

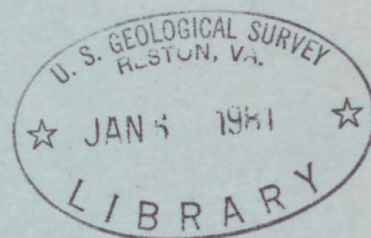
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1974

# Water Resources Data for Missouri

Part 1. Surface Water Records

Part 2. Water Quality Records



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

Prepared in cooperation with the Missouri Department of Natural Resources, Division of Research and Technical Information and Division of Environmental Quality; Missouri Department of Highways; and with other State and Federal agencies



# CALENDAR FOR WATER YEAR 1974

1973

## OCTOBER

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

## NOVEMBER

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

## DECEMBER

| 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 |    |    |    |    |    |

1974

## JANUARY

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

## FEBRUARY

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

## MARCH

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

## APRIL

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

## MAY

| 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 |    |    |    |    |    |    |

## JULY

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

## AUGUST

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

## SEPTEMBER

| 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 |    |    |    |    |    |



1974

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Natural Resources, Division of Research and Technical  
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and Federal agencies



Prepared in cooperation with

Missouri Department of Natural Resources,  
James L. Wilson, director  
Division of Research and Technical Information,  
Dr. Wallace B. Howe, director  
Division of Environmental Quality,  
Kenneth M. Karch, director  
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Robert N. Hunter, chief engineer  
Corps of Engineers, U.S. Army  
Environmental Protection Agency  
Federal Power Commission

Copies of this report may be obtained from  
District Chief, Water Resources Division  
U.S. Geological Survey  
103 West 10th Street  
Rolla, Missouri 65401

1974

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RECORDS ARE PUBLISHED

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# WATER RESOURCES DATA FOR MISSOURI, 1974

## Part 1. Surface-Water Records

by M.E. Janson

## Part 2. Water-Quality Records

by H.F. McCormack

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### INTRODUCTION

Water resources data for the 1974 water year for Missouri including records of streamflow or reservoir storage at gaging stations, partial-record stations, and miscellaneous sites, and records of water-quality data on the chemical and physical characteristics of surface water, are given in this report. In Part 1, records are included for 144 gaging stations of which 137 are streamflow discharge stations, and 7 are reservoir or lake stations; also included are records for 105 crest-stage partial-record stations, and miscellaneous sites. Locations of gaging stations are shown in figure 1. In Part 2, water-quality data on chemical, physical, and biological characteristics of surface water were collected from designated sampling sites at predetermined intervals such as once daily, weekly, monthly, or less frequently, and at some sites data were recorded on punched paper tape at 15-, 30-, or 60-minute intervals. Records are given for 108 sampling stations of which 53 are continuous record stations, 30 are partial-record stations, and 25 are miscellaneous sampling sites. Locations of water-quality stations are shown in figure 1. A few pertinent stations in bordering states are also included in this report. The records were collected and computed by the Water Resources Division of the U.S. Geological Survey under the direction of Anthony Homyk, district chief. These data represent that part of the National Water Data System collected by the U.S. Geological Survey and cooperating State and Federal agencies in Missouri.

Beginning with the 1961 water year, streamflow records and related data have been released by the Geological Survey in annual reports on a State-boundary basis. Water-quality records beginning with the 1964 water year have been similarly released either in separate reports or in conjunction with streamflow records. These reports are for limited distribution and are designed primarily for rapid release of data shortly after the end of the water year.

Records of discharge and stage of streams, and contents and stage of lakes and reservoirs are 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 since then are in a 5-year series. Records of chemical quality, water temperatures, and suspended sediment have been published since 1941 in an annual series of water-supply papers entitled, "Quality of Surface Waters of the United States." More information is given under the headings "Publications" on pages 22 and 28.

#### 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,  
James L. Wilson, director  
Division of Research and Technical Information,  
Dr. Wallace B. Howe, director  
Division of Environmental Quality,  
Kenneth M. Karch, director  
Missouri Department of Highways,  
Robert N. Hunter, chief engineer

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

Corps of Engineers, U.S. Army, in collecting records for 82 gaging stations and one water-quality station.

Environmental Protection Agency, in collecting records for 11 water-quality stations.

Assistance was also furnished by the National Weather Service of the Environmental Science Services Administration of the U.S. Department of Commerce.

The following organizations aided in collecting records:

City of Kansas City; Union Electric Company of Missouri; Little River Drainage District; Missouri Conservation Commission; Missouri Park Board; City of Springfield Utilities; and City of Springfield Sanitation Division.

#### DEFINITION OF TERMS

Terms related to streamflow, water-quality and other hydrologic data, as used in this report, are defined below. See also table for converting English Units to International System (SI) Units on page 31.

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 metres.

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

Bacteria are microscopic unicellular organisms, typically spherical, rod-like, 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.

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

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

Fecal streptococcal bacteria are bacteria found also in the intestine of warmblooded animals. Their presence in water is considered to verify fecal pollution. They are characterized as gram-positive, cocci bacteria which are capable of growth in brain-heart infusion broth. In the laboratory they are defined as all the organisms which produce red or pink colonies within 48 hours at 35°C  $\pm$  1.0°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 shifting portion of fragmented material of which the streambed is composed.

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

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

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

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

Cfs-day is the volume of water represented by a flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, approximately 1.9835 acre-ft, or about 646,000 gallons or 2,445 cubic metres. It represents a runoff of approximately 0.0372 inch from 1 square mile or 0.3468 millimetre from 1 square kilometre.

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

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

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

Cubic 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.

Cubic foot per second (FT<sup>3</sup>/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 metres per second.

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

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

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

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

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

Gaging station is a particular site on a stream, canal, lake, or reservoir where systematic observations of gage height or discharge are obtained. When used in

connection with a discharge record, the term is applied only to those gaging stations where a continuous record of discharge is computed.

Hardness of water is a physical-chemical characteristic that is commonly recognized by the increased quantity of soap required to produce lather. It is attributable to the presence of alkaline earths (principally calcium and magnesium) and is expressed as equivalent calcium carbonate ( $\text{CaCO}_3$ ).

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

Milligrams per litre (MG/L, mg/l) is a unit for expressing the concentration of chemical constituents in solution. Milligrams per litre represents the weight of solute per unit volume of water. Milligrams or micrograms per litre may be converted to milliequivalents (one thousandth of a gram-equivalent weight of a constituent) per litre by multiplying by the factors in table 1, page 8. Concentration of suspended sediment also is expressed in mg/l, and is based on the weight of sediment per litre of water-sediment mixture. Sediment concentrations may be converted to parts per million by using the factors in table 2, p. 8.

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

Cells/volume refers to the number of cells of any organism which is counted by using a microscope and grid or counting cell. Many planktonic organisms are multi-celled and are counted according to the number of contained cells per sample volume, usually millilitres (ml) or litres (l).

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 metres ( $\text{m}^2$ ), acres, or hectares. Periphyton, benthic organisms, and macrophytes are expressed in these terms.

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

| <u>Ion</u>                          | <u>Multi-<br/>ply by</u> | <u>Ion</u>                         | <u>Multi-<br/>ply by</u> |
|-------------------------------------|--------------------------|------------------------------------|--------------------------|
| Aluminum ( $\text{Al}^{+3}$ )*...   | 0.11119                  | Iodide ( $\text{I}^{-1}$ ).....    | 0.00788                  |
| Ammonia as $\text{NH}_4^{+1}$ ...   | .05544                   | Iron ( $\text{Fe}^{+3}$ )*.....    | .05372                   |
| Barium ( $\text{Ba}^{+2}$ ).....    | .01456                   | Lead ( $\text{Pb}^{+2}$ )*.....    | .00965                   |
| Bicarbonate ( $\text{HCO}_3^{-1}$ ) | .01639                   | Lithium ( $\text{Li}^{+1}$ )*...   | .14411                   |
| Bromide ( $\text{Br}^{-1}$ ).....   | .01251                   | Magnesium ( $\text{Mg}^{+2}$ )..   | .08226                   |
| Calcium ( $\text{Ca}^{+2}$ ).....   | .04990                   | Manganese ( $\text{Mn}^{+2}$ )*.   | .03640                   |
| Carbonate ( $\text{CO}_3^{-2}$ )..  | .03333                   | Nickel ( $\text{Ni}^{+2}$ )*....   | .03406                   |
| Chloride ( $\text{Cl}^{-1}$ )....   | .02321                   | Nitrate ( $\text{NO}_3^{-1}$ )...  | .01613                   |
| Chromium ( $\text{Cr}^{+6}$ )*...   | .11539                   | Nitrite ( $\text{NO}_2^{-1}$ )...  | .02174                   |
| Cobalt ( $\text{Co}^{+2}$ )*.....   | .03394                   | Phosphate ( $\text{PO}_4^{-3}$ ).. | .03159                   |
| Copper ( $\text{Cu}^{+2}$ )*.....   | .03148                   | Potassium ( $\text{K}^{+1}$ )...   | .02557                   |
| Cyanide ( $\text{CN}^{-1}$ ).....   | .03844                   | Sodium ( $\text{Na}^{+1}$ ).....   | .04350                   |
| Fluoride ( $\text{F}^{-1}$ ).....   | .05264                   | Strontium ( $\text{Sr}^{+2}$ )*.   | .02283                   |
| Hydrogen ( $\text{H}^{+1}$ ).....   | .99209                   | Sulfate ( $\text{SO}_4^{-2}$ )...  | .02082                   |
| Hydroxide ( $\text{OH}^{-1}$ )...   | .05880                   | Zinc ( $\text{Zn}^{+2}$ )*.....    | .03060                   |

\*Constituent reported in micrograms per liter; multiply by factor and divide results by 1,000.

Table 2.--Factors for conversion of sediment concentration in milligrams per liter to parts per million\*  
(All values calculated to three significant figures)

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

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



Organism count/volume refers to the number of organisms collected and enumerated in a sample and adjusted to the number per sample volume, usually millilitres (ml) or litres (l). Numbers of planktonic organisms can be expressed in these terms.

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

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

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

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

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

The particle-size distribution 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.

Periphyton is the assemblage of microorganisms attached to and growing upon solid surfaces. While primarily consisting of algae, they also include bacteria, fungi, protozoa, rotifers, and other small organisms. Periphyton is a useful indicator of water quality.

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

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

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

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

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

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.

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

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

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

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

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

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 litre of water-sediment mixture (mg/l).

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

Sodium adsorption ratio (SAR) is the expression of relative activity of sodium ions in exchange reactions with soil and is an index of sodium or alkali

hazard to the soil. Waters range in respect to sodium hazard from those which can be used for irrigation on almost all soils to those which are generally unsatisfactory for irrigation.

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

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

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.

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

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

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

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

### SPECIAL NETWORKS AND PROGRAMS

National stream-quality accounting network is an accounting 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 in the network design.

Areal configuration of the network is based on river-basin accounting units 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 water-quality conditions nationwide on a year-to-year basis and (2) to detect and assess long-term changes in stream quality.

Radiochemical program is a network of regularly sampled water quality stations where additional samples are collected twice a year (at high and low flow) to be analyzed for radioisotopes. The streams that are sampled represent major drainage basins in the conterminous United States.

Radioisotopes that are determined in this program are those of uranium in micrograms per litre, radium as radium-226 in picocuries per litre, gross beta radiation as strontium/yttrium-90 in picocuries per litre, and gross alpha radiation as micrograms of uranium equivalent per litre.

A picocurie (PC/L, pCi/l) is one millionth of the amount of radioactivity represented by a microcurie, which is the quantity of radiation represented by one millionth of a gram of radium-226. A picocurie of radium results in 2.22 disintegration per minute.

### DOWNSTREAM ORDER AND STATION NUMBER

Stations are listed in a downstream direction along



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

As an added means of identification, each gaging station, partial-record station, and water-quality 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 gaging stations; therefore, the station number for a partial-record station indicates downstream order position in a list made up of both types of stations. Water-quality stations located at or near gaging stations or partial-record stations have the same number as the gaging or partial-record station. Gaps are left in the 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." In this report, the records are listed in downstream order by parts. The part number refers to an area whose boundaries coincide with certain natural drainage lines. Records in this report are in Part 5 (Upper Mississippi River basin), Part 6 (Missouri River basin), and Part 7 (Lower Mississippi River basin). All records for a drainage basin encompassing more than one State can be arranged in downstream order by assembling pages from the various State reports by station number to include all records in the basin.

## PART 1. SURFACE WATER 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 direct readings on a nonrecording gage or from a water-stage recorder that gives either a continuous graph of the fluctuations or a tape punched at 15-, 30- or 60-minute intervals. Measurements of discharge are made with a current meter, using the general methods adopted by the Geological Survey on the basis of experience in stream gaging since 1888. These methods are described in standard textbooks, in Water-Supply Paper 888, and in U.S. Geological Survey Techniques of Water Resources Investigations, book 3, chapter A6. Surface areas of lakes or reservoirs are determined from instrument surveys using standard methods. The configuration of the reservoir bottom is determined by sounding at many points.

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

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

For a lake or reservoir station, capacity tables giving the contents for any stage are prepared from stage-area relation curves defined by surveys. The application of the stage to the capacity table 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, adjoining good record, discharge measurements, weather records, and comparison with other station records from the same or nearby basins. Likewise daily contents may be estimated on the basis of operator's log, adjoining good record, inflow-outflow studies, and other information.

The data in this report generally comprise a description of the station and tabulations of daily and monthly 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. A calendar for the current water year is shown on the reverse side of the front cover to facilitate finding the day of the week for any date.

The description of the gaging stations gives the location, drainage area, period of record, type and history of gages, average discharge, extremes of discharge or contents, general remarks, and notations of revisions of previously published records. The location of the gaging station and the drainage area are obtained from the most accurate maps available. River mileage, given under "LOCATION" for some stations, is that determined and used by the Corps of Engineers or other agencies. Periods for which there are published records for the present station or for stations generally equivalent to the present one are given under "PERIOD OF RECORD." The type of gage currently in use, the datum of the present gage above mean sea level, and a condensed history of the types, locations, and datums of previous gages used during the period of record are given under "GAGE." In references to datum of gage, the phrase "mean sea level" denotes "Sea Level Datum

of 1929" as used by the Topographic Division of the Geological Survey unless otherwise qualified. The average discharge for the number of years indicated is given under "AVERAGE DISCHARGE;" it is not given for stations having fewer than 5 complete years of record or for stations where changes in water development during the period of record cause the figure to have little significance. 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. The maximum discharge (or contents) and the maximum gage height, the minimum discharge if there is little or no regulation (or minimum contents) and the minimum gage height if it is significant are given under "EXTREMES." The minimum daily discharge is given if there is extensive regulation (also the minimum discharge and gage height if they are abnormally low). In the first paragraph headed "Current year," the data given are for the complete current water year unless otherwise specified. In the second paragraph under "EXTREMES" headed "Period of record:" the data given are for the period of record given in PERIOD OF RECORD paragraph. Reliable information concerning major floods that occurred outside the period of record is given in the third or last paragraph under "EXTREMES." Unless otherwise qualified, the maximum discharge (or contents) corresponds to the crest stage obtained by use of a water-stage recorder (graphic or digital), a crest-stage gage, or a nonrecording gage read at the time of the crest. If the maximum gage height did not occur at the same time as the maximum discharge (or contents), it is given separately. Information pertaining to the accuracy of the discharge records, to conditions that affect the natural flow at the gaging station, and availability of Water Quality records, is given under "REMARKS:" for reservoir stations information on the dam forming the reservoir, the capacity, outlet works and spillway, and purpose and use of the reservoir, is also given under "REMARKS."

Previously published records of some stations have



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

Skeleton capacity tables are published for all reservoirs for which records of contents are published on a daily basis.

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 non-contributing 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 following "MAX" are the maximum daily discharges for the calendar and water years; likewise, those following "MIN" are the minimum daily discharges.

Footnotes to the table of daily discharges are introduced by the word "NOTE." Footnotes are used to indicate periods for which the discharge is computed or estimated by special methods because of no gage-height record, backwater from various sources, or other unusual conditions. Periods of no gage-height record are indicated if the period is continuous for a month or more or includes the maximum discharge for the year. Periods of backwater from an unusual source, of indefinite stage-discharge relation, or of any other unusual condition at the gage height 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.

Peak discharges and their times of occurrence and corresponding gage heights for many stations are listed below the yearly summary. All independent peaks above the selected base are given. The base discharge, which is given in parentheses, is selected so that an average of about three peaks a year can be presented. Peak discharges are not published for any canals, ditches, drains, or for any stream for which the peaks are subjected 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.

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

#### Accuracy of data

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

The station description under "REMARKS" states the degree of accuracy of the records. "Excellent" means that 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 discharges of less than 1 ft<sup>3</sup>/s; to tenths between 1.0 and 10 ft<sup>3</sup>/s; to whole numbers between 10 and 1,000 ft<sup>3</sup>/s; and to 3 significant figures above 1,000 ft<sup>3</sup>/s. The number of significant figures used is based solely on the magnitude of the figure. The same rounding rules apply to discharge figures listed for partial-record stations and miscellaneous sites.

Discharge 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.

### Publications

In each water-supply paper entitled, "Surface Water Supply of the United States" there is a list of numbers of preceding water-supply papers containing streamflow information for the area covered by that report. In addition, there is a list of numbers of water-supply papers containing detailed information on major floods in the area. Records for stations in Missouri for the period October 1960 to September 1965 are in Water-Supply Papers 1915, 1918, and 1919.

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

compiled in Water-Supply Papers 1308, 1310, and 1311 through September 1950, and in 1728, 1730, and 1731 for October 1950 to September 1960.

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

#### Other data available

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

## PART 2. WATER QUALITY RECORDS

### Collection and examination of data

Water samples for analyses usually are collected at or near gaging stations. The discharge records at these stations are used in conjunction with the computations of the chemical constituents and sediment loads in this report.

Descriptive statements are given for water-quality stations located at or near streamflow stations. Given location, drainage area, periods of record for the various water-quality data, extremes of pertinent data, and general remarks, in a format similar to that used for streamflow gaging stations.

Water-quality information is presented for chemical quality, biological, microbiological, water temperature, and fluvial sediment. Chemical quality includes concentrations of individual dissolved constituents and certain properties or characteristics such as hardness, sodium adsorption ratio, specific conductance, and pH. The



biological information includes qualitative and quantitative analyses of plankton, bottom organisms, and particulate inorganic and amorphous matter present. Microbiological information includes quantitative identification of certain bacteriological indicator organisms. Water-temperature data represent once-daily observations except for stations where a continuous temperature recorder furnished information from which daily minimums and maximums are obtained. Fluvial-sediment information is given for suspended-sediment discharges and concentrations and for particle-size distribution of suspended sediment and bed material.

Prior to the 1968 water year, data for chemical constituents and concentration of suspended sediment were reported in parts per million (ppm) and water temperatures were reported in degrees Fahrenheit ( $^{\circ}\text{F}$ ). In October 1967 the U.S. Geological Survey began reporting data for chemical constituents and concentrations of suspended sediment in milligrams per liter (mg/l) and water temperatures in degrees Celsius (centigrade,  $^{\circ}\text{C}$ ). In waters with a density of 1.000 g/ml (grams per milliliter), parts per million and milligrams per liter can be considered equal. In waters with a density greater than 1.000 g/ml, values in parts per million should be multiplied by the density to convert to milligrams per liter. Temperatures reported in degrees Celsius may be converted to degrees Fahrenheit by using Table 3, p. 25.

In October 1968, the Geological Survey began reporting many of the chemical constituents as well as the minor elements in micrograms per liter instead of milligrams per liter. (See "Definition of Terms," p. 3 and table for converting English Units to SI Units, p. 31).

### Solutes

The methods of collecting and analyzing water samples for determining the kinds and concentrations of solutes are described by Brown, Skougstad, and Fishman (1970). One sample can define adequately the water quality at a given time if the mixture of solutes throughout the stream cross section is homogeneous. However, the concentration

of solutes at different locations in the cross section may vary widely with different rates of water discharge, depending on the source of material and the turbulence and mixing of the stream. Some streams must be sampled at several verticals across the channel to determine accurately the solute load.

Table 3.--Degrees Celsius (°C) to degrees Fahrenheit (°F)\*  
(Temperature reported to nearest 0.5°C)

| °C  | °F | °C   | °F | °C   | °F | °C   | °F  | °C   | °F  |
|-----|----|------|----|------|----|------|-----|------|-----|
| 0.0 | 32 | 10.0 | 50 | 20.0 | 68 | 30.0 | 86  | 40.0 | 104 |
| .5  | 33 | 10.5 | 51 | 20.5 | 69 | 30.5 | 87  | 40.5 | 105 |
| 1.0 | 34 | 11.0 | 52 | 21.0 | 70 | 31.0 | 88  | 41.0 | 106 |
| 1.5 | 35 | 11.5 | 53 | 21.5 | 71 | 31.5 | 89  | 41.5 | 107 |
| 2.0 | 36 | 12.0 | 54 | 22.0 | 72 | 32.0 | 90  | 42.0 | 108 |
| 2.5 | 36 | 12.5 | 54 | 22.5 | 72 | 32.5 | 90  | 42.5 | 108 |
| 3.0 | 37 | 13.0 | 55 | 23.0 | 73 | 33.0 | 91  | 43.0 | 109 |
| 3.5 | 38 | 13.5 | 56 | 23.5 | 74 | 33.5 | 92  | 43.5 | 110 |
| 4.0 | 39 | 14.0 | 57 | 24.0 | 75 | 34.0 | 93  | 44.0 | 111 |
| 4.5 | 40 | 14.5 | 58 | 24.5 | 76 | 34.5 | 94  | 44.5 | 112 |
| 5.0 | 41 | 15.0 | 59 | 25.0 | 77 | 35.0 | 95  | 45.0 | 113 |
| 5.5 | 42 | 15.5 | 60 | 25.5 | 78 | 35.5 | 96  | 45.5 | 114 |
| 6.0 | 43 | 16.0 | 61 | 26.0 | 79 | 36.0 | 97  | 46.0 | 115 |
| 6.5 | 44 | 16.5 | 62 | 26.5 | 80 | 36.5 | 98  | 46.5 | 116 |
| 7.0 | 45 | 17.0 | 63 | 27.0 | 81 | 37.0 | 99  | 47.0 | 117 |
| 7.5 | 45 | 17.5 | 63 | 27.5 | 81 | 37.5 | 99  | 47.5 | 117 |
| 8.0 | 46 | 18.0 | 64 | 28.0 | 82 | 38.0 | 100 | 48.0 | 118 |
| 8.5 | 47 | 18.5 | 65 | 28.5 | 83 | 38.5 | 101 | 48.5 | 119 |
| 9.0 | 48 | 19.0 | 66 | 29.0 | 84 | 39.0 | 102 | 49.0 | 120 |
| 9.5 | 49 | 19.5 | 67 | 29.5 | 85 | 39.5 | 103 | 49.5 | 121 |

\*C = 5/9 (°F - 32) or °F = 9/5 (°C) + 32.

