5080	2540	1510	1140	6900	2140	732	681	109	89
12	10600	1900	3630	3420	1700	991	7050	1500	696	640	104	69
13	5000	4590	1980	2480	2010	966	5450	6480	682	608	111	60
14	1730	4920	2390	1700	3700	940	4240	6830	1600	586	103	59
15	1270	2220	2560	1590	6340	905	3540	6120	2150	599	101	66
16	1100	1290	2490	1420	7780	900	2720	4200	3600	540	112	78
17	1020	1090	2180	1300	6850	869	2500	3050	2400	508	109	126
18	951	1000	1540	1080	4500	843	2040	2370	4530	504	92	109
19	901	961	1550	1000	3460	853	1800	2970	7610	491	77	87
20	864	943	1500	1060	2790	864	1740	4770	7560	472	76	88
21	892	921	1440	1050	2980	888	2360	7800	4520	457	75	101
22	780	905	1360	1100	2960	847	2510	8730	1970	443	73	116
23	634	903	1310	1240	2530	814	2540	9690	1520	430	79	89
24	609	865	1330	1250	2290	788	2400	7140	1260	416	152	77
25	564	821	1740	1190	2040	770	2410	3410	1090	412	157	77
26	533	736	2410	1150	1760	1010	3190	2350	1330	401	148	91
27	520	684	3150	1080	1550	3680	2710	1870	2040	393	149	81
28	527	852	6640	1060	1390	5890	2180	2630	1130	363	127	69
29	804	1200	9990	1280	---	5020	3640	3040	1900	195	99	52
30	1270	1250	12400	1940	---	4080	3180	1900	3100	175	85	38
31	1150	---	14000	3660	---	4320	---	1370	---	191	85	---
TOTAL	55925	35332	141210	66740	75150	52179	157770	116420	67880	29010	3619	2278
MEAN	1804	1178	4555	2153	2684	1683	5259	3755	2263	936	117	75.9
MAX	10600	4920	14000	9470	7780	5890	12100	9690	7610	4800	187	126
MIN	491	514	1080	1000	1010	770	1740	1370	682	175	73	38
	CAL YR 1982	TOTAL	1382689	MEAN	3788	MAX	25600	MIN	310			
	WTR YR 1983	TOTAL	803513	MEAN	2201	MAX	14000	MIN	38			

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 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD 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...	1530	872	456	8.0	15.0	60	8.2	81	>3000	K600
JAN 04...	1515	2580	368	8.0	1.5	110	12.4	88	1200	17000
MAY 10...	1500	2660	378	8.2	15.5	45	8.4	84	210	340
JUL 18...	1645	504	370	8.3	28.0	26	4.8	61	400	1100

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 02...	200	24	60	13	12	11	.4	6.2	180	36
JAN 04...	170	27	50	10	9.1	10	.3	4.4	140	27
MAY 10...	170	21	50	11	11	12	.4	4.0	150	28
JUL 18...	150	0	45	9.9	12	14	.4	4.2	170	28

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...	16	.30	14	281	270	.38	662	1.50	.080
JAN 04...	10	.20	10	217	210	.30	1510	2.70	.120
MAY 10...	10	.20	5.2	217	210	.30	1560	1.50	.070
JUL 18...	12	.30	2.2	193	220	.26	263	.180	.080

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- PENDEO (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDEO (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
NOV 02...	.10	1.9	.290	.89	.130	.090	121	285	97
JAN 04...	.15	2.7	.400	1.2	.080	.030	673	4690	79
MAY 10...	.09	1.6	.130	.40	.050	.040	330	2370	83
JUL 18...	.10	1.7	.240	.74	.050	.040	170	231	85

PLATTE RIVER BASIN

06821190 PLATTE RIVER AT SHARPS STATION, MO.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)
NOV 02...	50	2	160	.7	2	<1	<3	3	70	1
JAN 04...	80	1	130	<.5	<1	<1	<3	3	47	3
MAY 10...	50	1	120	3	4	<1	4	2	44	2
JUL 18...	<10	2	120	<.5	<1	<1	<3	5	25	<1

DATE	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 02...	22	100	.1	<10	2	<1	<1	260	<6	15
JAN 04...	17	160	.5	<10	2	1	1	220	<6	28
MAY 10...	13	44	.3	<10	1	1	<1	240	<6	48
JUL 18...	17	180	.1	<10	1	1	<1	210	<6	17

06892350 KANSAS RIVER AT DESOTO, KS
(National stream-quality accounting network and pesticide station)

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 upstream from Kill Creek and at mile 31.0.

DRAINAGE AREA.--59,756 mi², of which a large area is noncontributing.

WATER-DISCHARGE RECORDS

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 National Geodetic Vertical Datum of 1929. July 9, 1917, to Apr. 23, 1934, nonrecording gage; Apr. 24, 1934, to Nov. 26, 1961, water-stage recorder at site 9.7 mi downstream at datum 11.81 ft lower; Nov. 26, 1961, to Sept. 30, 1971, water-stage recorder at site 10.2 mi downstream at datum 17.81 ft lower; and Oct. 1, 1971, to Sept. 30, 1973, at site 10.2 mi downstream at datum 22.81 ft lower.

REMARKS.--Records good. Natural flow of stream affected by lakes and reservoirs in Colorado, Nebraska, and Kansas, and by numerous diversions above station. Diurnal fluctuations caused by hydroelectric plant 20.8 mi upstream; since storage capacity is small, daily flows are not affected appreciably.

AVERAGE DISCHARGE.--66 years, 6,988 ft³/s, 5,063,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 510,000 ft³/s July 13, 1951, gage height, 37.3 ft, from floodmarks, present site and datum, from rating curve extended above 128,000 ft³/s on basis of slope-area measurement of peak flow at mile 19.52 and at mile 18.60; minimum observed, 160 ft³/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, 61,500 ft³/s Apr. 2, gage height, 17.93 ft; minimum daily, 1,080 ft³/s Sept. 9.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2500	1970	3110	4310	4290	15100	33400	27700	16300	8760	2870	1520
2	2380	2260	3290	4330	3660	14700	58600	17900	15300	6230	2820	1460
3	2390	2090	4380	4110	3330	13200	44100	14500	14000	5360	2560	1420
4	2340	2110	4680	3880	3000	13100	34800	13400	13200	5860	2460	1370
5	2260	1980	5910	3790	3000	16200	45000	12400	7730	8810	2350	1300
6	2510	2040	8080	3730	3500	21400	48000	12100	10100	11900	2340	1210
7	2450	2160	7480	3540	3300	20500	36900	11200	9730	12500	2290	1130
8	2350	2210	6070	3560	4000	15900	27100	11300	6490	11900	2280	1100
9	2950	2210	5710	3720	4800	14000	29800	11900	5920	14700	2260	1080
10	3290	2130	5960	3720	5320	11600	28200	11800	5600	20000	2210	1090
11	3140	2090	7410	3810	5850	11000	25700	11600	13400	21800	2150	1120
12	2590	2560	7670	3870	6310	9810	23700	11900	15500	21900	2080	1450
13	2400	2740	6600	3600	6840	8060	22800	11900	15200	22000	2080	1440
14	2240	2680	6430	3450	8090	7170	21200	15800	14200	22600	2060	1330
15	2130	2360	6320	3560	11200	6800	19400	19900	19600	22600	2210	1290
16	2060	1940	6140	3660	12500	6540	18300	17000	16800	23000	2220	1290
17	2070	2100	5310	3900	12300	6300	17900	14800	14400	23300	2180	1200
18	2060	2140	4360	4470	11000	6130	17400	14300	15300	23500	2150	1170
19	1980	2190	4090	4660	10700	6040	17000	16800	26000	21500	2100	1150
20	1930	2280	3960	4550	12200	6010	16600	18100	30000	21400	1990	1190
21	1840	2260	3870	4640	12600	5990	16500	21000	18300	21100	1830	1310
22	1690	2200	3790	4890	12400	5920	18300	39500	14600	16300	1810	1310
23	1950	2220	3660	4550	12300	5490	19000	25900	13700	10200	1720	1260
24	1880	2300	3230	3850	12700	4870	17100	19700	13300	7850	1650	1200
25	1800	2320	3510	3350	16100	4740	16100	19400	12900	7360	1640	1160
26	1700	2320	3510	3200	16200	5940	15000	21300	12600	6930	1610	1190
27	1610	2350	3660	2930	15800	20800	14300	19100	12800	5730	1590	1170
28	1530	2420	6220	2870	15400	32100	24700	19000	15700	4890	1580	1140
29	1930	2690	7580	2930	---	21400	26900	17200	21600	4340	1570	1110
30	2180	2730	5560	3360	---	18000	19100	16400	14500	3620	1500	1100
31	1920	---	4250	3790	---	18200	---	16000	---	3300	1510	---
TOTAL	68050	68050	161800	118580	248690	373010	772900	530800	434770	421240	63670	37260
MEAN	2195	2268	5219	3825	8882	12030	25760	17120	14490	13590	2054	1242
MAX	3290	2740	8080	4890	16200	32100	58600	39500	30000	23500	2870	1520
MIN	1530	1940	3110	2870	3000	4740	14300	11200	5600	3300	1500	1080
CAL YR 1982	TOTAL		4220280	MEAN		11560	MAX	86100	MIN		1530	
WTR YR 1983	TOTAL		3298820	MEAN		9038	MAX	58600	MIN		1080	

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 and Quincy Railroad bridge at Kansas City, 1.4 mi downstream from Kansas River. River mile 366.1.

DRAINAGE AREA.--485,200 mi², 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 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 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.--86 years, 54,950 ft³/s, 39,810,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 573,000 ft³/s July 14, 1951; maximum gage height, 36.2 ft July 14, 1951; minimum discharge, about 1,500 ft³/s Jan. 9, 10, 1937; minimum gage height, -2.91 ft Jan. 29, 1966.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 192,800 ft³/s April 2, gage height, 20.59 ft; minimum daily, 43,400 ft³/s Feb. 6.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	49300	59600	70800	51300	64100	87500	131000	101000	79600	129000	64700	54900
2	50300	59200	70600	48300	55100	93900	186000	94800	81200	126000	64600	55300
3	53100	58900	69600	45400	47900	95000	177000	94100	82900	125000	63400	55500
4	57600	58400	69300	44700	44400	94900	152000	111000	82200	126000	62100	55100
5	60300	58900	75600	45000	43500	99000	158000	116000	78400	127000	61200	54400
6	59000	58200	85200	45700	43400	108000	158000	113000	76500	124000	61200	53500
7	56700	58600	85000	46900	43600	111000	142000	105000	80400	114000	60200	52500
8	57100	59900	82700	48000	44300	113000	128000	97700	73200	104000	57700	53100
9	65100	60100	78200	50000	45500	122000	124000	97300	71200	98200	56700	52500
10	67300	59400	74300	54100	45700	120000	124000	95000	69000	99900	56100	51500
11	76700	60800	70600	55300	46000	111000	124000	91900	72200	102000	56100	51300
12	83900	65000	67000	58200	46800	99900	120000	88100	78900	98100	56100	51300
13	72800	76600	62200	56100	48300	92500	117000	92100	79100	93300	56000	51200
14	66600	85700	58200	51700	51600	88600	117000	99300	82300	90500	56200	51100
15	62300	83600	56100	50600	62100	83200	122000	105000	109000	88600	56100	52700
16	59600	75900	54000	51400	78400	81000	129000	99700	124000	86700	56100	53700
17	57300	71600	51300	50900	83300	86200	124000	90400	118000	85900	55300	52900
18	55600	68700	48100	49100	83500	93100	117000	85400	119000	85100	54900	53700
19	55500	67500	47000	47900	81800	89200	114000	88400	147000	82900	54200	53200
20	55300	67700	47300	46700	87700	81800	111000	107000	161000	82200	54100	53200
21	56600	70000	47900	45800	107000	77000	107000	117000	144000	82300	53800	54200
22	57800	71800	47500	46200	106000	74700	104000	135000	133000	80300	54500	56400
23	59000	71400	46900	46700	90600	72300	102000	125000	126000	74000	55300	56700
24	59100	70500	47100	46200	87900	70500	98800	106000	122000	70700	56000	55100
25	57800	71300	47800	46600	91200	67300	94700	96400	119000	68600	55300	54200
26	56500	70900	49300	46300	90100	68700	90300	102000	118000	68600	54200	54000
27	57100	69700	53700	45300	87400	103000	88900	94600	114000	67800	54400	53000
28	58700	69500	65700	45200	84800	131000	97200	89000	110000	64500	54300	53000
29	60800	67900	74600	45100	---	112000	100000	87000	124000	62200	55300	52400
30	61000	69400	64200	46800	---	101000	90700	82800	127000	62100	55600	53800
31	60500	---	54800	54800	---	97300	---	79500	---	63600	55000	---
TOTAL	1866300	2016700	1922600	1512300	1892000	2925600	3648600	3086500	3102100	2833100	1766700	1605400
MEAN	60200	67220	62020	48780	67570	94370	121600	99560	103400	91390	56990	53510
MAX	83900	85700	85200	58200	107000	131000	186000	135000	161000	129000	64700	56700
MIN	49300	58200	46900	44700	43400	67300	88900	79500	69000	62100	53800	51100
CAL YR 1982	TOTAL 24394700			MEAN	66830	MAX	198000	MIN	12000			
WTR YR 1983	TOTAL 28177900			MEAN	77200	MAX	186000	MIN	43400			

BLUE RIVER BASIN

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 downstream from Indian Creek, in Kansas City and at river mile 23.16.

DRAINAGE AREA.--188 mi².

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 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 fair. Low flow regulated by commercial plants above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--44 years, 148 ft³/s, 10.69 in/yr, 107,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 41,000 ft³/s Sept., 13, 1961, gage height, 44.46 ft; 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 from information by City of Kansas City.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Apr. 1	1815	*9,670	25.35
Apr. 5	1245	7,700	22.69
May 1	1030	9,600	25.27

Minimum discharge, 13 ft³/s Sept. 10. gage height, 3.17 ft.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	22	282	111	119	81	5110	6300	78	149	24	23
2	22	22	135	100	117	77	3720	1080	81	103	23	23
3	22	22	64	90	91	74	835	438	422	79	26	22
4	22	22	47	85	79	215	1640	343	247	75	22	21
5	22	22	584	82	79	519	5530	303	247	57	23	23
6	22	22	332	84	81	285	1370	284	128	57	24	26
7	22	22	163	74	73	231	717	305	106	52	24	23
8	22	22	103	69	76	181	625	233	84	47	23	22
9	350	22	80	68	104	152	671	201	74	42	23	23
10	280	22	359	69	180	139	603	181	68	39	22	30
11	90	90	271	67	404	124	534	181	63	38	21	119
12	46	350	145	60	370	116	517	228	63	36	20	40
13	23	150	107	60	316	112	502	322	99	34	19	32
14	22	90	93	58	284	108	490	753	1170	33	19	26
15	21	21	82	54	239	101	433	318	180	31	22	29
16	21	21	68	52	227	95	407	233	102	32	23	27
17	21	20	63	49	185	91	390	188	78	33	21	25
18	21	20	62	45	160	86	374	348	680	31	20	25
19	21	21	58	44	146	106	354	223	623	30	22	25
20	21	20	55	43	127	193	342	164	231	29	20	97
21	21	20	51	42	120	126	343	142	139	28	21	31
22	21	21	49	48	112	99	482	130	100	26	23	27
23	340	22	47	50	107	87	464	116	82	26	28	25
24	100	22	96	46	100	80	389	122	71	33	24	25
25	21	22	86	42	95	78	344	350	61	50	23	29
26	21	21	60	45	89	707	323	147	70	29	22	27
27	21	22	260	46	84	705	991	117	59	27	21	25
28	23	58	457	76	87	380	1220	186	2210	26	21	23
29	22	507	214	228	---	328	422	117	456	25	24	23
30	22	487	147	195	---	447	350	89	257	25	26	23
31	22	---	125	130	---	336	---	84	---	24	29	---
TOTAL	1747	2225	4745	2312	4251	6459	30492	14226	8329	1346	703	939
MEAN	56.4	74.2	153	74.6	152	208	1016	459	278	43.4	22.7	31.3
MAX	350	507	584	228	404	707	5530	6300	2210	149	29	119
MIN	21	20	47	42	73	74	323	84	59	24	19	21
CAL YR 1982		TOTAL	81024		MEAN	222	MAX	8140	MIN	20		
WTR YR 1983		TOTAL	77774		MEAN	213	MAX	6300	MIN	19		

BLUE RIVER BASIN

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.--265 mi².

PERIOD OF RECORD.--October 1981 to present.

GAGE.--Water-stage recorder. Datum of gage is 724.41 ft 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 Aug. 13, 1982, gage height, 21.10 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, discharge, 34,900 ft³/s on a basis of slope-area measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 10,900 ft³/s Apr. 2, gage height, 16.91 ft.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.05	3.08	3.18	3.47	3.51	3.34	7.37	8.52	3.30	3.66	3.08	3.16
2	3.05	3.08	3.89	3.43	3.48	3.34	16.87	15.64	3.29	3.45	3.07	3.11
3	3.05	3.06	3.41	3.39	3.40	3.34	9.57	4.94	4.05	3.33	3.17	3.09
4	3.05	3.05	3.31	3.35	3.28	3.34	5.47	4.28	4.09	3.31	3.07	3.10
5	3.08	3.07	5.13	3.33	3.38	5.38	11.96	4.00	4.03	3.28	3.04	3.10
6	3.07	3.10	4.95	3.33	3.36	4.02	13.94	3.85	3.47	3.24	3.09	3.12
7	3.16	3.10	3.76	3.31	3.33	3.71	5.53	4.12	3.37	3.22	3.05	3.12
8	3.09	3.05	3.51	3.32	3.35	3.59	4.67	3.03	3.35	3.21	3.04	3.14
9	3.69	3.06	3.38	3.32	3.34	3.49	4.81	3.62	3.29	3.18	3.04	3.13
10	3.15	3.06	3.98	3.29	3.59	3.44	4.64	3.56	3.26	3.16	3.05	3.12
11	3.04	3.89	4.27	3.28	4.17	3.40	4.22	3.51	3.25	3.14	3.07	3.12
12	2.99	4.36	3.66	3.26	4.33	3.37	4.10	3.58	3.39	3.16	3.10	3.14
13	3.00	3.21	3.45	3.25	4.08	3.37	3.93	4.04	3.23	3.15	3.08	3.14
14	2.96	3.16	3.41	3.26	3.97	3.36	4.02	5.47	8.04	3.15	3.10	3.12
15	2.97	3.12	3.38	3.27	3.82	3.36	3.80	4.60	4.03	3.14	3.12	3.09
16	3.02	3.11	3.32	3.25	3.80	3.36	3.69	3.88	3.48	3.13	3.12	3.12
17	3.01	3.11	3.31	3.25	3.67	3.33	3.66	3.68	3.35	3.13	3.14	3.10
18	3.00	3.10	3.30	3.21	3.58	3.32	3.68	4.33	4.92	3.18	3.11	3.08
19	3.02	3.09	3.30	3.20	3.55	3.29	3.53	3.96	5.26	3.15	3.10	3.10
20	3.01	3.15	3.29	3.20	3.54	3.84	3.51	3.62	4.30	3.13	3.10	3.55
21	3.06	3.13	3.28	3.20	3.49	3.50	3.48	3.53	3.63	3.13	3.13	3.31
22	3.01	3.13	3.27	3.24	3.47	3.39	3.79	3.48	3.45	3.13	3.13	3.13
23	3.07	3.13	3.26	3.29	3.43	3.34	3.67	3.44	3.36	3.12	3.13	3.09
24	3.07	3.14	3.28	3.27	3.41	3.33	3.73	3.40	3.31	3.11	3.16	3.07
25	3.07	3.16	3.57	3.22	3.38	3.30	3.51	4.93	3.28	3.32	3.15	3.13
26	3.09	3.18	3.35	3.25	3.38	3.85	3.46	3.68	3.25	3.15	3.14	3.12
27	3.04	3.22	3.30	3.20	3.37	7.21	3.43	3.46	3.40	3.09	3.13	3.12
28	3.02	4.18	5.37	3.23	3.35	4.48	9.92	3.60	7.36	3.08	3.12	3.13
29	3.55	3.38	3.90	3.77	---	3.95	4.80	3.53	5.63	3.07	3.12	3.12
30	3.18	3.24	3.60	3.88	---	4.46	4.28	3.37	4.28	3.07	3.17	3.12
31	3.11	---	3.52	3.55	---	4.13	---	3.33	---	3.06	3.19	---
MEAN	3.09	3.23	3.64	3.32	3.56	3.74	5.57	4.39	3.99	3.19	3.11	3.14
MAX	3.69	4.36	5.37	3.88	4.33	7.21	16.87	15.64	8.04	3.66	3.19	3.55
MIN	2.96	3.05	3.18	3.20	3.28	3.29	3.43	3.03	3.23	3.06	3.04	3.07
WTR YR 1983		MEAN	3.66	MAX	16.87	MIN	2.96					

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 downstream from Longview damsite in Kansas City, 1 mi downstream from Longview Road and 2.0 mi upstream from Cedar Creek.

DRAINAGE AREA.--50.7 mi².

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

REVISED RECORDS.--WRD MO-77-1: 1975-76.

GAGE.--Water-stage recorder. Datum of gage is 798.60 ft National Geodetic Vertical Datum of 1929. Prior to October 25, 1974 at site 1.0 mi upstream and at datum 24.90 ft higher.

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

AVERAGE DISCHARGE.--17 years, 38.3 ft³/s, 10.23 in/yr, 27,750 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,700 ft³/s Aug. 13, 1982, gage height, 21.24 ft highwater mark; no flow Sept. 7, 8, 1983.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,250 ft³/s at 1000 hours May 1, gage height, 16.48 ft, no other peak above base of 2,200 ft³/s; no flow September 7, 8.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

MEAN VALUES												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.7	5.8	18	27	24	14	790	2040	13	46	2.0	.33
2	2.9	6.0	63	23	25	12	395	166	12	33	1.6	.22
3	2.4	5.3	32	22	23	13	146	100	55	20	1.0	.33
4	2.5	4.9	25	20	13	47	345	70	23	16	.92	.50
5	2.8	4.6	204	19	15	126	443	45	18	14	.92	.50
6	2.9	4.8	87	20	15	46	178	37	17	11	1.6	.33
7	2.9	5.1	44	20	11	29	108	41	14	7.8	4.6	.00
8	54	5.3	33	19	15	25	92	19	13	6.2	3.5	.00
9	63	6.0	26	19	20	21	124	18	10	5.2	2.2	.06
10	11	6.0	128	18	53	18	90	16	8.6	4.3	1.7	.22
11	5.3	16	69	14	121	17	67	17	12	3.7	1.0	3.7
12	3.8	23	38	14	79	16	58	20	18	3.7	.80	4.2
13	3.3	11	32	12	56	15	57	129	11	2.9	.80	3.9
14	3.1	9.3	29	18	44	15	58	269	98	2.5	.80	2.2
15	2.9	8.6	27	15	36	16	45	85	20	2.5	.80	4.6
16	2.8	9.6	23	14	41	14	43	53	13	2.5	.55	6.8
17	2.8	8.3	21	13	36	12	37	42	10	2.5	.55	2.4
18	2.9	8.3	23	12	33	12	36	124	112	2.5	.33	1.3
19	14	8.7	21	11	31	18	34	52	82	1.8	.28	.55
20	4.4	9.1	19	12	25	49	32	37	60	1.4	.38	13
21	3.3	8.9	17	12	24	28	31	39	34	1.0	.50	11
22	2.9	8.8	17	7.1	22	23	60	36	25	1.0	.55	2.5
23	3.1	8.6	15	14	21	21	59	30	20	.67	.80	1.6
24	2.8	9.1	62	13	19	18	38	25	18	4.2	2.4	1.0
25	3.2	8.8	41	12	17	17	32	95	15	21	2.2	.80
26	3.1	10	22	13	16	286	29	31	14	8.8	.55	1.0
27	3.7	15	106	16	15	143	228	23	15	5.5	.33	1.4
28	46	50	116	22	14	77	204	21	560	3.9	.38	1.0
29	34	24	43	76	---	65	78	16	230	2.9	.33	.55
30	8.1	19	34	45	---	106	62	11	86	2.7	.22	.38
31	6.3	---	29	29	---	63	---	11	---	2.2	.50	---
TOTAL	308.9	327.9	1464	601.1	864	1382	3999	3718	1636.6	243.37	35.09	66.37
MEAN	9.96	10.9	47.2	19.4	30.9	44.6	133	120	54.6	7.85	1.13	2.21
MAX	63	50	204	76	121	286	790	2040	560	46	4.6	13
MIN	2.4	4.6	15	7.1	11	12	29	11	8.6	.67	.22	.00
CAL YR 1982												
WTR YR 1983												
	TOTAL	21411.4		MEAN	58.7		MAX	2980		MIN	2.3	
	TOTAL	14646.33		MEAN	40.1		MAX	2040		MIN	.00	

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 mi west of Blue Springs, and 1.5 miles upstream from mouth.

DRAINAGE AREA.--34.4 mi².

PERIOD OF RECORD.--October 1974 to current year.

GAGE.--Water-stage recorder. Datum of gage is 753.09 ft 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.--9 years, 24.8 ft³/s, 9.79 in/yr, 18,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,000 ft³/s Aug. 13, 1982, gage height, 22.14 ft; no flow at times each year.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Apr. 6	----	1,180	15.4
May 1	1400	*2,350	16.92

No flow many days.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.8	16	25	40	23	15	33	652	26	40	.04	.00
2	4.5	15	35	40	25	14	30	138	37	35	.00	.00
3	4.0	14	32	39	26	14	29	141	36	32	.00	.00
4	2.1	12	31	38	26	16	30	156	33	27	.00	.00
5	5.1	11	46	37	27	27	30	153	31	22	.00	.00
6	10	10	48	35	28	23	600	167	29	20	.00	.00
7	5.2	12	48	32	27	24	400	137	27	19	.00	.00
8	18	13	48	29	19	22	300	116	23	17	.00	.00
9	35	12	49	26	19	19	200	112	21	16	.00	.00
10	26	9.4	50	29	21	17	150	103	20	15	.00	.00
11	23	14	49	24	31	16	98	98	17	13	.00	.00
12	21	21	50	24	32	14	94	95	17	12	.00	.00
13	23	14	51	23	31	13	96	98	16	8.4	.00	.00
14	21	12	51	22	31	12	96	105	36	7.5	.00	.00
15	20	10	51	20	30	12	90	95	19	6.9	.00	.00
16	19	10	48	19	30	10	88	89	17	6.5	.00	.00
17	17	9.4	47	18	29	9.3	83	82	15	5.7	.00	.00
18	17	5.1	47	20	27	8.5	81	84	82	5.1	.00	.00
19	18	8.7	44	15	27	8.3	75	76	34	4.0	.00	.00
20	18	10	42	15	25	14	51	69	27	3.4	.00	.00
21	16	9.2	40	15	23	13	51	64	24	3.0	.00	.00
22	15	11	38	14	19	12	84	60	21	2.4	.00	.00
23	14	10	38	15	24	7.9	82	55	19	1.6	.00	.00
24	13	8.4	41	9.9	20	13	80	52	17	1.6	.00	.00
25	12	10	43	15	19	11	89	58	16	1.3	.00	.00
26	10	9.4	40	13	18	25	84	46	19	.91	.00	.00
27	11	10	41	12	18	31	97	42	20	.07	.00	.00
28	20	32	43	15	16	31	156	42	92	.07	.00	.00
29	21	26	40	22	---	31	135	40	51	.07	.00	.00
30	16	25	42	23	---	31	147	36	47	.07	.00	.00
31	15	---	41	22	---	38	---	34	---	.07	.00	---
TOTAL	474.7	389.6	1339	720.9	691	552.0	3659	3295	889	326.66	.04	.00
MEAN	15.3	13.0	43.2	23.3	24.7	17.8	122	106	29.6	10.5	.00	.00
MAX	35	32	51	40	32	38	600	652	92	40	.04	.00
MIN	2.1	5.1	25	9.9	16	7.9	29	34	15	.07	.00	.00

CAL YR 1982	TOTAL	21539.42	MEAN	59.0	MAX	4850	MIN	.32
WTR YR 1983	TOTAL	12336.90	MEAN	33.8	MAX	652	MIN	.00

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 southwest of Lake City, and 10.5 mi upstream from mouth.

DRAINAGE AREA.--184 mi².

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

GAGE.--Water-stage recorder. Datum of gage is 719.15 ft National Geodetic Vertical Datum of 1929. Prior to July 24, 1957, nonrecording gage at site 50 ft 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.--35 years, 147 ft³/s, 10.85 in/yr, 106,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 42,300 ft³/s Aug. 13, 1982; maximum gage height, 27.94 ft Sept. 14, 1961; no flow at times during 1953-54, 1973.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft³/s and maximum(*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Apr. 1	1630	8,160	17.10
May 1	0915	*11,200	19.57

Minimum 25 ft³/s Sept. 9, gage height 3.20 ft.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	57	62	98	242	149	93	4600	6040	150	375	34	35
2	57	58	259	207	146	91	5340	2640	130	243	33	33
3	57	54	207	182	130	90	1670	727	509	200	32	31
4	61	49	125	163	115	118	1460	570	317	183	31	35
5	61	47	1300	152	116	544	4720	501	159	148	31	34
6	67	45	972	146	116	287	2310	453	139	126	30	40
7	70	43	513	139	107	202	881	480	122	109	32	37
8	108	45	334	130	110	158	684	317	105	98	35	33
9	344	44	227	127	110	138	760	270	98	91	32	28
10	113	43	553	127	171	123	670	247	91	81	32	32
11	96	109	669	117	460	115	574	272	82	75	31	74
12	88	201	355	101	413	112	535	308	97	76	30	40
13	84	110	285	98	323	114	489	525	97	66	30	36
14	84	71	263	82	260	109	497	1120	770	63	32	35
15	78	60	245	60	223	105	393	606	258	63	31	39
16	66	55	204	55	215	104	334	427	129	58	32	36
17	62	55	186	53	203	99	300	320	105	55	29	33
18	62	51	182	54	172	92	289	511	1720	55	30	32
19	60	52	171	48	166	94	252	428	963	53	31	32
20	83	53	161	47	152	228	236	272	513	48	29	110
21	69	51	140	48	139	194	220	235	256	43	29	35
22	59	50	133	49	132	134	280	211	184	43	33	33
23	51	53	130	47	128	91	272	187	151	40	93	32
24	49	50	202	49	122	85	238	185	128	37	48	33
25	49	46	369	47	114	101	205	530	114	76	34	34
26	45	49	189	61	108	877	185	222	330	73	33	32
27	44	57	382	74	107	1580	585	176	399	59	30	31
28	147	330	1410	88	97	623	1820	160	1650	40	34	30
29	282	201	503	208	---	517	681	148	792	38	37	30
30	108	118	357	272	---	623	578	136	618	33	35	30
31	74	---	286	160	---	544	---	125	---	32	36	---
TOTAL	2735	2312	11410	3433	4804	8385	32058	19349	11176	2780	1069	1125
MEAN	88.2	77.1	368	111	172	270	1069	624	373	89.7	34.5	37.5
MAX	344	330	1410	272	460	1580	5340	6040	1720	375	93	110
MIN	44	43	98	47	97	85	185	125	82	32	29	28
CAL YR 1982		TOTAL	137633	MEAN	377	MAX	27700	MIN	39			
WTR YR 1983		TOTAL	100636	MEAN	276	MAX	6040	MIN	28			

MISSOURI RIVER MAIN STEM

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 downstream from bridge on U.S. Highway 65 at Waverly. River mile 293.4.

DRAINAGE AREA.--487,200 mi², 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 computed 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 National Geodetic Vertical Datum of 1929. Prior to Jan. 1, 1934, at datum 5.00 ft 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 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.--53 years (1929-76, 1979-83), 49,650 ft³/s, 35,970,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 549,000 ft³/s July 16, 1951; maximum gage height, 28.85 ft Oct. 13, 1973; minimum discharge, about 1,700 ft³/s Jan. 9, 1940; minimum gage height, 0.4 ft Jan. 12, 1930, present datum.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 213,500 ft³/s April 3, gage height, 25.90 ft; minimum daily, 40,300 ft³/s Feb. 5.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

MEAN VALUES												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	48500	56000	67000	53000	57600	86800	120000	116000	81500	131000	64500	53400
2	47700	53600	70200	50000	56500	92800	191000	134000	82700	129000	64700	53200
3	48600	53300	68800	47000	47100	96100	211000	105000	83400	126000	62800	53200
4	51200	53900	66700	46000	42000	96000	210000	113000	82800	126000	60800	52900
5	55100	53400	75500	46000	40300	100000	209000	120000	78100	126000	59700	52300
6	56200	53200	95800	46000	40500	106000	208000	119000	72300	126000	59100	51300
7	54400	52900	93600	47000	40400	113000	189000	111000	74000	120000	58800	50000
8	54000	54300	89200	48000	41200	112000	154000	103000	72300	111000	57900	49800
9	62400	55300	82900	49000	43000	116000	140000	99200	67400	102000	57200	50600
10	65900	56600	78900	50000	43900	118000	136000	98600	66400	100000	56700	50200
11	66800	56700	77300	53000	45000	110000	130000	94600	65300	101000	55700	50800
12	77800	62000	70500	53700	46600	99500	123000	91300	73100	98900	55100	50100
13	73300	70000	65400	53200	47200	92600	117000	97100	76500	96500	54100	49800
14	66700	80000	60300	53500	48500	86300	117000	110000	81000	92600	53600	49100
15	61600	76000	57900	50000	52900	82000	122000	115000	91100	91100	53200	49700
16	59700	72000	56000	50600	66500	78100	128000	105000	121000	89800	53000	51100
17	58300	68000	54000	51100	76900	80100	127000	94600	124000	88200	52500	51200
18	55900	66900	50000	50000	76600	86800	119000	88700	120000	88500	52000	50500
19	56300	64100	49000	48000	76500	90600	116000	86500	143000	87400	51600	51000
20	55600	62100	49000	48200	77000	83000	114000	96300	158000	85300	51200	50600
21	55100	62400	50000	48200	98000	77300	111000	112000	149000	84800	51500	50700
22	55900	63600	49000	46400	104000	74400	107000	122000	139000	83900	53300	52400
23	56300	65500	49000	47600	98000	73400	104000	128000	133000	79400	52200	54300
24	56200	64800	48000	47900	92000	71500	100000	109000	129000	74600	52100	53200
25	56100	65400	50000	46200	90000	69100	95700	98300	127000	73000	52000	52600
26	54300	66500	52000	46500	92700	68300	91700	94500	125000	71500	52000	52400
27	53400	65400	56000	46200	91300	91500	90000	97100	124000	72000	51000	52000
28	53700	67200	69100	44800	88100	130000	103000	89800	120000	70100	50000	52100
29	55200	66600	74000	44900	---	121000	107000	89600	125000	67600	51000	51200
30	55400	67600	68000	45000	---	107000	101000	86400	131000	65400	52000	51300
31	55900	---	58000	48000	---	102000	---	83500	---	64500	52000	---
TOTAL	1783500	1875300	2001100	1505000	1820300	2911200	3991400	3208100	3115900	2923100	1703300	1543000
MEAN	57530	62510	64550	48550	65010	93910	133000	103500	103900	94290	54950	51430
MAX	77800	80000	95800	53700	104000	130000	211000	134000	158000	131000	64700	54300
MIN	47700	52900	48000	44800	40300	68300	90000	83500	65300	64500	50000	49100
CAL YR 1982	TOTAL		25256900	MEAN		69200	MAX		202000	MIN		12000
WTR YR 1983	TOTAL		28381200	MEAN		77760	MAX		211000	MIN		40300

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., Davies County, Hydrologic Unit 10280101, on left bank 100 ft upstream from bridge on State Highway 6, 50 ft downstream from Chicago, Rock Island and Pacific Railroad Co. Bridge, 1 mi northeast of Gallatin, and 6 mi upstream from Honey Creek, and at mile 90.

DRAINAGE AREA.--2,250 mi², 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 National Geodetic Vertical Datum of 1929. Prior to Jan. 31, 1922, nonrecording gage at site 100 ft upstream at same datum. January 31, 1922, to Nov. 15, 1936, nonrecording gage, at site about 1,100 ft upstream at datum 0.17 ft 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 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 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.--62 years, 1,170 ft³/s, 7.06 in/yr, 847,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 69,100 ft³/s June 24, 1947, gage height, 24.55 ft; maximum gage height, 37.02 ft June 2, 1929, (present site and datum); minimum discharge, 2.2 ft³/s June 3, 4, Oct. 27, 28, 29, 1956; minimum gage height observed, -0.37 ft June 15, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, about 40 ft July 8, 1909, from floodmarks.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 18,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 10	0330	24,700	25.36
Dec. 7	0115	*31,600	28.23
Dec. 29	0400	29,700	27.52
Apr. 3	0730	21,100	23.62

Minimum discharge, 26 ft³/s Sept. 12-14, gage height, 4.98.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	394	954	1350	2240	1800	889	4210	1100	1050	1810	83	49
2	369	751	1160	1770	1090	848	15000	1900	894	1060	77	49
3	356	649	1160	1510	721	817	18900	2250	830	604	71	45
4	349	568	945	1230	577	794	7860	1780	768	1380	68	40
5	339	484	10100	1160	721	866	11800	1840	1340	2090	66	38
6	329	422	29500	1140	801	1620	15900	1480	940	588	67	34
7	313	404	24700	1120	687	2090	7760	1320	768	352	75	32
8	362	393	6180	1160	707	1590	8280	1070	637	268	78	31
9	10800	390	3150	1150	708	1320	9200	973	553	248	72	31
10	19200	352	2260	1240	698	964	10400	973	488	248	72	27
11	4120	518	3670	2030	723	839	9240	733	429	194	65	27
12	1630	8940	2160	1600	880	781	5790	704	383	194	62	29
13	1270	7720	1180	997	1680	768	3910	704	356	168	60	26
14	1140	2770	1440	1060	5180	790	3220	1120	484	144	58	27
15	1010	1350	1430	921	5600	777	2440	1280	1630	248	59	57
16	884	940	1150	674	4940	751	1910	1020	1190	220	59	68
17	790	866	977	704	4190	716	1370	812	830	194	57	50
18	716	786	986	649	2700	691	1230	704	588	144	55	50
19	691	738	1010	620	2090	682	1290	2900	1470	119	52	49
20	751	734	979	641	1900	704	1220	4900	1360	119	51	56
21	721	729	899	665	1930	764	1140	3260	839	119	48	50
22	576	678	847	687	1710	712	1120	6940	584	119	57	47
23	526	616	830	695	1600	582	1110	3770	433	94	58	50
24	510	596	1770	678	1540	567	1020	2490	346	94	61	48
25	503	541	4370	666	1310	558	917	1740	296	94	83	44
26	484	496	4150	640	1140	989	812	1420	278	91	65	43
27	447	496	2800	588	1030	10200	777	2390	481	84	58	40
28	440	817	22400	576	926	9630	1230	7120	400	80	54	39
29	1210	1610	25300	1100	---	5320	1420	3560	604	76	47	36
30	2580	1740	7470	2710	---	5220	1280	2050	2680	77	54	33
31	1580	---	3020	3420	---	3640	---	1330	---	74	56	---
TOTAL	55390	39048	169343	36041	49579	57479	151756	65633	23929	11394	1948	1245
MEAN	1787	1302	5463	1163	1771	1854	5059	2117	798	368	62.8	41.5
MAX	19200	8940	29500	3420	5600	10200	18900	7120	2680	2090	83	68
MIN	313	352	830	576	577	558	777	704	278	74	47	26
CAL YR 1982		TOTAL	1090105		MEAN	2987	MAX	44500	MIN	86		
WTR YR 1983		TOTAL	662785		MEAN	1816	MAX	29500	MIN	26		

GRAND RIVER BASIN

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 downstream from Weldon River, and at mile 26.0.

DRAINAGE AREA.--1,670 mi², 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); WRD MO-83-1: 1981.

GAGE.--Water-stage recorder. Datum of gage is 721.87 ft National Geodetic Vertical Datum of 1929. June 25, 1921 to Aug. 26, 1923, nonrecording gage at two sites 12 mi 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 downstream at datum 3.46 ft 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. These are revised records from WDR MO-83-1: 1981.

AVERAGE DISCHARGE.--57 years (1921-23, 1928-83), 951 ft³/s, 7.73 in/yr, 689,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 95,000 ft³/s June 6, 1947, gage height, 25.7 ft from floodmark; minimum daily, 1 ft³/s June 17, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 30.7 ft July 6, 1909, present site and datum, from information by local residents, discharge, 50,000 ft³/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 and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 9	1145	18,000	14.10
Dec. 5	----	*27,700	16.30
Dec. 28	0900	23,400	15.40

Minimum discharge, 38 ft³/s Sept. 13, 14, gage height, 2.23 ft.

REVISIONS.--Revised figures of discharge for Dec. 19 to Feb. 15, June 25, July 30, Aug. 31 to Sept. 30, 1981, superseding those published in the report for 1981 are given herein.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	298	880	2180	2480	2010	822	5860	798	1060	3390	102	57
2	280	653	2370	1960	1180	775	11100	1290	955	1450	103	56
3	270	530	2380	1640	1060	733	8660	1830	1180	800	114	58
4	255	682	1640	1390	1120	707	7000	1260	4570	655	105	53
5	256	562	14900	1340	1390	1330	9160	1080	1670	480	109	49
6	253	466	14300	1260	1490	2430	7660	892	983	1030	102	49
7	250	429	5970	1260	1230	2980	5040	837	773	576	95	46
8	486	406	4320	1220	1120	3170	3290	1870	717	384	98	45
9	13500	392	2500	1250	1160	2060	4370	1350	650	314	101	45
10	7500	381	2170	1300	1100	1290	7550	931	556	277	82	45
11	5460	1540	2180	1320	1310	995	5800	761	482	259	74	50
12	3050	9720	2020	1470	1530	884	4540	703	425	237	66	49
13	1640	6010	1630	1240	1070	850	7640	686	389	216	65	44
14	1100	3550	1810	1010	3560	827	5240	665	652	199	67	41
15	888	1990	1820	854	5100	805	3480	646	1650	183	67	69
16	765	1400	1670	842	6290	791	2980	647	1450	172	67	77
17	722	1210	1410	711	4700	776	2160	692	1060	167	66	76
18	620	1080	1160	1040	2950	764	1750	728	916	164	61	71
19	578	1030	1130	1480	2350	767	1550	2620	814	155	57	60
20	550	1020	1080	1560	2560	757	1430	2680	1230	147	57	62
21	497	978	968	1410	2690	751	1290	3340	908	142	57	68
22	425	909	859	1400	2270	732	1180	5500	652	129	74	62
23	401	842	959	1410	2230	635	1100	3400	491	122	109	61
24	365	816	9700	1250	1580	597	1020	1680	415	116	88	59
25	357	714	8380	768	1340	568	931	1470	357	113	73	61
26	313	664	4570	640	1160	1160	862	1870	335	111	62	59
27	350	636	3230	712	992	8240	810	3300	1050	113	54	54
28	357	2100	16600	603	885	5910	888	7260	582	112	54	50
29	1510	4250	7710	1860	---	5430	850	4810	433	108	53	49
30	1760	3080	5590	3960	---	4170	914	2640	2370	107	64	46
31	1300	---	3280	3020	---	4320	---	1400	---	103	68	---
TOTAL	46356	48920	130486	43660	57427	57026	116105	59636	29775	12531	2414	1671
MEAN	1495	1631	4209	1408	2051	1840	3870	1924	993	404	77.9	55.7
MAX	13500	9720	16600	3960	6290	8240	11100	7260	4570	3390	114	77
MIN	250	381	859	603	885	568	810	646	335	103	53	41

CAL YR 1982	TOTAL	872855	MEAN	2391	MAX	25800	MIN	65
WTR YR 1983	TOTAL	606007	MEAN	1660	MAX	16600	MIN	41

GRAND RIVER BASIN

06899500 THOMPSON RIVER AT TRENTON, MO

LOCATION.--Lat 40°04'46", long 93°38'39", in NE4SW4 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 downstream from Weldon River, and at mile 26.0.

DRAINAGE AREA.--1,670 mi², 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); WRD MO-83-1: 1981.

GAGE.--Water-stage recorder. Datum of gage is 721.87 ft National Geodetic Vertical Datum of 1929. June 25, 1921 to Aug. 26, 1923, nonrecording gage at two sites 12 mi 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 downstream at datum 3.46 ft 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.--57 years (1921-23, 1928-83), 951 ft³/s, 7.73 in/yr, 689,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 95,000 ft³/s June 6, 1947, gage height, 25.7 ft from floodmark; minimum daily, 1 ft³/s June 17, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 30.7 ft July 6, 1909, present site and datum, from information by local residents, discharge, 50,000 ft³/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 and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 9	1145	18,000	14.10
Dec. 5	----	*27,700	16.30
Dec. 28	0900	23,400	15.40

Minimum discharge, 38 ft³/s Sept. 13, 14, gage height, 2.23 ft.

REVISIONS.--Revised figures of discharge for Dec. 19 to Feb. 15, June 25, July 30, Aug. 31 to Sept. 30, 1981, superseding those published in the report for 1981 are given herein.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	298	880	2180	2480	2010	822	5860	798	1060	3390	102	57
2	280	653	2370	1960	1180	775	11100	1290	955	1450	103	56
3	270	530	2380	1640	1060	733	8660	1830	1180	800	114	58
4	255	682	1640	1390	1120	707	7000	1260	4570	655	105	53
5	256	562	14900	1340	1390	1330	9160	1080	1670	480	109	49
6	253	466	14300	1260	1490	2430	7660	892	983	1030	102	49
7	250	429	5970	1260	1230	2980	5040	837	773	576	95	46
8	486	406	4320	1220	1120	3170	3290	1870	717	384	98	45
9	13500	392	2500	1250	1160	2060	4370	1350	650	314	101	45
10	7500	381	2170	1300	1100	1290	7550	931	556	277	82	45
11	5460	1540	2180	1320	1310	995	5800	761	482	259	74	50
12	3050	9720	2020	1470	1530	884	4540	703	425	237	66	49
13	1640	6010	1630	1240	1070	850	7640	686	389	216	65	44
14	1100	3550	1810	1010	3560	827	5240	665	652	199	67	41
15	888	1990	1820	854	5100	805	3480	646	1650	183	67	69
16	765	1400	1670	842	6290	791	2980	647	1450	172	67	77
17	722	1210	1410	711	4700	776	2160	692	1060	167	66	76
18	620	1080	1160	1040	2950	764	1750	728	916	164	61	71
19	578	1030	1130	1480	2350	767	1550	2620	814	155	57	60
20	550	1020	1080	1560	2560	757	1430	2680	1230	147	57	62
21	497	978	968	1410	2690	751	1290	3340	908	142	57	68
22	425	909	859	1400	2270	732	1180	5500	652	129	74	62
23	401	842	959	1410	2230	635	1100	3400	491	122	109	61
24	365	816	9700	1250	1580	597	1020	1680	415	116	88	59
25	357	714	8380	768	1340	568	931	1470	357	113	73	61
26	313	664	4570	640	1160	1160	862	1870	335	111	62	59
27	350	636	3230	712	992	8240	810	3300	1050	113	54	54
28	357	2100	16600	603	885	5910	888	7260	582	112	54	50
29	1510	4250	7710	1860	---	5430	850	4810	433	108	53	49
30	1760	3080	5590	3960	---	4170	914	2640	2370	107	64	46
31	1300	---	3280	3020	---	4320	---	1400	---	103	68	---
TOTAL	46356	48920	130486	43660	57427	57026	116105	59636	29775	12531	2414	1671
MEAN	1495	1631	4209	1408	2051	1840	3870	1924	993	404	77.9	55.7
MAX	13500	9720	16600	3960	6290	8240	11100	7260	4570	3390	114	77
MIN	250	381	859	603	885	568	810	646	335	103	53	41
CAL YR 1982		TOTAL	872855	MEAN	2391	MAX	25800	MIN	65			
WTR YR 1983		TOTAL	606007	MEAN	1660	MAX	16600	MIN	41			

GRAND RIVER BASIN

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 upstream from bridge on State Highway 6, 1.2 mi east of Galt, 2 mi upstream from West Medicine Creek, and at mile 32.0 (51.5 km).

DRAINAGE AREA.--225 mi².

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 National Geodetic Vertical Datum of 1929. Prior to Dec. 3, nonrecording gage at site 150 ft downstream at following datums: prior to Oct. 1, 1924, at datum 6.97 ft higher; Oct. 1, 1924 to Sept. 30, 1926, at datum 4.97 ft higher; Oct. 1, 1926 to Dec. 2, 1934, at datum 1.97 ft higher; Dec. 3, 1934, to Apr. 25, 1956, nonrecording gage, and Apr. 26 to Sept. 30, 1956; water-stage recorder at site 30 ft downstream at datum 2.00 ft higher; Oct. 1, 1956 to Apr. 5, 1969, water-stage recorder at site 30 ft 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.--60 years (water year 1922-75, 78-83), 145 ft³/s, 8.75 in/yr, 105,100 acre-ft.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,200 ft³/s June 6, 1947, gage height, 20.9 ft, 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 was determined for flood of July 1909 by Corps of Engineers.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 9	----	3,600	6.50
Nov. 12	----	*5,500	9.00
Dec. 5	----	4,100	7.20
Apr. 2	----	3,700	6.60
Apr. 5	----	3,300	6.10

Minimum, 3.4 ft³/s July 28, 29, gage height, 0.89 ft.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	32	229	400	300	73	892	117	73	24	6.2	10
2	24	30	400	350	250	69	2940	271	67	18	6.2	9.5
3	23	28	212	300	230	64	1690	178	68	17	7.6	9.5
4	21	26	250	230	220	63	819	110	69	20	10	9.0
5	22	26	2780	220	240	130	2020	84	66	15	17	9.0
6	22	26	804	210	250	520	1760	77	61	14	15	8.5
7	30	28	700	205	240	390	613	74	56	12	7.6	8.5
8	29	28	400	200	220	196	340	67	54	12	7.6	8.5
9	1560	28	250	205	210	109	635	59	54	12	6.2	8.5
10	1330	28	200	210	200	81	1480	54	54	10	7.6	8.5
11	200	506	170	210	210	72	522	69	41	10	6.2	8.0
12	95	4660	150	220	220	72	403	93	36	10	6.2	8.0
13	67	1220	130	200	459	78	1210	277	34	10	6.2	7.0
14	54	255	120	150	1080	81	1280	167	34	10	6.2	7.0
15	46	136	110	120	1600	75	599	113	34	10	6.2	7.0
16	38	96	100	90	768	62	294	96	36	10	7.6	7.0
17	32	84	95	85	459	57	202	74	36	9.0	6.2	7.0
18	30	82	90	110	302	54	164	306	43	9.0	6.2	7.0
19	48	79	90	170	271	52	151	810	41	9.0	6.2	7.0
20	39	79	85	160	291	63	131	260	34	9.0	7.6	7.0
21	29	77	80	140	231	73	110	972	30	9.0	6.2	7.6
22	26	72	79	140	182	67	99	1350	24	9.0	7.6	6.2
23	24	103	100	130	260	62	90	336	22	9.0	17	4.8
24	22	84	2110	130	173	64	82	211	18	9.0	8.5	4.8
25	23	64	800	130	124	62	72	422	18	9.0	4.8	4.8
26	22	59	600	130	96	304	69	155	18	9.0	4.8	4.8
27	22	54	400	130	83	2430	66	356	18	6.2	5.4	4.8
28	22	396	2140	150	78	1080	79	275	24	6.2	5.5	4.8
29	26	546	1000	180	---	956	82	152	29	3.4	6.2	4.8
30	42	352	600	400	---	403	113	100	27	7.6	18	4.8
31	35	---	450	350	---	331	---	83	---	6.2	20	---
TOTAL	4031	9284	15724	6055	9247	8193	19007	7768	1219	333.6	259.8	213.7
MEAN	130	309	507	195	330	264	634	251	40.6	10.8	8.38	7.12
MAX	1560	4660	2780	400	1600	2430	2940	1350	73	24	20	10
MIN	21	26	79	85	78	52	66	54	18	3.4	4.8	4.8
CAL YR 1982	TOTAL	153295	MEAN	420	MAX	5540	MIN	12				
WTR YR 1983	TOTAL	81335.1	MEAN	223	MAX	4660	MIN	3.4				

GRAND RIVER BASIN

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 downstream from Chicago, Burlington and Quincy Railroad bridge, 2 mi southwest of Sumner, 2.5 mi downstream from Locust Creek, and at mile 41.0.

DRAINAGE AREA.--6,880 mi², 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 National Geodetic Vertical Datum of 1929. Prior to July 11, 1926, nonrecording gage at site 200 ft 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 upstream at same datum. Aug. 9, 1952, to Nov. 12, 1953, nonrecording gage at site 120 ft upstream and at same datum. Nov. 13, 1953, to July 6, 1964, water-stage recorder and nonrecording gage for stages below 8.3 ft at site 120 ft 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 downstream from base gage at datum 631.30 ft 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.--60 years, 3,863 ft³/s, 7.63 in/yr, 2,799,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 180,000 ft³/s June 7, 8, 1947, gage height, 39.5 ft from floodmark; minimum observed, 10 ft³/s Aug. 12, 1934; minimum gage height, 2.19 ft Aug. 22, 23, 31, Sept. 1, 1936.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 9, 1909, reached a stage of 36.7 ft from floodmark.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 38,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 8	0200	48,200	36.04
Apr. 4	1330	*52,600	36.29

Minimum daily discharge, 105 ft³/s Sept. 14.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1340	3070	6100	11800	4340	2750	12000	5230	3350	5100	388	192
2	1280	2180	7520	7400	3520	2530	33300	9640	2800	5100	358	195
3	1210	1740	11300	5980	3210	2400	41700	7840	2530	2500	330	174
4	1140	1470	7900	4490	1930	2280	51400	6930	2380	1800	328	146
5	1120	1430	15600	4120	1940	2610	38300	4630	5400	8200	312	141
6	1080	1330	38500	3990	2000	6680	35400	3680	2800	6000	304	146
7	1070	1200	42300	3890	2120	11000	35600	3130	2340	1900	309	144
8	1070	1130	43900	3760	2070	8820	24600	2910	2100	1400	309	141
9	10300	1090	28000	3670	2090	6530	19700	3510	1860	1200	313	130
10	29200	1070	14200	3690	2270	4640	24000	3700	1670	1030	302	123
11	23400	1090	14200	4010	2460	3310	27000	2920	1490	920	269	141
12	11200	13000	9080	4460	3290	2770	13700	2850	1400	841	246	154
13	5850	25700	6000	3760	4930	2570	18500	4370	1300	787	230	119
14	3500	16500	4960	3250	9220	2500	15200	7700	1500	731	222	105
15	2700	6990	4960	2950	15900	2450	14700	7240	1800	686	223	115
16	2290	4120	4520	2590	15600	2360	10000	4720	2400	663	225	162
17	1970	3060	3930	2300	14800	2240	7480	3430	2500	640	215	207
18	1730	2640	3620	1980	9620	2100	6010	2890	2100	622	214	195
19	1580	2410	3600	1860	6690	2020	5130	4590	1600	607	192	189
20	1500	2290	3480	1840	6470	2050	4550	12700	2300	586	171	179
21	1590	2220	3270	1800	6160	2460	4120	9720	2800	554	158	195
22	1540	2150	2980	1890	5960	2490	3800	13000	1700	532	153	189
23	1290	2060	2870	1960	5320	2250	3620	16300	1500	512	161	165
24	1150	2140	9350	2030	5170	2100	3460	7430	1310	496	200	157
25	1100	2040	28200	2010	4380	2030	3210	5620	1180	480	222	157
26	1070	1800	24700	1970	3810	2660	2920	5190	1300	470	219	157
27	1030	1640	12400	1810	3320	20500	2720	5040	1260	450	207	157
28	1020	2040	28200	1760	2990	30800	2930	8500	2000	430	179	152
29	1080	6920	35900	1910	---	26500	3740	18000	1600	410	165	139
30	2500	8320	32600	4410	---	20800	4300	11000	1020	407	168	128
31	4230	---	24500	7820	---	12700	---	5240	---	403	174	---
TOTAL	122130	124840	478640	111160	151580	199900	473090	209650	61290	46457	7466	4694
MEAN	3940	4161	15440	3586	5414	6448	15770	6763	2043	1499	241	156
MAX	29200	25700	43900	11800	15900	30800	51400	18000	5400	8200	388	207
MIN	1020	1070	2870	1760	1930	2020	2720	2850	1020	403	153	105
CAL YR 1982		TOTAL	3250349	MEAN	8905	MAX	64000	MIN	360			
WTR YR 1983		TOTAL	1990897	MEAN	5455	MAX	51400	MIN	105			

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 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD 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...	1345	1700	411	7.9	13.0	100	8.6	81	2800	--
JAN 05...	1300	4210	418	7.7	.5	110	12.0	82	1200	17000
MAY 11...	1415	2840	424	8.0	17.0	400	8.2	84	1900	20000
JUL 19...	1450	604	510	8.3	32.0	25	5.2	71	88	48

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- LINITY FIELD (MG/L AS CACO3) (00410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
NOV 03...	190	27	55	12	11	11	.4	7.0	160	38
JAN 05...	210	46	61	13	13	12	.4	4.3	160	40
MAY 11...	190	25	58	12	11	11	.4	3.6	170	40
JUL 19...	240	7	70	15	14	11	.4	4.5	230	40

DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	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...	12	.20	12	260	240	.35	1190	.800	.090
JAN 05...	8.3	.20	13	270	250	.37	3070	1.70	.100
MAY 11...	8.5	.30	8.8	255	240	.35	1960	1.20	<.060
JUL 19...	12	.30	12	301	310	.41	491	.100	.030

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- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN (70331)
NOV 03...	.12	1.9	.300	.92	.090	.080	297	1360	60
JAN 05...	.13	1.2	.300	.92	.050	.030	461	5240	71
MAY 11...	--	1.4	.330	1.0	.070	.050	1430	11000	75
JUL 19...	.04	1.3	.230	.71	.140	.090	153	250	70

GRAND RIVER BASIN

06902000 GRAND RIVER NEAR SUMNER, MO.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)
NOV 03...	50	1	130	<.5	<1	<1	<3	9	64	<1
JAN 05...	160	1	120	<.5	<1	<1	<3	7	210	2
MAY 11...	120	1	120	<.5	<1	<1	<3	6	120	4
JUL 19...	<10	2	130	<.5	<1	<1	<3	5	13	<1

DATE	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 03...	19	24	.1	<10	5	<1	<1	210	<6	82
JAN 05...	19	150	<.1	<10	4	1	<1	250	<6	29
MAY 11...	12	19	.2	<10	3	1	<1	240	<6	17
JUL 19...	22	54	<.1	<10	5	1	<1	300	<6	11

CHARITON RIVER BASIN

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 downstream from bridge on U.S. Highway 136, 1 mi upstream from Shoal Creek, and 0.5 mi east of Livonia.

DRAINAGE AREA.--864 mi².

PERIOD OF RECORD.--May 1974 to current year. Occasional discharge measurements were made from October 1962 to May 1974.

REVISED RECORDS.--WDR MO-83-1: 1981.

GAGE.--Water-stage recorder. Datum of gage is 770.00 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. Several observations of water temperature were made during the year. Flow regulated by Rathbun Lake.

AVERAGE DISCHARGE.--9 years, 719 ft³/s, 520,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,170 ft³/s Apr. 3, 1983; maximum gage height, 24.26 ft July 4, 1974; minimum, 13 ft³/s Jan. 11 to Feb. 9, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,170 ft³/s Apr. 3, gage height, 22.74 ft; minimum, 32 ft³/s Aug. 13-15, 19.

REVISIONS.--The date of maximum daily discharge for water year 1981 has been revised to July 27, 1981.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1320	1280	1220	1640	1740	1630	2240	1020	955	930	39	83
2	1310	1310	2460	1810	1760	1630	5320	1180	949	922	38	47
3	1310	1310	2530	1800	1720	1630	6050	1180	1260	917	37	38
4	1120	1280	2150	1780	1790	1650	4980	1050	1600	948	36	37
5	265	1270	3900	1790	1750	1680	4490	1000	1120	920	36	37
6	153	1270	3910	1820	1670	2510	3460	990	1000	910	42	36
7	376	1260	3120	1620	1670	2280	1990	987	970	927	40	36
8	1230	1260	2780	675	1700	2160	891	970	952	898	35	36
9	1740	1260	1380	1420	1660	1960	1580	957	943	915	35	36
10	1120	1260	1440	1570	1680	1750	2610	948	935	945	34	36
11	667	1720	1830	1670	1690	1660	1710	955	926	945	34	36
12	1280	3650	1830	1770	1720	1620	881	1010	919	945	33	34
13	1340	2660	1810	1770	1950	1620	1440	752	915	942	32	34
14	1330	1320	1800	1750	2620	1610	1860	389	910	937	32	33
15	1320	593	1810	1730	2590	1600	1730	977	903	935	32	40
16	1320	1310	1780	1620	2740	1580	1360	1010	900	935	33	47
17	1310	1380	1770	1720	2600	1580	1160	980	918	930	33	58
18	1310	1350	1780	1720	2490	1570	1120	977	992	927	33	48
19	1310	1350	1800	1720	2320	1460	1110	1890	1060	831	32	39
20	1320	1360	1780	1870	2160	991	1070	1480	1040	444	37	39
21	1320	1340	1760	1840	2040	859	1020	1250	960	175	34	39
22	1300	1330	1750	1680	1940	342	1010	1360	946	82	37	39
23	1290	1340	1760	1660	1930	190	1000	1180	940	60	45	39
24	1300	1340	1920	1660	1920	171	989	1090	935	52	43	37
25	1290	1310	2560	1660	1840	157	976	1100	930	47	42	36
26	1290	1310	2090	1660	1740	1000	968	1020	928	44	39	36
27	1290	1300	1140	1650	1690	3300	968	994	939	40	38	36
28	1260	1840	2230	1670	1660	1380	975	994	927	39	35	36
29	1290	2020	2080	1740	---	2420	974	994	920	39	33	34
30	1300	1610	944	1790	---	1310	1000	973	927	39	46	34
31	1290	---	1030	1760	---	834	---	956	---	39	63	---
TOTAL	36671	44193	62144	52035	54780	46134	56932	32613	29519	18659	1158	1196
MEAN	1183	1473	2005	1679	1956	1488	1898	1052	984	602	37.4	39.9
MAX	1740	3650	3910	1870	2740	3300	6050	1890	1600	948	63	83
MIN	153	593	944	675	1660	157	881	389	900	39	32	33
CAL YR 1982	TOTAL		542789	MEAN		1487	MAX	8960	MIN		67	
WTR YR 1983	TOTAL		436034	MEAN		1195	MAX	6050	MIN		32	

06904500 CHARITON RIVER AT NOVINGER, MO

LOCATION.--Lat 40°14'05", long 92°41'14", on south line of SE¼NE¼ 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 east of Novinger, 1 mi downstream from Rye Creek, 2 mi upstream from Spring Creek, and at mile 73.1.

DRAINAGE AREA.--1,370 mi², 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 National Geodetic Vertical Datum of 1929. Prior to Dec. 20, 1939, nonrecording gage at bridge over old channel, 500 ft 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 fair. Several observations of water temperature were made during the year. Some regulation by Rathbun Lake.

AVERAGE DISCHARGE.--51 years, 825 ft³/s, 8.18 in/yr, 597,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,900 ft³/s June 7, 13, 1947, gage height, 28.50 ft; minimum, 0.1 ft³/s Aug. 31, Sept. 1, 1936.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 28.6 ft in June 1917.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 8,000 ft³/s revised and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 12	0745	10,300	16.62
Dec. 2	0845	14,800	21.10
Dec. 5	1200	14,000	20.31
Mar. 27	1230	10,400	16.76
Apr. 2	1330	*16,600	22.87

Minimum daily discharge, 36 ft³/s Aug. 16-19.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1560	1610	2450	1940	2080	1870	5850	1890	1210	1030	43	68
2	1540	1660	12600	2160	2090	1850	16200	2150	1200	1010	41	69
3	1520	1620	5090	2170	2030	1840	14600	1790	1500	1000	41	50
4	1490	1570	3280	2190	2020	1870	8630	1530	2000	1320	39	44
5	834	1560	10900	2210	2090	1980	9210	1380	1560	1020	46	44
6	433	1540	7850	2180	2000	5470	7190	1320	1290	988	43	44
7	370	1540	4710	2110	2010	3660	3710	1300	1190	973	101	43
8	1340	1540	3390	1120	2010	2910	1830	1270	1140	964	49	42
9	2400	1520	1340	1390	1980	2510	3590	1230	1100	966	43	41
10	2040	1510	1800	1880	2010	2190	4780	1200	1100	1010	39	40
11	1010	2760	2300	1900	2070	2050	2940	1250	1100	1010	38	40
12	1600	8800	2200	2000	2220	1980	1500	1470	1100	1010	37	40
13	1750	7000	2200	1950	2900	1980	1900	1980	1050	1000	37	40
14	1730	3000	2140	1950	4620	1960	2690	968	1050	1000	37	40
15	1710	1800	2150	1950	3910	1930	2550	1240	1050	998	37	49
16	1700	1200	2110	1900	4240	1900	2030	1350	1030	998	36	52
17	1700	1800	2090	1900	3530	1870	1720	1280	1030	992	36	49
18	1700	1800	2120	1950	3120	1850	1680	1300	1050	992	36	53
19	1750	1760	2180	2000	2890	1820	1640	3980	1300	969	36	46
20	1700	1770	2140	2000	2650	1400	1570	2530	1200	659	44	46
21	1700	1740	2110	2000	2460	1170	1520	2290	1150	348	44	45
22	1680	1710	2100	2010	2300	671	1480	2380	1100	161	61	44
23	1650	1820	2120	1980	2230	376	1450	1810	1070	81	48	44
24	1650	1800	2810	1990	2240	335	1400	1510	1050	65	47	44
25	1650	1720	4530	1990	2120	312	1370	1520	1030	59	48	43
26	1650	1710	2940	1920	2000	1040	1350	1400	1030	54	47	43
27	1640	1690	2050	1940	1930	8710	1330	1320	1030	52	45	42
28	1640	3590	4780	1990	1890	6150	1390	1310	1030	48	43	42
29	1630	3440	1890	2070	---	3730	1370	1310	1030	47	42	41
30	1620	2530	1190	2260	---	2410	1550	1250	1040	47	88	40
31	1580	---	1290	2230	---	1380	---	1210	---	45	71	---
TOTAL	47967	69110	102850	61230	69640	71174	110020	49718	34810	20916	1443	1368
MEAN	1547	2304	3318	1975	2487	2296	3667	1604	1160	675	46.5	45.6
MAX	2400	8800	12600	2260	4620	8710	16200	3980	2000	1320	101	69
MIN	370	1200	1190	1120	1890	312	1330	968	1030	45	36	40
CAL YR 1982	TOTAL	830053	MEAN	2274	MAX	14500	MIN	108				
WTR YR 1983	TOTAL	640246	MEAN	1754	MAX	16200	MIN	36				

CHARITON RIVER BASIN

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 northwest of Prairie Hill, 13.5 mi upstream from Puzzle Creek, and at mile 19.6.

DRAINAGE AREA.--1,870 mi², 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 National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Oct. 1, 1953, nonrecording gage at site 8.2 mi downstream at datum 13.68 ft 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.--55 years, 1,210 ft³/s, 8.79 in/yr, 876,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 31,900 ft³/s Apr. 23, 1973, gage height, 21.96 ft (6.693 m); maximum gage height, 25.3 from floodmark, at site and datum then in use, June 8, 9, 1947; minimum, 4.6 ft³/s Aug. 7, 9, 10, 1934.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 9,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 12	1900	12,800	14.15
Dec. 2	2145	26,500	20.00
Dec. 5	2345	21,800	18.34
Mar. 27	1600	13,700	14.65
Apr. 2	2330	*30,400	21.10
May 22	1200	9,100	12.00

Minimum daily discharge, 40 ft³/s Sept. 15.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1640	1740	2840	2020	2330	2120	7450	3320	1300	1130	102	115
2	1630	3350	19000	2280	2220	2090	27400	5640	1260	1120	96	120
3	1600	2140	17100	2460	2160	2080	29300	2910	1350	1090	92	90
4	1580	1800	7230	2370	2030	2080	20300	2130	1580	1450	94	70
5	1560	1630	15600	2410	2030	2140	16600	1720	2210	1840	94	65
6	959	1660	17100	2450	2120	6480	16000	1470	1620	1190	96	60
7	510	1590	8960	2440	2030	8100	8950	1410	1320	1080	82	55
8	419	1620	6220	2290	2080	4970	5310	1370	1240	1080	77	52
9	1500	1630	5010	1330	2040	3680	4800	1310	1240	1070	120	50
10	2920	1560	3240	1570	2040	2820	8180	1240	1180	1070	85	48
11	2330	1640	3450	2040	2240	2540	6340	1180	1200	1070	72	46
12	1170	9210	2940	1950	2420	2320	3980	1260	1130	1070	66	45
13	1470	8420	2640	2050	2750	2220	2330	1470	1100	1060	64	44
14	1820	4650	2560	2190	4760	2200	2810	3580	1090	1050	65	44
15	1840	2660	2560	2140	6620	2140	3530	1910	1080	1040	64	40
16	1810	1240	2500	2040	5310	2100	3050	1440	1070	1040	64	84
17	1820	1710	2390	2050	5750	2030	2280	1500	1070	1000	65	93
18	1810	1970	2350	2050	4530	1980	1870	1390	1080	982	65	113
19	1860	1930	2400	2100	3980	1960	1840	1620	2030	948	65	83
20	2010	1960	2430	2200	3660	2240	1760	5120	1570	866	64	78
21	1890	1940	2340	2200	3320	1800	1680	2720	1420	656	64	76
22	1830	1860	2260	2190	3040	1330	1600	6280	1190	442	65	73
23	1760	1860	2250	2070	2790	839	1560	3530	1100	224	75	73
24	1710	2030	2660	2020	2630	591	1470	2200	1080	168	109	70
25	1720	1920	4870	2030	2600	522	1410	1760	1080	142	90	67
26	1700	1820	5060	2030	2430	1340	1350	1760	1160	120	74	65
27	1660	1810	3610	1950	2270	11400	1340	1580	1350	107	68	61
28	1610	3220	4760	1990	2180	9160	1410	1550	1220	97	65	61
29	1660	5730	6780	2030	---	5990	1540	1580	1180	92	66	57
30	1760	4050	3750	2120	---	4620	1760	1480	1140	165	60	60
31	1720	---	2060	2370	---	2910	---	1430	---	115	110	---
TOTAL	51278	80350	168920	65430	84360	98792	189200	68860	38640	24574	2438	2058
MEAN	1654	2678	5449	2111	3013	3187	6307	2221	1288	793	78.6	68.6
MAX	2920	9210	19000	2460	6620	11400	29300	6280	2210	1840	120	120
MIN	419	1240	2060	1330	2030	522	1340	1180	1070	92	60	40
CAL YR 1982		TOTAL	1182715		MEAN	3240	MAX	21800	MIN	164		
WTR YR 1983		TOTAL	874900		MEAN	2397	MAX	29300	MIN	40		

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 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD 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 KF AGAR PER (COLS. 100 ML) (31673)
NOV 03...	1500	2000	280	8.0	12.5	110	9.2	86	4500	K14000
JAN 05...	1530	2400	274	7.9	.5	95	12.8	87	500	1800
MAR 08...	1600	4700	308	7.8	7.5	340	5.6	47	10000	38000
MAY 11...	1545	1200	330	7.9	16.5	60	7.8	79	88	1300
JUL 19...	1630	910	280	8.3	31.0	100	6.8	91	230	420
SEP 28...	1545	60	410	8.3	26.0	4.1	8.0	97	50	120

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...	120	26	36	7.4	6.0	9	.2	5.4	95	36
JAN 05...	130	31	38	8.1	6.4	9	.3	4.8	98	34
MAR 08...	140	50	41	8.8	7.7	10	.3	3.5	89	53
MAY 11...	150	34	45	10	8.5	10	.3	4.3	120	49
JUL 19...	120	19	34	7.6	6.9	11	.3	4.8	98	27
SEP 28...	190	27	55	12	13	13	.4	3.5	160	46

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 03...	6.4	.20	6.8	173	160	.24	934	.820	.070
JAN 05...	6.0	.20	7.6	179	160	.24	1160	1.10	.080
MAR 08...	6.0	.20	8.8	203	180	.28	2580	.920	.140
MAY 11...	6.5	.20	8.1	207	200	.28	671	1.00	<.060
JUL 19...	6.6	.20	5.7	155	150	.21	381	<.100	1.10
SEP 28...	8.4	.20	7.1	247	240	.34	40	<.100	<.010

K--Results based on colony count outside the acceptable range (non-ideal colony count).

CHARITON RIVER BASIN

06905500 CHARITON RIVER NEAR PRAIRIE HILL, MO.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
NOV 03...	.09	1.4	.240	.74	.030	.030	399	2150	63
JAN 05...	.10	1.5	.200	.61	.050	<.010	524	3400	47
MAR 08...	.18	3.4	.620	1.9	.140	.080	1590	20200	59
MAY 11...	--	1.2	.180	.55	.040	.030	337	1090	48
JUL 19...	1.4	1.1	.280	.86	.070	.060	321	789	7
SEP 28...	--	1.0	.080	.25	<.010	.020	20	3.2	45

DATE	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)
NOV 03...	50	1	71	<.5	<1	<1	<3	7	90	2
JAN 05...	90	1	69	<.5	<1	<1	<3	5	130	4
MAY 11...	--	1	70	<.5	<1	<1	<3	4	72	3
JUL 19...	310	1	61	1	<1	<1	<3	9	310	<1

DATE	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 03...	18	27	<.1	<10	4	<1	<1	120	<6	15
JAN 05...	13	25	<.1	<10	3	1	<1	120	<6	22
MAY 11...	9	14	.2	<10	2	1	<1	150	<6	9
JUL 19...	19	36	<.1	<10	<1	1	<1	120	<6	19

CHARITON RIVER BASIN

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 southwest of Musselfork, and 1.5 mi upstream from Long Branch.

DRAINAGE AREA.--267 mi².

PERIOD OF RECORD.--October 1948 to December 1951, October 1962 to current year.

GAGE.--Water-stage recorder. Datum of gage is 639.25 ft National Geodetic Vertical Datum of 1929. Prior to Jan. 1, 1952, nonrecording gage at same site and datum.

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

AVERAGE DISCHARGE.--24 years (1948-51, 1962-83), 232 ft³/s, 11.80 in/yr, 168,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,100 ft³/s Apr. 22, 1973, gage height, 22.11 ft; 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 and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 4	1330	8,350	20.33
Apr. 3	1800	*16,600	21.13

Minimum discharge, 1.1 ft³/s Aug. 22, 23, minimum gage height, 3.66 ft Aug. 22.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	59	242	167	114	62	1660	841	89	25	5.3	4.1
2	23	345	2120	144	90	61	8920	1950	73	28	4.6	5.7
3	22	306	2840	131	89	59	14900	1110	127	21	4.1	4.6
4	20	87	7040	111	85	60	11900	328	83	48	4.3	5.4
5	18	45	6370	107	74	86	6760	211	64	271	3.8	4.6
6	16	32	3780	98	67	790	3060	154	56	98	3.6	3.6
7	18	27	5100	100	60	1810	2560	129	47	40	3.5	2.8
8	20	25	3110	100	54	1010	1090	115	41	25	3.5	2.1
9	22	23	609	100	57	365	550	98	37	18	4.4	1.8
10	25	22	440	104	66	206	1020	86	33	15	4.6	1.5
11	24	63	902	109	146	147	875	79	30	13	3.5	2.8
12	22	733	556	91	286	127	447	108	27	12	2.8	3.3
13	22	1200	299	72	384	121	335	408	26	11	2.5	3.3
14	22	448	216	77	452	118	286	1380	25	10	2.4	3.0
15	22	130	185	71	464	110	268	901	24	9.9	2.4	3.0
16	22	79	170	60	328	96	233	280	23	9.3	2.1	2.8
17	22	62	146	60	305	85	180	172	22	9.1	1.9	2.9
18	22	55	137	67	277	77	152	125	24	8.6	1.7	2.2
19	22	54	144	58	182	74	141	120	299	8.1	1.7	1.8
20	22	55	148	51	152	222	132	166	193	7.7	1.5	2.9
21	22	53	133	48	134	425	120	145	74	7.5	1.7	2.9
22	22	48	116	46	112	257	110	233	39	7.4	1.4	3.3
23	25	48	112	52	98	162	109	1480	29	6.8	1.3	3.1
24	20	47	349	49	89	128	102	909	24	6.4	1.4	2.8
25	17	66	1470	54	83	120	93	205	21	6.5	1.4	2.4
26	15	71	1270	55	74	466	83	252	19	6.8	1.8	2.0
27	14	64	441	55	68	2060	78	170	18	8.2	2.0	2.4
28	16	417	791	54	64	2350	107	266	35	7.0	2.0	2.3
29	24	667	1370	60	---	2380	190	354	36	6.2	1.8	1.8
30	27	478	556	72	---	810	206	353	31	7.0	2.1	1.4
31	27	---	211	93	---	381	---	153	---	6.5	2.4	---
TOTAL	658	5809	41373	2516	4454	15225	56667	13281	1669	764.0	83.5	88.6
MEAN	21.2	194	1335	81.2	159	491	1889	428	55.6	24.6	2.69	2.95
MAX	27	1200	7040	167	464	2380	14900	1950	299	271	5.3	5.7
MIN	14	22	112	46	54	59	78	79	18	6.2	1.3	1.4
CAL YR 1982	TOTAL		171240	MEAN	469	MAX	7040	MIN	14			
WTR YR 1983	TOTAL		142588.1	MEAN	391	MAX	14900	MIN	1.3			

LITTLE CHARITON RIVER BASIN

06906190 LONG BRANCH 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 mi west of junction U.S. Highway 63 and 36 in Macon and 2 mi below confluence with Long Branch.

DRAINAGE AREA.--109 mi².

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 Engineers).