The daily chemical-quality data in this report generally represent equal-volume composites for 2- to 30-day periods; the composite periods are selected on the basis of specific conductance of the daily samples and fluctuation of water discharge.

For chemical-quality stations equipped with non-continuous-digital monitors, the records consist of daily maximum, minimum, and mean 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 U.S. Geological Survey district office at the address given on the back of the title page of this report.

### Temperature

Water temperatures are measured at most of the water-quality stations. In addition, water temperatures are taken at time of discharge measurements for surface-water stations. For daily stations, the water temperatures are taken about the same time each day when sample is collected. Large streams have a small diurnal temperature change while small, shallow streams may have a daily range of several degrees and may follow closely the changes in air temperature. Some streams may be affected by waste-heat discharges.

At stations where continuously recording thermographs are present, the records consist of maximum and minimum temperatures for each day and the monthly averages.

### 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 sub-divided day method (time-discharge weighted average). Therefore, for those days when the published sediment discharge value differs from the value computed as the product of discharge times mean concentration times 0.0027, the reader can assume that the sediment discharge for that day was computed by the sub-divided day method. For periods when no samples are collected, daily loads of suspended sediment are estimated on the basis of water discharge, sediment concentrations observed immediately before and after the periods, and suspended-sediment loads for other periods of similar discharge.

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

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

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

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

### Publications

The annual series of water-supply papers that contain information on quality of surface waters in Missouri are listed below:

| Year | Part<br>5 | Part<br>6 | Part<br>7 | Year | Part<br>5 | Part<br>6 | Part<br>7 |
|------|-----------|-----------|-----------|------|-----------|-----------|-----------|
| 1948 | ----      | ----      | 1133      | 1959 | 1643      | 1643      | 1644      |
| 1949 | ----      | ----      | 1163      | 1960 | 1743      | 1743      | 1744      |
| 1950 | ----      | ----      | 1188      | 1961 | 1883      | 1883      | 1884      |
| 1951 | ----      | ----      | 1199      | 1962 | 1943      | 1943      | 1944      |
| 1952 | ----      | ----      | 1252      | 1963 | 1949      | 1949      | 1950      |
| 1953 | ----      | ----      | 1292      | 1964 | 1956      | 1956      | 1957      |
| 1954 | ----      | ----      | 1352      | 1965 | 1963      | 1963      | 1964      |
| 1955 | ----      | ----      | 1402      | 1966 | 1993      | 1993      | 1994      |
| 1956 | ----      | ----      | 1452      | 1967 | 2013      | 2013      | 2014      |
| 1957 | A1521     | A1521     | 1522      | 1968 | 2094      | 2095      | 2096      |
| 1958 | 1572      | 1572      | 1573      | 1969 | 2144      |           |           |

A Includes Missouri records for 1953-57

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- U.S. Inter-Agency Committee on Water Resources, Subcommittee on Sedimentation, A study of methods used in measurement and analysis of sediment loads in streams. Published by the St. Anthony Falls Hydraulic Laboratory, Minneapolis, Minn.
- \_\_\_\_ 1941, Methods of analyzing sediment samples: Rept. 4.
- \_\_\_\_ 1953, Accuracy of sediment size analyses made by the bottom-withdrawal-tube method: Rept. 10.
- \_\_\_\_ 1957, The development and calibration of visual-accumulation tube: Rept. 11.
- \_\_\_\_ 1957, Some fundamentals of particle size analysis: Rept. 12.
- \_\_\_\_ 1959, Federal Inter-agency sedimentation instruments and reports: Rept. AA.
- \_\_\_\_ 1961, The single stage sampler for suspended sediment: Rept. 13.
- \_\_\_\_ 1963, Determinations of fluvial sediment discharge: Rept. 14.

Table 4.--Factors for converting English units to International System (SI) units

The following factors may be used to convert the English units published herein to the International System of Units (SI). Subsequent reports will contain both the English and SI unit equivalents in the station manuscript descriptions until such time that all data will be published in SI units.

| Multiply English units                     | By                     | To obtain SI units                          |
|--------------------------------------------|------------------------|---------------------------------------------|
| Length                                     |                        |                                             |
| inches (in)                                | 25.4                   | millimetres (mm)                            |
|                                            | .0254                  | metres (m)                                  |
| feet (ft)                                  | .3048                  | metres (m)                                  |
| yards (yd)                                 | .9144                  | metres (m)                                  |
| miles (mi)                                 | 1.609                  | kilometres (km)                             |
| Area                                       |                        |                                             |
| acres                                      | 4047                   | square metres (m <sup>2</sup> )             |
| square miles (mi <sup>2</sup> )            | 2.590                  | square kilometres (km <sup>2</sup> )        |
| Volume                                     |                        |                                             |
| gallons (gal)                              | 3.785                  | litres (l)                                  |
|                                            | $3.785 \times 10^{-3}$ | cubic metres (m <sup>3</sup> )              |
| million gallons (10 <sup>6</sup> gal)      | 3785                   | cubic metres (m <sup>3</sup> )              |
| cubic feet (ft <sup>3</sup> )              | .02832                 | cubic metres (m <sup>3</sup> )              |
| cfs-day [(ft <sup>3</sup> /s-day)·d]       | 2447                   | cubic metres (m <sup>3</sup> )              |
|                                            | $2.447 \times 10^{-3}$ | cubic hectometres (hm <sup>3</sup> )        |
| acre-feet (acre-ft)                        | 1233                   | cubic metres (m <sup>3</sup> )              |
|                                            | $1.233 \times 10^{-3}$ | cubic hectometres (hm <sup>3</sup> )        |
|                                            | $1.233 \times 10^{-6}$ | cubic kilometres (km <sup>3</sup> )         |
| Flow                                       |                        |                                             |
| cubic feet per second (ft <sup>3</sup> /s) | 28.32                  | litres per second (l/s)                     |
|                                            | .02832                 | cubic metres per second (m <sup>3</sup> /s) |
| gallons per minute (gpm)                   | .06309                 | litres per second (l/s)                     |
|                                            | $6.309 \times 10^{-5}$ | cubic metres per second (m <sup>3</sup> /s) |
| million gallons per day (mgd)              | .04381                 | cubic metres per second (m <sup>3</sup> /s) |
| Mass                                       |                        |                                             |
| ton (short)                                | .9072                  | tonne (t)                                   |



PART 1. SURFACE WATER RECORDS



## SURFACE-WATER RECORDS

## FOX RIVER BASIN

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, on left bank 90 ft (27 m) downstream from bridge on U.S. Highway 136, 0.8 mi (1.3 km) west of Wayland, and 5.0 mi (8.0 km) downstream from Brush Creek.

DRAINAGE AREA.--400 mi<sup>2</sup> (1,040 km<sup>2</sup>), approximately.

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

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

AVERAGE DISCHARGE-- 52 years, 233 ft<sup>3</sup>/s (6.599 m<sup>3</sup>/s), 7.91 in/yr (201 mm/yr), 168,800 acre-ft/yr (208 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 5,630 ft<sup>3</sup>/s (159 m<sup>3</sup>/s) May 30, (gage height, 16.53 ft or 5.038 m); minimum daily, 7.5 ft<sup>3</sup>/s (0.21 m<sup>3</sup>/s) Sept. 25.  
Period of record: Maximum discharge, 26,400 ft<sup>3</sup>/s (748 m<sup>3</sup>/s) April 22, 1973 (gage height, 21.71 ft or 6.617 m); no flow at times in several years.

REMARKS.--Records poor.

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

REVISION (WATER YEARS).--WSP 785: 1934.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT    | NOV   | DEC    | JAN    | FEB    | MAR    | APR   | MAY    | JUN    | JUL    | AUG   | SEP   |
|-------|--------|-------|--------|--------|--------|--------|-------|--------|--------|--------|-------|-------|
| 1     | 1,930  | 52    | 64     | 80     | 509    | 175    | 250   | 50     | 3,000  | 28     | 24    | 24    |
| 2     | 1,860  | 54    | 58     | 70     | 349    | 204    | 230   | 40     | 2,000  | 26     | 26    | 32    |
| 3     | 1,400  | 50    | 55     | 80     | 248    | 171    | 220   | 35     | 1,000  | 187    | 25    | 40    |
| 4     | 3,980  | 45    | 594    | 90     | 218    | 271    | 200   | 30     | 500    | 2,150  | 22    | 56    |
| 5     | 3,610  | 40    | 1,610  | 100    | 213    | 355    | 246   | 28     | 174    | 2,690  | 22    | 59    |
| 6     | 2,570  | 35    | 887    | 80     | 152    | 431    | 166   | 26     | 147    | 3,320  | 30    | 38    |
| 7     | 712    | 34    | 300    | 60     | 132    | 286    | 197   | 25     | 1,310  | 543    | 28    | 29    |
| 8     | 418    | 33    | 226    | 50     | 120    | 240    | 154   | 30     | 3,110  | 321    | 26    | 24    |
| 9     | 304    | 32    | 184    | 40     | 110    | 754    | 86    | 45     | 3,870  | 233    | 25    | 20    |
| 10    | 239    | 31    | 153    | 40     | 100    | 455    | 109   | 45     | 2,650  | 195    | 76    | 18    |
| 11    | 532    | 30    | 149    | 40     | 80     | 385    | 232   | 45     | 1,010  | 167    | 514   | 21    |
| 12    | 1,780  | 30    | 148    | 40     | 86     | 771    | 243   | 85     | 370    | 146    | 173   | 19    |
| 13    | 2,460  | 30    | 160    | 50     | 80     | 434    | 338   | 155    | 217    | 132    | 81    | 29    |
| 14    | 1,250  | 30    | 186    | 60     | 70     | 639    | 551   | 247    | 163    | 117    | 53    | 34    |
| 15    | 735    | 30    | 170    | 70     | 60     | 1,400  | 400   | 265    | 709    | 103    | 102   | 105   |
| 16    | 350    | 30    | 140    | 90     | 60     | 1,000  | 200   | 269    | 600    | 71     | 102   | 58    |
| 17    | 149    | 30    | 130    | 110    | 60     | 700    | 100   | 1,600  | 246    | 84     | 41    | 36    |
| 18    | 120    | 30    | 120    | 200    | 60     | 400    | 80    | 2,600  | 147    | 76     | 46    | 26    |
| 19    | 100    | 50    | 100    | 748    | 60     | 300    | 70    | 2,390  | 170    | 71     | 36    | 20    |
| 20    | 90     | 300   | 90     | 2,210  | 60     | 200    | 60    | 1,930  | 345    | 60     | 31    | 18    |
| 21    | 80     | 740   | 90     | 2,250  | 100    | 180    | 70    | 1,410  | 237    | 50     | 27    | 15    |
| 22    | 74     | 595   | 111    | 2,070  | 583    | 150    | 60    | 778    | 154    | 40     | 70    | 12    |
| 23    | 70     | 266   | 126    | 1,770  | 661    | 130    | 50    | 434    | 116    | 30     | 102   | 12    |
| 24    | 65     | 166   | 189    | 1,220  | 369    | 110    | 45    | 256    | 77     | 25     | 36    | 8.6   |
| 25    | 60     | 131   | 586    | 939    | 185    | 100    | 40    | 204    | 57     | 20     | 38    | 7.5   |
| 26    | 56     | 126   | 514    | 1,300  | 155    | 90     | 38    | 201    | 47     | 18     | 204   | 7.8   |
| 27    | 54     | 100   | 482    | 3,600  | 160    | 100    | 36    | 199    | 40     | 18     | 293   | 8.9   |
| 28    | 52     | 101   | 523    | 2,530  | 166    | 150    | 35    | 399    | 35     | 80     | 99    | 11    |
| 29    | 50     | 81    | 491    | 1,870  | -----  | 200    | 40    | 1,080  | 33     | 72     | 52    | 11    |
| 30    | 48     | 71    | 272    | 709    | -----  | 280    | 45    | 4,750  | 30     | 42     | 37    | 17    |
| 31    | 50     | ----- | 90     | 627    | -----  | 300    | ----- | 5,000  | -----  | 29     | 28    | ----- |
| TOTAL | 25,248 | 3,373 | 8,998  | 23,193 | 5,206  | 11,361 | 4,591 | 24,651 | 22,564 | 11,144 | 2,469 | 816.8 |
| MEAN  | 814    | 112   | 290    | 748    | 186    | 366    | 153   | 795    | 752    | 359    | 79.6  | 27.2  |
| MAX   | 3,980  | 740   | 1,610  | 3,600  | 661    | 1,400  | 551   | 5,000  | 3,870  | 3,320  | 514   | 105   |
| MIN   | 48     | 30    | 55     | 40     | 60     | 90     | 35    | 25     | 30     | 18     | 22    | 7.5   |
| CFSM  | 2.04   | .28   | .73    | 1.87   | .47    | .92    | .38   | 1.99   | 1.88   | .90    | .20   | .07   |
| IN.   | 2.35   | .31   | .84    | 2.16   | .48    | 1.06   | .43   | 2.29   | 2.10   | 1.04   | .23   | .08   |
| AC-FT | 50,080 | 6,690 | 17,850 | 46,000 | 10,330 | 22,530 | 9,110 | 48,900 | 44,760 | 22,100 | 4,900 | 1,620 |

CAL YR 1973 TOTAL 276,413.3 MEAN 757 MAX 19,900 MIN 6.6 CFSM 1.89 IN 25.71 AC-FT 548,300  
WTR YR 1974 TOTAL 143,614.8 MEAN 393 MAX 5,000 MIN 7.5 CFSM .98 IN 13.36 AC-FT 284,900

PEAK DISCHARGE (BASE, 4,000 FT<sup>3</sup>/S)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|------|------|-------|-----------|------|------|-------|-----------|
| 10-4 | 1630 | 14.28 | 4,270     | 6-9  | 2215 | 15.36 | 4,190     |
| 1-27 | 1615 | 15.00 | 4,200     | 7-6  | 1100 | 14.97 | 4,180     |
| 5-30 | 2315 | 16.53 | 5,630     |      |      |       |           |

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, on right bank upstream from bridge on State Highway 16, 1.0 mi (1.6 km) south of Monticello, and 19.0 mi (30.6 km) upstream from Middle Fabius River.

DRAINAGE AREA.--452 mi<sup>2</sup> (1,171 km<sup>2</sup>).

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

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

AVERAGE DISCHARGE.--52 years, 271 ft<sup>3</sup>/s (7.675 m<sup>3</sup>/s), 8.14 in/yr (207 mm/yr), 196,300 acre-ft/yr (242 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 10,800 ft<sup>3</sup>/s (306 m<sup>3</sup>/s) Oct. 5 (gage height, 25.52 ft or 7.778 m); minimum daily, 5.2 ft<sup>3</sup>/s (0.15 m<sup>3</sup>/s) July 2.  
Period of record: Maximum discharge, 20,700 ft<sup>3</sup>/s (586 m<sup>3</sup>/s) Apr. 22, 1973 (gage height, 33.03 ft or 10.068 m, from graph based on gage readings); no flow at times in many years.  
Maximum stage since at least 1874, that of Apr. 22, 1973.

REMARKS.--Records fair.

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

REVISIONS (WATER YEARS).--WSP 925: 1937-39(M). WSP 1308: 1922(M), 1924-26(M).

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT    | NOV    | DEC    | JAN     | FEB    | MAR    | APR    | MAY    | JUN      | JUL      | AUG   | SEP   |
|-------|--------|--------|--------|---------|--------|--------|--------|--------|----------|----------|-------|-------|
| 1     | 3,810  | 56     | 93     | 400     | 424    | 158    | 226    | 54     | 7,790    | 6.9      | 30    | 24    |
| 2     | 1,810  | 60     | 81     | 350     | 292    | 147    | 168    | 47     | 1,680    | 5.2      | 30    | 25    |
| 3     | 2,680  | 55     | 75     | 300     | 220    | 137    | 141    | 45     | 520      | 25       | 30    | 26    |
| 4     | 6,420  | 47     | 1,270  | 250     | 200    | 557    | 347    | 39     | 291      | 3,850    | 29    | 27    |
| 5     | 9,710  | 42     | 3,290  | 350     | 250    | 637    | 262    | 35     | 223      | 7,950    | 28    | 27    |
| 6     | 3,250  | 38     | 1,100  | 300     | 200    | 439    | 236    | 32     | 206      | 5,150    | 28    | 30    |
| 7     | 885    | 36     | 371    | 250     | 170    | 282    | 174    | 32     | 1,860    | 624      | 26    | 27    |
| 8     | 675    | 36     | 200    | 200     | 150    | 198    | 142    | 105    | 5,260    | 333      | 27    | 24    |
| 9     | 531    | 35     | 160    | 150     | 130    | 511    | 115    | 86     | 5,990    | 229      | 27    | 23    |
| 10    | 435    | 34     | 150    | 100     | 110    | 599    | 100    | 52     | 3,890    | 177      | 27    | 22    |
| 11    | 1,880  | 34     | 130    | 70      | 100    | 315    | 241    | 58     | 736      | 143      | 27    | 21    |
| 12    | 2,090  | 33     | 110    | 50      | 130    | 2,480  | 268    | 61     | 581      | 121      | 27    | 21    |
| 13    | 1,000  | 33     | 90     | 50      | 120    | 2,650  | 164    | 140    | 257      | 104      | 25    | 22    |
| 14    | 524    | 33     | 80     | 50      | 80     | 716    | 1,250  | 447    | 184      | 88       | 328   | 32    |
| 15    | 345    | 35     | 70     | 50      | 70     | 439    | 259    | 665    | 256      | 75       | 183   | 83    |
| 16    | 248    | 36     | 60     | 70      | 60     | 547    | 150    | 243    | 267      | 67       | 86    | 52    |
| 17    | 187    | 37     | 60     | 100     | 60     | 396    | 112    | 1,770  | 157      | 59       | 61    | 34    |
| 18    | 143    | 37     | 60     | 730     | 60     | 276    | 93     | 2,680  | 88       | 52       | 45    | 27    |
| 19    | 118    | 42     | 60     | 1,920   | 60     | 238    | 84     | 4,090  | 680      | 47       | 38    | 24    |
| 20    | 105    | 433    | 70     | 2,930   | 60     | 204    | 73     | 5,430  | 1,050    | 45       | 34    | 21    |
| 21    | 95     | 1,500  | 80     | 7,100   | 70     | 181    | 84     | 1,330  | 311      | 43       | 34    | 19    |
| 22    | 86     | 1,010  | 100    | 6,290   | 454    | 162    | 76     | 519    | 133      | 92       | 122   | 18    |
| 23    | 78     | 364    | 150    | 6,320   | 805    | 151    | 66     | 752    | 123      | 51       | 56    | 17    |
| 24    | 72     | 216    | 162    | 5,080   | 322    | 126    | 58     | 348    | 68       | 40       | 42    | 16    |
| 25    | 66     | 169    | 1,770  | 3,220   | 227    | 116    | 54     | 225    | 45       | 38       | 45    | 16    |
| 26    | 61     | 151    | 4,250  | 3,550   | 484    | 124    | 56     | 170    | 32       | 36       | 36    | 15    |
| 27    | 59     | 137    | 2,680  | 5,890   | 182    | 131    | 48     | 172    | 21       | 33       | 31    | 15    |
| 28    | 59     | 226    | 1,650  | 3,710   | 140    | 126    | 45     | 182    | 15       | 72       | 28    | 66    |
| 29    | 55     | 157    | 1,220  | 1,010   | -----  | 134    | 54     | 401    | 12       | 42       | 27    | 36    |
| 30    | 52     | 115    | 950    | 656     | -----  | 461    | 61     | 1,790  | 9.3      | 43       | 25    | 25    |
| 31    | 53     | -----  | 500    | 560     | -----  | 394    | -----  | 6,230  | -----    | 34       | 24    | ----- |
| TOTAL | 37,582 | 5,237  | 21,092 | 52,056  | 5,630  | 14,032 | 5,207  | 28,230 | 32,735.3 | 19,675.1 | 1,606 | 835   |
| MEAN  | 1,212  | 175    | 680    | 1,679   | 201    | 453    | 174    | 911    | 1,091    | 635      | 51.8  | 27.8  |
| MAX   | 9,710  | 1,500  | 4,250  | 7,100   | 805    | 2,650  | 1,250  | 6,230  | 7,790    | 7,950    | 328   | 83    |
| MIN   | 52     | 33     | 60     | 50      | 60     | 116    | 45     | 32     | 9.3      | 5.2      | 24    | 15    |
| CFSM  | 2.68   | .39    | 1.50   | 3.71    | .44    | 1.00   | .39    | 2.02   | 2.41     | 1.40     | .11   | .06   |
| IN.   | 3.09   | .43    | 1.74   | 4.28    | .46    | 1.15   | .43    | 2.32   | 2.69     | 1.62     | .13   | .07   |
| AC-FT | 74,540 | 10,390 | 41,840 | 103,300 | 11,170 | 27,830 | 10,330 | 55,990 | 64,930   | 39,030   | 3,190 | 1,660 |

CAL YR 1973 TOTAL 358,831.0 MEAN 983 MAX 17,900 MIN 18 CFSM 2.17 IN 29.53 AC-FT 711,700  
WTR YR 1974 TOTAL 223,917.4 MEAN 613 MAX 9,710 MIN 5.2 CFSM 1.36 IN 18.43 AC-FT 444,100

PEAK DISCHARGE (BASE, 5,000 FT<sup>3</sup>/S)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|------|------|-------|-----------|------|------|-------|-----------|
| 10-5 | 0800 | 25.52 | 10,800    | 5-20 | 1115 | 20.86 | 6,300     |
| 1-21 | 0830 | 22.23 | 7,410     | 6-1  | 0600 | 24.69 | 8,790     |
| 1-27 | 0115 | 22.64 | 7,780     | 6-8  | 2345 | 21.94 | 6,710     |

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, on left bank on downstream end of bridge pier on State Highway 16, 2.5 mi (4.0 km) southwest of Monticello, 8 mi (13 km) downstream from Radish Branch, and 17 miles (27.4 km) upstream from mouth.

DRAINAGE AREA.--393 mi<sup>2</sup> (1,018 km<sup>2</sup>).

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

GAGE.--Water-stage recorder. Datum of gage is 540.46 ft (164.732 m) above mean sea level. Prior to Oct. 4, 1967, norecording gage at present site and datum.

AVERAGE DISCHARGE.--29 years, 252 ft<sup>3</sup>/s (7.137 m<sup>3</sup>/s), 8.71 in/yr (221 mm/yr), 182,600 acre-ft/yr (225 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 7,590 ft<sup>3</sup>/s (215 m<sup>3</sup>/s) Oct. 6 (gage height, 20.32 ft or 6.194 m); minimum, 5.2 ft<sup>3</sup>/s (0.147 m<sup>3</sup>/s) Sept. 27, (gage height, 3.33 ft or 1.015 m).  
Period of record: Maximum discharge, 17,700 ft<sup>3</sup>/s (501 m<sup>3</sup>/s) Apr. 23, 1973 (gage height, 27.14 ft or 8.272 m); no flow at times in 1953-56.  
Flood of June 17, 1945, reached a stage of 23.3 ft (7.10 m), from floodmarks.

REMARKS.--Records good.

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

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT    | NOV   | DEC    | JAN    | FEB   | MAR    | APR    | MAY    | JUN    | JUL    | AUG   | SEP   |
|-------|--------|-------|--------|--------|-------|--------|--------|--------|--------|--------|-------|-------|
| 1     | 2,550  | 46    | 83     | 90     | 364   | 174    | 228    | 68     | 2,800  | 55     | 27    | 8.8   |
| 2     | 2,520  | 44    | 70     | 80     | 263   | 177    | 153    | 64     | 2,780  | 49     | 22    | 8.3   |
| 3     | 5,920  | 44    | 64     | 70     | 204   | 155    | 125    | 61     | 560    | 105    | 18    | 7.9   |
| 4     | 6,300  | 45    | 253    | 80     | 150   | 692    | 273    | 50     | 255    | 4,020  | 15    | 8.0   |
| 5     | 6,720  | 37    | 1,670  | 100    | 130   | 845    | 198    | 45     | 162    | 3,650  | 17    | 7.9   |
| 6     | 7,400  | 31    | 2,040  | 80     | 110   | 588    | 184    | 43     | 127    | 4,520  | 15    | 7.7   |
| 7     | 4,600  | 28    | 1,550  | 60     | 100   | 317    | 154    | 43     | 901    | 4,230  | 14    | 7.6   |
| 8     | 709    | 27    | 384    | 50     | 110   | 228    | 121    | 134    | 2,400  | 516    | 14    | 7.3   |
| 9     | 490    | 25    | 221    | 45     | 100   | 288    | 99     | 63     | 3,900  | 272    | 14    | 7.0   |
| 10    | 330    | 23    | 190    | 40     | 90    | 733    | 88     | 59     | 4,270  | 179    | 14    | 6.6   |
| 11    | 260    | 23    | 120    | 40     | 80    | 452    | 218    | 61     | 3,750  | 124    | 18    | 6.5   |
| 12    | 1,130  | 24    | 100    | 40     | 70    | 1,190  | 219    | 50     | 789    | 91     | 14    | 6.7   |
| 13    | 1,460  | 22    | 80     | 40     | 70    | 1,930  | 139    | 45     | 370    | 71     | 15    | 6.7   |
| 14    | 499    | 22    | 70     | 50     | 70    | 789    | 1,450  | 398    | 254    | 58     | 14    | 6.6   |
| 15    | 257    | 22    | 60     | 60     | 70    | 389    | 327    | 609    | 293    | 48     | 12    | 6.2   |
| 16    | 169    | 22    | 50     | 80     | 70    | 461    | 167    | 432    | 227    | 41     | 21    | 6.0   |
| 17    | 130    | 21    | 50     | 100    | 71    | 404    | 126    | 1,790  | 201    | 35     | 50    | 6.3   |
| 18    | 104    | 30    | 50     | 650    | 76    | 269    | 102    | 2,990  | 143    | 31     | 26    | 6.6   |
| 19    | 88     | 50    | 50     | 1,620  | 89    | 212    | 90     | 4,240  | 993    | 27     | 18    | 6.5   |
| 20    | 78     | 100   | 50     | 2,680  | 96    | 186    | 81     | 4,500  | 2,020  | 25     | 14    | 6.6   |
| 21    | 70     | 900   | 50     | 2,180  | 100   | 156    | 110    | 3,890  | 1,540  | 24     | 17    | 6.5   |
| 22    | 66     | 500   | 60     | 2,490  | 206   | 138    | 96     | 788    | 352    | 72     | 150   | 6.3   |
| 23    | 61     | 300   | 70     | 2,010  | 851   | 125    | 73     | 598    | 219    | 31     | 67    | 6.0   |
| 24    | 57     | 150   | 90     | 1,680  | 507   | 111    | 69     | 708    | 162    | 30     | 38    | 5.7   |
| 25    | 54     | 104   | 367    | 802    | 250   | 95     | 61     | 379    | 126    | 32     | 67    | 5.6   |
| 26    | 49     | 99    | 1,370  | 937    | 155   | 90     | 56     | 246    | 103    | 24     | 32    | 5.5   |
| 27    | 50     | 90    | 1,160  | 2,930  | 163   | 94     | 52     | 214    | 87     | 19     | 17    | 5.5   |
| 28    | 48     | 181   | 408    | 2,890  | 166   | 104    | 52     | 234    | 77     | 113    | 12    | 141   |
| 29    | 45     | 136   | 331    | 2,570  | ----- | 121    | 64     | 246    | 69     | 32     | 9.4   | 192   |
| 30    | 44     | 99    | 250    | 714    | ----- | 278    | 74     | 1,090  | 62     | 62     | 7.9   | 76    |
| 31    | 45     | ----- | 150    | 488    | ----- | 219    | -----  | 3,680  | -----  | 40     | 9.3   | ----- |
| TOTAL | 42,303 | 3,245 | 11,511 | 25,746 | 4,781 | 12,010 | 5,249  | 27,818 | 29,992 | 18,626 | 798.6 | 591.9 |
| MEAN  | 1,365  | 108   | 371    | 831    | 171   | 387    | 175    | 897    | 1,000  | 601    | 25.8  | 19.7  |
| MAX   | 7,400  | 900   | 2,040  | 2,930  | 851   | 1,930  | 1,450  | 4,500  | 4,270  | 4,520  | 150   | 192   |
| MIN   | 44     | 21    | 50     | 40     | 70    | 90     | 52     | 43     | 62     | 19     | 7.9   | 5.5   |
| CFSM  | 3.47   | .27   | .94    | 2.11   | .44   | .98    | .45    | 2.28   | 2.54   | 1.53   | .07   | .05   |
| IN.   | 4.00   | .31   | 1.09   | 2.44   | .45   | 1.14   | .50    | 2.63   | 2.84   | 1.76   | .08   | .06   |
| AC-FT | 83,910 | 6,440 | 22,830 | 51,070 | 9,480 | 23,820 | 10,410 | 55,180 | 59,490 | 36,940 | 1,580 | 1,170 |

CAL YR 1973 TOTAL 322,657.0 MEAN 884 MAX 15,100 MIN 10 CFSM 2.25 IN 30.54 AC-FT 640,000  
WTR YR 1974 TOTAL 182,671.5 MEAN 500 MAX 7,400 MIN 5.5 CFSM 1.27 IN 17.29 AC-FT 362,300

PEAK DISCHARGE (BASE, 3,500 FT<sup>3</sup>/S)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|------|------|-------|-----------|------|------|-------|-----------|
| 10-6 | 1800 | 20.32 | 7,590     | 6-10 | 1815 | 16.14 | 4,380     |
| 5-21 | 0200 | 16.88 | 4,830     | 7-7  | 0800 | 17.96 | 5,570     |
| 5-31 | 0700 | 16.15 | 4,390     |      |      |       |           |

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, on right bank at downstream side of highway bridge, 4.5 mi (7.2 km) southwest of Taylor, 5.0 mi (8.0 km) downstream from Grassy Creek, and 5.3 mi (8.5 km) upstream from confluence with North Fabius River.

DRAINAGE AREA.--620 mi<sup>2</sup> (1,606 km<sup>2</sup>).

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

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

AVERAGE DISCHARGE.--40 years, 395 ft<sup>3</sup>/s (11.19 m<sup>3</sup>/s), 8.65 in/yr (220 mm/yr), 286,200 acre-ft/yr (353 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 15,200 ft<sup>3</sup>/s (430 m<sup>3</sup>/s) Oct. 5 (gage height, 17.48 ft or 5.328 m); minimum, 6.5 ft<sup>3</sup>/s (0.184 m<sup>3</sup>/s) Sept. 26 (gage height, 1.30 ft or 0.396 m).  
Period of record: Maximum discharge, 19,700 ft<sup>3</sup>/s (558 m<sup>3</sup>/s) June 8, 1947 (gage height, 19.5 ft or 5.94 m), from rating curve extended above 11,000 ft<sup>3</sup>/s (312 m<sup>3</sup>/s); no flow at times in several years.  
Flood in 1928 reached a stage of 18.49 ft (5.636 m), from floodmark, at present site and datum.

REMARKS.--Records good.

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

REVISION (WATER YEARS).--WSP 825: 1936.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY         | OCT             | NOV        | DEC        | JAN     | FEB       | MAR      | APR           | MAY    | JUN    | JUL    | AUG   | SEP     |
|-------------|-----------------|------------|------------|---------|-----------|----------|---------------|--------|--------|--------|-------|---------|
| 1           | 4,390           | 48         | 207        | 250     | 424       | 263      | 357           | 203    | 4,030  | 51     | 24    | 73      |
| 2           | 4,650           | 45         | 154        | 200     | 338       | 225      | 234           | 183    | 3,050  | 45     | 26    | 61      |
| 3           | 7,570           | 44         | 134        | 170     | 266       | 220      | 225           | 159    | 764    | 40     | 28    | 43      |
| 4           | 9,670           | 44         | 2,880      | 150     | 210       | 1,570    | 196           | 134    | 358    | 3,470  | 26    | 40      |
| 5           | 13,300          | 41         | 3,510      | 130     | 160       | 2,300    | 196           | 109    | 364    | 4,410  | 23    | 37      |
| 6           | 12,500          | 38         | 2,850      | 120     | 150       | 1,340    | 228           | 91     | 221    | 4,080  | 20    | 35      |
| 7           | 8,770           | 37         | 1,120      | 110     | 140       | 650      | 225           | 81     | 2,110  | 2,720  | 19    | 34      |
| 8           | 3,960           | 35         | 441        | 100     | 130       | 438      | 208           | 146    | 3,880  | 804    | 20    | 33      |
| 9           | 888             | 31         | 230        | 100     | 120       | 350      | 178           | 400    | 4,230  | 244    | 23    | 32      |
| 10          | 540             | 28         | 190        | 100     | 110       | 451      | 156           | 255    | 4,000  | 161    | 21    | 31      |
| 11          | 345             | 27         | 180        | 100     | 100       | 694      | 401           | 152    | 2,690  | 119    | 20    | 30      |
| 12          | 277             | 27         | 187        | 100     | 100       | 1,210    | 655           | 117    | 1,160  | 95     | 18    | 31      |
| 13          | 710             | 27         | 423        | 100     | 132       | 1,670    | 413           | 97     | 445    | 76     | 17    | 26      |
| 14          | 640             | 26         | 280        | 110     | 134       | 1,210    | 272           | 318    | 285    | 63     | 16    | 17      |
| 15          | 366             | 26         | 251        | 120     | 132       | 530      | 1,040         | 1,570  | 254    | 54     | 20    | 14      |
| 16          | 229             | 25         | 219        | 140     | 132       | 534      | 382           | 928    | 235    | 47     | 20    | 12      |
| 17          | 163             | 26         | 170        | 200     | 130       | 562      | 274           | 1,710  | 183    | 42     | 19    | 11      |
| 18          | 132             | 26         | 160        | 500     | 130       | 427      | 209           | 4,400  | 159    | 37     | 35    | 9.7     |
| 19          | 112             | 26         | 150        | 2,000   | 162       | 308      | 180           | 5,500  | 750    | 33     | 37    | 9.7     |
| 20          | 95              | 581        | 140        | 4,960   | 169       | 245      | 167           | 5,700  | 2,580  | 31     | 35    | 8.7     |
| 21          | 83              | 1,000      | 130        | 4,100   | 161       | 218      | 157           | 5,420  | 992    | 32     | 33    | 8.3     |
| 22          | 72              | 985        | 120        | 2,850   | 571       | 194      | 259           | 5,220  | 365    | 118    | 48    | 7.7     |
| 23          | 73              | 583        | 120        | 2,100   | 572       | 173      | 298           | 2,760  | 207    | 51     | 114   | 7.4     |
| 24          | 63              | 353        | 300        | 1,440   | 638       | 151      | 195           | 546    | 150    | 36     | 139   | 7.0     |
| 25          | 56              | 425        | 1,940      | 878     | 392       | 136      | 141           | 426    | 122    | 27     | 123   | 6.8     |
| 26          | 53              | 248        | 1,730      | 1,050   | 251       | 128      | 117           | 274    | 94     | 25     | 120   | 6.5     |
| 27          | 59              | 202        | 1,270      | 4,180   | 341       | 126      | 105           | 240    | 80     | 24     | 74    | 7.9     |
| 28          | 55              | 788        | 674        | 3,830   | 360       | 126      | 95            | 246    | 70     | 25     | 67    | 9.3     |
| 29          | 58              | 479        | 491        | 3,000   | -----     | 292      | 113           | 267    | 63     | 27     | 52    | 71      |
| 30          | 53              | 318        | 346        | 1,200   | -----     | 974      | 170           | 624    | 58     | 25     | 45    | 409     |
| 31          | 52              | -----      | 300        | 590     | -----     | 562      | -----         | 6,600  | -----  | 25     | 57    | -----   |
| TOTAL       | 69,984          | 6,589      | 21,297     | 34,978  | 6,655     | 18,277   | 7,846         | 44,876 | 33,949 | 17,037 | 1,339 | 1,129.0 |
| MEAN        | 2,258           | 220        | 687        | 1,128   | 238       | 590      | 262           | 1,448  | 1,132  | 550    | 43.2  | 37.6    |
| MAX         | 13,300          | 1,000      | 3,510      | 4,960   | 638       | 2,300    | 1,040         | 6,600  | 4,230  | 4,410  | 139   | 409     |
| MIN         | 52              | 25         | 120        | 100     | 100       | 126      | 95            | 81     | 58     | 24     | 16    | 6.5     |
| CFSM        | 3.64            | .35        | 1.11       | 1.82    | .38       | .95      | .42           | 2.34   | 1.83   | .89    | .07   | .06     |
| IN.         | 4.20            | .40        | 1.28       | 2.10    | .40       | 1.10     | .47           | 2.69   | 2.04   | 1.02   | .08   | .07     |
| AC-FT       | 138,800         | 13,070     | 42,240     | 69,380  | 13,200    | 36,250   | 15,560        | 89,010 | 67,340 | 33,790 | 2,660 | 2,240   |
| CAL YR 1973 | TOTAL 480,609.0 | MEAN 1,317 | MAX 15,000 | MIN 14  | CFSM 2.12 | IN 28.84 | AC-FT 953,300 |        |        |        |       |         |
| WTR YR 1974 | TOTAL 263,956.0 | MEAN 723   | MAX 13,300 | MIN 6.5 | CFSM 1.17 | IN 15.84 | AC-FT 523,600 |        |        |        |       |         |

PEAK DISCHARGE (BASE, 4,000 FT<sup>3</sup>/S)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|------|------|-------|-----------|------|------|-------|-----------|
| 10-5 | 1845 | 17.48 | 15,200    | 5-20 | 0230 | 10.70 | 6,130     |
| 12-4 | 1715 | 8.96  | 4,380     | 5-31 | 0445 | 12.45 | 7,880     |
| 1-20 | 1900 | 10.03 | 5,370     | 1-8  | 2145 | 9.13  | 4,600     |
| 1-27 | 1300 | 9.05  | 4,460     | 7-4  | 1730 | 9.94  | 5,350     |

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, on right bank 100 ft (30 m) upstream from City Waterworks dam, 1,000 ft (305 m) upstream from upstream bridge on dual U.S. Highways 24 and 61, 0.5 mi (0.8 km) north of Palmyra, and 7.0 mi (11.3 km) upstream from mouth.

DRAINAGE AREA.--373 mi<sup>2</sup> (966 km<sup>2</sup>).

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

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

AVERAGE DISCHARGE.--39 years, 241 ft<sup>3</sup>/s (6.825 m<sup>3</sup>/s), 8.77 in/yr (223 mm/yr), 174,600 acre-ft/yr (215 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 17,900 ft<sup>3</sup>/s (507 m<sup>3</sup>/s) May 31 (gage height, 22.36 ft or 6.815 m); minimum, 3.2 ft<sup>3</sup>/s (0.091 m<sup>3</sup>/s) Sept. 26 (gage height, 9.74 ft or 2.969 m).  
Period of record: Maximum discharge, 57,500 ft<sup>3</sup>/s (1,630 m<sup>3</sup>/s) Apr. 21, 1973 (gage height, 29.70 ft or 9.053 m); no flow on many days in 1936, 1941, 1956.  
Maximum stage prior to 1934, about 28.0 ft (8.53 m), from floodmarks, date unknown, at site 1,000 ft (305 m) downstream, present datum.

REMARKS.--Records good. Water diverted from river above dam by City of Palmyra.

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

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT    | NOV   | DEC    | JAN    | FEB    | MAR    | APR   | MAY    | JUN    | JUL    | AUG   | SEP   |
|-------|--------|-------|--------|--------|--------|--------|-------|--------|--------|--------|-------|-------|
| 1     | 1,330  | 51    | 134    | 120    | 304    | 279    | 133   | 220    | 3,320  | 56     | 19    | 17    |
| 2     | 781    | 48    | 104    | 110    | 231    | 231    | 111   | 170    | 928    | 29     | 19    | 12    |
| 3     | 5,720  | 46    | 89     | 100    | 220    | 192    | 98    | 156    | 330    | 26     | 20    | 14    |
| 4     | 11,500 | 43    | 6,570  | 96     | 148    | 1,530  | 89    | 130    | 225    | 3,280  | 20    | 14    |
| 5     | 3,750  | 43    | 2,780  | 90     | 132    | 1,220  | 88    | 104    | 231    | 1,010  | 19    | 11    |
| 6     | 517    | 42    | 1,130  | 84     | 130    | 580    | 86    | 90     | 171    | 385    | 22    | 8.7   |
| 7     | 262    | 44    | 375    | 80     | 120    | 318    | 80    | 80     | 3,960  | 150    | 19    | 7.4   |
| 8     | 199    | 44    | 226    | 76     | 113    | 225    | 77    | 249    | 2,580  | 97     | 17    | 6.2   |
| 9     | 156    | 41    | 184    | 72     | 106    | 242    | 71    | 220    | 2,700  | 77     | 17    | 7.5   |
| 10    | 131    | 39    | 152    | 70     | 102    | 265    | 67    | 156    | 891    | 64     | 22    | 8.0   |
| 11    | 114    | 40    | 125    | 68     | 96     | 303    | 177   | 138    | 353    | 55     | 21    | 8.3   |
| 12    | 101    | 39    | 116    | 66     | 101    | 1,620  | 379   | 114    | 240    | 50     | 18    | 9.1   |
| 13    | 1,090  | 40    | 959    | 64     | 105    | 521    | 205   | 94     | 171    | 44     | 18    | 11    |
| 14    | 264    | 40    | 483    | 64     | 101    | 346    | 146   | 978    | 135    | 39     | 17    | 13    |
| 15    | 143    | 42    | 252    | 70     | 96     | 359    | 118   | 1,310  | 136    | 36     | 17    | 16    |
| 16    | 101    | 43    | 183    | 89     | 91     | 489    | 100   | 468    | 95     | 34     | 22    | 12    |
| 17    | 86     | 43    | 137    | 475    | 87     | 291    | 97    | 5,300  | 82     | 32     | 24    | 10    |
| 18    | 79     | 44    | 122    | 3,340  | 89     | 238    | 90    | 4,400  | 74     | 30     | 21    | 9.5   |
| 19    | 71     | 46    | 109    | 4,480  | 228    | 203    | 243   | 3,480  | 730    | 29     | 19    | 9.1   |
| 20    | 65     | 363   | 100    | 4,810  | 212    | 171    | 152   | 3,990  | 632    | 25     | 18    | 8.7   |
| 21    | 60     | 902   | 90     | 1,900  | 131    | 167    | 114   | 2,960  | 214    | 25     | 15    | 8.2   |
| 22    | 59     | 323   | 90     | 1,140  | 1,050  | 152    | 125   | 2,620  | 113    | 176    | 18    | 8.4   |
| 23    | 55     | 175   | 100    | 984    | 542    | 139    | 114   | 2,040  | 85     | 39     | 19    | 7.7   |
| 24    | 52     | 121   | 1,030  | 551    | 314    | 119    | 94    | 1,300  | 69     | 27     | 42    | 7.8   |
| 25    | 51     | 220   | 3,210  | 344    | 221    | 111    | 87    | 580    | 60     | 22     | 41    | 7.4   |
| 26    | 50     | 163   | 1,190  | 843    | 182    | 111    | 80    | 186    | 213    | 21     | 25    | 5.8   |
| 27    | 52     | 161   | 569    | 4,440  | 394    | 109    | 77    | 143    | 646    | 20     | 18    | 4.1   |
| 28    | 58     | 800   | 344    | 1,570  | 796    | 107    | 74    | 130    | 822    | 22     | 17    | 4.7   |
| 29    | 63     | 372   | 285    | 1,180  | -----  | 110    | 333   | 118    | 651    | 24     | 13    | 54    |
| 30    | 56     | 192   | 219    | 604    | -----  | 322    | 548   | 932    | 291    | 25     | 12    | 35    |
| 31    | 53     | ----- | 135    | 399    | -----  | 190    | ----- | 13,000 | -----  | 24     | 13    | ----- |
| TOTAL | 27,069 | 4,610 | 21,592 | 28,379 | 6,442  | 11,260 | 4,253 | 45,856 | 21,148 | 5,973  | 622   | 355.6 |
| MEAN  | 873    | 154   | 697    | 915    | 230    | 363    | 142   | 1,479  | 705    | 193    | 20.1  | 11.9  |
| MAX   | 11,500 | 902   | 6,570  | 4,810  | 1,050  | 1,620  | 548   | 13,000 | 3,960  | 3,280  | 42    | 54    |
| MIN   | 50     | 39    | 89     | 64     | 87     | 107    | 67    | 80     | 60     | 20     | 12    | 4.1   |
| CFSM  | 2.34   | .41   | 1.87   | 2.45   | .62    | .97    | .38   | 3.97   | 1.89   | .52    | .05   | .03   |
| IN.   | 2.70   | .46   | 2.15   | 2.83   | .64    | 1.12   | .42   | 4.57   | 2.11   | .60    | .06   | .04   |
| AC-FT | 53,690 | 9,140 | 42,830 | 56,290 | 12,780 | 22,330 | 8,440 | 90,960 | 41,950 | 11,850 | 1,230 | 705   |

CAL YR 1973 TOTAL 314,824.0 MEAN 863 MAX 32,500 MIN 16 CFSM 2.31 IN 31.40 AC-FT 624,500  
WTR YR 1974 TOTAL 177,559.6 MEAN 486 MAX 13,000 MIN 4.1 CFSM 1.30 IN 17.71 AC-FT 352,200

PEAK DISCHARGE (BASE, 5,000 FT<sup>3</sup>/S)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|------|------|-------|-----------|------|------|-------|-----------|
| 10-4 | 0345 | 20.44 | 12,900    | 5-20 | 0330 | 16.16 | 5,520     |
| 12-4 | 1800 | 19.43 | 10,900    | 5-31 | 1030 | 22.36 | 17,900    |
| 1-20 | 0600 | 17.15 | 6,920     | 6-7  | 1430 | 17.49 | 7,440     |
| 1-27 | 0345 | 17.28 | 7,120     | 7-4  | 1245 | 16.53 | 6,040     |
| 5-17 | 2200 | 19.15 | 10,300    |      |      |       |           |



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, on right bank 25 ft (8 m) upstream from upstream bridge on dual U.S. Highway 61 at Hannibal, and 4.8 mi (7.7 km) upstream from mouth.