REMARKS.--Lake is formed by a rolled earthfill type dam. Closure began on September 3, 1976. Storage began on Aug. 2, 1978. An uncontrolled limited service type spillway, 50 ft wide, is located at the right abutment. Capacity of surcharge pool (elevations 801.0 ft to 820.7 ft), 98,590 acre-ft; of flood control pool (elevations 791.0 ft to 801.0 ft), 30,600 acre-ft; and of multipurpose pool (elevations 751.1 ft to 791.0), 34,640 acre-ft. 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 July 28, 1981, elevation, 799.56 ft; minimum, 14,310 acre-ft Dec. 5, 1980, elevation 780.21 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 56,800 acre-ft Apr. 6, elevation, 798.67 ft; minimum, 32,700 acre-ft Sept. 30, elevation, 790.21 ft.

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36200	35700	38300	42200	37300	37300	41400	43500	41500	36900	35200	34000
2	36100	36300	40400	41800	37300	37300	47900	45000	41200	36700	35200	33900
3	36100	37600	44700	41400	37300	37200	55400	45100	40900	36600	35100	33800
4	36000	37500	46400	41400	37200	37100	55300	44800	40800	36800	35100	33800
5	36000	37400	47300	40900	37100	37200	55400	44300	40500	36900	35100	33700
6	35900	37300	49500	40500	37100	37700	56800	43800	40100	36800	35100	33700
7	35900	37200	50200	40300	37100	38600	56200	43400	39900	36700	35100	33600
8	35800	37200	49700	40100	37100	38900	55000	43000	39600	36600	35100	33600
9	36300	37200	49000	39900	37000	38800	54400	42600	39300	36500	35000	33500
10	36400	37100	48500	39600	36900	38700	54900	42200	39100	36500	34900	33400
11	36400	37200	48400	39400	36900	38600	54200	41800	38900	36400	34900	33600
12	36300	38000	47800	39200	37000	38400	53100	41500	38700	36300	34800	33500
13	36300	38400	47400	39000	37100	38300	52300	41600	38500	36200	34700	33500
14	36200	38400	47000	39000	37400	38200	51500	42300	38400	36200	34600	33400
15	36200	38300	46300	38700	37600	38100	50800	42200	38200	36100	34600	33500
16	36100	38100	45700	38500	37800	38100	50200	41900	38100	36000	34500	33500
17	36000	38000	45200	38500	37900	38000	49500	41500	38000	36000	34500	33400
18	36000	37900	44800	38300	38000	37900	49000	41000	37800	36000	34400	33300
19	36000	37900	44400	38200	38000	37800	48400	41000	37900	35900	34300	33300
20	36000	37800	43900	38100	37900	37900	47800	40700	37800	35800	34300	33400
21	35900	37800	43500	38100	37900	37900	47300	40600	37700	35700	34200	33300
22	35900	37700	43000	37800	37800	37800	46700	42600	37600	35600	34200	33200
23	35800	37800	42900	37700	37800	37800	46200	44200	37500	35600	34200	33100
24	35800	37600	42300	37600	37800	37800	45800	43900	37300	35500	34200	33000
25	35800	37500	42600	37500	37600	37700	45200	43700	37200	35700	34100	32800
26	35800	37500	42900	37500	37500	37800	44600	43400	37100	35600	34100	32800
27	35700	37500	42800	37400	37500	39500	44300	43100	37200	35500	34000	32800
28	35600	37500	42800	37400	37400	41700	44000	42900	37100	35400	33900	32800
29	35700	38100	43300	37400	---	41800	43600	42600	37000	35400	33900	32800
30	35600	38300	43000	37300	---	41600	43500	42300	36900	35300	33800	32700
31	35700	---	42500	37300	---	41400	---	41900	---	35300	34000	---

WTR YR 1983

(†)	791.43	792.45	794.03	792.07	792.10	793.63	794.37	793.82	791.93	791.28	790.76	790.21
(‡)	-600	+2600	+4200	-5200	+100	+4000	+2100	-1600	-5000	-1600	-1300	-1300
MAX	36400	38400	50200	42200	38000	41800	56800	45100	41500	36900	35200	34000
MIN	35600	35700	38300	37300	36900	37100	41400	40600	36900	35300	33800	32700

CAL YR.....(†) +14800

WTR YR.....(‡) - 3600

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

(‡) Change in contents, in acre-feet.

LITTLE CHARITON RIVER BASIN

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 downstream from Long Branch Lake and 3 mi west of Macon.

DRAINAGE AREA.--112 mi².

PERIOD OF RECORD.--September 1971 to current year. Partial-record station May 1970 to August 1971.

GAGE.--Water-stage recorder. Datum of gage is 741.43 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. Several observations of water temperatures were made during the year. Some regulation from Long Branch Lake.

AVERAGE DISCHARGE.--12 years, 107 ft³/s, 77,520 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,700 ft³/s Apr. 21, 1973, gage height, 20.60 ft; no flow in most years.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 859 ft³/s Apr. 6; minimum daily discharge, 1.1 ft³/s Sept. 27, 28.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	20	93	250	47	49	293	301	227	40	5.2	6.5
2	26	30	293	241	48	47	490	317	215	36	4.3	6.5
3	26	55	310	229	46	44	724	317	208	32	3.5	6.3
4	25	55	327	216	42	43	754	311	201	36	3.5	6.3
5	23	51	356	207	41	54	824	303	191	39	3.5	6.3
6	21	46	392	200	40	84	859	297	181	37	3.7	6.3
7	19	43	394	192	38	122	782	292	167	33	3.7	6.0
8	21	42	378	183	36	134	669	285	158	28	6.0	6.0
9	24	40	357	174	34	133	653	276	144	26	9.0	6.0
10	23	38	326	168	35	126	661	268	130	23	8.1	6.0
11	23	45	350	161	37	114	586	258	117	22	7.9	6.5
12	21	82	339	148	39	106	520	250	103	21	7.4	6.0
13	20	103	330	138	44	100	482	261	97	19	6.9	5.8
14	19	97	232	131	56	94	454	269	93	18	6.7	5.8
15	18	86	317	118	65	83	438	267	87	17	6.7	6.5
16	17	79	310	102	72	76	420	258	80	17	6.7	6.0
17	16	75	301	95	79	72	390	220	78	16	6.7	6.0
18	15	70	297	88	81	67	380	217	73	15	6.7	6.0
19	15	67	293	83	78	61	368	211	76	14	6.9	6.0
20	15	65	285	78	78	72	351	205	71	13	6.9	16
21	14	62	279	74	76	69	348	204	67	12	6.7	36
22	13	58	269	70	74	66	339	286	64	11	6.9	35
23	13	58	262	72	70	63	334	290	62	9.5	7.2	36
24	12	52	260	67	67	60	326	283	57	9.3	7.2	36
25	12	48	269	64	62	56	315	282	56	11	7.2	13
26	11	46	269	59	58	88	310	276	55	9.3	6.9	1.2
27	11	44	266	55	54	172	301	268	55	8.2	6.7	1.1
28	13	54	273	52	52	241	297	266	54	7.2	6.7	1.1
29	15	81	278	51	---	246	293	258	51	6.9	6.5	1.2
30	15	88	268	49	---	244	292	248	46	6.9	6.9	4.5
31	16	---	261	48	---	235	---	239	---	6.0	6.5	---
TOTAL	559	1780	9234	3863	1549	3221	14253	8283	3264	599.3	195.4	297.9
MEAN	18.0	59.3	298	125	55.3	104	475	267	109	19.3	6.30	9.93
MAX	27	103	394	250	81	246	859	317	227	40	9.0	36
MIN	11	20	93	48	34	43	292	204	46	6.0	3.5	1.1
CAL YR 1982	TOTAL		54811.1	MEAN	150	MAX	394	MIN	5.0			
WTR YR 1983	TOTAL		47098.6	MEAN	129	MAX	859	MIN	1.1			

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 downstream end of bridge on State Highway C, 1 mi downstream from Sugar Creek, and 1.5 mi northwest of Huntsville.

DRAINAGE AREA.--220 mi².

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 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 higher and from Sept. 24, 1974, at present datum.

REMARKS.--Records fair. Several observations of water temperatures were made during the year. Flow partly regulated by Long Branch Lake. Low flow affected by operation of pump 7 mi upstream.

AVERAGE DISCHARGE.--21 years, 243 ft³/s, 15.00 in/yr, 176,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,000 ft³/s Apr. 21, 1973, gage height, 20.78 ft, at datum then in use, from rating curve extended above 4,000 ft³/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 and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 2	2300	3,520	17.17
Mar. 26	2330	1,580	13.63
Apr. 2	0930	*4,280	17.69

Minimum observed discharge, 0.14 ft³/s Sept. 14, gage height, 5.65 ft.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	54	132	300	79	69	1470	939	258	51	9.5	12
2	31	90	2230	282	86	66	3740	848	245	45	2.2	54
3	32	64	2940	260	99	63	2750	484	274	41	4.3	5.1
4	35	67	1480	247	110	62	1770	416	241	49	3.6	5.8
5	30	63	1890	232	90	116	2140	368	217	51	2.8	4.8
6	27	58	1380	225	79	1080	1990	349	200	47	2.8	4.0
7	26	55	702	215	90	475	1230	345	185	44	5.4	3.2
8	28	51	580	202	81	295	961	336	169	40	4.5	3.0
9	133	51	494	194	72	212	1280	315	160	35	2.8	4.5
10	66	48	546	191	74	184	1160	300	148	32	6.6	7.0
11	36	63	628	178	111	166	937	289	139	27	8.2	29
12	32	168	469	181	113	155	800	293	129	23	7.4	19
13	28	157	427	176	110	144	702	576	118	24	7.0	6.0
14	26	130	411	147	118	132	638	587	115	23	7.8	1.3
15	23	119	395	137	115	123	559	420	110	21	6.6	20
16	20	110	376	140	118	116	512	340	98	21	4.8	27
17	19	103	364	158	115	110	474	302	88	21	5.1	12
18	19	94	359	169	111	101	454	280	90	18	4.3	7.4
19	23	92	352	126	110	98	426	287	607	17	3.8	5.7
20	46	98	331	120	106	276	405	262	205	17	4.3	6.0
21	35	88	323	116	98	334	390	243	127	16	5.4	10
22	24	83	313	99	93	185	384	596	99	16	5.7	48
23	27	87	304	98	92	157	376	510	83	15	8.2	47
24	21	89	323	92	87	133	366	382	71	15	7.8	48
25	20	77	565	88	84	119	351	358	66	23	5.7	81
26	20	79	407	84	77	815	340	338	68	18	5.1	21
27	19	79	355	80	74	1230	338	332	106	15	4.8	4.0
28	25	158	522	81	70	546	395	332	68	12	6.3	.94
29	43	180	397	84	---	393	355	308	61	9.5	4.5	.53
30	45	144	338	92	---	364	370	284	61	31	18	1.1
31	48	---	318	83	---	347	---	270	---	26	19	---
TOTAL	1039	2799	20651	4877	2662	8666	28063	12289	4606	843.5	194.3	498.37
MEAN	33.5	93.3	666	157	95.1	280	935	396	154	27.2	6.27	16.6
MAX	133	180	2940	300	118	1230	3740	939	607	51	19	81
MIN	19	48	132	80	70	62	338	243	61	9.5	2.2	.53

CAL YR 1982	TOTAL	596558	MEAN	1634	MAX	132000	MIN	11
WTR YR 1983	TOTAL	87188.17	MEAN	239	MAX	3740	MIN	.53

06906300 EAST FORK LITTLE CHARITON RIVER NEAR HUNTSVILLE, MO.--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--September 1963 to September 1968, October 1973 to July 1975, October 1982 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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 (STAND- ARD 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)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)
OCT											
20...	1100	1028	29001	52	1100	7.2	11.0	9.4	85	8	230
NOV											
03...	1610	1028	29001	54	1360	8.0	12.5	10.2	95	22	860
DEC											
14...	1030	1028	29001	416	398	7.2	5.0	--	--	22	150
JAN											
05...	1700	1028	29001	232	474	7.7	2.0	12.4	90	24	92
FEB											
08...	1120	1028	29001	113	975	7.3	1.5	13.2	94	17	K20
MAR											
08...	1715	1028	29001	270	677	7.5	5.5	10.8	86	22	2000
APR											
12...	1130	1028	29001	798	445	7.7	9.0	10.0	87	27	210
MAY											
11...	1730	1028	29001	287	481	7.5	15.5	8.4	83	29	150
JUN											
07...	1140	1028	29001	188	480	7.2	19.5	7.6	82	30	540
JUL											
19...	1815	1028	29001	17	900	8.5	32.0	7.2	98	34	52
AUG											
16...	1100	1028	29001	4.8	1280	7.9	27.5	5.2	65	24	180
SEP											
28...	1700	1028	29001	1.0	722	8.0	26.0	8.4	102	24	84

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- LILITY 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										
20...	540	470	120	55	56	5.8	62	7.6	510	7.0
NOV										
03...	--	--	--	--	--	--	118	2.3	--	--
DEC										
14...	--	--	--	--	--	--	194	24	--	--
JAN										
05...	200	170	50	19	15	4.4	29	1.1	150	6.0
FEB										
08...	--	--	--	--	--	--	82	8.0	--	--
MAR										
08...	--	--	--	--	--	--	79	4.8	--	--
APR										
12...	210	140	52	19	11	3.9	71	2.7	140	<2.0
MAY										
11...	--	--	--	--	--	--	66	4.0	--	--
JUN										
07...	--	--	--	--	--	--	66	8.1	--	--
JUL										
19...	320	220	72	34	52	4.6	105	.6	320	9.0
AUG										
16...	--	--	--	--	--	--	115	2.8	--	--
SEP										
28...	--	--	--	--	--	--	98	1.9	--	--

K--Results based on colony count outside the acceptable range (non-ideal colony count).

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 0300104, on right bank upstream from county bridge, 0.8 mi downstream from Finney Creek, 1 mi south of Blue Lick, and at mile 30.8.

DRAINAGE AREA.--1,120 mi².

PERIOD OF RECORD.--June 1922 to September 1933, May 1938 to current year.

REVISED RECORDS.--WSP 1006: 1929. WDR MO-83-1: 1982.

GAGE.--Water-stage recorder. Datum of gage is 593.79 ft National Geodetic Vertical Datum of 1929. Prior to July 25, 1925, nonrecording gage at site 75 ft downstream at datum 0.10 ft lower. July 25 to Sept. 30, 1933, and May 23, 1938, to Dec. 3, 1956, nonrecording gage at site 25 ft downstream at same datum.

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

AVERAGE DISCHARGE.--56 years, 712 ft³/s, 8.63 in/yr, 515,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 54,000 ft³/s Nov. 18, 1928, gage height 41.25 ft from floodmarks, from rating curve extended above 32,000 ft³/s by logarithmic plotting; minimum, 0.08 ft³/s Aug. 9, 10, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 22,200 ft³/s Apr. 5, gage height, 35.22 ft; minimum discharge, 1.2 ft³/s Sept. 30, minimum gage height, 6.01 ft.

REVISIONS.--The date of the 1982 water year maximum daily discharge has been revised to May 31.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	65	84	378	785	518	178	2250	6710	259	316	3.8	4.2
2	56	108	6270	541	401	172	8720	8860	222	179	4.6	3.8
3	50	110	7400	423	390	166	12400	9300	213	126	7.6	3.8
4	47	143	8600	330	261	165	17700	10500	203	195	6.0	2.7
5	44	100	9000	331	291	246	21200	7230	198	315	5.2	4.2
6	45	81	8800	328	244	601	20800	7840	198	111	6.6	4.2
7	39	35	8700	329	220	862	19600	3080	213	66	11	4.2
8	39	28	8600	331	219	1380	20000	991	303	45	14	4.2
9	768	25	8120	315	216	619	10800	756	115	32	33	4.2
10	1250	28	5880	320	279	285	7590	677	115	23	27	2.7
11	286	31	3640	320	946	286	4620	618	106	20	17	2.7
12	42	169	2860	265	2800	249	1460	1300	132	17	11	13
13	44	650	1230	206	3050	231	1010	2190	96	15	7.8	9.6
14	25	306	741	205	2110	228	901	1680	96	16	6.3	4.2
15	25	148	622	206	899	229	804	3390	130	16	5.0	6.3
16	46	117	524	176	573	205	626	1970	150	13	4.2	9.6
17	37	83	433	162	497	185	524	789	135	11	3.2	12
18	31	71	402	164	384	170	482	1090	130	8.4	2.5	8.9
19	31	68	423	168	272	165	458	2500	1130	7.2	2.2	7.7
20	31	69	396	158	218	821	417	1640	660	10	2.4	6.8
21	23	70	340	94	292	1800	386	698	298	18	2.5	7.8
22	39	68	309	116	263	1260	370	529	172	15	2.5	8.4
23	39	62	304	152	248	775	360	402	120	9.1	2.5	5.8
24	22	56	730	160	240	632	378	367	96	5.9	3.1	3.9
25	23	56	2720	161	228	486	345	406	80	164	3.2	3.5
26	22	62	2620	159	210	1780	279	489	74	38	4.0	7.8
27	22	59	1140	160	191	4390	948	897	133	45	3.8	4.9
28	22	299	2960	168	181	4870	3890	2290	472	25	3.6	3.3
29	25	1430	3830	223	---	5290	4540	1260	2550	10	4.4	2.2
30	106	694	3830	666	---	5490	4710	643	1090	8.1	7.5	1.5
31	126	---	2340	860	---	4040	---	356	---	8.3	9.4	---
TOTAL	3470	5310	104142	8982	16641	38256	168568	81448	9889	1888.0	226.9	168.1
MEAN	112	177	3359	290	594	1234	5619	2627	330	60.9	7.32	5.60
MAX	1250	1430	9000	860	3050	5490	21200	10500	2550	316	33	13
MIN	22	25	304	94	181	165	279	356	74	5.9	2.2	1.5
CAL YR 1982	TOTAL		495457.4	MEAN	1357	MAX	12000	MIN	9.4			
WTR YR 1983	TOTAL		438989.0	MEAN	1203	MAX	21200	MIN	1.5			

LAMINE RIVER BASIN

06908800 LAMINE RIVER NEAR BLACKWATER, MO.
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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 downstream from Blackwater River.

DRAINAGE AREA.--2610 mi².

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD 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...	1145	--	830	7.7	13.0	65	6.4	60	12000	13000
JAN 04...	1045	E100	430	7.6	1.5	45	12.4	87	460	7200
MAR 07...	1230	100	572	7.9	13.0	18	7.6	72	420	1700
MAY 10...	1115	200	420	7.9	16.5	39	7.0	70	200	780
JUL 18...	1300	100	448	7.7	26.0	20	4.4	53	100	170
SEP 27...	1100	--	1530	7.7	19.0	17	4.0	42	40	56

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- LITY FIELD (MG/L AS CACO3) (00410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
NOV 02...	230	65	64	18	71	39	2	7.7	170	44
JAN 04...	180	81	50	13	19	18	.6	3.7	98	39
MAR 07...	210	82	60	15	31	24	1	4.6	130	77
MAY 10...	170	45	50	12	17	17	.6	3.5	130	41
JUL 18...	170	37	47	12	23	22	.8	4.7	130	26
SEP 27...	290	120	79	23	180	56	5	8.9	170	50

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...	130	.20	11	468	450	.64	--	2.60	.600
JAN 04...	29	.20	13	252	230	.34	--	3.20	.280
MAR 07...	40	.20	5.1	338	310	.46	91	2.10	.450
MAY 10...	23	.20	12	247	240	.34	133	2.60	.160
JUL 18...	39	.30	7.1	247	240	.34	67	1.80	.240
SEP 27...	340	.30	8.6	840	790	1.1	--	.830	1.00

LAMINE RIVER BASIN

06908800 LAMINE RIVER NEAR BLACKWATER, MO.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
NOV									
02...	.77	2.5	.520	1.6	.360	.360	11	--	59
JAN									
04...	.36	1.3	.200	.61	.110	.090	38	--	97
MAR									
07...	.58	1.8	.220	.67	.240	.110	298	80	4
MAY									
10...	.21	1.7	.140	.43	.060	.050	110	59	82
JUL									
18...	.31	1.6	.150	.46	.070	.050	57	15	86
SEP									
27...	1.3	2.8	.160	.49	.030	.050	81	--	13

DATE	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)
NOV										
02...	20	2	170	<.5	<1	<1	<3	3	42	1
JAN										
04...	70	1	120	.5	<1	<1	<3	2	61	3
MAY										
10...	60	1	140	<.5	1	<1	<3	2	39	2
JUL										
18...	<10	1	160	<.5	<1	<1	<3	7	12	<1

DATE	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV										
02...	46	520	.1	<10	2	<1	<1	460	<6	150
JAN										
04...	18	220	.1	<10	5	1	<1	210	<6	18
MAY										
10...	16	120	.5	<10	2	1	<1	210	<6	9
JUL										
18...	17	860	.2	<10	3	1	<1	230	<6	76

MISSOURI RIVER MAIN STEM

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.

DRAINAGE AREA.--501,700 mi², 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 National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1928, nonrecording gage at site 0.4 mi downstream at datum 3.14 ft lower. Oct. 1, 1928 to May 9, 1931, nonrecording gage at site 50 ft upstream from present site at present datum. May 10, 1931, to Apr. 12, 1934, water-stage recorder at site 0.4 mi 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.--58 years, 59,260 ft³/s, 42,930,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 550,000 ft³/s July 17, 1951; maximum gage height, 32.82 ft July 17, 1951; minimum discharge, about 1,800 ft³/s Jan. 10, 1940; minimum gage height, -0.85 ft Jan. 13, 1937.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 21, 1844, reached a stage of 32.7 ft, discharge, about 710,000 ft³/s, computed by Corps of Engineers. Flood of June 6, 1903, reached a stage of 30.5 ft discharge, about 612,000 ft³/s, computed by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 317,700 ft³/s April 7, gage height, 30.74 ft; minimum daily, 46,000 ft³/s Feb. 7, 8.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	52700	63900	80200	105000	64200	94500	151000	146000	92600	130000	62900	57000
2	52400	62100	119000	84600	74800	94700	231000	198000	87800	132000	64100	56000
3	52400	61700	158000	68700	68200	101000	288000	206000	88700	134000	65300	55700
4	53600	60000	150000	59000	55500	102000	290000	169000	93800	131000	65500	55800
5	56900	59500	153000	54400	48800	103000	300000	151000	91400	132000	63900	55600
6	60900	59500	189000	53300	46800	114000	308000	145000	87700	134000	62600	55400
7	61500	59100	193000	53000	46000	135000	314000	136000	80700	127000	61600	54500
8	59600	59000	179000	53400	46000	139000	297000	120000	82600	118000	60600	53400
9	62200	60500	168000	54600	46300	133000	270000	109000	78900	109000	60100	53100
10	87600	61600	156000	55800	47400	134000	241000	107000	74300	105000	59500	53900
11	102000	60300	142000	60000	49200	129000	217000	106000	72300	105000	59000	54500
12	99200	63600	120000	62000	52600	119000	194000	104000	70800	105000	58000	54800
13	98800	90000	97400	60000	57900	108000	172000	113000	76900	102000	57700	53700
14	84900	102000	80000	55000	60600	99000	156000	129000	80100	98400	57300	52900
15	74600	102000	71600	54000	67600	93600	148000	144000	83700	96500	57100	52700
16	68900	92400	67800	53000	80000	87700	144000	136000	95700	95000	56900	53300
17	66300	80400	64000	54000	101000	84800	143000	119000	125000	93500	56400	55200
18	64000	74400	59900	56000	112000	88300	142000	110000	126000	93000	56000	55900
19	61900	71300	56300	55000	108000	97800	137000	113000	132000	92500	54700	54900
20	60300	70400	53500	54000	102000	101000	134000	113000	149000	89500	54400	55400
21	59400	69400	53100	53000	104000	97100	130000	127000	156000	87200	53600	55000
22	60200	70900	53600	52000	122000	90600	120000	137000	148000	86300	53300	55100
23	61700	73200	53800	51600	123000	83400	116000	153000	135000	83000	52900	57100
24	62800	73300	54300	52400	107000	80300	114000	149000	127000	76700	53800	58800
25	63900	72300	76200	52700	100000	77200	110000	124000	123000	72600	55400	57000
26	63800	72700	95800	52600	103000	80700	106000	111000	120000	69500	56100	56000
27	61600	73100	85900	52300	102000	114000	103000	110000	120000	67900	54900	55000
28	60200	74000	88600	51100	98000	173000	113000	113000	121000	67400	54000	54000
29	59800	79900	126000	49900	---	184000	131000	114000	120000	65500	54700	52000
30	61200	83200	130000	50800	---	167000	128000	114000	126000	62900	55400	49100
31	63000	---	118000	55000	---	150000	---	102000	---	62500	56000	---
TOTAL	2058300	2155700	3293000	1778200	2193900	3455700	5450000	4028000	3166000	3023900	1793700	1642800
MEAN	66400	71860	106200	57360	78350	111500	181700	129900	105500	97550	57860	54760
MAX	102000	102000	193000	105000	123000	184000	314000	206000	156000	134000	65500	58800
MIN	52400	59000	53100	49900	46000	77200	103000	102000	70800	62500	52900	49100
CAL YR 1982	TOTAL			33177800		MEAN	90900	MAX	270000	MIN	13000	
WTR YR 1983	TOTAL			34039200		MEAN	93260	MAX	314000	MIN	46000	

OSAGE RIVER BASIN

06918070 OSAGE RIVER ABOVE SCHELL CITY, MO

LOCATION.--Lat 38°03'20", long 94°08'44", in SE¼SW¼NW¼ sec. 20, T.38 N., R.29 W., Bates County, Hydrologic Unit 10290105, 0.8 mi downstream from Shaw Branch, 0.2 mi upstream from McKenzie Creek, and 3.0 mi northwest of Schell City.

DRAINAGE AREA.--5,410 mi², by U.S. Army Corps of Engineers.

PERIOD OF RECORD.--October 1979 to present.

GAGE.--Water-stage recorder. Datum of gage is 700.00 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 50,400 ft³/s June 20, 1981; minimum daily discharge, 61 ft³/s May 8, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 50,400 ft³/s June 20, minimum daily discharge 61 ft³/s May 8, 1981; may have been higher or lower during periods of no record.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

	MEAN VALUES											
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1								---	1080	18800	6860	2060
2								---	1380	18800	4300	5120
3								---	1850	17200	2800	5300
4								---	2170	15700	2340	4070
5								---	3680	14100	2010	2030
6								---	3340	11700	1520	1330
7								---	2400	8430	1300	985
8								61	1510	5640	1100	724
9								64	1100	4150	973	648
10								88	796	3510	849	681
11								72	6990	3080	737	528
12								105	20700	3050	1020	417
13								125	30300	2920	1370	307
14								131	30900	2900	957	296
15								77	30500	---	857	283
16								112	33400	---	676	273
17								171	39500	---	765	258
18								7270	45000	---	533	249
19								15400	45600	3510	410	229
20								18300	50400	7040	322	229
21								18900	47800	5960	228	213
22								16400	39200	2180	158	182
23								8650	28500	1050	156	180
24								6370	18100	935	156	178
25								7830	17500	730	225	177
26								6980	19700	810	1200	180
27								3130	18000	2170	2240	233
28								1380	18600	5860	1570	235
29								882	16700	10600	991	200
30					---	---		610	17200	12000	631	---
31		---			---	---	---	574	---	11700	469	---
TOTAL								---	593896	---	39723	---
MEAN								---	19800	---	1281	---
MAX								---	50400	---	6860	---
MIN								---	796	---	156	---

OSAGE RIVER BASIN

06918070 OSAGE RIVER ABOVE SCHELL CITY, MO

LOCATION.--Lat 38°03'20", long 94°08'44", in SE¼SW¼NW¼ sec. 20, T.38 N., R.29 W., Bates County, Hydrologic Unit 10290105, 0.8 mi downstream from Shaw Branch, 0.2 mi upstream from McKenzie Creek, and 3.0 mi northwest of Schell City.

DRAINAGE AREA.--5,410 mi², by U.S. Army Corps of Engineers.

PERIOD OF RECORD.--October 1979 to present.

GAGE.--Water-stage recorder. Datum of gage is 700.00 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 50,400 ft³/s June 20, 1981; minimum daily discharge, 61 ft³/s May 8, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 39,000 ft³/s June 5; minimum daily discharge, 746 ft³/s Nov. 26. May have been higher or lower during periods of no record.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	4520	8110	---	24900	2980	2050	2040	31800	---	---	---
2	---	11300	12200	---	27000	2810	2680	1660	34700	---	---	---
3	---	12700	11300	---	26200	2740	2310	1280	35900	---	---	---
4	---	13000	7150	---	23700	2440	2980	1100	37900	---	---	---
5	---	12000	4260	---	---	1760	2870	960	39000	---	---	---
6	---	10300	3250	---	---	1430	2090	900	37400	4200	---	---
7	---	7290	3150	---	---	1260	1770	2220	33300	2720	---	---
8	---	4930	3200	---	---	1070	1840	3580	28200	2290	---	---
9	---	6400	3020	---	---	977	1810	4120	22800	1800	---	---
10	---	10800	2850	---	---	926	1570	2710	---	2890	---	---
11	---	10700	2840	---	---	852	972	2060	---	6640	---	---
12	---	7750	2730	---	---	836	---	1710	---	6340	---	---
13	---	5300	2620	---	---	867	---	3700	---	3310	9120	---
14	---	4240	2430	---	---	1960	---	9690	---	1380	16300	---
15	4670	3690	2340	---	---	14300	---	15500	---	2610	18300	---
16	6830	2880	2330	---	---	17300	---	16700	---	4930	17000	---
17	9790	2210	2290	---	14300	21800	---	15000	---	5360	12200	---
18	10700	1870	2230	---	17900	25700	---	15400	---	3670	7320	---
19	10300	1440	2070	---	14800	23900	---	14600	---	---	3400	---
20	10500	1240	1990	---	9730	17700	---	12400	---	---	2060	---
21	10400	1060	1810	---	8360	11900	---	11000	---	---	1750	---
22	9620	1150	1700	---	7110	6540	---	13200	---	---	1420	---
23	7530	994	1680	---	6250	3210	---	13700	---	---	---	---
24	3810	815	1650	1740	5590	2420	---	11500	---	---	---	---
25	1520	818	1730	2830	5050	2220	---	8700	---	---	---	---
26	1030	746	1750	2400	4710	2440	---	8980	---	---	---	---
27	848	795	1510	2060	4210	2480	---	11300	---	---	---	---
28	777	829	1140	1670	3340	2480	---	11800	---	---	---	---
29	765	796	---	1390	---	1950	---	15300	---	---	---	---
30	678	1470	---	11300	---	1640	1440	19900	---	---	---	---
31	583	---	---	18700	---	1640	---	26700	---	---	---	---
TOTAL	---	144033	---	---	---	182528	---	279410	---	---	---	---
MEAN	---	4801	---	---	---	5888	---	9013	---	---	---	---
MAX	---	13000	---	---	---	25700	---	26700	---	---	---	---
MIN	---	746	---	---	---	836	---	900	---	---	---	---

LOCATION.--Lat 38°03'20", long 94°08'44", in SE¼SW¼NW¼ sec. 20, T.38 N., R.29 W., Bates County, Hydrologic Unit 10290105, 0.8 mi downstream from Shaw Branch, 0.2 mi upstream from McKenzie Creek, and 3.0 mi northwest of Schell Ctr.

PERIOD OF RECORD.--October 1979 to present.

REMARKS.--Records fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 50,400 ft³/s June 20, 1981; minimum daily discharge, 61 ft³/s May 8, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 47,100 ft³/s Apr. 6, minimum daily discharge, 66 ft³/s Nov. 3.
May have been higher or lower during period of no record.

[illegible]

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 approximately above gage.

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (NTU) (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 09...	1545	200	685	8.3	15.0	21	9.8	97	570	710
JAN 12...	1530	500	528	8.1	2.0	38	11.6	83	210	340
MAR 16...	1530	1800	494	8.1	11.5	36	7.2	66	180	1200
MAY 04...	1530	23500	244	8.1	16.5	330	7.2	73	2000	11000
JUL 07...	0900	4600	304	7.4	25.0	160	4.9	58	K800	3200
SEP 20...	1330	E200	398	7.5	22.0	40	6.4	72	130	500

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 09...	290	130	79	22	34	20	.9	5.3	160	170
JAN 12...	240	86	74	12	16	13	.5	3.4	150	100
MAR 16...	220	51	72	10	14	12	.4	3.1	170	74
MAY 04...	110	16	35	5.0	5.4	10	.2	3.1	92	29
JUL 07...	130	61	37	9.8	8.5	12	.3	4.3	72	79
SEP 20...	170	17	51	9.5	17	18	.6	4.3	150	53

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 09...	25	.40	2.6	449	430	.61	242	<.100	<.060
JAN 12...	15	.20	15	350	330	.48	472	1.40	.120
MAR 16...	12	.20	6.9	312	290	.42	1520	1.10	.180
MAY 04...	4.0	.20	8.5	146	150	.20	9260	.700	.130
JUL 07...	5.2	.20	7.0	199	200	.27	2470	.980	.200
SEP 20...	11	.40	4.4	241	240	.33	--	.310	.100

K--Results based on colony count outside the acceptable range (non-ideal colony count).

OSAGE RIVER BASIN

06918080 OSAGE RIVER NEAR SCHELL CITY, MO.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
NOV 09...	.08	1.4	.090	.28	.030	.010	79	43	58
JAN 12...	.15	1.3	.120	.37	.040	.020	73	99	93
MAR 16...	.23	1.1	.120	.37	.060	.040	75	364	80
MAY 04...	.17	1.8	.500	1.5	.050	.040	499	31700	94
JUL 07...	.26	1.5	.340	1.0	.050	.030	358	4450	--
SEP 20...	.13	1.2	.090	.28	.010	.010	--	--	--

DATE	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)
NOV 09...	10	1	130	<.5	<1	<1	<3	3	11	1
JAN 12...	70	1	95	.6	<1	<1	<3	2	23	<1
MAY 04...	--	1	66	<.5	<1	<1	<3	4	210	1
JUL 07...	130	1	71	<.5	5	<1	<3	6	130	5

DATE	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 09...	27	39	.2	<10	2	<1	<1	490	<6	11
JAN 12...	62	3	.1	<10	4	2	<1	1200	<6	14
MAY 04...	8	10	.6	<10	12	1	<1	170	<6	9
JUL 07...	15	40	<.1	<10	5	1	<1	210	<6	30

OSAGE RIVER BASIN

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 upstream from Cave Spring Branch and 2 mi south of Dadeville.

DRAINAGE.--257 mi².

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

GAGE.--Water-stage recorder. Datum of gage is 869.78 ft 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.--Records good. Several observations of water temperature made during the year.

AVERAGE DISCHARGE.--17 years, 213 ft³/s, 11.25 in/yr, 154,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,030 ft³/s Nov. 1, 1972, gage height, 20.63 ft from floodmark; minimum discharge, 4.0 ft³/s Sept. 16, 1980; minimum gage height, 4.34 ft Aug. 21, 1972.

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

Time	Date	Discharge (ft ³ /s)	Gage height (ft)
Dec. 4	0530	4,200	15.36
May 1	2200	4,990	16.65
July 5	0215	*5,530	17.55

Minimum discharge, 19 ft³/s Sept. 30, gage height, 4.56 ft.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44	29	275	485	152	102	225	3520	220	53	58	32
2	43	31	1460	445	201	100	1530	2450	210	48	60	29
3	42	30	3490	406	224	98	1710	1420	506	46	65	26
4	42	29	3360	380	220	97	1140	980	414	1210	54	25
5	41	28	2180	355	219	103	1090	510	326	2310	52	24
6	37	28	1620	335	218	97	1050	650	274	525	48	23
7	40	28	1140	316	208	99	894	580	225	392	47	25
8	39	28	901	296	202	96	756	520	192	320	45	28
9	49	28	750	280	197	94	693	480	159	271	44	28
10	52	27	788	267	191	92	619	460	140	235	43	25
11	44	29	922	248	184	90	546	440	125	208	42	22
12	41	33	769	230	176	87	499	430	114	190	40	22
13	39	32	685	224	169	87	479	430	105	169	38	22
14	38	30	624	218	164	87	487	830	108	157	37	22
15	36	29	561	203	158	85	434	750	103	149	35	24
16	34	28	501	195	151	82	402	660	94	140	35	26
17	33	28	458	188	145	80	379	580	89	131	34	26
18	32	28	429	178	140	77	360	700	84	122	33	24
19	31	28	395	170	136	77	338	840	80	114	32	22
20	31	28	364	165	132	85	317	640	76	105	31	26
21	30	28	341	162	127	80	299	570	71	99	31	28
22	30	32	319	159	124	76	345	510	67	92	30	25
23	29	51	302	152	121	74	1620	460	64	87	43	22
24	29	51	315	145	118	73	1310	410	62	82	40	22
25	29	46	812	140	114	70	981	370	65	77	36	24
26	29	89	605	139	109	79	834	330	65	79	32	25
27	28	283	575	138	106	92	729	300	67	76	30	24
28	29	497	746	134	105	103	670	290	62	71	29	22
29	31	425	653	132	---	112	1160	270	62	65	28	21
30	32	336	583	128	---	131	2960	250	59	61	28	19
31	30	---	532	125	---	142	---	230	---	60	31	---
TOTAL	1114	2417	27455	7138	4511	2847	24856	21860	4288	7744	1231	733
MEAN	35.9	80.6	886	230	161	91.8	829	705	143	250	39.7	24.4
MAX	52	497	3490	485	224	142	2960	3520	506	2310	65	32
MIN	28	27	275	125	105	70	225	230	59	46	28	19
CAL YR 1982		TOTAL	86245	MEAN	236	MAX	3490	MIN	27			
WTR YR 1983		TOTAL	106194	MEAN	291	MAX	3520	MIN	19			

OSAGE RIVER BASIN

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 downstream from Limestone Creek, and 2 mi southeast of Greenfield.

DRAINAGE AREA.--252 mi².

PERIOD OF RECORD.--September 1965 to current year.

GAGE.--Water-state recorder. Datum of gage is 870.34 ft National Geodetic Vertical Datum of 1929 (levels by Missouri State Highway Commission).

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

AVERAGE DISCHARGE.--18 years, 235 ft³/s, 12.66 in/yr, 170,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,100 ft³/s Nov. 1, 1972, gage height, 24.45 ft from floodmark; minimum, 9.8 ft³/s Sept. 15, 1980; minimum gage height, 5.15 ft Nov. 19, 1976.

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

Time	Date	Discharge (ft ³ /s)	Gage height (ft)
Dec. 4	0015	4,210	14.59
Apr. 23	0645	*7,980	17.76
May 1	1900	5,900	16.39
July 4	2315	7,650	17.56

Minimum discharge, 22 ft³/s Sept. 25, gage height, 5.71 ft.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	67	42	260	350	242	121	288	4160	222	86	80	39
2	67	43	1720	329	371	119	1520	2250	213	81	78	37
3	66	42	3830	306	364	116	1710	1400	288	78	79	36
4	64	39	2940	288	335	114	874	980	241	3170	75	35
5	62	39	1990	274	320	122	1040	510	206	2400	70	33
6	59	38	1370	261	305	119	796	650	193	539	68	32
7	59	38	1040	247	283	122	880	580	181	389	67	37
8	61	37	825	236	268	119	758	520	174	325	65	34
9	65	36	682	226	255	114	661	480	163	278	62	31
10	67	36	830	217	245	111	573	460	154	250	60	30
11	60	38	840	204	232	108	492	440	146	233	57	28
12	56	42	690	192	219	105	442	430	141	220	54	28
13	54	41	620	188	208	104	420	430	136	198	51	27
14	52	40	561	181	200	103	439	830	143	184	50	28
15	51	38	499	173	192	101	371	750	136	173	49	29
16	48	38	442	168	184	100	342	660	126	163	46	32
17	47	37	404	163	176	97	320	580	120	150	44	33
18	46	37	378	156	169	96	301	700	117	142	42	30
19	44	36	346	151	163	96	283	840	113	132	41	29
20	42	36	320	148	156	104	263	644	108	126	40	33
21	42	35	300	147	150	101	248	569	104	127	39	36
22	42	43	282	145	146	96	445	506	101	119	38	33
23	41	73	269	140	142	94	5340	462	97	114	51	32
24	42	71	278	136	138	91	2300	407	95	108	63	31
25	42	64	472	134	134	90	1320	371	95	104	51	28
26	43	117	345	135	129	99	854	331	95	102	45	34
27	41	296	361	137	126	126	854	301	108	99	42	33
28	41	513	532	132	124	144	731	293	101	92	40	31
29	44	374	409	130	---	150	1760	268	96	88	37	28
30	46	304	388	128	---	187	3400	245	91	86	37	29
31	41	---	371	125	---	204	---	233	---	82	40	---
TOTAL	1602	2663	24594	5947	5976	3573	30025	22280	4304	10438	1661	956
MEAN	51.7	88.8	793	192	213	115	1001	719	143	337	53.6	31.9
MAX	67	513	3830	350	371	204	5340	4160	288	3170	80	39
MIN	41	35	260	125	124	90	248	233	91	78	37	27
CAL YR 1982		TOTAL	103744	MEAN	284	MAX	3830	MIN	35			
WTR YR 1983		TOTAL	114019	MEAN	312	MAX	5340	MIN	27			

OSAGE RIVER BASIN

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 upstream from Slagle Creek and 3 mi west of Morrisville.

DRAINAGE AREA.--237 mi².

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

GAGE.--Water-stage recorder. Altitude of gage is 881 ft National Geodetic Vertical Datum of 1929.

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

AVERAGE DISCHARGE.--15 years. 210 ft³/s, 12.03 in/yr, 152,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 13,200 ft³/s Nov. 1, 1972, gage height, 21.95 ft from rating curve extended above 4,000 ft³/s; minimum, 0.3 ft³/s Sept. 15, 1980; minimum gage height, 1.98 ft Sept. 15, 1980.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 3	1800	7,110	14.89
Apr. 2	1015	*7,880	15.85
Apr. 30	1345	4,100	10.78
June 3	1015	3,470	9.87

Minimum discharge, 6.8 ft³/s Sept 6, gage height 2.14 ft.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	18	141	343	76	51	931	2680	133	27	30	10
2	12	24	2260	309	108	50	5940	1600	122	24	24	10
3	11	22	5500	276	115	49	3020	985	1220	22	22	9.6
4	11	19	3870	251	105	50	1410	744	303	707	24	8.4
5	11	17	3080	232	102	62	1320	560	215	458	21	8.4
6	10	17	1670	218	103	64	1080	465	188	229	18	7.6
7	13	17	1000	206	95	160	804	543	145	168	17	116
8	17	16	698	191	92	125	629	492	123	129	16	50
9	26	16	543	184	90	102	587	391	101	104	15	29
10	30	15	672	170	87	88	521	334	87	82	13	19
11	23	17	787	151	85	79	434	298	76	72	12	15
12	18	21	576	139	80	73	392	290	69	63	11	13
13	16	21	500	133	79	69	390	317	62	56	10	12
14	14	22	391	126	76	66	450	492	79	51	9.9	12
15	13	21	334	116	74	63	366	398	72	46	9.3	14
16	12	19	284	112	71	61	324	323	61	44	9.2	14
17	12	18	260	102	68	57	297	279	53	40	8.1	13
18	11	18	247	98	65	56	279	507	49	37	8.0	12
19	11	18	221	100	65	56	262	480	44	33	7.7	11
20	10	18	202	100	64	69	244	320	41	31	7.9	14
21	11	17	190	100	61	71	222	274	38	29	7.9	17
22	11	20	182	90	59	67	265	261	35	27	7.6	14
23	10	31	170	80	57	64	1660	251	33	24	14	13
24	11	33	668	73	58	61	877	215	32	23	13	12
25	11	32	1620	69	57	58	579	191	31	21	12	12
26	11	84	783	68	54	67	446	172	32	31	13	13
27	9.8	259	602	67	53	136	370	159	39	45	11	13
28	11	354	892	66	52	185	336	290	35	33	9.6	12
29	16	245	614	65	---	171	1980	197	32	27	8.4	11
30	18	180	473	63	---	184	3350	164	30	24	7.6	10
31	21	---	394	62	---	183	---	147	---	36	10	---
TOTAL	433.8	1629	29824	4360	2151	2697	29765	14819	3580	2743	407.2	525.0
MEAN	14.0	54.3	962	141	76.8	87.0	992	478	119	88.5	13.1	17.5
MAX	30	354	5500	343	115	185	5940	2680	1220	707	30	116
MIN	9.8	15	141	62	52	49	222	147	30	21	7.6	7.6
CAL YR 1982		TOTAL	75392.8	MEAN	207	MAX	5500	MIN	9.8			
WTR YR 1983		TOTAL	92934.0	MEAN	255	MAX	5940	MIN	7.6			

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 east of Stockton.

DRAINAGE AREA.--1,160 mi².

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

GAGE.--Water-stage recorder. Non-recording 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). Spillway is equipped with 4 taintor gates, 40 ft by 30.5 ft, crest elevation, 861.5 ft. Embankment closed and river diverted on Sept. 23, 1968. Gates closed and storage began on Dec. 12, 1969; minimum power elevation 830.0 ft reached on May 1, 1970. Gross storage at top of flood control pool is 1,666,659 acre-ft at elevation 892 ft, of which 779,550 acre-ft between elevations 867 ft and 892 ft is used for flood control, and 887,109 acre-ft between elevations 760 ft and 867 ft is used for multipurpose and power. Sedimentation reserve is 25,000 acre-ft. 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 Apr. 28, 1973, elevation, 885.94 ft; minimum, since initial filling to minimum power pool level, 352,000 acre-ft Aug. 27 to Sept. 4, 1970, elevation, 839.60 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 1,206,000 acre-ft May 5, 6; maximum elevation, 878.59 ft July 5; minimum contents, 756,200 acre-ft Sept. 30; minimum elevation, 863.95 ft 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 1982 TO SEPTEMBER 1983
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	855200	816300	836100	933600	890200	879800	882300	1170000	1103000	933000	863000	804000
2	851300	815300	860100	932000	889000	879800	917400	1185000	1098000	929000	859300	801600
3	848400	815300	891900	929500	888000	880800	934600	1193000	1111000	922100	855400	797800
4	843800	814900	917400	925900	887700	883000	945100	1200000	1109000	934100	853500	793900
5	839200	814400	937900	923400	889200	883300	957900	1206000	1103000	941000	851800	793700
6	839200	814400	945900	918100	890900	883500	967000	1206000	1098000	937400	852000	791300
7	831100	814400	955000	916100	890400	884300	974300	1204000	1091000	933800	851500	791100
8	828200	814100	960800	918100	886500	881800	980600	1203000	1085000	927200	851000	787600
9	824500	814100	966500	920400	885700	887100	987000	1198000	1077000	928700	850800	784400
10	823500	814400	973800	916400	886700	873200	991500	1196000	1070000	929500	847600	777800
11	818600	814100	980600	911600	886500	870000	996300	1191000	1067000	923100	847900	775100
12	818600	814900	987000	908000	888000	869800	999000	1187000	1059000	917600	846900	775100
13	818100	814600	987200	906800	889200	870800	1004000	1182000	1051000	911800	846200	775500
14	818400	814100	984000	901500	890200	871000	1005000	1185000	1044000	907000	845900	775500
15	817200	814400	980400	903000	889000	871000	1009000	1182000	1037000	900700	843800	776200
16	817400	813400	977700	901500	888200	872000	1011000	1178000	1031000	901200	841800	775500
17	817400	814400	974100	899200	887200	872000	1013000	1173000	1025000	901500	837800	775100
18	817400	814600	970100	894700	885700	871000	1016000	1175000	1017000	901700	834700	775500
19	815600	814100	966000	890700	885500	871700	1018000	1174000	1010000	897700	831100	773000
20	816300	813900	960800	887000	886500	872200	1021000	1168000	1003000	894200	830600	771400
21	815800	814100	956600	883000	884500	869300	1023000	1166000	996500	890200	830600	768300
22	815600	815600	952400	882800	883000	868300	1040000	1161000	988500	887000	829900	766700
23	815600	815600	946900	883500	882300	867900	1074000	1158000	981400	883300	829700	766700
24	815100	815800	944600	883800	880600	867600	1086000	1154000	974600	878300	825600	766200
25	814900	816300	945900	884700	879300	869100	1082000	1147000	969100	875900	821900	766000
26	814900	820500	945400	885700	879800	872200	1091000	1141000	962300	872000	817900	762300
27	815100	824700	946200	887200	879600	870800	1100000	1137000	955800	868300	814600	762500
28	815800	829200	944600	888000	879100	872700	1102000	1129000	949500	865700	811100	762500
29	815600	832000	941000	888200	---	874400	1121000	1124000	945600	864000	808000	759100
30	815300	834200	939400	888200	---	874400	1146000	1117000	939200	865400	807700	756200
31	815800	---	936600	891400	---	875700	---	1110000	---	865000	808000	---

WTR YR 1983

(+)	864.05	864.83	868.97	867.18	866.68	866.54	876.58	875.36	869.07	866.10	863.72	861.47
(+)	-44200	+18400	+102400	-45200	-12300	-3400	+270300	-36000	-170800	-74200	-57000	-51800
MAX	855200	834200	987200	933600	890900	884300	1146000	1206000	1111000	941000	863000	804000
MIN	814900	813400	836100	882800	879100	867600	882300	1110000	939200	864000	807700	756200

CAL YR.....(+) + 27600
WTR YR.....(+) -103800

(+) Elevation, in feet NGVD, at end of month.
(+) Change in content, 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 upstream from bridge on State Highway 32, 0.5 mi downstream from Stockton Dam, 2.0 mi upstream from Bear Creek, 2.0 mi east of Stockton, and at mile 49.5

DRAINAGE AREA.--1,160 mi², 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 National Geodetic Vertical Datum of 1929. Prior to Sept. 30, 1973, all previous gages at site 0.5 mi downstream and at datum 6.00 ft higher. Prior to May 4, 1960, nonrecording gage. Datum lowered 6.00 ft Oct. 1, 1978.

REMARKS.--Records fair except periods of backwater from Bear Creek which are poor. Several observations of water temperature were made during the year. Flow regulated by Stockton Lake since Dec. 12, 1969.

AVERAGE DISCHARGE.--62 years, 959 ft³/s, 694,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 120,000 ft³/s May 19, 1943, gage height, 31.8 ft; 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 in July 1909.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 4,130 ft³/s June 9; minimum 52 ft³/s July 18, 31.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2360	60	55	2840	1410	55	60	60	4080	3180	520	979
2	2220	61	55	2720	1530	55	60	60	4050	3130	1360	1260
3	2280	62	1100	2860	1810	55	60	60	1100	3090	1700	1630
4	2340	62	1100	2800	1280	55	60	60	2590	2040	866	1720
5	2360	62	55	2710	91	116	60	60	4090	2940	938	133
6	2330	62	55	3170	58	306	60	1890	4030	3180	67	1260
7	2540	62	55	2740	853	194	60	3830	3990	3280	56	108
8	2320	62	55	103	2760	876	60	4000	4020	3320	57	1400
9	2380	62	55	57	1060	2340	60	3940	4130	138	57	1400
10	127	64	55	2470	58	2540	60	3910	4100	57	866	1660
11	2210	62	55	2780	876	2340	60	3980	4010	3030	83	1670
12	97	64	55	2840	60	88	60	3990	4100	3300	56	108
13	64	65	2030	1460	55	58	60	4100	4060	3280	56	54
14	63	65	3280	2880	57	61	1090	3920	3980	3130	56	54
15	62	65	3480	127	817	59	153	4050	3990	3360	516	54
16	60	65	3460	62	997	212	60	4100	3130	136	1010	54
17	60	66	3470	2640	1360	311	60	4040	4000	53	1650	53
18	60	66	3420	2700	1100	858	60	3910	4000	52	1280	53
19	60	153	3480	2580	785	99	60	3840	4000	1690	1510	1240
20	60	60	3460	2360	54	65	60	4000	4000	1780	79	1190
21	60	59	3460	2710	858	1820	60	4060	4000	1760	57	691
22	60	150	3460	979	1620	619	60	4070	4000	1700	57	143
23	60	146	3520	82	826	470	60	3960	3970	1700	1140	385
24	60	55	3480	62	979	59	60	4060	4050	1400	1860	118
25	61	55	2530	62	1070	60	60	3480	3440	1820	1660	54
26	61	55	2440	62	55	62	1000	4060	4060	1760	1770	1350
27	61	55	3400	61	54	63	2000	4060	4050	1400	1470	138
28	61	55	3650	60	727	65	2000	4040	3450	1370	1450	54
29	61	55	3460	61	---	67	1000	4060	3210	952	1340	1150
30	61	55	3590	61	---	727	60	4060	3190	60	97	1400
31	61	---	3200	61	---	109	---	4000	---	52	62	---
TOTAL	24720	2090	65020	47160	23260	14864	8683	101710	112870	58140	23746	21563
MEAN	797	69.7	2097	1521	831	479	289	3281	3762	1875	766	719
MAX	2540	153	3650	3170	2760	2540	2000	4100	4130	3360	1860	1720
MIN	60	55	55	57	54	55	60	60	1100	52	56	53
CAL YR 1982	TOTAL		388895	MEAN	1065	MAX	3650	MIN	44			
WTR YR 1983	TOTAL		503826	MEAN	1380	MAX	4130	MIN	52			

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 upstream from bridge on State Highway J, 4.5 mi downstream from Bear Creek, 6.3 mi downstream from Stockton Lake, 3 mi north of Stockton and at mile 44.9.

DRAINAGE AREA.--1,292 mi², 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 National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except for period of no gage height records which are poor. Several observations of water temperature were made during the year. Regulated by Stockton Lake.

AVERAGE DISCHARGE.--10 years, 963 ft³/s, 697,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum observed discharge, 7,720 ft³/s Nov. 11, 1972, gage height, 21.20 ft; minimum, 24 ft³/s Mar. 25, 26, 1977, gage height, 4.76 ft (1.451 m).

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 4,100 ft³/s May 18; minimum daily, 57 ft³/s Aug. 14.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2360	75	153	2720	1400	94	322	734	3880	3010	520	977
2	2220	72	858	2500	1540	86	2650	487	3870	2990	1360	1380
3	2220	72	3800	2730	1370	85	2080	375	3460	2890	1750	1660
4	2310	73	2530	2620	1260	85	637	303	2260	2410	996	1750
5	2260	70	1560	2290	309	100	768	283	3980	2430	1090	431
6	2290	68	724	3090	131	266	699	1730	3900	3070	252	1200
7	2640	68	431	2520	706	245	444	3640	3850	3190	68	375
8	2370	68	343	510	2710	563	366	3890	3850	3280	65	1320
9	2580	68	289	160	1290	2170	345	3870	3960	740	67	1580
10	300	67	420	2020	140	2400	339	3690	3920	115	1030	1680
11	2000	72	588	2400	916	1960	291	3840	3820	2490	62	1750
12	400	75	354	2600	132	614	260	3890	3920	3220	59	404
13	120	73	1780	1370	114	101	249	3970	3890	3190	58	70
14	100	72	3080	2650	109	98	889	4030	3840	3040	57	65
15	90	68	3450	528	666	96	606	4010	3870	3310	500	68
16	85	67	3420	131	1060	163	210	3990	3190	750	966	64
17	85	67	3410	2160	1230	258	194	3930	3840	104	1590	62
18	80	64	3340	2440	1010	451	186	4100	3840	94	1180	58
19	80	203	3390	2300	988	485	176	3660	3870	1550	1640	1290
20	80	100	3370	2520	105	99	169	3930	3870	1850	293	1380
21	75	58	3370	2120	699	1110	163	3970	3840	1800	64	775
22	75	115	3380	1010	1590	930	200	3970	3900	1730	59	490
23	75	180	3460	281	747	855	2380	3820	3790	1760	1120	398
24	75	61	3420	120	1220	107	832	3900	3970	1150	1940	289
25	75	60	2590	114	1100	91	447	3820	3290	1890	1710	70
26	75	189	2410	112	107	104	1050	3920	3870	1840	1700	1380
27	75	311	3380	114	93	153	2100	3900	3940	1420	1610	362
28	75	413	3690	110	809	169	2250	3890	3440	1440	1540	72
29	75	262	3450	109	---	158	3080	3900	3040	1310	1540	1240
30	75	187	3230	107	---	297	1700	3890	3000	247	348	1610
31	75	---	2870	104	---	712	---	3820	---	72	77	---
TOTAL	25495	3398	72540	44560	23551	15105	26082	101152	110960	58382	25311	24250
MEAN	822	113	2340	1437	841	487	869	3263	3699	1883	816	808
MAX	2640	413	3800	3090	2710	2400	3080	4100	3980	3310	1940	1750
MIN	75	58	153	104	93	85	163	283	2260	72	57	58
CAL YR 1982	TOTAL		432074	MEAN		1184	MAX	3800	MIN	58		
WTR YR 1983	TOTAL		530786	MEAN		1454	MAX	4100	MIN	57		

OSAGE RIVER BASIN

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 north of Pleasant View, 1.8 mi downstream from Alder Creek, and 5.8 mi upstream from mouth.

DRAINAGE AREA--420 mi², 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 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 downstream at same datum. May 11, 1950 to Dec. 17, 1952, nonrecording gage, at present site and datum.

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

AVERAGE DISCHARGE.--38 years, 294 ft³/s, 9.51 in/yr, 213,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 33,900 ft³/s July 17, 1958, gage height, 27.35 ft; no flow at times many years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 27.7 ft July 20, 1909, from floodmark.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 3	1400	5,240	16.74
Apr. 3	0730	6,550	18.70
Apr. 6	0615	4,890	16.15
Apr. 23	2130	*11,200	22.64
Apr. 30	0515	5,330	16.88

Minimum discharge, 0.44 ft³/s Sept. 5, gage height, 2.78 ft.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	19	329	337	321	89	1420	2570	95	70	4.5	.64
2	12	24	2440	295	2270	87	5020	1470	86	50	4.5	.55
3	20	63	4890	263	1130	86	6080	840	1600	44	4.8	.48
4	20	40	3900	236	552	85	2550	588	2230	40	4.2	.48
5	18	23	2690	218	405	109	3170	462	511	1650	3.6	.44
6	17	17	1890	206	373	126	4100	375	298	1070	3.6	.58
7	25	15	907	195	328	133	1460	351	231	191	3.7	1.0
8	25	12	613	182	288	135	877	489	188	112	3.0	.91
9	34	11	480	169	286	122	742	336	150	75	2.2	.84
10	47	9.7	837	159	300	108	750	266	120	57	1.9	.76
11	50	11	1980	145	289	97	659	240	99	46	1.7	.70
12	36	20	1000	128	257	90	523	323	84	35	1.3	.70
13	29	40	583	121	229	87	462	308	74	27	1.1	.70
14	23	39	468	117	212	85	521	1460	70	23	1.1	.64
15	20	30	392	109	199	83	472	1630	77	21	1.1	.77
16	17	24	321	102	186	81	375	812	145	20	1.1	1.1
17	16	23	281	97	174	76	320	532	98	19	1.1	1.2
18	14	20	263	90	159	71	292	520	66	19	1.1	1.2
19	13	19	240	84	150	69	267	837	54	17	1.0	.95
20	11	18	215	81	141	83	246	660	46	15	1.0	1.1
21	9.9	17	192	81	132	102	224	414	37	12	1.1	1.1
22	8.9	16	176	82	127	111	266	359	31	11	1.1	.98
23	8.7	17	167	82	121	101	6560	367	26	9.7	1.3	.78
24	8.7	17	226	82	118	90	8190	387	24	9.0	20	.76
25	7.8	24	499	82	114	85	4550	280	22	8.0	21	.85
26	7.5	69	464	86	106	241	860	229	24	7.5	7.8	.97
27	6.2	675	426	101	98	1190	688	190	38	7.0	3.9	.96
28	7.1	1440	1350	110	94	1100	1160	162	79	6.5	2.1	.85
29	16	1000	973	115	---	706	2820	138	79	6.0	1.4	.69
30	18	495	520	115	---	945	4870	119	87	5.5	.89	.62
31	17	---	400	112	---	976	---	107	---	5.0	.65	---
TOTAL	577.8	4247.7	30112	4382	9159	7549	60494	17821	6769	3688.2	108.84	24.30
MEAN	18.6	142	971	141	327	244	2016	575	226	119	3.51	.81
MAX	50	1440	4890	337	2270	1190	8190	2570	2230	1650	21	1.2
MIN	6.2	9.7	167	81	94	69	224	107	22	5.0	.65	.44

CAL YR 1982 TOTAL 121521.9

WTR YR 1983 TOTAL 144932.84

MEAN

MEAN

333

397

MAX

MAX

4890

8190

MIN

MIN

3.4

.44

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 downstream from Cedar Creek and 5 mi north of Caplinger Mills.

DRAINAGE AREA.--1,810 mi².

PERIOD OF RECORD.--October 1974 to current year.

GAGE.--Water-stage recorder. Datum of gage is 720.82 ft 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.--9 years, 1,230 ft³/s, 891.100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,900 ft³/s Nov. 4, 1974, gage height, 25.99 ft from floodmark; minimum, 48 ft³/s Sept. 13, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 10,900 ft³/s Apr. 24; minimum daily, 65 ft³/s Aug. 14, 15.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2390	101	539	3250	1330	348	2000	5200	4000	3010	83	145
2	2300	127	3060	2920	3620	214	8190	3300	4000	2990	689	1250
3	2350	146	8330	3040	2330	209	9150	2500	4800	2870	1640	1530
4	2320	135	7800	2870	2120	209	4140	1000	4800	3060	1190	1720
5	2280	111	5270	2770	1260	233	4180	800	4800	2980	1070	1530
6	2340	102	3450	3070	513	328	5410	1500	4600	4330	798	252
7	2690	95	1740	2810	461	400	2570	4000	4300	3190	104	1310
8	2270	95	1160	1640	2540	284	1750	4200	4200	3220	87	260
9	2450	90	884	382	2500	2100	1400	4200	4100	1950	78	1700
10	1790	88	1360	1510	663	2550	1460	4200	4000	231	72	1550
11	582	96	2860	2450	1080	2220	1450	4100	4000	1380	800	1820
12	1830	114	1740	2800	569	1380	1370	4100	4000	3100	300	1450
13	195	125	1490	1670	357	236	1480	4100	4000	3070	70	108
14	160	124	3470	2700	330	217	1670	4500	4000	2950	65	79
15	146	126	3780	1640	323	214	2500	5500	4000	3180	65	78
16	132	119	3690	288	1220	209	1520	5000	3600	1900	800	77
17	111	114	3640	1510	1530	321	1420	4500	4000	183	1500	70
18	112	111	3570	2630	1210	321	1290	4500	4000	151	1200	67
19	108	135	3560	2520	1590	882	1100	4500	4000	610	1700	130
20	101	210	3560	2840	409	228	898	4500	4000	1960	1000	1540
21	97	111	3470	1980	268	713	698	4400	4000	1890	150	1140
22	92	99	3490	1440	1990	1390	618	4300	4000	1840	74	1010
23	89	204	3520	932	786	1050	7170	4200	4000	2050	159	115
24	87	130	3590	253	1140	316	10900	4100	3800	919	1740	535
25	85	106	3040	250	1930	211	5880	4100	3560	1870	1710	98
26	85	214	2950	235	421	332	1720	4100	3360	1960	1620	210
27	83	1050	3720	241	231	1410	3010	4100	3790	1540	1730	1450
28	87	2140	4930	245	804	1520	4000	4000	3420	1560	1510	103
29	91	1610	4620	249	---	1000	7270	4000	3040	1600	1480	242
30	89	818	3920	250	---	1160	9750	4000	3050	773	1230	1760
31	99	---	3160	245	---	2030	---	4000	---	99	103	---
TOTAL	27641	8846	105363	51630	33525	24235	105964	121500	119220	62416	24817	23329
MEAN	892	295	3399	1665	1197	782	3532	3919	3974	2013	801	778
MAX	2690	2140	8330	3250	3620	2550	10900	5500	4800	4330	1740	1820
MIN	83	88	539	235	231	209	618	800	3040	99	65	67
CAL YR 1982	TOTAL		558168	MEAN		1529	MAX	8330	MIN	83		
WTR YR 1983	TOTAL		708486	MEAN		1941	MAX	10900	MIN	65		

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 upstream from Jefferson Bridge on State Highway D and 5 mi southwest of Polk.

DRAINAGE AREA.--276 mi².

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

GAGE.--Water-stage recorder. Datum of gage is 872.61 ft National Geodetic Vertical Datum of 1929.

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

AVERAGE DISCHARGE.--15 years, 241 ft³/s, 11.86 in/yr, 174,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,300 ft³/s Nov. 1, 1972, gage height, 21.88 ft; minimum, 0.3 ft³/s Aug. 11, 1980; minimum gage height, 1.26 ft Sept. 1, 2, 1973.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 5,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 3	1430	*16,600	18.34
Apr. 2	1915	15,100	17.45
Apr. 29	1315	14,000	16.75
June 3	1300	6,570	11.32

Minimum discharge, 2.4 ft³/s Aug. 21, 22; gage height, 1.48 ft.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.5	18	166	375	76	55	649	1980	126	39	14	12
2	8.0	60	3890	318	92	55	12000	1180	119	33	13	11
3	9.0	48	13600	266	95	55	3410	855	2230	26	20	10
4	8.5	30	5820	240	85	55	1180	732	525	39	43	9.3
5	8.5	23	3860	222	81	61	1380	577	250	329	22	8.6
6	8.6	20	1450	207	80	65	1120	493	203	116	19	8.7
7	37	19	925	195	80	69	823	580	151	67	15	642
8	19	18	708	181	78	72	647	620	123	53	13	123
9	19	16	583	167	77	67	694	455	97	42	12	51
10	19	15	821	155	76	65	682	391	84	35	12	30
11	20	15	1000	139	76	63	548	350	73	31	11	22
12	18	19	640	123	74	61	472	329	68	27	9.5	18
13	15	19	507	116	72	60	469	360	60	24	9.0	15
14	14	20	449	113	69	60	619	729	64	23	8.0	14
15	13	20	405	103	69	58	471	553	78	22	8.0	13
16	13	19	354	99	67	56	402	407	65	20	7.5	13
17	13	15	320	97	65	55	355	322	56	20	7.3	13
18	13	15	302	91	63	53	322	863	49	19	6.1	13
19	12	15	276	86	63	52	291	796	47	17	5.4	13
20	11	15	254	84	62	59	269	449	49	17	3.8	12
21	12	15	239	83	61	65	280	373	44	19	2.9	19
22	12	18	227	82	58	64	386	396	42	17	3.1	30
23	12	21	220	83	57	62	2080	346	39	14	30	17
24	12	23	944	82	57	59	945	276	36	14	243	13
25	11	26	3380	79	59	57	596	240	35	13	49	12
26	11	88	940	78	60	62	464	214	34	49	30	13
27	11	423	775	79	59	95	406	192	34	47	21	12
28	12	601	1370	78	57	125	501	184	44	22	17	11
29	15	371	735	76	---	131	8000	178	52	16	15	10
30	16	224	536	76	---	130	4270	151	45	13	13	9.5
31	17	---	444	74	---	134	---	137	---	15	13	---
TOTAL	428.1	2249	46140	4247	1968	2180	44731	15708	4922	1238	695.6	1198.1
MEAN	13.8	75.0	1488	137	70.3	70.3	1491	507	164	39.9	22.4	39.9
MAX	37	601	13600	375	95	134	12000	1980	2230	329	243	642
MIN	8.0	15	166	74	57	52	269	137	34	13	2.9	8.6
CAL YR 1982		TOTAL	98721.1	MEAN	270	MAX	13600	MIN	5.5			
WTR YR 1983		TOTAL	125704.8	MEAN	344	MAX	13600	MIN	2.9			

OSAGE RIVER BASIN

06921200 LINDLEY CREEK NEAR POLK, MO

LOCATION.--Lat 37°45'02", long 93°15'58", in NE&SE¼ sec.29, T.35 N., R.21 W., Polk County, Hydrologic Unit 10290107, on left bank 30 ft upstream from county highway bridge, 0.5 mi downstream from Panther Creek, 2.5 mi northeast of Polk, and 11 mi upstream from Ingalls Creek.

DRAINAGE AREA.--112 mi².

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WDR MO-83-1: 1982.

GAGE.--Water-stage recorder. Datum of gage is 884.08 ft National Geodetic Vertical Datum of 1929. Prior to Sept. 25, 1957, nonrecording gage at site 30 ft downstream at same datum.

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

AVERAGE DISCHARGE.--26 years, 87.4 ft³/s, 10.59 in/yr, 63,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 28,000 ft³/s May 5, 1961, gage height, 23.60 ft, from rating extended above 12,000 ft³/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.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 2	1400	6,260	15.55
Apr. 2	1000	7,410	16.29
Apr. 29	1200	*9,010	17.14
June 3	1400	2,250	10.52

No flow many days.

REVISIONS.--The average discharge for water 1982 has been revised to 85.7 ft³/s.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.03	34	48	118	32	17	414	811	31	5.0	.04	.04
2	.02	40	3050	104	50	18	4430	333	30	3.9	.03	.01
3	.02	17	3650	86	42	17	786	216	844	2.7	.02	.00
4	.02	6.6	1060	73	31	17	414	164	174	5.4	.01	.00
5	.02	3.1	1940	69	31	23	841	134	81	23	.00	.00
6	.10	2.9	488	64	34	27	491	112	57	12	.00	.00
7	.57	2.9	287	57	31	29	268	166	43	6.6	.00	.00
8	3.7	2.4	201	52	31	28	216	114	36	4.6	.00	.00
9	7.2	2.3	158	49	32	25	341	91	28	4.0	.00	.00
10	27	2.5	485	47	34	23	290	76	25	3.0	.00	.00
11	11	3.8	458	41	32	21	182	67	21	2.2	.00	.00
12	6.0	6.6	210	34	30	21	138	69	19	2.2	.00	.00
13	3.8	9.5	158	35	28	21	174	64	17	1.7	.00	.00
14	2.7	9.8	139	35	28	21	229	502	33	1.5	.00	.00
15	2.2	7.8	123	31	27	20	128	213	33	5.6	.00	.00
16	1.5	6.0	102	29	26	19	102	135	19	16	.00	.00
17	1.2	5.0	88	28	25	18	82	95	15	8.4	.00	.00
18	2.1	4.5	84	26	24	17	73	574	13	5.2	.00	.00
19	3.8	4.5	72	24	23	18	62	501	11	3.3	.00	.00
20	7.7	4.4	62	23	23	30	52	193	10	2.1	.00	.00
21	9.8	4.2	56	24	21	36	47	143	8.7	1.4	.00	.00
22	11	5.3	53	26	21	30	107	345	6.9	.86	.00	.00
23	13	11	53	25	21	25	1070	222	5.4	.53	.41	.00
24	13	11	552	24	21	24	332	122	4.7	.37	7.8	.00
25	13	9.9	845	25	21	23	187	95	4.0	.26	2.5	.00
26	14	124	255	27	19	32	137	74	3.9	.19	1.6	.00
27	14	213	320	27	18	89	111	60	7.5	.14	.57	.00
28	16	296	762	26	18	87	487	53	13	.11	.25	.00
29	19	111	244	27	---	65	6270	47	8.4	.09	.09	.00
30	31	66	165	28	---	67	1050	39	5.6	.07	.07	.00
31	36	---	142	26	---	65	---	35	---	.06	.06	---
TOTAL	270.48	1027.0	16310	1310	774	973	19511	5865	1608.1	122.48	54.04	.05
MEAN	8.73	34.2	526	42.3	27.6	31.4	650	189	53.6	3.95	1.74	.00
MAX	36	296	3650	118	50	89	6270	811	844	23	41	.04
MIN	.02	2.3	48	23	18	17	47	35	3.9	.06	.00	.00
CAL YR 1982		TOTAL	41207.01		MEAN	113	MAX	3650	MIN	.00		
WTR YR 1983		TOTAL	47825.15		MEAN	131	MAX	6270	MIN	.00		

06921325 POMME DE TERRE LAKE NEAR HERMITAGE, MO

LOCATION.--Lat 37°54'06", long 93°19'05", in NE¼ 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 southwest of Hermitage.

DRAINAGE AREA.--611 mi².

PERIOD OF RECORD.--June 1960 to current year.

GAGE.--Water-stage recorder. Non-recording 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 at elevation, 874 ft, crest of spillway, of which 407,200 acre-ft between elevations 839 ft and 874 ft is used for flood control, and 228,700 acre-ft between elevations 783 ft and 839 ft is used for conservation and 12,840 acre-ft below elevation 783 ft 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 Apr. 30, 1973, elevation, 862.35 ft, minimum, since initial filling to conservation pool level, 215,880 acre-ft Mar. 3, 1964, elevation, 835.61 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 426,600 acre-ft May 5, elevation 857.97 ft; minimum daily, 232,200 acre-ft Sept. 30; elevation, 837.80 ft.

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 1982 TO SEPTEMBER 1983
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	243100	240400	249300	276000	247100	243800	247100	413800	301000	241900	238900	234700
2	243100	240700	251700	271400	247400	243800	260600	420000	294600	241600	238600	234500
3	243400	240600	283900	267000	247300	243700	299900	423100	290100	241600	238600	234000
4	243400	240600	323100	262400	246500	243600	305700	425000	293500	241800	238300	234000
5	243200	240500	339300	257700	245600	244000	308900	426600	288600	242000	238200	233700
6	243000	240300	351700	252800	244900	244200	315300	424100	283400	242400	238100	233500
7	243400	240200	352100	247800	244300	244500	318100	419700	277800	242500	238000	233400
8	243300	240000	350400	246500	243400	244500	319900	415300	272200	242400	237900	234200
9	243700	240000	348000	244900	242700	244600	321600	410400	266400	242300	237600	234300
10	243500	239900	345900	243600	241900	244600	323400	405800	260600	242200	237400	234200
11	243300	240100	346400	242100	242100	244600	324800	400500	254600	242100	237200	234000
12	243100	240400	345500	242200	242200	244700	324700	395400	248600	242000	236900	233900
13	243000	240200	343500	242600	242500	244800	326200	390300	242800	241900	236600	233900
14	242900	240000	338900	242800	242600	244700	327800	386800	243100	241700	236500	233700
15	242700	239900	334200	243000	242800	244800	328600	385400	243300	241900	236200	233400
16	242500	239800	329800	243400	242900	244800	329100	381000	243400	241700	235900	233900
17	242400	239700	324900	243600	243000	244700	329400	376200	243300	241500	235700	233800
18	242200	239600	320100	243800	243100	244800	329400	371500	243300	241400	235600	233600
19	242000	239700	315200	244100	243200	244800	329400	370200	243200	241200	235300	233500
20	241800	239500	310200	244200	243300	245100	329300	366300	243000	241100	235100	233000
21	241600	239500	305100	244300	243400	245300	329200	360900	243000	240900	234800	233500
22	241500	239500	300100	244600	243400	245300	329000	356300	242800	240700	234600	233100
23	241300	239700	294900	244900	243500	245300	335100	352200	242600	240500	234800	232900
24	241100	239800	289900	245100	243600	245300	343600	346600	242400	240300	235300	232700
25	241000	239900	291300	245200	243700	245300	345900	341600	242200	240100	235600	232900
26	240800	240500	290500	245500	243800	245300	346900	335600	242100	239900	235600	232700
27	240600	242500	290000	245700	243800	245800	346400	330000	242200	239700	235400	232600
28	240200	245300	289100	246100	243800	246200	347900	324000	241900	239600	235200	232500
29	240700	246900	287600	246300	---	246500	360800	318600	241900	239400	235100	232300
30	240500	246900	284100	246500	---	246700	401700	312700	241900	239200	234900	232200
31	240400	---	280000	246700	---	247000	---	306700	---	239000	234900	---

WTR YR 1983

(†)	838.86	838.90	843.64	839.65	839.28	839.68	855.82	846.61	839.04	838.68	838.14	837.80
(‡)	-3600	+6500	+33100	-33300	-2900	+3200	+154700	-95000	-64800	-2900	-4100	-2700

MAX	243700	246900	352100	276000	247400	247000	401700	426600	301000	242500	238900	234700
MIN	240200	239500	249300	242100	241900	243600	247100	306700	241900	239000	234600	232200

CAL YR 1982.....(†) +34000

WTR YR 1982.....(‡) -11800

(†) 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 downstream from outlet of Pomme de Terre Lake, 2.5 mi southwest of Hermitage, 4.5 mi upstream from Green Branch, and at mile 43.4.

DRAINAGE AREA.--615 mi².

PERIOD OF RECORD.--August 1960 to current year.

REVISED RECORDS.--WDR MO-83-1: 1981.

GAGE.--Water-stage recorder. Datum of gage is 749.33 ft 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.--23 years. 457 ft³/s, 331,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,000 ft³/s May 9, 1961, gage height, 15.02 ft; no flow Sept. 10, 1960, Mar. 9-17, 1971, Nov. 4-6, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 3,060 ft³/s May 12; minimum daily discharge, 43 ft³/s many days.