DRAINAGE AREA.--31.0 mi<sup>2</sup> (80.3 km<sup>2</sup>).

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

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

AVERAGE DISCHARGE.--31 years, 18.4 ft<sup>3</sup>/s (0.521 m<sup>3</sup>/s), 8.06 in/yr (205 mm/yr), 13,330 acre-ft/yr (16.4 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 1,820 ft<sup>3</sup>/s (51.5 m<sup>3</sup>/s) May 30 (gage height, 9.86 ft or 3.005 m); minimum daily, 1.1 ft<sup>3</sup>/s (0.031 m<sup>3</sup>/s) Aug. 21, 26.  
Period of record: Maximum discharge, 6,500 ft<sup>3</sup>/s (184 m<sup>3</sup>/s) Aug. 3, 1957 (gage height, 14.05 ft or 4.282 m, present datum); no flow at times in several years.

REMARKS.--Records poor. High flow regulated by Bear Creek reservoir, 1.0 mi (1.6 km) upstream, since Aug. 7, 1961.

REVISION.--WSP 1115: Drainage area.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY         | OCT            | NOV       | DEC     | JAN     | FEB       | MAR      | APR          | MAY     | JUN     | JUL   | AUG  | SEP   |
|-------------|----------------|-----------|---------|---------|-----------|----------|--------------|---------|---------|-------|------|-------|
| 1           | 16             | 6.2       | 8.3     | 7.0     | 30        | 33       | 11           | 20      | 356     | 10    | 1.9  | 14    |
| 2           | 7.6            | 5.8       | 7.6     | 6.0     | 25        | 27       | 9.7          | 18      | 51      | 5.0   | 2.1  | 6.6   |
| 3           | 304            | 5.5       | 7.3     | 5.0     | 21        | 24       | 9.0          | 17      | 34      | 3.0   | 2.1  | 5.8   |
| 4           | 111            | 5.5       | 263     | 5.0     | 17        | 24       | 8.6          | 12      | 20      | 90    | 1.9  | 3.8   |
| 5           | 15             | 5.2       | 222     | 5.0     | 16        | 19       | 9.4          | 11      | 55      | 50    | 1.9  | 3.0   |
| 6           | 10             | 5.0       | 18      | 5.0     | 19        | 18       | 8.3          | 10      | 23      | 40    | 1.9  | 2.8   |
| 7           | 9.7            | 5.0       | 11      | 5.0     | 15        | 17       | 8.0          | 10      | 100     | 30    | 1.9  | 2.5   |
| 8           | 8.3            | 5.0       | 9.0     | 5.0     | 14        | 15       | 8.3          | 23      | 70      | 25    | 4.5  | 2.3   |
| 9           | 7.6            | 4.8       | 8.6     | 5.0     | 13        | 97       | 7.2          | 12      | 50      | 20    | 4.0  | 2.1   |
| 10          | 6.2            | 4.8       | 6.6     | 5.0     | 13        | 37       | 6.9          | 11      | 40      | 17    | 6.9  | 2.1   |
| 11          | 5.8            | 4.8       | 5.8     | 5.0     | 13        | 98       | 34           | 14      | 30      | 14    | 3.2  | 2.1   |
| 12          | 64             | 4.8       | 8.0     | 5.0     | 14        | 113      | 21           | 11      | 25      | 12    | 2.3  | 11    |
| 13          | 274            | 5.0       | 51      | 5.0     | 14        | 36       | 12           | 9.0     | 20      | 10    | 2.1  | 27    |
| 14          | 196            | 5.2       | 15      | 7.0     | 13        | 25       | 14           | 107     | 17      | 8.0   | 1.9  | 5.8   |
| 15          | 170            | 5.8       | 11      | 10      | 12        | 56       | 10           | 46      | 14      | 7.0   | 1.6  | 4.0   |
| 16          | 15             | 5.2       | 8.3     | 30      | 12        | 41       | 9.4          | 24      | 11      | 6.0   | 1.6  | 3.2   |
| 17          | 12             | 5.0       | 6.6     | 100     | 12        | 24       | 8.6          | 102     | 10      | 5.0   | 1.7  | 2.8   |
| 18          | 10             | 5.0       | 6.6     | 222     | 49        | 21       | 8.0          | 89      | 9.0     | 4.0   | 1.6  | 2.6   |
| 19          | 9.4            | 5.0       | 9.0     | 103     | 64        | 18       | 8.6          | 60      | 60      | 3.5   | 1.4  | 2.5   |
| 20          | 8.3            | 8.1       | 8.0     | 158     | 23        | 17       | 8.3          | 40      | 30      | 3.0   | 1.2  | 2.5   |
| 21          | 7.6            | 12        | 7.0     | 95      | 27        | 16       | 47           | 40      | 20      | 3.0   | 1.1  | 2.3   |
| 22          | 6.9            | 7.2       | 7.0     | 79      | 216       | 15       | 22           | 30      | 15      | 30    | 3.2  | 2.1   |
| 23          | 6.6            | 5.8       | 7.0     | 56      | 43        | 14       | 12           | 14      | 10      | 10    | 1.9  | 2.1   |
| 24          | 6.2            | 7.2       | 97      | 42      | 32        | 13       | 11           | 34      | 8.0     | 4.0   | 1.2  | 2.1   |
| 25          | 5.8            | 12        | 175     | 38      | 29        | 12       | 9.4          | 23      | 7.0     | 3.2   | 1.2  | 2.1   |
| 26          | 5.5            | 27        | 214     | 145     | 25        | 12       | 8.6          | 23      | 20      | 2.8   | 1.1  | 2.1   |
| 27          | 9.0            | 17        | 40      | 216     | 98        | 12       | 8.3          | 23      | 40      | 2.6   | 1.6  | 2.3   |
| 28          | 8.3            | 71        | 26      | 69      | 114       | 12       | 8.0          | 22      | 70      | 3.0   | 16   | 2.5   |
| 29          | 6.9            | 15        | 20      | 57      | -----     | 12       | 90           | 22      | 30      | 2.3   | 4.2  | 2.5   |
| 30          | 6.6            | 10        | 10      | 43      | -----     | 13       | 40           | 122     | 20      | 1.9   | 2.3  | 1.9   |
| 31          | 6.9            | -----     | 8.0     | 34      | -----     | 11       | -----        | 419     | -----   | 1.9   | 15   | ----- |
| TOTAL       | 1,336.2        | 290.9     | 1,301.7 | 1,572.0 | 993       | 902      | 476.6        | 1,418.0 | 1,265.0 | 427.2 | 96.5 | 130.5 |
| MEAN        | 43.1           | 9.70      | 42.0    | 50.7    | 35.5      | 29.1     | 15.9         | 45.7    | 42.2    | 13.8  | 3.11 | 4.35  |
| MAX         | 304            | 71        | 263     | 222     | 216       | 113      | 90           | 419     | 356     | 90    | 16   | 27    |
| MIN         | 5.5            | 4.8       | 5.8     | 5.0     | 12        | 11       | 6.9          | 9.0     | 7.0     | 1.9   | 1.1  | 1.9   |
| CFSM        | 1.39           | .31       | 1.35    | 1.64    | 1.15      | .94      | .51          | 1.47    | 1.36    | .45   | .10  | .14   |
| IN.         | 1.60           | .35       | 1.56    | 1.89    | 1.19      | 1.08     | .57          | 1.70    | 1.52    | .51   | .12  | .16   |
| AC-FT       | 2,650          | 577       | 2,580   | 3,120   | 1,970     | 1,790    | 945          | 2,810   | 2,510   | 847   | 191  | 259   |
| CAL YR 1973 | TOTAL 16,837.1 | MEAN 46.1 | MAX 738 | MIN 1.5 | CFSM 1.49 | IN 20.20 | AC-FT 33,400 |         |         |       |      |       |
| WTR YR 1974 | TOTAL 10,209.6 | MEAN 28.0 | MAX 419 | MIN 1.1 | CFSM .90  | IN 12.25 | AC-FT 20,250 |         |         |       |      |       |

05503000 Oak Dale Branch near Emden, Mo.

LOCATION.--Lat 39°45'30", long 91°55'08", in NW¼NW¼ sec.9, T.57 N., R.9 W., Shelby County, on right bank about 25 ft (8 m) upstream from culvert on County Highway T, 4.0 mi (6.4 km) southwest of Emden, and at mile 1.5 (2.4 km).

DRAINAGE AREA.--2.64 mi<sup>2</sup> (6.84 km<sup>2</sup>).

PERIOD OF RECORD.--August 1955 to current year. Prior to October 1959 published as "Douglas Creek near Emden".

GAGE.--Water-stage recorder. Altitude of gage is 699 ft (213.1 m) from topographic map.

AVERAGE DISCHARGE.--19 years, 2.71 ft<sup>3</sup>/s (0.077 m<sup>3</sup>/s), 13.94 in/yr (354 mm/yr), 1,960 acre-ft/yr (2.42 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 1,390 ft<sup>3</sup>/s (39.4 m<sup>3</sup>/s) May 30 (gage height, 9.65 ft or 2.941 m); no flow on many days.

Period of record: Maximum discharge, 1,740 ft<sup>3</sup>/s (49.3 m<sup>3</sup>/s) Apr. 20, 1973 (gage height, 10.96 ft or 3.341 m); no flow at times each year.

REMARKS.--Records poor.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT    | NOV   | DEC    | JAN    | FEB   | MAR    | APR   | MAY    | JUN    | JUL    | AUG  | SEP   |
|-------|--------|-------|--------|--------|-------|--------|-------|--------|--------|--------|------|-------|
| 1     | 6.2    | .04   | 0      | .35    | .50   | 1.0    | .18   | .22    | 2.1    | .21    | 0    | .02   |
| 2     | .72    | .04   | 0      | .30    | .35   | .48    | .11   | .19    | .54    | .21    | 0    | .02   |
| 3     | 170    | .04   | 0      | .28    | .21   | .37    | .11   | .15    | .25    | 3.0    | 0    | .02   |
| 4     | 11     | .04   | 119    | .25    | .15   | 71     | .12   | .10    | .26    | 138    | 0    | .02   |
| 5     | .73    | .04   | 11     | .23    | .18   | 6.7    | .11   | .08    | .21    | 1.3    | 0    | .02   |
| 6     | .15    | .04   | 1.2    | .22    | .33   | 1.6    | .10   | .08    | 1.5    | .27    | 0    | .02   |
| 7     | .12    | .04   | .33    | .21    | .16   | .60    | .11   | .95    | 162    | .11    | 0    | .02   |
| 8     | .14    | .04   | .28    | .20    | .14   | .40    | .08   | 7.1    | 63     | .07    | .01  | .02   |
| 9     | .21    | .02   | .34    | .19    | .13   | 4.2    | .07   | .20    | 13     | .04    | .02  | .02   |
| 10    | .21    | .03   | .13    | .18    | .12   | .83    | .06   | .12    | 1.5    | .02    | .01  | .02   |
| 11    | .21    | .04   | .12    | .17    | .11   | 25     | 4.6   | .11    | 1.1    | .01    | 0    | .02   |
| 12    | .25    | .04   | .13    | .16    | .10   | 29     | 2.9   | .09    | .66    | .01    | 0    | .87   |
| 13    | 1.2    | .04   | 22     | .15    | .10   | 3.3    | .37   | .08    | .32    | .01    | 0    | .08   |
| 14    | .08    | .04   | 2.7    | .14    | .10   | .94    | .19   | 45     | .24    | .01    | 0    | .02   |
| 15    | .07    | .04   | .57    | .15    | .10   | 9.1    | .14   | 5.6    | .21    | .01    | 0    | .01   |
| 16    | .06    | .04   | .23    | .19    | .10   | 3.5    | .11   | .57    | .21    | 0      | 0    | .01   |
| 17    | .04    | .04   | .15    | 72     | .10   | .74    | .11   | 89     | .21    | 0      | 0    | .01   |
| 18    | .04    | .04   | .11    | 99     | .29   | .49    | .11   | 88     | .19    | 0      | 0    | .01   |
| 19    | .03    | .05   | .50    | 133    | 3.1   | .28    | .11   | 12     | 50     | 0      | 0    | .01   |
| 20    | .02    | 2.5   | .60    | 68     | .36   | .22    | .10   | 1.7    | .86    | 0      | 0    | .03   |
| 21    | .03    | .79   | .70    | 12     | .57   | .20    | .08   | .35    | .35    | .01    | 0    | .01   |
| 22    | .04    | .01   | .90    | 18     | 9.3   | .16    | .08   | .18    | .21    | 0      | 0    | 0     |
| 23    | .04    | 0     | 1.3    | 6.1    | 1.4   | .13    | .07   | .11    | .18    | 0      | 0    | 0     |
| 24    | .04    | 0     | 40     | 1.7    | 1.6   | .13    | .06   | .10    | .16    | 0      | 0    | 0     |
| 25    | .04    | 0     | 57     | .91    | 1.2   | .13    | .05   | .11    | .16    | 0      | 0    | 0     |
| 26    | .04    | .01   | 14     | 75     | 2.8   | .13    | .02   | .10    | .16    | 0      | 0    | 0     |
| 27    | .05    | 3.1   | 4.8    | 28     | 16    | .14    | .02   | .08    | .16    | 0      | 0    | 0     |
| 28    | .03    | 5.8   | 1.9    | 13     | 6.5   | .15    | .09   | .08    | .16    | 0      | .01  | .04   |
| 29    | .03    | .06   | 1.5    | 11     | ----- | .35    | 10    | .11    | .16    | 0      | .02  | .04   |
| 30    | .03    | .01   | .50    | 4.8    | ----- | .51    | 1.7   | 108    | .18    | 0      | .02  | .02   |
| 31    | .04    | ----- | .45    | 1.3    | ----- | .18    | ----- | 101    | -----  | 0      | .02  | ----- |
| TOTAL | 191.89 | 13.02 | 282.44 | 547.18 | 46.10 | 161.96 | 21.96 | 461.56 | 300.24 | 143.29 | .11  | 1.38  |
| MEAN  | 6.19   | .43   | 9.11   | 17.7   | 1.65  | 5.22   | .73   | 14.9   | 10.0   | 4.62   | .004 | .046  |
| MAX   | 170    | 5.8   | 119    | 133    | 16    | 71     | 10    | 108    | 162    | 138    | .02  | .87   |
| MIN   | .02    | 0     | 0      | .14    | .10   | .13    | .02   | .08    | .16    | 0      | 0    | 0     |
| CFSM  | 2.34   | .16   | 3.45   | 6.70   | .63   | 1.98   | .28   | 5.64   | 3.79   | 1.75   | .002 | .02   |
| IN.   | 2.70   | .18   | 3.98   | 7.71   | .65   | 2.28   | .31   | 6.50   | 4.23   | 2.02   | .001 | .02   |
| AC-FT | 381    | 26    | 560    | 1,090  | 91    | 321    | 44    | 916    | 596    | 284    | .2   | 2.7   |

CAL YR 1973 TOTAL 2,975.28 MEAN 8.15 MAX 305 MIN 0 CFSM 3.09 IN 41.92 AC-FT 5,900  
WTR YR 1974 TOTAL 2,171.13 MEAN 5.95 MAX 170 MIN 0 CFSM 2.25 IN 30.59 AC-FT 4,310

PEAK DISCHARGE (BASE, 350 FT<sup>3</sup>/S)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|------|------|-------|-----------|------|------|-------|-----------|
| 10-3 | 1000 | 6.24  | 677       | 5-30 | 2315 | 9.65  | 1,390     |
| 12-4 | 0730 | 4.87  | 429       | 6-7  | 0530 | 6.37  | 707       |
| 1-19 | 2045 | 6.43  | 713       | 6-19 | 0530 | 4.91  | 441       |
| 5-18 | 1300 | 4.70  | 401       | 7-4  | 0100 | 7.11  | 848       |

05504900 South Fork Salt River near Santa Fe, Mo.

LOCATION.--Lat 39°19'55", long 91°48'10", in SW¼NE¼ sec.33, T.53 N., R.8 W., Audrain County, on right bank 25 ft (8 m) downstream from bridge on county road, 100 ft (30 m) downstream from Littleby Creek, 2.8 mi (4.5 km) southeast of Santa Fe, and at mile 102.5 (164.9 km).

DRAINAGE AREA.--295 mi<sup>2</sup> (764 km<sup>2</sup>).

PERIOD OF RECORD.--October 1939 to current year. Published as "at Santa Fe" prior to October 1968.

GAGE.--Water-stage recorder. Datum of gage is 639.09 ft (194.795 m) above mean sea level. Prior to Feb. 5, 1940, nonrecording gage, and Feb. 5, 1940, to Sept. 30, 1968, water-stage recorder 6.3 mi (10.1 km) downstream at datum 26.04 ft (7.937 m) lower.

AVERAGE DISCHARGE.--35 years, 193 ft<sup>3</sup>/s (5.466 m<sup>3</sup>/s), 8.88 in/yr (226 mm/yr), 139,800 acre-ft/yr (172 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 20,800 ft<sup>3</sup>/s (589 m<sup>3</sup>/s) May 31 (gage height, 25.19 ft or 7.678 m); minimum daily, 1.1 ft<sup>3</sup>/s (0.031 m<sup>3</sup>/s) Sept. 17.

Period of record: Maximum discharge, 28,800 ft<sup>3</sup>/s (816 m<sup>3</sup>/s) Oct. 13, 1969 (gage height, 28.24 ft or 8.608 m); no flow at times in several years.

REMARKS.--Records fair.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT    | NOV    | DEC    | JAN    | FEB    | MAR   | APR    | MAY    | JUN    | JUL   | AUG   | SEP   |
|-------|--------|--------|--------|--------|--------|-------|--------|--------|--------|-------|-------|-------|
| 1     | 333    | 128    | 157    | 110    | 112    | 295   | 84     | 264    | 11,100 | 9.4   | 4.4   | 138   |
| 2     | 321    | 95     | 125    | 100    | 61     | 145   | 71     | 297    | 724    | 8.4   | 4.2   | 145   |
| 3     | 1,210  | 56     | 107    | 90     | 58     | 102   | 60     | 448    | 206    | 7.5   | 4.1   | 69    |
| 4     | 1,320  | 40     | 5,140  | 80     | 44     | 99    | 50     | 186    | 142    | 8.9   | 4.7   | 36    |
| 5     | 368    | 31     | 4,870  | 70     | 27     | 87    | 40     | 105    | 110    | 13    | 5.7   | 26    |
| 6     | 161    | 26     | 1,240  | 60     | 38     | 51    | 35     | 75     | 108    | 22    | 5.5   | 17    |
| 7     | 95     | 23     | 271    | 55     | 65     | 50    | 34     | 59     | 2,000  | 14    | 5.0   | 12    |
| 8     | 71     | 20     | 188    | 50     | 54     | 41    | 132    | 56     | 1,970  | 10    | 4.4   | 9.7   |
| 9     | 32     | 20     | 158    | 49     | 50     | 117   | 184    | 59     | 2,750  | 7.7   | 4.0   | 7.4   |
| 10    | 25     | 19     | 134    | 48     | 65     | 236   | 93     | 60     | 1,060  | 6.2   | 21    | 4.5   |
| 11    | 25     | 20     | 113    | 47     | 59     | 620   | 152    | 108    | 248    | 5.5   | 22    | 4.5   |
| 12    | 309    | 20     | 103    | 46     | 49     | 640   | 151    | 126    | 160    | 5.0   | 12    | 11    |
| 13    | 8,940  | 21     | 100    | 45     | 49     | 260   | 135    | 111    | 110    | 5.0   | 9.7   | 7.4   |
| 14    | 4,820  | 23     | 95     | 44     | 40     | 141   | 1,780  | 1,230  | 85     | 4.6   | 7.1   | 7.4   |
| 15    | 436    | 34     | 90     | 167    | 38     | 132   | 715    | 2,280  | 70     | 4.6   | 6.3   | 4.5   |
| 16    | 288    | 48     | 85     | 1,020  | 32     | 182   | 696    | 518    | 146    | 5.4   | 6.2   | 2.5   |
| 17    | 127    | 38     | 80     | 2,200  | 34     | 136   | 774    | 1,610  | 88     | 5.2   | 6.3   | 1.1   |
| 18    | 109    | 38     | 75     | 3,650  | 1,030  | 84    | 230    | 3,110  | 53     | 4.9   | 6.2   | 1.3   |
| 19    | 65     | 35     | 70     | 2,530  | 3,280  | 70    | 137    | 1,300  | 242    | 4.2   | 7.0   | 1.4   |
| 20    | 51     | 58     | 70     | 1,020  | 2,230  | 60    | 98     | 351    | 370    | 4.0   | 5.9   | 1.5   |
| 21    | 41     | 548    | 70     | 1,240  | 823    | 59    | 84     | 193    | 110    | 5.2   | 5.2   | 1.6   |
| 22    | 35     | 353    | 70     | 1,880  | 1,280  | 59    | 85     | 145    | 57     | 5.2   | 32    | 1.6   |
| 23    | 31     | 154    | 70     | 1,680  | 884    | 78    | 80     | 254    | 37     | 4.4   | 103   | 1.6   |
| 24    | 28     | 251    | 1,270  | 440    | 468    | 132   | 60     | 154    | 26     | 3.7   | 50    | 1.6   |
| 25    | 26     | 1,340  | 3,180  | 195    | 267    | 132   | 48     | 97     | 20     | 4.0   | 19    | 1.6   |
| 26    | 25     | 1,860  | 1,020  | 1,110  | 322    | 127   | 41     | 120    | 16     | 4.9   | 12    | 1.6   |
| 27    | 30     | 1,120  | 365    | 3,200  | 788    | 117   | 37     | 112    | 14     | 5.7   | 9.4   | 1.6   |
| 28    | 61     | 666    | 248    | 1,480  | 488    | 115   | 36     | 83     | 12     | 5.8   | 14    | 1.6   |
| 29    | 81     | 417    | 210    | 1,160  | -----  | 115   | 183    | 79     | 11     | 6.0   | 79    | 8.8   |
| 30    | 57     | 218    | 181    | 420    | -----  | 115   | 695    | 3,360  | 10     | 5.5   | 65    | 3.2   |
| 31    | 54     | -----  | 130    | 260    | -----  | 107   | -----  | 18,600 | -----  | 5.0   | 30    | ----- |
| TOTAL | 19,575 | 7,720  | 20,085 | 24,546 | 12,735 | 4,704 | 7,000  | 35,550 | 22,055 | 210.9 | 570.3 | 532.0 |
| MEAN  | 631    | 257    | 648    | 792    | 455    | 152   | 233    | 1,147  | 735    | 6.80  | 18.4  | 17.7  |
| MAX   | 8,940  | 1,860  | 5,140  | 3,650  | 3,280  | 640   | 1,780  | 18,600 | 11,100 | 22    | 103   | 145   |
| MIN   | 25     | 19     | 70     | 44     | 27     | 41    | 34     | 56     | 10     | 3.7   | 4.0   | 1.1   |
| CFSM  | 2.14   | .87    | 2.20   | 2.68   | 1.54   | .52   | .79    | 3.89   | 2.49   | .02   | .06   | .06   |
| IN.   | 2.47   | .97    | 2.53   | 3.10   | 1.61   | .59   | .88    | 4.48   | 2.78   | .03   | .07   | .07   |
| AC-FT | 38,830 | 15,310 | 39,840 | 48,690 | 25,260 | 9,330 | 13,880 | 70,510 | 43,750 | 418   | 1,130 | 1,060 |

CAL YR 1973 TOTAL 172,259.6 MEAN 472 MAX 8,940 MIN 5.0 CFSM 1.60 IN 21.72 AC-FT 341,700  
WTR YR 1974 TOTAL 155,283.2 MEAN 425 MAX 18,600 MIN 1.1 CFSM 1.44 IN 19.58 AC-FT 308,000

PEAK DISCHARGE (BASE, 3,000 FT<sup>3</sup>/S)

| DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|------|------|-------|-----------|
| 10-3  | 1615 | 11.39 | 3,570     | 1-27 | *    | *     | 3,680     |
| 10-13 | *    | 20.47 | 12,700    | 2-19 | *    | *     | 3,360     |
| 12-4  | 1945 | 15.25 | 6,520     | 5-17 | 2245 | 11.54 | 3,680     |
| 12-25 | 0715 | 11.34 | 3,540     | 5-31 | 0430 | 25.19 | 20,800    |
| 1-18  | *    | *     | 3,840     | 6-9  | 0845 | 11.02 | 3,310     |

\*Unknown

## 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, on right bank near upstream side of bridge on E. Madison Street in Paris, 600 ft (183 m) downstream from Wabash Railroad bridge, 12.5 mi (20.1 km) upstream from Elk Fork Salt River, and at mile 104.5 (168.1 km) above mouth of Salt River.

DRAINAGE AREA.--356 mi<sup>2</sup> (922 km<sup>2</sup>).

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

GAGE.--Water-stage recorder. Datum of gage is 621.88 ft (189.549 m) above mean sea level, 1961 adjustment. Prior to Jan. 22, 1940, nonrecording gage, Jan. 22, 1940, to Sept. 30, 1968, water-stage recorder, 600 ft (183 m) upstream at present datum.

AVERAGE DISCHARGE.--35 years, 242 ft<sup>3</sup>/s (6.853 m<sup>3</sup>/s), 9.23 in/yr (234 mm/yr), 175,300 acre-ft/yr (216 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 3,910 ft<sup>3</sup>/s (111 m<sup>3</sup>/s) May 19 (gage height, 11.52 ft or 3.511 m); minimum discharge, 3.0 ft<sup>3</sup>/s (0.085 m<sup>3</sup>/s) July 31, Aug. 1, Sept. 6, 7; minimum gage height, 2.62 ft (0.799 m) Sept. 6, 7.

Period of record: Maximum discharge, 45,000 ft<sup>3</sup>/s (1,270 m<sup>3</sup>/s) Apr. 21, 1973 (gage height, 33.5 ft or 10.21 m, from floodmark); no flow at times in several years.

REMARKS.--Records good. Water diverted from river upstream from gage by City of Paris.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY         | OCT                                                                          | NOV   | DEC    | JAN    | FEB    | MAR    | APR   | MAY    | JUN    | JUL     | AUG     | SEP     |
|-------------|------------------------------------------------------------------------------|-------|--------|--------|--------|--------|-------|--------|--------|---------|---------|---------|
| 1           | 1,670                                                                        | 31    | 92     | 30     | 267    | 391    | 68    | 634    | 2,710  | 12      | 3.3     | 30      |
| 2           | 1,610                                                                        | 30    | 63     | 30     | 203    | 250    | 64    | 299    | 2,340  | 11      | 3.9     | 42      |
| 3           | 1,890                                                                        | 27    | 55     | 30     | 165    | 198    | 58    | 300    | 588    | 10      | 4.5     | 35      |
| 4           | 2,490                                                                        | 26    | 1,530  | 30     | 135    | 222    | 50    | 162    | 151    | 116     | 4.6     | 35      |
| 5           | 3,150                                                                        | 24    | 2,120  | 30     | 118    | 1,140  | 48    | 113    | 104    | 159     | 14      | 27      |
| 6           | 3,650                                                                        | 24    | 1,800  | 30     | 105    | 1,020  | 45    | 86     | 92     | 649     | 24      | 13      |
| 7           | 2,280                                                                        | 24    | 1,120  | 30     | 100    | 508    | 44    | 68     | 1,490  | 300     | 15      | 9.7     |
| 8           | 250                                                                          | 23    | 292    | 30     | 90     | 260    | 45    | 64     | 2,140  | 67      | 12      | 9.7     |
| 9           | 158                                                                          | 23    | 149    | 30     | 88     | 257    | 41    | 60     | 2,060  | 31      | 53      | 7.7     |
| 10          | 122                                                                          | 22    | 115    | 30     | 86     | 379    | 37    | 83     | 1,650  | 20      | 113     | 6.5     |
| 11          | 96                                                                           | 20    | 90     | 31     | 84     | 412    | 50    | 102    | 783    | 14      | 34      | 6.5     |
| 12          | 94                                                                           | 22    | 80     | 33     | 82     | 735    | 127   | 80     | 206    | 11      | 17      | 13      |
| 13          | 149                                                                          | 26    | 70     | 35     | 80     | 783    | 94    | 65     | 126    | 8.7     | 12      | 184     |
| 14          | 99                                                                           | 26    | 65     | 40     | 78     | 496    | 79    | 850    | 97     | 7.8     | 9.1     | 28      |
| 15          | 74                                                                           | 29    | 60     | 45     | 76     | 367    | 64    | 1,480  | 146    | 7.6     | 7.2     | 14      |
| 16          | 63                                                                           | 29    | 55     | 70     | 75     | 541    | 53    | 795    | 174    | 6.3     | 7.1     | 11      |
| 17          | 54                                                                           | 28    | 52     | 407    | 75     | 359    | 75    | 1,980  | 128    | 5.5     | 7.0     | 7.8     |
| 18          | 59                                                                           | 27    | 50     | 1,650  | 80     | 247    | 51    | 2,900  | 92     | 5.6     | 5.6     | 6.0     |
| 19          | 39                                                                           | 27    | 45     | 2,460  | 424    | 181    | 42    | 3,240  | 338    | 5.5     | 5.0     | 5.3     |
| 20          | 33                                                                           | 38    | 42     | 3,130  | 316    | 150    | 37    | 2,090  | 65     | 4.8     | 4.9     | 37      |
| 21          | 32                                                                           | 61    | 40     | 2,830  | 198    | 133    | 36    | 2,060  | 40     | 4.7     | 4.8     | 322     |
| 22          | 30                                                                           | 157   | 39     | 1,980  | 624    | 120    | 69    | 2,490  | 33     | 4.9     | 67      | 74      |
| 23          | 29                                                                           | 322   | 38     | 944    | 860    | 115    | 57    | 776    | 27     | 4.4     | 404     | 37      |
| 24          | 28                                                                           | 131   | 37     | 610    | 492    | 101    | 81    | 203    | 26     | 4.2     | 406     | 19      |
| 25          | 27                                                                           | 74    | 36     | 358    | 264    | 86     | 65    | 130    | 23     | 4.1     | 123     | 12      |
| 26          | 26                                                                           | 127   | 35     | 408    | 178    | 80     | 42    | 98     | 19     | 4.2     | 43      | 9.3     |
| 27          | 38                                                                           | 83    | 34     | 1,920  | 448    | 78     | 34    | 81     | 17     | 4.6     | 23      | 7.7     |
| 28          | 48                                                                           | 100   | 33     | 1,860  | 652    | 78     | 30    | 74     | 15     | 3.9     | 60      | 7.9     |
| 29          | 46                                                                           | 150   | 32     | 1,680  | -----  | 78     | 1,010 | 70     | 14     | 3.8     | 41      | 6.6     |
| 30          | 38                                                                           | 138   | 31     | 910    | -----  | 77     | 1,940 | 250    | 13     | 3.7     | 17      | 5.6     |
| 31          | 34                                                                           | ----- | 30     | 404    | -----  | 71     | ----- | 2,970  | -----  | 3.4     | 20      | -----   |
| TOTAL       | 18,406                                                                       | 1,869 | 8,330  | 22,105 | 6,443  | 9,913  | 4,536 | 24,653 | 15,707 | 1,497.7 | 1,565.0 | 1,029.3 |
| MEAN        | 594                                                                          | 62.3  | 269    | 713    | 230    | 320    | 151   | 795    | 524    | 48.3    | 50.5    | 34.3    |
| MAX         | 3,650                                                                        | 322   | 2,120  | 3,130  | 860    | 1,140  | 1,940 | 3,240  | 2,710  | 649     | 406     | 322     |
| MIN         | 26                                                                           | 20    | 30     | 30     | 75     | 71     | 30    | 60     | 13     | 3.4     | 3.3     | 5.3     |
| CFSM        | 1.67                                                                         | .18   | .76    | 2.00   | .65    | .90    | .42   | 2.23   | 1.47   | .14     | .14     | .10     |
| IN.         | 1.92                                                                         | .20   | .87    | 2.31   | .67    | 1.04   | .47   | 2.58   | 1.64   | .16     | .16     | .11     |
| AC-FT       | 36,510                                                                       | 3,710 | 16,520 | 43,850 | 12,780 | 19,660 | 9,000 | 48,900 | 31,150 | 2,970   | 3,100   | 2,040   |
| CAL YR 1973 | TOTAL 281,741.8 MEAN 772 MAX 24,800 MIN 9.8 CFSM 2.17 IN 29.44 AC-FT 558,800 |       |        |        |        |        |       |        |        |         |         |         |
| WTR YR 1974 | TOTAL 116,054.0 MEAN 318 MAX 3,650 MIN 3.3 CFSM .89 IN 12.13 AC-FT 230,200   |       |        |        |        |        |       |        |        |         |         |         |

PEAK DISCHARGE (BASE, 2,400 FT<sup>3</sup>/S)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|------|------|-------|-----------|------|------|-------|-----------|
| 10-4 | 0130 | 9.21  | 2,570     | 4-30 | 0030 | 9.58  | 2,770     |
| 10-6 | 0945 | 11.24 | 3,740     | 5-19 | 0215 | 11.52 | 3,410     |
| 12-4 | 2130 | 9.01  | 2,460     | 5-31 | 1630 | 10.53 | 3,320     |
| 1-19 | 2115 | 11.06 | 3,640     | 6-8  | 1530 | 11.03 | 3,620     |

05506800 Elk Fork Salt River near Madison, Mo.

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

DRAINAGE AREA.--200 mi<sup>2</sup> (518 km<sup>2</sup>).

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

GAGE.--Water-stage recorder. Datum of gage is 690.16 ft (210.361 m) above mean sea level (Missouri State Highway Commission benchmark).

AVERAGE DISCHARGE.--6 years, 213 ft<sup>3</sup>/s (6.032 m<sup>3</sup>/s), 14.46 in/yr (367 mm/yr), 154,300 acre-ft/yr (190 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 7,650 ft<sup>3</sup>/s (217 m<sup>3</sup>/s) May 31 (gage height, 21.56 ft or 6.571 m). minimum, 0.59 ft<sup>3</sup>/s (0.017 m<sup>3</sup>/s) Aug. 2, 3 (gage height, 3.57 ft or 1.088 m).

Period of record: Maximum discharge, 42,300 ft<sup>3</sup>/s (1,200 m<sup>3</sup>/s) Apr. 21, 1973 (gage height, 33.4 ft or 10.18 m, from floodmarks); minimum discharge, 0.21 ft<sup>3</sup>/s (0.006 m<sup>3</sup>/s) Sept. 14, Oct. 18, 19, 1971; minimum gage height, 3.35 ft (1.021 m) Oct. 11, 1972.

Flood of July 9, 1967, reached a stage of 31.25 ft (9.525 m), from floodmark (discharge, 31,200 ft<sup>3</sup>/s or 884 m<sup>3</sup>/s, revised by contracted-opening method). Flood in 1871 reached nearly the same stage, from information by local resident.

REVISIONS.--The maximum discharge for the 1970 water year has been revised to 20,500 ft<sup>3</sup>/s (581 m<sup>3</sup>/s) Oct. 13, 1969 (gage height, 29.19 ft or 8.879 m), superseding figure published in WRD Missouri, 1970, 1971, 1972, and WSP 2115.

REMARKS.--Records fair.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT     | NOV     | DEC    | JAN    | FEB    | MAR    | APR   | MAY      | JUN      | JUL   | AUG      | SEP     |
|-------|---------|---------|--------|--------|--------|--------|-------|----------|----------|-------|----------|---------|
| 1     | 634     | 18      | 42     | 40     | 191    | 255    | 34    | 142      | 3,440    | 2.1   | .97      | 204     |
| 2     | 220     | 14      | 34     | 20     | 136    | 144    | 29    | 120      | 255      | 2.0   | .72      | 433     |
| 3     | 952     | 11      | 24     | 20     | 98     | 102    | 25    | 138      | 95       | 1.9   | .92      | 412     |
| 4     | 1,400   | 10      | 1,620  | 15     | 64     | 85     | 21    | 103      | 47       | 28    | 1.5      | 146     |
| 5     | 285     | 9.9     | 1,820  | 14     | 46     | 111    | 21    | 38       | 27       | 123   | 1.1      | 30      |
| 6     | 134     | 9.2     | 368    | 13     | 57     | 77     | 19    | 17       | 19       | 24    | 1.1      | 11      |
| 7     | 78      | 7.7     | 200    | 12     | 120    | 49     | 19    | 9.9      | 2,150    | 6.3   | 1.2      | 7.0     |
| 8     | 54      | 7.9     | 132    | 11     | 94     | 36     | 24    | 8.6      | 1,510    | 4.1   | 1.3      | 5.9     |
| 9     | 36      | 8.1     | 103    | 10     | 60     | 122    | 24    | 7.9      | 1,180    | 3.3   | 1.4      | 4.7     |
| 10    | 26      | 8.4     | 77     | 10     | 51     | 308    | 19    | 7.3      | 332      | 2.7   | 1.9      | 3.7     |
| 11    | 22      | 8.4     | 66     | 10     | 82     | 484    | 42    | 12       | 100      | 2.5   | 1.5      | 3.5     |
| 12    | 38      | 8.6     | 67     | 10     | 109    | 1,190  | 126   | 28       | 45       | 2.3   | 1.3      | 69      |
| 13    | 535     | 7.5     | 1,040  | 10     | 94     | 342    | 85    | 11       | 23       | 1.9   | 1.4      | 413     |
| 14    | 318     | 9.2     | 451    | 15     | 70     | 167    | 49    | 1,230    | 12       | 2.2   | 1.2      | 76      |
| 15    | 118     | 8.8     | 228    | 28     | 48     | 382    | 34    | 1,710    | 846      | 1.8   | 1.1      | 14      |
| 16    | 54      | 9.5     | 144    | 66     | 36     | 580    | 24    | 312      | 299      | 1.7   | 1.1      | 7.1     |
| 17    | 30      | 11      | 82     | 937    | 30     | 250    | 17    | 2,300    | 45       | 1.6   | 1.2      | 4.9     |
| 18    | 19      | 11      | 60     | 1,880  | 38     | 150    | 14    | 3,580    | 12       | 1.5   | 1.7      | 4.0     |
| 19    | 14      | 15      | 40     | 2,940  | 1,180  | 111    | 12    | 1,870    | 27       | 1.4   | 2.0      | 3.7     |
| 20    | 11      | 40      | 30     | 2,880  | 586    | 78     | 9.9   | 338      | 8.0      | 1.4   | 1.6      | 216     |
| 21    | 9.9     | 75      | 30     | 1,020  | 275    | 64     | 11    | 142      | 4.7      | 1.3   | 1.4      | 219     |
| 22    | 8.6     | 61      | 30     | 505    | 868    | 57     | 13    | 75       | 4.0      | 1.3   | 107      | 16      |
| 23    | 8.4     | 60      | 30     | 655    | 532    | 49     | 14    | 51       | 3.4      | 1.3   | 158      | 6.8     |
| 24    | 7.7     | 146     | 865    | 295    | 250    | 40     | 9.2   | 30       | 2.9      | 1.1   | 49       | 4.8     |
| 25    | 7.5     | 160     | 1,670  | 196    | 150    | 37     | 7.0   | 16       | 2.8      | 1.1   | 8.0      | 4.0     |
| 26    | 7.5     | 220     | 517    | 589    | 171    | 39     | 6.3   | 11       | 2.5      | 1.1   | 4.7      | 3.5     |
| 27    | 14      | 163     | 278    | 1,980  | 709    | 43     | 5.5   | 15       | 2.6      | 1.1   | 3.5      | 3.3     |
| 28    | 53      | 252     | 193    | 571    | 553    | 48     | 5.3   | 10       | 2.4      | 1.1   | 404      | 3.0     |
| 29    | 54      | 120     | 156    | 808    | -----  | 45     | 64    | 9.5      | 2.3      | 1.2   | 302      | 2.9     |
| 30    | 37      | 61      | 118    | 631    | -----  | 44     | 144   | 1,280    | 2.1      | 1.2   | 91       | 4.3     |
| 31    | 24      | -----   | 70     | 322    | -----  | 39     | ----- | 6,560    | -----    | 1.1   | 14       | -----   |
| TOTAL | 5,209.6 | 1,551.2 | 10,585 | 16,513 | 6,698  | 5,528  | 927.2 | 20,182.2 | 10,501.7 | 228.6 | 1,168.81 | 2,336.1 |
| MEAN  | 168     | 51.7    | 341    | 533    | 239    | 178    | 30.9  | 651      | 350      | 7.37  | 37.7     | 77.9    |
| MAX   | 1,400   | 252     | 1,820  | 2,940  | 1,180  | 1,190  | 144   | 6,560    | 3,440    | 123   | 404      | 433     |
| MIN   | 7.5     | 7.5     | 24     | 10     | 30     | 36     | 5.3   | 7.3      | 2.1      | 1.1   | .72      | 2.9     |
| CFSM  | .84     | .26     | 1.71   | 2.67   | 1.20   | .89    | .15   | 3.26     | 1.75     | .04   | .19      | .39     |
| IN.   | .97     | .29     | 1.97   | 3.07   | 1.25   | 1.03   | .17   | 3.75     | 1.95     | .04   | .22      | .43     |
| AC-FT | 10,330  | 3,080   | 21,000 | 32,750 | 13,290 | 10,960 | 1,840 | 40,030   | 20,830   | 453   | 2,320    | 4,630   |

CAL YR 1973 TOTAL 144,179.00 MEAN 395 MAX 24,100 MIN 2.4 CFSM 1.98 IN 26.82 AC-FT 286,000  
WTR YR 1974 TOTAL 81,429.41 MEAN 223 MAX 6,560 MIN .72 CFSM 1.12 IN 15.15 AC-FT 161,500

PEAK DISCHARGE (BASE, 2,500 FT<sup>3</sup>/S)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|------|------|-------|-----------|------|------|-------|-----------|
| 1-19 | 2400 | 1568  | 3,840     | 5-31 | 1915 | 21.56 | 7,650     |
| 5-18 | 1615 | 16.20 | 4,100     | 6-7  | 1830 | 13.54 | 2,700     |



05507500 Salt River near Monroe City, Mo.

LOCATION.--Lat 39°32'25", long 91°40'20", in NE&NW¼ sec.22, T.55 N., R.7 W., Ralls County, on left bank on downstream side of old bridge pier, 135 ft (41 m) upstream from highway bridge at Joanna, 2,500 ft (762 m) downstream from Indian Creek, 2.0 mi (3.2 km) upstream from Lick Creek, 8.0 mi (12.9 km) south east of Monroe City, and at mile 63.5 (102.2 km).

DRAINAGE AREA.--2,230 mi<sup>2</sup> (5,780 km<sup>2</sup>), approximately.

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

GAGE.--Water-stage recorder. Datum of gage is 520.04 ft (158.508 m) above mean sea level. Prior to Feb. 2, 1940, nonrecording gage at present site and datum.

AVERAGE DISCHARGE.--35 years, 1,532 ft<sup>3</sup>/s (43.39 m<sup>3</sup>/s), 9.33 in/yr (237 mm/yr), 1,110,000 acre-ft/yr (1.37 km<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 42,800 ft<sup>3</sup>/s (1,210 m<sup>3</sup>/s) June 1 (gage height, 28.16 ft or 8.583 m); minimum, 30 ft<sup>3</sup>/s (0.85 m<sup>3</sup>/s) Aug. 5-8, Sept. 30; minimum gage height, 3.29 ft (1.003 m) Sept. 30. Period of record: Maximum discharge, 102,000 ft<sup>3</sup>/s (2,890 m<sup>3</sup>/s) Apr. 22, 1973 (gage height, 39.1 ft or 11.92 m, from floodmark); no flow July 28-31, 1954. Flood of June 1928 reached a stage of about 36 ft (11.0 m), from information by local residents.