REVISIONS.--The date of minimum daily discharge for water year 1981 has been revised to Sept. 11-16, 1981.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43	49	47	2760	61	92	470	115	2950	44	44	44
2	43	49	86	2750	236	93	523	110	2970	44	44	44
3	45	49	64	2740	562	93	485	109	2970	44	45	44
4	44	49	51	2730	559	93	485	109	2960	44	45	44
5	43	49	59	2770	559	92	490	1250	2950	44	45	44
6	45	48	1120	2810	558	91	454	2520	2940	44	45	44
7	45	48	2130	1760	557	91	422	2950	2930	43	45	45
8	45	48	2120	1070	556	91	423	2940	2920	43	45	44
9	45	48	2110	1070	556	91	423	2930	2900	43	45	44
10	45	48	2110	1070	284	91	426	2920	2890	43	45	44
11	45	48	2100	506	87	91	425	2970	2880	43	45	44
12	44	49	2080	62	86	91	423	3060	2870	43	45	45
13	44	48	2480	61	86	91	424	3040	1260	43	44	45
14	44	47	2850	62	86	91	426	3040	78	43	44	44
15	44	47	2840	61	87	91	426	3020	78	43	44	45
16	44	47	2790	61	88	91	426	3010	79	43	44	45
17	44	47	2810	61	89	91	425	3000	81	43	44	44
18	44	47	2800	61	89	91	425	2990	84	43	44	46
19	45	47	2790	60	89	92	425	2980	86	43	44	54
20	45	47	2780	60	89	92	425	2970	87	43	43	56
21	45	47	2770	60	89	92	426	2960	88	43	43	56
22	45	47	2790	60	90	91	429	2950	88	43	44	55
23	46	47	2800	60	90	91	439	2940	86	43	45	54
24	45	47	2790	60	91	91	435	2970	85	44	45	51
25	45	47	2800	60	91	200	435	2980	83	44	45	47
26	45	53	2790	60	91	273	795	2970	80	44	46	45
27	46	50	2790	60	91	274	1130	2960	78	44	46	44
28	47	51	2800	60	91	272	1140	2950	62	44	44	44
29	47	48	2790	60	---	271	518	2940	45	44	44	44
30	47	48	2780	60	---	271	124	2930	44	44	45	44
31	47	---	2770	60	---	374	---	2910	---	44	45	---
TOTAL	1391	1444	66887	23245	6088	4130	14722	78493	37702	1347	1381	1393
MEAN	44.9	48.1	2158	750	217	133	491	2532	1257	43.5	44.5	46.4
MAX	47	53	2850	2810	562	374	1140	3060	2970	44	46	56
MIN	43	47	47	60	61	91	124	109	44	43	43	44
CAL YR 1982	TOTAL		195386	MEAN	535	MAX	2850	MIN	43			
WTR YR 1983	TOTAL		238223	MEAN	653	MAX	3060	MIN	43			

OSAGE RIVER BASIN

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 downstream from bridge on State Highway B, 0.9 mi east of Archie, 1.4 mi upstream from Mormon Fork, and 7.4 mi downstream from South Fork.

DRAINAGE AREA.--356 mi², revised 1980.

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

GAGE.--Water-stage recorder. Datum of gage is 768.99 ft National Geodetic Vertical Datum of 1929.

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

AVERAGE DISCHARGE.--14 years, 248 ft³/s, 13.14 in/yr, 179,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,600 ft³/s Oct. 13, 1969, gage height, 19.4 ft; 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 and 28.8 ft, respectively, at point 1 mi 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)	Gage height (ft)
Mar. 27	0100	6,930	10.57
Apr. 1	2115	13,700	15.19
Apr. 28	0515	7,060	10.66
May 2	0415	*15,500	16.65

No flow many days.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.8	28	72	132	150	76	4900	9760	47	38	.10	.00
2	4.8	21	615	122	145	74	1300	10900	44	21	.05	.00
3	5.2	16	272	110	131	70	3440	1400	49	14	.00	.00
4	5.1	14	156	103	114	72	5200	592	132	11	.00	.00
5	4.8	13	1720	103	86	1820	10400	406	80	8.7	.00	.00
6	6.7	11	1300	101	83	541	3850	327	52	7.9	.00	.00
7	7.4	12	398	101	85	582	935	480	42	5.7	.00	.00
8	115	12	230	98	78	216	615	291	37	5.6	.00	.00
9	1910	12	163	98	94	167	598	227	29	5.3	.00	.00
10	208	12	493	98	359	137	659	197	24	4.8	.00	.00
11	85	15	861	85	1620	117	461	174	20	4.5	.00	.00
12	51	111	287	70	979	108	363	164	20	3.3	.00	.00
13	34	71	184	60	533	101	303	170	20	3.3	.00	3.0
14	28	49	156	58	387	98	294	706	60	3.3	.00	2.6
15	21	34	143	56	287	91	254	516	110	3.0	.00	3.0
16	17	28	122	50	236	85	208	210	58	1.6	.00	3.7
17	16	22	103	45	203	76	189	148	35	1.1	.00	2.6
18	14	21	98	38	170	70	176	468	25	.52	.00	1.5
19	17	21	98	42	154	70	159	348	164	.71	.00	.94
20	21	21	94	43	138	182	144	176	266	1.1	.00	2.2
21	20	19	87	40	123	247	134	135	77	.71	.00	2.4
22	17	17	87	41	117	167	269	117	43	.71	.00	1.6
23	16	15	87	42	111	130	1020	103	30	.52	.00	.86
24	16	13	98	42	104	110	472	91	19	.10	.00	.46
25	16	11	233	44	99	98	267	132	13	.24	.00	1.5
26	15	11	170	46	87	1380	210	145	289	.52	.00	1.6
27	14	17	660	47	83	3630	434	91	94	.05	.00	1.3
28	21	175	1160	53	79	731	4550	82	34	.01	.00	1.2
29	47	171	492	136	---	436	1400	70	30	.00	.00	1.1
30	69	104	162	314	---	768	812	56	53	.00	.00	1.0
31	44	---	145	196	---	531	---	50	---	.00	.00	---
TOTAL	2870.8	1097	10946	2614	6835	12981	44016	28732	1996	147.29	.15	32.56
MEAN	92.6	36.6	353	84.3	244	419	1467	927	66.5	4.75	.00	1.09
MAX	1910	175	1720	314	1620	3630	10400	10900	289	38	.10	3.7
MIN	4.8	11	72	38	78	70	134	50	13	.00	.00	.00
CAL YR 1982		TOTAL	160488.70	MEAN	440	MAX	11000	MIN	.00			
WTR YR 1983		TOTAL	112267.80	MEAN	308	MAX	10900	MIN	.00			

06922200 TEBO CREEK AT LEESVILLE, MO.

WATER-QUALITY RECORDS

LOCATION.--Lat 38°22'04", long 93°32'41" in SE¼ NW¼ sec.2, T.41 N., R.24 W., Henry County, Hydrologic Unit 10290108, at bridge on County Highway PP, 1.5 mi north of Leesville.

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	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)
OCT											
08...	1200	317	7.9	22.0	7.0	80	K18	140	59	40	9.1
NOV											
10...	1200	289	8.1	14.0	9.6	92	14	140	48	41	9.9
DEC											
16...	1415	280	7.6	6.0	8.3	67	--	120	72	32	9.2
JAN											
13...	1145	446	8.2	4.0	11.0	83	1000	190	96	50	16
FEB											
10...	0930	392	7.8	3.5	12.0	90	4	170	110	45	14
MAR											
17...	1100	463	7.7	10.5	9.8	88	9	200	130	51	17
APR											
07...	1200	172	7.4	7.0	10.2	83	5700	73	37	20	5.6
MAY											
05...	0930	260	7.4	14.5	8.0	78	170	110	66	29	8.9
JUN											
08...	0930	319	7.1	20.0	5.2	57	1	140	79	36	11
JUL											
07...	1530	276	7.7	28.5	6.8	86	K2	120	53	34	8.5
AUG											
11...	1100	295	8.0	29.0	4.8	62	1	120	26	35	8.1
SEP											
20...	1000	306	7.7	23.0	6.6	76	54	140	38	39	9.3

DATE	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)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (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)
OCT											
08...	7.2	4.9	79	66	5.3	.20	3.9	193	.200	.90	.060
NOV											
10...	7.7	4.8	95	76	5.7	.30	3.2	208	.300	1.1	.020
DEC											
16...	7.2	5.9	46	81	5.7	.20	8.5	184	.700	1.7	.180
JAN											
13...	11	5.2	95	140	7.5	.20	10	302	.800	1.5	.090
FEB											
10...	9.5	4.9	62	120	6.7	.20	9.2	252	.800	1.1	.080
MAR											
17...	12	4.9	72	150	8.0	.20	6.7	308	.700	.90	.050
APR											
07...	4.3	3.6	36	53	2.7	.20	6.6	124	.700	1.8	.400
MAY											
05...	6.3	3.5	43	75	4.0	.10	6.9	173	.500	1.2	.080
JUN											
08...	7.0	3.9	56	95	3.6	.20	5.4	199	<.100	.70	.040
JUL											
07...	6.3	3.9	67	66	4.7	.20	2.5	153	<.100	1.0	.060
AUG											
11...	6.4	4.6	95	59	5.2	.20	1.7	170	<.100	1.0	.060
SEP											
20...	7.3	4.2	98	60	5.7	.20	1.9	186	<.100	1.0	.020

DATE	TIME	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL) (01105)	ALUM- INUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G) (01108)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD) (01028)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G) (01029)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU) (01043)
OCT									
08...	1200	220	4200	1	1	<10	5	3	10
JAN									
13...	1145	1000	8200	2	1	<10	7	5	20
APR									
07...	1200	6000	3400	1	<1	10	5	16	10
AUG									
11...	1100	200	6100	<1	<1	<10	7	6	10

K--Results based on colony count outside the acceptable range (non-ideal colony count).

OSAGE RIVER BASIN

06922200 TEBO CREEK AT LEESVILLE, MO.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE) (01170)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB) (01052)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN) (01053)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN) (01093)
OCT 08...	410	10000	1	20	130	850	20	60
JAN 13...	1200	13000	3	30	500	800	30	70
APR 07...	7200	9500	9	30	340	700	50	50
AUG 11...	350	--	<1	30	80	750	30	60

06922440 HARRY S. TRUMAN 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 northwest of Warsaw and 95 mi southeast of Kansas City, and at mile 175.

DRAINAGE AREA.--11,500 mi².

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 tainter gates 40 ft side by 47.3 ft high. Capacity of surcharge pool (elevations 739.6 ft to 751.1 ft), 2,911,000 acre-ft; of flood control pool (elevations 706.0 ft to 739.6 ft), 4,006,000 acre-ft; and of multipurpose pool (elevations 635.0 ft to 706.0 ft), 5,209,000 acre-ft. Lake is used for flood control, hydro-electric power, recreation, fish and wildlife conservation.

COOPERATION.--Records furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 3,887,000 acre-ft May 6, 1983, elevation 732.50 ft, minimum, 41,710 acre-ft Nov. 14, 1978, elevation, 661.0 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 3,887,000 acre-ft May 6, elevation 721.58 ft; minimum 1,144,000 acre-ft Aug. 24, elevation 704.90 ft.

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1252000	1198000	1215000	1370000	1221000	1190000	1519000	3464000	2484000	1228000	1187000	1156000
2	1252000	1199000	1305000	1342000	1237000	1195000	1737000	3617000	2404000	1229000	1183000	1156000
3	1247000	1191000	1421000	1308000	1249000	1199000	1907000	3747000	2345000	1242000	1185000	1159000
4	1240000	1181000	1515000	1280000	1250000	1207000	2070000	3825000	2282000	1245000	1188000	1162000
5	1232000	1173000	1615000	1246000	1273000	1214000	2279000	3858000	2220000	1240000	1190000	1164000
6	1230000	1173000	1678000	1212000	1288000	1237000	2468000	3887000	2152000	1251000	1193000	1160000
7	1224000	1174000	1728000	1210000	1274000	1241000	2625000	3853000	2089000	1258000	1193000	1162000
8	1220000	1169000	1758000	1223000	1254000	1261000	2756000	3811000	2028000	1257000	1192000	1150000
9	1220000	1164000	1778000	1233000	1237000	1279000	2882000	3752000	1985000	1257000	1192000	1153000
10	1221000	1160000	1812000	1229000	1218000	1263000	2998000	3696000	1945000	1253000	1192000	1155000
11	1217000	1166000	1836000	1228000	1225000	1244000	3090000	3632000	1939000	1234000	1187000	1158000
12	1220000	1162000	1831000	1232000	1250000	1238000	3183000	3565000	1896000	1220000	1186000	1161000
13	1214000	1161000	1797000	1229000	1279000	1229000	3267000	3498000	1847000	1208000	1186000	1164000
14	1210000	1161000	1760000	1228000	1295000	1212000	3297000	3483000	1801000	1202000	1184000	1163000
15	1208000	1156000	1702000	1234000	1296000	1212000	3298000	3448000	1750000	1195000	1184000	1166000
16	1207000	1156000	1670000	1240000	1281000	1211000	3281000	3399000	1702000	1202000	1182000	1166000
17	1206000	1156000	1623000	1231000	1278000	1211000	3255000	3384000	1648000	1203000	1171000	1166000
18	1200000	1156000	1575000	1228000	1264000	1204000	3218000	3409000	1599000	1203000	1171000	1166000
19	1202000	1159000	1522000	1223000	1255000	1207000	3163000	3376000	1546000	1199000	1160000	1151000
20	1197000	1159000	1482000	1216000	1248000	1212000	3098000	3330000	1491000	1187000	1161000	1156000
21	1196000	1159000	1490000	1212000	1218000	1208000	3029000	3288000	1438000	1187000	1161000	1157000
22	1196000	1160000	1394000	1221000	1205000	1204000	2973000	3229000	1386000	1187000	1158000	1159000
23	1196000	1163000	1347000	1225000	1199000	1202000	2964000	3161000	1335000	1190000	1158000	1159000
24	1195000	1163000	1311000	1225000	1191000	1204000	2957000	3094000	1283000	1192000	1144000	1159000
25	1197000	1164000	1323000	1220000	1189000	1210000	2932000	3033000	1273000	1196000	1148000	1161000
26	1199000	1167000	1329000	1221000	1182000	1237000	2896000	2952000	1264000	1200000	1152000	1162000
27	1196000	1177000	1332000	1217000	1188000	1296000	2870000	2876000	1255000	1203000	1155000	1164000
28	1202000	1191000	1352000	1215000	1184000	1329000	2896000	2799000	1244000	1203000	1157000	1166000
29	1196000	1203000	1380000	1221000	---	1371000	3051000	2722000	1234000	1202000	1156000	1166000
30	1198000	1208000	1386000	1225000	---	1389000	3222000	2642000	1224000	1204000	1160000	1169000
31	1200000	---	1386000	1215000	---	1408000	---	2563000	---	1203000	1157000	---

WTR YR 1983

(+)	705.93	706.08	709.05	706.20	705.65	709.40	728.06	722.68	706.37	705.99	705.15	705.38
(+)	-50000	+8000	+178000	-171000	-31000	+224000	+1814000	-659000	-1339000	-21000	-46000	+12000
MAX	1252000	1208000	1836000	1370000	1296000	1408000	3298000	3887000	2484000	1258000	1993000	1169000
MIN	1195000	1156000	1215000	1210000	1182000	1190000	1519000	2563000	1224000	1187000	1144000	1150000

CAL YR.....(+) +176000

WTR YR.....(+) - 81000

(+) 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 below Harry S. Truman Dam, and 1.5 mi northwest of Warsaw.

DRAINAGE AREA.--7,856 mi².

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

GAGE.--Acoustic flow monitor. Datum of gage is at National Geodetic Vertical Datum of 1929 (levls 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 was pumped back up into Truman Lake at Truman Dam has the ability to pump water from the Osage River.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily flow, 52,200 ft³/s June 2, 1983; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum daily flow, 52,200 ft³/s June 2; no flow at times.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3360	1900	.00	22800	7820	.00	16600	500	50900	5200	8220	.00
2	2900	.00	5190	22200	7210	.00	11900	500	52200	.00	1040	1010
3	4880	4160	571	22100	7030	.00	4370	500	47900	.00	.00	.00
4	4020	5150	.00	22800	10800	.00	2170	2090	48100	5100	.00	.00
5	5960	3230	.00	23500	.00	.00	500	12900	48100	5560	.00	.00
6	3920	.00	.00	23000	1100	.00	500	20300	48100	.00	.00	1870
7	5510	.00	1380	7640	11600	12000	500	31000	48000	5040	.00	.00
8	4700	2550	1410	.00	14600	4690	500	35200	45500	7970	.00	6230
9	4590	2790	11400	.00	14600	3760	500	42800	34100	3490	.00	.00
10	2590	1420	17400	5030	14200	13700	500	41000	28800	3300	.00	.00
11	3200	.00	16500	7160	7420	13700	7820	43600	13800	10200	1950	.00
12	2130	1280	20500	2080	1290	8110	7550	44100	31900	19800	.00	.00
13	2890	1080	19600	5280	.00	7750	6820	43500	31900	9210	.00	.00
14	2650	.00	20100	3800	5070	10000	12200	42700	34000	7090	617	333
15	1290	2780	20500	.00	13600	2690	21100	43200	32100	7650	.00	.00
16	868	.00	20800	.00	17100	3010	24500	45700	30900	.00	1600	.00
17	.00	513	20300	4750	16200	2760	25700	33400	30500	.00	6570	.00
18	2690	.00	20300	4900	16900	5410	27900	26900	32300	24	5500	.00
19	1270	.00	24100	5420	10600	2590	33900	41500	32300	3300	6700	9200
20	.00	.00	22600	8950	9100	1500	28400	43400	32400	6770	.00	.00
21	.00	.00	6150	7560	17400	5860	36800	44800	32900	1860	.00	.00
22	.00	.00	7340	.00	9820	7580	39200	44400	32600	1920	1350	.00
23	.00	.00	30700	.00	7170	4830	39000	45000	31500	.00	149	.00
24	.00	.00	30700	1530	8360	3820	37700	46500	30500	.00	8040	.00
25	.00	.00	11400	3000	5120	887	38500	46300	10400	.00	.00	.00
26	.00	.00	11000	1650	6550	1840	40700	50200	10200	.00	.00	.00
27	1720	.00	18400	3770	.00	.00	46200	49300	10300	.00	.00	.00
28	.00	.00	16800	2700	4870	11800	43700	48200	10400	731	.00	.00
29	2570	1200	16700	.00	---	9320	30600	45800	10400	2280	3000	.00
30	.00	.00	23200	.00	---	15400	500	49600	10500	.00	.00	.00
31	.00	---	22500	8660	---	15400	---	49400	---	.00	1080	---
TOTAL	63708.0	28053.0	437541.0	220280.0	245530.0	168407.0	586830	1114290	943500	106495.0	45816.0	18643.0
MEAN	2055	935	14110	7106	8769	5432	19560	35940	31450	3435	1478	621
MAX	5960	5150	30700	23500	17400	15400	46200	50200	52200	19800	8220	9200
MIN	.00	.00	.00	.00	.00	.00	.00	500	500	10200	.00	.00
CAL YR 1982	TOTAL 3899627			MEAN 10680	MAX 38900	MIN .00						
WTR YR 1983	TOTAL 3979093			MEAN 10900	MAX 52200	MIN .00						

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 downstream from spring outlet, 1.5 mi 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, 1964, 1965.

GAGE.--Nonrecording gage. Datum of gage 864.71 ft 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 downstream at datum 2.30 ft 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 good. Occasional runoff from drainage area of 42.4 mi² included in records.

AVERAGE DISCHARGE.--34 years (1916-19, 1928-41, 1965-83), 158 ft³/s, 114,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,000 ft³/s Nov. 1, 1973, gage height, 9.14 ft from floodmark, includes about 7,200 ft³/s from Spring Creek, by indirect measurement of peak flow over dam; minimum, about 55 ft³/s Nov. 13, 1934.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 2,240 ft³/s Apr. 29; minimum daily discharge, 84 ft³/s Nov. 5, 6-10, 24-26.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	87	88	98	264	128	109	234	1230	240	150	130	124
2	87	88	1050	248	132	109	1450	881	260	150	130	123
3	88	85	1490	254	128	109	660	770	276	148	174	122
4	89	88	895	230	122	113	551	680	250	152	150	119
5	89	84	1170	222	122	119	450	591	235	160	140	119
6	89	85	746	219	122	119	405	534	225	152	138	119
7	90	84	614	207	120	120	365	471	218	150	136	119
8	89	84	507	199	117	120	333	450	213	148	134	119
9	88	84	407	197	117	119	333	430	205	146	132	119
10	88	84	365	192	117	117	337	400	200	144	130	117
11	88	87	358	181	113	115	315	370	195	142	130	115
12	87	87	330	174	109	115	303	358	190	138	130	115
13	87	85	312	170	109	117	297	337	183	138	128	113
14	88	85	297	168	109	117	297	321	183	140	130	113
15	88	85	273	160	109	115	279	315	183	154	128	115
16	87	85	259	156	114	117	273	313	179	144	128	117
17	87	85	248	152	109	115	267	311	172	140	126	114
18	87	85	237	148	111	115	253	309	168	138	126	111
19	87	88	224	146	109	113	245	306	166	136	126	113
20	87	87	214	144	109	113	237	300	162	134	126	115
21	85	85	207	144	109	113	232	282	160	134	124	109
22	85	85	197	142	109	111	227	285	158	134	126	109
23	85	85	192	138	109	111	227	279	158	134	126	109
24	87	84	217	136	111	111	227	270	156	132	126	109
25	87	84	540	134	108	111	230	259	156	134	124	110
26	87	84	436	132	108	114	222	250	154	132	124	110
27	87	100	378	130	111	118	212	248	170	132	124	108
28	88	124	354	130	109	126	237	242	164	132	124	108
29	89	108	318	130	---	124	2240	239	158	130	124	108
30	88	105	297	128	---	124	1130	227	156	130	124	106
31	89	---	279	124	---	128	---	222	---	130	126	---
TOTAL	2714	2657	13509	5299	3200	3597	13068	12480	5693	4358	4044	3427
MEAN	87.5	88.6	436	171	114	116	436	403	190	141	130	114
MAX	90	124	1490	264	132	128	2240	1230	276	160	174	124
MIN	85	84	98	124	108	109	212	222	154	130	124	106
CAL YR 1982	TOTAL		60153	MEAN	165	MAX	1490	MIN	84			
WTR YR 1983	TOTAL		74046	MEAN	203	MAX	2240	MIN	84			

OSAGE RIVER BASIN

06923700 NIANGUA RIVER AT BENNETT SPRINGS, MO.

WATER-QUALITY RECORDS

LOCATION.--Lat 37°44'17", long 92°51'37", in SE¼ sec. 25, T.35 N., R.18 W., Dallas County, Hydrologic Unit 10290110, at bridge on Highway 64.

PERIOD OF RECORD.--October 1982 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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 (STAND- ARD 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)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)
OCT											
06...	1030	1028	29001	122	395	7.8	16.5	8.8	90	<5	50
NOV											
08...	1000	1028	29001	120	392	7.8	14.5	9.2	89	<5	6
DEC											
16...	1630	1028	29001	550	245	7.6	10.0	10.6	94	<5	--
JAN											
11...	0915	1028	29001	440	310	8.0	8.0	9.8	83	5	52
FEB											
08...	0915	1028	29001	345	355	8.1	7.0	10.4	86	9	K9
MAR											
15...	0900	1028	29001	320	380	7.9	13.5	10.6	101	<5	9
APR											
05...	0915	1028	29001	1840	256	7.9	10.0	9.8	87	6	660
MAY											
03...	0915	1028	29001	2200	242	7.8	14.5	8.4	83	--	1100
JUN											
06...	1000	1028	29001	590	280	7.5	14.5	7.2	70	10	530
JUL											
05...	1130	1028	29001	40	370	7.7	18.5	9.2	97	<5	40
AUG											
09...	0900	1028	29001	174	399	7.7	16.5	8.4	85	<5	84
SEP											
22...	1200	1028	29001	112	353	7.5	16.0	8.6	86	7	24

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										
06...	220	30	44	26	2.6	1.4	187	5.7	<10	3.0
NOV										
08...	--	--	--	--	--	--	197	6.0	--	--
DEC										
16...	--	--	--	--	--	--	113	5.5	--	--
JAN										
11...	160	32	33	18	3.0	1.6	125	2.4	<10	8.0
FEB										
08...	--	--	--	--	--	--	151	2.3	--	--
MAR										
15...	--	--	--	--	--	--	180	4.4	--	--
APR										
05...	140	24	28	16	2.2	2.2	112	2.7	13	4.0
MAY										
03...	--	--	--	--	--	--	112	3.4	--	--
JUN										
06...	--	--	--	--	--	--	125	7.6	--	--
JUL										
05...	180	14	36	22	2.7	1.4	167	6.4	<10	5.0
AUG										
09...	--	--	--	--	--	--	200	7.7	--	--
SEP										
22...	--	--	--	--	--	--	207	13	--	--

[illegible]

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 southwest of Bagnell, and at mile 81.7.

DRAINAGE AREA.--14,000 mi², 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.

REMARKS.--Lake is formed by concrete gravity dam. Spillway is equipped with 12 tainter gates 34 ft wide by 22 ft high. Storage began in 1931. Usable capacity 1,218,000 acre-ft between elevations 630.00 ft (maximum draw-down) and 660.00 ft (top of gates). Dead storage, 708,800 acre-ft. 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, May 22, 1943, elevation, 665.45 ft; minimum, 322,100 acre-ft Feb. 13, 1948, elevation 639.95 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 1,278,000 acre-ft Apr. 29, May 1, elevation, 661.12 ft; minimum, 855,600 acre-ft Mar. 15, elevation, 653.17 ft.

MONTHEND ELEVATION AND CONTENTS, AT 2400, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

Date	Elevation (feet)	Contents (acre-ft)	Change in contents (acre-feet)
Sept. 30.....	658.37	1,125,000	-53,000
Oct. 31.....	657.84	1,095,000	-30,000
Nov. 30.....	658.16	1,113,000	+18,000
Dec. 31.....	658.38	1,125,000	+12,000
CAL YR 1982.....	-----	-----	+46,000
Jan. 31.....	655.89	991,600	-133,400
Feb. 28.....	654.30	910,800	-80,800
Mar. 31.....	654.43	917,300	+6,500
Apr. 30.....	661.04	1,274,000	+356,700
May 31.....	659.72	1,202,000	-72,000
June 30.....	658.64	1,140,000	-62,000
July 31.....	656.92	1,046,000	-94,000
Aug. 31.....	656.76	1,037,000	-9,000
Sept. 30.....	656.62	1,030,000	-7,000
WTR YR 1983.....	-----	-----	-95,000

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 upstream from Bagnell, 3 mi downstream from hydroelectric plant of Union Electric Company of Missouri, and at mile 78.5.

DRAINAGE AREA.--14,000 mi². 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 of National Weather Service.

GAGE.--Water-stage recorder. Datum of gage is 548.87 ft National Geodetic Vertical Datum of 1929. Prior to Oct. 15, 1930, nonrecording gage at present site and datum. Since Oct. 1, 1940, auxiliary water-stage recorder at power plant 3 mi upstream from base gage.

REMARKS.--Records fair. Flow regulated by Lake of the Ozarks.

AVERAGE DISCHARGE.--103 years, 9,574 ft³/s, 6,936,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 220,000 ft³/s May 19, 1943, gage height, 48.8 ft; minimum, 183 ft³/s Sept. 9, 1969; minimum daily discharge, 220 ft³/s Dec. 12, 1917.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known prior to 1943, 43.1 ft in June 1844, discharge, 164,000 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 67,200 ft³/s May 1; minimum daily discharge, 395 ft³/s Oct. 17, Nov. 12.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4970	400	425	28800	11400	18100	16100	67200	52300	4130	668	630
2	788	400	6560	28700	7480	848	27800	57200	52200	1120	2720	645
3	458	405	34500	28700	11600	3210	21700	22700	52500	878	3660	645
4	1770	1940	37800	28700	12900	4300	3480	13800	52600	825	1120	638
5	6620	2550	40500	28700	2340	772	668	16200	52500	825	675	638
6	4190	1190	33800	28700	632	540	5080	32500	52400	818	652	660
7	2760	525	19000	28600	15800	11900	6200	33800	52400	818	645	668
8	2960	1590	1150	13400	18800	16400	6100	34400	48800	4790	855	3860
9	8140	3060	4010	1360	17300	10800	5720	34400	36600	8800	652	1630
10	1360	2820	11600	6280	16900	11200	6160	34500	34400	2150	668	608
11	4080	1010	21400	7380	15600	15400	6620	36800	31400	7780	705	600
12	7100	395	26500	3220	1170	2110	14600	44400	31600	2000	652	615
13	6820	877	25600	2020	548	518	17600	48600	32600	7600	645	832
14	4840	1520	29000	7560	8240	11800	21600	51500	32000	9360	795	780
15	3640	3540	29000	1190	16700	9320	24500	52800	32600	9840	705	630
16	675	3240	29000	502	17700	998	31800	52000	32600	10500	4070	652
17	395	2560	29700	2450	17600	525	31900	49800	32600	4640	3440	638
18	1520	1290	30400	6100	15400	472	31900	48200	32600	4110	1830	750
19	5220	3240	30400	5880	11500	475	32500	48200	32600	6600	3700	615
20	5990	465	30400	4740	5990	472	33300	47800	32700	12100	1500	645
21	6800	410	30300	3200	16000	9740	33400	47800	32700	6580	1120	660
22	5500	2090	30100	660	10300	1560	33400	48000	32700	8100	1500	532
23	930	510	29100	465	12900	6800	33600	47900	31400	6360	705	780
24	415	3980	29600	4920	11600	7460	33600	47400	32700	4720	4180	720
25	440	998	29600	5920	2230	3060	33600	47600	26400	1060	1430	668
26	400	480	29200	11700	518	525	33700	47900	2860	1430	968	622
27	787	472	29000	11400	510	1310	33800	50200	7560	908	682	608
28	410	690	29100	8900	5780	5540	35100	52500	15900	5640	652	570
29	945	472	28900	1520	---	15500	44300	52500	13900	2320	645	615
30	410	425	28800	502	---	14000	61600	52300	14100	690	645	630
31	400	---	28800	7520	---	14300	---	52300	---	658	630	---
TOTAL	91733	43544	793245	319689	285438	199955	721428	1373200	1020220	138150	43514	23784
MEAN	2959	1451	25590	10310	10190	6450	24050	44300	34010	4456	1404	793
MAX	8140	3980	40500	28800	18800	18100	61600	67200	52600	12100	4180	3860
MIN	395	395	425	465	510	472	668	13800	2860	658	630	532
CAL YR 1982	TOTAL		4343454	MEAN		11900	MAX	40500	MIN	395		
WTR YR 1983	TOTAL		5053900	MEAN		13850	MAX	67200	MIN	395		

OSAGE RIVER BASIN

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 downstream from Sugar Creek, 2.5 mi south of St. Thomas, and at mile 43.1.

DRAINAGE AREA.--14,500 mi², approximately.

PERIOD OF RECORD.--August 1931 to current year.

GAGE.--Water-stage recorder. Datum of gage is 528.06 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Flow regulated by Lake of the Ozarks.

AVERAGE DISCHARGE.--52 years, 9,933 ft³/s, 7,196,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 216,000 ft³/s May 20, 1943, gage height, 43.8 ft; minimum, 346 ft³/s July 12, 1959, Sept. 18, 1960; minimum gage height, 1.28 ft Sept. 18, 1960; minimum daily discharge, 373 ft³/s July 12, 1959.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known prior to 1943, about 39.4 in June 1844.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 81,800 ft³/s May 1; minimum daily discharge, 610 ft³/s Oct. 27.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

MEAN VALUES												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6930	621	1070	30000	10700	18600	15900	81800	52200	11000	784	648
2	4250	643	8950	29900	10100	6900	34000	79000	52100	3260	767	639
3	1100	651	56500	29600	7700	1510	36200	49200	52400	1230	2950	643
4	730	635	59900	29500	11400	3750	20100	17700	52500	965	4050	639
5	2290	2640	54900	29500	11200	4220	13400	17000	52400	890	1230	645
6	6790	2670	48300	29400	1930	1120	15200	27600	52300	852	824	652
7	3850	1320	34000	29400	4530	3140	16900	33300	52200	832	789	655
8	3560	822	11700	20200	18900	14600	17200	34400	51700	844	763	662
9	3730	2290	2970	8600	16500	12700	15500	34200	41600	5630	870	4590
10	7450	2950	6130	2330	16500	9820	13200	34000	34400	8200	768	1450
11	2340	3070	18900	6820	18400	12400	11100	34500	32900	2300	748	715
12	3960	1330	26600	6910	9610	12400	11500	41000	29100	7790	760	680
13	7520	685	25500	3800	1480	1850	18300	47100	31200	2130	729	672
14	6970	967	29000	2660	1390	3080	22600	51300	31100	8340	717	790
15	4160	1780	29800	7150	13400	11600	21800	54500	31200	8490	798	796
16	3440	3580	29800	1440	16500	6010	29700	53800	31500	9480	793	691
17	994	2940	29900	1190	18900	1290	31800	51600	31500	8740	4510	674
18	651	2440	31000	3190	13900	803	31900	50300	31900	4420	3790	663
19	1830	2080	31100	6000	13900	720	31800	51800	32300	3930	1630	714
20	5640	2850	31100	5220	9030	738	32800	49400	32300	8930	4240	669
21	6230	857	31100	4280	10300	2280	33000	49100	32500	9790	1470	667
22	6050	700	31100	3180	13500	8580	33000	50900	32600	6200	1200	667
23	4230	2200	30000	1040	11100	2250	33000	49600	31400	8700	1520	615
24	1160	989	33400	896	12400	6980	33000	48800	31500	5730	848	733
25	685	3880	41700	5420	7990	7720	32900	48700	31700	3960	4960	779
26	650	1800	33200	6990	2050	1870	32900	48200	12400	1190	1380	747
27	610	1900	31200	11500	852	1040	33100	48900	3130	1380	901	691
28	878	3290	32500	9510	759	1400	34200	51800	11100	977	707	661
29	717	2270	31200	7930	---	10900	42500	52500	15300	6630	660	626
30	1060	1390	30600	1590	---	14000	63600	52500	13200	1910	663	638
31	690	---	30400	908	---	13900	---	52400	---	885	665	---
TOTAL	101145	56240	923520	336054	284921	198171	812100	1446900	1023630	145605	47484	25111
MEAN	3263	1875	29790	10840	10180	6393	27070	46670	34120	4697	1532	837
MAX	7520	3880	59900	30000	18900	18600	63600	81800	52500	11000	4960	4590
MIN	610	621	1070	896	759	720	11100	17000	3130	832	660	615
CAL YR 1982	TOTAL		4771741	MEAN		13070	MAX		59900	MIN		610
WTR YR 1983	TOTAL		5400881	MEAN		14800	MAX		81800	MIN		610

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 north of St. Thomas, 8.6 mi downstream from gaging station, and at mile 34.5.

DRAINAGE AREA.--14,500 mi² 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.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD 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 16...	1030	4000	300	8.2	8.0	2.4	9.8	82	14	280
JAN 24...	1115	800	280	8.1	4.5	7.8	12.0	91	7	380
MAR 31...	1000	16000	267	8.2	7.0	10	12.2	100	3	38
MAY 19...	1030	53000	232	7.9	15.0	33	7.4	73	1700	5000
JUL 25...	1500	4750	280	7.8	25.0	3.1	4.2	50	140	340
SEP 07...	1030	660	277	7.9	27.0	2.4	6.6	81	K17	K24

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 NA) (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 16...	150	13	43	11	5.9	8	.2	3.9	140	28
JAN 24...	130	20	36	9.7	4.9	7	.2	3.4	110	26
MAR 31...	120	24	33	9.5	4.9	8	.2	3.5	98	28
MAY 19...	110	22	31	8.1	4.5	8	.2	2.9	89	26
JUL 25...	120	29	36	8.2	5.3	8	.2	3.2	95	32
SEP 07...	130	25	38	9.7	5.6	8	.2	2.8	110	27

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 16...	6.9	.20	2.7	182	190	.25	1970	<.100	.070
JAN 24...	5.7	.20	5.1	170	160	.23	367	.480	.130
MAR 31...	6.1	.10	3.0	155	150	.21	6700	.540	.180
MAY 19...	4.6	<.10	5.9	140	140	.19	20000	.730	<.060
JUL 25...	5.3	.10	5.1	161	150	.22	2060	<.100	.490
SEP 07...	5.2	.10	5.5	160	160	.22	285	<.100	.030

K--Results based on colony count outside the acceptable range (non-ideal colony count).

OSAGE RIVER BASIN

06926510 OSAGE RIVER BELOW ST. THOMAS, MO.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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 16...	.09	.50	.130	.40	.030	<.010	19	205	97
JAN 24...	.17	.50	.060	.18	.030	.020	16	35	96
MAR 31...	.23	.80	.040	.12	.040	.040	63	2720	58
MAY 19...	--	1.1	.070	.21	.040	.020	--	--	--
JUL 25...	.63	.70	.080	.25	.050	.040	25	321	78
SEP 07...	.04	.70	.020	.06	.020	.010	313	558	47

DATE	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)
NOV 16...	20	1	83	.5	<1	<1	<3	2	16	<1
JAN 24...	50	1	68	.6	<1	<1	<3	2	40	<1
MAY 19...	--	1	61	<.5	<1	<1	<3	3	96	2
JUL 25...	30	1	71	1	2	<1	<3	6	24	<1

DATE	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 16...	8	91	.5	<10	1	<1	<1	140	<6	71
JAN 24...	14	19	.2	<10	3	<1	<1	110	<6	47
MAY 19...	11	10	.3	<10	2	1	<1	110	<6	11
JUL 25...	15	47	<.1	<10	7	<1	<1	130	<6	53

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 northwest of Hooker.

PERIOD OF RECORD.--July 1977 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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 (STAND- ARD 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)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)
OCT											
13...	1200	1028	29001	265	370	8.2	17.0	8.4	87	<5	17
NOV											
16...	1215	1028	29001	200	391	8.2	7.5	9.6	80	<5	9
DEC											
17...	0845	1028	29001	1700	278	8.2	6.0	11.7	94	<5	130
JAN											
26...	1100	1028	29001	440	355	8.3	5.0	11.6	91	<5	K8
FEB											
22...	1300	1028	29001	483	354	8.5	12.0	10.6	98	<5	K8
MAR											
30...	1245	1028	29001	430	345	8.5	9.5	11.0	95	6	<8
APR											
21...	0900	1028	29001	1700	300	8.1	11.5	10.2	93	15	K22
MAY											
17...	1300	1028	29001	3800	265	8.0	16.0	6.8	68	21	110
JUN											
27...	1215	1028	29001	485	340	8.3	26.0	6.0	73	7	52
JUL											
28...	0945	1028	29001	227	360	8.1	27.5	5.8	73	<5	27
AUG											
24...	1100	1028	29001	122	371	7.9	28.5	5.0	63	15	30
SEP											
06...	1100	1028	29001	110	376	8.0	25.0	5.8	70	8	110

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 DIS- 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										
13...	210	20	40	26	2.4	1.7	187	2.3	<10	3.0
NOV										
16...	--	--	--	--	--	--	203	2.5	--	--
DEC										
17...	--	--	--	--	--	--	134	1.6	--	--
JAN										
26...	190	23	37	23	2.7	1.6	164	1.6	<10	2.0
FEB										
22...	--	--	--	--	--	--	164	1.0	--	--
MAR										
30...	--	--	--	--	--	--	171	1.0	--	--
APR										
21...	170	19	34	20	2.0	2.1	148	2.3	12	2.0
MAY										
17...	--	--	--	--	--	--	131	2.5	--	--
JUN										
27...	--	--	--	--	--	--	167	1.6	--	--
JUL										
28...	200	24	38	25	2.5	1.8	174	2.7	<10	6.0
AUG										
24...	--	--	--	--	--	--	190	4.6	--	--
SEP										
06...	--	--	--	--	--	--	187	3.6	--	--

K--Results based on colony count outside the acceptable range (non-ideal colony count).

DATE	FLUORIDE, DIS- SOLVED (MG/L AS F) (00950)	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 RECOVERABLE (UG/L AS CD) (01027)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	COPPER, TOTAL RECOVERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)
OCT 13...	.10	198	6	<.050	.020	<.050	<2	<2	3	<5
NOV 16...	--	--	1	.050	.010	.050	--	--	--	--
DEC 17...	--	--	5	1.20	<.010	<.050	--	--	--	--
JAN 26...	.10	176	1	.660	.010	<.050	<2	<2	<5	<5
FEB 22...	--	--	7	.320	<.010	<.050	--	--	--	--
MAR 30...	--	--	2	.060	.010	<.050	--	--	--	--
APR 21...	.10	170	<1	.670	<.010	<.050	<2	<2	<5	<5
MAY 17...	--	--	26	.410	.010	.110	--	--	--	--
JUN 27...	--	--	5	.110	<.010	<.050	--	--	--	--
JUL 28...	.10	196	1	.160	.010	<.050	<2	<2	<5	9
AUG 24...	--	--	<1	<.050	<.010	.070	--	--	--	--
SEP 06...	--	--	8	<.050	.010	<.050	--	--	--	--

[illegible]

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 Devil's Elbow.

PERIOD OF RECORD.--July 1977 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER) (00028)	STREAM-FLOW, INSTANTANEOUS (CFS) (00061)	SPE-CIFIC CON-DUCT-ANCE (UMHOS) (00095)	PH (STAND-ARD 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)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)
OCT 13...	0930	1028	29001	284	315	8.1	16.5	9.2	94	<5	15
NOV 18...	0945	1028	29001	275	345	8.2	9.5	10.8	94	12	32
DEC 17...	1340	1028	29001	1210	235	8.1	8.0	11.5	97	<5	60
JAN 26...	0930	1028	29001	420	290	8.2	5.0	11.0	86	<5	<9
FEB 22...	1115	1028	29001	390	310	8.3	12.0	11.2	104	<5	K9
MAR 30...	1045	1028	29001	445	301	8.1	9.5	10.0	87	5	<4
APR 21...	1000	1028	29001	960	246	8.1	11.5	9.2	84	28	K20
MAY 17...	1130	1028	29001	2100	226	7.9	15.5	7.8	77	16	260
JUN 27...	1015	1028	29001	405	314	7.6	24.0	7.0	83	7	59
JUL 28...	0830	1028	29001	340	332	8.1	28.0	6.4	81	<5	23
AUG 24...	0915	1028	29001	290	331	7.8	25.0	6.2	74	<5	110
SEP 06...	0945	1028	29001	233	350	7.9	24.0	6.6	78	9	84

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)	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 13...	170	21	34	21	2.6	1.4	151	2.3	<10	3.0
NOV 18...	--	--	--	--	--	--	180	2.2	--	--
DEC 17...	--	--	--	--	--	--	113	1.7	--	--
JAN 26...	160	17	32	19	3.5	1.2	141	1.7	<10	<2.0
FEB 22...	--	--	--	--	--	--	144	1.4	--	--
MAR 30...	--	--	--	--	--	--	148	2.3	--	--
APR 21...	140	13	29	16	<2.0	1.7	125	1.9	10	<2.0
MAY 17...	--	--	--	--	--	--	118	2.9	--	--
JUN 27...	--	--	--	--	--	--	144	7.0	--	--
JUL 28...	160	4	33	20	2.9	1.4	161	2.5	<10	4.0
AUG 24...	--	--	--	--	--	--	164	5.0	--	--
SEP 06...	--	--	--	--	--	--	161	3.9	--	--

K--Results based on colony count outside the acceptable range (non-ideal colony count).

06930450 BIG PINEY RIVER AT DEVILS ELBOW, MO.--Continued

DATE	FLUORIDE, DIS- SOLVED (MG/L AS F) (00950)	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 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 13...	.10	163	<1	.210	.040	<.050	<2	<2	<5	<5
NOV 18...	--	--	5	.220	.010	<.050	--	--	--	--
DEC 17...	--	--	6	.740	<.010	<.050	--	--	--	--
JAN 26...	.10	149	<1	.540	.020	<.050	<2	<2	<5	<5
FEB 22...	--	--	<1	.340	<.010	<.050	--	--	--	--
MAR 30...	--	--	4	.320	<.010	<.050	--	--	--	--
APR 21...	.10	147	6	.480	<.010	<.050	<2	<2	<5	<5
MAY 17...	--	--	10	.350	<.010	.100	--	--	--	--
JUN 27...	--	--	7	.300	<.010	<.050	--	--	--	--
JUL 28...	.10	143	2	.300	.010	<.050	<2	<2	<5	6
AUG 24...	--	--	5	.280	<.010	.140	--	--	--	--
SEP 06...	--	--	6	.200	.040	.050	--	--	--	--

[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.27 N., R.10 W., Phelps County, Hydrologic Unit 10290203, at bridge on County Highway D at Jerome, 150 ft upstream from Little Piney Creek, 0.7 mi upstream from gaging station.

DRAINAGE AREA.--2570 mi².

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD 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, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCHI FECAL, KF AGAR (COLS./ PER 100 ML) (31673)
NOV 16...	1300	560	354	8.2	7.5	.70	10.2	85	5	300
JAN 26...	1215	1270	315	8.3	5.0	2.1	10.2	79	7	110
MAR 23...	1330	1250	318	8.3	10.0	1.2	12.4	108	1	23
MAY 19...	1230	4200	265	8.0	16.0	4.2	7.8	78	200	150
JUL 28...	1130	620	340	8.2	28.0	1.7	5.6	71	48	21
SEP 06...	1200	350	351	8.1	25.0	1.4	7.2	86	K18	38

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 16...	200	27	41	23	2.9	3	.0	1.4	170	8.0
JAN 26...	170	17	34	20	2.5	3	.0	1.4	150	9.0
MAR 23...	180	27	36	21	2.8	3	.0	1.2	150	9.1
MAY 19...	140	9	29	16	2.2	3	.0	1.8	130	9.2
JUL 28...	170	12	34	21	2.8	3	.0	1.8	160	6.5
SEP 06...	190	17	37	23	2.9	3	.0	1.6	170	6.3

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 16...	4.3	<.10	6.7	200	190	.27	302	<.100	<.060
JAN 26...	5.2	<.10	6.1	185	170	.25	634	.610	.100
MAR 23...	5.3	<.10	2.0	172	170	.23	580	.200	.190
MAY 19...	4.2	<.10	7.1	140	150	.19	1590	.400	<.060
JUL 28...	4.3	<.10	10	174	180	.24	291	<.100	.280
SEP 06...	4.2	<.10	9.6	180	190	.24	170	.130	.040

K--Results based on colony count outside the acceptable range (non-ideal colony count).

GASCONADE RIVER BASIN

06930800 GASCONADE RIVER ABOVE JEROME, MO.--Continued

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- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
NOV 16...	.08	.30	.010	.03	.010	<.010	18	27	93
JAN 26...	.13	.20	.030	.09	.010	.010	14	48	95
MAR 23...	.24	.80	.020	.06	.020	.030	55	186	45
MAY 19...	--	.80	.040	.12	.030	.020	39	442	69
JUL 28...	.36	.50	.040	.12	.030	.020	18	30	69
SEP 06...	.05	.50	.010	.03	.010	.020	89	84	92

DATE	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)
NOV 16...	10	<1	58	<.5	<1	<1	<3	<1	16	2
JAN 26...	<10	<1	46	1	<1	<1	<3	<1	9	1
MAY 19...	30	<1	48	1	<1	<1	<3	1	26	1
JUL 28...	<10	1	57	<.5	<1	<1	<3	2	5	<1

DATE	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 16...	7	7	<.1	<10	<1	<1	<1	43	<6	9
JAN 26...	14	12	<.1	<10	1	<1	<1	36	<6	<3
MAY 19...	12	8	.1	<10	1	<1	<1	35	<6	9
JUL 28...	15	10	<.1	<10	<1	<1	<1	39	<6	8

GASCONADE RIVER BASIN

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 upstream from Mill Creek.

DRAINAGE AREA.--200 mi², approximately.

PERIOD OF RECORD.--October 1928 to current year.

GAGE.--Water-stage recorder. Datum of gage is 693.40 ft National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1951, all gages at datum 3.0 ft higher. Prior to Nov. 21, 1963, nonrecording gage at site 100 ft downstream. Nov. 21, 1963, to May 9, 1966, nonrecording gage at present site.

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.--55 years, 151 ft³/s, 10.25 in/yr, 109,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 32,500 ft³/s Aug. 14, 1946, gage height, 16.2 ft, present datum from floodmark, from rating curve extended above 21,000 ft³/s on basis of slope-area measurements at gage heights 15.0 ft and 16.2 ft; maximum gage height, 16.26 ft June 26, 1935, from floodmark, present datum; minimum discharge, 24 ft³/s Aug. 22-31, 1936, Sept. 19, 20, 1954, Oct. 10-16, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 16.7 ft Aug. 20, 1915, from floodmark, present datum; discharge, 30,000 ft³/s, from rating curve based on discharge measurements made in 1935 and extended above 25,000 ft³/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,900 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 3	0230	*29,300	16.11
May 1	0130	9,500	11.32

Minimum discharge, 51 ft³/s Sept. 20, gage height, 2.03 ft.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	71	99	211	228	100	90	356	3440	171	88	69	99
2	66	113	4990	202	106	90	944	877	166	85	67	95
3	65	118	19600	188	110	90	637	603	301	88	68	92
4	65	101	4290	179	103	90	605	480	223	90	70	95
5	64	95	2040	168	101	112	530	413	192	95	70	102
6	65	89	1040	170	101	241	493	374	219	90	66	99
7	74	86	663	172	102	271	447	384	179	95	70	134
8	66	81	495	166	101	229	418	344	164	110	72	109
9	72	77	413	159	101	193	407	309	155	100	55	103
10	66	77	396	157	101	172	390	285	145	95	58	101
11	63	77	383	152	100	154	366	270	140	90	60	99
12	59	83	342	143	97	144	360	258	136	88	60	99
13	59	76	317	139	96	140	522	355	130	85	61	90
14	59	75	297	137	96	134	666	1730	146	85	60	60
15	59	73	274	129	96	127	501	602	147	85	60	60
16	58	73	248	126	96	123	439	415	130	84	58	64
17	57	74	228	124	95	119	400	339	120	83	56	59
18	57	72	216	120	94	116	373	314	120	82	57	56
19	57	71	202	116	94	115	344	290	117	81	57	55
20	64	71	187	115	94	115	319	260	115	80	60	58
21	61	71	180	115	94	114	304	327	111	78	70	65
22	60	70	176	112	94	109	299	828	108	76	63	60
23	61	74	176	109	93	104	296	399	106	74	69	60
24	62	73	244	106	92	101	287	317	105	73	66	59
25	61	71	795	104	91	100	274	279	104	72	78	70
26	59	225	369	102	90	102	266	253	103	73	80	72
27	61	365	339	101	90	120	263	234	104	75	93	66
28	67	844	367	101	90	120	443	220	99	78	81	65
29	80	393	308	101	---	117	3290	201	96	73	68	63
30	75	282	271	101	---	121	2600	189	90	67	91	64
31	91	---	250	100	---	124	---	181	---	67	102	---
TOTAL	2004	4149	40307	4242	2718	4097	17839	15770	4242	2585	2115	2373
MEAN	64.6	138	1300	137	97.1	132	595	509	141	83.4	68.2	79.1
MAX	91	844	19600	228	110	271	3290	3440	301	110	102	134
MIN	57	70	176	100	90	90	263	181	90	67	55	55
CAL YR 1982		TOTAL	102611	MEAN	281	MAX	19600	MIN	40			
WTR YR 1983		TOTAL	102441	MEAN	281	MAX	19600	MIN	55			

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 downstream from Little Piney Creek, and at mile 107.

DRAINAGE AREA.--2,840 mi², 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. Gage-height records collected intermittently in the vicinity 1885-1926 and at same site since 1938 are contained in reports of National Weather Service.

REVISED RECORDS.--WSP 172: 1904. WSP 566: Drainage area. WSP 1340: 1903-04, 1928(M).

GAGE.--Water-stage recorder. Datum of gage is 657.64 ft National Geodetic Vertical Datum of 1929. Prior to July 26, 1904, nonrecording gage at site 0.8 mi downstream at different datum. July 26, 1904, to July 21, 1906, nonrecording gage at site 0.5 mi upstream from present site at datum about 0.85 ft higher than present gage. Jan. 3, 1923, to Sept. 29, 1928, nonrecording gage at site 400 ft downstream from present site at datum 0.14 ft 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.--63 years (1903-05, 1922-83), 2,485 ft³/s, 11.88 in/yr, 1,800,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 136,000 ft³/s Dec. 5, 1982, gage height, 31.34 ft; minimum, 254 ft³/s Sept. 21, 22, 1956, gage height, 1.24 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jan. 6, 1897 reached a stage about 29.0 ft Jan. 6, 1897, discharge, 120,000 ft³/s. A stage of 28.6 ft was reached on Aug. 20, 22, 1915, discharge, 114,000 ft³/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 16,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 5	0815	*136,000	31.34
Apr. 5	0230	28,400	15.91
May 1	0700	76,600	25.94

Minimum discharge, 432 ft³/s Sept. 5, 6, gage height, 1.53 ft.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	610	695	4420	4390	1310	1040	2720	72300	2120	1010	691	465
2	603	695	7250	3890	1400	1020	9110	50700	2020	985	668	458
3	608	701	57300	3490	1560	1010	20600	30200	2490	951	634	464
4	604	681	101000	3170	1840	1010	24800	19000	2720	956	604	458
5	590	682	121000	2920	1970	1060	23100	10000	3990	967	603	447
6	631	696	66800	2730	2030	1270	10200	7710	3560	945	592	452
7	712	680	37300	2580	1950	1600	7870	6670	2800	996	584	610
8	659	667	21100	2440	1860	2140	6490	5930	2450	1080	577	563
9	726	656	10600	2330	1780	2470	5730	5360	2220	1080	565	920
10	692	647	8130	2230	1710	3260	5510	4820	2050	1030	555	719
11	652	657	6920	2140	1650	3070	5420	4310	1920	971	546	614
12	653	677	6260	2030	1580	2710	5180	3940	1790	918	529	615
13	632	654	5830	1940	1520	2460	4930	3820	1670	871	529	609
14	609	643	5220	1880	1470	2270	6030	8210	1660	845	537	564
15	595	631	4680	1790	1430	2110	9820	9190	1680	838	527	567
16	586	623	4200	1720	1390	1990	7230	8030	1590	804	519	599
17	578	619	3790	1670	1350	1880	5870	6320	1540	782	509	575
18	576	622	3480	1600	1320	1780	5060	5150	1500	771	496	559
19	579	622	3220	1550	1280	1690	4490	4590	1440	746	489	559
20	595	622	2990	1490	1250	1660	4070	4470	1370	741	474	558
21	588	617	2880	1470	1230	1590	3740	4000	1300	711	463	559
22	571	619	2600	1460	1200	1520	3520	4870	1240	686	472	534
23	558	646	2480	1440	1170	1460	3400	4440	1180	666	497	527
24	555	641	2740	1410	1140	1410	3520	5530	1140	650	475	532
25	552	632	9700	1380	1130	1360	3670	4370	1130	705	478	568
26	553	959	13600	1360	1090	1330	3700	3590	1100	700	472	587
27	549	1550	9530	1320	1070	1410	3500	3160	1130	668	476	565
28	582	3450	7390	1290	1060	1430	4120	2850	1060	685	473	553
29	624	5510	6600	1300	---	1460	11100	2630	1050	680	461	549
30	615	5080	5880	1300	---	1520	42300	2410	1040	656	467	536
31	637	---	5100	1280	---	1620	---	2260	---	678	479	---
TOTAL	18874	32874	549990	62990	40740	53610	256800	310830	53950	25772	16441	16885
MEAN	609	1096	17740	2032	1455	1729	8560	10030	1798	831	530	563
MAX	726	5510	121000	4390	2030	3260	42300	72300	3990	1080	691	920
MIN	549	617	2480	1280	1060	1010	2720	2260	1040	650	461	447
CAL YR 1982	TOTAL	1249896	MEAN	3424	MAX	121000	MIN	549				
WTR YR 1983	TOTAL	1439756	MEAN	3945	MAX	121000	MIN	447				

MISSOURI RIVER MAIN STEM

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.

DRAINAGE AREA.--524,200 mi² 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 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 National Geodetic Vertical Datum of 1929. Prior to Sept. 26, 1930, nonrecording gage at site 480 ft downstream at datum 0.07 ft 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.--86 years, 80,050 ft³/s, 58,000,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 676,000 ft³/s June 6, 7, 1903, gage height, 21.5 ft, discharge computed by Corps of Engineers; maximum gage height, 33.70 ft Apr. 25, 1973; minimum, about 4,200 ft³/s Jan. 10-12, 1940; minimum gage height observed, -0.80 ft Jan. 5, 6, 1940.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 1844 reached a stage of 35.5 ft, discharge, about 892,000 ft³/s computed by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 394,600 ft³/s May 3, gage height, 32.55 ft; minimum daily, 55,100 ft³/s Sept. 30.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	61700	67600	89900	151000	62600	103000	183000	262000	168000	145000	68900	59500
2	63900	70700	112000	136000	80600	116000	269000	374000	160000	142000	68000	59200
3	61800	71600	300000	118000	89300	104000	336000	382000	156000	140000	68500	58200
4	59300	69100	354000	105000	83000	105000	358000	336000	157000	135000	70400	57400
5	59100	67300	334000	96000	75100	108000	350000	261000	160000	135000	72100	56900
6	63100	67900	355000	92700	66200	113000	360000	212000	159000	140000	69500	56500
7	71600	69000	373000	90700	56800	125000	367000	195000	154000	139000	68100	56000
8	71000	67900	325000	89400	59700	146000	348000	185000	147000	134000	67300	55900
9	69600	67300	260000	79500	71500	155000	336000	170000	143000	127000	66600	55100
10	73700	69200	218000	70500	70200	149000	313000	161000	130000	123000	65600	57100
11	97600	72600	188000	66700	70200	151000	281000	157000	122000	116000	64700	57400
12	106000	72600	176000	71600	72000	149000	248000	155000	118000	112000	63900	57600
13	105000	75900	157000	72600	65900	133000	225000	160000	116000	114000	62600	57300
14	104000	97300	136000	72800	63100	114000	209000	175000	123000	109000	61900	56700
15	93200	110000	125000	73700	67500	110000	194000	201000	126000	109000	61300	55600
16	83100	112000	117000	71800	86100	108000	189000	211000	130000	107000	60800	55400
17	76300	105000	113000	65000	102000	98100	190000	199000	147000	107000	60000	55300
18	71300	94500	110000	64400	120000	91800	190000	181000	167000	104000	62100	56000
19	68000	87800	107000	66100	123000	92300	186000	175000	184000	101000	62800	56600
20	67200	83100	104000	67600	117000	97500	177000	171000	205000	100000	61100	55400
21	69500	79700	101000	65000	108000	102000	173000	168000	207000	103000	62200	55400
22	69900	76400	100000	62700	118000	101000	169000	205000	205000	100000	60500	55400
23	69500	75500	98100	60400	134000	95100	165000	211000	193000	96600	59300	55700
24	68200	77300	102000	58400	133000	90900	160000	212000	182000	95900	58800	57200
25	65900	77300	162000	58700	122000	86700	157000	204000	175000	89900	59100	59300
26	65100	80200	155000	62700	111000	85700	155000	183000	167000	84100	62900	59400
27	64400	82700	148000	66900	107000	91500	153000	169000	148000	79000	62000	57500
28	63200	93100	146000	70300	104000	130000	167000	166000	146000	76100	60100	56600
29	63000	94100	148000	67200	---	175000	190000	165000	143000	75600	58600	56100
30	63100	90400	166000	63700	---	188000	210000	164000	141000	77600	58500	55400
31	64800	---	166000	58900	---	176000	---	159000	---	72000	59300	---
TOTAL	2253100	2425100	5546000	2416000	2538800	3690600	7008000	6329000	4679000	3388800	1967500	1703100
MEAN	72680	80840	178900	77940	90670	119100	233600	204200	156000	109300	63470	56770
MAX	106000	112000	373000	151000	134000	188000	367000	382000	207000	145000	72100	59500
MIN	59100	67300	89900	58400	56800	85700	153000	155000	116000	72000	58500	55100
CAL YR 1982	TOTAL		41915000	MEAN	114800	MAX	373000	MIN	13900			
WTR YR 1983	TOTAL		43945000	MEAN	120400	MAX	382000	MIN	55100			

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, 2150 micromhos December 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, 835 micromhos Sept. 22; minimum daily 315 micromhos December 4.

WATER TEMPERATURE: Maximum daily, 31.0°C Aug. 5, 20, minimum daily 1.0°C, Jan. 1, 19, 21, 23, 25, Feb. 5, 6.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD 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, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
NOV 17...	1030	106000	652	8.2	6.0	230	9.0	73	7200	21000
JAN 25...	1100	58500	705	8.0	1.5	25	12.6	88	2000	6600
MAY 18...	1130	180000	496	8.1	16.0	230	7.8	78	1900	6000
JUL 27...	1100	78500	705	8.2	28.5	39	5.6	71	250	220

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 17...	210	50	54	18	46	32	1	5.2	160	150
JAN 25...	250	72	66	21	47	28	1	5.2	180	130
MAY 18...	210	58	54	17	24	20	.8	4.8	150	91
JUL 27...	250	83	68	20	47	28	1	7.3	170	150

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 17...	16	.40	9.2	416	400	.57	119000	1.20	<.060
JAN 25...	21	.40	14	418	410	.57	66000	1.60	.200
MAY 18...	14	.30	9.2	314	310	.43	153000	2.10	<.060
JUL 27...	19	.40	14	441	430	.60	93500	.110	.040

MISSOURI RIVER MAIN STEM

06934500 MISSOURI RIVER AT HERMANN, MO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
NOV 17...	.08	3.3	.470	1.4	.100	.080	1260	361000	46
JAN 25...	.26	1.1	.180	.55	.090	.080	152	24000	30
MAY 18...	--	1.2	.280	.86	.100	.070	1070	520000	82
JUL 27...	.05	1.3	.270	.83	.160	.030	516	109000	41

DATE	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)
NOV 17...	60	2	110	<.5	<1	<1	<3	4	84	<1
JAN 25...	10	1	120	1	<1	<1	<3	2	19	<1
MAY 18...	60	2	110	<.5	<1	<1	<3	2	54	1
JUL 27...	10	5	140	<.5	<1	<1	<3	6	20	<1

DATE	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 17...	37	10	.2	<10	3	1	1	380	<6	23
JAN 25...	45	16	.1	<10	4	2	<1	450	<6	53
MAY 18...	16	1	.3	<10	2	2	<1	3100	<6	22
JUL 27...	44	3	<.1	<10	1	3	<1	430	<6	16

MISSOURI RIVER MAIN STEM

06934500 MISSOURI RIVER AT HERMANN, MO--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21.5	15.0	6.5	1.0	2.5	7.0	6.5	14.5	20.0	27.5	30.5	28.5
2	22.0	14.5	8.5	2.5	3.0	8.0	8.0	14.0	19.5	27.0	30.0	28.5
3	20.0	13.5	12.0	2.0	3.0	8.5	7.0	14.5	20.5	28.0	30.5	27.0
4	22.0	11.5	11.0	2.0	2.0	9.0	6.5	15.0	21.0	26.0	30.0	28.5
5	22.0	11.0	10.5	2.5	1.0	10.0	7.0	15.5	21.0	27.0	31.0	27.0
6	21.5	11.0	10.0	3.5	1.0	9.5	7.0	17.0	21.0	26.5	30.0	27.0
7	22.0	11.5	9.0	3.0	1.5	10.0	6.0	16.5	21.0	26.5	30.0	27.5
8	21.5	12.0	7.0	3.5	1.5	8.5	7.0	15.0	21.0	27.0	30.0	27.0
9	21.5	12.5	9.0	3.5	1.5	8.0	7.0	15.0	21.0	27.0	30.0	28.0
10	19.0	13.0	5.5	3.0	2.5	8.0	6.0	16.0	22.0	27.0	30.0	26.0
11	18.0	12.0	3.0	3.5	2.0	7.5	8.0	16.0	21.0	27.5	30.0	26.0
12	17.0	11.0	3.5	2.5	3.0	7.0	9.0	18.0	22.0	29.0	29.0	26.0
13	17.0	9.0	4.0	4.5	3.0	7.0	8.0	18.0	23.0	28.5	29.0	24.0
14	17.0	8.0	4.0	3.0	2.5	6.5	8.5	17.0	23.0	28.5	29.0	24.0
15	18.0	9.0	3.5	2.5	4.5	8.5	9.0	16.0	23.5	28.5	27.5	22.0
16	16.0	8.0	5.5	2.5	5.0	8.0	9.5	16.5	23.5	28.0	29.5	22.5
17	16.0	8.0	4.0	1.5	6.0	8.5	8.5	17.0	24.5	27.5	30.0	21.0
18	14.5	7.0	4.5	1.5	5.5	8.0	9.0	17.0	24.5	28.5	30.0	26.0
19	15.5	8.0	3.5	1.0	6.0	8.0	9.5	16.5	23.0	30.0	30.5	24.0
20	14.0	9.0	4.5	1.5	6.5	8.0	9.5	17.0	23.5	29.0	31.0	22.0
21	14.0	9.5	4.0	1.0	7.0	6.0	10.5	16.5	24.0	30.0	29.5	20.0
22	13.5	8.0	6.0	1.5	8.0	6.0	10.0	17.0	23.0	30.0	29.0	19.5
23	14.5	7.0	6.5	1.0	7.0	6.0	11.0	18.0	24.5	30.0	30.0	19.0
24	11.5	6.5	7.0	2.0	6.0	6.5	10.0	17.0	25.0	30.0	30.0	19.5
25	13.0	6.0	8.5	1.0	6.0	6.0	11.0	18.0	25.5	29.0	30.0	18.5
26	14.0	7.0	7.0	2.0	6.0	6.0	13.0	18.5	26.0	29.0	30.5	19.5
27	13.0	6.0	7.0	2.0	6.5	5.5	14.0	18.5	24.0	29.0	30.0	20.5
28	13.0	6.0	5.0	2.5	6.5	5.5	15.0	19.5	27.0	30.0	30.0	20.5
29	13.0	6.0	4.5	2.0	---	7.0	14.5	20.0	27.0	30.0	29.5	21.0
30	12.5	7.0	4.5	3.0	---	6.0	15.0	19.0	27.0	30.0	28.0	20.5
31	13.5	---	4.5	2.5	---	6.5	---	19.5	---	30.0	28.5	---
MEAN	17.0	9.5	6.0	2.5	4.0	7.5	9.5	17.0	23.0	28.5	30.0	23.5
WTR YR 1983	MEAN	15.0		MAX	31.0		MIN	1.0				

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	465	745	695	405	700	565	465	595	515	560	745	810
2	450	735	670	390	635	530	420	375	525	585	740	820
3	455	720	365	405	630	575	385	380	545	565	745	820
4	470	735	315	460	625	585	355	340	575	545	740	825
5	475	745	320	445	600	590	345	395	560	525	740	820
6	480	750	330	500	585	560	340	545	570	500	745	830
7	470	745	355	535	595	550	355	545	550	500	760	830
8	475	750	385	560	620	515	350	525	550	530	775	830
9	465	760	405	595	585	495	365	515	595	590	770	830
10	455	760	420	635	585	505	375	535	610	600	785	825
11	440	755	415	665	600	500	415	555	610	625	785	825
12	370	750	440	665	590	505	450	575	615	640	790	825
13	375	755	470	670	645	520	480	585	620	645	790	830
14	385	710	500	675	660	535	470	565	660	650	790	825
15	400	625	530	685	650	550	500	520	655	635	790	820
16	395	655	545	655	595	555	520	445	635	645	800	825
17	410	655	570	665	550	590	535	510	640	645	795	825
18	380	665	570	685	540	610	565	530	655	645	790	830
19	425	660	570	690	525	620	560	520	570	655	775	825
20	440	670	575	680	515	640	545	500	510	660	785	825
21	440	690	585	690	520	640	540	530	475	640	775	825
22	440	705	585	690	500	610	550	525	490	650	795	835
23	445	715	590	700	525	600	555	540	450	655	805	830
24	455	715	595	705	505	625	555	515	465	655	805	820
25	475	735	435	715	485	635	560	465	480	660	810	815
26	480	720	515	715	495	650	570	470	520	675	785	820
27	475	720	475	700	515	670	580	500	570	715	800	820
28	475	705	465	675	535	600	570	520	540	745	795	805
29	475	695	475	670	---	535	540	535	550	745	815	820
30	475	705	485	675	---	480	525	520	555	740	825	790
31	475	---	480	685	---	430	---	505	---	755	815	---
MEAN	445	715	488	622	575	567	478	506	562	632	783	823
WTR YR 1983	MEAN	599		MAX	835		MIN	315				

MISSISSIPPI RIVER MAIN STEM

07010000 MISSISSIPPI RIVER AT ST. LOUIS, MO

LOCATION.--Lat 38°37'44", long 90°10'47", St. Louis County, Hydrologic Unit 07140101, on downstream side of west pier of Eads Bridge at St. Louis, 15 mi downstream from Missouri River, 19.2 mi upstream from Meramec River, and at mile 180.0 above the Ohio River.

DRAINAGE AREA.--697,000 mi², 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 National Geodetic Vertical Datum of 1929. Prior to May 5, 1934, nonrecording gage 0.4 mi downstream and May 5, 1934, to Dec. 9, 1952, water-stage recorder at site 20 ft 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.--122 years, 178,300 ft³/s, 129,200,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 1,019,000 ft³/s June 10, 11, 1903, gage height, 38.00 ft; maximum gage height, 43.23 ft Apr. 28, 1973; minimum daily discharge, 18,000 ft³/s Dec. 21-23, 1863; minimum gage height, -6.11 ft Jan. 16, 1940.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 27, 1844, reached a stage of 41.32 ft, from floodmarks, discharge, 1,300,000 ft³/s, computed by Corps of Engineers. Flood in April 1785 may have reached a stage 42.0 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 739,000 ft³/s Dec. 7 at 2000, maximum gage height, 39.27 ft May 4 at 1600; minimum, 88,300 ft³/s Sept. 15, gage height, 3.12 ft.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	112000	193000	279000	396000	154000	296000	479000	549000	387000	277000	167000	142000
2	111000	198000	285000	379000	157000	292000	507000	608000	376000	292000	164000	132000
3	119000	210000	436000	360000	190000	295000	568000	669000	377000	299000	164000	122000
4	129000	217000	601000	323000	182000	282000	622000	699000	372000	301000	164000	114000
5	117000	212000	677000	313000	169000	279000	662000	677000	369000	305000	158000	107000
6	122000	206000	707000	298000	169000	288000	681000	622000	371000	309000	159000	115000
7	135000	202000	728000	289000	149000	297000	703000	571000	367000	319000	154000	118000
8	138000	192000	721000	276000	131000	313000	712000	527000	352000	325000	147000	115000
9	145000	179000	683000	267000	137000	336000	713000	495000	332000	324000	146000	117000
10	149000	176000	638000	255000	159000	344000	707000	469000	314000	318000	147000	117000
11	159000	171000	581000	238000	166000	340000	692000	448000	290000	314000	144000	115000
12	186000	177000	569000	220000	165000	342000	673000	433000	286000	304000	137000	113000
13	205000	187000	512000	218000	172000	345000	656000	421000	280000	295000	144000	108000
14	197000	211000	481000	216000	173000	337000	650000	425000	279000	295000	139000	93300
15	198000	251000	445000	210000	174000	326000	632000	433000	279000	289000	135000	89200
16	192000	259000	405000	199000	177000	326000	612000	447000	271000	284000	126000	103000
17	182000	262000	360000	188000	178000	330000	592000	452000	272000	276000	122000	108000
18	177000	260000	337000	169000	216000	331000	573000	440000	279000	266000	112000	107000
19	176000	255000	324000	158000	268000	333000	557000	424000	297000	251000	120000	109000
20	181000	252000	310000	151000	278000	341000	543000	414000	322000	240000	126000	108000
21	166000	252000	296000	151000	281000	356000	530000	405000	343000	237000	127000	108000
22	172000	248000	288000	149000	273000	363000	519000	417000	349000	238000	129000	119000
23	178000	250000	286000	149000	278000	364000	512000	439000	340000	233000	141000	125000
24	176000	245000	304000	154000	298000	365000	504000	442000	324000	229000	141000	120000
25	174000	247000	342000	157000	306000	362000	498000	441000	307000	230000	134000	120000
26	178000	250000	405000	158000	302000	363000	492000	429000	300000	225000	127000	136000
27	171000	255000	418000	162000	298000	366000	486000	410000	277000	209000	125000	155000
28	173000	263000	415000	165000	297000	373000	483000	398000	256000	198000	131000	162000
29	182000	279000	400000	166000	---	413000	501000	394000	254000	190000	125000	167000
30	181000	276000	391000	166000	---	458000	519000	392000	263000	179000	138000	168000
31	181000	---	399000	160000	---	477000	---	393000	---	182000	145000	---
TOTAL	5062000	6835000	14023000	6860000	5897000	10633000	17578000	14783000	9485000	8233000	4338000	3632500
MEAN	163300	227800	452400	221300	210600	343000	585900	476900	316200	265600	139900	121100
MAX	205000	279000	728000	396000	306000	477000	713000	699000	387000	325000	167000	168000
MIN	111000	171000	279000	149000	131000	279000	479000	392000	254000	179000	112000	89200
CAL YR 1982	TOTAL 101734200			MEAN 278700	MAX 728000	MIN 68300						
WTR YR 1983	TOTAL 107359500			MEAN 294100	MAX 728000	MIN 89200						

MISSISSIPPI RIVER MAIN STEM

07010000 MISSISSIPPI RIVER AT ST. LOUIS, MO--Continued

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
INSTANTANEOUS OBSERVATIONS at 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.53	12.80	17.76	24.95	9.07	18.58	26.72	32.08	26.33	18.80	10.72	8.09
2	5.06	13.04	17.54	24.05	8.78	18.25	27.64	34.55	25.75	19.53	10.59	7.16
3	5.36	14.00	23.51	22.98	11.68	18.58	29.99	36.98	25.78	20.23	10.43	6.26
4	7.24	14.85	32.15	21.70	11.81	17.74	31.78	38.83	25.27	20.23	10.71	5.86
5	5.78	14.55	35.10	20.40	10.14	17.58	33.81	38.84	24.90	20.43	9.94	4.91
6	6.05	13.98	36.22	19.46	10.48	18.06	34.52	37.41	24.91	20.63	9.91	5.65
7	7.14	13.73	37.41	19.06	9.03	18.52	35.33	35.24	24.50	21.17	9.68	6.01
8	7.55	13.05	37.84	18.21	7.24	19.28	36.00	33.34	23.57	21.57	9.08	5.68
9	8.16	11.55	37.14	17.72	7.14	20.76	36.28	31.90	22.21	21.66	9.01	5.69
10	8.28	11.36	35.52	16.91	9.21	21.36	36.49	30.56	21.32	21.47	9.02	6.04
11	9.24	10.75	33.70	15.91	9.86	21.00	36.21	29.38	19.36	21.40	8.61	5.73
12	11.12	10.91	31.90	14.50	9.44	21.09	35.73	28.46	18.95	20.99	7.69	4.80
13	13.28	11.61	30.64	14.37	10.21	21.31	35.11	27.75	18.44	20.51	8.60	4.90
14	12.34	13.00	29.27	14.11	10.34	20.96	35.13	27.88	18.17	20.53	8.07	3.74
15	12.70	16.58	27.61	13.56	10.03	20.28	34.47	28.22	18.49	20.15	7.97	3.17
16	12.25	17.01	25.70	12.75	11.00	20.13	33.63	28.91	17.77	19.90	6.92	4.21
17	11.59	17.32	23.13	12.00	13.90	20.48	32.98	29.35	17.86	19.44	6.89	5.10
18	10.80	17.23	21.77	10.33	14.80	20.42	32.24	28.90	18.09	18.85	5.21	5.40
19	11.01	16.89	21.21	9.42	16.91	20.53	31.70	28.02	19.27	17.76	6.39	5.12
20	11.63	16.57	20.44	8.73	17.53	20.89	31.22	27.46	20.36	16.98	6.45	5.01
21	10.30	16.70	19.69	8.76	17.83	21.82	30.71	26.99	21.80	16.57	6.97	5.50
22	10.32	16.35	19.12	8.54	17.32	22.22	30.35	27.31	22.25	16.66	6.64	7.00
23	11.10	16.38	18.93	8.33	17.29	22.27	30.09	28.74	21.91	16.26	7.92	6.90
24	10.97	14.99	19.64	8.70	18.47	22.25	29.80	28.97	21.06	15.81	8.02	6.40
25	10.65	16.17	21.11	9.16	19.10	21.81	29.57	28.98	19.95	15.96	7.35	7.20
26	11.23	16.39	25.33	9.24	18.80	21.68	29.34	28.46	19.58	15.74	6.86	8.80
27	10.63	16.66	26.18	9.67	18.67	21.71	29.15	27.49	18.91	14.59	6.33	9.03
28	10.34	17.00	26.19	9.83	18.54	21.68	29.03	26.78	17.58	13.42	7.25	9.49
29	11.44	18.04	25.34	9.79	---	23.49	29.89	26.48	17.49	12.85	6.50	9.93
30	11.39	18.05	24.60	10.13	---	25.91	31.06	26.48	17.89	11.70	7.58	10.20
31	11.33	---	25.13	9.72	---	26.94	---	26.51	---	12.22	7.90	---
MEAN	9.74	14.92	26.67	13.97	13.02	20.89	32.20	30.23	20.99	18.19	8.10	6.30
MAX	13.28	18.05	37.84	24.95	19.10	26.94	36.49	38.84	26.33	21.66	10.72	10.20
MIN	5.06	10.75	17.54	8.33	7.14	17.58	26.72	26.48	17.49	11.70	5.21	3.17
WTR YR 1983	MEAN	17.97	MAX	38.84	MIN	3.17						

MISSISSIPPI RIVER MAIN STEM

07010000 MISSISSIPPI RIVER AT ST. LOUIS, MO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--

WATER TEMPERATURES: October 1951 to current year.

SEDIMENT RECORDS: April 1948 to current year.

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 January 21, 22, 1967.

SEDIMENT LOADS: Maximum daily, 7,010,000 tons May 5, 1951; minimum daily, 2,800 tons January 21, 1967.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 1,830 mg/L December 4; minimum daily mean, 71 mg/L August 29.