REMARKS.--Records good.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY         | OCT             | NOV        | DEC        | JAN     | FEB       | MAR      | APR             | MAY     | JUN     | JUL    | AUG    | SEP    |
|-------------|-----------------|------------|------------|---------|-----------|----------|-----------------|---------|---------|--------|--------|--------|
| 1           | 8,170           | 239        | 1,030      | 700     | 2,110     | 3,280    | 510             | 3,590   | 42,700  | 172    | 39     | 261    |
| 2           | 8,890           | 290        | 792        | 600     | 1,520     | 1,480    | 471             | 1,570   | 32,600  | 160    | 39     | 354    |
| 3           | 15,000          | 260        | 660        | 500     | 1,190     | 902      | 425             | 1,530   | 6,420   | 147    | 37     | 752    |
| 4           | 21,500          | 213        | 15,700     | 450     | 983       | 736      | 373             | 1,210   | 1,680   | 1,410  | 34     | 528    |
| 5           | 16,100          | 189        | 25,200     | 400     | 832       | 3,670    | 345             | 763     | 1,010   | 4,050  | 32     | 338    |
| 6           | 16,900          | 172        | 16,000     | 380     | 799       | 4,660    | 322             | 552     | 859     | 4,810  | 30     | 219    |
| 7           | 20,200          | 160        | 6,720      | 370     | 800       | 2,060    | 307             | 438     | 10,500  | 1,830  | 30     | 158    |
| 8           | 13,100          | 149        | 2,440      | 360     | 780       | 961      | 322             | 443     | 16,900  | 665    | 32     | 122    |
| 9           | 1,920           | 141        | 1,290      | 350     | 760       | 1,080    | 467             | 500     | 21,300  | 350    | 44     | 93     |
| 10          | 1,270           | 132        | 981        | 340     | 740       | 1,730    | 434             | 591     | 15,200  | 241    | 52     | 77     |
| 11          | 926             | 128        | 825        | 330     | 700       | 3,560    | 562             | 568     | 8,250   | 185    | 124    | 63     |
| 12          | 1,420           | 124        | 738        | 320     | 680       | 8,690    | 767             | 556     | 2,730   | 149    | 138    | 58     |
| 13          | 16,600          | 120        | 3,130      | 320     | 660       | 6,530    | 770             | 483     | 1,270   | 128    | 117    | 180    |
| 14          | 13,100          | 116        | 3,180      | 320     | 640       | 4,370    | 1,410           | 4,100   | 861     | 115    | 89     | 470    |
| 15          | 5,120           | 120        | 1,570      | 320     | 630       | 2,390    | 2,310           | 12,500  | 721     | 111    | 71     | 206    |
| 16          | 1,180           | 161        | 1,070      | 600     | 621       | 3,800    | 867             | 7,040   | 1,410   | 100    | 59     | 122    |
| 17          | 747             | 159        | 846        | 2,110   | 586       | 2,580    | 1,550           | 8,320   | 1,220   | 90     | 56     | 88     |
| 18          | 551             | 149        | 704        | 14,300  | 579       | 1,680    | 872             | 21,200  | 785     | 84     | 51     | 69     |
| 19          | 420             | 136        | 677        | 23,200  | 7,030     | 1,160    | 544             | 23,500  | 1,460   | 76     | 44     | 54     |
| 20          | 355             | 224        | 600        | 22,700  | 9,480     | 921      | 419             | 13,300  | 4,440   | 68     | 40     | 47     |
| 21          | 435             | 1,150      | 580        | 19,700  | 3,360     | 803      | 438             | 11,000  | 1,830   | 64     | 35     | 77     |
| 22          | 371             | 2,020      | 540        | 12,500  | 6,910     | 711      | 481             | 14,100  | 731     | 60     | 174    | 491    |
| 23          | 280             | 1,590      | 520        | 11,000  | 7,060     | 643      | 391             | 12,100  | 509     | 56     | 387    | 206    |
| 24          | 231             | 1,290      | 3,560      | 6,470   | 4,080     | 587      | 477             | 2,750   | 389     | 51     | 976    | 136    |
| 25          | 214             | 2,340      | 15,300     | 3,390   | 2,300     | 535      | 404             | 1,440   | 310     | 46     | 599    | 92     |
| 26          | 197             | 4,230      | 11,100     | 3,700   | 1,510     | 503      | 343             | 946     | 266     | 43     | 334    | 66     |
| 27          | 241             | 3,410      | 5,440      | 18,300  | 3,310     | 508      | 288             | 799     | 240     | 40     | 200    | 52     |
| 28          | 299             | 3,080      | 2,690      | 15,400  | 6,550     | 523      | 261             | 713     | 218     | 39     | 300    | 45     |
| 29          | 277             | 2,390      | 1,760      | 12,800  | -----     | 513      | 1,710           | 659     | 200     | 39     | 940    | 38     |
| 30          | 304             | 1,550      | 1,370      | 7,570   | -----     | 497      | 6,740           | 5,570   | 188     | 38     | 378    | 33     |
| 31          | 278             | -----      | 791        | 3,680   | -----     | 507      | -----           | 37,400  | -----   | 38     | 277    | -----  |
| TOTAL       | 166,596         | 26,432     | 127,804    | 183,480 | 67,200    | 62,570   | 25,580          | 190,231 | 180,197 | 15,455 | 5,758  | 5,495  |
| MEAN        | 5,374           | 881        | 4,123      | 5,919   | 2,400     | 2,018    | 853             | 6,136   | 6,007   | 499    | 186    | 183    |
| MAX         | 21,500          | 4,230      | 25,200     | 23,200  | 9,480     | 8,690    | 6,740           | 37,400  | 42,700  | 4,810  | 976    | 752    |
| MIN         | 197             | 116        | 520        | 320     | 579       | 497      | 261             | 438     | 188     | 38     | 30     | 33     |
| CFSM        | 2.41            | .40        | 1.85       | 2.65    | 1.08      | .90      | .38             | 2.75    | 2.69    | .22    | .08    | .08    |
| IN.         | 2.78            | .44        | 2.13       | 3.06    | 1.12      | 1.04     | .43             | 3.17    | 3.01    | .26    | .10    | .09    |
| AC-FT       | 330,400         | 52,430     | 253,500    | 363,900 | 133,300   | 124,100  | 50,740          | 377,300 | 357,400 | 30,650 | 11,420 | 10,900 |
| CAL YR 1973 | TOTAL 1,774,633 | MEAN 4,862 | MAX 94,000 | MIN 65  | CFSM 2.18 | IN 29.60 | AC-FT 3,520,000 |         |         |        |        |        |
| WTR YR 1974 | TOTAL 1,056,798 | MEAN 2,895 | MAX 42,700 | MIN 30  | CFSM 1.30 | IN 17.63 | AC-FT 2,096,000 |         |         |        |        |        |

PEAK DISCHARGE (BASE, 16,000 FT<sup>3</sup>/S)

| DATE  | TIME | G. H. | DISCHARGE | DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|-------|------|-------|-----------|------|------|-------|-----------|
| 10-3  | 1730 | 20.88 | 25,200    | 12-25 | 1415 | 16.28 | 16,400    | 5-19 | 0815 | 20.75 | 24,900    |
| 10-13 | 1715 | 18.01 | 19,400    | 1-20  | 1545 | 20.72 | 24,800    | 6-1  | 1030 | 28.16 | 42,800    |
| 12-5  | 0445 | 21.56 | 26,500    | 1-27  | 1245 | 18.28 | 20,000    | 6-9  | 0800 | 19.77 | 22,900    |

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, on left bank 180 ft (55 m) upstream from upstream bridge on dual U.S. Highway 61, 2.0 mi (3.2 km) north of New London, 8.0 mi (12.9 km) upstream from Spencer Creek and at mile 35.5 (57.1 km).

DRAINAGE AREA.--2,480 mi<sup>2</sup> (6,420 km<sup>2</sup>), approximately.

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

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

AVERAGE DISCHARGE.--52 years, 1,674 ft<sup>3</sup>/s (47.41 m<sup>3</sup>/s), 9.17 in/yr (233 mm/yr), 1,213,000 acre-ft/yr (1.50 km<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 37,600 ft<sup>3</sup>/s (1,060 m<sup>3</sup>/s) June 2 (gage height, 24.69 ft or 7.526 m); minimum, 45 ft<sup>3</sup>/s (1.27 m<sup>3</sup>/s) Aug. 6, 8 (gage height, 1.99 ft or 0.607 m).

Period of record: Maximum discharge, 107,000 ft<sup>3</sup>/s (3,030 m<sup>3</sup>/s) Apr. 22, 1973 (gage height, 31.8 ft or 9.69 m, from floodmark); no flow Aug. 3-14, 1934, Aug. 21 to Sept. 1, 1936.

Flood of July 14, 1958, reached a stage of 27.6 ft (8.41 m), present site and datum, based on comparison of June 1928 flood crest at stone marker 1.0 mi (1.6 km) downstream to gage.

REMARKS.--Records poor. Records of chemical analyses are published in part 2 of this report.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY         | OCT             | NOV        | DEC        | JAN     | FEB       | MAR      | APR             | MAY     | JUN     | JUL    | AUG    | SEP    |
|-------------|-----------------|------------|------------|---------|-----------|----------|-----------------|---------|---------|--------|--------|--------|
| 1           | 7,540           | 350        | 1,290      | 800     | 3,590     | 5,230    | 635             | 4,980   | 34,600  | 286    | 55     | 402    |
| 2           | 9,000           | 330        | 924        | 700     | 2,710     | 3,410    | 585             | 2,390   | 37,100  | 265    | 62     | 471    |
| 3           | 12,100          | 300        | 700        | 600     | 2,200     | 2,480    | 582             | 1,640   | 20,600  | 246    | 63     | 750    |
| 4           | 21,900          | 250        | 9,470      | 550     | 1,920     | 2,150    | 456             | 1,620   | 3,300   | 271    | 57     | 905    |
| 5           | 19,600          | 200        | 21,100     | 500     | 1,720     | 3,340    | 402             | 1,210   | 1,860   | 3,710  | 53     | 662    |
| 6           | 16,200          | 190        | 20,000     | 450     | 1,580     | 5,360    | 366             | 863     | 1,290   | 5,050  | 49     | 425    |
| 7           | 19,200          | 180        | 8,970      | 400     | 1,550     | 3,900    | 362             | 681     | 7,220   | 3,600  | 47     | 287    |
| 8           | 18,300          | 170        | 3,470      | 390     | 1,500     | 2,320    | 278             | 630     | 16,800  | 1,560  | 50     | 220    |
| 9           | 5,650           | 160        | 1,690      | 380     | 1,450     | 1,940    | 262             | 619     | 19,000  | 848    | 51     | 172    |
| 10          | 2,070           | 150        | 1,190      | 370     | 1,400     | 2,510    | 424             | 605     | 17,200  | 545    | 130    | 133    |
| 11          | 1,690           | 140        | 952        | 360     | 1,350     | 3,660    | 496             | 605     | 9,540   | 386    | 97     | 112    |
| 12          | 1,500           | 130        | 766        | 350     | 1,300     | 6,710    | 814             | 628     | 3,970   | 272    | 138    | 145    |
| 13          | 14,400          | 130        | 1,640      | 340     | 1,250     | 6,490    | 940             | 654     | 1,820   | 228    | 194    | 339    |
| 14          | 18,200          | 130        | 3,690      | 330     | 1,240     | 5,040    | 1,150           | 1,240   | 1,260   | 196    | 168    | 300    |
| 15          | 9,650           | 130        | 2,110      | 320     | 1,230     | 3,400    | 2,930           | 9,760   | 1,000   | 182    | 131    | 250    |
| 16          | 2,720           | 160        | 1,000      | 310     | 1,220     | 3,940    | 1,590           | 9,610   | 1,190   | 209    | 108    | 200    |
| 17          | 1,520           | 204        | 900        | 1,490   | 1,210     | 3,620    | 1,690           | 4,620   | 1,740   | 150    | 93     | 170    |
| 18          | 1,140           | 228        | 700        | 12,300  | 1,200     | 2,650    | 1,590           | 15,500  | 1,370   | 131    | 83     | 133    |
| 19          | 915             | 206        | 600        | 21,800  | 4,120     | 1,950    | 983             | 19,600  | 3,090   | 116    | 74     | 104    |
| 20          | 766             | 200        | 550        | 23,100  | 10,200    | 1,560    | 703             | 18,400  | 5,930   | 108    | 66     | 85     |
| 21          | 606             | 629        | 520        | 24,100  | 5,740     | 1,370    | 654             | 10,400  | 3,220   | 98     | 58     | 69     |
| 22          | 528             | 1,780      | 510        | 14,800  | 6,850     | 1,250    | 959             | 11,300  | 1,460   | 104    | 59     | 216    |
| 23          | 500             | 1,930      | 500        | 12,400  | 8,220     | 1,120    | 692             | 13,000  | 938     | 90     | 329    | 497    |
| 24          | 400             | 1,430      | 1,960      | 8,130   | 5,640     | 1,060    | 594             | 6,400   | 712     | 78     | 881    | 261    |
| 25          | 350             | 2,370      | 12,800     | 5,010   | 3,820     | 950      | 667             | 2,150   | 579     | 71     | 1,130  | 181    |
| 26          | 300             | 4,460      | 13,000     | 4,900   | 2,690     | 900      | 581             | 1,360   | 493     | 69     | 700    | 134    |
| 27          | 320             | 4,340      | 6,530      | 16,900  | 3,080     | 800      | 510             | 996     | 430     | 66     | 439    | 101    |
| 28          | 360             | 3,230      | 3,300      | 17,600  | 6,380     | 700      | 462             | 863     | 382     | 71     | 448    | 79     |
| 29          | 400             | 2,750      | 1,860      | 14,200  | -----     | 660      | 794             | 758     | 343     | 79     | 1,140  | 67     |
| 30          | 380             | 1,910      | 1,290      | 9,650   | -----     | 620      | 5,400           | 1,280   | 310     | 63     | 917    | 56     |
| 31          | 360             | -----      | 1,000      | 5,400   | -----     | 610      | -----           | 22,800  | -----   | 58     | 522    | -----  |
| TOTAL       | 188,565         | 28,767     | 124,982    | 198,930 | 86,360    | 81,700   | 28,551          | 167,162 | 198,747 | 19,206 | 8,392  | 7,926  |
| MEAN        | 6,083           | 959        | 4,032      | 6,417   | 3,084     | 2,635    | 952             | 5,392   | 6,625   | 620    | 271    | 264    |
| MAX         | 21,900          | 4,460      | 21,100     | 24,100  | 10,200    | 6,710    | 5,400           | 22,800  | 37,100  | 5,050  | 1,140  | 905    |
| MIN         | 300             | 130        | 500        | 310     | 1,200     | 610      | 262             | 605     | 310     | 58     | 47     | 56     |
| CFSM        | 2.45            | .39        | 1.63       | 2.59    | 1.24      | 1.06     | .38             | 2.17    | 2.67    | .25    | .11    | .11    |
| IN.         | 2.83            | .43        | 1.87       | 2.98    | 1.30      | 1.23     | .43             | 2.51    | 2.98    | .29    | .13    | .12    |
| AC-FT       | 374,000         | 57,060     | 247,900    | 394,600 | 171,300   | 162,100  | 56,630          | 331,600 | 394,200 | 38,100 | 16,650 | 15,720 |
| CAL YR 1973 | TOTAL 1,966,625 | MEAN 5,388 | MAX 98,200 | MIN 80  | CFSM 2.17 | IN 29.50 | AC-FT 3,901,000 |         |         |        |        |        |
| WTR YR 1974 | TOTAL 1,139,288 | MEAN 3,121 | MAX 37,100 | MIN 47  | CFSM 1.26 | IN 17.09 | AC-FT 2,260,000 |         |         |        |        |        |

PEAK DISCHARGE (BASE, 16,000 FT<sup>3</sup>/S)

| DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|------|------|-------|-----------|
| 10-4  | 1800 | 20.20 | 22,600    | 1-27 | 2015 | 18.52 | 19,000    |
| 10-14 | 0300 | 19.43 | 20,900    | 5-20 | 0245 | 19.84 | 20,900    |
| 12-6  | 0015 | 20.26 | 22,800    | 6-2  | 0945 | 24.69 | 37,600    |
| 1-21  | 0330 | 21.17 | 25,500    | 6-9  | 2000 | 19.56 | 20,400    |

05587500 Mississippi River at Alton, Ill.

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

DRAINAGE AREA.--171,500 mi<sup>2</sup> (444,200 km<sup>2</sup>), approximately.

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

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

AVERAGE DISCHARGE.--47 years, 98,440 ft<sup>3</sup>/s (2,788 m<sup>3</sup>/s), 71,320,000 acre-ft/yr (87.9 km<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 404,000 ft<sup>3</sup>/s (11,400 m<sup>3</sup>/s) June 3; maximum elevation, 423.11 ft (128.964 m) May 25; minimum discharge, 29,000 ft<sup>3</sup>/s (821 m<sup>3</sup>/s) Sept 26 (elevation, 398.22 ft or 121.377 m). Period of record: Maximum discharge, 535,000 ft<sup>3</sup>/s (15,200 m<sup>3</sup>/s) Apr. 29, 1973, includes undetermined amount of overflow from Missouri River; maximum elevation, 432.15 ft (131.719 m) Apr. 28, 1973; minimum discharge, 7,960 ft<sup>3</sup>/s (225 m<sup>3</sup>/s) Nov. 7, 1948, result of temporary storage in pool of lock and dam 26; minimum elevation, 390.50 ft (119.024 m) Jan. 27, 1954.

Flood in June 1844 reached a stage of 432.10 ft (131.704 m), present datum.

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

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT      | NOV      | DEC      | JAN      | FEB      | MAR      | APR      | MAY      | JUN      | JUL      | AUG      | SEP      |
|-------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 1     | 170,000  | 117,000  | 114,000  | 100,000  | 296,000  | 156,000  | 157,000  | 222,000  | 324,000  | 353,000  | 78,500   | 56,600   |
| 2     | 173,000  | 119,000  | 113,000  | 95,000   | 288,000  | 153,000  | 164,000  | 225,000  | 349,000  | 351,000  | 76,300   | 59,800   |
| 3     | 166,000  | 115,000  | 117,000  | 92,000   | 272,000  | 154,000  | 164,000  | 229,000  | 352,000  | 344,000  | 68,300   | 64,600   |
| 4     | 184,000  | 109,000  | 127,000  | 90,000   | 255,000  | 162,000  | 158,000  | 234,000  | 392,000  | 332,000  | 70,200   | 59,000   |
| 5     | 196,000  | 112,000  | 185,000  | 80,000   | 235,000  | 171,000  | 150,000  | 233,000  | 374,000  | 319,000  | 67,000   | 59,100   |
| 6     | 208,000  | 101,000  | 194,000  | 78,000   | 213,000  | 185,000  | 151,000  | 230,000  | 349,000  | 306,000  | 70,500   | 57,100   |
| 7     | 215,000  | 97,600   | 187,000  | 75,000   | 193,000  | 201,000  | 153,000  | 224,000  | 325,000  | 289,000  | 71,700   | 53,500   |
| 8     | 210,000  | 96,600   | 174,000  | 72,000   | 163,000  | 212,000  | 165,000  | 215,000  | 305,000  | 265,000  | 59,500   | 47,100   |
| 9     | 185,000  | 95,600   | 152,000  | 70,000   | 158,000  | 217,000  | 172,000  | 203,000  | 301,000  | 229,000  | 71,600   | 43,700   |
| 10    | 123,000  | 87,700   | 136,000  | 75,000   | 152,000  | 223,000  | 176,000  | 190,000  | 302,000  | 191,000  | 82,000   | 48,100   |
| 11    | 112,000  | 80,100   | 112,000  | 67,400   | 145,000  | 233,000  | 182,000  | 181,000  | 308,000  | 181,000  | 92,300   | 54,000   |
| 12    | 110,000  | 79,500   | 102,000  | 63,900   | 138,000  | 243,000  | 202,000  | 177,000  | 311,000  | 174,000  | 97,200   | 58,200   |
| 13    | 149,000  | 74,700   | 94,300   | 60,000   | 145,000  | 261,000  | 215,000  | 171,000  | 311,000  | 168,000  | 101,000  | 56,700   |
| 14    | 192,000  | 68,500   | 98,400   | 65,000   | 145,000  | 270,000  | 215,000  | 173,000  | 306,000  | 156,000  | 92,900   | 59,200   |
| 15    | 142,000  | 69,200   | 103,000  | 70,000   | 141,000  | 270,000  | 222,000  | 186,000  | 298,000  | 147,000  | 93,500   | 56,900   |
| 16    | 118,000  | 64,700   | 91,200   | 75,000   | 137,000  | 265,000  | 223,000  | 203,000  | 288,000  | 151,000  | 98,400   | 51,500   |
| 17    | 116,000  | 66,300   | 84,200   | 80,000   | 130,000  | 259,000  | 223,000  | 208,000  | 287,000  | 146,000  | 90,600   | 48,400   |
| 18    | 126,000  | 67,700   | 76,600   | 100,000  | 127,000  | 253,000  | 224,000  | 207,000  | 289,000  | 133,000  | 88,700   | 46,200   |
| 19    | 129,000  | 65,400   | 82,500   | 135,000  | 138,000  | 241,000  | 224,000  | 217,000  | 288,000  | 121,000  | 67,200   | 40,300   |
| 20    | 119,000  | 67,500   | 56,100   | 173,000  | 151,000  | 233,000  | 223,000  | 235,000  | 286,000  | 113,000  | 61,300   | 46,600   |
| 21    | 115,000  | 84,300   | 39,400   | 217,000  | 156,000  | 219,000  | 222,000  | 257,000  | 286,000  | 92,500   | 65,900   | 47,500   |
| 22    | 113,000  | 85,300   | 48,600   | 234,000  | 154,000  | 197,000  | 224,000  | 289,000  | 287,000  | 104,000  | 60,400   | 48,900   |
| 23    | 107,000  | 94,700   | 53,900   | 235,000  | 170,000  | 180,000  | 226,000  | 318,000  | 289,000  | 102,000  | 69,000   | 48,300   |
| 24    | 108,000  | 94,800   | 72,900   | 230,000  | 178,000  | 174,000  | 223,000  | 336,000  | 292,000  | 84,700   | 75,500   | 41,500   |
| 25    | 111,000  | 104,000  | 99,800   | 225,000  | 179,000  | 165,000  | 226,000  | 346,000  | 296,000  | 85,500   | 73,400   | 35,500   |
| 26    | 111,000  | 111,000  | 148,000  | 220,000  | 170,000  | 148,000  | 230,000  | 343,000  | 303,000  | 84,400   | 75,600   | 32,300   |
| 27    | 112,000  | 122,000  | 154,000  | 222,000  | 161,000  | 143,000  | 228,000  | 330,000  | 314,000  | 90,500   | 67,400   | 38,700   |
| 28    | 116,000  | 120,000  | 157,000  | 246,000  | 153,000  | 138,000  | 227,000  | 313,000  | 329,000  | 87,300   | 83,400   | 41,700   |
| 29    | 114,000  | 136,000  | 150,000  | 275,000  | -----    | 132,000  | 226,000  | 298,000  | 341,000  | 96,400   | 72,500   | 42,300   |
| 30    | 113,000  | 124,000  | 144,000  | 290,000  | -----    | 132,000  | 224,000  | 288,000  | 349,000  | 84,800   | 59,700   | 45,800   |
| 31    | 116,000  | -----    | 125,000  | 295,000  | -----    | 142,000  | -----    | 299,000  | -----    | 83,100   | 56,000   | -----    |
| TOTAL | 4,379.0M | 2,830.2M | 3,591.9M | 4,405.3M | 4,943.0M | 6,132.0M | 6,019.0M | 7,580.0M | 9,431.0M | 5,464.2M | 2,357.5M | 1,489.1M |
| MEAN  | 141,300  | 94,340   | 115,900  | 142,100  | 176,500  | 197,800  | 200,600  | 244,500  | 314,400  | 176,300  | 76,050   | 49,640   |
| MAX   | 215,000  | 136,000  | 194,000  | 295,000  | 296,000  | 270,000  | 230,000  | 346,000  | 392,000  | 353,000  | 101,000  | 64,600   |
| MIN   | 107,000  | 64,700   | 39,400   | 60,000   | 127,000  | 132,000  | 150,000  | 171,000  | 286,000  | 83,100   | 56,000   | 32,300   |
| AC-FT | 8,686M   | 5,614M   | 7,125M   | 8,738M   | 9,804M   | 12,160M  | 11,940M  | 15,030M  | 18,710M  | 10,840M  | 4,676M   | 2,954M   |

CAL YR 1973 TOTAL 70,455,300 MEAN 193,000 MAX 527,000 MIN 39,400 AC-FT 139,700,000  
WTR YR 1974 TOTAL 58,622,200 MEAN 160,600 MAX 392,000 MIN 32,300 AC-FT 116,300,000

M Expressed in thousands.