SEDIMENT LOADS: Maximum daily, 2,970,000 tons December 4; minimum daily, 24,000 tons August 29.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

1	---	---	---	---	---	---	---	---	---	---	---
2	---	13.0	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	15.0	---	---	---	---
4	20.5	---	---	2.5	---	---	7.0	---	19.0	---	---
5	---	---	13.0	---	---	---	7.5	---	---	---	---
6	---	---	---	---	---	---	---	16.0	---	---	28.5
7	---	---	---	---	---	9.0	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	29.5	---
9	---	---	7.0	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	7.5	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---
14	17.0	---	---	---	---	---	---	---	---	27.5	---
15	---	---	---	---	---	---	---	---	---	28.0	---
16	---	6.5	---	---	---	---	---	16.0	24.0	---	---
17	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---
19	15.5	---	---	---	---	---	---	---	---	---	24.5
20	---	---	3.0	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---
22	---	7.5	---	---	---	4.5	---	---	---	---	---
23	---	---	---	---	---	5.0	---	---	---	---	---
24	---	---	---	---	5.5	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	30.0	---
26	---	---	---	---	---	---	---	---	---	---	30.5
27	---	---	---	---	---	---	---	27.0	---	---	---
28	---	---	---	1.0	5.0	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---
30	---	6.5	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---
MEAN	---	---	---	---	---	---	---	---	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---

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)
OCT , 1982										
14...	195000	56	61	66	73	91	94	100	100	100
NOV										
22...	248000	42	47	50	58	76	81	99	100	100
DEC										
05...	624000	43	43	48	54	70	75	98	99	100
JAN , 1983										
28...	165000	--	--	--	--	39	47	87	100	100
FEB										
28...	284000	35	41	45	55	72	74	95	100	100
MAR										
22...	354000	26	27	29	37	54	58	89	95	100
APR										
05...	662000	44	47	50	55	69	74	95	100	100
MAY										
04...	697000	52	60	67	72	80	83	92	100	100
JUN										
16...	271000	33	36	--	48	73	83	96	99	100
JUL										
15...	289000	38	41	45	53	87	91	99	100	100

MISSISSIPPI RIVER MAIN STEM

07010000 MISSISSIPPI RIVER AT ST. LOUIS, MO--Continued

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)
OCT , 1982										
14...	0	0	4	25	74	91	96	98	100	100
NOV										
22...	0	2	38	52	76	87	93	96	100	100
JAN , 1983										
28...	0	0	9	53	85	--	99	100	100	100
FEB										
28...	0	0	11	55	85	94	97	98	99	100
MAR										
22...	0	0	24	50	85	94	97	98	100	100
JUN										
16...	0	0	2	22	67	82	91	96	97	100
JUL										
15...	0	0	4	20	57	76	86	92	96	100

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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	112000	117	35400	193000	293	153000	279000	306	231000
2	111000	100	30000	198000	297	159000	285000	312	240000
3	119000	97	31200	210000	408	231000	436000	591	696000
4	129000	95	33100	217000	465	272000	601000	1830	2970000
5	117000	89	28100	212000	554	317000	677000	1400	2560000
6	122000	87	28700	206000	513	285000	707000	978	1870000
7	135000	85	31000	202000	467	255000	728000	1200	2360000
8	138000	89	33200	192000	389	202000	721000	752	1460000
9	145000	107	41900	179000	379	183000	683000	758	1400000
10	149000	106	42600	176000	363	172000	638000	779	1340000
11	159000	125	53700	171000	336	155000	581000	650	1020000
12	186000	171	85900	177000	335	160000	569000	847	1300000
13	205000	215	119000	187000	350	177000	512000	729	1010000
14	197000	707	376000	211000	381	217000	481000	708	919000
15	198000	760	406000	251000	372	252000	445000	560	673000
16	192000	623	323000	259000	706	494000	405000	528	577000
17	182000	363	178000	262000	1080	764000	360000	576	560000
18	177000	311	149000	260000	960	674000	337000	581	529000
19	176000	372	177000	255000	776	534000	324000	497	435000
20	181000	342	167000	252000	717	488000	310000	435	364000
21	166000	296	133000	252000	609	414000	296000	358	286000
22	172000	276	128000	248000	522	350000	288000	312	243000
23	178000	249	120000	250000	486	328000	286000	273	211000
24	176000	210	99800	245000	434	287000	304000	364	299000
25	174000	231	109000	247000	405	270000	342000	478	441000
26	178000	245	118000	250000	371	250000	405000	632	691000
27	171000	233	108000	255000	353	243000	418000	900	1020000
28	173000	231	108000	263000	317	225000	415000	628	704000
29	182000	273	134000	279000	320	241000	400000	908	981000
30	181000	274	134000	276000	382	285000	391000	673	710000
31	181000	284	139000	---	---	---	399000	567	611000
TOTAL	5062000	---	3700600	6835000	---	9037000	14023600	---	28711000

07010000 MISSISSIPPI RIVER AT ST. LOUIS, MO--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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	396000	735	786000	154000	84	34900	296000	544	435000
2	379000	682	698000	157000	100	42400	292000	545	430000
3	360000	654	636000	190000	142	72800	295000	539	429000
4	323000	640	558000	182000	179	88000	282000	521	397000
5	313000	430	363000	169000	317	145000	279000	437	329000
6	298000	313	252000	169000	320	146000	288000	435	338000
7	289000	251	196000	149000	318	128000	297000	401	322000
8	276000	173	129000	131000	276	97600	313000	430	363000
9	267000	147	106000	137000	283	105000	336000	562	510000
10	255000	136	93600	159000	239	103000	344000	782	726000
11	238000	125	80300	166000	616	276000	340000	756	694000
12	220000	123	73100	165000	136	60600	342000	784	724000
13	218000	129	75900	172000	136	63200	345000	812	756000
14	216000	116	67700	173000	144	67300	337000	697	634000
15	210000	113	64100	174000	138	64800	326000	781	687000
16	199000	136	73100	177000	155	74100	326000	696	613000
17	188000	176	89300	178000	178	85500	330000	576	513000
18	169000	170	77600	216000	179	104000	331000	561	501000
19	158000	193	82300	268000	451	326000	333000	471	423000
20	151000	178	72600	278000	648	486000	341000	424	390000
21	151000	167	68100	281000	699	530000	356000	374	359000
22	149000	143	57500	273000	753	555000	363000	419	411000
23	149000	150	60300	278000	608	456000	364000	405	398000
24	154000	106	44100	298000	630	507000	365000	492	485000
25	157000	103	43700	306000	681	563000	362000	443	433000
26	158000	103	43900	302000	621	506000	363000	391	383000
27	162000	112	49000	298000	547	440000	366000	323	319000
28	165000	102	45400	297000	589	472000	373000	345	347000
29	166000	101	45300	---	---	---	413000	350	390000
30	166000	92	41200	---	---	---	458000	601	743000
31	160000	99	42800	---	---	---	477000	1070	1380000
TOTAL	6860000	---	5114900	5897000	---	6599200	10633000	---	15862000
APRIL			MAY			JUNE			
1	479000	1240	1600000	549000	601	891000	387000	725	758000
2	507000	1330	1820000	608000	838	1380000	376000	1170	1190000
3	568000	1170	1790000	669000	800	1450000	377000	997	1010000
4	622000	1300	2180000	699000	889	1680000	372000	756	759000
5	662000	1240	2220000	677000	659	1200000	369000	552	550000
6	681000	1290	2370000	622000	441	741000	371000	411	412000
7	703000	1330	2520000	571000	402	620000	367000	384	381000
8	712000	1020	1960000	527000	328	467000	352000	405	385000
9	713000	910	1750000	495000	535	715000	332000	440	394000
10	707000	673	1280000	469000	443	561000	314000	335	284000
11	692000	563	1050000	448000	522	631000	290000	302	236000
12	673000	554	1010000	433000	490	573000	286000	280	216000
13	656000	460	815000	421000	468	532000	280000	293	222000
14	650000	454	797000	425000	494	567000	279000	272	205000
15	632000	436	744000	433000	353	413000	279000	242	182000
16	612000	432	714000	447000	492	594000	271000	221	162000
17	592000	419	670000	452000	634	774000	272000	254	187000
18	573000	342	529000	440000	808	960000	279000	243	183000
19	557000	413	621000	424000	886	1010000	297000	280	225000
20	543000	371	544000	414000	685	766000	322000	531	462000
21	530000	438	627000	405000	518	566000	343000	1110	1030000
22	519000	474	664000	417000	492	554000	349000	1540	1450000
23	512000	414	572000	439000	559	663000	340000	1460	1340000
24	504000	400	544000	442000	480	573000	324000	1650	1440000
25	498000	332	446000	441000	531	632000	307000	1540	1280000
26	492000	352	468000	429000	991	1150000	300000	1060	859000
27	486000	316	415000	410000	1060	1170000	277000	753	563000
28	483000	314	409000	398000	924	993000	256000	507	350000
29	501000	329	445000	394000	583	620000	254000	656	450000
30	519000	493	691000	392000	581	615000	263000	667	474000
31	---	---	---	393000	526	558000	---	---	---
TOTAL	17578000	---	32265000	14783000	---	24619000	9485000	---	17639000

MISSISSIPPI RIVER MAIN STEM

07010000 MISSISSIPPI RIVER AT ST. LOUIS, MO--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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	277000	502	375000	167000	164	73900	142000	89	34100
2	292000	445	351000	164000	149	66000	132000	91	32400
3	299000	415	335000	164000	148	65500	122000	101	33300
4	301000	409	332000	164000	192	85000	114000	112	34500
5	305000	589	485000	158000	165	70400	107000	90	26000
6	309000	568	474000	159000	160	68700	115000	95	29500
7	319000	622	536000	154000	143	59500	118000	86	27400
8	325000	591	519000	147000	141	56000	115000	90	27900
9	324000	532	465000	146000	167	65800	117000	95	30000
10	318000	544	467000	147000	151	59900	117000	95	30000
11	314000	491	416000	144000	156	60700	115000	92	28600
12	304000	452	371000	137000	124	45900	113000	92	28100
13	295000	364	290000	144000	113	43900	108000	92	26800
14	295000	353	281000	139000	110	41300	93300	99	24900
15	289000	359	280000	135000	107	39000	89200	99	23800
16	284000	370	284000	126000	94	32000	103000	109	30300
17	276000	326	243000	122000	91	30000	108000	116	33800
18	266000	340	244000	112000	83	25100	107000	111	32100
19	251000	312	211000	120000	94	30500	109000	121	35600
20	240000	299	194000	126000	100	34000	108000	104	30300
21	237000	295	189000	127000	81	27800	108000	116	33800
22	238000	297	191000	129000	87	30300	119000	113	36300
23	233000	248	156000	141000	122	46400	125000	114	38500
24	229000	222	137000	141000	100	38100	120000	115	37300
25	230000	219	136000	134000	88	31800	120000	117	37900
26	225000	211	128000	127000	96	32900	136000	117	43000
27	209000	188	106000	125000	82	27700	155000	114	47700
28	198000	168	89800	131000	72	25500	162000	131	57300
29	190000	169	86700	125000	71	24000	167000	192	86600
30	179000	179	86500	138000	80	29800	168000	184	83500
31	182000	167	82100	145000	82	32100	---	---	---
TOTAL	8233000	---	8541100	4338000	---	1399500	3632500	---	1101300
YEAR	107359500		154589600						

MERAMEC RIVER BASIN

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 downstream from spring outlet, 1 mi upstream from Meramec River, and 6 mi 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, 1943, 1939-40, 1946, 1953-55, 1957, 1961-65.

GAGE.--Nonrecording gage. Datum of gage is 773.97 ft National Geodetic Vertical Datum of 1929. Prior to Nov. 11, 1921, gage at site 150 ft upstream at different datum. Nov. 11, 1921, to June 4, 1938, at site 50 ft upstream at datum 0.21 ft higher.

REMARKS.--Records poor. Occasional backwater from Meramec River.

AVERAGE DISCHARGE.--27 years (1903-05, 1922-29, 1965-83), 149 ft³/s, 108,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 770 ft³/s, Dec. 6, 1982, backwater from Meramec River; minimum measured, 56 ft³/s Aug. 1, 1934.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 770 ft³/s Dec. 6; minimum daily, 91 ft³/s Aug. 30 - Sept. 2.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	159	196	329	323	150	128	150	600	190	159	111	91
2	150	185	294	323	159	128	422	466	181	159	106	91
3	167	185	300	300	154	128	504	429	181	159	106	102
4	167	176	350	283	154	125	466	416	217	159	106	102
5	163	167	700	260	154	128	410	381	201	145	104	100
6	159	167	770	249	154	154	387	346	201	145	115	98
7	176	163	700	249	154	212	364	311	190	145	111	102
8	176	159	625	238	145	227	340	306	190	141	108	102
9	185	150	602	238	138	227	346	277	181	159	104	100
10	185	150	589	238	138	206	352	266	181	154	106	104
11	181	154	535	222	141	176	340	244	181	145	104	104
12	176	145	504	212	141	159	329	233	172	145	102	104
13	167	138	478	201	141	159	320	238	172	145	102	106
14	176	134	466	196	138	150	370	255	163	141	100	102
15	172	134	453	190	138	150	410	369	181	141	100	102
16	172	134	435	196	134	141	381	346	172	150	100	102
17	172	128	387	185	134	141	352	311	172	150	100	108
18	172	128	364	176	131	134	329	288	172	145	100	108
19	163	128	352	172	128	134	311	255	176	145	104	106
20	167	128	335	167	134	134	294	244	172	131	108	104
21	163	227	300	167	131	141	283	244	172	121	108	106
22	163	206	277	163	128	134	277	340	163	121	104	106
23	154	196	266	167	128	128	277	346	163	121	102	108
24	163	185	329	163	125	128	272	311	154	125	102	111
25	163	167	400	154	131	128	266	277	172	118	98	115
26	154	167	497	154	128	128	260	244	172	115	95	115
27	167	447	460	154	131	159	249	233	172	115	100	111
28	159	575	429	159	128	159	249	233	163	118	104	108
29	163	472	404	154	---	145	364	222	163	115	98	111
30	167	398	369	154	---	150	500	201	172	118	91	111
31	163	---	335	154	---	141	---	190	---	115	91	---
TOTAL	5184	6089	13634	6361	3890	4682	10174	9422	5312	4265	3190	3140
MEAN	167	203	440	205	139	151	339	304	177	138	103	105
MAX	185	575	770	323	159	227	504	600	217	159	115	115
MIN	150	128	266	154	125	125	150	190	154	115	91	91
CAL YR 1982	TOTAL		75611	MEAN		207	MAX	770	MIN		102	
WTR YR 1983	TOTAL		75343	MEAN		206	MAX	770	MIN		91	

MERAMEC RIVER BASIN

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 downstream from railroad bridge, 400 ft upstream from highway bridge, 0.8 mi upstream from Whittenburg Creek, 1.5 mi north of Steelville, and at mile 149.4.

DRAINAGE AREA.--781 mi².

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 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 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 downstream. July 21, 1967 to Feb. 13, 1973 at site 1,900 ft downstream and at datum 2.0 ft lower.

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

AVERAGE DISCHARGE.--61 years, 564 ft³/s, 9.81 in/yr, 408,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 49,300 ft³/s Dec. 4, 1982, gage height, 25.59 ft; maximum gage height, 25.59 ft Dec. 4, 1982; minimum discharge, 74 ft³/s July 22, 1934.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Aug. 20, 1915, reached a stage of 26.5 ft, discharge, 60,000 ft³/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 6,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 4	0730	*49,300	25.59
Dec. 25	2100	12,100	12.76
May 1	0415	24,600	18.43
May 14	2115	6,900	9.28

Minimum discharge, 161 ft³/s Aug. 18, gage height, 1.94 ft.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	273	348	1430	1040	313	253	450	22200	572	303	175	169
2	266	353	1920	929	326	249	2280	8680	547	296	176	169
3	266	348	25200	839	342	252	5170	3230	592	287	178	169
4	265	357	44500	766	336	252	2740	2270	857	285	173	169
5	259	344	23000	713	317	262	1680	1780	695	289	171	169
6	272	317	6520	669	316	397	1470	1530	624	282	188	170
7	344	304	3190	633	309	786	1300	1390	587	281	201	195
8	375	287	1810	593	311	957	1150	1300	534	261	201	202
9	394	274	1460	566	332	838	1160	1150	499	258	189	211
10	462	266	1270	541	326	701	1160	1050	472	252	178	192
11	508	262	1220	516	326	599	1050	953	451	244	180	184
12	412	270	1110	483	321	526	970	900	436	237	175	184
13	368	262	996	459	313	477	986	957	420	236	171	185
14	337	262	924	442	305	427	6320	4750	407	222	175	178
15	313	255	864	418	303	388	5800	3200	447	222	174	176
16	296	248	803	403	299	364	1810	1850	451	219	167	183
17	280	240	754	394	291	341	1370	1430	403	219	171	184
18	266	236	729	378	286	321	1180	1250	383	208	164	183
19	261	236	708	357	285	306	1030	1200	387	208	165	177
20	262	240	679	349	282	298	904	1120	394	208	167	172
21	251	372	633	343	273	297	810	1020	423	198	166	172
22	260	391	607	348	272	289	769	2510	386	194	173	172
23	252	367	589	350	269	275	757	1590	356	185	180	172
24	240	362	1660	347	269	257	722	1200	334	187	167	172
25	240	353	9290	334	265	241	672	1010	325	189	168	180
26	239	464	6020	330	260	235	639	886	330	189	169	191
27	229	1640	2230	321	257	249	591	802	340	190	169	187
28	225	3850	1850	315	253	280	782	758	349	196	172	184
29	240	3460	1600	312	---	298	2620	707	357	186	169	183
30	259	1920	1350	313	---	293	15900	654	326	187	167	176
31	334	---	1170	313	---	285	---	609	---	186	169	---
TOTAL	9248	18888	146086	15114	8357	11993	64242	73936	13684	7104	5408	5410
MEAN	298	630	4712	488	298	387	2141	2385	456	229	174	180
MAX	508	3850	44500	1040	342	957	15900	22200	857	303	201	211
MIN	225	236	589	312	253	235	450	609	325	185	164	169
CAL YR 1982		TOTAL	385535	MEAN	1056	MAX	44500	MIN	135			
WTR YR 1983		TOTAL	379470	MEAN	1040	MAX	44500	MIN	164			

MERAMEC RIVER BASIN

07013000 MERAMEC RIVER NEAR STEELVILLE, MO--Continued

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.22	2.39	3.90	3.61	2.36	2.22	2.46	18.06	2.87	2.35	2.05	1.92
2	2.20	2.40	3.56	3.46	2.37	2.21	4.29	11.56	2.83	2.34	2.05	1.92
3	2.20	2.41	14.69	3.33	2.42	2.21	8.44	6.21	2.85	2.32	2.05	1.92
4	2.20	2.42	25.54	3.19	2.41	2.21	5.72	5.17	3.49	2.30	2.02	1.92
5	2.18	2.39	19.16	3.11	2.37	2.22	4.50	4.60	3.08	2.32	2.01	1.92
6	2.18	2.34	9.63	3.02	2.37	2.42	4.22	4.30	2.96	2.31	2.05	1.92
7	2.36	2.31	6.37	2.97	2.37	3.05	3.98	4.11	2.90	2.32	2.11	1.99
8	2.40	2.27	5.31	2.91	2.33	3.52	3.75	4.02	2.82	2.26	2.11	2.01
9	2.48	2.23	4.73	2.86	2.40	3.37	3.73	3.78	2.76	2.26	2.06	2.07
10	2.55	2.21	4.39	2.82	2.39	3.16	3.79	3.63	2.70	2.24	2.03	2.00
11	2.74	2.21	4.26	2.78	2.39	3.00	3.63	3.47	2.66	2.24	2.03	1.97
12	2.53	2.22	4.08	2.71	2.38	2.88	3.50	3.41	2.61	2.21	2.01	1.95
13	2.44	2.21	3.87	2.67	2.36	2.80	3.40	3.33	2.59	2.21	1.98	1.97
14	2.38	2.19	3.72	2.63	2.34	2.73	7.90	6.47	2.55	2.17	2.00	1.95
15	2.32	2.18	3.59	2.60	2.34	2.63	9.76	6.03	2.65	2.17	2.00	1.94
16	2.28	2.16	3.45	2.56	2.33	2.58	4.71	4.74	2.68	2.17	1.96	1.96
17	2.24	2.15	3.32	2.54	2.31	2.54	4.11	4.18	2.57	2.17	1.98	1.97
18	2.21	2.13	3.23	2.51	2.30	2.50	3.82	3.88	2.51	2.14	1.94	1.97
19	2.20	2.13	3.15	2.45	2.30	2.46	3.61	3.81	2.50	2.14	1.95	1.95
20	2.21	2.13	3.06	2.45	2.28	2.44	3.43	3.72	2.50	2.14	1.95	1.93
21	2.17	2.48	2.96	2.43	2.27	2.44	3.28	3.54	2.62	2.11	1.95	1.93
22	2.20	2.50	2.92	2.43	2.27	2.42	3.21	5.06	2.54	2.11	1.91	1.93
23	2.18	2.44	2.89	2.44	2.26	2.39	3.18	4.42	2.46	2.07	2.00	1.93
24	2.14	2.44	3.21	2.44	2.26	2.35	3.13	3.86	2.41	2.09	1.94	1.93
25	2.14	2.41	9.92	2.41	2.25	2.30	3.05	3.58	2.39	2.08	1.94	1.93
26	2.14	2.43	9.63	2.40	2.24	2.28	2.99	3.40	2.37	2.08	1.94	1.99
27	2.11	4.17	5.14	2.40	2.23	2.31	2.90	3.25	2.39	2.10	1.94	1.98
28	2.10	5.91	4.63	2.37	2.22	2.37	2.93	3.19	2.42	2.13	1.94	1.97
29	2.14	6.63	4.41	2.36	---	2.44	3.79	3.12	2.46	2.10	1.93	1.97
30	2.14	4.58	4.07	2.36	---	2.43	12.79	3.01	2.41	2.07	1.92	1.95
31	2.39	---	3.80	2.36	---	2.41	---	2.95	---	2.09	1.92	---
MEAN	2.27	2.70	6.02	2.70	2.33	2.56	4.47	4.77	2.65	2.19	1.99	1.96
MAX	2.74	6.63	25.54	3.61	2.42	3.52	12.79	18.06	3.49	2.35	2.11	2.07
MIN	2.10	2.13	2.89	2.36	2.22	2.21	2.46	2.95	2.37	2.07	1.91	1.92
WTR YR 1983		MEAN	3.06	MAX	25.54	MIN	1.91					

MERAMEC RIVER BASIN

07013050 CROOKED CREEK NEAR DILLARD, MO

WATER-QUALITY RECORDS

LOCATION.--Lat 37°42'42", long. 91°11'48", in NW¼ sec. 31, T.34 N., R.3 W., Crawford County, Hydrologic Unit 07140102, at bridge on county road.

PERIOD OF RECORD.--Oct. 1982 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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 (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO) (01037)
OCT												
19...	0945	1028	29001	5.1	398	7.9	15.0	9.2	91	2	2	<60
NOV												
24...	1230	1028	29001	10	472	8.2	8.0	11.0	92	2	2	<60
DEC												
16...	1435	1028	29001	14	308	7.6	7.0	11.2	93	2	3	<60
JAN												
19...	1430	1028	29001	6.2	420	8.4	3.5	13.2	99	2	2	<60
FEB												
16...	1400	1028	29001	4.7	488	8.5	9.0	10.8	93	3	3	<60
MAR												
24...	0915	1028	29001	6.4	450	8.2	8.0	9.4	79	2	<2	<60
APR												
13...	0930	1028	29001	17	330	8.1	12.0	10.0	94	3	3	<60
MAY												
25...	1330	1028	29001	13	360	8.2	19.0	8.4	89	2	<2	<60
JUN												
22...	0930	1028	29001	5.2	409	7.6	21.5	5.4	61	<2	<2	<60
JUL												
05...	0945	1028	29001	5.4	416	7.8	22.0	6.6	75	--	--	--
AUG												
04...	0930	1028	29001	3.6	564	7.9	25.0	6.8	81	<2	<2	<60
SEP												
01...	0915	1028	29001	2.3	486	7.5	24.0	5.4	64	<2	<2	<60

DATE	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
OCT											
19...	<60	<5	<5	20	<20	<5	<5	<40	<40	<0	<10
NOV											
24...	<60	<5	<5	30	<20	<5	<5	<40	<40	20	10
DEC											
16...	<60	<5	<5	30	20	<5	<5	<40	<40	<0	20
JAN											
19...	<60	<5	<5	<20	30	<5	<5	<40	<40	10	<10
FEB											
16...	<60	<5	<5	<20	<20	<5	<5	<50	<50	70	10
MAR											
24...	<60	<5	<5	20	<20	<5	<5	<50	<50	<0	<10
APR											
13...	<60	<5	<5	40	<20	<5	<5	<50	<50	20	12
MAY											
25...	<60	<5	<5	<20	<20	<5	<5	<50	<50	<10	<10
JUN											
22...	<60	<5	28	<20	<20	<5	<5	<50	<50	<10	44
JUL											
05...	--	--	--	--	--	--	--	--	--	--	--
AUG											
04...	<60	<5	<5	<20	20	<5	<5	<50	<50	20	20
SEP											
01...	<60	<5	<5	<20	<20	<5	<5	<50	<50	<10	25

MERAMEC RIVER BASIN

07014500 MERAMEC RIVER NEAR SULLIVAN, MO

LOCATION.--Lat 38°09'30", long 91°06'30", in SE&NE¼ 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 downstream from Brazil Creek, 4.0 mi southeast of Sullivan, and at mile 117.0.

DRAINAGE AREA.--1,475 mi².

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,(M), 1924-30, 1933, drainage area.

GAGE.--Water-stage recorder. Datum of gage is 581.82 ft above mean sea level (levels by Corps of Engineers). Prior to Oct. 21, 1952, nonrecording gage at present site and datum.

REMARKS.--Records good. Water diverted from river 0.5 mi above gage by mining company. Several observations of water temperature and specific conductance made during the year.

AVERAGE DISCHARGE.--52 years, 1,166 ft³/s, 10.74 in/yr, 844.800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 77,300 ft³/s June 9, 1945, gage height, 32.0 ft; maximum gage height, 32.34 ft, Dec. 4, 1982; minimum discharge, 131 ft³/s Sept. 20, 22, 1956; minimum gage height, 1.00 ft June 12, 13, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in August 1915 reached a stage of 33.5 ft from information by local residents, discharge 90,000 ft³/s.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 4	1615	*67,700	32.22	Apr. 14	2345	19,100	17.23
Dec. 25	2245	21,800	18.44	May 1	1445	47,000	26.96
Apr. 3	2045	8,970	11.83	May 15	0700	15,600	15.61

Minimum daily discharge, 267 ft³/s Aug. 22.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	530	664	2510	2260	763	532	1020	42700	1240	606	379	288
2	507	654	2640	2050	798	536	2560	29700	1170	580	380	284
3	497	648	22900	1880	828	532	7440	10200	1270	558	364	279
4	489	628	61600	1730	828	531	6540	5300	1560	551	352	276
5	476	619	48300	1620	794	541	3610	4040	1510	555	346	272
6	490	586	21400	1530	788	607	3030	3350	1350	556	359	274
7	595	559	7370	1450	765	913	2650	2970	1240	546	369	299
8	679	539	4720	1370	741	1450	2360	2710	1130	529	364	342
9	800	514	3450	1310	728	1480	2260	2440	1020	511	349	401
10	3070	497	2900	1260	720	1310	2390	2190	946	499	337	374
11	1540	489	2630	1210	713	1160	2210	2050	891	488	323	353
12	1170	510	2420	1140	697	1040	2010	1970	849	477	312	350
13	933	505	2160	1080	675	968	2630	2030	814	468	304	371
14	791	504	1950	1040	660	917	12000	7090	762	461	300	374
15	705	497	1790	997	652	867	14300	12400	796	451	294	388
16	641	479	1630	952	645	829	5130	4980	798	447	291	380
17	597	464	1500	923	630	792	3230	3440	747	437	288	365
18	558	457	1400	892	625	764	2700	2850	710	425	281	350
19	534	455	1330	857	615	735	2370	2670	712	424	274	334
20	539	456	1250	830	607	734	2080	2490	1010	418	272	329
21	536	571	1170	822	593	728	1870	2270	828	408	268	332
22	529	673	1110	835	583	707	1770	3230	763	396	267	326
23	515	675	1080	831	577	680	1720	3480	700	382	305	331
24	496	682	4610	818	576	650	1670	2400	665	374	296	324
25	478	706	17600	797	570	628	1560	2070	638	419	291	340
26	465	1000	17000	783	555	621	1470	1860	625	409	287	381
27	450	2500	6030	771	546	651	1400	1780	645	402	286	362
28	442	5190	4100	757	536	711	1580	1710	656	409	285	346
29	486	6400	3520	756	---	764	3720	1560	664	393	288	334
30	533	3730	2920	764	---	766	19600	1420	637	383	285	321
31	607	---	2530	758	---	753	---	1320	---	383	287	---
TOTAL	21678	32851	257520	35073	18808	24897	118880	170670	27346	14345	9683	10080
MEAN	699	1095	8307	1131	672	803	3963	5505	912	463	312	336
MAX	3070	6400	61600	2260	828	1480	19600	42700	1560	606	380	401
MIN	442	455	1080	756	536	531	1020	1320	625	374	267	272

CAL YR 1982	TOTAL	778953	MEAN	2134	MAX	61600	MIN	311
WTR YR 1983	TOTAL	741831	MEAN	2032	MAX	61600	MIN	267

MERAMEC RIVER BASIN

07014500 MERAMEC RIVER NEAR SULLIVAN, MO--Continued

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.28	2.60	5.90	5.46	2.79	2.28	2.85	26.28	3.90	2.69	2.00	1.75
2	2.23	2.57	5.10	5.13	2.87	2.30	4.40	23.20	3.79	2.61	2.03	1.71
3	2.19	2.57	15.90	4.86	2.94	2.28	10.08	13.34	3.84	2.54	1.97	1.70
4	2.18	2.51	30.61	4.62	2.96	2.28	10.61	9.02	4.16	2.48	1.94	1.70
5	2.13	2.50	28.56	4.43	2.88	2.29	7.24	7.77	4.33	2.53	1.92	1.66
6	2.11	2.43	19.47	4.26	2.88	2.43	6.56	6.97	4.09	2.53	1.94	1.65
7	2.43	2.36	10.94	4.14	2.83	2.88	6.00	6.45	3.90	2.51	1.98	1.72
8	2.62	2.31	8.32	4.01	2.77	4.11	5.59	6.09	3.74	2.46	1.97	1.81
9	2.93	2.24	7.14	3.89	2.74	4.20	5.33	5.73	3.53	2.39	1.94	2.06
10	8.29	2.19	6.41	3.80	2.72	3.92	5.62	5.35	3.43	2.35	1.89	1.99
11	4.36	2.17	6.07	3.72	2.71	3.63	5.37	5.11	3.34	2.33	1.86	1.88
12	3.70	2.21	5.81	3.60	2.68	3.42	5.08	4.99	3.26	2.30	1.82	1.89
13	3.23	2.21	5.44	3.47	2.63	3.25	4.85	4.81	3.20	2.26	1.79	1.99
14	2.92	2.22	5.16	3.40	2.60	3.15	12.20	7.06	3.09	2.23	1.78	1.93
15	2.71	2.19	4.93	3.31	2.56	3.05	15.22	15.55	3.18	2.21	1.76	1.99
16	2.56	2.14	4.69	3.22	2.55	2.96	8.73	8.78	3.15	2.18	1.75	1.98
17	2.46	2.11	4.47	3.16	2.52	2.89	6.83	7.14	3.08	2.17	1.74	1.95
18	2.35	2.09	4.31	3.09	2.51	2.82	6.12	6.27	2.98	2.12	1.73	1.88
19	2.29	2.08	4.17	3.03	2.49	2.76	5.63	5.99	2.94	2.11	1.71	1.83
20	2.31	2.07	4.02	2.97	2.47	2.76	5.19	5.78	3.77	2.11	1.71	1.79
21	2.28	2.29	3.88	2.93	2.44	2.75	4.87	5.42	3.23	2.08	1.68	1.83
22	2.27	2.60	3.76	2.96	2.42	2.70	4.69	6.24	3.13	2.04	1.68	1.79
23	2.24	2.61	3.68	2.97	2.39	2.65	4.58	7.46	2.95	2.01	1.79	1.81
24	2.20	2.63	6.78	2.93	2.39	2.57	4.51	5.70	2.85	2.00	1.78	1.79
25	2.14	2.69	15.95	2.89	2.38	2.53	4.33	5.20	2.78	2.13	1.75	1.78
26	2.11	2.78	16.89	2.86	2.35	2.47	4.19	4.83	2.73	2.09	1.74	1.97
27	2.07	4.77	9.51	2.83	2.32	2.56	4.03	4.58	2.82	2.06	1.75	1.89
28	2.04	8.29	7.76	2.80	2.29	2.68	4.08	4.59	2.79	2.08	1.75	1.88
29	2.15	10.18	7.21	2.78	---	2.82	5.74	4.38	2.84	2.04	1.75	1.87
30	2.25	7.56	6.41	2.82	---	2.83	16.65	4.17	2.78	2.02	1.73	1.82
31	2.39	---	5.84	2.80	---	2.80	---	4.02	---	2.02	1.73	---
MEAN	2.66	3.07	8.87	3.52	2.61	2.87	6.57	7.69	3.32	2.25	1.82	1.84
MAX	8.29	10.18	30.61	5.46	2.96	4.20	16.65	26.28	4.33	2.69	2.03	2.06
MIN	2.04	2.07	3.68	2.78	2.29	2.28	2.85	4.02	2.73	2.00	1.68	1.65
WTR YR 1983		MEAN	3.94	MAX	30.61	MIN	1.65					

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 1982 TO SEPTEMBER 1983

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 (STAND- ARD 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)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)
OCT											
21...	1445	1028	29001	540	327	8.6	14.0	8.6	83	<5	14
NOV											
05...	1510	1028	29001	611	344	8.5	9.5	12.2	106	<5	5
DEC											
01...	0930	1028	29001	2550	250	7.9	11.5	9.8	90	11	240
15...	1445	1028	29001	1750	242	7.4	8.0	10.8	91	9	68
JAN											
07...	1400	1028	29001	1420	268	8.0	5.5	11.6	92	<5	57
FEB											
01...	1330	1028	29001	752	326	8.3	5.0	11.6	91	--	K6
MAR											
10...	1540	1028	29001	1260	328	8.3	7.0	11.0	91	<5	68
APR											
20...	1245	1028	29001	2060	236	8.2	11.0	9.6	86	37	46
MAY											
13...	1630	1028	29001	1860	259	7.8	20.0	7.4	81	6	60
JUN											
14...	1300	1028	29001	762	325	8.2	23.0	7.8	--	--	K14
JUL											
21...	1645	1028	29001	405	342	8.2	30.0	5.8	75	6	14
AUG											
18...	1145	1028	29001	281	355	8.0	27.5	5.0	62	<5	47
SEP											
30...	1700	1028	29001	321	330	8.2	21.0	8.0	88	<5	8

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										
21...	180	20	36	22	2.4	1.3	161	.8	11	4.0
NOV										
05...	--	--	--	--	--	--	177	1.1	--	--
DEC										
01...	--	--	--	--	--	--	115	2.8	--	--
15...	--	--	--	--	--	--	115	8.9	--	--
JAN										
07...	140	13	29	16	2.0	1.2	125	2.4	<10	1.0
FEB										
01...	--	--	--	--	--	--	148	1.4	--	--
MAR										
10...	--	--	--	--	--	--	157	1.5	--	--
APR										
20...	130	6	46	2.8	<2.0	1.6	121	1.5	17	<2.0
MAY										
13...	--	--	--	--	--	--	125	3.8	--	--
JUN										
14...	--	--	--	--	--	--	157	1.9	--	--
JUL										
21...	190	2	38	22	2.4	1.3	184	2.2	<10	5.0
AUG										
18...	--	--	--	--	--	--	171	3.3	--	--
SEP										
30...	--	--	--	--	--	--	177	2.1	--	--

07014500 MERAMEC RIVER NEAR SULLIVAN, MO.--Continued

[illegible]

MERAMEC RIVER BASIN

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 downstream from Lanes Fork, 5 mi east of High Gate, and 11 mi north of St. James.

DRAINAGE AREA.--135 mi².

PERIOD OF RECORD.--July 1965 to current year. Occasional low-flow measurements 1963, 1964.

REVISED RECORDS.--WDR MO-82-1: 1981.

GAGE.--Water-stage recorder. Datum of gage is 804.1 ft 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 good. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--18 years, 118 ft³/s, 11.87 in/yr, 85,490 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 49,300 ft³/s Dec. 3, 1982, gage height, 23.65 ft; no flow Aug. 27 to Sept. 15, 1971, July 28 to Aug. 24, 1975, Aug. 18-22, 1976, July 30 to Aug. 5, 1982.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 1957 reached a stage of about 23 ft, from information by local resident.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 28	0315	6,020	10.56
Dec. 3	----	*49,300	23.65
Apr. 29	1400	6,340	10.85
May 1	0715	22,100	18.94

Minimum daily discharge, 0.15 ft³/s Sept. 20.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.9	35	164	89	23	9.5	1500	7290	50	6.9	.40	.35
2	7.1	48	8980	75	30	9.0	5000	1100	45	5.8	.35	.25
3	7.1	79	21000	64	30	8.4	900	335	40	4.9	.35	.20
4	7.9	44	2040	57	31	7.9	275	176	35	4.8	.30	.20
5	7.9	33	857	52	32	19	400	110	35	6.1	.30	.25
6	22	28	503	48	32	80	425	80	30	5.1	1.1	.40
7	87	26	304	43	32	387	275	122	27	3.9	.96	.67
8	34	30	203	39	31	248	215	103	25	3.4	.67	.40
9	37	20	145	35	30	143	190	70	23	2.9	.40	.56
10	34	19	153	33	32	102	170	57	22	2.5	.35	.56
11	24	19	246	29	32	79	160	50	20	2.2	.30	.35
12	19	30	151	24	30	67	154	52	19	2.0	.25	.56
13	17	35	111	23	28	58	304	78	18	1.9	.20	.83
14	16	28	94	22	27	51	500	1000	17	1.7	.20	.83
15	14	23	87	19	25	44	215	3500	16	1.6	.20	.67
16	13	21	73	18	23	38	133	350	15	1.6	.20	.40
17	11	20	65	17	21	33	99	113	15	1.4	.25	.25
18	11	19	61	18	19	29	92	83	75	1.2	.20	.20
19	10	19	56	18	19	27	77	82	30	1.1	.20	.20
20	11	19	49	18	19	30	65	56	20	.95	.25	.15
21	21	19	45	17	17	33	56	58	15	.74	.25	.25
22	16	17	41	16	16	28	60	2500	20	.67	.25	.20
23	12	19	39	15	16	23	59	700	13	.56	.35	.25
24	11	26	235	14	14	23	52	500	10	.45	.40	.25
25	11	25	407	14	14	21	46	300	8.0	.25	.40	.25
26	10	851	285	15	14	21	41	200	7.0	1.1	.56	1.5
27	9.2	837	233	15	12	52	40	150	14	1.1	.30	.67
28	9.0	2230	513	14	11	68	209	250	12	1.0	.25	.35
29	18	454	217	15	---	56	2900	150	10	.70	.20	.40
30	26	243	138	21	---	56	2380	75	8.1	.56	.20	.80
31	26	---	110	21	---	57	---	60	---	.45	.35	---
TOTAL	567.1	5316	37605	918	660	1907.8	16992	19750	694.1	69.53	10.94	13.20
MEAN	18.3	177	1213	29.6	23.6	61.5	566	637	23.1	2.24	.35	.44
MAX	87	2230	21000	89	32	387	5000	7290	75	6.9	1.1	1.5
MIN	7.1	17	39	14	11	7.9	40	50	7.0	.25	.20	.15
CAL YR 1982		TOTAL	89518.87	MEAN	245	MAX	21000	MIN	.00			
WTR YR 1983		TOTAL	84503.67	MEAN	232	MAX	21000	MIN	.15			

MERAMEC RIVER BASIN

07015720 BOURBEUSE RIVER NEAR HIGH GATE, MO--Continued

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.51	.68	1.63	1.23	.50	.31	---	18.69	.21	---		
2	.95	.70	12.96	1.12	.65	.30	---	4.18	.18	---		
3	.78	1.17	18.67	1.02	.65	.29	---	2.32	.15	---		
4	.65	.83	6.06	.94	.65	.27	---	1.73	.22	---		
5	.58	.69	3.87	.89	.67	.27	---	1.37	.19	---		
6	.56	.63	2.95	.84	.67	2.40	---	1.17	.15	.02		
7	.59	.58	2.30	.79	.66	2.53	---	1.29	.14	.04		
8	.54	.56	1.93	.74	.63	2.07	---	1.35	.12	.01		
9	.72	.51	1.61	.70	.59	1.54	---	1.09	.11	---		
10	.69	.49	1.45	.69	.63	1.28	---	.97	.09	---		
11	.57	.49	2.19	.65	.63	1.11	---	.88	.08	---		
12	.50	.58	1.65	.58	.62	1.01	---	.91	.07	---		
13	.46	.70	1.43	.55	.58	.92	---	1.10	.07	---		
14	.45	.64	1.26	.55	.56	.85	---	---	.06	---		
15	.42	.55	1.21	.50	.54	.81	2.02	---	.06	---		
16	.40	.54	1.10	.49	.51	.75	1.58	---	.06	---		
17	.37	.52	1.02	.48	.46	.70	1.35	---	.05	---		
18	.36	.50	.98	.46	.47	.65	1.30	---	.04	---		
19	.35	.50	.93	.49	.46	.63	1.19	1.40	.03	---		
20	.37	.50	.85	.49	.45	.64	1.08	1.16	.02	---		
21	.53	.50	.81	.46	.43	.69	1.01	1.03	.01	---		
22	.45	.48	.76	.45	.42	.63	1.01	---	.01	---		
23	.39	.47	.74	.44	.41	.58	1.03	---	.01	---		
24	.37	.56	1.10	.41	.39	.55	.97	---	.01	---		
25	.36	.59	2.64	.41	.39	.52	.89	---	.07	---		
26	.35	1.11	2.31	.42	.38	.51	.84	---	.04	---		
27	---	3.40	1.87	.43	.35	.79	.79	---	.04	---		
28	.32	6.27	3.21	.42	.33	1.06	1.79	.35	.04	---		
29	.40	2.79	2.01	.42	---	.94	6.68	.31	.01	---		
30	.62	1.99	1.58	.53	---	.93	7.13	.27	---	---		
31	.53	---	1.37	.53	---	.94	---	.24	---	---		---
MEAN	---	1.02	2.72	.62	.52	.89	---	---	---	---		
MAX	---	6.27	18.67	1.23	.67	2.53	---	---	---	---		
MIN	---	.47	.74	.41	.33	.27	---	---	---	---		

MERAMEC RIVER BASIN

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 070140103, on right bank downstream side of pier of bridge on U.S. Highway 50, 800 ft upstream from Flat Creek, 0.5 mi east of Union, 7.0 mi upstream from Birch Creek, and at mile 13.4. Records include flow of Flat Creek.

DRAINAGE AREA.--808 mi², 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 National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1948, datum of all gages 3.00 ft higher. Prior to Oct. 21, 1933, nonrecording gage, at site 30 ft upstream. Oct. 21, 1933, to June 11, 1944, nonrecording gage, at present site.

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

AVERAGE DISCHARGE.--62 years, 634 ft³/s, 10.66 in/yr, 459,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 73,300 ft³/s December 5, 1982, gage height, 33.80 ft; minimum, 11 ft³/s Oct. 10, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Aug. 22, 1915, reached a stage of 28.5 ft, present datum, from floodmarks, discharge, about 50,000 ft³/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 and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 5	UNKNOWN	*73,300	33.80
Apr. 4	1700	11,300	14.81
May 3	1945	21,800	20.36
May 16	1645	11,000	14.61
May 24	0645	9,610	13.51

Minimum daily discharge, 35 ft³/s Sept. 10.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	120	123	1270	731	176	132	865	12500	413	114	69	39
2	114	128	1570	643	232	130	5420	16800	364	108	68	38
3	113	175	13000	582	255	126	9760	20100	354	101	66	37
4	108	342	36000	525	306	123	10900	11700	341	99	62	37
5	104	326	63000	482	318	126	3650	1610	338	97	61	36
6	218	303	31200	444	316	135	1980	1120	328	94	62	37
7	500	266	13300	423	287	143	2320	877	326	85	59	36
8	718	232	3210	402	255	870	1450	722	273	85	55	36
9	509	206	1800	380	239	972	1320	640	239	84	51	36
10	369	195	1200	361	229	748	2180	613	216	79	51	35
11	305	185	909	344	221	580	1750	539	199	79	50	36
12	281	190	863	322	216	466	1290	482	185	78	66	45
13	241	181	799	302	211	390	1180	446	173	76	70	43
14	210	177	740	282	208	340	2190	873	164	75	61	44
15	176	185	687	265	203	306	3040	6380	166	73	55	41
16	157	184	617	243	196	277	1530	9930	156	70	51	41
17	143	179	573	223	190	252	978	2370	156	67	48	40
18	133	175	534	209	183	232	777	1150	166	64	46	42
19	125	168	496	196	179	212	676	835	374	63	45	42
20	125	166	465	188	172	225	613	702	232	61	43	43
21	117	177	436	182	167	231	557	720	179	59	42	44
22	114	165	407	183	161	232	501	3750	210	58	56	43
23	112	216	388	181	156	223	456	7450	215	58	49	41
24	115	240	982	173	152	212	429	6380	168	61	44	40
25	114	218	2990	168	148	199	400	1440	148	100	46	48
26	112	369	4700	167	142	191	375	914	139	105	46	50
27	110	1020	2080	165	137	194	501	694	146	108	44	47
28	108	3690	1310	163	134	194	906	653	139	85	54	45
29	111	6230	1550	164	---	204	1970	932	129	80	44	45
30	107	3710	1340	171	---	234	8680	689	124	74	41	43
31	115	---	897	171	---	271	---	508	---	72	40	---
TOTAL	6004	20121	189313	9435	5789	9170	68644	114519	6760	2512	1645	1230
MEAN	194	671	6107	304	207	296	2288	3694	225	81.0	53.1	41.0
MAX	718	6230	63000	731	318	972	10900	20100	413	114	70	50
MIN	104	123	388	163	134	123	375	446	124	58	40	35
CAL YR 1982		TOTAL	436629	MEAN	1196	MAX	63000	MIN	47			
WTR YR 1983		TOTAL	435142	MEAN	1192	MAX	63000	MIN	35			

MERAMEC RIVER BASIN

07016500 BOURBEUSE RIVER AT UNION, MO--Continued

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.97	.98	4.29	3.81	2.03	1.82	2.94	14.93	2.37	1.37	1.16	.96
2	.94	.99	3.42	3.56	2.37	1.82	8.41	18.04	2.21	1.35	1.15	.95
3	.97	1.05	14.74	3.38	2.32	1.80	13.48	19.33	2.17	1.32	1.14	.94
4	.90	1.85	20.97	3.22	2.50	1.78	14.54	18.43	2.14	1.31	1.12	.94
5	.88	1.82	33.80	3.09	2.57	1.77	7.36	4.98	2.14	1.31	1.11	.93
6	.85	1.73	24.90	2.99	2.57	1.82	5.59	4.00	2.11	1.28	1.13	.93
7	1.36	1.62	17.42	2.92	2.50	1.86	6.67	3.51	2.14	1.26	1.11	.93
8	3.11	1.48	7.48	2.84	2.35	4.14	5.11	3.13	1.96	1.25	1.08	.93
9	2.43	1.39	5.48	2.78	2.30	4.24	4.62	2.96	1.85	1.24	1.06	.93
10	1.96	1.33	4.72	2.73	2.26	3.78	6.32	2.95	1.77	1.23	1.06	.93
11	1.73	1.28	4.34	2.67	2.23	3.33	5.62	2.70	1.70	1.22	1.05	.92
12	1.67	1.30	4.11	2.59	2.21	3.04	4.85	2.54	1.66	1.21	1.12	1.00
13	1.52	1.27	3.97	2.53	2.19	2.82	4.21	2.41	1.60	1.20	1.17	.97
14	1.41	1.24	3.85	2.46	2.18	2.66	5.88	2.62	1.57	1.19	1.13	.99
15	1.25	1.27	3.66	2.40	2.16	2.55	7.57	9.87	1.57	1.18	1.09	.96
16	1.16	1.28	3.47	2.33	2.13	2.45	5.30	13.84	1.53	1.17	1.06	.96
17	1.09	1.25	3.33	2.24	2.10	2.36	4.26	5.70	1.52	1.15	1.05	.95
18	1.03	1.24	3.22	2.19	2.08	2.28	3.81	4.04	1.57	1.14	1.04	.96
19	.99	1.20	3.12	2.13	2.05	2.20	3.55	3.42	1.86	1.13	1.03	.97
20	1.00	1.18	3.03	2.09	2.02	2.21	3.39	3.10	1.79	1.11	1.02	.97
21	.95	1.25	2.95	2.06	1.99	2.26	3.25	2.89	1.63	1.10	1.01	.99
22	.93	1.18	2.85	2.06	1.97	2.27	3.11	6.84	1.58	1.10	1.00	.98
23	.92	1.20	2.79	2.06	1.95	2.24	2.99	11.22	1.79	1.09	1.05	.96
24	.94	1.52	4.03	2.04	1.92	2.19	2.92	13.51	1.60	1.09	1.00	.95
25	.93	1.43	6.70	2.00	1.91	2.14	2.84	4.63	1.51	1.34	1.00	.96
26	.92	1.79	9.37	1.99	1.87	2.09	2.77	3.61	1.46	1.30	1.02	1.03
27	.91	2.77	6.24	1.99	1.85	2.12	2.68	3.08	1.48	1.36	.99	1.02
28	.89	7.62	4.89	1.98	1.84	2.11	4.25	2.93	1.49	1.24	1.12	.99
29	.92	10.05	5.10	1.97	---	2.14	4.72	3.42	1.43	1.22	1.00	.99
30	.89	8.73	5.07	2.01	---	2.27	12.30	3.11	1.41	1.18	.97	.98
31	.88	---	4.19	2.01	---	2.38	---	2.63	---	1.17	.96	---
MEAN	1.20	2.14	7.34	2.49	2.16	2.42	5.51	6.46	1.75	1.22	1.06	.96
MAX	3.11	10.05	33.80	3.81	2.57	4.24	14.54	19.33	2.37	1.37	1.17	1.03
MIN	.85	.98	2.79	1.97	1.84	1.77	2.68	2.41	1.41	1.09	.96	.92
WTR YR 1983	MEAN	2.90	MAX	33.80	MIN	.85						

MERAMEC RIVER BASIN

07017200 BIG RIVER AT IRONDALE, MO

LOCATION.--Lat 37°49'48", long 90°41'27", in SE&SW¼ sec.15, T.36 N., R. 3 E., Washington County, Hydrologic Unit 070140104, on right bank 50 ft upstream from bridge on State Highway U, 0.2 mi upstream from Mill Creek, and 0.8 mi west of Irondale.

DRAINAGE AREA.--175 mi².

PERIOD OF RECORD.--July 1965 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 753.28 ft National Geodetic Vertical Datum of 1929 (Missouri State Highway Commission benchmark). July 1-15, 1965, nonrecording gage at present site and datum.

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

AVERAGE DISCHARGE.--18 years, 173 ft³/s, 13.44 in/yr, 125,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 43,200 ft³/s Nov. 1, 1972, gage height, 27.92 ft, from floodmarks, from rating curve extended above 13,000 ft³/s on basis of step backwater computations and indirect measurement of peak flow of February 1966 flood; minimum, 2.2 ft³/s Sept. 16, 1971.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 9	0815	11,800	14.25	Apr. 13	1830	8,540	12.24
Dec. 3	1915	*17,900	17.29	Apr. 30	0700	16,300	16.52
Dec. 24	0715	12,700	14.70	May 14	0930	9,870	13.08

Minimum daily discharge, 4.9 ft³/s, Aug. 21, 22.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	45	58	240	209	80	43	143	4430	91	31	14	7.4
2	43	60	679	189	113	43	536	1550	89	27	12	6.5
3	36	62	12300	172	110	41	576	746	180	24	11	6.9
4	35	58	1820	153	85	41	317	562	161	25	10	6.5
5	32	56	1140	143	83	46	256	486	115	30	10	6.0
6	35	56	676	133	85	66	269	436	104	26	10	5.2
7	58	52	436	124	78	85	446	377	93	23	9.8	11
8	46	56	345	108	76	85	303	354	80	21	9.5	9.6
9	4030	54	295	99	73	76	717	295	73	21	7.4	9.0
10	476	52	285	93	78	72	417	261	69	20	7.4	8.4
11	225	52	317	95	73	64	309	264	56	19	6.9	7.4
12	149	58	261	93	66	60	264	309	54	18	6.5	16
13	137	60	238	91	60	58	2520	1050	46	17	6.9	52
14	128	58	229	87	62	54	1400	5360	52	15	5.6	25
15	110	56	221	80	58	54	549	1040	52	15	5.6	17
16	89	52	201	78	62	64	399	597	47	14	5.6	14
17	78	52	197	80	71	62	328	476	44	13	5.6	13
18	72	52	189	80	64	62	311	424	42	12	5.2	11
19	73	54	180	80	62	62	277	383	41	12	5.2	9.6
20	91	52	169	78	60	71	254	295	43	11	5.2	10
21	73	54	161	73	56	89	233	259	42	11	4.9	13
22	71	54	153	69	54	78	246	259	36	9.2	4.9	11
23	69	56	153	73	54	66	227	225	34	9.5	8.1	11
24	66	56	5860	74	54	69	207	195	31	9.1	8.6	9.6
25	64	56	2120	76	52	73	193	143	30	14	7.5	10
26	62	317	654	76	48	73	178	135	28	17	7.3	16
27	62	845	486	73	46	176	163	128	41	15	7.4	14
28	60	1110	618	73	43	161	266	132	83	13	9.6	11
29	69	492	691	76	---	133	6960	111	42	11	8.5	9.0
30	66	314	277	83	---	126	7510	99	33	17	7.1	7.7
31	62	---	244	80	---	122	---	93	---	25	7.7	---
TOTAL	6712	4464	31835	3091	1906	2375	26774	21474	1932	544.8	241.0	363.8
MEAN	217	149	1027	99.7	68.1	76.6	892	693	64.4	17.6	7.77	12.1
MAX	4030	1110	12300	209	113	176	7510	5360	180	31	14	52
MIN	32	52	153	69	43	41	143	93	28	9.1	4.9	5.2
CAL YR 1982		TOTAL	112349	MEAN	308	MAX	12300	MIN	14			
WTR YR 1983		TOTAL	101712.6	MEAN	279	MAX	12300	MIN	4.9			

MERAMEC RIVER BASIN

07017200 BIG RIVER AT IRONDALE, MO--Continued

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.29	1.59	2.78	2.61	1.93	1.75	2.13	12.27	2.52	2.20	2.04	1.93
2	1.28	1.57	2.54	2.52	2.14	1.75	3.32	5.48	2.48	2.17	2.01	1.92
3	1.24	1.62	11.96	2.42	2.12	1.74	3.96	4.20	2.59	2.14	1.99	1.91
4	1.23	1.59	6.17	2.33	1.91	1.74	3.06	3.77	2.88	2.13	1.97	1.90
5	1.21	1.56	5.11	2.31	1.96	1.73	2.77	3.58	2.62	2.20	1.96	1.90
6	1.20	1.53	4.15	2.27	1.99	1.85	2.81	3.54	2.56	2.17	1.97	1.88
7	1.59	1.49	3.42	2.17	1.92	1.97	3.68	3.44	2.52	2.14	1.96	1.97
8	1.35	1.46	3.13	2.12	1.87	2.00	2.99	3.37	2.46	2.12	1.97	1.97
9	14.28	1.50	2.96	2.06	1.95	1.95	4.62	3.32	2.43	2.11	1.95	1.96
10	3.72	1.47	2.86	2.03	1.90	1.92	3.36	3.29	2.40	2.10	1.94	1.94
11	2.72	1.47	3.07	2.03	1.85	1.90	3.02	3.29	2.37	2.10	1.93	1.93
12	2.31	1.53	2.79	2.01	1.81	1.87	2.82	3.30	2.35	2.09	1.92	1.92
13	2.25	1.60	2.72	2.02	1.84	1.86	3.31	3.71	2.32	2.08	1.96	2.36
14	2.20	1.55	2.69	2.02	1.85	1.85	5.51	12.43	2.31	2.07	1.91	2.15
15	2.11	1.52	2.66	1.90	1.91	1.83	3.82	4.73	2.31	2.06	1.91	2.07
16	2.03	1.49	2.56	1.94	1.89	1.90	3.32	3.88	2.29	2.06	1.91	2.04
17	1.95	1.47	2.47	1.91	1.89	1.89	3.08	3.60	2.27	2.04	1.91	2.02
18	1.90	1.46	2.47	1.92	1.87	1.88	3.02	3.44	2.25	2.03	1.90	2.00
19	1.84	1.48	2.49	1.90	1.85	1.89	2.89	3.42	2.25	2.01	1.90	1.98
20	2.01	1.46	2.37	1.91	1.84	1.89	2.79	3.14	2.26	1.99	1.89	1.96
21	1.91	1.47	2.29	1.79	1.84	2.02	2.71	3.04	2.26	1.98	1.88	2.03
22	1.82	1.48	2.36	1.86	1.81	1.97	2.72	3.02	2.24	1.96	1.88	2.00
23	1.76	1.48	2.31	1.84	1.80	1.93	2.67	3.00	2.22	1.96	1.93	1.99
24	1.72	1.50	14.46	1.84	1.80	1.91	2.59	2.90	2.20	1.96	1.96	1.98
25	1.67	1.49	8.52	1.86	1.81	1.89	2.51	2.81	2.19	2.01	1.93	1.96
26	1.63	1.47	4.15	1.91	1.77	1.87	2.43	2.74	2.18	2.06	1.93	2.05
27	1.62	4.46	3.44	1.93	1.77	2.40	2.36	2.66	2.22	2.03	1.93	2.03
28	1.59	5.53	4.05	1.97	1.76	2.37	2.56	2.73	2.51	2.02	1.94	2.01
29	1.69	3.68	3.21	1.92	---	2.23	10.22	2.63	2.26	1.99	1.96	1.99
30	1.71	3.04	2.93	1.99	---	2.17	15.38	2.57	2.22	1.98	1.92	1.97
31	1.63	---	2.77	1.94	---	2.16	---	2.55	---	2.13	1.93	---
MEAN	2.21	1.87	3.93	2.04	1.88	1.94	3.75	3.93	2.36	2.07	1.94	1.99
MAX	14.28	5.53	14.46	2.61	2.14	2.40	15.38	12.43	2.88	2.20	2.04	2.36
MIN	1.20	1.46	2.29	1.79	1.76	1.73	2.13	2.55	2.18	1.96	1.88	1.88
WTR YR 1983		MEAN	2.50	MAX	15.38	MIN	1.20					

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 upstream from Mammoth Creek, 1.5 mi downstream from Mineral Fork, 6.5 mi west of De Soto, and at mile 59.2. Records include flow from Mammoth Creek.

DRAINAGE AREA.--718 mi², includes that of Mammoth Creek.

PERIOD OF RECORD.--October 1948 to current year. Prior to May 1949 monthly discharge only, published WSP 1311 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 538.79 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records good for recorded period Oct. 1 to June 29. Records fair June 30 - Sept. 30 when observers readings were used after gage was removed. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--35 years, 659 ft³/s, 12.46 in/yr, 477,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 55,800 ft³/s June 30, 1957, gage height, 27.15 ft; minimum discharge, 20 ft³/s Sept. 19, 1954; minimum gage height, 1.89 ft Sept. 15, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of August 1915 reached a stage of about 29.4 ft, from floodmark, 1.0 mi downstream adjusted to gage site by comparison with recorded flood 5.5 ft lower; discharge, 70,500 ft³/s from rating curve extended above 37,000 ft³/s.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 8,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 10	0630	9,900	14.33	Apr. 14	1000	17,400	17.96
Dec. 4	0345	37,400	22.35	May 1	1515	*49,700	24.05
Dec. 25	0515	27,500	20.69	May 14	1915	26,600	20.51

Minimum daily discharge, 85 ft³/s, Aug. 21 and Sept. 4.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	222	293	1010	1100	398	288	576	35500	449	208	180	124
2	217	282	853	976	755	285	1660	19300	436	202	144	118
3	215	275	16400	878	907	286	2830	4400	558	205	130	105
4	212	271	29800	782	624	285	1960	2570	707	202	132	85
5	206	275	10400	717	493	298	1340	1860	623	199	153	89
6	205	264	4790	679	461	1070	1260	1540	639	192	151	97
7	267	254	2600	636	436	782	1540	1360	536	189	139	125
8	274	248	1810	576	417	633	1600	1190	452	182	121	113
9	3930	239	1410	542	402	538	2540	1060	411	178	115	106
10	6550	230	1220	520	402	461	2510	960	380	172	106	101
11	1310	228	1210	498	398	421	1600	900	369	167	105	101
12	829	245	1110	467	384	388	1200	893	347	161	101	125
13	612	251	957	451	370	365	1690	1210	328	159	99	144
14	504	246	857	436	361	361	13900	14400	324	157	99	140
15	461	241	788	421	352	343	4660	15500	323	153	95	135
16	421	230	723	407	352	335	2100	2960	306	151	93	130
17	388	224	636	393	343	331	1510	1830	292	149	92	118
18	361	222	612	385	339	352	1270	1430	278	147	89	109
19	343	223	588	376	331	379	1120	1340	293	146	88	105
20	370	226	559	366	323	467	969	1180	327	142	88	110
21	370	248	531	362	319	822	864	990	344	140	85	118
22	352	256	509	378	319	600	829	921	294	140	93	110
23	319	267	498	390	310	482	836	891	264	139	140	105
24	300	280	13100	384	308	426	762	763	250	147	144	102
25	271	267	23300	378	302	384	673	675	241	218	140	105
26	282	504	7470	380	298	361	612	616	236	167	130	127
27	278	2600	2850	384	292	582	559	580	305	155	125	125
28	278	3870	2750	375	291	805	736	650	574	151	119	119
29	300	2620	2140	380	---	636	2390	595	507	137	118	115
30	308	1420	1550	398	---	553	16400	515	419	140	113	113
31	312	---	1260	402	---	542	---	473	---	144	110	---
TOTAL	21267	17299	134291	15817	11287	14861	72496	119052	11812	5139	3637	3419
MEAN	686	577	4332	510	403	479	2417	3840	394	166	117	114
MAX	6550	3870	29800	1100	907	1070	16400	35500	707	218	180	144
MIN	205	222	498	362	291	285	559	473	236	137	85	85
CAL YR 1982		TOTAL	435401	MEAN	1193	MAX	29800	MIN	163			
WTR YR 1983		TOTAL	430377	MEAN	1179	MAX	35500	MIN	85			

MERAMEC RIVER BASIN

07018000 BIG RIVER NEAR DESOTO, MO--Continued

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.19	3.45	4.92	5.01	3.82	3.45	4.00	21.31	3.65	3.00	2.95	2.72
2	3.16	3.41	4.64	4.85	4.04	3.44	5.08	19.67	3.61	2.93	2.81	2.68
3	3.15	3.40	14.46	4.70	4.79	3.43	7.40	9.37	3.73	2.98	2.75	2.64
4	3.15	3.37	21.91	4.56	4.36	3.43	6.25	7.03	4.29	2.97	2.73	2.51
5	3.12	3.39	14.40	4.44	4.07	3.43	5.27	6.02	4.06	2.96	2.84	2.53
6	3.10	3.33	10.26	4.36	4.01	4.09	5.17	5.51	3.95	2.94	2.83	2.54
7	3.27	3.30	7.12	4.29	3.96	4.50	5.30	5.25	3.87	2.92	2.79	2.74
8	3.37	3.28	5.96	4.23	3.89	4.24	5.77	5.01	3.67	2.90	2.71	2.67
9	3.74	3.25	5.43	4.16	3.84	4.04	6.98	4.80	3.57	2.88	2.68	2.64
10	14.28	3.21	5.15	4.11	3.83	3.90	7.18	4.65	3.49	2.85	2.65	2.60
11	5.38	3.20	5.14	4.07	3.82	3.80	5.69	4.52	3.47	2.82	2.62	2.58
12	4.66	3.25	5.04	4.00	3.79	3.73	5.15	4.51	3.40	2.80	2.60	2.70
13	4.30	3.30	4.82	3.94	3.73	3.68	4.89	4.58	3.35	2.78	2.60	2.80
14	4.11	3.27	4.69	3.91	3.70	3.65	17.73	11.81	3.35	2.78	2.59	2.78
15	3.98	3.26	4.59	3.87	3.68	3.61	9.32	18.80	3.34	2.77	2.58	2.77
16	3.88	3.21	4.52	3.82	3.66	3.58	6.39	7.66	3.28	2.76	2.56	2.74
17	3.78	3.19	4.41	3.78	3.64	3.58	5.54	5.99	3.25	2.75	2.56	2.69
18	3.69	3.18	4.33	3.77	3.62	3.61	5.20	5.36	3.21	2.73	2.54	2.64
19	3.62	3.19	4.28	3.74	3.60	3.69	4.98	5.23	3.20	2.71	2.53	2.63
20	3.67	3.19	4.21	3.73	3.58	3.74	4.77	5.03	3.34	2.70	2.53	2.63
21	3.69	3.27	4.14	3.70	3.56	4.70	4.60	4.70	3.28	2.68	2.53	2.68
22	3.68	3.29	4.08	3.73	3.55	4.18	4.51	4.55	3.26	2.67	2.52	2.66
23	3.55	3.32	4.03	3.77	3.53	3.93	4.53	4.51	3.17	2.67	2.77	2.63
24	3.49	3.40	13.69	3.76	3.53	3.82	4.45	4.31	3.13	2.66	2.80	2.61
25	3.44	3.34	20.46	3.75	3.51	3.73	4.29	4.14	3.10	3.05	2.79	2.60
26	3.41	3.40	13.13	3.75	3.49	3.66	4.17	4.03	3.08	2.89	2.75	2.75
27	3.39	6.78	7.40	3.75	3.47	3.79	4.09	3.91	3.33	2.86	2.72	2.72
28	3.40	8.30	7.19	3.74	3.45	4.52	4.15	4.09	3.76	2.82	2.70	2.70
29	3.47	7.25	6.42	3.73	---	4.24	5.10	3.99	3.67	2.80	2.68	2.68
30	3.48	5.49	5.62	3.82	---	4.06	16.87	3.82	3.69	2.79	2.67	2.67
31	3.53	---	5.23	3.85	---	4.04	---	3.72	---	2.78	2.64	---
MEAN	3.97	3.78	7.47	4.02	3.77	3.85	6.16	6.71	3.48	2.83	2.68	2.66
MAX	14.28	8.30	21.91	5.01	4.79	4.70	17.73	21.31	4.29	3.05	2.95	2.80
MIN	3.10	3.18	4.03	3.70	3.45	3.43	4.00	3.72	3.08	2.66	2.52	2.51
WTR YR 1983		MEAN	4.29	MAX	21.91	MIN	2.51					

MERAMEC RIVER BASIN

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 070140104, on right bank on downstream side of pier of county highway bridge at Byrnesville, 4.0 mi upstream from Heads Creek, at at mile 14.1.

DRAINAGE AREA.--917 mi².

PERIOD OF RECORD.--October 1921 to current year. Prior to June 1922 monthly discharge only, published 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 National Geodetic Vertical Datum of 1929. Prior to Mar. 9, 1940, nonrecording gage at present site and datum.

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

AVERAGE DISCHARGE.--62 years, 835 ft³/s, 12.37 in/yr, 605,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 42,800 ft³/s May 2, 1983, gage height, 26.42 ft; minimum discharge, 25 ft³/s Aug. 30, 1936, minimum gage height, 1.50 ft Aug. 14, 1934.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Aug. 21, 1915, reached a stage of 30.2 ft from floodmarks, discharge, 80,000 ft³/s, by slope-area measurement of peak flow.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 11	0200	8,370	15.53	Apr. 15	1300	14,500	19.14
Dec. 5	0715	36,600	25.18	May 2	1315	*42,800	26.42
Dec. 25	0030	28,700	23.38	May 16	0200	22,700	21.88

Minimum daily discharge, 109 ft³/s Aug. 21.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	271	355	1490	1570	547	345	1270	21000	565	364	179	115
2	258	340	1250	1390	758	341	2180	40100	544	310	218	116
3	260	323	9020	1220	1150	337	3390	24000	557	280	196	115
4	263	312	20300	1070	1040	333	2930	5810	653	262	174	113
5	261	304	34200	969	805	419	2220	2890	744	253	160	110
6	255	304	18500	894	706	1120	2050	2160	700	249	154	110
7	262	298	7550	833	654	1430	1790	1820	676	243	152	115
8	281	285	3470	796	613	947	2070	1600	592	233	168	140
9	327	275	2010	755	580	754	3270	1410	521	230	160	135
10	4960	265	1660	723	564	651	3420	1230	480	222	150	128
11	4500	256	1520	699	549	579	2450	1090	444	215	142	126
12	1320	259	1460	671	533	529	1770	1020	426	209	137	136
13	948	260	1280	639	514	494	2480	1020	403	204	130	131
14	762	272	1110	610	491	466	8300	3490	385	200	126	137
15	656	265	1010	590	475	445	13000	14300	379	198	125	153
16	582	264	913	569	463	427	3860	17300	372	193	124	153
17	525	255	838	546	454	410	2240	3470	359	188	122	157
18	478	251	780	528	442	450	1780	2200	342	184	121	155
19	436	247	741	507	433	471	1530	1830	336	181	119	144
20	411	250	708	492	422	710	1350	1670	352	178	112	137
21	410	291	673	489	410	906	1130	1410	368	173	109	132
22	416	287	640	493	400	940	1000	1280	364	171	117	129
23	404	300	715	504	395	720	965	1120	343	166	120	132
24	368	312	18500	512	382	609	922	1020	311	180	178	131
25	345	321	23300	509	377	541	824	872	297	369	265	130
26	329	421	5930	506	368	508	750	773	293	246	176	138
27	316	1310	3350	503	359	518	782	712	294	216	145	141
28	310	3410	3210	503	352	723	1350	699	330	202	133	143
29	324	4070	3180	503	---	793	3570	721	484	198	130	141
30	332	2280	2290	512	---	716	9180	666	465	179	121	137
31	348	---	1820	536	---	678	---	605	---	170	117	---
TOTAL	21918	18642	173418	21641	15236	19310	83823	159288	13379	6866	4580	3980
MEAN	707	621	5594	698	544	623	2794	5138	446	221	148	133
MAX	4960	4070	34200	1570	1150	1430	13000	40100	744	369	265	157
MIN	255	247	640	489	352	333	750	605	293	166	109	110

CAL YR 1982	TOTAL	532802	MEAN	1460	MAX	34200	MIN	200
WTR YR 1983	TOTAL	542081	MEAN	1485	MAX	40100	MIN	109

MERAMEC RIVER BASIN

07018500 BIG RIVER AT BYRNESVILLE, MO--Continued

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.72	3.75	6.81	6.90	4.54	3.85	5.02	19.65	4.71	4.02	3.04	2.60
2	3.66	3.68	6.04	6.52	5.08	3.83	7.29	26.01	4.62	3.77	3.34	2.60
3	3.62	3.61	14.11	6.22	5.65	3.81	9.86	23.42	4.60	3.61	3.18	2.60
4	3.65	3.56	19.59	5.96	5.86	3.80	9.61	13.58	4.91	3.50	3.04	2.59
5	3.67	3.52	25.16	5.76	5.32	3.78	7.70	9.38	5.24	3.46	2.94	2.55
6	3.61	3.50	21.38	5.62	5.04	6.41	7.93	8.09	5.20	3.43	2.87	2.54
7	3.69	3.50	15.46	5.48	4.90	7.19	7.28	7.41	5.07	3.41	2.88	2.55
8	3.72	3.42	10.77	5.36	4.79	5.78	7.77	6.98	4.83	3.35	3.00	2.76
9	4.02	3.38	7.82	5.24	4.70	5.28	9.61	6.57	4.57	3.33	2.95	2.75
10	11.70	3.34	7.08	5.14	4.64	4.97	10.09	6.26	4.43	3.30	2.87	2.69
11	13.36	3.30	6.75	5.06	4.60	4.72	8.70	6.02	4.30	3.25	2.82	2.67
12	6.49	3.31	6.66	4.97	4.55	4.55	7.34	5.86	4.23	3.22	2.78	2.70
13	5.54	3.29	6.34	4.86	4.49	4.44	6.69	5.81	4.14	3.19	2.74	2.70
14	5.04	3.38	6.03	4.76	4.41	4.33	14.24	6.91	4.06	3.16	2.71	2.72
15	4.71	3.33	5.83	4.69	4.35	4.25	18.99	17.30	4.03	3.15	2.70	2.85
16	4.50	3.34	5.65	4.62	4.30	4.19	10.46	21.49	4.01	3.13	2.68	2.86
17	4.33	3.29	5.49	4.54	4.27	4.12	8.27	10.04	3.95	3.10	2.67	2.86
18	4.18	3.26	5.33	4.47	4.23	4.19	7.35	8.17	3.89	3.07	2.66	2.87
19	4.05	3.24	5.20	4.40	4.19	4.33	6.80	7.41	3.84	3.05	2.64	2.79
20	3.98	3.24	5.10	4.33	4.16	4.59	6.50	7.13	3.87	3.03	2.62	2.71
21	3.95	3.50	4.98	4.31	4.11	5.57	6.09	6.64	3.99	3.00	2.59	2.70
22	3.97	3.44	4.86	4.32	4.07	5.81	5.84	6.46	3.90	2.98	2.57	2.66
23	3.97	3.50	4.78	4.36	4.05	5.20	5.78	6.04	3.91	2.97	2.67	2.68
24	3.81	3.57	18.88	4.40	4.02	4.84	5.71	5.88	3.76	2.93	2.65	2.67
25	3.71	3.64	22.89	4.39	3.98	4.60	5.51	5.58	3.69	3.73	3.66	2.64
26	3.64	3.67	13.42	4.38	3.95	4.46	5.28	5.34	3.62	3.44	3.09	2.72
27	3.57	4.99	---	4.37	3.91	4.50	5.11	5.16	3.62	3.28	2.86	2.73
28	3.52	9.86	---	4.37	3.88	4.83	6.70	5.10	3.81	3.17	2.76	2.75
29	3.61	11.40	9.90	4.36	---	5.44	10.09	5.21	4.18	3.19	2.72	2.74
30	3.62	8.43	8.35	4.39	---	5.16	15.94	5.06	4.44	3.07	2.66	2.70
31	3.69	---	7.44	4.47	---	5.03	---	4.85	---	3.00	2.63	---
MEAN	4.59	4.14	---	4.94	4.50	4.77	8.32	9.19	4.25	3.27	2.84	2.70
MAX	13.36	11.40	---	6.90	5.86	7.19	18.99	26.01	5.24	4.02	3.66	2.87
MIN	3.52	3.24	---	4.31	3.88	3.78	5.02	4.85	3.62	2.93	2.57	2.54

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 upstream from bridge on north access roadway of I-44, 2.0 mi east of Eureka, 3.0 mi downstream from Big River, and at mile 34.1.

DRAINAGE AREA.--3,788 mi².

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 National Geodetic Vertical Datum of 1929. Prior to Jan. 17, 1933, nonrecording gage at site 200 ft 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 higher.

REMARKS.--Records good.

AVERAGE DISCHARGE.--64 years, 3,060 ft³/s, 10.97 in/yr, 2,217,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 145,000 ft³/s Dec. 6, 1982, gage height, 42.89 ft; minimum, 196 ft³/s Aug. 27, 31, Sept. 1, 1936.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Aug. 22, 1915, reached a stage of 42.2 ft, from floodmarks, present datum, discharge, 175,000 ft³/s, by slope-area measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 17,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 6	0800	*145,000	42.89	Apr. 16	0515	28,100	17.98
Dec. 27	0500	42,000	23.66	May 3	0900	99,400	37.16
Apr. 5	1830	22,100	15.07	May 16	1945	37,500	22.00

Minimum daily discharge, 495 ft³/s, Aug. 22, Sept. 10.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	907	1030	11400	6000	1790	1310	3140	30500	2810	1450	742	543
2	871	1070	7150	5170	2210	1300	7120	58700	2610	1330	766	536
3	861	1100	22700	4630	2750	1280	13800	94700	2550	1240	758	529
4	825	1110	41700	4190	2700	1270	19200	77000	2610	1180	734	529
5	777	1240	89400	3830	2410	1300	21600	48500	2800	1130	685	522
6	768	1220	139000	3540	2270	2800	15900	18600	3020	1100	670	515
7	1190	1190	99500	3310	2160	2680	10600	9340	2720	1080	685	509
8	1600	1130	61900	3150	2060	2520	9910	7190	2550	1060	662	502
9	1810	1060	25400	2980	1980	3350	11300	6140	2320	1030	670	502
10	5260	1030	10700	2850	1920	3420	11500	5440	2140	1010	646	495
11	8650	991	8100	2730	1870	2990	10700	5080	1980	979	623	572
12	4090	1020	6850	2600	1840	2610	8480	4500	1860	942	601	646
13	2730	991	6100	2470	1780	2340	7110	4270	1770	922	579	662
14	2100	1010	5530	2370	1730	2150	16200	7080	1710	916	579	631
15	1700	981	4970	2270	1690	2000	23500	19500	1690	879	572	638
16	1440	981	4570	2180	1640	1900	25900	34500	1650	860	558	654
17	1290	972	4200	2100	1610	1800	19500	28000	1620	835	543	654
18	1180	963	3880	2010	1560	1830	9090	11000	1580	824	536	662
19	1100	935	3620	1940	1530	1830	6510	7100	1560	814	522	646
20	1060	963	3400	1880	1510	2240	5430	6010	1770	809	515	623
21	1020	1170	3210	1850	1470	2940	4720	5370	1760	800	502	601
22	1000	1160	3060	1840	1430	2660	4250	7400	1710	783	495	587
23	991	1290	2950	1860	1420	2290	3930	9790	1640	766	522	579
24	944	1410	9860	1860	1400	2040	3730	12700	1570	750	565	587
25	917	1430	22200	1840	1380	1870	3520	9390	1460	1070	693	594
26	889	1880	36300	1800	1360	1760	3280	4980	1390	1110	631	623
27	862	3310	39700	1770	1340	1840	3110	4130	1390	953	572	638
28	853	8760	25800	1760	1330	1880	5610	3730	1410	907	558	654
29	880	14500	12200	1760	---	2110	10900	3700	1470	907	572	646
30	880	16500	9350	1770	---	2110	18500	3720	1600	800	565	625
31	935	---	7420	1770	---	2180	---	3150	---	758	551	---
TOTAL	50380	72397	732120	82080	50140	66600	318040	551210	58720	29994	18872	17704
MEAN	1625	2413	23620	2648	1791	2148	10600	17780	1957	968	609	590
MAX	8650	16500	139000	6000	2750	3420	25900	94700	3020	1450	766	662
MIN	768	935	2950	1760	1330	1270	3110	3150	1390	750	495	495
CAL YR 1982		TOTAL	2082824	MEAN	5706	MAX	139000	MIN	723			
WTR YR 1983		TOTAL	2048257	MEAN	5612	MAX	139000	MIN	495			

MERAMEC RIVER BASIN

07019000 MERAMEC RIVER NEAR EUREKA, MO--Continued

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.96	3.06	9.85	6.67	3.47	3.08	3.82	18.06	4.40	3.25	2.53	2.29
2	2.94	3.10	6.89	6.09	3.63	3.07	7.08	26.47	4.22	3.15	2.54	2.27
3	2.90	3.14	12.64	5.71	4.19	3.06	10.32	36.63	4.14	3.06	2.56	2.26
4	2.90	3.12	22.24	5.41	4.27	3.05	13.35	34.29	4.19	2.99	2.53	2.25
5	2.85	3.25	31.58	5.14	4.02	3.04	14.77	27.56	4.33	2.95	2.47	2.24
6	2.83	3.24	42.89	4.92	3.89	4.66	12.77	14.51	4.62	2.91	2.44	2.23
7	2.89	3.22	38.13	4.75	3.80	4.12	9.21	8.74	4.29	2.90	2.48	2.23
8	3.35	3.17	31.39	4.62	3.72	4.11	8.96	7.42	4.21	2.88	2.44	2.21
9	3.74	3.11	18.49	4.49	3.64	4.71	9.33	6.72	4.00	2.85	2.47	2.20
10	3.78	3.08	9.48	4.37	3.58	4.85	9.76	6.26	3.85	2.84	2.44	2.19
11	8.38	3.05	7.97	4.27	3.55	4.53	9.49	5.91	3.71	2.80	2.41	2.34
12	5.25	3.07	7.17	4.16	3.51	4.21	8.22	5.65	3.61	2.77	2.37	2.38
13	4.37	3.05	6.71	4.06	3.47	3.99	7.19	5.43	3.53	2.74	2.34	2.43
14	3.93	3.05	6.34	3.97	3.44	3.83	11.85	5.96	3.46	2.72	2.35	2.38
15	3.64	3.04	5.94	3.89	3.40	3.71	15.08	12.48	3.43	2.70	2.33	2.37
16	3.44	3.04	5.67	3.81	3.37	3.62	17.78	20.46	3.41	2.67	2.32	2.40
17	3.31	3.03	5.41	3.75	3.33	3.53	15.09	19.57	3.39	2.65	2.30	2.41
18	3.22	3.01	5.17	3.67	3.30	3.52	8.62	9.82	3.35	2.64	2.28	2.41
19	3.14	3.00	4.99	3.60	3.28	3.56	7.02	7.35	3.32	2.63	2.26	2.38
20	3.12	2.99	4.82	3.54	3.25	3.56	6.29	6.65	3.45	2.62	2.25	2.34
21	3.07	3.19	4.67	3.51	3.23	4.52	5.78	6.23	3.44	2.60	2.24	2.33
22	3.06	3.19	4.55	3.50	3.21	4.27	5.44	6.97	3.49	2.59	2.22	2.30
23	3.05	3.26	4.44	3.52	3.18	3.96	5.19	8.39	3.41	2.57	2.21	2.30
24	3.01	3.36	6.91	3.52	3.16	3.75	5.05	10.24	3.35	2.55	2.33	2.29
25	2.98	3.41	14.17	3.50	3.15	3.60	4.90	9.55	3.25	2.84	2.54	2.29
26	2.95	3.42	20.82	3.48	3.13	3.49	4.73	6.04	3.18	2.95	2.43	2.34
27	2.92	4.50	23.60	3.46	3.11	3.55	4.56	5.39	3.19	2.78	2.34	2.36
28	2.91	7.06	18.48	3.44	3.09	3.55	5.93	5.06	3.19	2.72	2.30	2.38
29	2.94	10.62	10.23	3.43	---	3.80	8.63	5.10	3.21	2.74	2.33	2.37
30	2.93	11.92	8.69	3.45	---	3.77	11.64	5.17	3.41	2.62	2.31	2.35
31	2.97	---	7.59	3.45	---	3.85	---	4.68	---	2.56	2.29	---
MEAN	3.41	3.86	13.16	4.17	3.48	3.80	8.93	11.57	3.67	2.78	2.38	2.32
MAX	8.38	11.92	42.89	6.67	4.27	4.85	17.78	36.63	4.62	3.25	2.56	2.43
MIN	2.83	2.99	4.44	3.43	3.09	3.04	3.82	4.68	3.18	2.55	2.21	2.19
WTR YR 1983		MEAN	5.31	MAX	42.89	MIN	2.19					

MERAMEC RIVER BASIN

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, 380,000 tons December 5, 1982; minimum daily, 3.2 tons December 20, 1980.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (000661)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED CENT SATUR- ATION (00301)	COLI- FORM, FECAL, 0.7 UM-MF (100 ML) (31625)	STREP- TOCOCOCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
NOV										
05...	1340	1260	372	8.4	10.0	2.6	10.6	94	84	48
JAN										
07...	1230	3300	311	7.8	5.5	7.2	12.0	93	52	320
MAR										
10...	1345	3400	355	8.3	8.5	15	11.2	94	180	1000
MAY										
13...	1445	4230	298	8.0	20.0	14	7.4	80	88	210
JUL										
21...	1500	800	400	8.2	31.0	5.1	5.6	74	23	92
SEP										
30...	1515	625	379	8.3	21.5	3.3	7.8	86	12	27

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...	200	20	42	23	4.8	5	.2	1.7	180	24
JAN										
07...	160	29	34	18	3.5	5	.1	1.4	130	18
MAR										
10...	190	37	40	21	5.2	6	.2	1.9	150	27
MAY										
13...	150	23	33	17	3.7	5	.1	2.0	130	18
JUL										
21...	200	22	41	24	4.3	4	.1	1.6	180	19
SEP										
30...	200	22	38	26	5.2	5	.2	1.5	180	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 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...	6.7	.10	4.7	209	220	.28	711	<.100	.100
JAN									
07...	4.3	<.10	9.3	178	170	.24	1590	.780	<.060
MAR									
10...	6.8	.10	4.4	204	200	.28	1870	.300	.060
MAY									
13...	4.7	<.10	8.7	169	170	.23	1930	.510	.100
JUL									
21...	5.3	.20	8.2	203	210	.28	438	<.100	.020
SEP									
30...	7.5	<.10	6.2	213	210	.29	359	<.100	.030

MERAMEC RIVER BASIN

07019000 MERAMEC RIVER NEAR EUREKA, MO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
NOV 05...	.13	.40	.010	.03	<.010	<.010	16	54	96
JAN 07...	.08	.60	.050	.15	.010	<.010	11	98	6
MAR 10...	.08	.70	.040	.12	.060	.040	18	165	89
MAY 13...	.13	1.0	.060	.18	.040	.020	81	925	78
JUL 21...	.03	.40	.040	.12	.020	.010	30	65	96
SEP 30...	.04	.50	.010	.03	.010	.010	59	100	71

DATE	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)
NOV 05...	<10	1	170	<.5	<1	<1	<3	2	25	<1
JAN 07...	30	<1	130	<.5	<1	<1	<3	1	36	3
MAY 13...	30	<1	130	.5	<1	<1	<3	7	17	2
JUL 21...	<10	1	180	<.5	<1	<1	<3	4	10	<1

DATE	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 05...	16	19	<.1	<10	1	<1	<1	58	<6	24
JAN 07...	10	49	<.1	<10	5	1	<1	49	<6	9
MAY 13...	10	40	.1	<10	1	1	<1	53	<6	29
JUL 21...	13	23	<.1	<10	<1	<1	<1	59	<6	11

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)
DEC , 1982										
03...	22700	45	50	54	65	93	95	99	100	100
04...	41700	54	56	63	73	87	88	98	100	100
05...	89400	44	52	71	99	94	95	97	99	100
06...	139000	48	62	76	92	97	97	99	100	100
13...	6270	--	--	--	--	82	83	88	98	100
APR , 1983										
06...	14900	43	52	58	77	99	--	--	--	--
MAY										
02...	66900	46	55	66	82	93	94	97	100	100
03...	102000	49	54	63	78	88	92	98	100	100

MERAMEC RIVER BASIN

07019000 MERAMEC RIVER NEAR EUREKA, MO--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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	907	---	---	1030	8	22	11400	---	---
2	871	---	---	1070	11	32	7150	130	2510
3	861	---	---	1100	7	21	22700	440	27000
4	825	---	---	1110	7	21	41700	526	59200
5	777	---	---	1240	7	23	89400	1370	380000
6	768	6	12	1220	7	23	139000	821	312000
7	1190	---	---	1190	8	26	99500	337	90500
8	1600	---	---	1130	5	15	61900	281	47000
9	1810	---	---	1060	4	11	25400	308	21100
10	5260	---	---	1030	3	8.3	10700	206	5950
11	8650	---	---	991	3	8.0	8100	134	2930
12	4090	---	---	1020	4	11	6850	155	2870
13	2730	---	---	991	4	11	6100	98	1610
14	2100	---	---	1010	4	11	5530	73	1090
15	1700	---	---	981	4	11	4970	54	725
16	1440	---	---	981	4	11	4570	41	506
17	1290	---	---	972	4	11	4200	66	748
18	1180	---	---	963	4	10	3880	38	398
19	1100	---	---	935	4	10	3620	28	274
20	1060	---	---	963	5	13	3400	26	239
21	1020	---	---	1170	5	16	3210	23	199
22	1000	---	---	1160	5	16	3060	28	231
23	991	---	---	1290	4	14	2950	36	287
24	944	---	---	1410	4	15	9860	502	11000
25	917	---	---	1430	5	19	22200	686	41100
26	889	9	22	1880	---	---	36300	551	54000
27	862	9	21	3310	---	---	39700	389	41700
28	853	9	21	8760	---	---	25800	129	8990
29	880	6	14	14500	---	---	12200	118	3890
30	880	7	17	16500	---	---	9350	87	2200
31	935	8	20	---	---	---	7420	60	1200
TOTAL	50380	---	127	72397	---	389.3	732120	---	1321447
JANUARY				FEBRUARY			MARCH		
1	6000	50	810	1790	---	---	1310	---	---
2	5170	51	712	2210	---	---	1300	---	---
3	4630	45	563	2750	---	---	1280	---	---
4	4190	40	453	2700	---	---	1270	---	---
5	3830	36	372	2410	---	---	1300	---	---
6	3540	18	172	2270	---	---	2800	---	---
7	3310	19	170	2160	---	---	2680	---	---
8	3150	19	162	2060	---	---	2520	---	---
9	2980	15	121	1980	---	---	3350	---	---
10	2850	13	100	1920	---	---	3420	---	---
11	2730	15	111	1870	---	---	2990	---	---
12	2600	15	105	1840	---	---	2610	---	---
13	2470	13	87	1780	---	---	2340	---	---
14	2370	12	77	1730	---	---	2150	14	81
15	2270	12	74	1690	---	---	2000	16	86
16	2180	11	65	1640	---	---	1900	16	82
17	2100	11	62	1610	---	---	1800	13	63
18	2010	11	60	1560	---	---	1830	18	89
19	1940	11	58	1530	---	---	1830	55	272
20	1880	7	36	1510	---	---	2240	61	369
21	1850	---	---	1470	---	---	2940	38	302
22	1840	---	---	1430	15	58	2660	71	510
23	1860	---	---	1420	---	---	2290	64	396
24	1860	---	---	1400	---	---	2040	51	281
25	1840	---	---	1380	---	---	1870	51	258
26	1800	---	---	1360	---	---	1760	59	280
27	1770	---	---	1340	---	---	1840	69	343
28	1760	---	---	1330	---	---	1880	69	350
29	1760	---	---	---	---	---	2110	68	387
30	1770	---	---	---	---	---	2110	67	382
31	1770	---	---	---	---	---	2180	66	388
TOTAL	82080	---	4370	50140	---	58	66600	---	4919

MERAMEC RIVER BASIN

07019000 MERAMEC RIVER NEAR EUREKA, MO--Continued

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)
APRIL			MAY			JUNE			
1	3140	164	1630	30500	422	34800	2810	49	372
2	7120	342	6670	58700	825	137000	2610	70	493
3	13800	728	24700	94700	728	187000	2550	36	248
4	19200	627	32500	77000	294	61100	2610	33	233
5	21600	260	15200	48500	250	32700	2800	30	227
6	15900	132	5670	18600	121	6080	3020	24	196
7	10600	108	3090	9340	281	7090	2720	19	140
8	9910	286	7610	7190	199	3860	2550	20	138
9	11300	596	18200	6140	150	2490	2320	17	106
10	11500	232	7200	5440	130	1910	2140	14	81
11	10700	188	5430	5080	124	1700	1980	12	64
12	8480	97	2220	4500	123	1490	1860	11	55
13	7110	166	3270	4270	118	1360	1770	10	48
14	16200	382	22100	7080	185	3900	1710	7	32
15	23500	375	23800	19500	718	39400	1690	10	46
16	25900	368	25700	34500	484	45600	1650	10	45
17	19500	345	18200	28000	219	16600	1620	7	31
18	9090	290	7120	11000	154	4570	1580	9	38
19	6510	224	3940	7100	147	2820	1560	14	59
20	5430	157	2300	6010	145	2350	1770	18	86
21	4720	117	1490	5370	149	2160	1760	16	76
22	4250	109	1250	7400	357	7500	1710	12	55
23	3930	106	1120	9790	526	13900	1640	11	49
24	3730	107	1080	12700	313	10700	1570	16	68
25	3520	127	1210	9390	174	4410	1460	16	63
26	3280	154	1360	4980	181	2430	1390	20	75
27	3110	170	1430	4130	205	2290	1390	24	90
28	5610	378	5730	3730	217	2190	1410	25	95
29	10900	1290	39600	3700	170	1700	1470	26	103
30	18500	582	29100	3720	103	1030	1600	26	112
31	---	---	---	3150	57	485	---	---	---
TOTAL	318040	---	319920	551210	---	642615	58720	---	3524
JULY			AUGUST			SEPTEMBER			
1	1450	23	90	742	11	22	543	17	25
2	1330	18	65	766	18	37	536	14	20
3	1240	17	57	758	20	41	529	25	36
4	1180	19	61	734	18	36	529	17	24
5	1130	19	58	685	19	35	522	13	18
6	1100	16	48	670	17	31	515	11	15
7	1080	14	41	685	14	26	509	11	15
8	1060	16	46	662	14	25	502	12	16
9	1030	13	36	670	12	22	502	14	19
10	1010	13	35	646	11	19	495	14	19
11	979	18	48	623	15	25	572	11	17
12	942	17	43	601	21	34	646	13	23
13	922	19	47	579	17	27	662	17	30
14	916	23	57	579	18	28	631	17	29
15	879	23	55	572	15	23	638	15	26
16	860	16	37	558	15	23	654	15	26
17	835	13	29	543	15	22	654	13	23
18	824	14	31	536	15	22	662	11	20
19	814	14	31	522	16	23	646	8	14
20	809	25	55	515	15	21	623	10	17
21	800	21	45	502	16	22	601	15	24
22	783	25	53	495	16	21	587	17	27
23	766	23	48	522	17	24	579	13	20
24	750	18	36	565	16	24	587	11	17
25	1070	20	58	693	16	30	594	19	30
26	1110	26	78	631	16	27	623	13	22
27	953	20	51	572	16	25	638	11	19
28	907	22	54	558	16	24	654	9	16
29	907	32	78	572	16	25	646	9	16
30	800	20	43	565	15	23	625	9	15
31	758	16	33	551	24	36	---	---	---
TOTAL	29994	---	1547	18872	---	823	17704	---	638
YEAR	2048257		2300377.3						

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 downstream from Saline Creek, and 10 mi upstream from mouth.

DRAINAGE AREA.--3,950 mi², approximately.

PERIOD OF RECORD.--August 1963 to July 1975, October 1981 to current year.

REMARKS.--Records of discharge are given for gaging station near Eureka, Mo.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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 (STAND- ARD 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)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)
OCT											
21...	1130	1028	29001	1400	380	8.3	13.0	8.8	83	<5	240
NOV											
05...	1225	1028	29001	1540	390	8.3	12.0	9.6	89	<5	440
DEC											
01...	1200	1028	29001	6800	209	8.0	12.0	9.4	87	12	5400
15...	1305	1028	29001	4000	289	7.6	5.5	11.0	87	11	540
JAN											
07...	1100	1028	29001	4000	336	8.0	5.5	11.0	87	6	220
FEB											
01...	1030	1028	29001	1850	418	8.1	5.0	12.0	94	--	210
MAR											
10...	1245	1028	29001	3800	411	8.3	8.5	9.0	77	10	440
APR											
20...	1000	1028	29001	5000	260	7.8	10.5	8.8	78	20	K300
MAY											
13...	1315	1028	29001	4800	305	8.0	19.5	7.0	75	7	420
JUN											
14...	1000	1028	29001	1900	372	8.0	24.0	6.8	--	--	70
JUL											
21...	1345	1028	29001	900	417	8.1	31.0	5.2	68	<5	22
AUG											
18...	0900	1028	29001	650	418	7.9	28.5	5.4	68	26	88
SEP											
30...	1430	1028	29001	710	395	8.3	22.0	9.4	104	10	88

DATE	HARD- NESS (MG/L AS CaCO ₃) (00900)	HARD- NESS, NONCAR- BONATE (MG/L CaCO ₃) (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 CaCO ₃) (00410)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO ₂) (00405)	SULFATE DIS- SOLVED (MG/L AS SO ₄) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS Cl) (00940)
OCT										
21...	190	31	42	21	6.3	2.2	161	1.5	26	9.0
NOV										
05...	--	--	--	--	--	--	182	1.7	--	--
DEC										
01...	--	--	--	--	--	--	82	1.6	--	--
15...	--	--	--	--	--	--	125	6.1	--	--
JAN										
07...	160	28	35	18	5.5	1.6	134	2.6	21	11
FEB										
01...	--	--	--	--	--	--	151	2.3	--	--
MAR										
10...	--	--	--	--	--	--	167	1.6	--	--
APR										
20...	140	24	31	15	3.2	1.5	115	3.5	24	<2.0
MAY										
13...	--	--	--	--	--	--	138	2.7	--	--
JUN										
14...	--	--	--	--	--	--	157	3.0	--	--
JUL										
21...	210	26	43	24	7.6	1.8	180	2.8	18	13
AUG										
18...	--	--	--	--	--	--	174	4.2	--	--
SEP										
30...	--	--	--	--	--	--	180	1.7	--	--

K--Results based on colony count outside the acceptable range (non-ideal colony count).

MERAMEC RIVER BASIN

07019280 MERAMEC RIVER AT PAULINA HILLS, MO.--Continued

DATE	FLUORIDE, DIS- SOLVED (MG/L AS F) (00950)	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 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 21...	.10	220	16	.280	.150	.130	<2	<2	<5	<5
NOV 05...	--	--	22	<.080	.140	.100	--	--	--	--
DEC 01...	--	--	90	.360	.040	.220	--	--	--	--
15...	--	--	<1	.640	.030	.070	--	--	--	--
JAN 07...	.10	193	11	.750	.090	<.050	<2	<2	<5	<5
FEB 01...	--	--	4	.550	.110	.070	--	--	--	--
MAR 10...	--	--	156	.210	.090	.070	--	--	--	--
APR 20...	.10	161	22	.430	.050	.060	<2	<2	6	<5
MAY 13...	--	--	41	.480	.040	.100	--	--	--	--
JUN 14...	--	--	38	.090	<.010	.080	--	--	--	--
JUL 21...	.10	224	16	.140	.070	.110	<2	<2	<5	6
AUG 18...	--	--	49	.070	.010	.160	--	--	--	--
SEP 30...	--	--	17	.110	.010	<.050	--	--	--	--

[illegible]

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 downstream from Kaskaskia River, and at mile 109.9 above Ohio River.

DRAINAGE AREA.--708,600 mi², 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.--WDR MO-76-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 341.05 ft National Geodetic Vertical Datum of 1929. Prior to Feb. 1, 1962, nonrecording gage 0.4 mi 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.--56 years, 186,700 ft³/s, 135,300,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge determined, 886,000 ft³/s July 3, 1947, Apr. 30, 1973, discharge including unmeasured overflow, was greater May 24, 1943; maximum gage height, 43.32 ft Apr. 30, 1973; minimum daily discharge, 30,000 ft³/s Dec. 12, 1937; minimum gage height, -4.10 ft Jan. 2, 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 30, 1844, reached a stage of 39.8 ft and a discharge of 1,350,000 ft³/s computed by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 825,000 ft³/s Dec. 9 at 0100; maximum gage height, 41.02 ft May 5; minimum, 94,700 ft³/s Sept. 16, gage height, 4.34 ft.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	129000	192000	290000	441000	168000	294000	482000	566000	400000	273000	183000	141000
2	116000	205000	286000	426000	165000	291000	496000	600000	394000	284000	172000	136000
3	115000	217000	376000	403000	177000	291000	528000	651000	390000	295000	170000	128000
4	123000	230000	547000	378000	202000	287000	574000	723000	390000	296000	170000	122000
5	126000	234000	632000	351000	190000	279000	624000	746000	386000	300000	168000	115000
6	120000	230000	711000	329000	182000	282000	669000	723000	386000	303000	166000	111000
7	125000	223000	772000	315000	175000	292000	699000	677000	385000	309000	167000	117000
8	136000	217000	813000	304000	154000	303000	716000	625000	376000	317000	160000	118000
9	148000	202000	800000	291000	140000	325000	727000	585000	355000	321000	153000	116000
10	152000	190000	754000	280000	147000	343000	730000	547000	334000	324000	151000	117000
11	157000	183000	705000	264000	164000	343000	724000	512000	305000	317000	149000	117000
12	173000	179000	652000	244000	168000	340000	710000	482000	285000	313000	145000	115000
13	199000	185000	593000	234000	170000	344000	697000	458000	278000	304000	142000	111000
14	205000	198000	565000	230000	175000	345000	692000	462000	272000	302000	143000	106000
15	203000	233000	531000	226000	172000	335000	678000	466000	272000	298000	140000	98300
16	201000	259000	489000	219000	178000	325000	655000	465000	268000	294000	134000	95800
17	193000	264000	437000	208000	207000	326000	631000	471000	263000	288000	128000	106000
18	184000	265000	389000	194000	233000	329000	609000	470000	265000	279000	121000	110000
19	181000	262000	364000	176000	256000	335000	588000	457000	276000	268000	118000	109000
20	182000	257000	346000	166000	278000	341000	570000	440000	304000	253000	122000	110000
21	181000	258000	328000	162000	285000	356000	553000	427000	330000	246000	126000	111000
22	171000	253000	315000	160000	280000	367000	537000	420000	334000	244000	125000	123000
23	178000	252000	308000	157000	274000	371000	522000	431000	324000	243000	132000	127000
24	181000	253000	346000	161000	286000	371000	508000	446000	307000	239000	138000	124000
25	178000	252000	405000	167000	300000	366000	495000	452000	293000	240000	136000	123000
26	178000	254000	437000	170000	302000	363000	485000	451000	285000	238000	130000	135000
27	179000	262000	466000	173000	298000	362000	477000	438000	279000	228000	124000	149000
28	173000	273000	478000	176000	295000	361000	472000	422000	275000	213000	125000	152000
29	179000	286000	470000	178000	---	383000	480000	410000	261000	204000	127000	159000
30	183000	296000	453000	179000	---	428000	518000	403000	261000	194000	125000	163000
31	182000	---	444000	175000	---	465000	---	401000	---	188000	134000	---
TOTAL	5131000	7064000	15502000	7537000	6021000	10543000	17846000	15827000	9533000	8415000	4424000	3665100
MEAN	165500	235500	500100	243100	215000	340100	594900	510500	317800	271500	142700	122200
MAX	205000	296000	813000	441000	302000	465000	730000	746000	400000	324000	183000	163000
MIN	115000	179000	286000	157000	140000	279000	472000	401000	261000	188000	118000	95800
CAL YR 1982	TOTAL 107664600			MEAN 295000	MAX 813000	MIN 72300						
WTR YR 1983	TOTAL 111508100			MEAN 305500	MAX 813000	MIN 95800						

MISSISSIPPI RIVER MAIN STEM

07020500 MISSISSIPPI RIVER AT CHESTER, ILL--Continued

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.58	13.22	20.00	28.14	11.50	20.07	28.33	33.98	27.27	19.56	13.36	9.41
2	7.05	14.20	19.84	27.66	11.14	19.96	28.61	35.39	26.99	20.33	12.44	9.21
3	6.95	14.70	21.84	26.60	11.93	19.93	29.62	36.99	26.52	20.96	12.16	8.43
4	7.52	15.72	30.83	25.49	14.33	19.77	31.51	39.34	26.50	21.07	12.22	7.65
5	8.45	16.08	33.99	24.15	13.65	19.24	33.06	40.81	26.28	21.20	11.88	6.97
6	7.59	15.88	36.20	22.82	12.74	19.32	35.00	40.69	26.13	21.41	11.57	6.26
7	7.86	15.32	37.97	22.04	12.53	19.87	36.01	39.34	26.07	21.67	11.74	6.91
8	9.10	15.08	39.30	21.42	10.88	20.42	36.92	37.57	25.63	22.19	11.26	7.22
9	9.95	14.07	39.71	20.64	9.42	21.45	37.65	36.03	24.59	22.40	10.50	6.94
10	10.59	13.10	39.17	20.08	9.73	22.62	38.03	34.39	23.43	22.32	10.31	6.87
11	10.76	12.75	37.79	19.09	11.31	22.68	38.29	32.81	21.93	22.17	10.28	7.04
12	11.87	12.45	36.13	17.82	11.75	22.48	38.27	31.43	20.52	22.02	9.95	6.98
13	14.04	12.76	34.51	16.87	11.78	22.60	37.85	30.33	19.99	21.53	9.48	6.38
14	14.74	13.63	33.12	16.68	12.23	22.65	37.84	30.15	19.59	21.39	9.73	5.99
15	14.32	15.75	31.64	16.37	12.13	22.07	37.60	30.62	19.57	21.17	9.42	4.91
16	14.39	17.92	29.92	15.91	12.28	21.56	36.94	30.52	19.37	20.91	8.91	4.34
17	13.78	18.18	27.75	14.99	14.13	21.75	36.27	30.79	19.06	20.59	8.33	5.59
18	13.11	18.35	25.46	14.22	16.22	21.95	35.56	30.85	19.12	20.08	7.79	6.16
19	12.89	18.27	24.29	12.71	17.51	22.22	34.75	30.31	19.67	19.41	7.01	6.06
20	12.76	17.90	23.40	11.80	19.09	22.46	34.08	29.41	20.58	18.51	7.53	6.28
21	12.98	17.98	22.60	11.26	19.61	23.20	33.46	28.76	22.04	17.86	8.05	6.24
22	11.94	17.70	21.80	11.11	19.30	23.85	32.86	28.37	22.82	17.74	8.04	7.52
23	12.59	17.61	21.56	10.94	18.84	24.04	32.26	28.75	23.05	17.69	8.49	8.19
24	12.83	17.68	22.69	10.96	19.55	24.16	31.73	29.43	22.54	17.39	9.22	7.85
25	12.64	17.63	26.24	11.33	20.32	23.83	31.30	29.75	21.65	17.34	9.11	7.56
26	12.51	17.76	27.59	11.47	20.52	23.67	30.97	29.78	20.92	17.27	8.55	8.69
27	12.75	18.19	28.86	11.52	20.31	23.69	30.70	29.21	20.48	16.70	7.93	10.23
28	12.29	18.94	29.80	11.75	20.17	23.56	30.38	28.45	20.01	15.62	7.84	10.35
29	12.56	19.56	29.49	11.99	---	24.13	30.51	27.82	19.10	14.89	8.18	10.91
30	12.93	20.42	28.73	11.80	---	25.99	32.26	27.42	18.90	14.17	7.82	11.31
31	12.89	---	28.20	11.92	---	27.53	---	27.30	---	13.42	8.73	---
MEAN	11.46	16.29	29.37	16.82	14.82	22.35	33.95	32.15	22.34	19.39	9.61	7.48
MAX	14.74	20.42	39.71	28.14	20.52	27.53	38.29	40.81	27.27	22.40	13.36	11.31
MIN	6.95	12.45	19.84	10.94	9.42	19.24	28.33	27.30	18.90	13.42	7.01	4.34
WTR YR 1983	MEAN	19.71	MAX	40.81	MIN	4.34						

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 June 6, 1982; minimum daily, 3,580 tons March 18, 1981.

EXTREMES FOR CURRENT YEAR.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 1,510 mg/L April 2; minimum daily mean, 62 mg/L January 26.

SUSPENDED-SEDIMENT LOADS: Maximum daily 2,440,000 tons December 6; minimum daily, 26,500 tons August 21.

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)
OCT , 1982										
07...	125000	32	34	--	42	73	81	99	100	100
NOV										
23...	252000	36	40	43	49	66	70	93	99	100
DEC										
06...	711000	46	48	51	57	74	81	94	98	100
JAN , 1983										
26...	170000	--	--	--	--	49	54	84	100	100
MAR										
01...	294000	38	42	48	59	76	79	93	100	100
04...	185000	60	62	67	72	85	91	99	100	100
24...	373000	29	32	36	47	66	71	90	99	100
APR										
08...	170000	60	62	67	72	85	91	99	100	100
MAY										
05...	736000	55	61	66	71	84	87	95	100	100
JUN										
17...	263000	31	34	--	44	69	74	96	100	100
JUL										
14...	317000	37	39	43	48	75	78	93	100	100
SEP										
01...	139000	--	--	--	--	56	64	97	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)
OCT , 1982										
07...	0	0	19	48	76	88	94	99	100	100
JAN , 1983										
26...	0	0	14	76	93	98	100	100	100	100
MAR										
24...	0	0	7	50	91	96	98	98	99	100
JUN										
17...	0	0	22	57	77	91	95	98	100	100

MISSISSIPPI RIVER MAIN STEM

07020500 MISSISSIPPI RIVER AT CHESTER, IL--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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	129000	227	79100	192000	388	201000	290000	328	257000
2	116000	213	66700	205000	242	134000	286000	350	270000
3	115000	175	54300	217000	230	135000	376000	467	474000
4	123000	152	50500	230000	286	178000	547000	771	1140000
5	126000	137	46600	234000	273	172000	632000	1320	2250000
6	120000	123	39900	230000	316	196000	711000	1270	2440000
7	125000	110	37100	223000	276	166000	772000	827	1720000
8	136000	122	44800	217000	278	163000	813000	606	1330000
9	148000	240	95900	202000	265	145000	800000	495	1070000
10	152000	183	75100	190000	196	101000	754000	463	943000
11	157000	148	62700	183000	183	90400	705000	190	362000
12	173000	209	97600	179000	220	106000	652000	469	826000
13	199000	249	134000	185000	242	121000	593000	463	741000
14	205000	338	187000	198000	265	142000	565000	404	616000
15	203000	456	250000	233000	331	208000	531000	399	572000
16	201000	431	234000	259000	384	269000	489000	445	588000
17	193000	203	106000	264000	604	431000	437000	377	445000
18	184000	179	88900	265000	534	382000	389000	403	423000
19	181000	317	155000	262000	492	348000	364000	367	361000
20	182000	307	151000	257000	554	384000	346000	286	267000
21	181000	312	152000	258000	497	346000	328000	267	236000
22	171000	260	120000	253000	470	321000	315000	234	199000
23	178000	248	119000	252000	435	296000	308000	216	180000
24	181000	224	109000	253000	555	379000	346000	324	303000
25	178000	225	108000	252000	541	368000	405000	484	529000
26	178000	285	137000	254000	400	274000	437000	442	522000
27	179000	169	81700	262000	453	320000	466000	409	515000
28	173000	170	79400	273000	436	321000	478000	429	554000
29	179000	171	82600	286000	360	278000	470000	396	503000
30	183000	152	75100	296000	323	258000	453000	364	445000
31	182000	360	177000	---	---	---	444000	339	406000
TOTAL	5131000	---	3297000	7064000	---	7233400	15502000	---	21487000
JANUARY			FEBRUARY			MARCH			
1	441000	239	285000	168000	89	40400	294000	487	387000
2	426000	266	306000	165000	91	40500	291000	453	356000
3	403000	328	357000	177000	146	69800	291000	398	313000
4	378000	299	305000	202000	174	94900	287000	383	297000
5	351000	235	223000	190000	152	78000	279000	461	347000
6	329000	225	200000	182000	204	100000	282000	337	257000
7	315000	261	222000	175000	188	88800	292000	322	254000
8	304000	222	182000	154000	145	60300	303000	379	310000
9	291000	161	126000	140000	153	57800	325000	531	466000
10	280000	134	101000	147000	146	57900	343000	715	662000
11	264000	120	85500	164000	213	94300	343000	797	738000
12	244000	134	88300	168000	235	107000	340000	732	672000
13	234000	146	92200	170000	126	57800	344000	657	610000
14	230000	138	85700	175000	98	46300	345000	678	632000
15	226000	256	156000	172000	106	49200	335000	638	577000
16	219000	279	165000	178000	166	79800	325000	525	461000
17	208000	190	107000	207000	332	186000	326000	447	393000
18	194000	90	47100	233000	252	159000	329000	414	368000
19	176000	92	43700	256000	386	267000	335000	407	368000
20	166000	146	65400	278000	380	285000	341000	500	460000
21	162000	124	54200	285000	521	401000	356000	525	505000
22	160000	78	33700	280000	509	385000	367000	478	474000
23	157000	100	42400	274000	437	323000	371000	489	490000
24	161000	101	43900	286000	490	378000	371000	487	488000
25	167000	87	39200	300000	528	428000	366000	494	488000
26	170000	62	28500	302000	699	570000	363000	384	376000
27	173000	155	72400	298000	546	439000	362000	396	387000
28	176000	189	89800	295000	524	417000	361000	360	351000
29	178000	175	84100	---	---	---	383000	385	398000
30	179000	105	50700	---	---	---	428000	746	862000
31	175000	82	38700	---	---	---	465000	1260	1580000
TOTAL	7537000	---	3820500	6021000	---	5360800	10543000	---	15327000

MISSISSIPPI RIVER MAIN STEM

07020500 MISSISSIPPI RIVER AT CHESTER, IL--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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	482000	1270	1650000	566000	411	628000	400000	481	519000
2	496000	1510	2020000	600000	447	724000	394000	588	626000
3	528000	1060	1510000	651000	611	1070000	390000	572	602000
4	574000	990	1530000	723000	672	1310000	390000	561	591000
5	624000	1050	1770000	746000	586	1180000	386000	485	505000
6	669000	985	1780000	723000	493	962000	386000	465	485000
7	699000	910	1720000	677000	436	797000	385000	398	414000
8	716000	880	1700000	625000	404	682000	376000	370	376000
9	727000	770	1510000	585000	453	716000	355000	322	309000
10	730000	701	1380000	547000	513	758000	334000	285	257000
11	724000	526	1030000	512000	511	706000	305000	275	226000
12	710000	461	884000	482000	490	638000	285000	251	193000
13	697000	501	943000	458000	428	529000	278000	236	177000
14	692000	693	1290000	462000	437	545000	272000	254	187000
15	678000	452	827000	466000	406	511000	272000	249	183000
16	655000	402	711000	465000	356	447000	268000	225	163000
17	631000	382	651000	471000	399	507000	263000	215	153000
18	609000	397	653000	470000	541	687000	265000	233	167000
19	588000	362	575000	457000	549	677000	276000	259	193000
20	570000	423	651000	440000	430	511000	304000	445	365000
21	553000	454	678000	427000	492	567000	330000	799	712000
22	537000	444	644000	420000	530	601000	334000	1040	938000
23	522000	434	612000	431000	460	535000	324000	1140	997000
24	508000	435	597000	446000	464	559000	307000	1270	1050000
25	495000	359	480000	452000	501	611000	293000	1400	1110000
26	485000	334	437000	451000	653	795000	285000	1220	939000
27	477000	334	430000	438000	699	827000	279000	923	695000
28	472000	365	465000	422000	602	686000	275000	694	515000
29	480000	375	486000	410000	481	532000	261000	648	457000
30	518000	396	554000	403000	446	485000	261000	931	656000
31	---	---	---	401000	473	512000	---	---	---
TOTAL	17846000	---	30168000	15827000	---	21295000	9533000	---	14760000
JULY			AUGUST			SEPTEMBER			
1	273000	687	506000	183000	146	72100	141000	115	43800
2	284000	436	334000	172000	138	64100	136000	110	40400
3	295000	512	408000	170000	122	56000	128000	121	41800
4	296000	523	418000	170000	129	59200	122000	119	39200
5	300000	220	178000	168000	151	68500	115000	106	32900
6	303000	312	255000	166000	147	65900	111000	107	32100
7	309000	757	632000	167000	150	67600	117000	108	34100
8	317000	608	520000	160000	149	64400	118000	102	32500
9	321000	610	529000	153000	141	58200	116000	103	32300
10	324000	529	463000	151000	126	51400	117000	142	44900
11	317000	415	355000	149000	103	41400	117000	109	34400
12	313000	446	377000	145000	99	38800	115000	110	34200
13	304000	399	327000	142000	117	44900	111000	107	32100
14	302000	349	285000	143000	102	39400	106000	101	28900
15	298000	327	263000	140000	102	38600	98300	110	29200
16	294000	322	256000	134000	119	43100	95800	111	28700
17	288000	325	253000	128000	115	39700	106000	116	33200
18	279000	299	225000	121000	115	37600	110000	113	33600
19	268000	290	210000	118000	111	35400	109000	118	34700
20	253000	257	176000	122000	107	35200	110000	140	41600
21	246000	240	159000	126000	78	26500	111000	133	39900
22	244000	231	152000	125000	102	34400	123000	134	44500
23	243000	242	159000	132000	123	43800	127000	169	58000
24	239000	198	128000	138000	154	57400	124000	140	46900
25	240000	213	138000	136000	203	74500	123000	129	42800
26	238000	275	177000	130000	135	47400	135000	143	52100
27	228000	254	156000	124000	86	28800	149000	131	52700
28	213000	195	112000	125000	96	32400	152000	132	54200
29	204000	225	124000	127000	103	35300	159000	147	63100
30	194000	232	122000	125000	106	35800	163000	161	70900
31	188000	162	82200	134000	119	43100	---	---	---
TOTAL	8415000	---	8479200	4424000	---	1480900	3665100	---	1229700
YEAR	111508100		133938500						

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 downstream from Perkins Creek.

DRAINAGE AREA.--423 mi².

PERIOD OF RECORD.--January 1920 to current year. Prior to October 1921 monthly discharge only published in WSP 1931.

REVISED RECORDS.--WSP 1147: 1922-23(M). WSP 1281: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 350.38 ft National Geodetic Vertical Datum of 1929. Prior to June 9, 1953, nonrecording gage. Prior to Oct. 1, 1925, at site 500 ft upstream at datum 49.82 ft lower, Oct. 1, 1925, to Nov. 12, 1930, at site 500 ft upstream at datum 0.18 ft higher. Nov. 13, 1930, to June 8, 1953, at present site and datum. Since Dec. 18, 1949, auxiliary nonrecording gage, 6.0 mi downstream.

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

AVERAGE DISCHARGE.--63 years, 511 ft³/s, 16.40 in/yr, 370,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 97,100 ft³/s Dec. 4, 1982, gage height, 29.91 ft; minimum discharge, 16 ft³/s, Aug. 31, 1936; gage height, 0.81 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of August 1915 reached a stage of 28.0 ft, present datum, from floodmark by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 8,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 4	0015	*97,100	29.91
Dec. 25	0330	40,800	27.06
Apr. 30	1415	44,800	27.33

Minimum daily discharge, 43 ft³/s Sept. 21, 23, 25.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	131	120	1060	1060	186	170	483	16600	209	134	64	49
2	124	124	780	952	432	167	977	7170	198	119	63	49
3	118	124	38800	742	558	164	1110	5640	207	111	60	47
4	118	122	42700	629	623	161	1030	4750	237	106	59	46
5	113	119	10100	556	576	176	901	2300	223	106	58	45
6	112	116	4320	499	546	1890	1660	1340	198	103	62	44
7	119	114	1700	446	506	2030	2390	1040	183	98	98	47
8	113	113	1280	397	453	1220	2260	990	174	94	81	48
9	1690	111	1580	359	412	860	2200	836	167	91	70	44
10	938	111	1230	333	381	697	2150	715	161	89	65	45
11	388	110	1020	306	351	588	1550	592	155	86	63	45
12	300	106	804	279	325	508	1140	553	150	84	64	44
13	255	123	647	264	301	450	1070	486	145	81	63	44
14	222	124	568	250	282	404	5100	740	141	78	60	44
15	203	122	525	235	267	362	6040	4380	138	77	58	45
16	186	106	474	223	256	331	2450	2520	133	77	57	46
17	173	116	428	212	245	305	1510	852	129	76	56	46
18	162	117	394	202	235	293	1250	698	125	75	55	45
19	154	118	365	192	227	278	985	706	122	74	54	44
20	150	120	336	186	217	280	760	615	120	72	52	44
21	145	120	311	183	209	286	635	530	118	70	51	43
22	140	128	292	184	204	291	633	492	117	68	50	44
23	134	238	287	181	198	296	622	429	114	66	52	43
24	129	343	8430	178	192	283	563	372	111	64	51	44
25	126	262	28200	175	187	270	506	332	108	62	55	43
26	123	242	11200	171	180	269	463	305	106	61	55	46
27	120	716	4520	169	176	381	426	276	116	61	54	47
28	116	3380	2960	165	173	424	396	260	115	62	53	48
29	118	3050	2440	167	---	414	2570	260	145	61	52	48
30	118	1560	1680	181	---	402	30700	242	157	63	50	47
31	118	---	1300	179	---	392	---	224	---	65	49	---
TOTAL	7156	12375	170731	10255	8898	15042	74530	57245	4522	2534	1834	1364
MEAN	231	413	5507	331	318	485	2484	1847	151	81.7	59.2	45.5
MAX	1690	3380	42700	1060	623	2030	30700	16600	237	134	98	49
MIN	112	106	287	165	173	161	396	224	106	61	49	43
CAL YR 1982		TOTAL	371081		MEAN	1017	MAX	42700	MIN	62		
WTR YR 1983		TOTAL	366486		MEAN	1004	MAX	42700	MIN	43		

MISSISSIPPI RIVER MAIN STEM

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 07140165, near center span on downstream side of railroad bridge at Thebes, 5.0 mi downstream from Headwater Diversion Channel, and at mile 43.7 above Ohio River.

DRAINAGE AREA.--713,200 mi², 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). WDR MO-76-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 300 ft 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 upstream at datum 4.65 ft 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 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.--51 years, 192,480 ft³/s, 139,500,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 893,000 ft³/s May 27, 1943, elevation, 340.33 ft, present datum; maximum elevation, 343.43 ft Apr. 30, 1973; minimum discharge, 23,400 ft³/s Dec. 13, 1937, at site then in use; minimum elevation, 301.67 ft Jan. 2, 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 4, 1944, reached an elevation of 345.14 ft, present datum, at Grays Point, from floodmarks, discharge, 1,375,000 ft³/s, computed by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 846,000 ft³/s Dec. 9 at 1800, maximum gage height, 42.65 ft May 6 at 1100; minimum, 98,300 ft³/s Sept. 17, gage height, 9.35 ft.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	141600	189000	297000	489000	177000	287000	468000	603000	443000	280000	189000	148000
2	130000	200000	296000	479000	179000	286000	476000	639000	437000	291000	182000	153000
3	119000	210000	350000	462000	182000	283000	489000	682000	431000	302000	175000	147000
4	121000	220000	521000	440000	198000	281000	517000	729000	426000	310000	173000	137000
5	130000	232000	645000	411000	211000	273000	556000	782000	416000	311000	172000	130000
6	130000	233000	727000	380000	201000	274000	612900	797000	407000	313000	169000	121000
7	128000	228000	779000	357000	197000	283000	661000	766000	402000	316000	168000	120000
8	135000	222000	797000	337000	188000	295000	691000	725000	397000	322000	167000	124000
9	150000	213000	838000	317000	172000	312000	718000	682000	384000	327000	160000	124000
10	163000	197000	829000	300000	163000	334000	729000	641000	364000	328000	156000	122000
11	163000	190000	786000	281000	172000	344000	738000	601000	342000	332000	155000	122000
12	171000	186000	738000	263000	183000	344000	744000	568000	314000	334000	154000	121000
13	189000	179000	691000	245000	184000	345000	736000	539000	300000	331000	156000	117000
14	212000	190000	642000	237000	185000	347000	738000	522000	292000	324000	150000	114000
15	212000	209000	595000	234000	186000	340000	732000	531000	289000	321000	151000	108000
16	209000	245000	547000	227000	185000	330000	715000	526000	287000	315000	148000	101000
17	200000	263000	494000	218000	195000	327000	693000	521000	281000	298000	142000	100000
18	191000	267000	438000	208000	225000	331000	671000	522000	279000	289000	138000	108000
19	190000	265000	395000	192000	246000	333000	650000	522000	283000	280000	130000	110000
20	188000	258000	370000	180000	268000	339000	628000	508000	296000	269000	129000	109000
21	188000	251000	350000	173000	281000	350000	606000	493000	315000	259000	134000	110000
22	183000	249000	333000	169000	282000	363000	588000	484000	332000	252000	140000	113000
23	180000	250000	321000	167000	275000	373000	573000	480000	340000	251000	142000	124000
24	185000	250000	342000	166000	276000	382000	556000	488000	337000	247000	149000	126000
25	185000	250000	424000	170000	287000	385000	543000	496000	325000	245000	153000	124000
26	184000	251000	443000	174000	295000	383000	529000	497000	311000	246000	150000	125000
27	185000	257000	472000	176000	293000	385000	515000	494000	302000	242000	144000	139000
28	183000	274000	502000	177000	289000	385000	503000	483000	297000	229000	137000	150000
29	181000	284000	514000	179000	---	389000	509000	470000	285000	216000	139000	154000
30	186000	295000	508000	181000	---	413000	563000	457000	277000	205000	138000	159000
31	188000	---	498000	181000	---	447000	---	449000	---	194000	139000	---
TOTAL	5300000	7007000	16482600	8170000	6175000	10543000	18447000	17697000	10191000	8779000	4723000	3760000
MEAN	171000	233600	531700	263500	220500	340100	614900	570900	339700	283200	152400	125300
MAX	212000	295000	838000	489000	295000	447000	744000	797000	443000	334000	189000	159000
MIN	119000	179000	296000	166000	163000	273000	468000	449000	277000	194000	129000	100000
CAL YR 1982	TOTAL 112715100			MEAN 308800	MAX 838000	MIN 81000						
WTR YR 1983	TOTAL 1127274000			MEAN 321300	MAX 838000	MIN 100000						

MISSISSIPPI RIVER MAIN STEM

07022000 MISSISSIPPI RIVER AT THEBES, IL--Continued

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13.62	17.03	24.53	34.60	16.94	23.86	31.15	38.94	34.02	23.29	17.96	13.42
2	12.85	17.63	24.15	34.34	16.97	23.78	31.85	39.89	33.78	23.90	17.44	14.04
3	11.68	18.34	25.45	33.64	17.29	23.59	32.45	40.82	33.36	24.52	16.76	13.66
4	11.65	18.95	33.65	32.81	18.15	23.49	33.59	41.92	32.96	25.04	16.63	12.86
5	12.43	19.72	37.51	31.64	19.49	23.00	34.99	43.29	32.40	25.01	16.59	12.30
6	12.65	19.92	39.71	30.34	18.81	22.99	36.78	44.10	31.67	25.24	16.29	11.45
7	12.30	19.57	41.27	28.96	18.49	23.51	38.59	43.75	31.36	25.32	16.13	11.31
8	13.00	19.23	41.55	27.81	18.08	24.17	39.90	42.82	31.02	25.66	16.15	11.72
9	13.85	18.79	42.54	26.66	16.66	25.00	40.80	41.71	30.21	25.92	15.63	11.69
10	15.15	17.75	42.42	25.65	15.74	26.19	41.22	40.76	29.07	26.01	15.11	11.69
11	15.05	17.15	41.62	24.55	16.33	26.86	41.35	39.62	27.81	25.82	14.95	11.85
12	15.48	16.81	40.63	23.33	17.37	26.74	41.68	38.65	26.10	25.68	14.78	11.73
13	16.74	16.68	39.40	22.14	17.48	26.72	41.72	37.60	25.04	25.45	14.38	11.48
14	18.53	17.07	38.27	21.58	17.53	26.72	41.72	36.95	24.39	25.03	14.26	11.07
15	18.63	18.05	36.91	21.18	17.72	26.42	41.66	37.20	23.87	24.96	14.31	10.60
16	18.50	20.45	35.75	15.00	17.50	25.82	41.31	37.13	23.86	24.70	14.02	9.74
17	17.96	21.78	34.01	20.25	17.98	25.43	40.83	36.92	23.42	24.49	13.45	9.45
18	17.37	21.98	32.09	19.41	19.92	25.62	40.18	36.82	23.34	24.01	13.04	10.52
19	17.15	22.08	30.44	18.42	21.20	25.76	39.82	36.90	23.48	23.54	12.27	10.92
20	19.05	21.98	29.34	17.31	22.54	25.89	39.25	36.38	24.14	22.88	11.94	10.81
21	17.08	21.68	28.39	16.70	23.39	26.50	38.80	35.89	25.10	22.27	12.25	11.01
22	16.80	21.61	27.59	16.35	23.56	27.04	38.27	35.52	26.09	21.84	12.73	11.09
23	16.24	21.70	27.01	16.19	23.25	27.48	37.80	35.30	26.47	21.74	12.67	12.33
24	16.75	21.61	27.73	15.97	23.06	27.87	37.40	35.54	26.60	21.55	13.36	12.69
25	16.93	21.60	32.02	16.22	23.73	28.09	36.86	35.92	25.99	21.31	13.81	12.49
26	16.65	21.67	32.76	16.65	24.22	27.93	36.50	36.08	25.21	21.36	13.59	12.40
27	16.75	22.03	33.71	16.80	24.21	27.85	36.06	35.91	24.72	21.27	13.16	13.54
28	16.72	23.03	34.92	16.88	23.96	27.82	35.66	35.61	24.44	20.59	12.56	14.61
29	16.40	23.66	35.47	17.05	---	27.85	35.57	35.14	23.82	19.70	12.73	14.89
30	16.82	24.28	35.30	17.21	---	28.64	37.35	34.60	23.26	19.06	12.76	15.39
31	17.08	---	34.92	17.27	---	30.23	---	34.26	---	18.35	12.72	---
MEAN	15.74	20.13	34.23	22.35	19.70	26.09	38.04	38.13	27.23	23.40	14.34	12.09
MAX	19.05	24.28	42.54	34.60	24.22	30.23	41.72	44.10	34.02	26.01	17.96	15.39
MIN	11.65	16.68	24.15	15.00	15.74	22.99	31.15	34.26	23.26	18.35	11.94	9.45
WTR YR 1983	MEAN	24.33	MAX	44.10	MIN	9.45						

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 3,970,000 tons December 6, 1982; minimum daily, 2530 tons January 28, 1981.

EXTREMES FOR CURRENT YEAR.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 2,190 mg/L December 6; minimum daily mean 76 mg/L February 17.

SUSPENDED-SEDIMENT LOADS: Maximum daily, 3,970,000 tons December 5; minimum daily, 30,500 tons September 22.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD 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, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
NOV 23...	1300	248000	508	8.0	7.5	180	8.8	73	4200	28000
JAN 18...	1245	207000	581	8.1	1.0	45	12.0	85	1800	2400
MAR 25...	0900	385000	440	8.0	6.0	150	8.4	67	3000	27000
MAY 24...	1200	488000	491	8.0	18.0	80	6.6	68	8200	5400
JUL 06...	0900	313000	541	8.0	26.0	210	4.4	53	9800	5000
SEP 02...	1000	153000	635	8.2	28.0	17	6.0	76	4200	1400

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 23...	200	54	50	19	21	18	.7	4.3	150	65
JAN 18...	250	59	63	22	22	16	.6	3.5	190	77
MAR 25...	190	65	50	17	16	15	.5	3.8	130	59
MAY 24...	210	61	53	19	16	14	.5	3.5	150	66
JUL 06...	230	49	57	21	20	16	.6	4.4	180	75
SEP 02...	260	91	63	25	37	23	1	4.4	170	120

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 23...	20	.30	10	303	280	.41	203000	3.30	.190
JAN 18...	20	.30	11	361	330	.49	202000	4.00	.140
MAR 25...	16	.20	10	269	250	.37	280000	2.80	.340
MAY 24...	17	<.10	6.8	276	270	.38	364000	3.00	<.060
JUL 06...	18	.30	9.6	340	310	.46	287000	3.70	<.060
SEP 02...	23	.40	7.8	380	380	.52	157000	1.30	<.010

MISSISSIPPI RIVER MAIN STEM

07022000 MISSISSIPPI RIVER AT THEBES, IL--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4) (71846)	NITRO- GEN,AM- MONIA + ORGANIC (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- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
NOV 23...	.24	2.4	.410	1.3	.130	.100	476	319000	61
JAN 18...	.18	1.0	.230	.71	.110	.080	263	147000	31
MAR 25...	.44	2.7	.370	1.1	.110	.100	71	73800	61
MAY 24...	--	2.3	.300	.92	.090	.070	356	469000	87
JUL 06...	--	2.3	.590	1.8	.150	.120	677	572000	95
SEP 02...	--	1.1	.150	.46	.120	.130	169	69800	90

DATE	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)
NOV 23...	60	2	87	.5	<1	<1	<3	11	60	<1
JAN 18...	40	1	110	.5	<1	<1	<3	6	32	1
MAY 24...	30	2	91	<.5	<1	<1	<3	3	23	2
JUL 06...	10	3	110	<.5	2	<1	<3	10	57	4

DATE	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 23...	23	7	.2	<10	2	1	<1	210	<6	11
JAN 18...	19	17	.1	<10	2	1	<1	220	<6	12
MAY 24...	14	3	.3	<10	5	1	<1	210	<6	10
JUL 06...	25	5	.1	<10	3	2	<1	260	<6	75

DATE	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT) (80030)	GROSS ALPHA, SUSP. TOTAL (UG/L U-NAT) (80040)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137) (03515)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137) (03516)	GROSS BETA, DIS- SOLVED (PCI/L AS SR/ YT-90) (80050)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/ YT-90) (80060)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L) (09511)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)	GROSS ALPHA, SUSP. TOTAL (PCI/L AS U-NAT) (01516)
MAR 25...	<4.6	11	7.3	8.3	7.0	8.0	.10	3.0	7.5
SEP 02...	<12	<1.7	9.6	3.1	9.3	2.9	.08	4.9	--

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)
NOV , 1982										
23...	263000	36	41	43	50	66	72	96	99	100
MAR , 1983										
25...	394000	23	26	29	36	53	60	87	97	100
APR 07...	661000	44	47	49	56	68	73	94	99	100
MAY 06...	804000	47	52	57	62	71	74	92	96	99
JUL 07...	671000	44	47	49	55	68	73	94	99	100

MISSISSIPPI RIVER MAIN STEM

07022000 MISSISSIPPI RIVER AT THEBES, IL--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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	141000	260	99000	189000	242	123000	297000	467	385000
2	130000	239	83900	200000	246	133000	296000	449	366000
3	119000	238	76500	210000	324	184000	350000	460	445000
4	121000	228	74500	220000	370	220000	521000	1280	1840000
5	130000	223	78300	232000	424	266000	645000	2190	3900000
6	130000	217	76200	233000	441	277000	727000	1980	3970000
7	128000	197	68100	228000	431	265000	779000	1450	3100000
8	135000	221	80600	222000	412	247000	797000	1040	2410000
9	150000	225	91100	213000	297	171000	838000	805	1850000
10	163000	254	112000	197000	310	165000	829000	659	1510000
11	163000	249	110000	190000	291	149000	786000	599	1320000
12	171000	248	115000	186000	285	143000	738000	589	1210000
13	189000	399	204000	179000	280	135000	691000	570	1080000
14	212000	699	400000	190000	451	231000	642000	481	839000
15	212000	542	310000	209000	351	198000	595000	471	757000
16	209000	836	472000	245000	467	309000	547000	432	638000
17	200000	665	359000	263000	506	359000	494000	332	443000
18	191000	577	298000	267000	697	502000	438000	323	382000
19	190000	528	271000	265000	678	485000	395000	470	501000
20	188000	450	228000	258000	591	420000	370000	337	337000
21	188000	439	223000	251000	541	380000	350000	304	287000
22	183000	400	198000	249000	549	382000	333000	434	390000
23	180000	371	180000	250000	556	387000	321000	245	212000
24	185000	341	170000	250000	572	400000	342000	326	301000
25	185000	293	146000	250000	588	410000	424000	503	576000
26	184000	283	141000	251000	587	410000	443000	518	620000
27	185000	311	155000	257000	577	413000	472000	493	628000
28	183000	282	139000	274000	566	431000	502000	661	896000
29	181000	215	105000	284000	539	423000	514000	554	769000
30	186000	224	112000	295000	494	404000	508000	601	824000
31	188000	256	130000	---	---	---	498000	519	698000
TOTAL	5300000	---	5306200	7007000	---	9022000	16482000	---	33484000
JANUARY			FEBRUARY			MARCH			
1	489000	334	441000	177000	104	49700	287000	539	418000
2	479000	564	729000	179000	116	56100	286000	549	424000
3	462000	594	741000	182000	145	71300	283000	511	390000
4	440000	585	695000	198000	169	90300	281000	428	325000
5	411000	449	498000	211000	194	111000	273000	563	415000
6	380000	322	330000	201000	191	104000	274000	619	458000
7	357000	266	256000	197000	179	95200	283000	414	316000
8	337000	242	220000	188000	176	89300	295000	397	316000
9	317000	226	193000	172000	164	76200	312000	426	359000
10	300000	186	151000	163000	148	65100	334000	518	467000
11	281000	124	94100	172000	132	61300	344000	675	627000
12	263000	77	54700	183000	116	57300	344000	668	620000
13	245000	123	81400	184000	83	41200	345000	665	619000
14	237000	249	159000	185000	108	53900	347000	782	733000
15	234000	352	222000	186000	432	217000	340000	655	601000
16	227000	214	131000	185000	151	75400	330000	620	552000
17	218000	190	112000	195000	76	40000	327000	557	492000
18	208000	197	111000	225000	271	165000	331000	531	475000
19	192000	190	98500	246000	340	226000	333000	542	487000
20	180000	168	81600	268000	384	278000	339000	497	455000
21	173000	130	60700	281000	480	364000	350000	494	467000
22	169000	108	49300	282000	490	373000	363000	505	495000
23	167000	147	66300	275000	552	410000	373000	516	520000
24	166000	326	146000	276000	493	367000	382000	550	567000
25	170000	148	67900	287000	538	417000	385000	533	554000
26	174000	109	51200	295000	619	493000	383000	453	468000
27	176000	106	50400	293000	726	574000	385000	498	518000
28	177000	98	46800	289000	588	459000	385000	499	519000
29	179000	94	45400	---	---	---	389000	424	445000
30	181000	119	58200	---	---	---	413000	444	495000
31	181000	123	60100	---	---	---	447000	1000	1210000
TOTAL	8170000	---	6101600	6175000	---	5480300	10543000	---	15807000

MISSISSIPPI RIVER MAIN STEM

07022000 MISSISSIPPI RIVER AT THEBES, IL--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)
APRIL			MAY			JUNE			
1	468000	1160	1470000	603000	428	697000	443000	744	890000
2	476000	917	1180000	639000	446	769000	437000	735	867000
3	489000	1120	1480000	682000	464	854000	431000	786	915000
4	517000	1300	1810000	729000	564	1110000	426000	1080	1240000
5	556000	1330	2000000	782000	807	1700000	416000	568	638000
6	612000	1200	1980000	797000	956	2060000	407000	406	446000
7	661000	1050	1870000	766000	1100	2280000	402000	436	473000
8	691000	1080	2010000	725000	970	1900000	397000	407	436000
9	718000	945	1830000	682000	491	904000	384000	393	407000
10	729000	796	1570000	641000	464	803000	364000	399	392000
11	738000	774	1540000	601000	372	604000	342000	380	351000
12	744000	586	1180000	568000	368	564000	314000	351	298000
13	736000	585	1160000	539000	369	537000	300000	311	252000
14	738000	486	968000	522000	356	502000	292000	302	238000
15	732000	397	785000	531000	347	497000	289000	293	229000
16	715000	435	840000	526000	405	575000	287000	303	235000
17	693000	502	939000	521000	425	598000	281000	274	208000
18	671000	414	750000	522000	426	600000	279000	274	206000
19	650000	394	691000	522000	512	722000	283000	285	218000
20	628000	364	617000	508000	485	665000	296000	327	261000
21	606000	334	546000	493000	438	583000	315000	501	426000
22	588000	333	529000	484000	382	499000	332000	852	764000
23	573000	332	514000	480000	402	521000	340000	1150	1060000
24	556000	332	498000	488000	403	531000	337000	1120	1020000
25	543000	312	457000	496000	433	580000	325000	1260	1110000
26	529000	321	458000	497000	444	596000	311000	1280	1070000
27	515000	339	471000	494000	483	644000	302000	1160	946000
28	503000	338	459000	483000	533	695000	297000	946	759000
29	509000	337	463000	470000	554	703000	285000	781	601000
30	563000	411	625000	457000	633	781000	277000	689	515000
31	---	---	---	449000	654	793000	---	---	---
TOTAL	18447000	---	31690000	17697000	---	25867000	10191000	---	17471000
JULY			AUGUST			SEPTEMBER			
1	280000	743	562000	189000	234	119000	148000	148	59100
2	291000	687	540000	182000	190	93400	153000	148	61100
3	302000	599	488000	175000	190	89800	147000	118	46800
4	310000	605	506000	173000	196	91600	137000	123	45500
5	311000	697	585000	172000	180	83600	130000	140	49100
6	313000	825	697000	169000	163	74400	121000	151	49300
7	316000	912	778000	168000	169	76700	120000	144	46700
8	322000	914	795000	167000	215	96900	124000	149	49900
9	327000	798	705000	160000	244	105000	124000	154	51600
10	328000	704	623000	156000	182	76700	122000	147	48400
11	332000	631	566000	155000	165	69100	122000	141	46400
12	334000	530	478000	154000	159	66100	121000	134	43800
13	331000	531	475000	150000	171	69300	117000	133	42000
14	324000	473	414000	150000	172	69700	114000	133	40900
15	321000	453	393000	151000	149	60700	108000	132	38500
16	315000	443	377000	148000	126	50300	101000	153	41700
17	298000	411	331000	142000	126	48300	100000	163	44000
18	289000	390	304000	138000	150	55900	108000	140	40800
19	280000	369	279000	130000	138	48400	110000	161	47800
20	269000	359	261000	129000	116	40400	109000	128	37700
21	259000	371	259000	134000	151	54600	110000	122	36200
22	252000	333	227000	140000	244	92200	113000	100	30500
23	251000	312	211000	142000	233	89300	124000	125	41900
24	247000	285	190000	149000	152	61100	126000	130	44200
25	245000	264	175000	153000	164	67700	124000	124	41500
26	246000	298	198000	150000	152	61600	125000	154	52000
27	242000	254	166000	144000	141	54800	139000	178	66800
28	229000	216	134000	137000	141	52200	150000	167	67600
29	216000	194	113000	139000	129	48400	154000	140	58200
30	205000	200	111000	138000	124	46200	159000	159	68300
31	194000	212	111000	139000	154	57800	---	---	---
TOTAL	8779000	---	12052000	4723000	---	2171200	3760000	---	1438300
YEAR	117274000		165890600						

ST. FRANCIS RIVER BASIN

07036100 ST. FRANCIS RIVER NEAR SACO, MO.

WATER-QUALITY RECORDS

LOCATION.--Lat 37°23'06", long 90°28'27", in NE¼SE¼NE¼, sec.10, T.31 N., R.5 E., Madison County, Hydrologic Unit 08020202, at bridge on County Highway C near Saco, and 1.3 mi downstream from Twelvemile Creek.

PERIOD OF RECORD.--October 1982 to current year.

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 (STAND- ARD 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)	COLI- FORM, FECAL, 0.7 UM-MF (COLS. / 100 ML) (31625)
OCT 22...	1230	1028	29001	118	216	8.1	12.0	10.0	93	<5	17
NOV 24...	0930	1028	29001	130	270	8.1	9.0	10.4	90	8	48
DEC 16...	1020	1028	29001	738	195	7.5	4.5	12.4	95	7	110
JAN 19...	1000	1028	29001	225	230	8.1	2.0	12.8	93	20	K4
FEB 16...	0915	1028	29001	322	194	8.6	6.5	12.0	98	<5	K4
MAR 24...	1145	1028	29001	610	210	8.5	9.0	12.2	105	7	32
APR 13...	1400	1028	29001	1770	158	7.9	13.0	8.4	80	<5	1200
MAY 25...	0930	1028	29001	270	185	8.3	20.0	8.0	87	14	K15
JUN 21...	1115	1028	29001	80	244	7.9	25.0	6.8	81	12	100
JUL 05...	1230	1028	29001	125	200	7.9	27.0	5.6	69	15	52
AUG 03...	1130	1028	29001	16	245	7.9	27.0	6.0	74	15	28
SEP 01...	1230	1028	29001	10	230	7.4	26.5	6.8	84	8	57

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										
22...	110	24	22	13	4.1	2.4	85	1.3	18	5.0
NOV										
24...	--	--	--	--	--	--	108	1.7	--	--
DEC										
16...	--	--	--	--	--	--	69	4.2	--	--
JAN										
19...	120	27	25	13	5.3	1.5	89	1.4	23	<2.0
FEB										
16...	--	--	--	--	--	--	69	.3	--	--
MAR										
24...	--	--	--	--	--	--	82	.5	--	--
APR										
13...	75	0	16	8.6	3.0	1.3	75	1.8	21	<2.0
MAY										
25...	--	--	--	--	--	--	75	.7	--	--
JUN										
21...	--	--	--	--	--	--	75	1.8	--	--
JUL										
05...	86	7	18	10	3.4	2.6	79	1.9	13	5.0
AUG										
03...	--	--	--	--	--	--	95	2.3	--	--
SEP										
01...	--	--	--	--	--	--	98	7.5	--	--

K--Results based on colony count outside the acceptable range (non-ideal colony count).

ST. FRANCIS RIVER BASIN

07036940 BIG CREEK AT CHLORIDE, MO

WATER-QUALITY RECORDS

LOCATION.--Lat. 37°27'40", long. 90°41'10", in N½ sec. 14, T.32 N., R.3 E., Iron County, Hydrologic Unit 08020202, at bridge on county road.

PERIOD OF RECORD.--Partial-record station 1969 to 1975 water year; October 1982 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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 (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO) (01037)
OCT 19...	1330	1028	29001	4.9	340	8.1	16.0	9.8	99	12	10	<60
NOV 24...	1030	1028	29001	13	209	8.1	7.5	12.4	103	5	4	<60
DEC 16...	1245	1028	29001	21	160	7.1	7.0	11.5	95	6	5	<60
JAN 19...	1215	1028	29001	8.8	219	8.1	2.5	13.2	97	6	6	<60
FEB 16...	1200	1028	29001	9.0	190	8.3	9.5	11.2	97	4	4	<60
MAR 24...	1045	1028	29001	17	181	8.1	8.5	10.2	87	3	<2	<60
APR 13...	1200	1028	29001	146	127	7.8	12.0	9.4	88	17	14	<60
MAY 25...	1115	1028	29001	10	180	8.1	18.5	7.8	82	6	7	<60
JUN 22...	1200	1028	29001	2.4	306	8.0	23.5	7.2	84	10	9	<60
JUL 05...	1100	1028	29001	2.5	344	8.1	22.0	7.2	81	9	8	<60
AUG 04...	1200	1028	29001	2.0	420	8.2	26.5	6.2	76	<2	8	<60
SEP 01...	1045	1028	29001	.68	430	7.8	23.5	4.8	56	8	6	<60

DATE	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
OCT 19...	<60	<5	<5	50	20	<5	<5	<40	<40	30	20
NOV 24...	<60	<5	7	60	30	6	<5	<40	<40	130	80
DEC 16...	<60	<5	<5	70	30	<5	<5	<40	<40	40	40
JAN 19...	<60	<5	<5	40	<20	5	<5	<40	<40	30	30
FEB 16...	<60	6	<5	<20	<20	6	6	<50	<50	20	20
MAR 24...	<60	<5	<5	50	20	7	<5	<50	<50	20	<10
APR 13...	<60	8	<5	950	40	91	6	<50	<50	50	42
MAY 25...	<60	<5	<5	30	26	<5	<5	<50	<50	20	10
JUN 22...	<60	<5	<5	<20	<20	18	16	<50	<50	20	180
JUL 05...	<60	<5	8	70	40	10	<5	<50	<50	20	290
AUG 04...	<60	<5	<5	120	<20	5	<5	<50	<50	50	18
SEP 01...	<60	<5	<5	70	<20	<5	<5	<50	<50	40	20

ST. FRANCIS RIVER BASIN

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 upstream from Clark Creek, and 3 mi east of Patterson.

DRAINAGE AREA.--956 mi².

PERIOD OF RECORD.--October 1920 to current year. Prior to June 1921, monthly discharge only, published in WSP 1311.

REVISED RECORDS.--WSP 732: 1922-23.

GAGE.--Water-stage recorder. Datum of gage is 370.45 ft National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1938, nonrecording gage at site 50 ft upstream at datum 2.00 ft higher. Oct. 1, 1938, to Apr. 12, 1939, nonrecording gage and Apr. 13, 1939, to Sept. 5, 1956, water-stage recorder at site 50 ft upstream at present datum. Sept. 6, 1956, to Sept. 26, 1958, nonrecording gage at present site and datum.

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

AVERAGE DISCHARGE.--63 years, 1,103 ft³/s, 15.67 in/yr, 799,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 155,000 ft³/s Dec. 3, 1982, gage height, 35.77 ft, from slope-area measurement; minimum discharge, 8 ft³/s Aug. 28 to Sept. 1, 1936; minimum gage height, 1.32 ft Aug. 16, 1941.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood on Aug. 1915 reached a stage of 33.8 ft, present datum, from floodmarks, discharge, 100,000 ft³/s, from rating curve extended above 55,000 ft³/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 21,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 3	2315	*155,000	35.77
Dec. 25	0530	63,300	28.05
Apr. 14	1515	26,100	20.03
Apr. 30	0945	65,700	27.91
May 15	0130	41,100	24.05

Minimum discharge, 15 ft³/s Aug. 22, gage height, 3.80 ft.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	315	168	2040	1900	500	260	953	32600	550	344	33	23
2	288	173	1570	1600	800	250	2490	17600	499	248	31	21
3	267	175	55500	1400	1370	240	6290	14700	549	194	29	19
4	252	173	107000	1300	1640	230	4440	8100	625	159	31	19
5	235	170	36100	1150	1290	483	2940	5300	743	143	33	18
6	223	168	10000	1050	1100	2020	5200	3750	628	127	35	17
7	216	173	5000	940	1000	4720	5550	3000	514	117	33	21
8	208	170	3200	870	850	2650	4910	2400	443	110	30	18
9	216	168	2500	800	750	1750	4270	1850	410	102	30	17
10	218	166	2000	740	650	1340	4470	1400	380	92	30	17
11	591	164	1700	680	600	1100	3270	1150	351	83	29	17
12	403	170	1500	640	560	957	2520	1000	317	76	27	17
13	310	175	1300	600	520	872	3080	2670	279	71	25	17
14	267	182	1200	550	490	813	22000	16200	252	66	24	17
15	237	190	1100	510	470	756	10800	27300	239	63	22	17
16	220	200	1000	470	450	704	4780	8930	222	61	21	18
17	201	198	940	450	430	656	3290	6110	202	58	21	18
18	191	196	860	420	410	623	2580	4830	186	55	20	18
19	183	196	820	400	380	560	2210	3910	174	55	20	18
20	177	201	770	370	370	530	1810	3190	165	53	20	19
21	175	209	760	350	350	571	1520	2560	154	50	17	19
22	175	215	730	330	340	772	1470	2020	144	46	18	18
23	177	249	3080	320	330	745	1540	1560	135	44	22	18
24	175	283	25400	310	320	666	1540	1280	130	42	22	18
25	175	280	59400	300	300	616	1390	1040	128	41	23	19
26	168	304	35300	290	290	589	1250	888	119	41	24	22
27	162	873	9000	290	280	658	1130	808	114	38	26	23
28	157	8450	5000	280	270	1020	1060	757	902	36	25	24
29	166	8080	3900	280	---	1200	16100	721	1830	37	27	25
30	166	3210	2900	270	---	955	60600	680	590	36	26	24
31	168	---	2200	270	---	876	---	616	---	34	24	---
TOTAL	7082	25729	383770	20130	17110	30182	185453	178920	11974	2722	798	576
MEAN	228	858	12380	649	611	974	6182	5772	399	87.8	25.7	19.2
MAX	591	8450	107000	1900	1640	4720	60600	32600	1830	344	35	25
MIN	157	164	730	270	270	230	953	616	114	34	17	17
CAL YR 1982		TOTAL	837398		MEAN	2294	MAX	107000	MIN	45		
WTR YR 1983		TOTAL	864446		MEAN	2368	MAX	107000	MIN	17		

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 southwest of Wappapello, and at mile 309.

DRAINAGE AREA.--1,310 mi², approximately.

PERIOD OF RECORD.--April 1941 to current year.

GAGE.--Water-stage recorder. Datum of gage is 347.74 ft 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), 2,600 acre-ft; at conservation pool level (gage height, 7.0 ft), 30,900 acre-ft; at spillway crest (gage height, 47.0 ft), 613,200 acre-ft; at maximum pool level (gage height, 62.4 ft), uncontrollable above spillway crest, 1,022,000 acre-ft. 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 Apr. 16, 1945, gage height, 51.35 ft; minimum since initial filling to conservation pool level, 23,340 acre-ft Mar. 1, 2, 3, 1970; minimum gage height, 4.20 ft Sept 26, 27, 1967.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 521,700 acre-ft Dec. 6, 7, gage height, 42.90 ft; minimum 29,500 acre-ft Mar. 25, gage height, 6.63 ft.

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

6.0	27,100	22.0	166,200
7.0	30,900	27.0	235,200
10.0	48,000	33.0	332,900
13.0	71,400	38.0	422,800
17.0	109,600	43.0	523,900

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	88700	63500	102900	488400	67100	31900	39700	339600	139000	61200	63400	62900
2	84800	63800	103700	474900	67400	31800	42600	383700	129300	61200	63300	62700
3	80500	64300	131300	458000	68500	32300	48000	401100	121100	61300	63200	62700
4	76900	64100	352000	444800	67000	32800	55500	409800	114100	61200	63200	62600
5	73000	64100	505000	429600	65800	32800	60000	405000	106200	61800	63200	62500
6	69000	63900	521700	414100	64800	34200	63600	395600	98300	61700	63100	62400
7	65900	63500	521700	399100	63300	37300	73600	384100	90300	61500	63200	62700
8	63300	63500	513400	391600	63200	43900	83500	373100	82700	61300	63200	62700
9	69600	63500	501900	367600	64200	46200	91100	358300	76100	61300	63100	62700
10	71100	63300	489100	351100	63100	46900	100100	344400	71700	61200	62900	62700
11	69700	63200	476200	335300	59700	47300	106200	329800	69800	61100	62700	62700
12	67100	63700	462500	319100	50800	46900	109200	315200	67800	60900	63100	62600
13	65100	63800	448300	302100	45100	46600	110000	304500	66400	60900	63200	62700
14	63800	63500	433700	284600	39400	46200	120200	286100	65400	61000	63100	62600
15	63500	63500	420100	267900	38000	45600	164000	316100	64600	61100	63100	62300
16	63800	63400	405100	250600	35600	44600	174200	345600	64100	61100	62900	62300
17	63900	63100	389200	234000	35700	43900	177200	338100	63400	60900	62800	62300
18	63800	63500	375000	215400	36800	41900	177000	325600	63200	61000	62800	62200
19	63700	63300	359700	210400	37600	39000	175900	313400	63300	60900	62800	62100
20	64000	63600	344300	178900	37900	36800	173900	299300	63400	60900	62700	62100
21	64100	64100	329200	164200	38000	34500	171300	284900	63800	60800	62700	62700
22	64200	63800	324700	152400	38400	32300	168400	271300	63800	60800	62600	62400
23	64000	64000	308000	141300	41600	31000	165500	256600	63800	60800	63000	62400
24	64000	64400	305700	129900	37800	30600	163300	239100	63800	60900	62900	62400
25	63900	63700	395500	119500	36700	29500	160300	227200	63700	60700	62900	62400
26	63800	63100	492600	109300	35200	30200	156100	207600	63500	60700	62900	62400
27	63600	64000	507900	99700	33900	31600	153100	194600	63900	60700	62700	62500
28	63400	71300	506000	91000	32700	32900	149900	183300	63800	60600	62700	62700
29	63500	88900	505200	84300	---	34500	147900	172300	65100	60600	62800	62700
30	63500	99800	496900	78200	---	36600	204100	167000	64400	60600	62800	62700
31	63400	---	485400	72500	---	38400	---	149700	---	60700	62800	---

WTR YR 1983

(†)	360.07	364.02	389.06	361.12	355.36	356.42	372.87	368.63	360.19	359.72	359.73	359.70
(‡)	-29200	+36400	+385600	-412900	-39800	+5700	+165700	-54400	-85300	-3700	+2100	-100
MAX	88700	99800	521700	488400	68500	47300	204100	409800	139000	61800	63400	62900
MIN	63300	63100	102900	72500	32700	29500	39700	149700	63200	60600	62600	62100

CAL YR 1982.....(†) +454600

WTR YR 1983.....(‡) - 29900

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

(‡) Change in contents, in acre-feet.