## 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, in left bank on downstream side of bridge pier, 0.5 mi (0.8 km) west of Fairfax, and 2 mi (3.2 km) downstream from unnamed creek, and at mile 13.3 (21.4 km).

DRAINAGE AREA.--508 mi<sup>2</sup> (1,315 km<sup>2</sup>).

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

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

AVERAGE DISCHARGE.--52 years, 186 ft<sup>3</sup>/s (5.27 m<sup>3</sup>/s), 4.98 in/yr (126 mm/yr), 135,100 acre-ft/yr (167 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 12,500 ft<sup>3</sup>/s (354 m<sup>3</sup>/s) Oct. 11 (gage height, 23.28 ft or 7.096 m); minimum, 21 ft<sup>3</sup>/s (0.595 m<sup>3</sup>/s) Sept. 30 (gage height, 5.00 ft or 1.524 m).

Period of record: Maximum discharge, 16,300 ft<sup>3</sup>/s (461.6 m<sup>3</sup>/s) June 20, 1942, from rating curve extended above 11,000 ft<sup>3</sup>/s (311.5 m<sup>3</sup>/s); maximum gage height, 23.28 ft (7.096 m) Oct. 11, 1973; no flow on several days in July and August 1934.

REMARKS.--Records fair.

REVISIONS (WATER YEARS).--WSP 856: 1937.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT    | NOV    | DEC    | JAN    | FEB    | MAR    | APR    | MAY    | JUN    | JUL   | AUG   | SEP   |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|-------|-------|
| 1     | 718    | 310    | 271    | 400    | 740    | 674    | 247    | 376    | 331    | 196   | 58    | 44    |
| 2     | 425    | 300    | 268    | 400    | 608    | 626    | 241    | 345    | 294    | 187   | 61    | 51    |
| 3     | 338    | 290    | 271    | 400    | 509    | 698    | 223    | 352    | 274    | 174   | 59    | 51    |
| 4     | 290    | 290    | 1,810  | 400    | 490    | 650    | 213    | 320    | 255    | 180   | 58    | 47    |
| 5     | 251    | 290    | 1,460  | 400    | 533    | 599    | 211    | 305    | 255    | 174   | 57    | 42    |
| 6     | 238    | 290    | 650    | 400    | 512    | 480    | 205    | 291    | 329    | 164   | 61    | 41    |
| 7     | 242    | 290    | 485    | 400    | 455    | 440    | 198    | 280    | 527    | 156   | 61    | 41    |
| 8     | 234    | 298    | 485    | 400    | 485    | 475    | 183    | 269    | 573    | 151   | 63    | 38    |
| 9     | 214    | 292    | 485    | 400    | 482    | 480    | 183    | 272    | 4,280  | 143   | 67    | 34    |
| 10    | 2,340  | 285    | 400    | 400    | 445    | 409    | 178    | 263    | 903    | 138   | 98    | 33    |
| 11    | 10,700 | 285    | 400    | 400    | 445    | 384    | 178    | 557    | 620    | 137   | 97    | 32    |
| 12    | 7,410  | 288    | 412    | 400    | 470    | 409    | 200    | 390    | 524    | 137   | 71    | 47    |
| 13    | 2,200  | 285    | 530    | 400    | 490    | 407    | 196    | 296    | 465    | 132   | 59    | 46    |
| 14    | 1,270  | 278    | 425    | 400    | 478    | 378    | 201    | 1,280  | 455    | 116   | 55    | 38    |
| 15    | 917    | 271    | 375    | 400    | 443    | 368    | 205    | 378    | 397    | 114   | 72    | 35    |
| 16    | 767    | 255    | 325    | 400    | 433    | 354    | 217    | 318    | 359    | 112   | 97    | 33    |
| 17    | 632    | 251    | 370    | 450    | 433    | 333    | 205    | 500    | 347    | 110   | 182   | 30    |
| 18    | 569    | 249    | 355    | 500    | 450    | 333    | 205    | 1,420  | 338    | 107   | 114   | 28    |
| 19    | 542    | 247    | 278    | 600    | 465    | 327    | 182    | 650    | 324    | 104   | 72    | 30    |
| 20    | 515    | 470    | 300    | 800    | 428    | 309    | 553    | 419    | 305    | 101   | 68    | 27    |
| 21    | 461    | 682    | 500    | 1,000  | 431    | 298    | 2,520  | 354    | 287    | 101   | 61    | 26    |
| 22    | 446    | 362    | 1,000  | 780    | 482    | 300    | 710    | 340    | 269    | 101   | 59    | 26    |
| 23    | 425    | 323    | 1,000  | 626    | 436    | 283    | 482    | 316    | 255    | 90    | 56    | 27    |
| 24    | 405    | 500    | 900    | 608    | 432    | 287    | 421    | 300    | 247    | 80    | 55    | 27    |
| 25    | 350    | 388    | 700    | 653    | 406    | 287    | 390    | 289    | 243    | 76    | 53    | 26    |
| 26    | 355    | 323    | 600    | 1,010  | 436    | 289    | 356    | 291    | 239    | 75    | 47    | 26    |
| 27    | 342    | 400    | 485    | 924    | 560    | 285    | 340    | 294    | 229    | 73    | 43    | 26    |
| 28    | 325    | 350    | 440    | 674    | 695    | 280    | 366    | 307    | 219    | 73    | 42    | 24    |
| 29    | 315    | 300    | 400    | 674    | -----  | 276    | 779    | 287    | 209    | 67    | 43    | 24    |
| 30    | 305    | 290    | 362    | 833    | -----  | 269    | 563    | 1,350  | 201    | 58    | 43    | 22    |
| 31    | 318    | -----  | 400    | 1,140  | -----  | 257    | -----  | 812    | -----  | 58    | 43    | ----- |
| TOTAL | 34,859 | 9,732  | 17,142 | 17,672 | 13,672 | 12,244 | 11,351 | 14,221 | 14,553 | 3,685 | 2,075 | 1,022 |
| MEAN  | 1,124  | 324    | 553    | 570    | 488    | 395    | 378    | 459    | 485    | 119   | 66.9  | 34.1  |
| MAX   | 10,700 | 682    | 1,810  | 1,140  | 740    | 698    | 2,520  | 1,420  | 4,280  | 196   | 182   | 51    |
| MIN   | 214    | 247    | 268    | 400    | 406    | 257    | 178    | 263    | 201    | 58    | 42    | 22    |
| CFSM  | 2.21   | .64    | 1.09   | 1.12   | .96    | .78    | .74    | .90    | .95    | .23   | .13   | .07   |
| IN.   | 2.55   | .71    | 1.26   | 1.29   | 1.00   | .90    | .83    | 1.04   | 1.07   | .27   | .15   | .07   |
| AC-FT | 69,140 | 19,300 | 34,000 | 35,050 | 27,120 | 24,290 | 22,510 | 28,210 | 28,870 | 7,310 | 4,120 | 2,030 |

CAL YR 1973 TOTAL 231,647 MEAN 635 MAX 10,700 MIN 76 CFSM 1.25 IN 16.96 AC-FT 459,500  
WTR YR 1974 TOTAL 152,228 MEAN 417 MAX 10,700 MIN 22 CFSM .82 IN 11.15 AC-FT 301,900

PEAK DISCHARGE (BASE, 4,800 FT<sup>3</sup>/S)

| DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|------|------|-------|-----------|
| 10-11 | 2300 | 23.28 | 12,500    | 6-9  | 0730 | 18.03 | 6,700     |



## MISSOURI RIVER MAIN STEM

06813500 Missouri River at Rulo, Nebr.

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

DRAINAGE AREA.--418,900 mi<sup>2</sup> (1,085,000 km<sup>2</sup>), approximately.

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

GAGE.--Water-stage recorder. Datum of gage is 837.23 ft (255.19 m) above mean sea level. Prior to Sept. 13, 1950, nonrecording gage at site 80 ft (24 m) upstream at same datum.

AVERAGE DISCHARGE.--25 years, 38,650 ft<sup>3</sup>/s (1,095 m<sup>3</sup>/s), 28,000,000 acre-ft/yr (34,500 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 125,000 ft<sup>3</sup>/s (3,540 m<sup>3</sup>/s) Oct. 12 (gage height, 23.41 ft or 7.135 m, backwater from Nemaha River); minimum daily discharge, 21,000 ft<sup>3</sup>/s (595 m<sup>3</sup>/s) Jan. 13-16; minimum gage height, 6.51 ft (1.984 m) Jan. 3.

Period of record: Maximum discharge, 358,000 ft<sup>3</sup>/s (10,100 m<sup>3</sup>/s) Apr. 22, 1952, (gage height, 25.60 ft or 7.803 m); minimum daily, 4,420 ft<sup>3</sup>/s (125 m<sup>3</sup>/s) Jan. 13, 1957; minimum gage height, 0.65 ft (0.198 m) Jan. 7, 1971 (result of freezeup).

Flood in 1881 reached a stage of 22.9 ft (6.98 m), from floodmark (discharge not determined).

REMARKS.--Records good except those for period of backwater from Nemaha River, Oct. 10-15, and for winter period, which are poor. Flow partly regulated by upstream main-stem reservoirs.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT      | NOV      | DEC      | JAN     | FEB      | MAR      | APR      | MAY      | JUN      | JUL      | AUG      | SEP      |
|-------|----------|----------|----------|---------|----------|----------|----------|----------|----------|----------|----------|----------|
| 1     | 58,500   | 43,500   | 38,900   | 27,100  | 46,700   | 39,600   | 44,900   | 47,100   | 54,900   | 37,900   | 38,400   | 36,600   |
| 2     | 63,000   | 45,200   | 37,900   | 26,900  | 44,600   | 39,600   | 46,000   | 46,700   | 49,100   | 38,600   | 38,600   | 37,400   |
| 3     | 57,200   | 47,900   | 37,400   | 26,700  | 41,000   | 39,400   | 47,100   | 47,500   | 45,600   | 38,400   | 39,400   | 37,200   |
| 4     | 54,400   | 47,500   | 41,300   | 26,900  | 38,400   | 41,300   | 47,900   | 46,000   | 44,600   | 38,400   | 39,900   | 36,900   |
| 5     | 52,600   | 47,500   | 45,600   | 27,100  | 37,600   | 41,000   | 50,800   | 45,200   | 42,500   | 38,600   | 39,200   | 36,600   |
| 6     | 50,400   | 45,600   | 38,400   | 26,900  | 37,900   | 39,900   | 51,300   | 45,200   | 40,400   | 38,200   | 39,400   | 36,400   |
| 7     | 50,000   | 45,200   | 35,000   | 26,700  | 35,600   | 39,200   | 50,800   | 43,200   | 43,200   | 37,900   | 39,400   | 36,600   |
| 8     | 50,400   | 44,600   | 33,600   | 26,500  | 35,000   | 39,400   | 48,700   | 43,500   | 44,200   | 37,900   | 39,200   | 36,600   |
| 9     | 49,100   | 44,900   | 32,900   | 26,000  | 35,400   | 39,400   | 49,100   | 44,600   | 67,500   | 37,900   | 39,400   | 36,600   |
| 10    | 65,100   | 44,600   | 32,500   | 25,000  | 35,200   | 39,200   | 47,900   | 43,800   | 57,200   | 37,600   | 41,300   | 36,600   |
| 11    | 100,000  | 43,200   | 32,500   | 24,000  | 34,300   | 39,200   | 47,900   | 44,900   | 48,700   | 37,600   | 42,800   | 36,600   |
| 12    | 122,000  | 43,200   | 32,200   | 22,500  | 34,000   | 38,900   | 49,100   | 49,500   | 48,700   | 37,900   | 41,300   | 38,400   |
| 13    | 102,000  | 43,200   | 33,200   | 21,000  | 35,000   | 39,200   | 49,100   | 50,000   | 51,300   | 38,400   | 39,600   | 39,900   |
| 14    | 75,000   | 42,500   | 34,300   | 21,000  | 37,600   | 39,400   | 50,000   | 50,400   | 46,700   | 38,200   | 40,700   | 38,900   |
| 15    | 65,000   | 43,500   | 33,400   | 21,000  | 39,200   | 39,400   | 52,200   | 47,100   | 46,700   | 37,900   | 45,600   | 38,600   |
| 16    | 60,500   | 43,800   | 31,600   | 21,000  | 38,200   | 39,200   | 51,300   | 46,300   | 45,600   | 37,400   | 44,200   | 37,600   |
| 17    | 54,900   | 42,800   | 30,900   | 24,000  | 37,600   | 39,200   | 50,000   | 50,400   | 44,600   | 37,200   | 43,500   | 36,900   |
| 18    | 51,300   | 43,500   | 31,100   | 34,000  | 39,600   | 39,200   | 47,900   | 62,500   | 44,900   | 36,900   | 41,600   | 37,200   |
| 19    | 49,100   | 43,800   | 29,900   | 38,000  | 50,800   | 39,200   | 47,100   | 72,000   | 44,200   | 37,600   | 39,400   | 38,200   |
| 20    | 48,300   | 43,800   | 27,700   | 40,000  | 48,300   | 39,400   | 46,300   | 87,800   | 41,300   | 38,200   | 37,900   | 38,400   |
| 21    | 46,700   | 48,700   | 26,900   | 39,000  | 47,900   | 39,900   | 58,000   | 66,500   | 41,300   | 37,600   | 36,900   | 38,400   |
| 22    | 46,000   | 54,000   | 26,700   | 38,000  | 44,900   | 41,900   | 50,400   | 57,200   | 41,000   | 37,400   | 36,600   | 38,400   |
| 23    | 45,200   | 53,100   | 26,700   | 37,000  | 40,700   | 45,200   | 49,100   | 59,500   | 41,000   | 37,200   | 36,900   | 37,900   |
| 24    | 43,800   | 50,800   | 27,700   | 38,000  | 36,900   | 49,100   | 49,100   | 52,600   | 42,000   | 36,900   | 36,900   | 38,200   |
| 25    | 42,800   | 50,400   | 32,500   | 42,000  | 37,200   | 49,500   | 47,900   | 49,100   | 44,000   | 37,200   | 36,900   | 38,200   |
| 26    | 41,900   | 50,000   | 32,900   | 46,000  | 35,900   | 48,700   | 47,900   | 49,500   | 46,000   | 37,400   | 36,200   | 38,200   |
| 27    | 41,900   | 48,300   | 31,100   | 44,000  | 36,200   | 50,000   | 47,100   | 50,800   | 40,400   | 37,600   | 36,400   | 37,400   |
| 28    | 41,900   | 46,300   | 30,700   | 42,800  | 37,600   | 48,300   | 46,700   | 53,100   | 39,600   | 37,900   | 36,400   | 37,600   |
| 29    | 42,200   | 43,200   | 30,700   | 41,600  | -----    | 47,500   | 50,800   | 50,400   | 39,400   | 37,900   | 36,200   | 37,600   |
| 30    | 41,900   | 41,000   | 30,300   | 41,900  | -----    | 48,300   | 54,400   | 54,400   | 38,400   | 38,400   | 36,400   | 37,900   |
| 31    | 42,800   | -----    | 28,700   | 44,600  | -----    | 46,700   | -----    | 66,000   | -----    | 38,600   | 36,400   | -----    |
| TOTAL | 1,755.9M | 1,375.6M | 1,015.2M | 987,200 | 1,099.3M | 1,305.4M | 1,476.8M | 1,622.8M | 1,365.0M | 1,172.8M | 1,213.0M | 1,128.0M |
| MEAN  | 56,640   | 45,850   | 32,750   | 31,850  | 39,260   | 42,110   | 49,230   | 52,350   | 45,500   | 37,830   | 39,130   | 37,600   |
| MAX   | 122,000  | 54,000   | 45,600   | 46,000  | 50,800   | 50,000   | 58,000   | 87,800   | 67,500   | 38,600   | 45,600   | 39,900   |
| MIN   | 41,900   | 41,000   | 26,700   | 21,000  | 34,000   | 38,900   | 44,900   | 43,200   | 38,400   | 36,900   | 36,200   | 36,400   |
| AC-FT | 3,483M   | 2,729M   | 2,014M   | 1,958M  | 2,180M   | 2,589M   | 2,929M   | 3,219M   | 2,707M   | 2,326M   | 2,406M   | 2,237M   |

CAL YR 1973 TOTAL 18,567,600 MEAN 50,870 MAX 122,000 MIN 24,000 AC-FT 36,830,000  
WTR YR 1974 TOTAL 15,517,000 MEAN 42,510 MAX 122,000 MIN 21,000 AC-FT 30,780,000

M Expressed in thousands



06816000 Mill Creek at Oregon, Mo.

LOCATION.--Lat 39°58'55", long 95°07'37", in NE¼NE¼ sec.35, T.60 N., R.38 W., Holt County, on left bank at downstream side of bridge on U.S. Highway 275, 0.5 mi (0.8 km) upstream from Rock Creek, 1 mi (1.6 km) southeast of Oregon, and 7 mi (11.2 km) upstream from mouth.

DRAINAGE AREA.--4.90 mi<sup>2</sup> (12.69 km<sup>2</sup>).

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

GAGE.--Water-stage recorder. Datum of gage is 921.26 ft (280.800 m) above mean sea level.

AVERAGE DISCHARGE.--24 years, 2.15 ft<sup>3</sup>/s (0.061 m<sup>3</sup>/s), 5.96 in/yr (151 mm/yr), 1,560 acre-ft/yr (1.92 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 4,700 ft<sup>3</sup>/s (133 m<sup>3</sup>/s) May 18 (gage height, 9.10 ft or 2.774 m); minimum, 1.4 ft<sup>3</sup>/s (0.040 m<sup>3</sup>/s) July 29, 30 (gage height, 1.26 ft or 0.384 m).  
Period of record: Maximum discharge, 4,700 ft<sup>3</sup>/s (133 m<sup>3</sup>/s) May 18, 1974 (gage height, 9.10 ft or 2.774 m); no flow at times most years.

REMARKS.--Records poor.

REVISIONS (WATER YEARS).--WSP 2119: 1960 (M).