CAL YR 1982	TOTAL	806321.00	MEAN	2209	MAX	10500	MIN	.00
WTR YR 1983	TOTAL	1084227	MEAN	2970	MAX	10500	MIN	41

ST. FRANCIS RIVER BASIN

07042500 LITTLE RIVER DITCH 251 NEAR LILBOURN, MO

LOCATION.--Lat 36°33'20", long 89°40'12", SW¼SE¼ sec.8, T.22 N., R.13 E., New Madrid County, Hydrologic Unit 08020204, in right bank 150 ft upstream from bridge on U.S. Highway 62, 3.7 mi southwest of Lilbourn, and 4.0 mi northwest of Marston.

DRAINAGE AREA.--235 mi².

PERIOD OF RECORD.--October 1945 to current year. Prior to January 1946 monthly discharge only, published in WSP 1311.

REVISED RECORDS.--WDR MO 80-1: 1980, (M).

GAGE.--Water-stage recorder and creststage gage. Datum of gage is 263.46 ft National Geodetic Vertical Datum of 1929 (levels by Missouri State Highway Commission). Prior to Oct. 27, 1967, nonrecording gage at present site and datum.

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

AVERAGE DISCHARGE.--38 years, 324 ft³/s, 18.72 in/yr, 234,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,580 ft³/s Mar. 29, 1975, gage height, 14.17 ft; maximum gage height, 15.16 ft Feb. 15, 1950; minimum discharge, 29 ft³/s Sept. 20, 1954; minimum gage height, 1.94 ft Sept. 21, 22, 23, 25, 26, 1976.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in June 1945 reached a stage of 15.6 from floodmark, discharge, 3,200 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,020 ft³/s May 3, gage height, 13.87 ft; minimum daily 35 ft³/s Sept. 25.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

MEAN VALUES												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	84	107	291	1020	258	192	207	1780	313	190	104	52
2	82	101	237	756	545	187	310	1850	304	220	109	51
3	81	91	1010	606	512	183	418	4910	430	200	110	51
4	81	90	3800	518	369	181	319	4960	933	180	95	52
5	80	92	2880	474	315	279	504	4700	456	180	91	54
6	79	92	1320	434	313	438	812	4020	343	180	97	53
7	82	84	672	424	315	329	1070	2440	312	170	90	53
8	84	84	476	393	294	278	2450	1160	298	170	88	52
9	86	84	386	378	290	250	1700	710	293	170	85	53
10	90	84	353	364	283	216	876	590	280	160	88	52
11	87	83	333	340	277	227	607	512	269	160	86	51
12	84	86	312	321	264	218	516	1130	265	160	84	50
13	82	82	294	310	250	215	1160	902	255	150	80	45
14	80	78	281	298	248	214	2690	493	243	150	76	44
15	80	74	760	287	246	202	1330	501	322	150	72	43
16	79	72	701	277	242	198	732	491	252	150	68	43
17	78	71	378	273	235	194	571	445	243	150	72	42
18	76	71	327	266	225	192	507	446	239	150	68	42
19	77	72	309	248	225	189	460	602	286	140	64	39
20	77	104	283	241	220	187	429	494	426	140	63	40
21	78	139	261	250	214	187	396	492	350	140	62	45
22	78	124	249	279	209	183	375	519	273	140	62	39
23	77	126	241	346	209	174	377	710	236	140	61	37
24	76	160	253	313	209	172	377	510	221	140	61	37
25	78	133	2590	283	202	169	341	421	220	140	60	35
26	78	139	3470	270	194	170	319	389	210	130	59	37
27	78	767	2950	261	192	267	312	366	210	131	58	40
28	78	1810	3590	256	192	373	300	362	200	120	57	40
29	88	1590	2580	257	---	256	290	357	190	109	56	39
30	95	1040	1890	263	---	215	727	340	190	99	55	37
31	101	---	1490	252	---	209	---	326	---	100	54	---
TOTAL	2534	7730	34967	11258	7547	6944	21482	37928	9062	4709	2335	1348
MEAN	81.7	258	1128	363	270	224	716	1223	302	152	75.3	44.9
MAX	101	1810	3800	1020	545	438	2690	4960	933	220	110	54
MIN	76	71	237	241	192	169	207	326	190	99	54	35
CAL YR 1982		TOTAL	116421	MEAN	319	MAX	4240	MIN	67			
WTR YR 1983		TOTAL	147844	MEAN	405	MAX	4960	MIN	35			

ST. FRANCIS RIVER BASIN

07043500 LITTLE RIVER DITCH 1 NEAR MOREHOUSE, MO

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 downstream from Little River ditch 39, and 2.0 mi west of Morehouse.

DRAINAGE AREA.--450 mi².

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 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 downstream at present datum.

REMARKS.--Records good. 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 downstream, and is independent of the ditch for which records are published as Little River ditch 1 near Kennett.

AVERAGE DISCHARGE.--38 years, 527 ft³/s, 15.90 in/yr, 381,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,070 ft³/s May 3, 1983, gage height, 17.29 ft; maximum gage height, 19.81 ft Mar. 11, 1964; minimum discharge, 21 ft³/s Sept. 18, 1954, gage height, 3.13 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 1945 reached a stage of 19.85 ft from floodmark, discharge, 5,830 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 10,070 ft³/s May 3, gage height, 17.29 ft; minimum daily, 35 ft³/s Sept. 23, 24.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	85	90	662	3150	292	209	366	9210	321	284	72	41
2	85	89	494	2380	1390	203	1210	8250	295	201	68	43
3	84	85	1550	1910	1520	201	1380	9790	331	195	64	42
4	85	84	5660	1480	937	203	907	8830	480	193	61	41
5	84	83	4810	1140	672	227	715	7660	440	189	60	45
6	84	85	3710	916	527	402	1470	6110	358	180	59	46
7	88	87	2240	673	436	387	3760	3750	292	170	77	43
8	89	87	1530	455	388	343	5060	2710	262	160	77	40
9	99	86	1320	416	355	309	4720	2240	249	160	72	38
10	105	88	1070	382	337	288	2490	1790	243	150	74	38
11	93	94	791	353	318	260	1690	1360	240	150	71	37
12	89	98	595	320	294	237	1260	1030	239	140	64	38
13	88	88	483	303	279	231	1150	760	234	130	58	37
14	85	86	438	290	271	218	5290	730	235	130	56	36
15	87	84	440	265	261	207	4130	1640	234	130	53	36
16	84	86	449	257	254	202	2380	2410	232	120	55	36
17	84	89	413	243	243	199	1690	1370	230	120	57	36
18	87	95	399	228	236	197	1300	1010	240	120	53	37
19	87	98	370	217	233	195	917	815	628	110	50	36
20	85	128	341	219	225	201	615	637	349	110	49	39
21	87	129	320	226	222	208	486	608	246	100	49	37
22	83	177	311	237	224	205	476	1880	231	98	46	36
23	83	207	304	239	231	196	566	1140	228	96	45	35
24	84	262	3870	250	222	197	511	566	227	94	44	35
25	84	174	8880	254	220	194	447	463	225	90	43	36
26	85	179	9750	253	214	201	415	397	225	88	43	39
27	87	418	8980	248	211	965	376	415	213	84	43	39
28	90	1880	8640	247	211	1220	355	417	210	80	44	38
29	87	1520	8100	252	---	685	1070	641	209	78	42	37
30	87	862	7040	259	---	493	7940	595	235	76	42	37
31	89	---	5170	260	---	401	---	407	---	74	42	---
TOTAL	2703	7618	89130	18322	11223	9884	55142	79631	8381	4100	1733	1154
MEAN	87.2	254	2875	591	401	319	1838	2569	279	132	55.9	38.5
MAX	105	1880	9750	3150	1520	1220	7940	9790	628	284	77	46
MIN	83	83	304	217	211	194	355	397	209	74	42	35
CAL YR 1982	TOTAL		259126	MEAN		710	MAX	9750	MIN		65	
WTR YR 1983	TOTAL		289021	MEAN		792	MAX	9790	MIN		35	

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 east 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 1982 TO SEPTEMBER 1983

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 (STAND- ARD 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)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)
OCT											
04...	1215	1028	29001	221	410	8.5	29.5	3.6	47	<5	--
NOV											
01...	1600	1028	29001	169	500	8.3	22.0	5.6	64	12	60
29...	1530	1028	29001	8520	139	7.3	10.5	4.8	43	34	2700
JAN											
03...	1715	1028	29001	4000	152	7.1	7.0	5.0	41	20	1300
FEB											
01...	1630	1028	29001	950	325	8.1	9.5	4.4	38	<5	270
MAR											
01...	1530	1028	29001	706	495	8.6	13.5	7.0	67	<5	K6
APR											
05...	1430	1028	29001	2900	192	7.7	12.5	6.2	58	18	720
MAY											
11...	0845	1028	29001	3760	260	7.7	19.5	6.2	67	12	150
JUN											
06...	1445	1028	29001	2200	242	7.9	24.0	4.0	46	42	760
JUL											
12...	1140	1028	29001	585	387	8.2	31.0	3.0	39	17	100
AUG											
11...	1000	1028	29001	276	361	8.2	30.0	4.6	--	7	30
SEP											
14...	0800	1028	29001	177	386	8.0	20.0	5.8	62	24	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)	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										
04...	210	26	56	17	18	2.7	184	1.1	21	16
NOV										
01...	--	--	--	--	--	--	200	1.9	--	--
29...	--	--	--	--	--	--	46	4.5	--	--
JAN										
03...	69	17	18	5.8	3.8	3.0	52	8.0	10	4.0
FEB										
01...	--	--	--	--	--	--	141	2.2	--	--
MAR										
01...	--	--	--	--	--	--	220	1.0	--	--
APR										
05...	81	19	22	6.4	4.3	2.8	62	2.4	17	8.0
MAY										
11...	--	--	--	--	--	--	102	3.9	--	--
JUN										
06...	--	--	--	--	--	--	85	2.1	--	--
JUL										
12...	200	25	56	15	14	2.2	177	2.1	27	18
AUG										
11...	--	--	--	--	--	--	154	1.9	--	--
SEP										
14...	--	--	--	--	--	--	98	1.9	--	--

DATE	FLUORIDE, DIS- SOLVED (MG/L AS F) (00950)	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 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 04...	--	258	19	<.050	.040	.130	6	3	7	5
NOV 01...	--	--	33	<.050	.080	.150	--	--	--	--
29...	--	--	180	.660	.050	.600	--	--	--	--
JAN 03...	.10	--	174	.240	.150	.400	<10	4	11	8
FEB 01...	--	--	30	.410	.100	.150	--	--	--	--
MAR 01...	--	--	--	<.050	.060	.060	--	--	--	--
APR 05...	.10	168	170	1.00	.190	.340	4	<2	10	6
MAY 11...	--	--	116	.260	.170	.360	--	--	--	--
JUN 06...	--	--	210	.630	.320	.770	--	--	--	--
JUL 12...	.10	270	56	<.050	<.010	.230	<2	3	<5	<5
AUG 11...	--	--	44	.050	<.010	.230	--	--	--	--
SEP 14...	--	--	32	<.050	.020	.240	--	--	--	--

[illegible]

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 downstream from proposed bridge site on county road, 1.6 mi downstream from County Line Dam site, 1 mi downstream from Davis Creek and 4 mi south of Strafford.

DRAINAGE AREA.--165 mi².

PERIOD OF RECORD.--October 1973 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,207 ft National Geodetic Vertical Datum of 1929.

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.--10 years, 153 ft³/s, 12.59 in/yr, 110,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,900 ft³/s Sept. 27, 1977, gage height, 18.90 ft; minimum, 1.0 ft³/s Aug. 18-22, 1983.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 3	1430	*12,300	15.89
Dec. 24	1715	5,170	11.98
Apr. 2	1100	9,230	14.66
Apr. 30	--	9,090	14.60

Minimum daily discharge, 1.0 ft³/s Aug. 18-22.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.0	13	142	286	40	32	271	2100	54	21	26	6.0
2	5.7	16	2340	242	48	31	5780	933	52	19	20	5.0
3	5.3	16	9920	200	55	30	2250	729	50	21	12	5.0
4	5.3	15	2590	172	59	30	1060	555	78	956	8.0	5.0
5	5.3	14	2810	152	59	35	723	456	57	364	10	4.0
6	5.5	13	1250	135	59	80	591	398	51	159	9.4	4.0
7	6.0	12	806	122	57	200	467	436	43	101	10	4.0
8	7.3	12	588	111	55	350	386	392	39	61	9.0	16
9	9.7	12	446	98	55	250	429	335	33	53	8.0	12
10	9.7	11	428	88	54	200	434	293	32	46	7.0	10
11	9.8	11	483	80	54	150	371	260	30	41	8.0	8.0
12	10	11	378	67	52	130	315	240	29	38	7.0	6.0
13	11	11	294	64	48	110	276	215	26	36	6.0	5.0
14	9.7	10	236	62	48	100	376	252	34	35	5.0	4.0
15	9.3	10	196	59	48	90	349	263	36	40	4.0	3.0
16	9.1	10	156	57	45	80	278	223	34	36	3.0	3.0
17	8.9	10	127	55	42	70	228	200	29	32	2.0	4.0
18	8.6	10	108	53	40	75	197	170	26	29	1.0	3.0
19	8.2	10	82	50	40	60	167	150	24	27	1.0	3.0
20	8.1	10	64	48	38	55	139	130	23	25	1.0	3.0
21	8.1	10	58	46	38	52	114	120	21	24	1.0	3.0
22	8.1	11	54	46	36	50	111	110	20	23	1.0	2.6
23	7.8	14	50	46	36	49	222	98	19	22	30	2.0
24	7.8	16	1640	43	36	47	454	88	18	21	22	2.0
25	7.8	18	1210	41	36	47	340	80	18	70	18	3.0
26	7.8	133	623	40	35	50	310	74	19	40	14	4.0
27	7.8	378	510	40	33	100	280	68	29	30	12	3.0
28	8.7	548	720	40	33	187	260	64	30	26	10	3.0
29	11	333	535	40	---	170	800	60	26	23	9.0	2.0
30	12	208	419	40	---	170	6000	58	24	21	8.0	2.0
31	13	---	349	40	---	177	---	56	---	22	7.0	---
TOTAL	258.4	1906	29612	2663	1279	3257	23978	9606	1004	2462	289.4	139.6
MEAN	8.34	63.5	955	85.9	45.7	105	799	310	33.5	79.4	9.34	4.65
MAX	13	548	9920	286	59	350	6000	2100	78	956	30	16
MIN	5.3	10	50	40	33	30	111	56	18	19	1.0	2.0
CAL YR 1982		TOTAL	75212.4	MEAN	206	MAX	9920	MIN	4.0			
WTR YR 1983		TOTAL	76454.4	MEAN	209	MAX	9920	MIN	1.0			

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 downstream from Pearson Creek, and 2.5 mi southeast of Springfield.

DRAINAGE AREA.--246 mi².

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

GAGE.--Water-stage recorder. Datum of gage is 1,143.27 ft 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 temperature were made during the year.

AVERAGE DISCHARGE.--28 years, 215 ft³/s, 11.87 in/yr, 155,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,800 ft³/s Dec. 17, 1957, gage height, 18.20 ft; minimum, 0.1 ft³/s Sept. 16, 24, 25, 1956, gage height, 2.18 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in July 1909 reached a stage about 22 ft from information by local resident, discharge not determined.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 3	----	*16,000	16.20
Dec. 24	2300	6,020	13.33
Apr. 2	1215	12,600	15.31
May 1	----	14,600	15.80

Minimum discharge, 4.2 ft³/s Aug. 4; gage height, 2.89 ft.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	22	215	442	76	63	270	9250	82	47	24	16
2	12	23	1980	385	82	62	7920	1940	79	44	14	15
3	11	25	13800	330	90	61	2970	1240	91	42	12	14
4	11	26	5240	291	96	62	1280	913	128	1460	7.0	14
5	11	25	3740	252	98	67	939	712	98	786	10	14
6	11	24	1650	224	98	147	778	572	79	364	12	13
7	14	23	1070	203	96	333	640	585	71	230	15	24
8	14	23	804	178	93	496	553	548	65	144	17	25
9	21	22	647	168	91	389	579	473	57	105	15	20
10	20	21	585	151	90	311	554	417	55	86	14	18
11	19	21	672	134	88	239	496	374	52	72	15	16
12	18	21	599	120	86	204	450	339	50	62	14	15
13	17	21	542	113	83	194	423	306	55	55	13	14
14	18	21	484	106	82	168	506	344	67	54	12	14
15	17	20	432	103	80	143	450	381	64	57	11	13
16	16	20	378	93	79	131	393	326	67	58	11	14
17	14	20	329	89	77	127	351	280	62	55	10	14
18	13	20	300	82	76	115	319	267	58	52	10	13
19	13	20	267	78	74	108	280	261	55	49	10	13
20	14	22	229	76	73	106	246	234	54	46	9.6	13
21	14	22	202	79	72	102	220	209	51	43	9.2	14
22	13	20	184	83	71	97	287	198	49	41	9.0	13
23	13	30	170	84	69	92	547	179	47	39	52	12
24	13	32	1660	80	68	88	638	160	46	37	39	12
25	13	32	2090	80	67	84	524	147	45	109	25	13
26	13	136	875	78	66	86	451	130	44	82	21	14
27	13	368	675	76	64	123	381	116	54	42	19	13
28	14	546	849	75	63	201	350	135	55	34	18	13
29	20	436	708	75	---	206	2650	109	53	29	17	12
30	21	300	581	75	---	200	7170	99	50	27	16	12
31	21	---	507	74	---	208	---	95	---	30	16	---
TOTAL	464	2362	42464	4477	2248	5013	33615	21339	1883	4381	496.8	440
MEAN	15.0	78.7	1370	144	80.3	162	1121	688	62.8	141	16.0	14.7
MAX	21	546	13800	442	98	496	7920	9250	128	1460	52	25
MIN	11	20	170	74	63	61	220	95	44	27	7.0	12
CAL YR 1982		TOTAL	105001.4	MEAN	288	MAX	13800	MIN	4.0			
WTR YR 1983		TOTAL	119182.8	MEAN	327	MAX	13800	MIN	7.0			

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 upstream from Riley Creek, and 42.3 mi above mouth.

DRAINAGE AREA.--987 mi².

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 National Geodetic Vertical Datum of 1929. Prior to Dec. 11, 1927, nonrecording gage at site 500 ft downstream at datum 1.48 ft 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 higher.

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

AVERAGE DISCHARGE.--62 years, 942 ft³/s, 12.96 in/yr, 682,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 52,700 ft³/s May 20, 1943, gage height, 29.82 ft present datum; minimum discharge, 10 ft³/s Sept. 20, 1954; minimum gage height, 1.15 ft Jan. 13, 1964 (result of ice conditions upstream).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 12,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 4	0300	*45,400	26.89
Apr. 3	0815	25,600	17.52
May 2	1200	25,500	17.48

Minimum, 117 ft³/s, Sept. 30, gage height, 2.76 ft.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	175	232	1500	1980	533	346	812	16200	824	322	297	189
2	171	218	4480	1780	779	338	6420	17800	751	305	258	176
3	171	222	28100	1610	806	326	21100	5450	745	287	249	155
4	170	206	38100	1490	801	342	7060	3760	853	2010	243	145
5	166	191	14300	1380	790	399	4020	3000	754	5670	206	135
6	168	181	10900	1290	795	435	3090	2540	657	2250	191	129
7	176	174	6570	1220	758	690	2510	2430	594	1620	189	137
8	206	171	4850	1150	731	1130	2190	2300	546	1250	189	369
9	245	166	3830	1090	690	1260	1980	2070	514	994	181	295
10	291	166	3370	1030	670	1120	1880	1880	480	823	176	238
11	232	167	3350	862	639	982	1720	1760	464	696	171	198
12	206	172	3170	706	598	868	1570	1790	457	603	164	174
13	192	198	2870	675	573	790	1470	1650	441	522	160	160
14	183	178	2600	650	553	742	1450	1620	499	484	160	155
15	175	165	2160	608	538	695	1480	1740	588	448	155	152
16	171	158	1930	588	515	639	1360	1630	525	434	150	160
17	165	157	1730	553	516	593	1230	1500	477	383	147	172
18	161	156	1600	528	490	558	1140	1420	444	365	145	155
19	155	156	1460	500	467	528	1040	1400	415	360	145	141
20	171	156	1340	476	458	528	939	1280	386	335	141	141
21	189	154	1240	509	439	519	874	1190	374	304	141	145
22	176	166	1160	472	430	467	1010	1160	367	295	137	162
23	164	297	1090	462	417	444	1770	1070	349	289	135	145
24	160	408	2030	435	395	417	2960	969	330	275	193	139
25	154	366	6830	458	391	399	2520	883	331	250	241	141
26	152	505	4150	435	378	417	2140	835	348	455	211	143
27	150	1890	3040	421	358	514	1850	772	387	620	177	165
28	158	3080	2970	408	326	558	2020	1800	360	445	167	150
29	203	2780	2980	412	---	665	2680	1530	353	348	182	145
30	269	1900	2560	408	---	721	12800	1140	336	301	162	123
31	222	---	2230	399	---	737	---	938	---	276	155	---
TOTAL	5747	15136	168490	24985	15834	19167	95085	85507	14949	24019	5618	5034
MEAN	185	505	5435	806	566	618	3170	2758	498	775	181	168
MAX	291	3080	38100	1980	806	1260	21100	17800	853	5670	297	369
MIN	150	154	1090	399	326	326	812	772	330	250	135	123
CAL YR 1982		TOTAL	460408	MEAN	1261	MAX	38100	MIN	150			
WTR YR 1983		TOTAL	479571	MEAN	1314	MAX	38100	MIN	123			

WHITE RIVER BASIN

07053400 TABLE ROCK LAKE NEAR BRANSON, MO

LOCATION.--Lat 36°35'46", long 93°18'35", in NW¼ sec.22, T. 22N., R.22 W., Taney County, Hydrologic Unit 11010001, at dam on White River, 3 mi upstream from Fall Creek, and 6.1 mi southwest of Branson.

DRAINAGE AREA.--4,020 mi².

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, non-recording gage at same site and datum.

REMARKS.--Lake is formed by combination concrete-gravity and embankment type dam. Storage began on Sept. 9, 1956. Storage for purpose of filling to power pool level at elevation 881 ft and capacity 1,520,500 acre-ft began Nov. 24, 1958, and was reached Dec. 19, 1959. Capacity is 3,567,500 acre-ft at top of spillway gates, elevation 933 ft. Capacity is 3,462,000 acre-ft at top of flood control pool, elevation 931 ft. Capacity between elevations 915 ft and 931 ft is reserved for flood control, 760,000 acre-ft. Capacity between elevation 881 ft and 915 ft of 1,181,500 acre-ft is used for power generation. The capacity at the lowest outlet, elevation 721.96 ft, is 3,530 acre-ft. 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 May 10, 1961, elevation, 932.52 ft; minimum, since initial filling to bottom of power pool level, 1,535,500 acre-ft Feb. 8, 1965, elevation, 881.54 ft.

EXTREMES FOR CURRENT YEAR.--Maximum daily contents, 3,242,000 acre-ft Dec. 6; minimum daily contents, 2,493,000 acre-ft Sept. 28.

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

905	2,297,000	919	2,878,000
910	2,493,000	924	3,111,000
915	2,702,000	929	3,359,000

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2769000	2743000	2738000	2772000	2725000	2676000	2586000	2915000	2790000	2784000	2718000	2548000
2	2768000	2737000	2799000	2751000	2733000	2674000	2620000	2947000	2789000	2785000	2712000	2545000
3	2766000	2728000	3035000	2739000	2731000	2675000	2687000	2941000	2790000	2785000	2702000	2543000
4	2764000	2717000	3198000	2732000	2727000	2675000	2707000	2930000	2788000	2795000	2691000	2537000
5	2760000	2707000	3232000	2720000	2721000	2677000	2714000	2912000	2788000	2798000	2682000	2530000
6	2759000	2706000	3242000	2710000	2716000	2683000	2714000	2892000	2779000	2790000	2682000	2522000
7	2762000	2706000	3238000	2699000	2702000	2685000	2715000	2875000	2777000	2781000	2685000	2518000
8	2764000	2706000	3227000	2700000	2697000	2681000	2715000	2854000	2775000	2778000	2676000	2514000
9	2761000	2706000	3204000	2702000	2699000	2674000	2718000	2831000	2777000	2778000	2670000	2511000
10	2761000	2704000	3194000	2705000	2699000	2666000	2724000	2807000	2777000	2777000	2665000	2512000
11	2758000	2705000	3183000	2705000	2699000	2662000	2724000	2791000	2776000	2773000	2657000	2512000
12	2752000	2699000	3163000	2705000	2697000	2660000	2718000	2782000	2774000	2772000	2655000	2512000
13	2750000	2691000	3140000	2705000	2696000	2664000	2715000	2777000	2776000	2771000	2656000	2511000
14	2753000	2688000	3117000	2707000	2691000	2664000	2716000	2779000	2791000	2770000	2657000	2511000
15	2753000	2680000	3091000	2709000	2692000	2661000	2719000	2784000	2795000	2770000	2644000	2511000
16	2752000	2682000	3062000	2712000	2695000	2659000	2722000	2787000	2793000	2777000	2640000	2511000
17	2751000	2680000	3033000	2708000	2694000	2659000	2722000	2787000	2785000	2782000	2632000	2514000
18	2749000	2680000	3004000	2703000	2694000	2651000	2717000	2790000	2785000	2773000	2623000	2516000
19	2751000	2681000	2974000	2704000	2698000	2650000	2711000	2793000	2785000	2768000	2616000	2514000
20	2750000	2682000	2943000	2704000	2700000	2632000	2702000	2796000	2782000	2763000	2607000	2514000
21	2750000	2682000	2914000	2707000	2702000	2621000	2707000	2789000	2774000	2759000	2601000	2513000
22	2749000	2691000	2889000	2708000	2705000	2614000	2707000	2789000	2773000	2750000	2594000	2509000
23	2748000	2694000	2864000	2710000	2705000	2612000	2721000	2792000	2772000	2742000	2592000	2504000
24	2747000	2694000	2855000	2708000	2704000	2607000	2734000	2787000	2778000	2739000	2582000	2500000
25	2746000	2696000	2865000	2702000	2696000	2602000	2739000	2785000	2781000	2741000	2573000	2500000
26	2746000	2708000	2859000	2701000	2677000	2592000	2742000	2782000	2785000	2740000	2566000	2500000
27	2743000	2732000	2848000	2701000	2666000	2585000	2741000	2778000	2794000	2742000	2559000	2500000
28	2745000	2745000	2840000	2701000	2669000	2580000	2743000	2790000	2788000	2736000	2557000	2493000
29	2745000	2746000	2827000	2706000	---	2581000	2792000	2793000	2786000	2724000	2551000	2497000
30	2744000	2743000	2811000	2709000	---	2583000	2868000	2794000	2783000	2727000	2549000	2497000
31	2741000	---	2793000	2709000	---	2579000	---	2794000	---	2729000	2550000	---

WTR YR 1983

(+)	915.90	915.95	917.08	915.16	914.23	912.10	918.78	917.12	916.86	915.63	911.39	910.10
(+)	-29000	+2000	+50000	-84000	-40000	-90000	+289000	-74000	-11000	-54000	-179000	-53000
MAX	2769000	2746000	3242000	2772000	2733000	2685000	2868000	2947000	2795000	2798000	2718000	2548000
MIN	2741000	2680000	2738000	2699000	2666000	2579000	2586000	2777000	2772000	2724000	2549000	2493000

CAL YR.....(+) + 83000

WTR YR.....(+) -273000

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

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

WHITE RIVER BASIN

07053500 WHITE RIVER NEAR BRANSON, MO

LOCATION.--Lat 36°35'51", long 93°17'42", in SE¼NE¼ sec.22, T.22N., R.22 W., Taney County, Hydrologic Unit 11010003, on left bank 0.9 mi downstream from Table Rock Dam, 2.1 mi upstream from Fall Creek, 5 mi southwest of Branson, 7.4 mi upstream from Missouri Pacific bridge, and at mile 527.8.

DRAINAGE AREA.--4,022 mi².

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 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 downstream at different datum. Oct. 1, 1951 to Mar. 6, 1952, nonrecording gage at same site and datum.

REMARKS.--Records good. 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.--32 years, 3,513 ft³/s, 2,545,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 89,100 ft³/s May 16, 1956, gage height, 36.9 ft; minimum, prior to building dam, 24 ft³/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, from floodmark, discharge, 203,000 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 18,000 ft³/s Dec. 16; minimum daily, 40 ft³/s many days.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	240	2590	6410	14700	3590	1360	2680	4320	3280	4490	6550	2980
2	780	3840	6280	14400	5920	4150	5020	11800	3950	4450	6450	3640
3	1090	4860	40	9420	7660	2960	1990	14700	5710	4810	6740	1500
4	4950	5140	4140	7090	7260	5280	8000	14700	2900	3600	6000	1850
5	5100	4850	10800	8110	6880	880	10600	14800	3120	7060	5600	4620
6	4840	40	13400	7820	6120	40	10500	14600	5280	7290	380	6160
7	1610	40	13700	7630	9400	3400	9770	14700	2780	7790	40	4510
8	3240	1080	15000	1610	4940	7280	9960	15000	2390	6420	5060	6310
9	1240	40	17400	1440	2080	9000	2580	14900	1560	5300	4510	5400
10	40	760	12300	410	3000	9700	1310	14900	1680	5220	3710	3720
11	2240	440	12100	2260	3160	6950	4670	13300	1580	6270	4770	180
12	3480	3210	15800	1640	2720	2310	7460	7970	1470	4780	1690	2630
13	2290	3160	16600	1420	2690	530	7940	6350	620	5550	170	140
14	1390	1670	16600	810	4490	4770	6230	5340	140	6010	160	140
15	1330	3730	17400	40	8690	6300	3850	2610	1600	4710	5980	160
16	280	550	18000	40	7840	6210	2920	4490	3920	1040	7240	150
17	110	1230	17800	2780	9530	5500	3290	5370	4710	1800	7310	140
18	1420	160	17800	3170	8930	9230	5880	5390	1410	5800	7100	1150
19	110	40	17900	780	7490	7050	6820	3990	1420	5720	6680	3610
20	40	40	17700	700	7870	10100	7070	5840	4040	5910	4240	150
21	300	120	15900	960	7950	11100	1250	6840	6280	6730	4420	150
22	490	40	14900	600	8660	7860	5010	2900	3050	7890	5430	1640
23	320	760	14900	40	8720	6520	6420	5010	2940	5950	3590	1890
24	40	910	13900	2760	9270	5960	6320	5440	790	2810	7360	1470
25	550	40	13600	3510	12700	7290	6160	4630	120	2130	7460	130
26	620	40	14300	1990	10700	9860	5890	6630	130	2600	7240	507
27	2380	2150	14400	650	6310	5710	6310	3840	830	5960	6320	210
28	850	6790	13900	1310	4160	6470	5430	2070	8030	8270	3380	2150
29	250	7810	13900	40	---	3340	4490	1970	6040	6950	6750	130
30	1610	7030	14700	40	---	2710	1250	1870	7040	1720	4550	130
31	1850	---	14300	3460	---	3440	---	3820	---	1030	2820	---
TOTAL	45080	63160	425870	101630	188730	173260	167070	240090	88810	156060	149700	57547
MEAN	1454	2105	13740	3278	6740	5589	5569	7745	2960	5034	4829	1918
MAX	5100	7810	18000	14700	12700	11100	10600	15000	8030	8270	7460	6310
MIN	40	40	40	40	2080	40	1250	1870	120	1030	40	130
CAL YR 1982	TOTAL		1489450	MEAN		4081	MAX	18000	MIN	40		
WTR YR 1983	TOTAL		1857007	MEAN		5088	MAX	18000	MIN	40		

WHITE RIVER BASIN
07053700 LAKE TANEYCOMO AT BRANSON, MO.

WATER-QUALITY RECORDS

LOCATION.--Lat 36°38'06", long 93°15'52" in SE¼NW¼ sec.4, T.22 N., R.21 W., Taney County, Hydrologic Unit 11010003, 1000 ft 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 1982 TO SEPTEMBER 1983

DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER) (00028)	SPE-CIFIC CON-DUCT-ANCE (UMHOS) (00095)	PH (STAND-ARD 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)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	HARD-NESS (MG/L AS CACO3) (00900)
OCT											
06...	1515	1028	29001	245	7.7	10.0	7.6	67	7	84	120
NOV											
08...	1430	1028	29001	234	7.8	11.0	8.4	76	7	30	--
DEC											
08...	1705	80513	80010	225	7.7	10.0	9.0	--	--	--	100
08...	1715	80513	80010	225	7.6	10.0	8.6	--	--	--	100
14...	1020	1028	29001	224	8.0	11.0	7.2	65	14	--	--
JAN											
11...	1330	1028	29001	246	8.2	9.0	9.6	83	11	23	110
FEB											
08...	1315	1028	29001	228	8.2	7.0	10.6	88	<5	K3	--
MAR											
15...	1245	1028	29001	228	8.2	8.5	10.0	85	<5	K4	--
APR											
05...	1345	1028	29001	231	8.2	9.0	10.0	87	<5	K4	120
MAY											
03...	1245	1028	29001	230	8.0	10.0	9.0	80	<5	K8	--
18...	1405	80513	80010	232	8.2	10.0	10.0	--	--	--	110
18...	1410	80513	80010	232	8.3	10.0	9.8	--	--	--	110
JUN											
06...	1300	1028	29001	240	7.8	10.5	8.6	76	10	33	--
JUL											
05...	1600	1028	29001	242	7.7	12.0	7.9	72	11	20	120
AUG											
09...	1515	1028	29001	238	7.7	14.0	5.6	54	<5	68	--
18...	0740	80513	80010	240	7.9	12.0	4.2	--	--	--	110
18...	0745	80513	80010	235	7.9	11.5	4.2	--	--	--	110
SEP											
22...	0900	1028	29001	220	7.4	11.0	5.2	46	8	35	--

DATE	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 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)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)
OCT										
06...	43	36	7.8	3.3	1.7	79	3.0	<10	5.0	.10
NOV										
08...	--	--	--	--	--	98	3.0	--	--	--
DEC										
08...	0	33	5.3	--	--	105	4.0	9.0	6.4	--
08...	0	33	5.4	--	--	104	5.0	9.0	7.2	--
14...	--	--	--	--	--	102	2.0	--	--	--
JAN										
11...	6	32	7.5	3.3	1.8	105	1.3	<10	8.0	.10
FEB										
08...	--	--	--	--	--	95	1.2	--	--	--
MAR										
15...	--	--	--	--	--	98	1.2	--	--	--
APR										
05...	12	37	6.0	2.9	1.9	105	1.3	13	5.0	.10
MAY										
03...	--	--	--	--	--	105	2.0	--	--	--
18...	10	33	6.2	--	--	98	1.2	7.0	5.0	--
18...	8	33	6.7	--	--	102	1.0	7.0	4.5	--
JUN										
06...	--	--	--	--	--	98	3.0	--	--	--
JUL										
05...	19	36	6.5	3.0	1.8	98	3.8	<10	5.0	.10
AUG										
09...	--	--	--	--	--	105	4.0	--	--	--
18...	12	34	6.5	--	--	100	2.4	7.0	5.0	--
18...	6	33	5.7	--	--	100	2.4	7.0	5.0	--
SEP										
22...	--	--	--	--	--	108	8.3	--	--	--

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) (00630)	NITRO- GEN, AMMONIA TOTAL (MG/L) (00610)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L) (00625)	PHOS- PHORUS, TOTAL (MG/L) (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 06...	122	3	.570	.040	--	<.050	<2	<2	<5	<5
NOV 08...	150	--	.540	.060	--	.070	--	--	--	--
DEC 08...	--	--	.300	.090	.10	.040	--	--	--	--
08...	--	--	.300	.080	.20	.030	--	--	--	--
14...	--	3	.190	.060	--	<.050	--	--	--	--
JAN 11...	141	--	.240	.020	--	<.050	<2	<2	<5	<5
FEB 08...	--	<1	.270	.010	--	<.050	--	--	--	--
MAR 15...	--	1	.710	.040	--	<.050	--	--	--	--
APR 05...	124	1	.640	.030	--	<.050	<2	<2	<5	<5
MAY 03...	--	<1	.660	.020	--	<.050	--	--	--	--
18...	--	--	.600	.060	.50	.030	--	--	--	--
18...	--	--	.600	.020	.40	.030	--	--	--	--
JUN 06...	--	<1	.680	<.010	--	<.050	--	--	--	--
JUL 05...	139	2	.690	.020	--	<.050	<2	3	<5	<5
AUG 09...	--	22	.700	<.010	--	<.050	--	--	--	--
18...	--	--	.600	.070	.20	.030	--	--	--	--
18...	--	--	.700	.040	.20	.030	--	--	--	--
SEP 22...	--	4	.530	.040	--	<.050	--	--	--	--

[illegible]

WHITE RIVER BASIN

07057500 NORTH FORK RIVER NEAR TECUMSEH, MO

LOCATION.--Lat 36°37'22", long 92°14'53", in NE¼ sec.35, T.23 N., R.12 W., Ozark County, Hydrologic Unit 11010006, on right bank 3.2 mi downstream from Spring Creek, and 3.5 mi northeast of Tecumseh.

DRAINAGE AREA.--561 mi².

PERIOD OF RECORD.--October 1944 to current year.

GAGE.--Water-stage recorder. Datum of gage is 584.67 ft National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to May 12, 1945, nonrecording gage at same site and datum 0.22 ft lower.

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

AVERAGE DISCHARGE.--39 years, 706 ft³/s, 17.09 in/yr, 511,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 37,900 ft³/s Apr. 22, 1974, gage height, 22.15 ft; minimum, 187 ft³/s Sept. 14-18, 1954, gage height, 2.06 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 6,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 3	1915	*26,700	17.70
Dec. 24	2015	7,540	8.14
Apr. 14	0930	7,610	8.18
Apr. 30	0900	*26,700	17.69

Minimum discharge, 273 ft³/s Oct. 2 and 4, gage height 2.26 ft.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	281	302	858	1290	695	471	576	4010	728	529	413	369
2	281	335	1300	1200	856	470	3250	2960	713	512	414	363
3	281	367	16400	1100	927	466	3360	2270	720	499	408	358
4	281	354	14200	1030	870	473	2250	1900	801	535	402	354
5	285	332	6520	1000	810	558	1800	1680	728	573	396	354
6	286	321	4350	956	780	686	1560	1490	664	572	461	353
7	296	315	3040	947	745	801	1370	1390	634	542	443	412
8	307	310	2390	920	706	920	1250	1270	610	515	419	429
9	316	305	1990	902	679	847	1190	1150	599	498	411	391
10	323	302	1770	894	659	782	1130	1080	582	495	402	374
11	314	302	1610	885	635	733	1060	1030	568	487	397	366
12	302	318	1460	876	605	695	1010	1000	562	478	396	363
13	296	302	1340	860	588	675	1320	983	549	476	388	358
14	292	302	1270	827	570	663	5270	1040	592	472	382	354
15	290	292	1200	800	552	648	2890	1300	639	470	380	352
16	287	292	1130	787	547	630	2130	1160	597	466	378	357
17	283	292	1070	774	540	615	1770	1060	563	463	380	354
18	283	292	1030	751	529	599	1590	1100	542	462	377	349
19	285	292	1000	729	526	584	1420	1420	530	456	378	349
20	293	292	965	715	519	582	1280	1390	525	450	375	351
21	287	287	920	717	510	568	1180	1240	512	445	371	349
22	286	297	894	710	508	545	1200	1340	500	440	370	344
23	283	360	885	691	502	528	1400	1360	498	434	369	340
24	282	440	4330	671	501	517	1340	1160	491	431	369	338
25	281	416	4330	652	488	510	1210	1060	492	436	366	342
26	281	422	2720	637	480	515	1140	974	491	434	365	343
27	281	691	2130	631	475	535	1080	911	585	429	367	343
28	296	2370	2080	617	472	533	1040	858	694	422	363	338
29	315	1650	1860	625	---	532	1030	833	602	416	363	335
30	311	1080	1620	640	---	528	11600	786	565	424	374	332
31	307	---	1440	637	---	525	---	764	---	420	381	---
TOTAL	9072	14232	88102	25471	17274	18734	59696	41969	17876	14681	12058	10714
MEAN	293	474	2842	822	617	604	1990	1354	596	474	389	357
MAX	323	2370	16400	1290	927	920	11600	4010	801	573	461	429
MIN	281	287	858	617	472	466	576	764	491	416	363	332
CAL YR 1982	TOTAL	281276	MEAN	771	MAX	16400	MIN	278				
WTR YR 1983	TOTAL	329879	MEAN	904	MAX	16400	MIN	281				

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 downstream from Pine Creek, 3 mi northwest of Tecumseh, and 5 mi upstream from mouth.

DRAINAGE AREA.--570 mi².

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 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.--39 years, 511 ft³/s, 12.17 in/yr, 370,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 71,100 ft³/s Dec. 3, 1982, gage height, 26.74 ft; minimum, 96 ft³/s Sept. 16, 17, 1954; minimum gage height, 1.98 ft Aug. 13, 1964.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 6,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 3	----	*71,100	26.74
Apr. 30	----	27,000	19.00

Minimum daily discharge, 132 ft³/s Oct. 27.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	152	157	700	942	491	292	565	5000	500	283	220	175
2	152	182	12000	864	678	290	1620	2500	500	266	229	170
3	160	196	52000	788	663	289	2100	2000	506	257	214	170
4	160	201	18000	724	579	294	1500	1700	584	452	205	170
5	164	186	10000	681	533	346	1200	1450	524	673	200	170
6	164	174	5000	640	518	468	1100	1240	500	384	220	180
7	176	166	3000	609	492	633	980	1090	477	322	200	190
8	183	158	2500	574	464	693	880	988	399	298	190	200
9	198	154	2000	546	451	618	820	883	383	286	185	185
10	209	148	1650	532	439	559	770	805	366	281	185	175
11	181	148	1470	502	425	513	740	752	354	279	180	170
12	166	156	1180	467	403	475	720	736	343	277	180	165
13	160	156	1030	452	384	460	800	713	337	274	180	165
14	156	144	957	438	374	452	3000	758	355	273	180	165
15	146	140	885	417	371	437	2200	1110	377	270	180	165
16	144	140	798	403	364	423	1700	961	338	265	180	175
17	144	140	729	393	353	406	1400	853	320	260	175	165
18	144	140	689	380	345	394	1200	896	311	253	175	165
19	143	140	654	370	338	379	1100	1070	303	251	175	165
20	144	140	603	371	334	374	1000	967	298	245	175	175
21	152	140	563	373	328	363	960	884	291	240	175	170
22	145	148	536	376	324	347	980	1010	285	237	175	170
23	144	220	556	367	318	333	1100	976	277	233	175	168
24	140	396	2870	354	314	327	1000	863	271	230	175	165
25	136	304	2790	347	312	320	900	789	270	229	170	165
26	136	276	2390	344	302	320	820	730	267	233	170	165
27	132	830	1800	340	295	339	780	663	326	230	170	165
28	140	2400	1740	335	293	351	760	628	302	225	170	160
29	165	1690	1410	345	---	341	740	592	299	220	170	160
30	166	900	1160	371	---	335	10000	547	309	217	175	160
31	164	---	1030	374	---	333	---	522	---	227	185	---
TOTAL	4866	10470	132690	15019	11485	12504	43435	34676	10972	8670	5738	5108
MEAN	157	349	4280	484	410	403	1448	1119	366	280	185	170
MAX	209	2400	52000	942	678	693	10000	5000	584	673	229	200
MIN	132	140	536	335	293	289	565	522	267	217	170	160
CAL YR 1982	TOTAL		248521	MEAN	681	MAX	52000	MIN	104			
WTR YR 1983	TOTAL		295633	MEAN	810	MAX	52000	MIN	132			

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 upstream from Black River.

DRAINAGE AREA.--94.5 mi².

PERIOD OF RECORD.--January 1960 to current year.

GAGE.--Water-stage recorder. Datum of gage is 655.34 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. 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 upstream, since Feb. 19, 1963, capacity 6,350 acre-ft.

AVERAGE DISCHARGE.--23 years, 108 ft³/s, 78,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,400 ft³/s Nov. 2, 1972, gage height, 11.13 ft; no flow at times many years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of March 1935 reached a stage of about 13.8 ft from information by local resident.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,110 ft³/s Dec. 3, gage height, 10.04 ft; no flow Sept. 3-6.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	23	225	165	26	13	156	1510	14	4.0	1.2	.08
2	12	25	317	148	28	9.4	395	1030	39	3.5	1.2	.02
3	11	30	6260	66	25	17	976	645	92	3.4	1.1	.00
4	10	31	3260	77	21	17	324	380	61	3.4	.99	.00
5	9.4	152	2210	122	34	28	224	261	44	3.5	.95	.00
6	12	22	1260	65	34	34	342	204	24	3.3	.91	.00
7	19	18	315	49	36	78	521	164	32	2.8	.90	.08
8	9.0	18	184	102	93	17	315	139	46	2.7	.89	.27
9	165	27	158	82	12	91	476	117	27	2.7	.89	.42
10	28	28	114	14	15	18	317	103	27	2.5	.89	.53
11	29	33	132	18	122	31	236	93	28	2.5	.87	.63
12	69	40	266	30	117	137	354	96	31	2.2	.80	.67
13	70	43	59	58	9.4	12	1680	127	20	2.2	.72	.65
14	36	42	158	17	13	19	2130	3880	8.7	2.1	.72	.60
15	38	43	88	30	56	23	578	1080	6.9	2.2	.72	.53
16	26	44	95	31	33	6.2	329	447	5.8	2.2	.72	.55
17	20	44	68	64	8.1	9.6	222	257	5.0	2.0	.70	.47
18	27	44	25	10	67	27	190	204	6.4	1.9	.72	.38
19	74	38	45	16	13	32	159	184	6.6	1.7	.72	.29
20	22	10	65	24	6.4	14	136	149	88	1.7	.69	.25
21	10	5.8	107	18	19	40	121	40	91	1.6	.65	.25
22	4.7	5.1	115	7.0	35	43	139	27	10	1.5	.71	.15
23	3.8	42	29	5.3	11	129	154	14	6.7	1.5	.87	.08
24	3.4	130	3400	18	19	25	138	23	5.4	1.3	.89	.02
25	3.2	202	3690	42	37	27	120	22	4.8	1.4	.80	.02
26	11	107	2030	43	6.7	43	111	69	4.9	1.4	.70	.04
27	14	914	1390	8.3	5.2	113	102	50	4.9	1.4	.61	.16
28	14	1580	956	15	71	97	106	101	6.4	1.3	.52	.24
29	25	681	350	21	---	112	4010	25	4.8	1.2	.36	.24
30	30	352	269	21	---	53	4650	121	4.2	1.2	.22	.16
31	29	---	138	22	---	85	---	17	---	1.3	.16	---
TOTAL	853.5	4773.9	27778	1408.6	972.8	1400.2	19711	11579	755.5	67.6	23.79	7.78
MEAN	27.5	159	896	45.4	34.7	45.2	657	374	25.2	2.18	.77	.26
MAX	165	1580	6260	165	122	137	4650	3880	92	4.0	1.2	.67
MIN	3.2	5.1	25	5.3	5.2	6.2	102	14	4.2	1.2	.16	.00

CAL YR 1982 TOTAL 86954.2 MEAN 238 MAX 6260 MIN 2.2
WTR YR 1983 TOTAL 69331.67 MEAN 190 MAX 6260 MIN .00

WHITE RIVER BASIN

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 downstream from Mayberry Branch, 7 mi southwest of Annapolis, 11 mi downstream from East Fork, and at mile 278.5.

DRAINAGE AREA.--484 mi².

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

GAGE.--Water-stage recorder. Datum of gage is 569.72 ft National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Aug. 21, 1942, at site 415 ft 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.--44 years, 568 ft³/s, 15.94 in/yr, 411,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 49,700 ft³/s Nov. 2, 1972, gage height, 21.55 ft; minimum discharge, 65 ft³/s Aug. 16, 17, 18, 1965; minimum gage height, 0.64 Aug. 22, 23, 1983.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 9	2130	7,740	8.61	Apr. 14	0600	13,200	11.25
Dec. 3	--	40,800	17.64	Apr. 30	0245	*47,600	18.65
Dec. 25	0200	22,300	14.08	May 14	1315	13,200	11.24

Minimum discharge, 101 ft³/s Aug. 22, 23; gage height, 0.64 ft.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	230	274	1360	1210	272	240	454	8030	416	204	164	105
2	218	272	2830	1060	282	203	700	5380	417	196	152	105
3	206	302	22600	914	290	206	2480	3600	518	189	143	105
4	200	322	23200	735	276	209	1890	2510	640	188	138	103
5	197	403	6950	710	276	224	1410	1970	518	206	131	103
6	191	333	4660	705	279	252	1400	1650	456	215	133	103
7	227	279	2520	564	279	379	1630	1410	438	202	131	124
8	344	262	1830	592	311	463	1540	1230	393	190	128	160
9	1690	255	1460	560	286	498	1630	1080	396	181	125	173
10	2590	252	1240	507	249	420	1670	948	347	176	122	159
11	1180	246	1080	428	252	383	1400	863	338	171	118	143
12	839	262	1210	411	420	445	1200	871	321	165	114	137
13	686	265	884	411	252	371	1960	833	313	160	111	139
14	354	269	867	383	233	318	9860	8670	287	158	109	142
15	472	258	819	360	262	315	3350	4920	282	157	107	145
16	403	240	735	348	256	286	2040	2600	273	155	105	144
17	356	247	658	341	233	272	1550	1910	261	153	105	138
18	322	244	591	352	240	272	1300	1620	252	149	105	134
19	319	242	543	300	256	276	1090	1520	247	157	105	130
20	371	236	557	300	218	279	914	1310	262	149	105	128
21	308	233	557	300	215	269	793	1070	396	142	103	130
22	272	230	597	290	230	293	787	942	267	137	102	128
23	252	236	487	279	224	326	827	834	235	132	105	128
24	236	308	9070	276	215	282	760	739	222	129	105	125
25	224	383	16000	300	236	243	695	662	214	132	105	127
26	218	450	5870	300	209	256	647	644	207	138	104	138
27	218	1190	3540	276	200	308	610	618	217	140	107	142
28	215	4250	3090	258	224	424	596	609	250	140	107	140
29	233	2890	2280	272	---	383	7580	549	232	135	105	135
30	268	1800	1780	265	---	360	27900	553	216	136	105	132
31	282	---	1440	272	---	352	---	492	---	148	105	---
TOTAL	14121	17433	121305	14279	7175	9807	80663	60637	9831	5030	3604	3945
MEAN	456	581	3913	461	256	316	2689	1956	328	162	116	132
MAX	2590	4250	23200	1210	420	498	27900	8670	640	215	164	173
MIN	191	230	487	258	200	203	454	492	207	129	102	103
CAL YR 1982		TOTAL	379043		MEAN	1038	MAX	23200	MIN	105		
WTR YR 1983		TOTAL	347830		MEAN	953	MAX	27900	MIN	102		

WHITE RIVER BASIN

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 upstream from Brewer Bay, 4.5 mi west of Piedmont, and at mile 257.4.

DRAINAGE AREA.--898 mi².

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 at elevation 567 ft, of which 391,800 acre-ft is available for flood-control storage, and 21,920 acre-ft is permanent storage which under normal operating conditions will be maintained for purposes of conservation and recreation at elevation 494 ft. 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 May 28, 1957, elevation, 565.59 ft; minimum, since initial filling to conservation pool level, 15,800 acre-ft Jan. 20, 23, 1972, elevation, 490.00 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 310,500 acre-ft Dec. 30, elevation, 556.07 ft; minimum, 21,400 acre-ft Nov. 14; minimum elevation, 493.71 ft Mar. 29.

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

493	20,300	530	137,000
498	28,900	540	193,000
504	41,500	551	269,000
510	57,300	556	314,000
520	91,600		

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	79500	21900	41800	304700	138600	21800	27200	197900	166500	81200	28700	26900
2	76700	21800	45100	301200	133300	21900	28900	211100	161300	80400	28200	26800
3	73800	21900	149100	296800	127400	22000	33500	222000	160100	79800	27900	26500
4	71100	22000	211200	292300	121500	22000	37800	228100	157200	78700	27600	26100
5	68100	22100	230000	288400	115600	22200	41300	230600	154100	76200	27400	25800
6	64900	22300	241800	283600	110000	22400	44100	229800	150700	74200	27400	25400
7	62000	22300	246400	278600	103900	22400	44900	227100	147300	72200	27400	25000
8	59000	22100	246600	273500	98100	22500	45300	230900	144700	70400	27500	24500
9	59900	22000	245000	268400	91900	22400	45300	220100	141500	69500	27600	24100
10	66700	21900	244600	263300	86100	22000	45400	216300	138500	68300	27600	23700
11	67400	21800	243000	257900	80000	21800	44700	212900	135800	66200	27700	23200
12	66500	21700	240500	252300	74300	21900	42700	211200	133300	64200	27700	22800
13	66000	21600	237300	246800	68700	22000	45300	207500	130100	62100	27500	22300
14	64300	21400	233300	241200	62500	22000	68600	223700	127400	60000	27300	21900
15	61900	21800	228800	235500	56600	22100	76900	232700	124300	58300	27100	21800
16	59400	22100	224500	230000	50600	22200	79100	234200	121500	57500	27000	21900
17	56800	22200	220100	224100	44900	22100	79300	232300	118700	56100	27100	22100
18	53700	22300	216000	218400	40000	22000	77600	231200	115900	53600	27200	22200
19	50800	22500	211900	212400	35800	22000	74600	229600	113300	51300	27200	22300
20	48100	22600	207700	206800	31300	21900	71400	226400	110600	49000	27000	22600
21	45200	22700	203600	201000	27500	21800	67900	222800	107900	46800	26900	22700
22	42200	22600	199200	195300	24900	21700	66400	219700	105300	44900	27000	22800
23	39300	22800	202300	189300	23300	21600	65400	216300	102500	44000	27100	23000
24	36400	22700	227700	183300	22500	21800	64200	211600	99600	42400	27100	23100
25	33400	22800	273700	177700	22000	21700	61200	206700	96900	40100	27200	23200
26	30300	23500	289400	171900	21800	21800	57300	201200	94500	37800	27100	23400
27	27400	25700	299000	166100	21700	22000	53300	195300	91500	35500	27000	23600
28	25100	34500	306600	160200	21700	22600	49300	189700	88900	33200	26800	23700
29	23700	40300	310200	154200	---	23700	82100	184000	86200	31100	26800	23900
30	22900	42000	310500	148500	---	24900	176100	178600	83600	30200	26800	24000
31	22200	---	307700	142900	---	25900	---	172400	---	29500	26900	---

WTR YR 1983

(†)	494.20	504.20	555.74	531.24	493.89	496.33	537.25	536.61	517.91	498.34	496.90	495.28
(‡)	-6000	+19800	+265700	-164800	-121200	+4200	+150200	-3700	-88800	-54100	-2600	-2900
MAX	79500	42000	310500	304700	138600	25900	176100	234200	166500	81200	28700	26900
MIN	22200	21400	41800	142900	21700	21600	27200	172400	83600	29500	26800	21800

CAL YR.....(†) +285600
WTR YR.....(‡) - 58200

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

WHITE RIVER BASIN

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 mi south of Leeper, 4 mi downstream from McKenzie Creek, 8 mi downstream from Clearwater Dam, and at mile 249.

DRAINAGE AREA.--987 mi².

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 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 downstream at datum 3.85 ft 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.--62 years, 954 ft³/s, 691,200 acre-ft.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 78,400 ft³/s May 14, 1933, gage height, 20.01 ft, site and datum then in use, from rating curve extended above 55,000 ft³/s; minimum, 62 ft³/s Sept. 22-25, 1966, gage height, 0.42 ft, result of closure of Clearwater Dam: minimum, prior to regulation, 133 ft³/s Aug. 11, 1934.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of March 1904 reached a stage of about 22.3 ft, present site and datum, from floodmarks, discharge, 125,000 ft³/s, from rating curve extended above 55,000 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 40,900 ft³/s Dec. 3, gage height, 15.15 ft; minimum 102 ft³/s Mar. 31, gage height, 1.01 ft.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1690	684	2010	3500	2790	391	103	1020	3800	1760	610	209
2	1830	556	2040	3480	2890	383	146	702	3700	939	530	215
3	1840	464	22000	3450	3500	378	178	1040	3700	770	460	314
4	1820	451	3060	3410	3500	374	143	727	2300	781	390	331
5	1860	446	911	3380	3530	386	135	1450	2300	1620	435	336
6	1960	445	620	3430	3490	384	177	2090	2300	1500	365	349
7	1950	458	950	3540	3480	423	1420	3370	2300	1350	358	432
8	1930	486	2390	3520	3520	568	1730	3340	2200	1340	312	434
9	1480	484	2980	3480	3510	595	2160	3290	2200	947	296	433
10	414	483	2560	3490	3510	752	2150	3330	2200	810	287	432
11	623	484	2220	3550	3500	718	2240	3400	2100	1500	263	431
12	1370	490	2890	3530	3510	512	2650	2640	2100	1400	266	432
13	1060	481	2910	3520	3450	509	2350	2560	2100	1400	325	426
14	1440	481	3430	3580	3450	511	902	2050	2000	1400	338	425
15	1820	354	3840	3600	3510	449	789	1390	2000	1430	335	364
16	1890	158	3690	3570	3480	446	1820	2130	2000	929	325	242
17	1870	216	3200	3560	3540	464	2100	3140	2000	908	257	212
18	1890	225	3160	3570	3360	484	2650	2910	1900	1660	237	205
19	1980	225	3130	3540	2730	483	3250	2250	1900	1580	237	194
20	1960	225	3090	3530	2680	488	3220	2940	1900	1570	281	204
21	1940	225	3060	3570	2630	481	3200	3100	1900	1560	290	203
22	1970	234	3050	3530	2430	476	2600	2790	1900	1520	248	200
23	1940	295	3040	3490	1440	476	1850	2530	1840	914	231	201
24	1900	287	7510	3500	1040	425	1800	2620	1840	890	228	201
25	1880	284	2650	3550	719	423	2240	2900	1820	1690	228	200
26	1870	292	912	3550	591	417	3070	3300	1820	1560	228	200
27	1830	255	702	3550	467	403	3160	3600	1810	1500	263	200
28	1730	391	1030	3540	419	388	2900	3700	1790	1490	275	193
29	1240	329	1440	3560	---	157	3760	3800	1780	1300	269	192
30	846	1200	2100	3520	---	117	6690	3800	1770	795	217	192
31	778	---	3460	3450	---	102	---	3800	---	640	209	---
TOTAL	50601	12088	100035	109040	76666	13563	61583	81709	65270	39453	9593	8602
MEAN	1632	403	3227	3517	2738	438	2053	2636	2176	1273	309	287
MAX	1980	1200	22000	3600	3540	752	6690	3800	3800	1760	610	434
MIN	414	158	620	3380	419	102	103	702	1770	640	209	192
CAL YR 1982		TOTAL	471756	MEAN	1292	MAX	22000	MIN	158			
WTR YR 1983		TOTAL	628203	MEAN	1721	MAX	22000	MIN	102			

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 upstream from bridge on U.S. Highway 60, 4.8 mi downstream from Indian Creek, and at mile 211.2.

DRAINAGE AREA, --1,245 mi².

PERIOD OF RECORD.--October 1936 to September 1937, October 1939 to current year. Gage-height records collected at site 1,800 ft downstream September 1923 to July 1935, and since July 1935 at site 1,500 ft 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 National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1940, nonrecording gage at site 1,500 ft downstream are at datum 2.00 ft higher, Oct. 1, 1940, to June 7, 1955, at site 1,500 ft downstream at present datum.

REMARKS.--Records fair. Flow regulated by Clearwater Lake. Several observations of water temperatures made during the year.

AVERAGE DISCHARGE.--45 years, 1,286 ft³/s, 931,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 65,600 ft³/s Dec. 4, 1982, computed from slope-area measurement, gage height, 21.68 ft; minimum discharge, 180 ft³/s Sept. 25, 26, 1966, gage height, 0.65 ft, closure of Clearwater Dam for repairs; minimum prior to regulation, 236 ft³/s Aug. 12, 1944.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of March 1904 reached a maximum discharge of 100,000 ft³/s and flood on Mar. 12, 1935 reached a stage of 21.1 ft, present datum (affected by levees constructed since 1904).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 65,600 ft³/s Dec. 4, gage height, 21.68 ft; minimum daily discharge, 359 ft³/s Sept. 30.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

MEAN VALUES												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1750	1190	1170	3800	3820	878	537	7630	4000	1900	967	385
2	1780	1100	1380	3800	3540	821	789	5330	3980	1820	925	380
3	1860	957	4970	3800	3520	789	887	5090	3960	1270	872	384
4	1890	826	41200	3800	3800	766	849	4100	3150	1090	714	462
5	1890	774	17600	3700	3870	826	842	2630	2720	1130	662	502
6	1930	748	5890	3800	3910	1060	1230	2630	2780	1620	637	509
7	2020	731	2270	3800	3890	911	1610	3090	2760	1590	577	541
8	2020	737	1760	3800	3890	867	2370	3830	2790	1490	543	592
9	2980	761	2590	3800	3890	948	2880	3930	2410	1450	497	605
10	2560	750	2830	3800	3900	982	3030	3880	2440	1160	482	610
11	1100	742	2770	3800	3880	1100	2860	3840	2390	1090	485	610
12	1100	751	3000	3800	3870	1070	2860	3840	2270	1420	480	609
13	1610	735	3500	3800	3870	915	3190	3770	2230	1460	490	610
14	1470	717	4000	3800	3830	893	4660	3570	2210	1500	493	607
15	1670	708	4500	3800	3820	880	3100	3430	2200	1490	507	604
16	1930	660	5000	3800	3840	824	2140	3080	2180	1440	506	563
17	2020	501	4800	3800	3820	808	2510	3090	2150	1110	496	448
18	2040	517	4000	3800	3700	819	2750	3610	2120	1100	480	404
19	2080	540	3900	3890	3250	828	3120	3510	2100	1550	460	383
20	2150	545	3800	3880	3010	853	3470	3130	2080	1570	420	381
21	2140	540	3700	3890	2900	861	3510	3600	2060	1570	400	382
22	2120	528	5000	3900	2670	834	3550	4270	2050	1550	450	373
23	2130	509	3500	3870	2170	827	3100	3690	2030	1490	440	367
24	2110	546	4000	3840	1850	824	2500	3340	2020	1110	410	363
25	2070	624	9000	3840	1490	776	2340	3600	2000	1090	380	365
26	2050	605	6000	3860	1230	775	2720	3720	1980	1570	360	368
27	2030	599	4000	3870	1090	979	3280	3860	1870	1570	360	366
28	1990	723	3000	3860	1010	887	3440	3960	1960	1550	380	363
29	1910	1530	3800	3870	---	803	3450	4040	1930	1570	440	361
30	1590	1750	3800	3910	---	597	5090	4030	1920	1570	420	359
31	1300	---	3800	3870	---	544	---	4010	---	1110	400	---
TOTAL	59290	22944	170530	118650	89310	26545	78664	119130	72740	44000	16133	13856
MEAN	1913	765	5501	3827	3190	856	2622	3843	2425	1419	520	462
MAX	2980	1750	41200	3910	3910	1100	5090	7630	4000	1900	967	610
MIN	1100	501	1170	3700	1010	544	537	2630	1870	1090	360	359
CAL YR 1982	TOTAL		692870		MEAN		1898		MAX		41200	
WTR YR 1983	TOTAL		831792		MEAN		2279		MAX		41200	
									MIN		408	
											359	

WHITE RIVER AT EMINENCE, MO
07066000 JACKS FORK AT EMINENCE, MO

LOCATION.--Lat 37°09'18", long 91°21'31", in SW¼NW¼ sec.26, T.29 N., R.4 W., Shannon County, Hydrologic Unit 11010008, on left bank 50 ft upstream from bridge on State Highway 19, at Eminence, 1.5 mi downstream from Mahans Creek, and 8.0 mi upstream from mouth.

DRAINAGE AREA.--398 mi².

PERIOD OF RECORD.--October 1921 to current year. Monthly discharge only for October 1921, published WSP 1311.

REVISED RECORDS.--WSP 787: 1928(M), 1934. WSP 877: 1938. WSP 927: Drainage area. WSP 1281: 1929.

GAGE.--Water-stage recorder. Datum of gage is 617.87 ft National Geodetic Vertical Datum of 1929. Prior to Jan. 27, 1934, nonrecording gage at site 1,350 ft upstream at datum 2.11 ft higher. Jan. 27, 1934, to Jan. 10, 1935, nonrecording gage at site 75 ft downstream at datum 0.04 ft lower. Jan. 11, 1935, to July 9, 1964, nonrecording gage at site 50 ft downstream at present datum.

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

AVERAGE DISCHARGE.--62 years, 441 ft³/s, 15.05 in/yr, 319,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 40,200 ft³/s April 30, 1983, gage height, 17.03 ft, from rating curve extended above 21,000 ft³/s; minimum, 0.64 ft³/s Aug. 28, 1936; minimum gage height, 0.64 ft Sept. 18, 1971.

EXTREMES OUTSIDE PERIOD OF RECORD.--Floods in 1895 and March 1904 reached a stage of about 25 ft present site and datum, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,900 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 28	1615	6,130	7.08
Dec. 4	0415	22,900	13.84
Dec. 24	2015	11,200	9.66
Apr. 14	0145	16,100	11.40
Apr. 30	0645	*40,200	17.03

Minimum discharge, 131 ft³/s Oct. 27, minimum gage height, 0.96 ft.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	157	179	1020	992	356	243	270	4120	438	231	186	141
2	154	190	937	889	508	243	1590	3090	437	224	172	143
3	153	224	12400	820	702	243	2440	2510	464	223	170	141
4	153	264	13100	751	607	247	1530	2080	459	235	165	143
5	154	238	5860	708	529	351	1100	1780	451	243	155	143
6	158	217	3900	672	452	808	1030	1530	417	248	155	138
7	160	201	2490	642	422	1340	999	1300	370	234	167	146
8	163	193	1980	600	412	1160	914	1080	357	222	165	191
9	173	184	1650	577	398	895	845	933	344	220	160	232
10	187	177	1450	554	397	739	776	851	336	216	160	189
11	188	174	1280	526	385	612	708	751	332	216	155	170
12	175	178	1160	467	360	504	654	715	329	209	155	160
13	168	176	1060	452	347	457	966	656	324	203	155	155
14	162	171	1010	422	335	427	6720	651	328	200	153	146
15	157	167	938	392	323	392	2390	859	333	200	153	143
16	155	165	855	373	315	378	1610	814	333	200	153	148
17	153	158	765	369	301	364	1220	694	327	200	150	146
18	148	156	727	355	295	343	1030	725	308	209	153	146
19	148	156	685	343	288	323	876	1040	301	206	153	146
20	152	156	624	339	283	306	751	1030	275	194	148	150
21	147	153	574	343	279	288	672	869	262	191	148	150
22	147	150	535	350	274	258	666	794	255	189	146	148
23	144	194	518	344	270	254	1020	775	248	183	150	148
24	141	323	4110	337	270	254	921	684	241	177	150	143
25	138	331	5820	330	266	251	776	624	238	191	150	146
26	138	339	2610	320	258	247	684	583	266	216	150	148
27	137	1510	1970	317	254	251	636	537	258	197	148	148
28	144	4570	2040	317	251	250	589	498	252	189	143	148
29	163	2300	1700	327	---	250	4320	481	250	219	141	148
30	171	1390	1420	333	---	247	19700	468	241	206	141	143
31	184	---	1140	333	---	251	---	446	---	191	143	---
TOTAL	4872	14984	76328	14894	10137	13176	58403	33968	9774	6482	4793	4587
MEAN	157	499	2462	480	362	425	1947	1096	326	209	155	153
MAX	188	4570	13100	992	702	1340	19700	4120	464	248	186	232
MIN	137	150	518	317	251	243	270	446	238	177	141	138
CAL YR 1982	TOTAL	223118	MEAN	611	MAX	13100	MIN	137				
WTR YR 1983	TOTAL	252398	MEAN	692	MAX	19700	MIN	137				

WHITE RIVER BASIN

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, 1.4 mi downstream from Pike Creek, 4.7 mi upstream from Big Creek, and at mile 90.4.

DRAINAGE AREA.--1,667 mi².

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 National Geodetic Vertical Datum of 1929. Prior to Sept. 1, 1926, nonrecording gage at site 100 ft 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 and datum 3.00 ft higher, set to read same as gage 100 ft downstream.

REMARKS.--Records good.

AVERAGE DISCHARGE.--71 years, 1,859 ft³/s, 15.15 in/yr, 1,347,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 125,000 ft³/s Aug. 21, 1915, gage height, 25.9 ft, present datum, from rating curve extended above 62,000 ft³/s; minimum discharge, 473 ft³/s Oct. 7, 8, 1956; minimum gage height, 1.54 ft Oct. 2, 3, 1981.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 26, 1904, reached a stage of 29.0 ft, present datum, from floodmarks.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 14,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 3	1430	*89,200	23.89
Dec. 25	1500	27,800	14.66
Apr. 30	2145	81,300	25.67

Minimum discharge, 758 ft³/s Sept. 30, gage height, 2.64 ft.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	991	1050	3720	4320	1630	1220	1440	37400	2190	1350	1010	801
2	975	1070	3380	3960	1740	1210	1750	13000	2140	1320	981	787
3	967	1130	61600	3700	1920	1210	4880	10800	2210	1290	957	780
4	982	1190	59600	3460	1950	1210	4490	8510	2470	1290	940	777
5	959	1190	36000	3260	1860	1290	3710	6960	2310	1380	951	774
6	950	1130	16500	3090	1790	1920	3520	5930	2150	1380	952	769
7	997	1090	10600	2950	1750	2920	3510	5280	2060	1290	960	816
8	1130	1050	7560	2810	1700	3180	3400	4810	1980	1230	951	808
9	1140	1020	6040	2670	1660	2800	3320	4440	1920	1200	929	845
10	1540	963	5210	2560	1640	2460	3190	4140	1860	1190	914	857
11	1470	936	4830	2460	1610	2200	2980	3910	1820	1170	901	820
12	1310	967	4340	2330	1570	2030	2790	3890	1780	1150	893	803
13	1200	952	3970	2230	1520	1930	3470	3770	1750	1130	882	811
14	1130	922	3750	2150	1480	1870	12100	4420	1730	1120	876	816
15	1080	899	3560	2060	1460	1810	15400	7410	1790	1120	867	793
16	1040	890	3330	2010	1450	1750	6490	5500	1720	1110	856	803
17	1010	882	3120	1970	1430	1690	5050	4660	1670	1120	848	808
18	985	887	2980	1920	1410	1640	4420	4290	1620	1130	844	789
19	970	889	2870	1870	1390	1600	4000	4580	1590	1110	843	774
20	991	888	2710	1830	1370	1590	3670	4570	1560	1070	837	791
21	973	877	2560	1820	1350	1550	3380	4160	1560	1050	830	836
22	937	870	2430	1820	1330	1500	3390	3910	1540	1030	829	805
23	916	1060	2360	1790	1310	1440	3510	3680	1490	1010	874	779
24	904	1110	7910	1760	1300	1390	3540	3400	1450	1000	868	768
25	895	1240	23900	1720	1300	1360	3300	3140	1430	1040	857	774
26	884	1270	14900	1690	1270	1360	3110	2940	1420	1110	832	805
27	880	2570	8320	1650	1240	1450	2970	2760	1490	1070	825	797
28	889	6770	7810	1630	1220	1460	2840	2630	1460	1030	817	783
29	971	8650	6730	1630	---	1430	6080	2510	1410	1010	807	772
30	1050	4960	5480	1640	---	1410	60800	2370	1380	1030	798	758
31	1070	---	4790	1610	---	1390	---	2270	---	1040	803	---
TOTAL	32186	49372	332860	72370	42650	53270	186500	182040	52950	35570	27332	23899
MEAN	1038	1646	10740	2335	1523	1718	6217	5872	1765	1147	882	797
MAX	1540	8650	61600	4320	1950	3180	60800	37400	2470	1380	1010	857
MIN	880	870	2360	1610	1220	1210	1440	2270	1380	1000	798	758
CAL YR 1982	TOTAL	1028444	MEAN	2818	MAX	61600	MIN	774				
WTR YR 1983	TOTAL	1090999	MEAN	2989	MAX	61600	MIN	758				

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 downstream from spring outlet, 0.4 mi upstream from Current River, and 3.5 mi 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: 1922-23, 1928(M), 1929.

GAGE.--Nonrecording gage. Datum of gage is 429.08 ft National Geodetic Vertical Datum of 1929. Prior to Feb. 19, 1971, nonrecording gage, prior to Oct. 1, 1934 at datum 1.0 ft 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.--62 years, 437 ft³/s, 316,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 2,000 ft³/s, estimated, Dec. 3, 1982, during period of backwater from Current River; minimum, 236 ft³/s Oct. 6, 1956.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 2,000 ft³/s, estimated Dec. 3, during period of backwater from Current River; minimum daily discharge, 300 ft³/s Nov. 21.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	326	312	751	1170	523	410	393	2000	499	435	353	326
2	326	312	590	1060	523	410	445	1800	493	435	353	326
3	329	310	2000	982	529	410	1090	1600	516	429	355	326
4	323	307	1700	911	519	410	889	1500	519	426	355	323
5	321	307	1400	859	509	410	1120	1400	509	426	353	323
6	321	307	1300	819	506	474	634	1270	499	426	353	329
7	318	305	1170	793	503	569	634	1140	503	419	350	329
8	321	305	1500	759	493	594	619	986	493	416	347	329
9	323	305	1400	735	489	536	656	854	493	413	347	326
10	329	305	1300	715	486	506	619	772	489	413	341	323
11	321	307	1250	703	477	483	563	743	496	410	341	326
12	321	307	1200	676	470	470	542	695	493	410	341	323
13	315	305	1060	664	467	461	580	656	489	407	338	329
14	315	305	1020	649	461	455	800	641	493	407	341	329
15	315	305	933	638	455	451	1400	1100	493	404	338	329
16	310	305	885	630	455	445	1300	1030	493	401	338	329
17	310	305	832	615	451	438	1180	798	493	398	338	329
18	312	305	802	612	448	435	968	727	493	394	335	329
19	310	305	764	601	445	432	837	798	493	391	335	329
20	310	305	739	597	438	419	695	735	493	385	332	329
21	312	300	715	594	432	419	638	707	486	382	332	326
22	312	305	685	587	429	416	672	664	480	376	335	323
23	312	307	645	580	429	407	672	626	474	373	335	323
24	310	307	680	563	429	404	672	594	467	373	335	326
25	310	307	700	556	423	398	634	559	464	370	332	326
26	307	312	800	552	419	398	605	549	458	367	332	326
27	310	407	900	542	416	404	576	532	451	364	332	323
28	312	600	1500	539	413	398	576	523	451	361	329	323
29	312	800	1400	536	---	398	576	519	445	358	329	323
30	312	1100	1300	532	---	394	700	509	442	358	326	321
31	312	---	1240	523	---	394	---	499	---	355	326	---
TOTAL	9797	10874	33161	21292	13037	13648	22285	27526	14560	12282	10527	9781
MEAN	316	362	1070	687	466	440	743	888	485	396	340	326
MAX	329	1100	2000	1170	529	594	1400	2000	519	435	355	329
MIN	307	300	590	523	413	394	393	499	442	355	326	321
CAL YR 1982		TOTAL	191231	MEAN	524	MAX	2000	MIN	300			
WTR YR 1983		TOTAL	198770	MEAN	545	MAX	2000	MIN	300			

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 upstream from U.S. Highway 160, 1 mi west of Doniphan, 2.5 mi upstream from Brian Creek, and at mile 51.3.

DRAINAGE AREA.--2,038 mi².

PERIOD OF RECORD.--October 1918 to current year. Prior to July 1921 monthly discharge only, published in WSP 1311.

REVISED RECORDS.--WSP 877: 1937 38(M). WSP 927: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 321.21 ft, National Geodetic Vertical Datum of 1929. July, 1936, to Sept. 30, 1971, datum is 1.00 ft higher. Prior to July 3, 1936, nonrecording gages at several sites 0.5 mi downstream at various datums.

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

AVERAGE DISCHARGE.--65 years, 2,712 ft³/s, 18.07 in/yr, 1,965,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 122,000 ft³/s December 3, 1982, gage height, 25.49 ft, present site and datum, from slope-area measurement; minimum, 852 ft³/s Oct. 8-19, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of March 1904 reached a stage of 25.9 ft, from floodmarks, present site and datum, discharge, 130,000 ft³/s from rating curve extended above 60,000 ft³/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 14,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 3	2200	*122,000	25.49
Dec. 24	2030	48,900	16.38
Apr. 15	2215	25,800	11.08
May 1	1330	83,400	21.61

Minimum discharge, 1,320 ft³/s Sept. 4-6, gage height, 1.42 ft., minimum gage height, 1.39 ft Sept. 30.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1650	1660	6360	6960	2660	2060	2260	74400	3430	2310	1730	1360
2	1630	1670	5260	6410	2690	2050	2590	33500	3350	2260	1700	1350
3	1600	1670	64900	5940	2770	2040	4260	17900	3380	2210	1660	1340
4	1600	1740	78800	5550	2910	2030	6380	12700	3460	2250	1640	1330
5	1590	1800	62100	5240	2860	2120	5580	9980	3470	2260	1620	1330
6	1630	1760	34300	4920	2780	2330	5120	8440	3320	2310	1740	1320
7	1600	1700	18000	4760	2730	3130	5010	7590	3210	2220	1640	1450
8	1670	1640	11000	4570	2680	3790	5050	6910	3110	2130	1640	1390
9	2490	1590	8670	4400	2630	3670	5010	6300	3030	2080	1610	1380
10	2080	1550	7560	4230	2590	3350	4820	5800	2950	2050	1580	1430
11	2390	1510	6960	4080	2560	3110	4550	5470	2890	2020	1560	1420
12	2170	1560	6410	3920	2510	2940	4290	5340	2840	1990	1560	1380
13	2000	1530	5870	3780	2460	2800	4280	5140	2790	1960	1530	1360
14	1870	1500	5490	3660	2410	2720	8010	4960	2760	1940	1500	1370
15	1780	1470	5200	3560	2370	2660	18400	7240	2870	1920	1480	1360
16	1710	1440	4920	3470	2350	2590	13300	7450	2940	1920	1470	1350
17	1660	1420	4640	3390	2330	2520	7630	6180	2850	1910	1460	1370
18	1620	1430	4430	3320	2310	2470	6570	5590	2780	1920	1450	1360
19	1590	1450	4250	3250	2280	2420	5870	5540	2720	1910	1440	1340
20	1580	1460	4090	3150	2250	2410	5320	5690	2670	1860	1440	1390
21	1570	1440	3930	3110	2240	2360	4920	5410	2630	1820	1410	1400
22	1540	1440	3770	3090	2210	2310	4720	5090	2620	1780	1400	1410
23	1500	1580	3700	3040	2190	2250	4750	4860	2560	1750	1440	1360
24	1480	1830	22800	2980	2180	2190	4800	4630	2500	1730	1460	1350
25	1460	1870	30300	2920	2160	2140	4630	4390	2450	1770	1440	1350
26	1440	2040	32600	2860	2130	2140	4410	4190	2420	1820	1430	1370
27	1430	2940	17000	2800	2100	2220	4240	4020	2460	1850	1400	1400
28	1430	7320	12400	2750	2070	2250	4090	3890	2490	1780	1390	1380
29	1500	10500	10500	2740	---	2240	4020	3760	2410	1760	1380	1360
30	1550	8940	8790	2700	---	2210	20500	3650	2350	1740	1360	1360
31	1650	---	7660	2660	---	2190	---	3540	---	1760	1360	---
TOTAL	52460	71450	502660	120210	68410	77710	185380	289550	85710	60990	46920	41120
MEAN	1692	2382	16210	3878	2443	2507	6179	9340	2857	1967	1514	1371
MAX	2490	10500	78800	6960	2910	3790	20500	74400	3470	2310	1740	1450
MIN	1430	1420	3700	2660	2070	2030	2260	3540	2350	1730	1360	1320
CAL YR 1982	TOTAL	1554920	MEAN	4260	MAX	78800	MIN	1420				
WTR YR 1983	TOTAL	1602570	MEAN	4391	MAX	78800	MIN	1320				

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 upstream from North Prong Little Black River.

DRAINAGE AREA.--6.85 mi².

WATER DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 571.84 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except for periods of no gage-height record which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,080 ft³/s Dec. 3, 1982, gage height, 10.98 ft; no flow at times.EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 760 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 3	0400	*6,080	10.98
Dec. 24	0400	3,800	9.40

No flow many days.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.10	.10	11	6.7	.58	.33	3.5	28	1.9	.44	.00	.00
2	.10	.10	9.6	5.2	.58	.29	42	34	1.9	.38	.00	.00
3	.10	.10	1740	4.0	.67	.29	28	99	3.9	.38	.00	.00
4	.10	.10	84	3.4	.77	.29	15	26	3.4	.44	.00	.00
5	.10	.10	50	3.0	1.0	.51	28	16	3.0	.40	.00	.00
6	.10	.10	25	2.5	1.1	.58	29	10	2.3	.40	.00	.00
7	.12	.10	15	2.3	1.1	.58	22	8.0	1.9	.30	.00	.00
8	.10	.10	33	2.1	1.1	.58	33	6.1	1.9	.30	.00	.00
9	.10	.10	7.3	1.9	1.2	.67	32	4.7	1.7	.20	.00	.00
10	6.9	.08	6.4	1.5	1.4	.77	19	3.8	1.5	.20	.00	.00
11	4.1	.09	6.4	1.5	1.2	.77	12	3.4	1.4	.20	.00	.00
12	2.0	.16	4.2	1.4	1.1	.88	10	3.2	1.2	.20	.00	.00
13	1.0	.09	3.8	1.2	1.0	.88	42	3.0	1.1	.20	.00	.00
14	.80	.09	3.2	1.1	1.0	.88	45	3.5	1.1	.20	.00	.00
15	.60	.08	3.0	1.0	1.0	.77	23	17	1.1	.20	.00	.00
16	.60	.08	2.3	1.0	1.0	.77	14	13	1.0	.10	.00	.00
17	.40	.09	2.1	.88	.88	.77	10	8.3	.88	.10	.00	.00
18	.40	.09	1.7	.77	.88	.77	8.8	10	.88	.10	.00	.00
19	.20	.12	1.5	.67	.88	.77	7.0	15	.88	.10	.00	.00
20	.20	.12	1.4	.67	.77	.88	5.5	9.4	.88	.10	.00	.00
21	.20	.12	1.2	.67	.67	.77	4.7	7.6	.77	.05	.00	.00
22	.20	.18	1.1	.58	.58	.67	5.2	6.4	.67	.05	.00	.00
23	.20	.58	2.3	.58	.58	.58	5.5	5.0	.67	.05	.00	.00
24	.20	22	1050	.51	.51	.58	5.0	4.2	.58	.05	.00	.00
25	.20	9.3	145	.51	.51	.51	4.2	3.8	.58	.05	.00	.00
26	.20	29	35	.44	.44	.58	3.6	3.2	.58	.00	.00	.00
27	.10	291	46	.38	.38	.77	3.4	3.0	.51	.00	.00	.00
28	.10	161	45	.38	.33	.67	3.2	3.2	.51	.00	.00	.00
29	.10	38	21	.51	---	.67	3.6	3.0	.51	.00	.00	.00
30	.10	17	12	.51	---	.67	67	2.3	.51	.00	.00	.00
31	.10	---	9.1	.44	---	.77	---	19	---	.00	.00	---
TOTAL	38.72	627.59	3378.6	48.30	23.21	20.27	534.2	382.1	39.71	5.19	.00	.00
MEAN	1.25	20.9	109	1.56	.83	.65	17.8	12.3	1.32	.17	.00	.00
MAX	19	291	1740	6.7	1.4	.88	67	99	3.9	.44	.00	.00
MIN	.10	.08	1.1	.38	.33	.29	3.2	2.3	.51	.00	.00	.00
CAL YR 1982		TOTAL	8257.61		MEAN	22.6	MAX	1740	MIN	.00		
WTR YR 1983		TOTAL	5097.89		MEAN	14.0	MAX	1740	MIN	.00		

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, 28.0°C June 25; minimum 0.5°C on many days.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1				---	---	---	13.0	11.5	12.0	6.5	4.5	5.5
2				---	---	---	14.5	13.5	14.0	6.0	5.5	6.0
3				---	---	---	14.5	14.0	14.0	6.0	4.5	5.5
4				---	---	---	14.5	14.5	14.5	5.5	3.5	4.5
5				---	---	---	14.0	12.0	13.5	6.5	4.5	5.5
6				---	---	---	12.0	11.0	11.0	5.5	4.0	5.0
7				---	---	---	11.0	9.5	10.0	6.5	4.5	5.5
8				---	---	---	11.0	9.0	10.0	5.5	5.5	5.5
9				12.0	10.0	11.0	10.0	8.5	9.0	5.5	4.5	5.0
10				14.0	9.5	11.5	9.0	8.5	8.5	6.5	5.5	6.0
11				14.5	13.0	13.5	9.0	6.5	8.5	5.5	3.5	4.5
12				14.5	8.5	11.5	6.5	5.0	5.5	4.0	1.5	3.0
13				8.5	6.0	7.0	6.0	4.5	5.5	5.5	2.0	4.0
14				9.0	6.5	8.0	8.0	5.5	6.5	6.0	3.0	4.5
15				8.0	5.0	6.0	8.5	8.0	8.5	4.5	2.0	3.5
16				8.0	4.0	5.5	7.0	5.5	6.0	4.0	.5	2.0
17				9.0	6.0	8.0	6.5	4.5	5.5	3.5	.5	1.5
18				10.5	9.0	10.0	8.0	6.0	6.5	2.0	.5	1.5
19				12.0	10.5	11.5	8.0	6.0	6.5	2.0	.5	1.0
20				15.0	12.0	14.0	7.0	5.0	6.0	3.0	1.5	2.0
21				14.5	13.0	13.5	7.0	5.0	6.0	1.5	1.5	1.5
22				13.0	12.0	13.0	10.5	7.0	9.0	3.0	1.5	2.0
23				13.5	11.0	13.0	11.5	10.5	11.5	4.0	3.0	3.5
24				11.0	9.0	10.0	12.0	11.5	11.5	5.0	3.5	4.5
25				10.0	8.5	9.5	12.0	10.5	11.5	5.5	3.5	4.5
26				10.0	9.5	10.0	10.5	9.5	10.0	4.5	3.0	4.0
27				9.5	9.5	9.5	11.5	9.5	10.5	4.0	3.5	3.5
28				10.5	9.5	10.0	10.5	8.0	9.0	4.0	3.0	3.5
29				11.5	9.5	10.5	7.0	6.5	7.0	5.0	3.5	4.5
30				11.5	10.0	10.5	6.5	5.0	6.0	6.5	3.5	5.0
31				---	---	---	6.5	5.5	6.0	5.5	3.5	4.5
MONTH				15.0	4.0	10.5	14.5	4.5	9.0	6.5	.5	4.0

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 upstream from Highway NN and 5.4 miles above South Prong Little Black River.

DRAINAGE AREA.--39.4 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 8, 1980 to current year.

GAGE.--Water-stage recorder. Datum of gage is 468.61 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 31,800 ft³/s Dec. 3, 1982, gage height, 17.32 ft; no flow at times.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 28	--	unknown	--
Dec. 3	1630	*31,800	17.32
Dec. 24	1115	9,060	13.53

Minimum, 0.72 ft³/s Sept. 7, gage height, 1.57 ft.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.3	6.0	78	52	10	12	40	166	16	5.2	1.5	1.0
2	5.8	6.0	77	49	12	12	210	166	15	4.6	1.3	1.0
3	5.6	6.0	6930	40	13	12	167	447	26	4.8	1.2	1.0
4	5.6	6.3	521	33	17	11	86	143	30	7.1	1.2	1.0
5	5.2	6.3	397	31	16	17	184	80	22	9.0	1.8	1.0
6	5.2	6.3	245	27	17	22	197	61	18	7.2	2.1	1.0
7	6.7	6.3	158	22	18	21	154	52	16	6.0	2.0	4.7
8	6.7	6.3	119	22	17	20	197	43	15	5.9	2.0	2.8
9	234	6.3	84	19	17	20	212	37	14	5.6	1.9	2.2
10	40	6.3	42	18	17	20	106	35	13	5.3	1.7	1.8
11	27	6.3	36	16	18	19	77	32	12	4.6	1.6	1.6
12	22	8.4	31	13	18	19	64	31	10	4.3	1.8	1.8
13	19	7.8	27	13	16	18	196	28	10	4.1	1.9	2.0
14	17	7.0	27	13	16	18	206	27	8.9	3.6	1.9	1.6
15	15	6.5	27	11	15	17	85	70	8.9	3.2	1.7	1.6
16	14	6.5	22	11	16	17	66	62	8.5	3.2	1.6	1.4
17	13	6.5	18	10	14	17	57	45	7.5	3.2	1.6	1.6
18	11	6.5	17	10	14	17	48	47	7.4	3.0	1.4	1.6
19	10	7.0	15	10	14	17	41	62	7.4	2.8	1.3	1.3
20	9.0	7.5	13	9.4	14	19	37	50	7.4	2.5	1.3	2.0
21	8.5	7.5	13	8.9	13	17	39	43	7.2	2.0	1.2	2.6
22	8.0	8.1	12	8.9	13	16	40	41	6.7	1.7	1.0	2.0
23	8.0	56	15	8.9	13	16	36	34	6.1	1.7	1.0	1.6
24	7.5	65	3070	8.9	13	15	32	31	6.4	1.4	1.2	1.6
25	7.0	47	875	8.9	13	14	30	28	6.0	1.6	1.3	1.7
26	7.0	53	364	8.1	12	18	28	26	6.1	1.9	1.2	1.9
27	7.0	450	406	7.9	12	30	28	24	6.4	1.9	1.1	1.7
28	6.5	1200	442	7.5	12	27	27	23	6.4	1.9	1.0	1.7
29	6.5	179	263	9.5	---	27	27	23	6.2	2.0	1.1	1.7
30	6.0	85	130	10	---	27	418	19	5.6	1.8	1.0	1.6
31	6.0	---	63	8.9	---	27	---	18	---	1.6	1.0	---
TOTAL	556.1	2282.7	14537	525.8	410	579	3135	1994	336.1	114.7	44.9	52.1
MEAN	17.9	76.1	469	17.0	14.6	18.7	105	64.3	11.2	3.70	1.45	1.74
MAX	234	1200	6930	52	18	30	418	447	30	9.0	2.1	4.7
MIN	5.2	6.0	12	7.5	10	11	27	18	5.6	1.4	1.0	1.0
CAL YR 1982		TOTAL	33904.4		MEAN	92.9	MAX	6930		MIN	3.7	
WTR YR 1983		TOTAL	24567.4		MEAN	67.3	MAX	6930		MIN	1.0	

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 southeast of Grandin and 0.1 mile below the confluence of South Prong Little Black River and North Prong Little Black River.

DRAINAGE AREA.--79.5 square miles.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 400.44 ft National Geodetic Vertical Datum of 1929.

RECORDS.--Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 41,800 ft³/s Dec. 3, 1982, gage height, 13.78 ft; minimum, 4.9 ft³/s Aug. 29, 30, Sept. 3-6, 1983.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 8	0430	4,120	7.35	Apr. 30	0930	2,100	6.00
Dec. 3	0800	*41,800	13.78	May 3	0330	2,530	6.30
Dec. 24	1200	17,800	12.10				

Minimum discharge, 4.9 ft³/s Aug. 29, 30, Sept. 3-6, gage height, 1.15 ft.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	20	172	116	30	24	57	472	32	17	8.0	5.2
2	15	22	154	101	34	23	342	295	38	16	7.4	5.2
3	15	22	10300	85	36	23	381	1230	56	15	7.4	5.2
4	15	20	1530	69	35	22	201	385	45	20	7.1	5.2
5	15	20	748	68	36	33	321	208	39	25	7.8	5.2
6	17	20	381	64	38	35	418	148	35	20	8.9	5.1
7	17	20	246	60	37	34	357	121	33	18	8.6	12
8	16	20	180	56	36	33	414	97	30	17	8.2	8.4
9	968	19	147	52	36	33	414	80	28	17	8.0	7.1
10	109	19	137	49	35	33	252	69	27	16	7.4	6.7
11	57	20	130	45	35	33	172	67	27	15	7.2	6.3
12	45	24	116	42	34	32	140	66	27	15	7.2	6.5
13	39	22	102	40	33	32	245	58	25	14	7.1	6.7
14	33	21	91	38	32	31	774	56	24	13	6.9	6.5
15	30	20	84	36	31	30	280	145	24	13	6.9	6.3
16	28	20	77	34	31	30	176	135	24	12	6.7	6.7
17	26	20	69	32	30	29	137	90	22	12	6.3	6.5
18	26	21	67	30	28	28	120	91	21	11	6.2	6.3
19	24	22	63	28	28	27	101	127	20	10	6.0	6.2
20	24	24	59	27	27	31	85	97	20	10	6.0	8.3
21	23	23	57	27	27	29	76	80	19	9.5	6.0	9.3
22	22	23	56	27	27	26	82	76	19	9.1	6.0	7.8
23	21	72	58	26	26	26	80	64	18	8.4	6.5	7.4
24	21	72	7130	26	26	25	74	56	18	7.8	6.7	7.4
25	21	60	2400	25	25	24	67	52	18	8.2	6.2	7.8
26	20	56	522	24	25	28	63	48	18	8.6	5.4	8.4
27	20	963	614	23	24	49	59	44	20	8.2	5.4	8.2
28	20	1240	786	22	24	45	56	47	19	16	5.4	7.8
29	21	486	293	27	---	42	58	40	18	11	5.2	5.8
30	21	274	193	29	---	43	985	37	18	9.3	5.2	5.7
31	20	---	148	26	---	43	---	34	---	8.6	5.2	---
TOTAL	1764	3685	27110	1354	866	976	6987	4615	782	410.7	208.5	207.2
MEAN	56.9	123	875	43.7	30.9	31.5	233	149	26.1	13.2	6.73	6.91
MAX	968	1240	10300	116	38	49	985	1230	56	25	8.9	12
MIN	15	19	56	22	24	22	56	34	18	7.8	5.2	5.1
CAL YR 1982		TOTAL	69702.0		MEAN	191	MAX	10300		MIN	9.0	
WTR YR 1983		TOTAL	48965.4		MEAN	134	MAX	10300		MIN	5.1	

WHITE RIVER BASIN

07068300 NORTH PRONG LITTLE BLACK RIVER NEAR GRANDIN, MO--Continued

WATER-QUALITY RECORDS

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

WATER QUALITY DATA

DATE	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD 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)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L) (00530)	NITRO- GEN, NITRATE TOTAL (MG/L AS N) (00620)
OCT , 1982											
07...	6.8	163	7.3	20.0	.50	6.2	67	560	K360	<1	--
DEC											
02...	78	90	6.9	16.0	2.1	5.6	57	36	46	6	.00
FEB , 1983											
04...	17	130	7.4	3.0	1.5	12.8	95	K21	--	<1	--
APR											
08...	248	68	7.3	10.0	4.9	8.6	76	800	17000	8	--
JUN											
08...	15	130	7.7	22.0	1.1	4.8	54	K21	860	2	--
AUG											
09...	1.8	227	8.5	27.0	1.2	5.2	64	36	200	13	--

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 , 1982										
07...	<.020	.10	<.060	--	.40	.50	2.2	.010	.03	<.010
DEC										
02...	<.020	.30	<.060	--	.70	1.0	4.4	.010	.03	<.010
FEB , 1983										
04...	<.020	.30	<.060	--	.30	.60	2.7	.010	.03	.010
APR										
08...	<.020	.10	.070	.43	.50	.60	2.7	.020	.06	.020
JUN										
08...	<.020	.10	<.060	--	.40	.50	2.2	.010	.03	.020
AUG										
09...	<.020	<.10	.030	.47	.50	--	--	.030	.09	.010

K--Results based on colony count outside the acceptable range (non-ideal colony count).

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, 31.5°C many days in July and August, 1983; 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, 8,070 tons December 3, 1982; minimum 0.0 tons on many days.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 31.5°C many days in July and August; minimum, 3.0°C January 18 and 19.

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 155 mg/L December 3; minimum daily, 1 mg/L on many days.

SUSPENDED-SEDIMENT LOADS: Maximum daily 8,070 tons December 3, minimum daily, 0.01 tons on many days.

WATER QUALITY DATA

DATE	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00300) (00301)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00300) (00301)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOC- CI, FECAL, KF AGAR (COLS. PER 100 ML) (31673)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDE- (MG/L) (00530)	NITRO- GEN, NITRATE TOTAL (MG/L AS N) (00620)
OCT , 1982											
07...	18	252	7.7	20.0	.70	5.4	59	K410	1100	1	--
DEC											
01...	164	112	7.1	13.5	2.3	5.8	55	36	240	5	.00
FEB , 1983											
03...	36	191	7.5	5.0	1.7	11.2	88	K4	K24	<1	--
APR											
08...	356	75	7.5	10.0	5.4	9.8	87	220	7800	15	--
JUN											
07...	36	191	7.9	20.0	.40	6.2	66	27	80	<1	--
AUG											
09...	8.0	285	8.0	29.0	1.3	7.0	89	76	60	13	--

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 , 1982										
07...	<.020	<.10	<.060	--	.50	--	--	.010	.03	<.010
DEC										
01...	<.020	.20	<.060	--	.70	.90	4.0	.010	.03	<.010
FEB , 1983										
03...	<.020	.20	<.060	--	.30	.50	2.2	.010	.03	<.010
APR										
08...	<.020	.10	.080	.82	.90	1.0	4.4	.020	.06	.020
JUN										
07...	<.020	.10	<.060	--	.80	.90	4.0	.010	.03	.030
AUG										
09...	<.020	<.10	.040	.76	.80	--	--	.020	.06	.020

K--Results based on colony count outside the acceptable range (non-ideal colony count).

WHITE RIVER BASIN

07068380 LITTLE BLACK RIVER NEAR GRANDIN, MO--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

07068380 LITTLE BLACK RIVER NEAR GRANDIN, MO--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	19.5	18.0	18.5	29.5	27.0	28.5	31.5	30.0	31.0	28.5	26.0	27.0
2	18.0	18.0	18.0	30.0	28.5	29.5	31.5	30.0	31.0	28.0	25.5	26.5
3	19.0	18.0	18.5	30.0	28.0	29.0	31.5	29.5	30.5	26.5	24.5	25.5
4	20.5	18.5	20.0	30.0	27.0	29.0	31.5	29.5	30.5	26.5	24.5	25.5
5	21.5	19.5	20.5	28.5	26.5	27.0	31.0	29.5	30.0	26.5	24.5	25.5
6	---	---	---	28.5	26.0	27.0	30.5	28.5	29.5	28.5	25.5	27.0
7	20.0	20.0	20.0	28.5	25.0	26.5	30.0	28.5	29.0	28.0	25.5	26.5
8	20.0	18.0	19.0	28.0	24.5	26.0	30.5	28.5	29.5	28.0	25.5	26.5
9	20.5	18.0	19.0	28.5	26.0	27.0	30.5	29.0	29.5	27.0	25.0	26.0
10	21.0	18.5	20.0	29.5	26.5	28.0	30.5	29.0	29.5	27.0	25.0	26.0
11	21.0	19.5	20.5	29.5	28.0	29.0	30.0	29.0	29.5	26.5	25.0	25.5
12	22.0	20.5	21.0	30.0	28.0	29.0	30.0	28.5	29.5	26.5	24.0	25.5
13	23.0	20.5	21.5	30.0	28.5	29.5	30.0	27.0	28.5	25.5	22.0	24.5
14	23.0	20.5	21.5	30.0	28.5	29.0	28.5	26.0	27.0	24.5	21.0	23.5
15	22.0	19.5	20.5	29.5	28.0	28.5	29.0	26.5	28.0	23.5	22.0	22.0
16	23.5	20.5	21.5	28.5	27.0	28.0	29.0	27.0	28.0	23.0	21.5	22.0
17	23.0	20.5	21.5	29.5	27.0	28.5	30.0	28.0	29.0	24.0	22.0	23.0
18	23.5	21.5	22.0	29.5	27.0	28.5	30.0	28.5	29.0	25.0	23.5	24.0
19	24.0	22.0	23.0	30.5	28.5	29.5	30.0	28.0	29.0	25.0	24.0	24.5
20	25.0	23.0	24.0	31.0	29.5	30.5	30.0	28.0	29.0	24.5	23.0	24.0
21	26.0	23.5	25.0	31.5	29.5	30.5	30.0	28.5	29.0	25.0	20.0	20.5
22	26.0	24.0	25.0	31.5	30.0	30.5	30.0	28.5	29.0	20.0	17.0	18.5
23	26.0	24.0	25.0	31.5	30.0	30.5	29.5	28.0	28.5	19.0	17.0	18.5
24	26.5	24.5	25.5	31.5	30.0	30.5	30.5	28.0	29.0	18.5	16.0	17.0
25	27.0	25.0	26.0	31.5	29.5	30.5	31.0	28.5	30.0	18.5	16.5	17.0
26	27.0	25.0	26.0	30.5	29.0	29.5	30.0	28.5	29.5	19.0	16.5	18.0
27	27.0	25.5	26.5	30.5	28.5	29.5	30.0	28.0	29.0	20.5	19.0	19.5
28	27.0	26.0	26.5	30.0	29.0	29.5	30.0	28.0	29.0	21.0	19.5	20.5
29	28.0	26.0	26.5	30.0	29.0	29.5	30.0	28.0	29.0	21.0	19.5	20.5
30	28.5	25.5	26.5	30.5	29.0	30.0	30.0	27.0	28.5	21.0	19.5	20.0
31	---	---	---	31.5	29.5	30.5	29.5	27.0	28.5	---	---	---
MONTH	28.5	18.0	22.5	31.5	24.5	29.0	31.5	26.0	29.0	28.5	16.0	23.0
YEAR	31.5	3.0	16.5									

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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	1	.04	20	1	.05	172	3	1.4
2	15	1	.04	22	1	.06	154	3	1.3
3	15	1	.04	22	1	.06	10300	155	8070
4	15	1	.04	20	2	.11	1530	94	388
5	17	1	.05	20	2	.11	748	22	44
6	17	4	.18	20	2	.11	381	15	15
7	17	4	.18	20	2	.11	246	13	8.6
8	16	2	.09	20	1	.05	180	13	6.3
9	968	37	93	19	1	.05	147	14	5.6
10	109	22	6.5	19	1	.05	137	14	5.2
11	57	4	.62	20	1	.05	130	14	4.9
12	45	2	.24	24	2	.13	116	13	4.1
13	39	2	.21	22	1	.06	102	13	3.6
14	33	2	.18	21	1	.06	91	13	3.2
15	30	2	.16	20	1	.05	84	13	3.0
16	28	2	.15	20	1	.05	77	13	2.7
17	26	1	.07	20	1	.05	69	12	2.2
18	26	1	.07	21	2	.11	67	12	2.2
19	24	2	.13	22	3	.18	63	11	1.9
20	24	2	.13	24	3	.19	59	12	1.9
21	23	2	.12	23	3	.19	57	10	1.5
22	22	1	.06	23	6	.37	56	10	1.5
23	21	1	.06	72	20	4.7	58	11	1.7
24	21	2	.11	72	24	4.7	7130	100	2610
25	21	2	.11	60	11	1.8	2400	87	564
26	20	2	.11	56	10	1.5	522	17	24
27	20	2	.11	963	27	85	614	31	51
28	20	2	.11	1240	20	71	786	39	83
29	21	2	.11	486	10	13	293	14	11
30	21	2	.11	274	5	3.7	193	8	4.2
31	20	1	.05	---	---	---	148	6	2.4
TOTAL	1766	---	103.18	3685	---	187.65	27110	---	11929.4

WHITE RIVER BASIN

07068380 LITTLE BLACK RIVER NEAR GRANDIN, MO--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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	116	4	1.3	30	1	.08	24	2	.13
2	101	5	1.4	35	1	.09	23	2	.12
3	85	3	.69	36	1	.10	23	3	.19
4	69	2	.37	35	1	.09	22	2	.12
5	68	2	.37	36	1	.10	33	3	.27
6	64	2	.35	38	1	.10	35	3	.28
7	60	1	.16	37	1	.10	33	3	.27
8	56	3	.45	36	1	.10	33	2	.18
9	52	3	.42	36	1	.10	33	2	.18
10	49	2	.26	35	1	.09	33	1	.09
11	45	2	.24	35	1	.09	33	1	.09
12	49	4	.53	34	1	.09	32	2	.17
13	40	3	.32	33	2	.18	32	2	.17
14	38	2	.21	32	2	.17	31	2	.17
15	36	2	.19	31	2	.17	30	2	.16
16	34	3	.28	31	1	.08	30	2	.16
17	32	4	.35	30	2	.16	29	2	.16
18	30	5	.40	28	1	.08	28	2	.15
19	28	3	.23	28	1	.08	27	2	.15
20	27	3	.22	27	1	.07	31	2	.17
21	27	3	.22	27	1	.07	29	3	.23
22	27	3	.22	27	1	.07	26	3	.21
23	26	2	.14	26	1	.07	26	3	.21
24	26	2	.14	26	2	.14	25	3	.20
25	25	2	.13	26	3	.21	24	3	.19
26	24	2	.13	25	4	.27	28	4	.30
27	23	1	.06	24	2	.13	49	4	.53
28	22	1	.06	24	1	.06	45	4	.49
29	27	1	.07	---	---	---	42	3	.34
30	29	1	.08	---	---	---	43	4	.46
31	26	1	.07	---	---	---	43	9	1.0
TOTAL	1361	---	10.06	868	---	3.14	975	---	7.54
APRIL				MAY			JUNE		
1	57	16	2.5	472	7	8.9	32	2	.17
2	342	10	9.2	295	7	5.6	38	3	.31
3	381	8	8.2	1230	9	30	56	7	1.1
4	201	8	4.3	385	8	8.3	45	5	.61
5	321	14	12	208	7	3.9	39	4	.42
6	418	13	15	148	5	2.0	35	4	.38
7	357	5	4.8	121	4	1.3	33	5	.45
8	414	5	5.6	97	5	1.3	30	6	.49
9	414	7	7.8	80	4	.86	28	5	.38
10	252	8	5.4	69	1	.19	27	4	.29
11	172	7	3.3	67	1	.18	27	3	.22
12	140	4	1.5	66	1	.18	27	3	.22
13	245	4	2.7	58	1	.16	25	3	.20
14	774	12	25	56	2	.30	24	3	.19
15	280	5	3.8	145	4	1.6	24	3	.19
16	176	6	2.9	135	1	.36	24	2	.13
17	137	4	1.5	90	2	.49	22	1	.06
18	120	2	.65	91	2	.49	21	1	.06
19	101	2	.55	127	2	.69	20	1	.05
20	85	2	.46	97	3	.79	20	1	.05
21	76	3	.62	80	2	.43	19	1	.05
22	82	4	.89	76	1	.21	19	2	.10
23	80	3	.65	64	2	.35	18	2	.10
24	74	2	.40	56	3	.45	18	4	.19
25	67	2	.36	52	1	.14	18	6	.29
26	63	2	.34	48	1	.13	18	4	.19
27	59	2	.32	44	1	.12	20	3	.16
28	56	2	.30	47	2	.25	19	2	.10
29	54	3	.44	40	4	.43	18	1	.05
30	985	14	37	37	4	.40	18	4	.19
31	---	---	---	34	3	.28	---	---	---
TOTAL	6983	---	158.48	4615	---	70.78	782	---	7.39

07068380 LITTLE BLACK RIVER NEAR GRANDIN, MO--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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	18	6	.29	8.0	6	.13	5.2	2	.03
2	16	6	.26	7.4	5	.10	5.2	3	.04
3	15	6	.24	7.4	5	.10	5.2	2	.03
4	20	5	.27	7.1	11	.21	5.2	1	.01
5	25	4	.27	7.8	12	.25	5.2	1	.01
6	20	3	.16	8.9	9	.22	5.1	2	.03
7	18	3	.15	8.6	8	.19	12	15	.49
8	17	2	.09	8.2	10	.22	8.4	11	.25
9	17	2	.09	8.0	14	.30	7.1	9	.17
10	16	3	.13	7.4	12	.24	6.7	6	.11
11	15	4	.16	7.2	9	.17	6.3	2	.03
12	15	4	.16	7.2	7	.14	6.5	1	.02
13	14	4	.15	7.1	7	.13	6.7	3	.05
14	13	3	.11	6.9	7	.13	6.5	5	.09
15	13	3	.11	6.9	6	.11	6.3	6	.10
16	12	5	.16	6.7	4	.07	6.7	4	.07
17	12	5	.16	6.3	3	.05	6.5	3	.05
18	11	5	.15	6.2	3	.05	6.3	2	.03
19	10	7	.19	6.0	3	.05	6.2	3	.05
20	10	11	.30	6.0	3	.05	8.3	3	.07
21	9.5	6	.15	6.0	4	.06	9.3	9	.23
22	9.1	6	.15	6.0	5	.08	7.8	6	.13
23	8.4	5	.11	6.5	5	.09	7.4	3	.06
24	7.8	12	.25	6.7	3	.05	7.4	1	.02
25	8.2	7	.15	6.2	8	.13	7.8	1	.02
26	8.6	4	.09	5.4	4	.06	8.4	1	.02
27	8.2	7	.15	5.4	3	.04	8.2	1	.02
28	16	6	.26	5.4	4	.06	7.8	1	.02
29	11	5	.15	5.2	3	.04	5.8	1	.02
30	9.3	6	.15	5.2	2	.03	5.7	1	.02
31	8.6	9	.21	5.2	1	.01	---	---	---
TOTAL	411.7	---	5.42	208.5	---	3.56	207.2	---	2.29
YEAR	48972.4		12488.89						

WHITE RIVER BASIN

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 left bank 200 feet east of river and just north of a gravel road, 5 miles below Beaverdam Creek and 3.1 miles southeast of Fairdealing.

DRAINAGE AREA.--194 mi².

WATER-DISCHARGE RECORDS

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

GAGE.--Water-state recorder. Datum of gage is 295.18 feet National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 54,200 ft³/s Dec. 3, 1982, gage height, 21.01 ft; minimum, 24 ft³/s Sept. 7, 1983.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 3	1715	*54,200	21.01
Dec. 24	2345	16,800	19.11

Minimum discharge, 24 ft³/s Sept. 7, gage height, 0.97 ft.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41	59	405	323	94	75	146	1640	87	47	47	34
2	41	60	303	274	125	75	351	847	81	48	46	33
3	40	66	18600	240	128	75	796	2500	94	49	45	34
4	40	66	8610	212	118	75	553	1880	195	48	43	30
5	40	66	2290	192	109	93	413	758	203	51	41	25
6	40	64	1350	177	110	132	956	431	146	51	50	26
7	52	64	629	165	114	129	1010	319	119	49	53	26
8	54	64	402	153	113	118	821	265	98	46	49	33
9	590	65	315	143	110	108	881	221	87	46	46	35
10	908	65	268	136	110	103	678	190	79	45	45	32
11	286	65	256	128	108	100	452	171	73	45	44	31
12	179	69	236	118	104	97	348	174	68	44	51	30
13	137	74	211	111	100	96	375	163	65	41	44	31
14	114	74	192	108	97	96	1800	146	63	38	41	32
15	97	73	185	103	95	94	1190	196	63	38	41	31
16	86	70	173	98	93	91	537	376	61	37	41	32
17	78	68	159	94	91	89	369	286	59	42	38	32
18	72	69	150	91	89	87	311	228	56	49	36	31
19	69	71	144	87	88	85	270	272	55	49	35	30
20	67	74	137	85	86	89	235	265	54	51	34	31
21	65	78	129	85	85	97	208	224	53	50	33	35
22	63	78	125	87	84	91	202	252	50	50	36	35
23	60	86	123	87	83	85	212	206	49	50	37	34
24	60	140	3860	86	78	77	216	166	48	50	38	33
25	58	173	7400	84	82	80	194	141	47	51	38	33
26	56	158	2530	81	79	83	175	126	48	49	38	33
27	56	394	1300	79	77	176	163	113	51	45	37	34
28	55	2230	1880	77	77	193	153	107	51	43	35	34
29	57	1990	1240	77	---	161	145	131	49	42	33	34
30	58	783	582	88	---	144	763	120	47	46	35	33
31	59	---	397	89	---	144	---	98	---	47	35	---
TOTAL	3678	7456	54581	3958	2727	3238	14923	13012	2299	1437	1265	957
MEAN	119	249	1761	128	97.4	104	497	420	76.6	46.4	40.8	31.9
MAX	908	2230	18600	323	128	193	1800	2500	203	51	53	35
MIN	40	59	123	77	77	75	145	98	47	37	33	25

CAL YR 1982	TOTAL	148683	MEAN	407	MAX	18600	MIN	40
WTR YR 1983	TOTAL	109531	MEAN	300	MAX	18600	MIN	25

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 31.0°C July 6, 7, 8, 9, 14, and 15, 1980; minimum, 0.0°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, 11,100 tons December 2, 1982; minimum daily, 0.12 tons December 19, 1982.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 30.0°C July 3 and 4; minimum, 2.0°C on January 19.

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 296 mg/L December 2; minimum daily mean, 1 mg/L on December 17 and 21.

SUSPENDED-SEDIMENT LOADS: Maximum daily, 11,100 tons December 2; minimum daily, 0.35 tons December 21.

WATER QUALITY DATA

DATE	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (NTU) (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- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDE (MG/L) (00530)	NITRO- GEN, NITRATE TOTAL (MG/L AS N) (00620)
OCT , 1982											
05...	41	250	7.6	20.5	.90	5.4	60	60	110	2	--
NOV											
30...	816	85	6.9	10.5	10	6.4	57	40	90	18	.02
FEB , 1983											
02...	124	195	7.5	7.0	17	7.8	64	300	300	7	--
APR											
06...	1110	90	7.4	11.0	22	9.2	84	4000	16000	39	--
JUN											
07...	117	176	7.9	19.5	3.6	5.8	62	100	240	17	--
AUG											
09...	53	300	7.9	28.0	4.9	3.6	45	200	250	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 , 1982										
05...	<.020	<.10	<.060	--	.50	--	--	.010	.03	<.010
NOV										
30...	<.020	.20	<.060	--	1.00	1.2	5.3	.050	.15	.020
FEB , 1983										
02...	<.020	.30	<.060	--	1.10	1.4	6.2	.040	.12	.010
APR										
06...	<.020	.10	.100	.50	.60	.70	3.1	.040	.12	.040
JUN										
07...	<.020	<.10	<.060	--	.30	--	--	.070	.21	.050
AUG										
09...	<.020	<.10	.080	.42	.50	--	--	.030	.09	.020

WHITE RIVER BASIN

07068510 LITTLE BLACK RIVER BELOW FAIRDEALING, MO--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

WHITE RIVER BASIN

07068510 LITTLE BLACK RIVER BELOW FAIRDEALING, MO--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	20.0	18.0	19.0	18.5	18.0	18.5	---	---	---	26.5	25.5	26.0
2	19.5	18.0	18.5	18.0	18.0	18.0	---	---	---	26.0	24.5	25.5
3	20.0	18.5	19.0	18.0	18.0	18.0	---	---	---	25.5	24.5	25.0
4	20.0	20.0	20.0	18.0	18.0	18.0	---	---	---	25.5	24.5	25.0
5	20.0	20.0	20.0	18.0	18.0	18.0	---	---	---	25.5	24.5	25.0
6	20.0	20.0	20.0	18.0	18.0	18.0	---	---	---	26.5	24.5	25.5
7	20.0	19.5	19.5	18.0	17.5	17.5	---	---	---	26.5	25.0	25.5
8	19.5	19.5	19.5	17.5	17.5	17.5	---	---	---	26.5	25.0	26.0
9	19.5	19.5	19.5	17.5	17.5	17.5	27.5	27.0	27.0	26.5	25.0	26.0
10	19.5	19.5	19.5	17.5	17.5	17.5	28.0	26.5	27.0	26.5	25.0	26.0
11	19.5	19.5	19.5	17.5	17.5	17.5	28.0	26.5	27.0	26.5	25.0	26.0
12	19.5	19.5	19.5	---	---	---	27.0	26.0	26.5	26.0	25.0	25.5
13	19.5	19.5	19.5	---	---	---	26.5	25.5	26.0	25.5	24.0	24.5
14	19.5	19.5	19.5	---	---	---	26.0	24.5	25.5	24.0	22.0	23.0
15	19.5	19.5	19.5	---	---	---	26.5	24.5	25.5	22.0	21.0	21.5
16	19.5	19.5	19.5	---	---	---	26.5	25.0	25.5	23.0	21.0	22.0
17	19.5	19.5	19.5	---	---	---	27.0	25.5	26.0	23.0	21.0	22.0
18	19.5	19.5	19.5	---	---	---	27.5	26.0	26.5	24.0	22.0	23.0
19	19.0	19.0	19.0	---	---	---	27.5	26.0	27.0	24.0	23.0	23.5
20	19.0	19.0	19.0	---	---	---	28.0	26.5	27.0	23.5	21.5	23.0
21	19.0	19.0	19.0	---	---	---	28.0	26.5	27.5	21.5	19.0	20.0
22	19.0	19.0	19.0	---	---	---	28.0	26.5	27.5	18.5	17.5	18.0
23	19.0	19.0	19.0	---	---	---	27.5	26.5	27.0	17.5	16.0	17.0
24	19.0	19.0	19.0	---	---	---	28.0	26.5	27.0	16.5	15.0	16.0
25	19.0	19.0	19.0	---	---	---	28.5	26.5	27.5	15.5	15.0	15.5
26	19.0	19.0	19.0	---	---	---	28.5	27.0	27.5	16.5	15.5	16.0
27	19.0	18.5	18.5	---	---	---	29.0	27.0	28.0	18.0	16.5	17.0
28	18.5	18.5	18.5	---	---	---	28.5	27.0	27.5	19.0	17.5	18.0
29	18.5	18.5	18.5	---	---	---	28.5	27.0	27.5	19.5	18.0	18.5
30	18.5	18.5	18.5	---	---	---	27.0	26.0	27.0	19.5	18.0	18.5
31	---	---	---	---	---	---	26.5	26.0	26.5	---	---	---
MONTH	20.0	18.0	19.0	18.5	17.5	18.0	29.0	24.5	27.0	26.5	15.0	22.0
YEAR	29.0	2.0	14.0									

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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	41	18	2.0	59	10	1.6	405	11	12
2	41	15	1.7	60	9	1.5	303	11	9.0
3	40	16	1.7	66	8	1.4	18600	296	11100
4	40	14	1.5	66	6	1.1	8610	47	1090
5	40	8	.86	66	4	.71	2290	24	148
6	40	9	.97	64	4	.69	1350	19	69
7	52	8	1.1	64	4	.69	629	15	25
8	54	9	1.3	64	5	.86	402	12	13
9	590	285	992	65	7	1.2	315	9	7.7
10	908	153	586	65	7	1.2	268	8	5.8
11	286	11	8.5	65	6	1.1	256	8	5.5
12	179	9	4.4	69	7	1.3	236	6	3.8
13	137	8	3.0	74	4	.80	211	6	3.4
14	114	7	2.2	74	5	1.0	192	9	4.7
15	97	8	2.1	73	5	.99	185	5	2.5
16	86	8	1.9	70	2	.38	173	3	1.4
17	78	7	1.5	68	5	.92	159	1	.43
18	72	6	1.2	69	5	.93	150	3	1.2
19	69	7	1.3	71	4	.77	144	2	.78
20	67	5	.90	74	7	1.4	137	3	1.1
21	65	3	.53	78	14	2.9	129	1	.35
22	63	3	.51	78	8	1.7	125	2	.67
23	60	3	.49	86	9	2.1	123	17	5.6
24	60	5	.81	140	14	5.3	3860	270	6410
25	58	5	.78	173	9	4.2	7400	154	3080
26	56	4	.60	158	140	60	2530	39	266
27	56	5	.76	394	138	147	1300	58	204
28	55	6	.89	2230	140	675	1880	61	310
29	57	6	.92	1990	15	81	1240	16	54
30	58	6	.94	783	13	27	582	12	19
31	59	8	1.3	---	---	---	397	8	8.6
TOTAL	3678	---	1624.66	7456	---	1026.74	54581	---	22862.53

WHITE RIVER BASIN

07068510 LITTLE BLACK RIVER BELOW FAIRDEALING, MO--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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	323	9	7.9	94	12	3.1	75	4	.81
2	274	7	5.2	125	15	5.1	75	7	1.4
3	240	4	2.6	128	8	2.8	75	8	1.6
4	212	3	1.7	118	4	1.3	75	10	2.0
5	192	2	1.0	109	4	1.2	93	17	4.3
6	177	2	.96	110	6	1.8	132	23	8.2
7	165	2	.89	114	6	1.9	129	16	5.6
8	153	3	1.2	113	6	1.8	118	11	3.5
9	143	4	1.5	110	7	2.1	108	6	1.8
10	136	5	1.8	110	6	1.8	103	4	1.1
11	128	4	1.4	108	5	1.5	100	3	.81
12	118	3	.96	104	5	1.4	97	4	1.1
13	111	4	1.2	100	4	1.1	96	3	.78
14	108	3	.88	97	4	1.1	96	6	1.6
15	103	3	.84	95	7	1.8	94	10	2.5
16	98	2	.53	93	5	1.3	91	14	3.4
17	94	2	.51	91	6	1.5	89	10	2.4
18	91	2	.50	89	7	1.7	87	11	2.6
19	87	2	.48	88	7	1.7	85	12	2.8
20	85	2	.46	86	7	1.6	89	11	2.6
21	85	3	.70	85	6	1.4	97	3	.79
22	87	2	.48	84	5	1.1	91	6	1.5
23	87	3	.71	83	6	1.3	85	6	1.4
24	86	4	.94	78	5	1.1	77	6	1.3
25	84	5	1.2	82	4	.89	80	7	1.5
26	81	5	1.1	79	3	.64	83	10	2.2
27	79	3	.64	77	3	.62	176	54	26
28	77	2	.42	77	4	.83	193	17	8.9
29	77	3	.62	---	---	---	161	8	3.5
30	88	5	1.2	---	---	---	144	8	3.1
31	89	5	1.2	---	---	---	144	8	3.1
TOTAL	3958	---	41.72	2727	---	45.48	3238	---	104.19
APRIL			MAY			JUNE			
1	146	5	2.0	1640	248	1100	87	12	2.8
2	351	55	52	847	54	123	81	15	3.3
3	796	15	32	2500	98	662	94	47	12
4	553	12	18	1880	22	112	195	38	20
5	413	64	71	758	15	31	203	26	14
6	956	41	106	431	16	19	146	20	7.9
7	1010	22	60	319	16	14	119	18	5.8
8	821	17	38	265	16	11	98	14	3.7
9	881	13	31	221	15	9.0	87	16	3.8
10	678	12	22	190	15	7.7	79	14	3.0
11	452	11	13	171	14	6.5	73	15	3.0
12	348	11	10	174	17	8.0	68	16	2.9
13	375	30	45	163	18	7.9	65	16	2.8
14	1800	120	583	146	15	5.9	63	11	1.9
15	1190	22	71	196	16	8.5	63	19	3.2
16	537	13	19	376	23	23	61	22	3.6
17	369	12	12	286	23	18	59	23	3.7
18	311	10	8.4	228	18	11	56	21	3.2
19	270	10	7.3	272	22	16	55	20	3.0
20	235	9	5.7	265	20	14	54	24	3.5
21	208	10	5.6	224	19	11	53	14	2.0
22	202	11	6.0	252	20	14	50	7	.94
23	212	12	6.9	206	15	8.3	49	9	1.2
24	216	14	8.2	166	19	8.5	48	27	3.5
25	194	18	9.4	141	18	6.9	47	40	5.1
26	175	12	5.7	126	20	6.8	48	39	5.1
27	163	14	6.2	113	27	8.2	51	31	4.3
28	153	18	7.4	107	24	6.9	51	25	3.4
29	145	17	6.7	131	19	6.7	49	29	3.8
30	763	147	474	120	10	3.2	47	24	3.1
31	---	---	---	98	11	2.9	---	---	---
TOTAL	14923	---	1742.5	13012	---	2290.9	2299	---	139.54

WHITE RIVER BASIN

251

07068510 LITTLE BLACK RIVER BELOW FAIRDEALING, MO--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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	47	23	2.9	47	15	1.9	34	20	1.8
2	48	38	4.9	46	14	1.7	33	20	1.8
3	49	33	4.4	45	12	1.5	34	32	2.9
4	48	27	3.5	43	15	1.7	30	39	3.2
5	51	45	6.2	41	21	2.3	25	38	2.6
6	51	46	6.3	50	100	16	26	29	2.0
7	49	41	5.4	53	203	29	26	28	2.0
8	46	31	3.9	49	54	7.1	33	26	2.3
9	46	27	3.4	46	19	2.4	35	27	2.6
10	45	24	2.9	45	19	2.3	32	30	2.6
11	45	25	3.0	44	17	2.0	31	34	2.9
12	44	24	2.9	51	55	7.6	30	30	2.4
13	41	31	3.4	44	19	2.3	31	36	3.0
14	38	33	3.4	41	17	1.9	32	45	3.9
15	38	26	2.7	41	16	1.8	31	47	3.9
16	37	18	1.8	41	21	2.3	32	44	3.8
17	42	16	1.8	38	25	2.6	32	43	3.7
18	49	21	2.8	36	21	2.0	31	33	2.8
19	49	26	3.4	35	16	1.5	30	29	2.4
20	51	19	2.6	34	14	1.3	31	28	2.3
21	50	7	.94	33	15	1.3	35	29	2.7
22	50	9	1.2	36	16	1.6	35	31	2.9
23	50	13	1.8	37	16	1.6	34	26	2.4
24	50	12	1.6	38	17	1.7	33	19	1.7
25	51	19	2.6	38	21	2.2	33	16	1.4
26	49	15	2.0	38	27	2.8	33	29	2.6
27	45	15	1.8	37	33	3.3	34	23	2.1
28	43	19	2.2	35	34	3.2	34	24	2.2
29	42	17	1.9	33	27	2.4	34	36	3.3
30	46	23	2.9	35	31	2.9	33	26	2.3
31	47	18	2.3	35	18	1.7	---	---	---
TOTAL	1437	---	92.84	1265	---	115.9	957	---	78.5
YEAR	109531		30165.50						

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 below Cypress Creek at 5 mi above Harris Creek.

DRAINAGE AREA.--37.5 mi².

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 303.34 feet, National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,200 ft³/s Dec. 3, 1982, gage height, 15.25 ft; minimum, 1.70 ft³/s Sept. 5, 6, 1983.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 3	0800	*15,200	15.25
Dec. 24	1530	6,250	11.88
Dec. 27	2130	1,370	7.15
Apr. 13	2245	1,720	7.85
May 3	0100	3,000	9.50

Minimum discharge, 1.7 ft³/s Sept. 5, 6, gage height, 2.07 ft.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.4	4.0	44	43	22	13	68	90	12	8.3	3.2	2.0
2	5.2	5.0	38	37	40	12	215	390	12	8.0	2.8	1.9
3	5.4	5.0	4820	32	36	12	193	822	22	7.6	2.8	1.9
4	5.2	5.2	381	30	27	12	95	139	33	7.3	2.7	1.9
5	5.0	5.2	252	27	25	22	147	80	21	8.0	2.7	1.9
6	11	5.0	108	24	26	36	184	57	16	7.6	2.7	1.9
7	32	5.0	52	22	25	35	232	46	14	7.0	2.8	2.5
8	9.5	4.8	45	20	23	29	177	37	12	6.0	2.5	2.4
9	15	4.8	36	18	24	27	174	32	11	5.8	2.5	2.4
10	12	5.0	34	17	23	24	105	28	9.8	5.8	2.4	2.4
11	7.3	4.8	36	16	21	22	75	27	9.4	5.8	2.4	2.8
12	6.5	7.8	31	14	19	20	61	29	8.7	5.8	2.4	2.4
13	6.5	6.9	27	15	18	19	294	27	8.3	5.5	2.4	2.3
14	6.0	5.2	25	14	18	18	349	26	8.7	5.5	2.4	2.3
15	5.6	5.0	24	13	18	17	108	94	9.4	5.5	2.3	2.1
16	5.4	5.2	20	12	17	17	72	59	8.7	5.5	2.1	2.1
17	5.2	6.0	18	12	16	16	55	36	8.0	5.5	2.1	2.1
18	5.2	6.0	18	12	16	16	52	45	7.6	5.5	2.1	2.1
19	5.2	5.4	17	11	16	15	52	71	7.3	5.2	2.1	2.1
20	4.8	5.2	15	11	15	18	37	41	7.3	5.0	2.0	2.3
21	5.0	4.8	14	12	15	19	33	36	8.0	4.8	2.0	2.3
22	4.8	5.0	14	12	15	17	41	70	7.6	4.5	2.0	2.3
23	4.6	8.2	19	12	15	17	51	39	7.6	4.1	2.1	2.3
24	4.2	7.3	1860	12	15	15	54	29	7.6	3.9	2.1	2.3
25	4.2	6.5	1180	12	15	15	40	23	8.0	4.3	2.1	2.4
26	4.0	14	171	12	14	18	33	19	9.4	4.3	1.9	2.4
27	4.0	212	363	12	14	80	30	17	11	3.9	1.9	2.3
28	3.8	300	286	11	13	53	27	17	11	3.9	2.0	2.3
29	4.4	88	109	13	---	39	26	28	9.4	3.9	2.0	2.3
30	3.8	52	72	17	---	36	91	15	8.3	4.3	1.9	2.1
31	4.0	---	54	15	---	36	---	13	---	3.7	2.0	---
TOTAL	210.2	804.3	10183	540	561	745	3171	2482	334.1	171.8	71.4	66.8
MEAN	6.78	26.8	328	17.4	20.0	24.0	106	80.1	11.1	5.54	2.30	2.23
MAX	32	300	4820	43	40	80	349	822	33	8.3	3.2	2.8
MIN	3.8	4.0	14	11	13	12	26	13	7.3	3.7	1.9	1.9
CAL YR 1982		TOTAL	25919.9		MEAN	71.0	MAX	4820	MIN	3.8		
WTR YR 1983		TOTAL	19340.6		MEAN	53.0	MAX	4820	MIN	1.9		

07068540 LOGAN CREEK AT OXLY, MO

WATER-QUALITY RECORDS

PERIOD RECORD.--August 1980 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: May 1981 to current year.

SUSPENDED-SEDIMENT: August 1980 to current year.

INSTREMENTATION.--Water temperature recorder since May 1981.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum 29.0°C on July 21, 23, and 24, 1983; minimum 1.0°C on many days.

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 173 mg/L December 3, 1982; minimum daily mean, <1 mg/L on many days.

SUSPENDED-SEDIMENT LOADS: Maximum daily, 3,040 tons December 3, 1982; minimum daily, 0.00 tons on many days.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 29.0 on July 21, 23, and 24; minimum, 3.0 on January 18 and 19.

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 173 mg/L December 3; minimum daily mean, 1 mg/L on many days.

SUSPENDED-SEDIMENT LOADS: Maximum daily 3,040 tons December 3; minimum daily, 0.01 tons on many days.

WATER QUALITY DATA

DATE	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD 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, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDE (MG/L) (00530)	NITRO- GEN, NITRATE TOTAL (MG/L AS N) (00620)
OCT , 1982											
05...	4.8	302	7.7	20.0	.60	3.0	33	K16	70	<1	--
NOV											
30...	52	120	7.1	11.0	7.6	5.4	49	70	42	11	.00
FEB , 1983											
02...	40	171	7.5	6.5	3.6	7.0	57	240	110	<1	--
APR											
06...	183	88	7.3	11.5	15	9.6	88	1100	3600	8	--
JUN											
07...	13	222	7.8	19.0	--	7.6	80	73	360	--	--
AUG											
10...	2.6	325	7.8	27.0	1.9	7.2	88	220	1000	16	--

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 , 1982										
05...	<.020	<.10	<.060	--	1.20	--	--	.010	.03	<.010
NOV										
30...	<.020	.20	<.060	--	.80	1.0	4.4	.010	.03	<.010
FEB , 1983										
02...	<.020	.10	<.060	--	.50	.60	2.7	.020	.06	.010
APR										
06...	<.020	.10	.080	.62	.70	.80	3.5	.030	.09	.020
JUN										
07...	<.020	<.10	<.060	--	.30	--	--	.010	.03	.020
AUG										
10...	<.020	<.10	.050	.15	.20	--	--	.020	.06	.020

WHITE RIVER BASIN

07068540 LOGAN CREEK AT OXLY, MO--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

07068540 LOGAN CREEK AT OXLY, MO--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	18.0	16.0	17.0	28.0	25.0	26.0	28.0	25.0	26.5	25.5	24.0	25.0
2	18.0	17.0	17.0	27.0	25.5	26.0	27.0	25.5	26.0	25.5	23.0	24.5
3	19.0	17.0	18.0	28.0	25.0	26.5	27.0	24.5	25.5	25.0	22.0	23.5
4	20.5	18.0	19.5	27.0	25.5	26.0	28.0	24.5	26.0	24.0	21.5	23.0
5	21.0	19.0	20.0	26.0	24.0	25.0	27.0	25.5	26.0	24.5	22.0	23.5
6	21.0	20.0	20.5	26.0	23.5	24.5	26.0	24.5	25.5	25.5	23.5	24.5
7	21.0	19.0	20.0	25.0	22.0	23.5	25.5	24.5	25.0	25.5	23.5	24.5
8	20.5	18.5	20.0	24.5	21.0	23.0	26.0	24.0	25.0	26.0	23.5	24.5
9	20.5	18.5	19.5	25.0	22.0	23.5	26.0	24.0	25.0	25.5	23.5	24.5
10	21.0	19.0	20.0	25.5	21.5	24.0	27.0	24.5	25.5	25.5	23.5	24.5
11	21.0	20.0	20.5	25.5	23.5	24.5	27.0	25.5	26.5	25.5	23.5	24.5
12	21.5	20.5	21.0	26.0	23.5	25.0	27.0	25.5	26.5	25.0	23.5	24.0
13	22.0	20.0	21.0	26.5	24.5	25.5	26.5	24.0	25.0	24.5	23.0	23.5
14	21.5	20.5	21.0	26.5	25.0	26.0	26.0	23.5	24.5	23.5	21.0	22.0
15	22.0	20.0	21.0	26.0	24.5	25.0	26.0	23.5	24.5	21.5	19.0	20.5
16	22.0	20.0	21.0	26.0	24.5	25.0	26.0	23.5	25.0	22.0	20.0	21.0
17	23.0	20.0	21.0	26.0	24.5	25.0	27.0	24.5	25.5	22.0	19.5	20.5
18	23.5	21.0	22.0	26.5	24.0	25.5	28.0	25.5	26.5	23.5	21.0	22.0
19	23.5	21.5	22.0	28.0	25.0	26.0	28.0	25.0	26.0	23.0	21.0	22.0
20	24.0	22.0	23.5	28.5	25.5	26.5	28.5	25.0	26.5	22.0	20.5	21.5
21	24.5	22.0	23.5	29.0	26.0	28.0	28.5	25.5	27.0	20.0	17.0	19.0
22	25.5	23.5	24.5	28.5	26.0	27.0	28.0	25.0	26.5	17.0	15.0	16.0
23	25.5	23.5	24.5	29.0	26.5	28.0	28.0	25.5	26.5	16.5	14.5	15.5
24	25.5	23.5	24.5	29.0	26.5	28.0	27.0	25.0	26.0	15.5	13.0	14.5
25	26.0	24.0	25.0	28.5	26.0	27.0	28.0	25.0	26.0	15.0	14.0	14.5
26	25.5	24.0	24.5	28.0	25.5	26.5	28.0	25.0	26.5	16.5	14.5	15.5
27	25.5	24.5	25.0	27.0	25.0	26.0	28.0	25.0	26.5	18.0	15.5	16.5
28	25.5	24.5	25.0	28.5	26.0	27.0	27.0	25.5	26.5	18.5	16.0	17.0
29	26.0	25.0	25.5	27.0	25.5	26.5	28.0	25.0	26.0	18.5	16.0	17.0
30	26.5	24.5	25.5	27.0	25.5	26.0	26.5	24.0	25.5	18.5	16.0	17.0
31	---	---	---	27.0	25.0	26.0	25.5	24.5	25.0	---	---	---
MONTH	26.5	16.0	22.0	29.0	21.0	25.5	28.5	23.5	26.0	26.0	13.0	21.0
YEAR	29.0	3.0	16.0									

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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	1	.01	4.0	1	.01	44	8	.95
2	5.2	1	.01	5.0	1	.01	38	50	5.1
3	5.4	1	.01	5.0	1	.01	4820	173	3040
4	5.2	1	.01	5.2	1	.01	381	22	23
5	5.0	1	.01	5.2	2	.03	252	8	5.4
6	11	1	.03	5.0	1	.01	108	5	1.5
7	32	5	.43	5.0	1	.01	52	4	.56
8	9.5	2	.05	4.8	5	.06	45	6	.73
9	15	2	.08	4.8	2	.03	36	4	.39
10	12	3	.10	5.0	1	.01	34	3	.28
11	7.3	3	.06	4.8	2	.03	36	5	.49
12	6.5	2	.04	7.8	3	.06	31	6	.50
13	6.5	1	.02	6.9	2	.04	27	4	.29
14	6.0	1	.02	5.2	2	.03	25	3	.20
15	5.6	1	.02	5.0	2	.03	24	2	.13
16	5.4	1	.01	5.2	2	.03	20	2	.11
17	5.2	1	.01	6.0	2	.03	18	2	.10
18	5.2	1	.01	6.0	3	.05	18	2	.10
19	5.2	2	.03	5.4	4	.06	17	3	.14
20	4.8	2	.03	5.2	4	.06	15	3	.12
21	5.0	1	.01	4.8	2	.03	14	2	.08
22	4.8	1	.01	5.0	2	.03	14	7	.26
23	4.6	1	.01	8.2	3	.07	19	7	.36
24	4.2	1	.01	7.3	3	.06	1860	37	196
25	4.2	1	.01	6.5	2	.04	1180	25	93
26	4.0	1	.01	14	4	.15	171	12	5.5
27	4.0	2	.02	212	9	3.3	363	6	5.9
28	3.8	3	.03	300	11	8.9	286	4	3.1
29	4.4	1	.01	88	8	1.9	109	3	.88
30	3.8	1	.01	52	5	.70	72	3	.58
31	4.0	1	.01	---	---	---	54	3	.44
TOTAL	210.2	---	1.13	804.3	---	15.79	10183	---	3386.19

WHITE RIVER BASIN

07068540 LOGAN CREEK AT OXLY, MO--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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	43	3	.35	22	3	.18	13	5	.18
2	37	3	.30	40	3	.32	12	8	.26
3	32	2	.17	36	5	.49	12	6	.19
4	30	2	.16	27	5	.36	12	3	.10
5	27	1	.07	25	3	.20	22	3	.18
6	24	1	.06	26	4	.28	36	4	.39
7	22	1	.06	25	3	.20	35	4	.38
8	20	1	.05	23	5	.31	29	3	.23
9	18	2	.10	24	3	.19	27	5	.36
10	17	2	.09	23	2	.12	24	5	.32
11	16	2	.09	21	2	.11	22	7	.42
12	14	2	.08	19	1	.05	19	5	.26
13	15	2	.08	18	1	.05	19	3	.15
14	14	2	.08	18	1	.05	18	2	.10
15	13	2	.07	18	1	.05	17	3	.14
16	12	2	.06	17	1	.05	17	3	.14
17	12	1	.03	16	2	.09	16	3	.13
18	12	1	.03	16	2	.09	16	3	.13
19	11	1	.03	16	2	.09	158	3	1.3
20	11	1	.03	15	2	.08	18	3	.15
21	12	1	.03	15	2	.08	19	3	.15
22	12	1	.03	15	2	.08	17	4	.18
23	12	1	.03	15	2	.08	17	3	.14
24	12	1	.03	15	2	.08	15	2	.08
25	12	1	.03	15	1	.04	15	3	.12
26	12	1	.03	14	1	.04	18	5	.24
27	12	2	.06	14	2	.08	80	15	3.2
28	11	1	.03	13	2	.07	53	9	1.3
29	13	2	.07	---	---	---	39	6	.63
30	17	4	.18	---	---	---	36	4	.39
31	15	6	.24	---	---	---	36	4	.39
TOTAL	540	---	2.75	561	---	3.91	887	---	12.33
APRIL			MAY			JUNE			
1	68	5	.92	90	9	2.2	12	4	.13
2	215	16	8.5	390	15	16	12	5	.16
3	193	10	5.2	822	25	100	22	8	.48
4	95	11	2.8	139	5	1.9	33	9	.80
5	147	16	6.4	80	3	.65	21	10	.57
6	184	13	6.5	57	1	.15	16	7	.30
7	232	10	6.3	46	1	.12	14	3	.11
8	177	6	2.9	37	3	.30	12	2	.06
9	174	7	3.3	32	3	.26	11	2	.06
10	105	8	2.3	28	2	.15	9.8	2	.05
11	75	6	1.2	27	1	.07	9.4	2	.05
12	61	4	.66	29	1	.08	8.7	2	.05
13	294	7	5.6	27	2	.15	8.3	2	.04
14	349	9	8.5	26	2	.14	8.7	1	.02
15	108	8	2.3	94	9	2.5	9.4	1	.03
16	72	7	1.4	59	4	.64	8.7	1	.02
17	55	5	.74	36	3	.29	8.0	1	.02
18	52	4	.56	45	4	.49	7.6	1	.02
19	52	8	1.1	71	6	1.2	7.3	1	.02
20	37	17	1.7	41	3	.33	7.3	1	.02
21	33	12	1.1	36	4	.39	8.0	1	.02
22	41	13	1.4	70	8	1.5	7.6	1	.02
23	51	8	1.1	39	4	.42	7.6	1	.02
24	54	3	.44	29	3	.23	7.6	1	.02
25	40	4	.43	23	2	.12	8.0	1	.02
26	33	4	.36	19	2	.10	9.4	2	.05
27	30	4	.32	17	2	.09	11	2	.06
28	27	3	.22	17	5	.23	11	2	.06
29	26	2	.14	28	13	.98	9.4	3	.08
30	91	6	1.5	15	6	.24	8.3	6	.13
31	---	---	---	13	4	.14	---	---	---
TOTAL	3171	---	75.89	2482	---	132.06	334.1	---	3.49

07068540 LOGAN CREEK AT OXLY, MO--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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	8.3	6	.13	3.2	3	.03	2.0	2	.01
2	8.0	3	.06	2.8	3	.02	1.9	2	.01
3	7.6	4	.08	2.8	2	.02	1.9	1	.01
4	7.3	3	.06	2.7	3	.02	1.9	1	.01
5	8.0	2	.04	2.7	2	.01	1.9	2	.01
6	7.6	2	.04	2.7	1	.01	1.9	1	.01
7	7.0	2	.04	2.8	2	.02	2.5	1	.01
8	6.0	2	.03	2.5	2	.01	2.4	1	.01
9	5.8	2	.03	2.5	1	.01	2.4	1	.01
10	5.8	2	.03	2.4	1	.01	2.4	1	.01
11	5.8	2	.03	2.4	1	.01	2.8	2	.02
12	5.8	2	.03	2.4	2	.01	2.4	4	.03
13	5.5	2	.03	2.4	2	.01	2.3	3	.02
14	5.5	1	.01	2.4	2	.01	2.3	4	.02
15	5.5	2	.03	2.3	2	.01	2.1	4	.02
16	5.5	2	.03	2.1	2	.01	2.1	5	.03
17	5.5	2	.03	2.1	2	.01	2.1	5	.03
18	5.5	2	.03	2.1	1	.01	2.1	5	.03
19	5.2	3	.04	2.1	1	.01	2.1	5	.03
20	5.0	4	.05	2.0	2	.01	2.3	4	.02
21	4.8	4	.05	2.0	2	.01	2.3	4	.02
22	4.5	5	.06	2.0	2	.01	2.3	3	.02
23	4.1	4	.04	2.1	2	.01	2.3	1	.01
24	3.9	4	.04	2.1	1	.01	2.3	5	.03
25	4.3	3	.03	2.1	1	.01	2.4	5	.03
26	4.3	3	.03	1.9	2	.01	2.4	4	.03
27	3.9	3	.03	1.9	3	.02	2.3	3	.02
28	3.9	3	.03	2.0	2	.01	2.3	3	.02
29	3.9	4	.04	2.0	1	.01	2.3	4	.02
30	4.3	3	.03	1.9	1	.01	2.1	5	.03
31	3.7	3	.03	2.0	2	.01	---	---	---
TOTAL	171.8	---	1.26	71.4	---	0.38	66.8	---	0.58
YEAR	19482.6		3635.76						

WHITE RIVER BASIN

07068560 DITCH NO. 2 NEAR SINSABAUGH, MO

WATER-QUALITY RECORDS

LOCATION.--Lat 36°30'22", long 90°4';7", in NE¼NW¼SW¼ sec.36, T.22 N., R.3 E., Ripley County, Hydrologic Unit 11010008, on County Road H bridge.

PERIOD OF RECORD.--April 1981 to current year.

WATER QUALITY DATA

DATE	STREAM- FLOW- INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD 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- TOCOCCHI 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)
APR , 1981											
01...	34	250	7.2	19.0	19	7.2	77	69	53	26	.000
JUN											
03...	63	170	7.6	22.0	34	5.2	59	64	380	87	.800
AUG											
12...	.00	250	7.7	28.0	17	6.8	82	58	--	26	.130
FEB , 1982											
11...	126	115	7.1	1.0	17	10.0	70	--	500	29	.690
AUG											
18...	223	70	6.6	26.0	17	3.4	41	2300	8200	25	<.080
NOV											
30...	232	75	6.9	11.0	15	4.6	42	70	270	11	.200
FEB , 1983											
02...	66	184	7.5	6.0	16	9.2	74	190	220	5	.200
APR											
06...	167	96	7.4	12.5	25	7.8	73	2400	11000	26	.200
JUN											
07...	60	163	7.5	21.0	26	4.2	46	140	1400	7	.200

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)
APR , 1981										
01...	.000	.000	.130	.51	.64	.64	2.8	.040	.12	.030
JUN										
03...	.010	.810	.150	.59	.74	1.6	6.9	.100	.31	.050
AUG										
12...	.040	.170	.460	.84	1.3	1.5	6.5	.050	.15	<.010
FEB , 1982										
11...	<.020	.690	.070	.81	.88	1.6	6.9	.030	.09	.010
AUG										
18...	<.020	<.100	.110	.79	.90	.90	4.0	.050	.15	.030
NOV										
30...	<.020	.200	<.060	--	1.0	1.1	5.3	.080	.25	.040
FEB , 1983										
02...	<.020	.200	<.060	--	.70	.90	4.0	.040	.12	.020
APR										
06...	<.020	.200	.090	.71	.80	1.0	4.4	.050	.15	.040
JUN										
07...	<.020	.200	<.060	--	.60	.80	3.5	.080	.25	.030

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 downstream from Cypress Ditch and at the northwest corner of Success.

DRAINAGE AREA.--386 mi².

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 265.89 feet National Geodetic Vertical Datum 1929.

REMARKS.--Records good except for period of once daily gage height, which are fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 8630 ft³/s Dec. 5, 1982, gage height, 25.45 ft; minimum, 11 ft³/s August 25-27, 1983.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 8,630 ft³/s Dec. 5, minimum daily discharge, 11 ft³/s Aug. 25-27.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

	MEAN VALUES											
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	61	71	1450	3980	200	143	272	2990	194	48	19	15
2	60	70	1260	3450	281	142	435	4760	168	50	15	12
3	60	68	1920	2780	321	141	882	4540	183	51	13	12
4	58	68	7950	1940	289	140	1000	4470	423	51	13	17
5	58	71	8630	1170	251	153	1040	4330	438	60	16	18
6	64	72	7010	788	234	215	1080	4040	357	53	18	19
7	108	72	5720	626	232	278	1250	3650	265	49	18	23
8	112	72	5180	455	230	279	1330	3210	209	41	37	30
9	83	72	4750	346	228	258	1360	2580	178	36	40	33
10	286	71	4270	298	222	229	1330	1790	158	35	28	30
11	639	71	3730	272	217	208	1270	1070	136	35	20	31
12	516	73	3150	245	208	194	1150	788	123	26	20	34
13	277	73	2420	227	198	186	1060	637	118	23	23	36
14	198	76	1580	214	192	183	1420	460	97	24	35	26
15	152	78	980	201	185	179	1760	441	109	22	34	25
16	123	81	720	192	181	191	2400	736	109	32	20	26
17	106	81	553	184	175	176	2240	731	99	35	19	28
18	100	82	391	174	170	170	1730	609	93	35	18	27
19	95	82	311	166	167	163	1330	666	85	31	12	29
20	85	83	271	160	163	166	1000	627	77	27	12	31
21	82	83	241	159	159	173	783	589	74	30	20	33
22	82	84	221	158	157	178	631	860	73	28	26	33
23	79	123	211	161	157	175	503	778	62	23	17	36
24	81	128	1320	165	154	167	512	533	59	22	12	38
25	78	128	3460	163	152	160	464	382	55	22	11	33
26	76	218	5290	159	149	160	390	313	56	23	11	34
27	74	602	5700	153	146	289	338	271	61	22	11	34
28	72	1160	5450	149	144	436	304	241	71	28	15	34
29	73	1370	5140	148	---	364	282	248	73	26	17	34
30	72	1550	4830	161	---	301	577	277	62	26	16	34
31	71	---	4770	168	---	276	---	230	---	22	16	---
TOTAL	4081	6933	98879	19612	5562	6473	30123	47847	4265	1036	602	845
MEAN	132	231	3190	633	199	209	1004	1543	142	33.4	19.4	28.2
MAX	639	1550	8630	3980	321	436	2400	4760	438	60	40	38
MIN	58	68	211	148	144	140	272	230	55	22	11	12
CAL YR 1982	TOTAL		264447	MEAN		725	MAX	8630	MIN		32	
WTR YR 1983	TOTAL		226258	MEAN		620	MAX	8630	MIN		11	

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 January 24, 1982; minimum daily, 0.16 tons January 15, 16, 19, 21, and 22, 1981.

EXTREMES FOR CURRENT YEAR.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 504 mg/L June 4; minimum daily mean, 2 mg/L Nov. 16.

SUSPENDED-SEDIMENT LOADS: Maximum daily, 3,540 tons December 4; minimum daily 0.44 tons November 16.

WATER QUALITY DATA

DATE	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDE (MG/L) (00530)	NITRO- GEN, NITRATE TOTAL (MG/L) (00620)
OCT , 1982											
05...	58	255	7.6	22.5	8.0	4.2	48	90	140	13	--
NOV											
30...	1370	70	6.6	11.5	17	5.4	50	80	560	25	.09
FEB , 1983											
02...	283	220	7.5	6.5	23	7.6	62	84	K44	18	--
APR											
07...	1300	109	7.3	13.0	27	8.8	83	--	5600	29	--
JUN											
07...	258	210	7.6	21.0	40	5.4	59	140	1400	77	.18
AUG											
10...	26	305	7.9	29.0	8.4	5.8	74	110	320	32	.18

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 , 1982										
05...	<.020	<.10	<.060	--	.90	--	--	.070	.21	.010
NOV										
30...	<.020	.20	<.060	--	1.20	1.4	6.2	.140	.43	.070
FEB , 1983										
02...	<.020	.20	.090	.61	.70	.90	4.0	.090	.28	.040
APR										
07...	<.020	.20	.140	.86	1.00	1.2	5.3	.090	.28	.070
JUN										
07...	.020	.20	<.060	--	.60	.80	3.5	.120	.37	.050
AUG										
10...	.020	.20	.040	.76	.80	1.0	4.4	.100	.31	.040

K--Results based on colony count outside the acceptable range (non-ideal colony count).

261

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

WHITE RIVER BASIN

07068600 LITTLE BLACK RIVER AT SUCCESS, AR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	18.0	16.0	17.0	26.0	24.0	25.0				---	---	---
2	17.5	16.5	17.0	25.5	24.5	24.5				---	---	---
3	18.0	17.0	17.5	25.5	23.5	24.5				---	---	---
4	20.0	17.5	18.5	25.0	23.5	24.5				---	---	---
5	20.0	19.0	19.5	24.0	22.5	23.5				---	---	---
6	20.0	19.0	19.5	24.0	22.0	23.0				---	---	---
7	19.0	17.5	18.5	23.0	21.0	22.0				---	---	---
8	19.5	17.5	18.5	23.5	20.5	22.0				---	---	---
9	20.0	18.0	19.0	24.5	21.5	23.0				---	---	---
10	20.5	18.5	19.5	25.0	23.0	24.0				---	---	---
11	21.0	20.0	20.5	26.0	23.5	24.5				---	---	---
12	21.5	20.0	20.5	---	---	---				---	---	---
13	22.0	20.0	21.0	---	---	---				---	---	---
14	21.5	20.0	20.5	---	---	---				---	---	---
15	21.5	19.5	20.5	---	---	---				29.5	12.0	19.0
16	22.0	20.5	21.0	---	---	---				24.0	15.5	20.0
17	22.0	20.5	21.0	---	---	---				23.5	20.0	21.5
18	23.0	21.0	22.0	---	---	---				25.5	21.5	23.0
19	23.5	21.5	22.5	---	---	---				24.0	22.0	23.0
20	23.5	22.0	22.5	---	---	---				22.5	20.0	22.0
21	24.0	22.0	23.0	---	---	---				19.5	16.0	17.5
22	24.0	22.5	23.5	---	---	---				17.0	14.5	15.5
23	23.5	22.5	23.0	---	---	---				16.0	14.5	15.0
24	24.5	22.5	23.5	---	---	---				15.0	13.0	14.0
25	24.5	23.0	24.0	---	---	---				14.5	13.5	14.0
26	24.0	23.5	24.0	---	---	---				17.0	14.5	15.5
27	24.0	23.0	23.5	---	---	---				18.0	16.0	17.0
28	24.0	23.5	24.0	---	---	---				18.5	16.5	17.5
29	24.0	23.0	23.5	---	---	---				19.0	17.0	18.0
30	24.5	23.0	24.0	---	---	---				19.5	17.0	18.0
31	---	---	---	---	---	---				---	---	---
MONTH	24.5	16.0	21.0	26.0	20.5	23.5				29.5	12.0	18.0
YEAR	29.5	1.0	13.0									

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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	61	26	4.3	71	22	4.2	1450	20	78
2	60	25	4.1	70	21	4.0	1260	18	61
3	60	30	4.9	68	17	3.1	1920	67	347
4	58	37	5.8	68	11	2.0	7950	165	3540
5	58	38	6.0	71	8	1.5	8630	78	1820
6	64	83	14	72	7	1.4	7010	39	738
7	108	139	41	72	9	1.8	5720	33	510
8	112	75	23	72	12	2.3	5180	29	406
9	83	53	12	72	15	2.9	4750	26	333
10	286	135	104	71	21	4.0	4270	18	208
11	639	149	257	71	19	3.6	3730	14	141
12	516	103	144	73	18	3.6	3150	15	128
13	277	90	67	73	14	2.8	2420	16	105
14	198	75	40	76	7	1.4	1580	16	68
15	152	57	23	78	3	.63	980	15	40
16	123	47	16	81	2	.44	720	14	27
17	106	36	10	81	3	.66	553	11	16
18	100	25	6.8	82	6	1.3	391	10	11
19	95	31	8.0	82	10	2.2	311	7	5.9
20	85	31	7.1	83	16	3.6	271	5	3.7
21	82	23	5.1	83	17	3.8	241	6	3.9
22	82	17	3.8	84	17	3.9	221	9	5.4
23	79	18	3.8	123	38	13	211	16	9.1
24	81	15	3.3	128	24	8.3	1320	299	1070
25	78	15	3.2	128	19	6.6	3460	112	1050
26	76	16	3.3	218	93	55	5290	59	843
27	74	15	3.0	602	128	208	5700	46	708
28	72	17	3.3	1160	72	226	5450	42	618
29	73	20	3.9	1370	39	144	5140	36	500
30	72	14	2.7	1550	24	100	4830	31	404
31	71	17	3.3	---	---	---	4770	33	425
TOTAL	4081	---	836.7	6933	---	816.03	98879	---	14223.0

07068600 LITTLE BLACK RIVER AT SUCCESS, AR--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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	3980	24	258	200	23	12	143	17	6.6
2	3450	19	177	281	36	27	142	28	11
3	2780	15	113	321	42	36	141	38	14
4	1940	13	68	289	24	19	140	46	17
5	1170	13	41	251	17	12	153	60	25
6	788	17	36	234	14	8.9	215	80	46
7	626	18	30	232	13	8.1	278	79	59
8	455	17	21	230	12	7.5	279	70	53
9	346	16	15	228	11	6.8	258	47	33
10	298	15	12	222	12	7.2	229	24	15
11	272	12	8.8	217	13	7.6	208	15	8.4
12	245	9	6.0	208	15	8.4	194	11	5.8
13	227	9	5.5	198	13	7.0	186	18	9.0
14	214	8	4.6	192	13	6.7	183	41	20
15	201	10	5.4	185	22	11	179	43	21
16	192	8	4.2	181	16	7.8	191	52	27
17	184	7	3.5	175	12	5.7	176	41	19
18	174	7	3.3	170	11	5.1	170	35	16
19	166	6	2.7	167	11	5.0	163	38	17
20	160	8	3.5	163	12	5.3	166	36	16
21	159	6	2.6	159	18	7.7	173	33	15
22	158	7	3.0	157	22	9.3	178	19	9.1
23	161	10	4.4	157	16	6.8	175	19	9.0
24	165	8	3.6	154	18	7.5	167	19	8.6
25	163	8	3.5	152	14	5.8	160	20	8.6
26	159	7	3.0	149	11	4.4	160	27	12
27	153	6	2.5	146	10	3.9	289	109	85
28	149	7	2.8	144	12	4.7	436	94	111
29	148	7	2.8	---	---	---	364	69	68
30	161	9	3.9	---	---	---	301	74	60
31	168	14	6.4	---	---	---	276	64	48
TOTAL	19612	---	857.0	5562	---	264.2	6473	---	873.1
APRIL			MAY			JUNE			
1	272	58	43	2990	105	848	194	100	52
2	435	81	95	4760	262	3370	168	103	47
3	882	83	198	4540	153	1880	183	117	58
4	1000	42	113	4470	104	1260	423	504	576
5	1040	44	124	4330	48	561	438	219	259
6	1080	48	140	4040	17	185	357	151	146
7	1250	71	240	3650	26	256	265	129	92
8	1330	62	223	3210	36	312	209	154	87
9	1360	58	213	2580	32	223	178	151	73
10	1330	75	269	1790	47	227	158	116	49
11	1270	50	171	1070	57	165	136	127	47
12	1150	29	90	788	92	196	123	128	43
13	1060	106	303	637	119	205	118	120	38
14	1420	145	556	460	164	204	97	112	29
15	1760	60	285	441	223	266	109	112	33
16	2400	34	220	736	146	290	109	120	35
17	2240	24	145	731	117	231	99	136	36
18	1730	24	112	609	113	186	93	116	29
19	1330	49	176	666	108	194	85	100	23
20	1000	39	105	627	110	186	77	103	21
21	783	34	72	589	126	200	74	113	23
22	631	39	66	860	236	548	73	99	20
23	503	40	54	778	171	359	62	92	15
24	512	42	58	533	125	180	59	90	14
25	464	47	59	382	121	125	55	88	13
26	390	53	56	313	107	90	56	86	13
27	338	50	46	271	107	78	61	89	15
28	304	54	44	241	112	73	71	90	17
29	282	61	46	248	118	79	73	96	19
30	577	113	176	277	132	99	62	86	14
31	---	---	---	230	107	66	---	---	---
TOTAL	30123	---	4498	47847	---	13142	4265	---	1936

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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	48	64	8.3	19	32	1.6	15	44	1.8
2	50	73	9.9	15	59	2.4	12	40	1.3
3	51	74	10	13	47	1.7	12	41	1.3
4	51	132	18	13	42	1.5	17	44	2.0
5	60	128	21	16	27	1.2	18	34	1.7
6	53	83	12	18	26	1.3	19	32	1.6
7	49	72	9.5	18	45	2.2	23	32	2.0
8	41	63	7.0	37	51	5.1	30	35	2.8
9	36	53	5.2	40	55	5.9	33	45	4.0
10	35	50	4.7	28	46	3.5	30	52	4.2
11	35	51	4.8	20	45	2.4	31	40	3.4
12	26	57	4.0	20	50	2.7	34	41	3.8
13	23	58	3.6	23	60	3.7	36	50	4.9
14	24	43	2.8	35	88	8.3	26	57	4.0
15	22	57	3.4	34	73	6.7	25	44	3.0
16	32	73	6.3	20	44	2.4	26	57	4.0
17	35	74	7.0	19	50	2.6	28	53	4.0
18	35	60	5.7	18	41	2.0	27	38	2.8
19	31	55	4.6	12	33	1.1	29	41	3.2
20	27	51	3.7	12	41	1.3	31	53	4.4
21	30	53	4.3	20	34	1.8	33	45	4.0
22	28	40	3.0	26	33	2.3	33	22	2.0
23	23	26	1.6	17	39	1.8	36	42	4.1
24	22	27	1.6	12	30	.97	38	47	4.8
25	22	27	1.6	11	30	.89	33	38	3.4
26	23	29	1.8	11	30	.89	34	28	2.6
27	22	38	2.3	11	18	.53	34	35	3.2
28	28	30	2.3	15	33	1.3	34	36	3.3
29	26	33	2.3	17	26	1.2	34	42	3.9
30	26	29	2.0	16	29	1.3	34	38	3.5
31	22	36	2.1	16	37	1.6	---	---	---
TOTAL	1036	---	176.4	602	---	74.18	845	---	95.0
YEAR	226258		37791.61						

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 downstream from West Fork Fourche Creek, and 2 mi southwest of Poynor.

DRAINAGE AREA.--87.2 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1976 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 340 ft, from topographic map.

REMARKS.--Water-discharge records good except for periods of no gage-height record which are poor.

AVERAGE DISCHARGE.--7 years, 104 ft³/s, 16.20 in/yr, 75,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 35,600 ft³/s Dec. 3, 1982, gage height, 18.28 ft; minimum, 2.7 ft³/s Aug. 11, 1983, gage height, 1.24 ft.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 9	0515	2,910	6.91
Nov. 28	0015	2,700	6.71
Dec. 3	0600	*35,600	18.28
Dec. 24	1245	12,600	12.83
May 3	0100	5,370	8.90

Minimum discharge, 2.7 ft³/s Aug. 11, minimum gage height, 1.17 ft Oct. 5, 6.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	16	222	172	77	29	112	272	48	20	8.2	3.8
2	12	17	182	156	97	29	332	626	49	19	6.6	3.8
3	12	18	14000	138	99	28	340	1800	71	17	5.8	3.5
4	12	17	1820	121	92	29	208	511	126	19	5.4	3.8
5	12	15	1200	115	88	49	575	261	68	22	4.2	3.8
6	246	15	1020	108	86	122	417	210	54	20	4.2	3.8
7	89	15	845	103	81	98	325	171	47	19	15	5.8
8	37	15	720	97	75	85	468	151	42	19	6.2	5.8
9	825	16	640	93	74	75	449	130	38	18	4.3	5.4
10	167	17	550	90	63	68	279	115	37	17	3.8	5.4
11	96	16	354	84	58	61	208	110	34	17	52	5.0
12	60	18	300	79	53	56	181	112	33	17	68	4.6
13	46	18	240	77	49	53	395	99	31	17	13	4.6
14	37	17	211	75	48	50	634	93	32	16	8.7	4.6
15	32	17	144	71	47	47	279	249	36	16	7.1	4.7
16	28	16	121	68	45	46	203	175	32	16	6.6	4.7
17	25	16	111	66	43	45	176	127	30	25	5.8	4.7
18	23	17	107	63	41	43	166	183	28	20	5.4	4.7
19	22	18	102	60	40	41	146	240	27	18	5.4	4.7
20	22	41	96	59	39	45	130	156	25	16	5.0	5.0
21	20	44	92	60	38	44	117	132	25	15	5.0	5.0
22	19	47	90	60	38	40	131	122	24	13	5.0	5.0
23	18	77	110	58	37	39	138	104	23	12	4.6	5.0
24	17	73	4500	56	35	38	134	90	23	11	4.2	5.0
25	16	66	2570	55	34	37	117	81	23	10	4.2	5.0
26	16	176	940	53	32	40	108	74	22	10	4.2	5.3
27	16	1190	1380	51	30	165	102	67	22	9.4	3.8	5.5
28	16	1230	1040	49	30	110	98	64	22	8.7	3.8	5.5
29	17	395	640	55	---	93	93	63	22	10	3.8	5.0
30	18	260	370	63	---	89	360	55	21	16	3.8	5.0
31	17	---	240	62	---	87	---	51	---	10	3.8	---
TOTAL	2006	3913	34957	2517	1569	1881	7421	6694	1115	493.1	286.9	143.5
MEAN	64.7	130	1128	81.2	56.0	60.7	247	216	37.2	15.9	9.25	4.78
MAX	825	1230	14000	172	99	165	634	1800	126	25	68	5.8
MIN	12	15	90	49	30	28	93	51	21	8.7	3.8	3.5
CAL YR 1982		TOTAL	75701.3	MEAN	207	MAX	14000	MIN	7.7			
WTR YR 1983		TOTAL	62996.5	MEAN	173	MAX	14000	MIN	3.5			

WHITE RIVER BASIN

07068863 FOURCHE RIVER NEAR POYNOR, MO.--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--

WATER TEMPERATURES: January 1976 to current year. (Discontinued)

INSTRUMENTATION.--Temperature recorder since January 1976.

REMARKS.--Temperature recorder inoperative many days during year. Number of missing days of record exceed 20 percent of year.

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 December 25, 27, 1980, Jan. 2, 4, 5, 6, 7, 8, 12, 16, 17, 1981.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

[illegible]

WHITE RIVER BASIN

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 downstream from lower outlet of spring, 1 mi north of Greer, and 1 mi 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 National Geodetic Vertical Datum of 1929. Aug. 10 to Dec. 31, 1904, nonrecording gage at site 250 ft downstream at different datum. Nov. 17, 1921, to June 25, 1934, nonrecording gage at site 250 ft downstream at datum 0.74 ft lower than present datum.

REMARKS.--Records good. Occasional runoff from drainage area of 2.97 mi² included in records.

AVERAGE DISCHARGE.--62 years, 333 ft³/s 241,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,770 ft³/s Dec. 3, 1982, includes about 930 ft³/s of surface runoff, gage height, 2.97 ft from rating curve extended above 700 ft³/s maximum excluding surface runoff, 942 ft³/s Dec. 3, 1982; minimum, 104 ft³/s Nov. 16-19, 1956, Jan. 18, 19, 1957.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,770 ft³/s Dec. 3, 1982, includes about 930 ft³/s of surface runoff, gage height, 2.97 ft from rating curve extended above 700 ft³/s maximum excluding surface runoff, 942 ft³/s Dec. 3, 1982; minimum, 144 ft³/s Nov. 21, 22, gage height, .35 ft.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	191	172	350	542	350	296	277	559	433	350	288	262
2	195	174	382	542	372	296	308	564	428	346	292	262
3	191	169	1010	531	377	296	328	606	428	346	292	262
4	188	166	795	520	372	296	346	600	428	346	296	258
5	188	162	712	510	362	308	359	588	423	346	296	258
6	188	162	693	498	362	350	365	576	418	341	296	258
7	188	156	661	489	363	367	376	576	413	337	296	258
8	188	153	661	473	350	376	395	564	408	337	292	258
9	188	153	642	468	350	372	395	554	405	333	287	258
10	185	153	630	458	345	359	395	537	414	328	284	258
11	185	153	618	448	345	346	392	537	409	324	288	258
12	185	153	606	443	341	333	386	526	409	324	284	254
13	182	150	594	442	337	328	423	514	404	321	284	254
14	182	153	582	438	333	317	537	508	404	324	288	254
15	182	146	571	433	333	308	554	499	404	328	284	255
16	185	150	559	428	329	304	548	499	399	328	284	254
17	182	150	548	418	324	296	542	489	399	324	280	250
18	182	150	542	409	320	300	531	489	394	319	280	247
19	178	146	537	400	316	296	520	505	394	316	277	247
20	178	150	526	400	314	292	510	506	390	312	277	247
21	175	144	515	395	314	288	499	499	390	304	277	247
22	172	144	504	390	308	284	483	494	386	296	277	243
23	172	153	494	390	308	282	483	489	376	292	273	243
24	172	162	582	386	308	282	478	478	372	288	273	243
25	172	159	648	381	304	282	467	473	367	284	269	243
26	172	166	600	377	300	284	467	467	367	284	269	243
27	175	258	588	372	300	284	462	462	363	280	269	243
28	172	363	594	367	300	282	458	457	363	280	269	243
29	175	381	577	367	---	277	453	453	359	284	269	243
30	175	368	565	362	---	273	504	448	355	284	266	240
31	172	---	554	357	---	273	---	443	---	284	266	---
TOTAL	5615	5419	18440	13434	9337	9527	13241	15959	11902	9790	8722	7543
MEAN	181	181	595	433	333	307	441	515	397	316	281	251
MAX	195	381	1010	542	377	376	554	606	433	350	296	262
MIN	172	144	350	357	300	273	277	443	355	280	266	240
CAL YR 1982	TOTAL		111177	MEAN	305	MAX	1010	MIN	112			
WTR YR 1983	TOTAL		128929	MEAN	353	MAX	1010	MIN	144			

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 southwest of Bardley, 7.5 mi upstream from Fredericks Fork, and at mile 53.7.

DRAINAGE AREA.--793 mi².

PERIOD OF RECORD.--October 1921 to current year. October 1921 monthly discharge only, published in WSP 1311.

REVISED RECORDS.--WSP 827: 1927-28, 1935. WSP 927: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 410.84 ft National Geodetic Vertical Datum of 1929. Prior to June 26, 1934, nonrecording gage at site 100 ft upstream at datum 0.06 ft 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.--61 years, 752 ft³/s, 12.87 in/yr, 544,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 49,800 ft³/s Dec. 3, 1982, gage height, 21.64 ft; minimum, 152 ft³/s Jan. 27, 1956, Jan. 11, 1957; minimum gage height, 1.06 ft Sept. 6-11, 1925, (present site and datum).

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 19.7 ft in August 1915, from floodmarks, discharge, 44,000 ft³/s from rating curve extended above 25,000 ft³/s.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 3	1615	*49,800	21.64
Dec. 24	1045	22,600	15.62

Minimum discharge, 276 ft³/s Nov. 15-17, 21, 22, gage height, 2.25 ft.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	335	292	820	2020	908	596	568	2030	986	676	487	387
2	333	304	734	1910	961	589	721	1760	985	660	480	383
3	333	300	26300	1800	982	578	898	2440	996	651	470	380
4	332	296	19500	1710	960	576	883	2220	998	686	470	377
5	331	292	7250	1650	936	646	870	1950	967	672	470	372
6	332	288	5270	1590	926	916	922	1770	953	639	470	371
7	335	288	3570	1530	906	975	960	1670	922	622	488	380
8	336	288	2920	1470	881	945	999	1550	925	613	556	373
9	362	284	2500	1420	866	891	1020	1450	911	602	505	375
10	336	284	2270	1370	858	852	993	1380	889	596	485	369
11	327	284	2130	1320	839	806	944	1330	876	590	492	364
12	324	296	1970	1260	813	785	913	1300	866	577	497	361
13	319	284	1850	1230	793	768	983	1250	851	571	468	358
14	315	280	1780	1200	778	759	2680	1230	855	565	457	351
15	313	276	1700	1150	768	735	2280	1230	849	560	451	348
16	312	276	1610	1120	762	720	1830	1190	825	572	447	350
17	304	276	1530	1100	744	704	1650	1150	811	554	443	347
18	305	280	1490	1070	731	686	1550	1190	804	543	439	343
19	305	280	1440	1050	719	669	1440	1360	795	535	435	340
20	308	280	1370	1030	704	665	1350	1340	781	534	430	353
21	298	276	1310	1030	693	638	1280	1300	771	526	422	340
22	296	280	1270	1010	680	613	1250	1270	760	517	419	333
23	295	328	1250	994	671	595	1230	1210	747	512	416	330
24	293	336	9230	977	664	577	1200	1150	740	506	411	325
25	289	324	6540	960	646	563	1140	1120	731	509	407	334
26	286	332	4100	945	624	570	1110	1090	722	505	403	335
27	285	545	3110	930	614	586	1080	1070	716	497	402	331
28	286	1190	3400	916	606	572	1060	1060	708	494	402	326
29	303	1080	2740	917	---	549	1040	1040	693	492	395	322
30	295	927	2370	905	---	544	1620	1020	685	492	392	319
31	295	---	2160	891	---	536	---	1010	---	491	391	---
TOTAL	9718	11346	125484	38475	22033	21204	36464	43130	25118	17559	13900	10577
MEAN	313	378	4048	1241	787	684	1215	1391	837	566	448	353
MAX	362	1190	26300	2020	982	975	2680	2440	998	686	556	387
MIN	285	276	734	891	606	536	568	1010	685	491	391	319
CAL YR 1982		TOTAL	344850	MEAN	945	MAX	26300	MIN	208			
WTR YR 1983		TOTAL	375008	MEAN	1027	MAX	26300	MIN	276			

ARKANSAS RIVER BASIN

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., and R.33 W., Jasper County, Hydrologic Unit 11070207, on left bank on downstream side of left pier of county highway bridge, 0.8 mi downstream from Blackberry Creek, 1.5 mi east of Waco, and 47.6 mi upstream from mouth.

DRAINAGE AREA.--1,164 mi².

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 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.--59 years, 844 ft³/s, 9.85 in/yr, 611,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 103,000 ft³/s May 19, 1943, gage height, 30.94 ft, from floodmark; minimum discharge, 4.2 ft³/s Aug. 28, 1954; minimum gage height, 0.80 ft July 24, 1934.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 13,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Apr. 24	1345	*21,900	20.68
July 26	0015	18,600	19.54

Minimum discharge, 90 ft³/s Sept. 30.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	130	104	727	989	3720	344	3050	9690	840	418	206	130
2	130	109	1800	915	6400	337	7810	9720	766	368	197	131
3	125	110	5690	859	3980	328	11200	6220	788	320	191	122
4	125	107	7940	803	1770	328	7530	2400	819	7740	187	120
5	125	103	5660	764	1170	457	8630	1990	909	17300	182	115
6	131	102	1220	731	1060	601	8400	1740	945	14800	170	113
7	129	101	1000	703	978	500	4770	1970	689	4480	165	123
8	132	100	950	674	894	481	2420	2480	607	1710	169	122
9	166	98	900	646	853	417	1980	1690	552	977	166	116
10	148	96	850	617	841	370	1910	1420	503	805	163	111
11	141	107	1900	590	836	344	1680	1340	467	697	154	110
12	135	115	1700	554	788	327	1440	1360	438	623	149	106
13	133	109	1500	515	718	316	1320	1530	415	544	145	101
14	128	115	1350	500	668	308	1450	4070	2780	535	143	99
15	122	112	1220	481	638	303	1360	3690	1450	546	138	105
16	118	106	1140	464	604	291	1140	2160	854	586	130	111
17	116	102	1050	449	576	280	1020	1540	562	597	129	112
18	116	102	985	435	543	269	949	1490	464	485	126	108
19	113	103	938	421	517	266	891	2100	418	412	123	101
20	111	102	878	406	496	279	839	2000	387	368	119	108
21	109	101	827	404	474	293	800	1440	360	332	117	108
22	107	110	789	411	455	298	1460	1300	339	308	110	104
23	106	168	763	400	436	279	14500	1210	318	288	106	99
24	105	167	759	388	420	263	21000	1210	299	271	128	96
25	105	164	1170	382	405	257	14800	1060	289	259	199	97
26	103	216	1500	385	386	348	4700	964	426	248	143	99
27	103	602	1260	393	367	1650	2020	901	799	239	124	97
28	112	1780	3380	400	354	2040	1790	3360	664	226	123	94
29	122	1740	2560	400	---	1220	2920	1620	714	209	133	92
30	113	1090	1420	397	---	2780	7960	1120	554	207	117	90
31	113	---	1100	398	---	2230	---	936	---	211	130	---
TOTAL	3772	8241	54926	16874	31347	18804	141739	75721	20415	57109	4582	3240
MEAN	122	275	1772	544	1120	607	4725	2443	681	1842	148	108
MAX	166	1780	7940	989	6400	2780	21000	9720	2780	17300	206	131
MIN	103	96	727	382	354	257	800	901	289	207	106	90
CAL YR 1982	TOTAL		338889	MEAN		928	MAX	11800	MIN		96	
WTR YR 1983	TOTAL		436770	MEAN		1197	MAX	21000	MIN		90	

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 downstream from Grove Creek, 3 mi east of Carterville, and 17 mi above mouth.

DRAINAGE AREA.--232 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1962 to current year.

GAGE.--Water-stage recorder. Datum of gage is 913.21 ft National Geodetic Vertical Datum of 1929 (levels by Missouri State Highway Commission).

REMARKS.--Records good.

AVERAGE DISCHARGE.--21 years, 188 ft³/s, 11.00 in/yr, 136,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 36,300 ft³/s July 3, 1976, gage height, 17.68 ft; minimum, 9.4 ft³/s Aug. 20, 21, 1972; minimum gage height, 0.28 ft Oct. 20, 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 2, 1959, reached a stage of 18.57 ft, from floodmark.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 3	0745	3,090	7.65
Apr. 2	1830	2,580	6.88
Apr. 24	Unknown	*12,400	14.22

Minimum daily discharge, 32 ft³/s Sept. 29, 30, gage height, 0.72 ft.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	54	44	307	267	580	142	373	2500	340	130	83	55
2	52	51	657	255	668	139	1460	1500	309	120	82	52
3	54	49	2610	241	480	137	1370	1190	309	110	79	47
4	52	46	1580	226	423	140	877	954	282	100	75	46
5	50	45	931	220	391	145	966	786	251	800	72	46
6	50	45	743	209	361	139	900	746	240	280	73	46
7	55	45	614	202	325	139	760	950	215	249	74	47
8	59	45	527	193	309	137	651	743	205	215	74	44
9	82	45	468	186	292	136	583	636	198	194	72	42
10	61	49	527	181	276	132	519	578	190	175	70	40
11	57	56	660	173	261	129	465	526	184	163	68	38
12	56	63	521	166	245	128	425	480	179	152	64	40
13	54	56	486	163	232	127	407	457	172	141	63	38
14	52	50	468	159	224	126	397	648	277	135	61	38
15	50	49	450	154	215	125	380	567	242	173	61	44
16	49	48	405	150	206	123	360	497	205	149	60	51
17	48	47	376	148	199	120	340	460	188	138	58	44
18	47	46	357	144	190	118	320	462	175	129	57	41
19	46	46	331	142	185	118	300	556	168	120	56	38
20	45	45	313	139	179	122	290	447	161	114	54	44
21	44	45	296	143	173	115	280	411	153	109	52	48
22	44	67	280	141	168	113	600	380	146	105	52	40
23	45	89	268	136	163	109	1100	367	141	103	58	37
24	45	80	272	134	158	107	6000	326	133	99	73	37
25	45	77	273	132	153	107	2000	318	133	97	59	40
26	44	132	259	132	149	117	1200	291	164	96	56	41
27	44	286	270	131	146	134	930	275	159	93	54	37
28	51	767	325	130	144	154	860	1310	146	90	56	35
29	50	462	312	133	---	171	1000	572	146	87	58	32
30	45	363	295	131	---	185	1500	440	141	85	54	32
31	44	---	284	135	---	201	---	362	---	84	56	---
TOTAL	1574	3338	16465	5196	7495	4135	27613	20735	5952	4835	1984	1260
MEAN	50.8	111	531	168	268	133	920	669	198	156	64.0	42.0
MAX	82	767	2610	267	668	201	6000	2500	340	800	83	55
MIN	44	44	259	130	144	107	280	275	133	84	52	32
CAL YR 1982		TOTAL	86079	MEAN	236	MAX	3030	MIN	44			
WTR YR 1983		TOTAL	100582	MEAN	276	MAX	6000	MIN	32			

ARKANSAS RIVER BASIN

07186400 CENTER CREEK NEAR CARTERVILLE, MO.--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--August 1962 to September 1975, October 1979 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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 (STAND- ARD 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)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)
OCT											
07...	1130	1028	29001	55	331	7.7	19.0	6.0	64	<5	250
NOV											
09...	1100	1028	29001	44	400	7.7	14.0	6.8	65	9	100
DEC											
15...	1145	1028	29001	455	297	8.0	9.0	10.6	91	5	--
JAN											
12...	1130	1028	29001	164	327	8.2	5.5	12.0	95	<5	26
FEB											
09...	1115	1028	29001	288	306	8.1	9.0	10.0	86	<5	40
MAR											
16...	1145	1028	29001	123	328	8.0	15.5	9.4	94	<5	K22
APR											
06...	1215	1028	29001	980	245	7.9	10.0	7.4	65	15	2400
MAY											
04...	1200	1028	29001	950	259	7.6	14.5	7.6	74	6	600
JUN											
07...	1100	1028	29001	215	316	7.9	17.5	8.2	86	<5	210
JUL											
06...	1500	1028	29001	308	260	7.4	22.5	6.1	70	20	2000
AUG											
10...	1300	1028	29001	71	355	8.1	26.5	5.8	72	<5	54
SEP											
21...	0845	1028	29001	48	376	7.4	16.0	5.7	57	6	290

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- LINIT 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...	160	32	58	3.7	9.1	2.0	128	4.9	18	9.0
NOV										
09...	--	--	--	--	--	--	141	5.4	--	--
DEC										
15...	--	--	--	--	--	--	110	2.1	--	--
JAN										
12...	140	22	51	2.9	5.3	1.4	118	1.4	10	9.0
FEB										
09...	--	--	--	--	--	--	108	1.7	--	--
MAR										
16...	--	--	--	--	--	--	121	2.3	--	--
APR										
06...	120	26	42	2.5	3.3	2.2	89	2.2	15	7.0
MAY										
04...	--	--	--	--	--	--	102	5.0	--	--
JUN										
07...	--	--	--	--	--	--	128	3.1	--	--
JUL										
06...	120	13	43	2.5	4.2	3.5	105	8.1	14	8.0
AUG										
10...	--	--	--	--	--	--	118	1.8	--	--
SEP										
21...	--	--	--	--	--	--	141	11	--	--

K--Results based on colony count outside the acceptable range (non-ideal colony count).

DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SOLIDS, RESIDUE AT 180 DEG. C 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...	.30	212	8	8.00	2.20	.070	<2	<2	<5	<5
NOV 09...	--	263	--	7.90	1.40	.120	--	--	--	--
DEC 15...	--	--	5	4.20	.460	.080	--	--	--	--
JAN 12...	.20	177	--	4.20	.420	.050	<2	<2	<5	<5
FEB 09...	--	--	9	4.20	.400	.150	--	--	--	--
MAR 16...	--	--	1	4.40	.620	.070	--	--	--	--
APR 06...	.10	157	24	3.20	.400	.140	<2	<2	<5	<5
MAY 04...	--	--	19	3.00	.300	.110	--	--	--	--
JUN 07...	--	--	9	3.40	.230	.070	--	--	--	--
JUL 06...	.10	189	48	2.80	.450	.180	3	3	6	6
AUG 10...	--	--	17	5.50	.520	.070	--	--	--	--
SEP 21...	--	--	11	8.90	2.80	.100	--	--	--	--

[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 south of Smithfield.

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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 (STAND- ARD 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)	COLI- FORM, FECAL, 0.7 UM-MF (COLS. / 100 ML) (31625)
OCT 07...	1230	1028	29001	60	440	8.1	19.0	8.2	87	<5	110
NOV 09...	1215	1028	29001	52	486	8.1	14.0	10.0	96	<5	80
DEC 15...	1345	1028	29001	461	340	8.1	8.0	10.7	90	11	--
JAN 12...	1300	1028	29001	150	385	8.2	5.5	10.0	79	<5	K20
FEB 09...	1200	1028	29001	270	379	8.1	9.0	11.0	95	6	K8
MAR 16...	1230	1028	29001	106	405	8.2	15.5	10.8	108	<5	K8
APR 06...	1300	1028	29001	1380	280	7.9	10.0	8.8	78	15	3200
MAY 04...	1230	1028	29001	1170	304	7.8	14.5	7.8	76	6	400
JUN 07...	1230	1028	29001	325	375	8.1	17.5	8.2	85	6	88
JUL 06...	1350	1028	29001	600	312	7.4	23.0	6.9	79	26	1200
AUG 10...	1400	1028	29001	58	410	8.3	27.0	7.2	90	7	33
SEP 21...	1030	1028	29001	62	412	7.4	16.5	8.5	85	8	200

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...	200	79	72	4.0	11	2.1	118	1.8	52	10
NOV 09...	--	--	--	--	--	--	141	2.2	--	--
DEC 15...	--	--	--	--	--	--	112	1.7	--	--
JAN 12...	170	43	62	3.2	7.3	1.5	125	1.5	40	12
FEB 09...	--	--	--	--	--	--	108	1.7	--	--
MAR 16...	--	--	--	--	--	--	118	1.4	--	--
APR 06...	140	47	50	2.7	3.5	2.4	89	2.2	40	6.0
MAY 04...	--	--	--	--	--	--	102	3.1	--	--
JUN 07...	--	--	--	--	--	--	121	1.9	--	--
JUL 06...	140	48	53	2.6	4.3	3.9	95	7.3	42	7.0
AUG 10...	--	--	--	--	--	--	128	1.2	--	--
SEP 21...	--	--	--	--	--	--	130	10	--	--

K--Results based on colony count outside the acceptable range (non-ideal colony count).

DATE	FLUORIDE, DIS-SOLVED (MG/L AS F) (00950)	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 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...	.40	271	5	7.20	.030	.140	<2	<2	<5
NOV 09...	--	320	--	8.00	.040	.160	--	--	--	--
DEC 15...	--	--	9	4.50	.290	.120	--	--	--	--
JAN 12...	.20	240	--	4.40	.110	.100	<2	<2	<5	<5
FEB 09...	--	--	1	4.70	.170	.170	--	--	--	--
MAR 16...	--	--	1	5.50	.060	.090	--	--	--	--
APR 06...	.10	188	37	2.40	.270	.150	3	<2	<5	<5
MAY 04...	--	--	25	2.90	.240	.120	--	--	--	--
JUN 07...	--	--	8	3.50	.040	.100	--	--	--	--
JUL 06...	.10	225	43	2.40	.150	.270	4	3	6	<5
AUG 10...	--	--	17	4.30	<.010	.100	--	--	--	--
SEP 21...	--	--	8	7.50	<.010	.150	--	--	--	--

[illegible]

ARKANSAS RIVER BASIN

07187000 SHOAL CREEK ABOVE JOPLIN, MO

LOCATION.--Lat 37°01'23", long 94°30'58", in SE¼NE¼ sec.34, T.27 N., R.33 W., Newton County, Hydrologic Unit 11070207, on right bank 250 ft upstream from mouth of Spring Creek, 1,400 ft downstream from bridge on State Highway 86, 0.5 mi south of city limits of Joplin and 13.2 mi above mouth.

DRAINAGE AREA.--427 mi².

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 National Geodetic Vertical Datum of 1929. Prior to July 21, 1966, water-stage recorder at site 1.8 mi upstream, at datum 15.5 ft higher.

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

AVERAGE DISCHARGE.--42 years, 390 ft³/s, 12.40 in/yr, 282,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 62,100 ft³/s May 18, 1943, gage height, 16.8 ft former site and datum; minimum, 12 ft³/s Sept. 7, 1954.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 10,800 ft³/s at 0715 May 1, gage height, 12.63 ft, no other peak above base of 6,000 ft³/s; minimum daily, 81 ft³/s Sept. 30.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	138	133	552	482	528	264	401	5860	496	301	212	142
2	138	128	638	460	832	264	649	2720	472	288	206	139
3	135	125	2730	438	798	260	1280	2020	538	283	203	129
4	126	120	3060	422	720	256	1250	1520	537	323	201	127
5	118	119	1790	411	663	283	1270	1220	501	1150	196	119
6	126	117	1370	396	613	275	1230	1070	472	625	191	118
7	135	116	1110	390	570	275	1080	1290	444	494	194	113
8	157	116	961	375	534	272	978	1200	422	433	196	108
9	173	107	853	365	511	268	901	1030	400	396	192	105
10	155	98	818	352	477	264	826	936	374	365	183	100
11	144	103	860	343	454	260	758	868	361	347	181	98
12	138	124	812	330	422	252	711	813	351	326	179	96
13	136	119	758	321	406	252	687	787	344	309	177	98
14	136	113	726	317	390	249	673	1000	651	306	174	95
15	127	103	688	308	380	249	626	924	681	315	173	105
16	127	98	632	304	365	249	587	822	515	319	168	116
17	123	98	600	295	356	241	561	751	458	301	162	108
18	114	98	570	287	343	237	543	748	425	283	151	99
19	116	98	546	283	334	234	515	780	405	278	147	96
20	118	95	517	279	330	245	498	709	380	268	143	102
21	118	95	494	279	321	237	492	671	360	261	139	121
22	118	116	477	279	312	230	753	647	350	251	137	101
23	118	143	460	272	304	227	2820	670	334	243	133	93
24	118	170	460	264	295	223	2510	589	321	237	145	90
25	118	167	482	264	287	220	1720	549	316	236	156	91
26	117	230	499	260	279	234	1410	533	360	229	137	93
27	109	422	494	260	272	268	1200	506	386	226	137	92
28	123	732	511	260	268	283	1060	711	338	222	141	86
29	136	765	522	260	---	298	1260	815	346	216	136	83
30	133	632	511	260	---	331	2520	570	325	209	134	81
31	129	---	499	264	---	346	---	534	---	210	150	---
TOTAL	4017	5700	26000	10080	12364	8046	31769	33863	12663	10250	5174	3144
MEAN	130	190	839	325	442	260	1059	1092	422	331	167	105
MAX	173	765	3060	482	832	346	2820	5860	681	1150	212	142
MIN	109	95	460	260	268	220	401	506	316	209	133	81
CAL YR 1982	TOTAL		146173	MEAN	400	MAX	3060	MIN	95			
WTR YR 1983	TOTAL		163070	MEAN	447	MAX	5860	MIN	81			

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 downstream from Blackfoot Branch, 2.8 mi upstream from Buffalo Creek, 3.0 mi southeast of Tiff City, and at mile 15.8.

DRAINAGE AREA.--872 mi².

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

REVISED RECORDS.--WSP 927: 1940. WSP 1117: Drainage area.

GAGE.--Water stage recorder. Datum of gage is 750.6. ft National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Sept. 6, 1960 to Aug. 25, 1961, at site 100 ft downstream.

REMARKS.--Records good.

AVERAGE DISCHARGE.--44 years, 770 ft³/s, 11.99 in/yr, 557,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 137,000 ft³/s Apr. 19, 1941, gage height, 28.4 ft, from floodmark, from rating curve extended above 60,000 ft³/s on basis of slope-area measurement of peak flow; minimum daily, 5.1 ft³/s Sept. 5, 6, 1954.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 9,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 3	1430	20,200	16.63
Apr. 30	0930	*35,200	20.70

Minimum daily discharge, 5.1 ft³/s Sept. 15.

DISCHARGE (CUBIC FEET/SECOND) WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

	MEAN VALUES											
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	87	96	1220	1060	776	316	592	12900	645	288	135	87
2	84	101	1150	949	2590	306	2420	6270	589	261	134	84
3	84	101	12200	855	2600	300	7500	3700	757	246	130	78
4	84	103	13000	750	2050	304	4650	2720	764	239	129	72
5	82	104	5410	680	1680	354	3290	2190	691	594	125	67
6	79	106	3490	630	1420	386	2780	1830	631	444	122	67
7	84	107	2610	596	1230	429	2360	1640	571	361	121	63
8	95	107	1890	551	1080	520	1980	1440	516	313	131	58
9	107	107	1650	515	975	596	1730	1260	474	277	134	55
10	104	102	1330	483	888	600	1510	1130	438	256	127	54
11	104	101	1270	453	816	560	1320	1020	409	239	115	52
12	98	112	1180	424	744	517	1200	943	385	225	107	52
13	92	117	1110	400	677	507	1130	893	359	211	97	52
14	90	119	1040	380	626	490	1150	880	401	204	91	52
15	87	118	948	361	586	469	1140	863	610	197	87	51
16	84	114	868	343	555	447	1090	814	524	190	85	55
17	82	109	811	328	521	422	1030	750	452	183	80	56
18	79	107	745	313	493	400	981	737	405	182	76	56
19	77	106	687	296	470	385	932	759	373	177	74	54
20	74	103	633	290	448	391	884	741	347	167	71	55
21	74	101	585	297	429	384	880	720	326	165	65	56
22	74	114	546	292	411	366	1640	721	305	157	66	58
23	74	167	519	280	395	349	5200	866	287	149	67	60
24	74	218	503	272	382	335	7060	1030	275	142	65	60
25	74	272	880	268	370	324	4260	883	265	142	65	59
26	74	342	1410	267	354	336	3020	777	264	143	64	58
27	74	885	1190	272	338	376	2330	694	268	148	65	58
28	78	2720	1280	284	325	459	1920	707	340	141	67	57
29	85	2630	1500	300	---	515	5220	899	349	137	64	54
30	90	1670	1350	323	---	555	27300	820	321	128	70	83
31	94	---	1200	358	---	573	---	717	---	129	76	---
TOTAL	2622	11259	64205	13870	24229	13271	98499	52314	13341	6835	2905	1823
MEAN	84.6	375	2071	447	865	428	3283	1688	445	220	93.7	60.8
MAX	107	2720	13000	1060	2600	600	27300	12900	764	594	135	87
MIN	74	96	503	267	325	300	592	694	264	128	64	51
CAL YR 1982	TOTAL		233003	MEAN		638	MAX	13000	MIN	74		
WTR YR 1983	TOTAL		305173	MEAN		836	MAX	27300	MIN	51		

ARKANSAS RIVER BASIN

07189000 ELK RIVER NEAR TIFF CITY, MO.--Continued

WATER-QUALITY RECORDS

DRAINAGE AREA.--872 mi².

PERIOD OF RECORD.--August 1962 to June 1963; November 1965 to July 1975; October 1980 thru September 1981; October 1982 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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 (STAND- ARD 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)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)
OCT 07...	0845	1028	29001	95	288	7.9	18.0	6.6	69	<5	58
NOV 09...	0915	1028	29001	102	287	7.9	13.5	9.0	86	<5	23
DEC 14...	1530	1028	29001	1100	274	8.2	8.0	11.0	92	<5	--
JAN 12...	0900	1028	29001	579	268	8.0	5.5	11.2	89	<5	K17
FEB 09...	0900	1028	29001	990	266	8.1	7.5	10.8	90	<5	42
MAR 16...	0915	1028	29001	470	264	8.1	14.0	9.0	87	<5	27
APR 06...	0900	1028	29001	2690	237	8.0	9.5	9.8	86	<5	190
MAY 04...	0930	1028	29001	2740	231	7.9	13.5	9.2	88	<5	420
JUN 07...	0900	1028	29001	650	261	8.2	18.0	8.0	84	<5	58
JUL 06...	1030	1028	29001	590	238	7.7	24.5	6.0	71	14	580
AUG 10...	0930	1028	29001	130	282	8.0	27.5	5.8	73	<5	25
SEP 21...	1230	1028	29001	63	257	7.3	19.0	8.1	86	14	20

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...	140	20	49	5.4	4.4	2.0	125	3.0	<10	6.0
NOV 09...	--	--	--	--	--	--	131	3.2	--	--
DEC 14...	--	--	--	--	--	--	118	1.4	--	--
JAN 12...	130	9	46	2.9	3.7	1.5	118	2.3	<10	8.0
FEB 09...	--	--	--	--	--	--	108	1.7	--	--
MAR 16...	--	--	--	--	--	--	118	1.8	--	--
APR 06...	140	28	28	16	2.1	2.2	108	2.1	10	4.0
MAY 04...	--	--	--	--	--	--	98	2.4	--	--
JUN 07...	--	--	--	--	--	--	102	1.2	--	--
JUL 06...	110	10	41	2.2	2.9	3.1	102	3.9	10	5.0
AUG 10...	--	--	--	--	--	--	121	2.3	--	--
SEP 21...	--	--	--	--	--	--	134	13	--	--

K--Results based on colony count outside the acceptable range (non-ideal colony count).

DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	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 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...	.10	159	3	.600	.030	.060	2	<2	5	<5
NOV 09...	--	187	--	.540	.010	.100	--	--	--	--
DEC 14...	--	--	2	2.30	.010	<.050	--	--	--	--
JAN 12...	.10	155	--	1.90	.010	<.050	<2	<2	<5	<5
FEB 09...	--	--	2	1.90	.030	.100	--	--	--	--
MAR 16...	--	--	<1	1.30	.050	.050	--	--	--	--
APR 06...	.10	145	8	1.70	.010	<.050	<2	<2	<5	<5
MAY 04...	--	--	15	1.90	.040	.060	--	--	--	--
JUN 07...	--	--	<1	1.20	<.010	.060	--	--	--	--
JUL 06...	.10	161	9	1.30	.020	.150	<2	<2	<5	<5
AUG 10...	--	--	19	.610	<.010	.080	--	--	--	--
SEP 21...	--	--	3	.510	<.010	.100	--	--	--	--

[illegible]

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 1983.

Station no.	Station name	Location	Drainage area (sq mi)	Period of record	Annual maximum		
					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 south of Wayland.	0.07	1955-65 1966-69 1970-83	12-3-82	6.95	130
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. & Q. railroad crossing and 3.6 mi south of Elsberry, Lincoln County, Missouri.	1.50	1954-	5-1-83	3.63	400
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 west of Ravenwood.	486	1922-71† 1972-83	3-5-83	10.20	4,000
06820300	Big Slough near Wilcox	Lat 40°23'23", long 94°55'32", on south line of SW¼ sec.35, T.65 N., R.36 W., at culvert on U.S. Highway 71, 3 mi southeast of Wilcox, Nodaway County.	1.30	1949-83	4-15-83	1.95	115
06821130	First Creek near Nashua	Lat 39°17'20", long 94°35'05", in NW¼SW¼ sec.26, T.52 N., R.33 W., Clay County, at culvert on farm road 150 ft east of U.S. Highway 169, and 1 mi south of Nashua.	0.55	1959-65 1966-74† 1975-83	4-6-83 & 4-30-83	7.63	14.5
Shoal Creek basin							
06894070	Crooked Creek near Richmond	Lat 39°20'00", long 93°58'45", in NW¼NW¼ 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	1948-70 1971-83	+	+	+
Platte River (Iowa-Missouri) basin							
06896000	Wakenda Creek at Carrollton	Lat 39°20'50", long 93°29'45", in NE¼SE¼ sec.5, T.52 N., R.23 W., Carroll County, on left bank near Highway 65 bridge in Carrollton.	248	1948-70† 1972-83	+	+	+
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 downstream from bridge on old U.S. Highway 69, 2 mi north of Bethany and 4 mi upstream from confluence with West Fork.	95	1934-	+	+	+
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 west of Utica.	1.44	1958-83	4-3-83	9.46	350
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 northeast of Hartford.	155	1963-83	4-20-83	19.48	6,200
06905000	Chariton River at Elmer	Lat 39°57'08", long 92°39'54", in E¼ sec.3, T. 59 N., R.16 W., Macon County, at bridge on State Highway J, 0.8 mi southwest of Elmer.	1,660	1921-30† 1961-83	4-3-83	15.73	6,800
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 mi SW of Thomas Hill.	150	1962-83	4-14-83	14.08	2,000

Annual maximum discharge at crest-stage partial-record stations, water year 1983--Continued

Station no.	Station name	Location	Drainage area (sq mi)	Period of record	Annual maximum		Dis-charge (ft ³ /s)
					Date	Gage height (feet)	
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	1949-	+	+	+
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 east of Clifton City.	598	1922-71† 1972-82	+	+	+
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 downstream 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	1958-83	2-11-83	19.49	+
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 east of Marshall.	2.87	1952-65 1966-82	+	+	<100
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 north of Estill and 2 mi north of New Franklin.	0.30	1958-83	10-21-82	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 downstream from Hungry Mother Creek, 7 mi east of Fayette and 15 mi upstream from mouth.	81	1948-60 1962-69† 1979-83	2-10-83	18.55	3,050
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 south of Jefferson City.	561	1947-74† 1975-83	12-3-82	29.83	+
Osage River basin							
06918200	North Fork Panther Creek tributary near Appleton City	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	1955-83	4-5-83	6.32	95
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 north of Brighton, and 8.7 mi southeast of Bolivar.	0.59	1955-	+	+	+
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 south of junction of U.S. Highway 54 and State Highway 39, 2.5 mi west of Caplinger Mills and 10.5 mi south-east of Eldorado Springs.	0.14	1955-62 1963-82	+	+	+
06921720	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 Blairstown, 0.8 mi downstream from Bear Creek and 1.5 mi upstream from Brushy Creek.	414	1960-	6-15-83	6.00	+

DISCHARGE AT PARTIAL-RECORD STATIONS

Annual maximum discharge at crest-stage partial-record stations, water year 1983--Continued

Station no.	Station name	Location	Drainage area (sq mi)	Period of record	Annual maximum		Dis-charge (ft ³ /s)
					Date	Gage height (feet)	
Osage River basin--Continued							
06921800	Granddaddy Creek near Ulrich	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 north of junction of State Highway K and State Highway 18 and 6.5 mi south of Ulrich.	0.92	1958-75 1976-83	4-5-83	6.91	160
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 right downstream wingwall of U.S. Highway 54 bridge, 0.6 mi east of Preston.	4.18	1956-76† 1977-83	8-1-83	8.78	1,080
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 southeast of Westphalia, 1.2 mi downstream from Little Maries Creek, and at mile 9.9.	257	1947-70† 1971-83	12-3-82	21.31	10,000
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 southwest of Mountain Grove.	1.34	1955-83	5-5-83	7.49	1,420
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 west of Salem.	0.89	1955-59 1960-63f 1964-83	5-9-83	7.03	+
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 from junction U.S. 63 and 72, in Rolla.	1.72	1978-83	6-6-83 5 10-17-83	2.13	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	1960-64 1966-70f 1971-83	2-8-83	10.07	245
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 west of Fredericktown.	4.03	1956-75† 1976-83	12-4-82	8.80	2,100
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 north of Ozark.	0.64	1967-65 1966-71f 1972-83	10-12-82	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	1954-83	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 south of Miller.	0.94	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 parentheses are in square kilometers.

< Less than

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

Water-quality partial-record stations are 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 1982 TO SEPTEMBER 1983

DATE	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	ALKA- LINEITY FIELD (MG/L AS CACO3) (00410)	NITRO- GEN, NITRITE TOTAL (MG/L AS N) (00615)
07064400 - MONTAUK SPRINGS AT MONTAUK, MO (LAT 37 27 36 LONG 091 40 59)									
MAY , 1983									
24...	132	200	7.3	13.5	8.5	21	76	93	<.020
SEP									
13...	70	298	7.4	14.0	7.4	K14	130	140	<.020
07064440 - CURRENT RIVER BELOW MONTAUK STATE PARK (LAT 37 27 01 LONG 091 29 41)									
MAY , 1983									
24...	172	209	7.8	14.5	10.4	38	270	100	<.020
SEP									
13...	90	300	7.6	14.5	8.8	62	180	130	<.020
07064530 - WELCH SPRING NEAR AKERS MO (LAT 37 23 38 LONG 091 34 25)									
MAY , 1983									
24...	356	235	7.4	13.5	8.6	21	82	120	<.020
SEP									
15...	90	336	7.4	14.5	7.7	K12	96	180	<.020
07064555 - PULLTITE SPRING NEAR ROUND SPRING, MO (LAT 37 20 03 LONG 091 29 24)									
MAY , 1983									
26...	132	185	7.2	13.0	8.9	51	120	89	<.020
SEP									
15...	49	308	7.4	14.0	7.7	<1	K4	160	<.020
07065000 - ROUND SPRING AT ROUND SPRING MO (LAT 37 16 57 LONG 091 24 27)									
MAY , 1983									
24...	100	231	7.6	13.5	8.7	K15	100	120	<.020
SEP									
13...	34	338	7.3	14.0	8.0	<1	K8	180	<.020
07065500 - ALLEY SPRING AT ALLEY MO (LAT 37 09 14 LONG 091 26 29)									
MAY , 1983									
25...	197	210	7.4	14.0	8.7	25	54	110	<.020
SEP									
14...	93	297	7.5	14.0	7.9	<1	K1	160	<.020
07066110 - JACKS FORK ABOVE TWO RIVERS (LAT 37 10 53 LONG 091 17 36)									
MAY , 1983									
25...	700	277	8.1	18.0	9.2	20	30	150	<.020
SEP									
14...	180	342	7.9	18.5	8.0	34	46	190	<.020
07066510 - CURRENT RIVER ABOVE POWDER MILL (LAT 37 10 32 LONG 091 12 48)									
MAY , 1983									
25...	2240	250	8.2	17.0	8.8	33	46	130	<.020
SEP									
14...	680	330	8.0	19.0	8.1	24	21	180	<.020
07066550 - BLUE SPRING NEAR EMINENCE, MO. (LAT 37 09 58 LONG 091 09 47)									
MAY , 1983									
25...	237	140	7.2	14.0	9.0	K15	48	57	<.020
SEP									
14...	88	300	7.5	14.0	8.9	<1	K3	150	<.020
07067500 - BIG SPRING NEAR VAN BUREN MO (LAT 36 57 05 LONG 090 59 36)									
MAY , 1983									
25...	650	250	7.5	14.5	8.8	22	46	140	<.020
SEP									
15...	328	342	7.4	15.0	8.0	<1	<1	190	<.020
07067800 - CURRENT RIVER BELOW HAWES CAMPGROUND (LAT 36 49 08 LONG 090 56 48)									
MAY , 1983									
25...	8700	250	8.2	19.0	9.6	K6	K28	140	<.020
SEP									
14...	1200	330	8.1	21.0	9.2	K9	25	180	<.020

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	NITRO- GEN, NO ₂ +NO ₃ TOTAL (MG/L AS N) (00630)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)
07064400	- MONTAUK SPRINGS AT MONTAUK, MO (LAT 37 27 36 LONG 091 40 59)							
MAY , 1983								
24...	.600	<.060	1.0	.010	<1	<1	<1	10
SEP								
13...	1.00	<.010	.50	.050	<1	1	<1	10
07064440	- CURRENT RIVER BELOW MONTAUK STATE PARK (LAT 37 27 01 LONG 091 29 41)							
MAY , 1983								
24...	.400	<.060	.60	.010	<1	2	<1	10
SEP								
13...	.900	.020	.40	.010	<1	2	<1	20
07064530	- WELCH SPRING NEAR AKERS MO (LAT 37 23 38 LONG 091 34 25)							
MAY , 1983								
24...	.500	<.060	.90	.010	<1	2	<1	10
SEP								
15...	.700	.020	.40	.010	--	--	--	--
07064555	- PULLTITE SPRING NEAR ROUND SPRING, MO (LAT 37 20 03 LONG 091 29 24)							
MAY , 1983								
26...	.400	<.060	.40	.020	<1	1	<1	20
SEP								
15...	.600	<.010	.30	<.010	--	--	--	--
07065000	- ROUND SPRING AT ROUND SPRING MO (LAT 37 16 57 LONG 091 24 27)							
MAY , 1983								
24...	.400	<.060	.40	.020	<1	2	<1	20
SEP								
13...	.300	<.010	.40	<.010	--	--	--	--
07065500	- ALLEY SPRING AT ALLEY MO (LAT 37 09 14 LONG 091 26 29)							
MAY , 1983								
25...	.500	<.060	.60	.020	<1	2	<1	10
SEP								
14...	.700	<.010	.30	<.010	<1	1	<1	10
07066110	- JACKS FORK ABOVE TWO RIVERS (LAT 37 10 53 LONG 091 17 36)							
MAY , 1983								
25...	.300	<.060	.30	.010	<1	2	<1	50
SEP								
14...	.300	<.010	.30	<.010	<1	1	<1	10
07066510	- CURRENT RIVER ABOVE POWDER MILL (LAT 37 10 32 LONG 091 12 48)							
MAY , 1983								
25...	.300	<.060	1.1	.020	<1	<1	1	20
SEP								
14...	.400	<.010	.40	.040	--	--	--	--
07066550	- BLUE SPRING NEAR EMINENCE, MO. (LAT 37 09 58 LONG 091 09 47)							
MAY , 1983								
25...	.400	<.060	.60	.020	<1	3	<1	20
SEP								
14...	.400	<.010	.50	<.010	--	--	--	--
07067500	- BIG SPRING NEAR VAN BUREN MO (LAT 36 57 05 LONG 090 59 36)							
MAY , 1983								
25...	.400	<.060	.30	.020	<1	2	1	10
SEP								
15...	.300	<.010	.20	.010	--	--	--	--
07067800	- CURRENT RIVER BELOW HAWES CAMPGROUND (LAT 36 49 08 LONG 090 56 48)							
MAY , 1983								
25...	.200	<.060	.50	.020	<1	4	<1	30
SEP								
14...	.200	<.010	.30	<.010	<1	2	<1	30

K--Results based on colony count outside the acceptable range (non-ideal colony count).

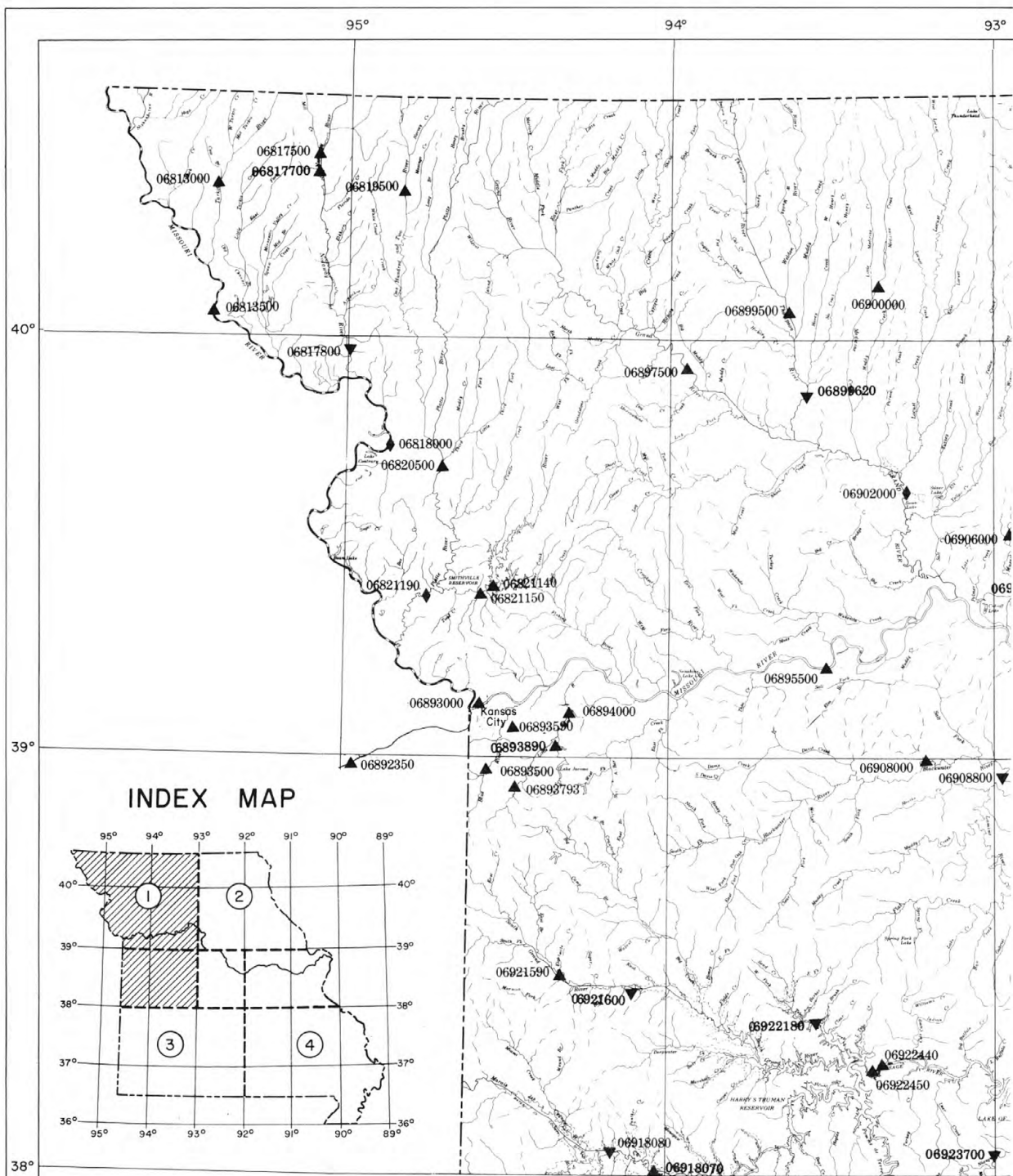
Index

	Page		Page
Accuracy of field data and computed results.....	10	Crooked Creek near Dillard.....	172
Acre-foot, definition of.....	13	near Paris.....	43
Algae, definition of.....	13	Crooked River near Richmond.....	280
Alley Spring at Alley.....	284	Crest-stage stations, maximum stage and discharge at partial-record stations.....	280
Analyses of samples collected at water-quality partial-record stations.....	284	Cubic feet per second, definition of.....	13
Aquifer, definition of.....	13	Cubic feet per second per square mile, definition of.....	13
Arkansas River basin, hydrologic-station records in.....	270	Cuivre River near Troy.....	66
Artificial substrate, definition of.....	15	Current River above Powder Mill.....	284
Ash mass, definition of.....	13	at Doniphan.....	234
		at Van Buren.....	232
Bacteria, definition of.....	13	below Hawes Campground.....	284
Barnes Creek near Fredericktown.....	282	below Montauk State Park.....	284
Bear Creek at Hannibal.....	35		
Bed material, definition of.....	13	Data, accuracy of.....	10
Bennett Spring at Bennett Springs.....	143	other available.....	11
Big Branch Tributary near Wayland.....	280	Definition of terms.....	13
Big Creek at Blairtown.....	281	Des Moines River at St. Francisville.....	19
Big Creek near Chloride.....	209	Diatoms, definition of.....	14
Big Piney at Devils Elbow.....	153	Discharge at partial-record stations.....	280
Big River at Byrnesville.....	185	Discharge, definition of.....	13
at Irondale.....	181	Dissolved, definition of.....	13
near De Soto.....	183	Ditch No. 2 near Sinsabough.....	258
Big Slough near Wilcox.....	280	Diversity index, definition of.....	13
Big Spring near Van Buren.....	233	Downstream order and station numbers.....	VI
Biomass, definition of.....	13	Drainage area, definition of.....	14
Black River at Leeper.....	229	Drainage basin, definition of.....	14
at Poplar Bluff.....	230	Dry mass, definition of.....	13
near Annapolis.....	227		
Blackwater River at Blue Lick.....	117	East Fork Big Creek near Bethany.....	280
at Valley City.....	281	East Fork Black River at Lesterville.....	226
Blue-green algae, definition of.....	14	East Fork Little Blue River near Blue Springs.....	96
Blue River at 12th St. at Kansas City.....	94	East Fork Little Chariton River near Huntsville.....	114
Blue River near Kansas City.....	93	near Macon.....	113
Blue River basin, hydrologic records in.....	93	Eleven Point River near Bardley.....	269
Blue Spring near Eminence.....	284	Elk Fork Salt River near Madison.....	52
Bourbeuse River at Union.....	179	Elk River near Tiff City.....	277
near Highgate.....	177	Explanation of stage and water-discharge records.....	9
Bryant Creek near Tecumseh.....	225	Explanation of water-quality records.....	11
Calendar for water year 1983.....	Front Cover	Fabius River basin, hydrologic records in.....	25
Camp Creek near Elsberry.....	280	Fecal coliform bacteria, definition of.....	13
Castor River at Zalma.....	200	Fecal streptococcal bacteria, definition of.....	13
Cedar Creek near Pleasant View.....	132	First Creek near Nashua.....	280
Cells/volume, definition.....	13	Fourche River near Pymor.....	265
Center Creek near Carterville.....	271	Fox River at Wayland.....	23
near Smithfield.....	274	Franca Branch near Brighton.....	281
Cfs-day, definition of.....	13		
Chariton River at Livonia.....	106	Gage height, definition of.....	14
at Novinger.....	107	Gaging station, definition of.....	14
at Elmer.....	280	Gasconade River above Jerome.....	155
near Prairie Hill.....	108	at Jerome.....	158
Chariton River basin, hydrologic records in.....	106	near Hooker.....	151
Chemical oxygen demand, definition of.....	13	near Rich Fountain.....	282
Chlorophyll, definition of.....	13	Gasconade River basin, hydrologic records in.....	151
Clearwater Lake near Piedmont.....	228	Granddaddy Creek near Ulrich.....	282
Collection and computation of data.....	9	Grand River near Gallatin.....	99
Collection and computation of stage and water-discharge data.....	9	near Summer.....	103
Collection and examination of water-quality data.....	11	Grand River basin, hydrologic records in.....	99
Contents, definition of.....	13	Grand River Tributary near Utica.....	280
Control, definition of.....	13		
Control structure, definition of.....	13		
Conversion tables to metric measure.....	Back Cover		
Cooperation.....	1		
Cottonwood Creek Tributary at Estill.....	281		

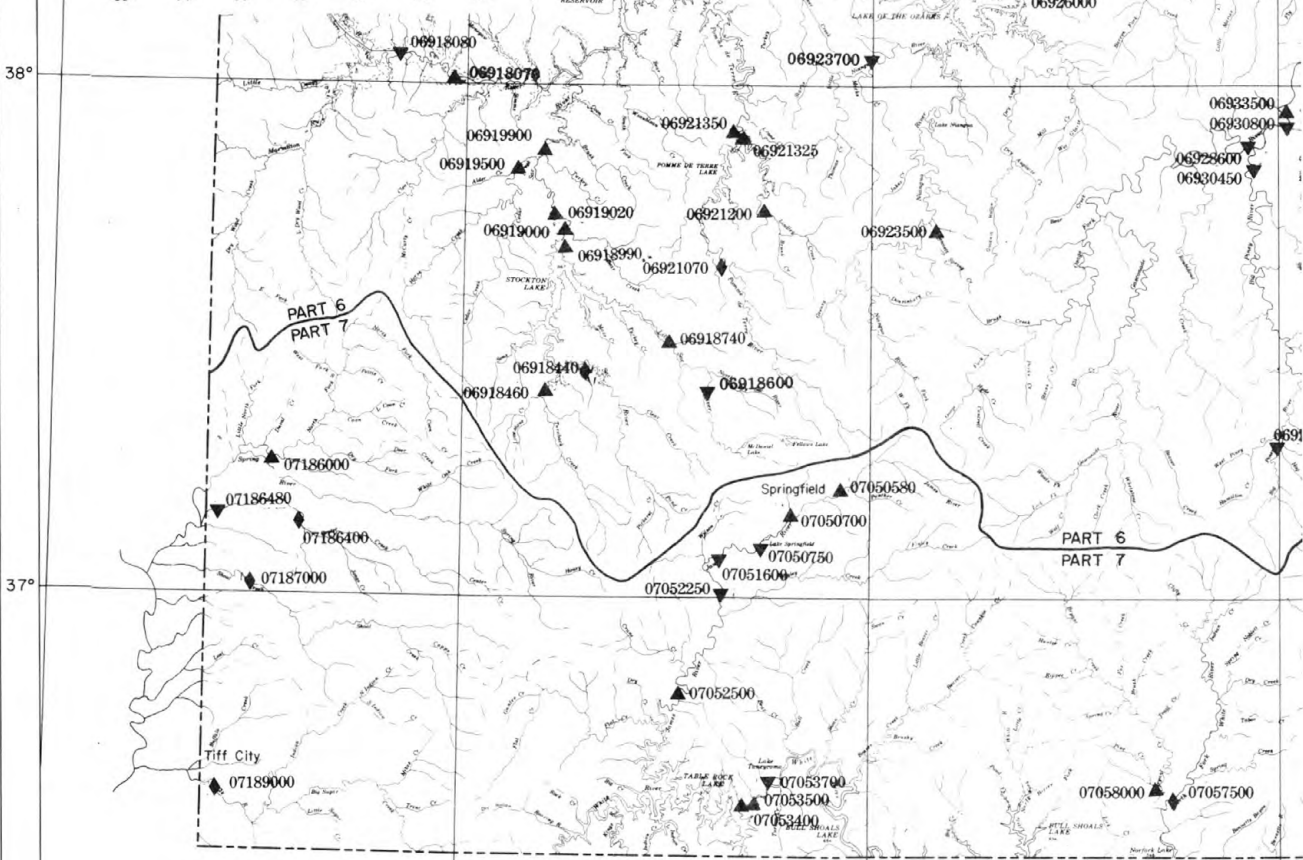
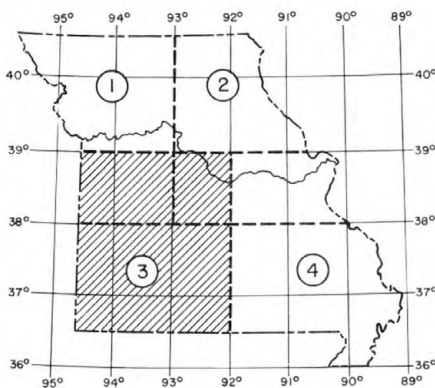
Index

	Page		Page
Green algae, definition of.....	14	Meramec River basin, hydrologic	
Greer Spring at Greer.....	268	records in.....	169
		Micrograms per gram, definition of.....	14
Hardness, definition of.....	14	Micrograms per liter, definition of.....	14
Harry S. Truman Dam and Reservoir		Middle Fabius near Monticello.....	26
at Warsaw.....	141	Middle Fork Little Black River at	
Hydrologic conditions.....	2	Grandin.....	235
Hydrologic-data station records.....	VI	Middle Fork River at Thomas Hill.....	280
Hydrologic unit, definition of.....	14	Middle Fork Salt River at Paris.....	47
		Milligrams per liter, definition of.....	14
Instantaneous discharge, definition of....	13	Mississippi River at Alton, IL.....	69
Introduction.....	1	at Chester, IL.....	195
		at Hannibal.....	33
Jacks Fork above Two Rivers.....	231	at St. Louis.....	163
at Eminence.....	219	at Thebes, IL.....	201
James River at Galena.....	218	below Alton, IL.....	73
near Springfield.....	217	Missouri River at Boonville.....	120
near Strafford.....		at Glasgow.....	281
Kansas River at De Soto, KS.....	91	at Hermann.....	159
Lakes:		at Kansas City.....	92
Clearwater Lake near Piedmont.....	228	at Rulo, NB.....	76
Harry S. Truman Dam and Reservoir		at St. Joseph.....	81
at Warsaw.....	141	at Waverly.....	98
Lake of the Ozarks near Bagnell.....	146	Moniteau Creek near Fayette.....	281
Longbranch Lake at Macon.....	112	Montauk Springs at Montauk.....	284
Pomme de Terre Lake near Hermitage.....	136	Moreau River near Jefferson City.....	281
Smithville Lake near Smithville.....	86	Mussel Fork near Musselfork.....	111
Stockton Lake near Stockton.....	129		
Table Rock Lake near Branson.....	220	National Geodetic Vertical Datum,	
Taneycomo Lake at Branson.....	222	definition of.....	14
Wappapello Lake near Wappapello.....	211	National stream-quality accounting	
Lamine River basin, hydrologic		network stations, definition of.....	15
records in.....	117	Natural substrates, definition of.....	8
Lamine River at Clifton City.....	281	Networks and programs, special.....	8
near Blackwater.....	118	Niangua River at Bennett Springs.....	144
Langenberg Branch near Rosebud.....	282	Nodaway River near	
Lick Creek at Perry.....	54	Burlington Junction.....	77
Lindley Creek near Polk.....	135	near Graham.....	78
Little Black River at Success.....	259	near Oregon.....	79
below Fairdeal.....	246	North Fabius River at Monticello.....	25
near Grandin.....	239	North Fork Panther Creek Tributary near	
Little Blue River below Longview damsite		Appleton City.....	281
in Kansas City.....	95	North Fork River near Tecumseh.....	224
near Lake City.....	97	North Fork Salt River near Hunnewell.....	38
Little Chariton River basin, hydrologic		North Prong Little Black River at	
records in.....	112	Grandin.....	238
Little Chariton River near Huntsville.....	114	North River at Palmyra.....	32
near Macon.....	113	Numbering system for miscellaneous	
Little Piney Creek at Newburg.....	157	sites and wells.....	8
Little Platte River at Smithville.....	87		
Little River Ditch 1 near Morehouse.....	214	One Hundred and Two River at Maryville....	84
Little River Ditch 251 near Lilbourn.....	213	Order, downstream and station number.....	VI
Little River ditches near Kennett.....	215	Organism, count/area, definition of.....	14
Little Sac River near Morrisville.....	128	Organism, count/volume,	
Logan Creek at Oxly.....	252	definition of.....	14
Longbranch Lake at Macon.....	112	Organism, definition of.....	14
Love Branch at Rolla.....	282	Organic mass, definition of.....	13
Love Creek near Salem.....	282	Osage River above Schell City.....	121
Map showing location of hydrologic-		below St. Thomas.....	149
data stations.....	289	below Truman Dam at Warsaw.....	142
Maple Grove Branch near Ozark.....	282	near Bagnell.....	147
Meramec Spring near St. James.....	169	near Schell City.....	124
Maries River at Westphalia.....	282	near St. Thomas.....	148
Mean concentration, definition of.....	15	Osage River basin, hydrologic	
Mean discharge, definition of.....	13	records in.....	121
Medicine Creek near Galt.....	102	Other data available.....	11
Meramec River at Paulina Hills.....	193		
near Eureka.....	187	Partial-record station, definition of.....	14
near Steelville.....	170	Particle-size, definition of.....	14
near Sullivan.....	173	Particle-size, classification,	
		definition of.....	14

	Page		Page
Percent composition, definition of.....	14	Spring River at Waco.....	270
Pesticides, definition of.....	14		
Physiographic conditions.....	2		
Phytoplankton, definition of.....	14		
Picocurie, definition of.....	14		
Plankton, definition of.....	14		
Platte River at Ravenwood.....	280		
at Sharps Station.....	88		
near Agency.....	85		
Platte River basin (Iowa-Missouri),			
hydrologic records in.....	84		
Polychlorinated biphenyls,			
definition of.....	14		
Pomme de Terre Lake near Hermitage.....	136		
Pomme de Terre River near Hermitage.....	137		
near Polk.....	134		
Preface.....	III		
Primary productivity,			
definition of.....	15		
Publications on techniques of water-			
resources investigations.....	17		
Pulltite Spring near Round Spring.....	284		
Radiochemical program.....	8		
Recurrence interval.....	15		
Round Spring at Round Spring.....	284		
Runoff in inches, definition of.....	15		
Sac River near Caplinger Mills.....	133		
near Dadeville.....	126		
below Stockton.....	131		
near Stockton.....	130		
Sac River Tributary near Caplinger			
Mills.....	281		
St. Francis River basin, hydrologic			
records in.....	207		
St. Francis River at Saco.....	207		
at Wappapello.....	212		
near Patterson.....	210		
Salt River at Hagers Grove.....	36		
near Center.....	56		
near New London.....	58		
Sediment, definition of.....	15		
Shiloh Branch near Marshall.....	281		
Shoal Creek above Joplin.....	276		
near Hartford.....	280		
Smithville Lake near Smithville.....	86		
Solute, definition of.....	15		
South Fabius River near Taylor.....	29		
South Fork Salt River at Santa Fe.....	45		
South Fork Stahl Creek near Miller.....	282		
South Grand River at Archie.....	138		
Special networks and programs.....	8		
Specific Conductance, definition of.....	15		
Spencer Creek below Plum Creek			
near Frankford.....	64		
Spring River at Waco.....	270		
		Table Rock Lake near Branson.....	220
		Taneycomo Lake at Branson.....	222
		Tarkio River at Fairfax.....	75
		Taxonomy, definition of.....	15
		Tebo Creek at Leesville.....	139
		Terms and abbreviation,	
		definition of.....	13
		Thermograph, definition of.....	15
		Thompson River at Trenton.....	100
		Time-weighted average, definition of.....	15
		Tons per acre-foot, definition of.....	15
		Tons per day, definition of.....	16
		Total, definition of.....	16
		Total load, definition of.....	16
		Total organism count, definition of.....	14
		Total sediment discharge, definition of..	15
		Turnback Creek above Greenfield.....	127
		Wakenda Creek at Carrollton.....	280
		Wappapello Lake near Wappapello.....	211
		Water analysis.....	11
		Weighted average, definition of.....	16
		Welch Spring near Akers.....	284
		Wet mass, definition of.....	13
		Wheeler Branch near Mountain Grove.....	282
		White River near Branson.....	221
		White River basin, hydrologic	
		records in.....	219
		WRD, definition of.....	16
		WSP, definition of.....	16
		Wyaconda River above Canton.....	24
		Zooplankton, definition of.....	14

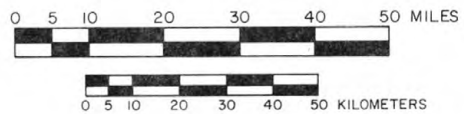


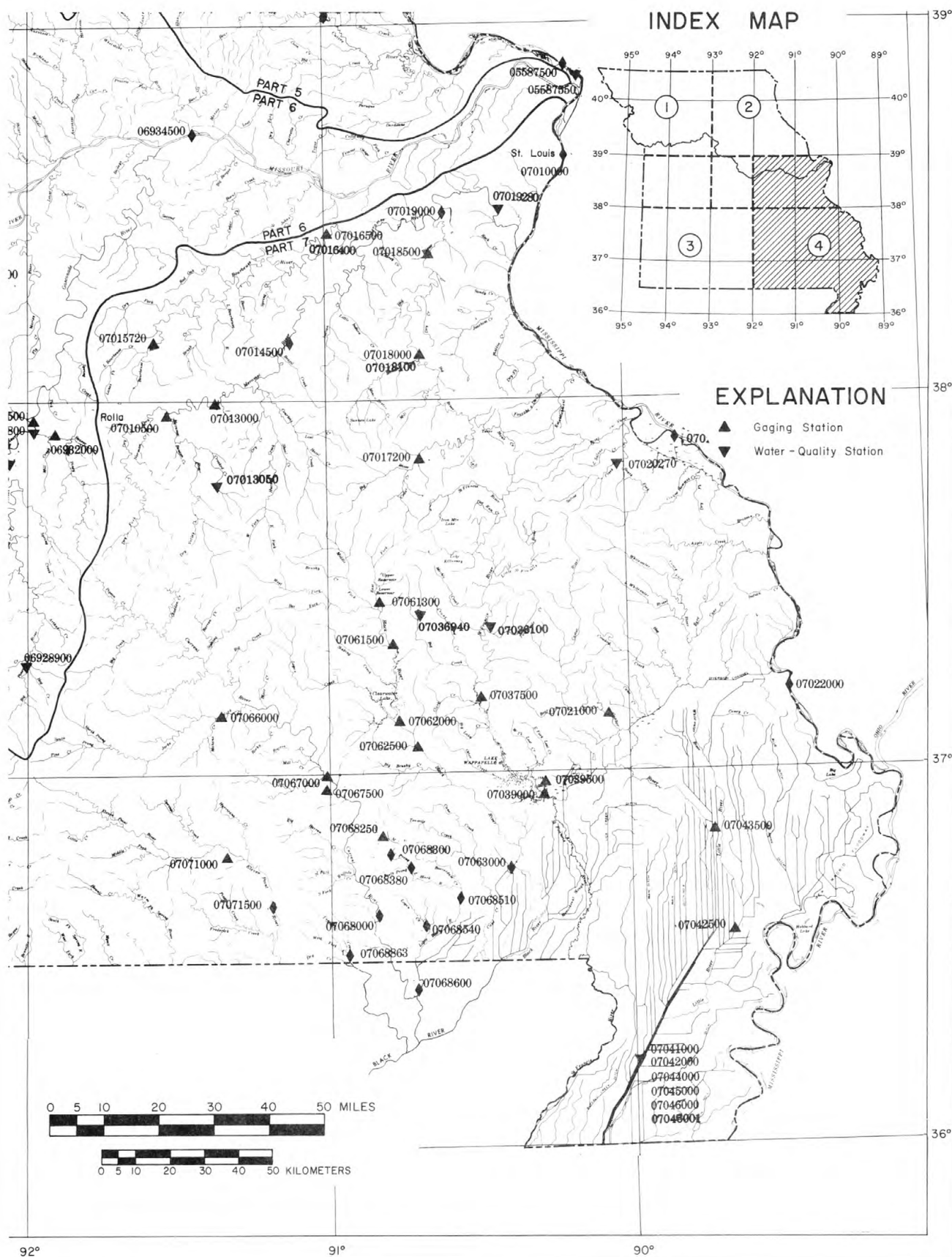
INDEX MAP



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

USGS LIBRARY - RESTON



PS 3 1818 00453250 1
U.S. DEPARTMENT OF THE INTERIOR
INT 413

U.S. DEPARTMENT OF THE INTERIOR
Geological Survey
1400 Independence Road, Mail Stop 200
Rolla, MO 65401



OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE \$300
SPECIAL 4TH CLASS BOOK RATE

U.S. GEOLOGICAL SURVEY LIBRARY
NATIONAL CENTER - MS 950
12201 SUNRISE VALLEY DRIVE
RESTON, VA 22092 (2)