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT   | NOV   | DEC   | JAN   | FEB   | MAR   | APR   | MAY   | JUN   | JUL  | AUG  | SEP   |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|-------|
| 1     | 6.1   | 7.0   | 7.8   | 6.3   | 5.8   | 4.9   | 5.4   | 4.3   | 5.4   | 4.0  | 1.8  | 1.5   |
| 2     | 5.4   | 6.8   | 7.8   | 6.3   | 6.1   | 4.9   | 4.5   | 4.3   | 5.2   | 4.0  | 1.9  | 1.8   |
| 3     | 5.4   | 6.6   | 7.8   | 6.3   | 5.8   | 4.9   | 4.7   | 4.3   | 5.2   | 4.7  | 1.7  | 1.6   |
| 4     | 5.4   | 6.3   | 35    | 6.3   | 5.8   | 7.2   | 4.5   | 4.1   | 7.9   | 4.5  | 1.7  | 1.6   |
| 5     | 5.6   | 6.3   | 10    | 6.3   | 6.1   | 5.4   | 4.5   | 4.1   | 5.4   | 4.0  | 1.6  | 1.6   |
| 6     | 7.0   | 6.1   | 7.5   | 6.3   | 5.6   | 5.4   | 4.7   | 4.1   | 17    | 3.9  | 2.3  | 1.6   |
| 7     | 5.4   | 6.3   | 7.3   | 6.3   | 6.1   | 5.4   | 4.5   | 4.1   | 6.8   | 3.7  | 2.1  | 1.6   |
| 8     | 5.4   | 6.3   | 7.5   | 6.3   | 5.8   | 7.0   | 4.1   | 4.9   | 86    | 3.5  | 2.2  | 1.6   |
| 9     | 5.2   | 6.3   | 7.5   | 6.3   | 5.6   | 5.6   | 4.3   | 5.2   | 30    | 3.2  | 7.2  | 1.6   |
| 10    | 96    | 6.3   | 7.0   | 6.0   | 5.6   | 5.4   | 4.5   | 5.2   | 6.6   | 3.2  | 2.7  | 1.6   |
| 11    | 71    | 6.1   | 7.3   | 6.0   | 6.1   | 5.6   | 4.5   | 5.8   | 6.4   | 3.2  | 2.1  | 1.6   |
| 12    | 14    | 6.1   | 7.0   | 6.0   | 5.8   | 5.4   | 4.7   | 4.7   | 5.2   | 2.7  | 1.9  | 48    |
| 13    | 11    | 6.1   | 7.3   | 6.0   | 5.8   | 5.4   | 4.7   | 5.2   | 5.0   | 2.7  | 1.9  | 21    |
| 14    | 9.8   | 5.8   | 7.0   | 6.2   | 5.6   | 5.4   | 4.7   | 5.2   | 5.8   | 2.7  | 1.9  | 1.7   |
| 15    | 9.5   | 5.8   | 6.6   | 6.2   | 5.6   | 5.6   | 4.5   | 4.9   | 5.0   | 2.5  | 2.1  | 1.7   |
| 16    | 9.2   | 5.8   | 6.6   | 6.2   | 5.8   | 5.4   | 4.7   | 5.2   | 4.7   | 2.4  | 7.0  | 1.7   |
| 17    | 8.6   | 5.6   | 6.3   | 6.3   | 5.8   | 5.4   | 4.5   | 64    | 4.5   | 2.3  | 2.5  | 1.7   |
| 18    | 8.6   | 5.6   | 6.6   | 6.3   | 5.8   | 5.4   | 4.5   | 487   | 4.3   | 2.3  | 2.3  | 1.6   |
| 19    | 8.3   | 5.6   | 6.3   | 6.3   | 5.2   | 5.2   | 4.5   | 13    | 4.3   | 2.5  | 2.2  | 1.6   |
| 20    | 8.0   | 30    | 6.3   | 6.3   | 5.2   | 5.4   | 8.1   | 11    | 4.3   | 2.1  | 1.9  | 1.6   |
| 21    | 8.0   | 9.5   | 6.3   | 6.3   | 6.6   | 5.2   | 11    | 17    | 4.2   | 2.1  | 1.6  | 1.7   |
| 22    | 8.0   | 9.2   | 6.3   | 6.3   | 5.8   | 5.2   | 4.5   | 12    | 4.0   | 2.1  | 1.6  | 1.6   |
| 23    | 8.9   | 9.2   | 6.3   | 6.1   | 5.4   | 6.3   | 4.1   | 8.1   | 4.2   | 2.1  | 1.6  | 2.2   |
| 24    | 7.8   | 8.6   | 11    | 6.1   | 9.2   | 5.4   | 4.1   | 7.6   | 5.0   | 2.1  | 1.6  | 1.8   |
| 25    | 7.8   | 8.3   | 8.9   | 6.3   | 8.3   | 5.4   | 4.1   | 6.8   | 4.2   | 1.9  | 1.6  | 2.1   |
| 26    | 7.8   | 8.3   | 7.0   | 6.6   | 5.4   | 5.2   | 3.8   | 7.2   | 4.0   | 1.9  | 1.5  | 1.8   |
| 27    | 7.8   | 8.3   | 7.0   | 6.1   | 5.2   | 5.8   | 3.8   | 6.8   | 4.0   | 1.7  | 1.5  | 2.1   |
| 28    | 7.5   | 7.8   | 7.0   | 6.1   | 4.9   | 5.4   | 4.1   | 7.6   | 3.9   | 1.7  | 1.5  | 2.3   |
| 29    | 7.3   | 7.8   | 6.8   | 6.1   | ----- | 4.9   | 5.6   | 5.9   | 3.9   | 1.5  | 1.5  | 1.7   |
| 30    | 7.0   | 7.8   | 6.8   | 6.1   | ----- | 4.9   | 4.3   | 5.4   | 3.9   | 1.5  | 1.5  | 1.6   |
| 31    | 6.8   | ----- | 6.3   | 5.8   | ----- | 5.2   | ----- | 5.0   | ----- | 1.6  | 1.5  | ----- |
| TOTAL | 389.6 | 231.6 | 252.2 | 192.4 | 165.8 | 169.2 | 144.5 | 740.0 | 314.9 | 84.3 | 68.0 | 117.2 |
| MEAN  | 12.6  | 7.72  | 8.14  | 6.21  | 5.92  | 5.46  | 4.82  | 23.9  | 10.5  | 2.72 | 2.19 | 3.91  |
| MAX   | 96    | 30    | 35    | 6.6   | 9.2   | 7.2   | 11    | 487   | 86    | 4.7  | 7.2  | 48    |
| MIN   | 5.2   | 5.6   | 6.3   | 5.8   | 4.9   | 4.9   | 3.8   | 4.1   | 3.9   | 1.5  | 1.5  | 1.5   |
| CFSM  | 2.57  | 1.58  | 1.66  | 1.27  | 1.21  | 1.11  | .98   | 4.88  | 2.14  | .56  | .45  | .80   |
| IN.   | 2.96  | 1.76  | 1.91  | 1.46  | 1.26  | 1.28  | 1.10  | 5.62  | 2.39  | .64  | .52  | .89   |
| AC-FT | 773   | 459   | 500   | 382   | 329   | 336   | 287   | 1,470 | 625   | 167  | 135  | 232   |

CAL YR 1973 TOTAL 2,456.1 MEAN 6.73 MAX 121 MIN 2.0 CFSM 1.37 IN 18.65 AC-FT 4,870  
WTR YR 1974 TOTAL 2,869.7 MEAN 7.86 MAX 487 MIN 1.5 CFSM 1.60 IN 21.79 AC-FT 5,690

PEAK DISCHARGE (BASE, 150 FT<sup>3</sup>/S)

| DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|------|------|-------|-----------|
| 10-10 | 2245 | 4.82  | 918       | 5-21 | 1015 | 3.37  | 263       |
| 5-17  | 0630 | 3.88  | 450       | 6-8  | 1845 | 4.69  | 852       |
| 5-18  | 0400 | 9.10  | 4,700     | 9-12 | 0230 | 4.03  | 514       |

## 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, near left bank on downstream end of bridge pier on U.S. Highway 136, 0.5 mi (0.8 km) upstream from Mill Creek, 0.5 mi (0.8 km) downstream from Norfolk and Western Railroad Co. bridge, and 1.5 mi (2.4 km) west of Burlington Junction.

DRAINAGE AREA.--1,240 mi<sup>2</sup> (3,210 km<sup>2</sup>), approximately.

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

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

AVERAGE DISCHARGE.--52 years, 529 ft<sup>3</sup>/s (14.98 m<sup>3</sup>/s), 5.79 in/yr (147 mm/yr), 383,200 acre-ft/yr (472 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 46,000 ft<sup>3</sup>/s (1,300 m<sup>3</sup>/s) Oct. 11 (gage height, 19.85 ft or 6.050 m); minimum discharge, 54 ft<sup>3</sup>/s (1.53 m<sup>3</sup>/s) Sept. 26 (gage height, 0.95 ft or 0.290 m).  
Period of record: Maximum discharge, 46,000 ft<sup>3</sup>/s (1,300 m<sup>3</sup>/s) Oct. 11, 1973 (gage height, 19.85 ft or 6.050 m); maximum gage height observed, 20.69 ft (6.306 m), present datum, Mar. 5, 1949 (ice jam); minimum discharge, 1.1 ft<sup>3</sup>/s (0.031 m<sup>3</sup>/s) Aug. 7, 1934.

REMARKS.--Records fair.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY         | OCT           | NOV    | DEC        | JAN     | FEB        | MAR     | APR     | MAY     | JUN       | JUL    | AUG      | SEP   |                 |  |
|-------------|---------------|--------|------------|---------|------------|---------|---------|---------|-----------|--------|----------|-------|-----------------|--|
| 1           | 3,500         | 815    | 1,080      | 1,100   | 3,710      | 3,000   | 790     | 3,000   | 1,360     | 326    | 81       | 75    |                 |  |
| 2           | 1,870         | 740    | 1,050      | 1,000   | 2,150      | 2,420   | 715     | 2,240   | 990       | 298    | 81       | 87    |                 |  |
| 3           | 1,470         | 715    | 1,020      | 1,100   | 1,600      | 2,700   | 690     | 1,790   | 930       | 277    | 81       | 87    |                 |  |
| 4           | 1,400         | 680    | 3,600      | 1,000   | 1,260      | 3,100   | 715     | 1,470   | 960       | 270    | 84       | 84    |                 |  |
| 5           | 1,180         | 640    | 4,260      | 1,000   | 1,150      | 3,200   | 840     | 1,360   | 900       | 264    | 87       | 75    |                 |  |
| 6           | 990           | 635    | 2,330      | 1,000   | 1,220      | 2,600   | 840     | 1,220   | 900       | 258    | 87       | 75    |                 |  |
| 7           | 960           | 640    | 1,360      | 1,000   | 930        | 1,990   | 715     | 1,150   | 1,050     | 255    | 84       | 75    |                 |  |
| 8           | 960           | 640    | 1,290      | 1,000   | 840        | 2,900   | 690     | 1,120   | 870       | 240    | 87       | 78    |                 |  |
| 9           | 960           | 630    | 1,510      | 1,000   | 870        | 2,420   | 660     | 1,120   | 9,040     | 234    | 114      | 72    |                 |  |
| 10          | 6,120         | 620    | 1,200      | 1,000   | 960        | 1,990   | 635     | 1,200   | 4,640     | 225    | 207      | 69    |                 |  |
| 11          | 34,500        | 610    | 900        | 1,000   | 900        | 1,670   | 630     | 1,260   | 2,620     | 219    | 150      | 66    |                 |  |
| 12          | 25,000        | 630    | 1,150      | 1,000   | 1,050      | 1,670   | 640     | 1,470   | 1,610     | 216    | 130      | 90    |                 |  |
| 13          | 7,900         | 615    | 1,710      | 1,000   | 1,750      | 2,070   | 665     | 1,120   | 1,320     | 213    | 105      | 93    |                 |  |
| 14          | 3,680         | 620    | 1,320      | 1,000   | 1,500      | 1,670   | 665     | 1,200   | 1,160     | 198    | 162      | 84    |                 |  |
| 15          | 2,680         | 605    | 960        | 1,000   | 1,150      | 1,470   | 690     | 1,590   | 1,010     | 198    | 186      | 84    |                 |  |
| 16          | 2,170         | 580    | 850        | 1,000   | 990        | 1,360   | 715     | 1,220   | 881       | 192    | 159      | 75    |                 |  |
| 17          | 1,870         | 565    | 765        | 1,000   | 1,300      | 1,260   | 690     | 2,990   | 798       | 177    | 258      | 72    |                 |  |
| 18          | 1,690         | 550    | 780        | 1,200   | 1,830      | 1,180   | 630     | 3,200   | 753       | 171    | 198      | 72    |                 |  |
| 19          | 1,550         | 528    | 790        | 1,500   | 1,910      | 1,150   | 605     | 4,040   | 719       | 165    | 153      | 66    |                 |  |
| 20          | 1,420         | 5,060  | 800        | 2,000   | 1,360      | 1,080   | 962     | 2,800   | 678       | 159    | 130      | 63    |                 |  |
| 21          | 1,300         | 7,600  | 800        | 3,000   | 1,260      | 1,020   | 10,200  | 1,790   | 632       | 155    | 105      | 63    |                 |  |
| 22          | 1,210         | 3,710  | 1,000      | 3,500   | 1,590      | 960     | 5,660   | 1,550   | 587       | 150    | 96       | 60    |                 |  |
| 23          | 1,130         | 2,150  | 2,150      | 2,510   | 1,120      | 930     | 3,300   | 1,710   | 539       | 147    | 84       | 60    |                 |  |
| 24          | 1,110         | 2,700  | 2,070      | 1,750   | 1,050      | 870     | 2,510   | 1,180   | 508       | 132    | 81       | 60    |                 |  |
| 25          | 1,030         | 2,800  | 2,800      | 1,870   | 990        | 870     | 1,990   | 1,120   | 488       | 120    | 78       | 57    |                 |  |
| 26          | 990           | 1,910  | 2,500      | 2,330   | 1,150      | 900     | 1,710   | 1,080   | 462       | 117    | 75       | 54    |                 |  |
| 27          | 930           | 2,510  | 2,150      | 2,700   | 1,400      | 960     | 1,590   | 1,750   | 434       | 105    | 72       | 60    |                 |  |
| 28          | 930           | 1,710  | 1,710      | 3,100   | 2,150      | 900     | 1,510   | 1,600   | 410       | 102    | 72       | 63    |                 |  |
| 29          | 840           | 1,400  | 1,360      | 2,420   | -----      | 870     | 5,010   | 1,510   | 379       | 87     | 69       | 69    |                 |  |
| 30          | 840           | 1,220  | 1,290      | 3,300   | -----      | 840     | 4,370   | 1,910   | 350       | 84     | 69       | 60    |                 |  |
| 31          | 815           | -----  | 1,200      | 5,660   | -----      | 840     | -----   | 1,990   | -----     | 78     | 75       | ----- |                 |  |
| TOTAL       | 112,995       | 44,828 | 47,755     | 54,040  | 39,140     | 50,860  | 52,032  | 53,750  | 37,978    | 5,832  | 3,500    | 2,148 |                 |  |
| MEAN        | 3,645         | 1,494  | 1,540      | 1,743   | 1,398      | 1,641   | 1,734   | 1,734   | 1,266     | 188    | 113      | 71.6  |                 |  |
| MAX         | 34,500        | 7,600  | 4,260      | 5,660   | 3,710      | 3,200   | 10,200  | 4,040   | 9,040     | 326    | 258      | 93    |                 |  |
| MIN         | 815           | 528    | 765        | 1,000   | 840        | 840     | 605     | 1,080   | 350       | 78     | 69       | 54    |                 |  |
| CFSM        | 2.94          | 1.20   | 1.24       | 1.41    | 1.13       | 1.32    | 1.40    | 1.40    | 1.02      | .15    | .09      | .06   |                 |  |
| IN.         | 3.39          | 1.34   | 1.43       | 1.62    | 1.17       | 1.53    | 1.56    | 1.61    | 1.14      | .17    | .11      | .06   |                 |  |
| AC-FT       | 224,100       | 88,920 | 94,720     | 107,200 | 77,630     | 100,900 | 103,200 | 106,600 | 75,330    | 11,570 | 6,940    | 4,260 |                 |  |
| CAL YR 1973 | TOTAL 804,954 |        | MEAN 2,205 |         | MAX 34,500 |         | MIN 201 |         | CFSM 1.78 |        | IN 24.15 |       | AC-FT 1,597,000 |  |
| WTR YR 1974 | TOTAL 504,858 |        | MEAN 1,383 |         | MAX 34,500 |         | MIN 54  |         | CFSM 1.12 |        | IN 15.15 |       | AC-FT 1,001,000 |  |

PEAK DISCHARGE (BASE, 8,500 FT<sup>3</sup>/S)

| DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|------|------|-------|-----------|
| 10-11 | 1210 | 19.85 | 46,000    | 4-21 | 1130 | 11.87 | 11,800    |
| 11-21 | 0430 | 10.62 | 9,790     | 6-9  | 0500 | 14.72 | 17,500    |

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, on left bank at left abutment of St. Joseph & Grand Island Railroad bridge in St. Joseph. River mile, 448.2 (721.2 km).

DRAINAGE AREA.--424,300 mi<sup>2</sup> (1,099,000 km<sup>2</sup>), approximately.

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.

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

AVERAGE DISCHARGE.--46 years, 38,550 ft<sup>3</sup>/s (1,092 m<sup>3</sup>/s), 27,930,000 acre-ft/yr (34,440 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 200,000 ft<sup>3</sup>/s (5,660 m<sup>3</sup>/s) Oct. 13 (gage height, 25.63 ft or 7.812 m); minimum daily discharge, 23,000 ft<sup>3</sup>/s (651 m<sup>3</sup>/s) Jan. 13-16; minimum gage height, 7.41 ft (2.259 m) Dec. 22.

Period of record: Maximum discharge, 397,000 ft<sup>3</sup>/s (11,240 m<sup>3</sup>/s) Apr. 22, 23, 1952 (gage height, 26.82 ft or 8.175 m); minimum, 2,300 ft<sup>3</sup>/s (65.1 m<sup>3</sup>/s) Jan. 9, 1937; minimum gage height, 0.00 ft (0.000 m) Dec. 18, 19, 1940.

Maximum stage known, 27.2 ft (8.29 m), present datum, Apr. 29, 1881 (discharge, about 370,000 ft<sup>3</sup>/s or 10,500 m<sup>3</sup>/s, computed by Corps of Engineers).

Flood of June 1844 reached a stage of 24.5 ft or 7.47 m (discharge, about 350,000 ft<sup>3</sup>/s or 9,910 m<sup>3</sup>/s, computed by Corps of Engineers).

REMARKS.--Records good. Discharge measurements made 3 or more times a month during winter and 4 or more times monthly during rest of year. Flow partly regulated by many upstream reservoirs. Records of chemical analyses are published in Part 2 of this report.

REVISIONS.--WSP 761: Drainage area.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT      | NOV      | DEC      | JAN      | FEB      | MAR      | APR      | MAY      | JUN      | JUL      | AUG      | SEP      |
|-------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 1     | 72,300   | 46,900   | 42,100   | 34,700   | 50,800   | 43,700   | 50,200   | 60,400   | 60,600   | 38,500   | 40,900   | 39,600   |
| 2     | 70,200   | 47,800   | 41,100   | 34,000   | 48,700   | 44,700   | 47,900   | 55,700   | 53,400   | 38,400   | 41,000   | 39,400   |
| 3     | 66,700   | 49,700   | 40,800   | 34,200   | 46,000   | 44,200   | 49,400   | 55,100   | 49,700   | 39,200   | 41,200   | 39,100   |
| 4     | 61,800   | 50,000   | 43,800   | 34,400   | 42,800   | 45,600   | 51,300   | 53,600   | 48,300   | 40,000   | 41,700   | 38,500   |
| 5     | 59,500   | 50,100   | 47,000   | 34,900   | 40,800   | 47,600   | 52,400   | 52,100   | 46,600   | 39,600   | 41,100   | 37,700   |
| 6     | 56,800   | 49,400   | 45,000   | 34,000   | 41,100   | 45,900   | 53,200   | 50,800   | 45,100   | 39,500   | 41,100   | 37,100   |
| 7     | 55,300   | 49,000   | 44,200   | 32,000   | 39,000   | 44,700   | 52,100   | 49,500   | 48,500   | 39,400   | 41,100   | 36,600   |
| 8     | 54,400   | 48,300   | 41,300   | 27,000   | 37,300   | 44,400   | 50,300   | 49,300   | 47,100   | 39,400   | 40,700   | 36,000   |
| 9     | 52,900   | 47,800   | 40,900   | 27,000   | 37,900   | 46,000   | 50,000   | 50,700   | 43,600   | 39,500   | 40,200   | 35,700   |
| 10    | 70,700   | 47,900   | 39,300   | 26,500   | 38,300   | 44,400   | 48,700   | 50,600   | 75,500   | 39,300   | 41,400   | 35,900   |
| 11    | 171,000  | 46,700   | 38,800   | 26,000   | 37,900   | 43,900   | 47,900   | 50,100   | 56,300   | 39,300   | 44,200   | 36,300   |
| 12    | 194,000  | 46,300   | 38,800   | 24,000   | 37,300   | 43,300   | 50,300   | 55,000   | 52,600   | 39,400   | 44,200   | 38,700   |
| 13    | 195,000  | 46,300   | 40,000   | 23,000   | 37,500   | 43,500   | 51,800   | 56,900   | 53,100   | 39,600   | 42,800   | 39,100   |
| 14    | 161,000  | 45,800   | 41,800   | 23,000   | 39,800   | 44,000   | 53,300   | 56,200   | 50,600   | 39,800   | 42,400   | 38,900   |
| 15    | 112,000  | 46,100   | 40,900   | 23,000   | 43,500   | 43,800   | 55,400   | 54,100   | 48,200   | 39,400   | 45,600   | 38,500   |
| 16    | 82,200   | 47,100   | 39,100   | 23,000   | 43,600   | 43,500   | 56,700   | 52,100   | 47,400   | 38,700   | 47,700   | 38,000   |
| 17    | 68,700   | 46,400   | 37,500   | 26,000   | 42,500   | 43,100   | 55,300   | 64,100   | 46,000   | 38,500   | 46,800   | 37,600   |
| 18    | 61,400   | 46,000   | 37,700   | 38,500   | 42,900   | 43,500   | 54,200   | 101,000  | 45,800   | 38,500   | 45,300   | 37,500   |
| 19    | 57,500   | 46,300   | 37,900   | 42,000   | 50,000   | 43,000   | 52,600   | 84,800   | 45,700   | 38,700   | 43,600   | 37,900   |
| 20    | 55,000   | 52,300   | 35,200   | 45,000   | 53,400   | 42,700   | 54,100   | 106,000  | 44,300   | 39,400   | 42,200   | 38,300   |
| 21    | 53,000   | 64,000   | 33,700   | 43,500   | 51,200   | 43,200   | 62,600   | 89,200   | 43,300   | 39,300   | 41,800   | 38,700   |
| 22    | 51,100   | 62,700   | 33,500   | 42,000   | 49,800   | 44,300   | 75,400   | 64,700   | 43,300   | 39,100   | 41,800   | 39,300   |
| 23    | 50,000   | 63,200   | 33,600   | 42,000   | 46,400   | 46,900   | 60,600   | 62,600   | 42,900   | 39,000   | 41,700   | 39,000   |
| 24    | 49,100   | 60,700   | 35,400   | 43,000   | 42,300   | 49,700   | 56,900   | 58,700   | 43,300   | 39,100   | 41,600   | 39,100   |
| 25    | 48,500   | 60,900   | 41,900   | 50,000   | 40,600   | 53,200   | 55,200   | 51,900   | 45,500   | 38,900   | 41,500   | 39,800   |
| 26    | 48,000   | 59,200   | 43,900   | 54,600   | 40,000   | 52,400   | 53,400   | 51,800   | 47,200   | 39,000   | 41,400   | 40,000   |
| 27    | 47,600   | 57,400   | 40,000   | 48,500   | 40,000   | 52,700   | 52,300   | 53,000   | 44,200   | 39,500   | 41,000   | 39,900   |
| 28    | 47,300   | 51,900   | 38,800   | 47,200   | 40,800   | 52,700   | 52,200   | 56,900   | 41,800   | 40,100   | 40,800   | 40,300   |
| 29    | 47,300   | 47,000   | 38,600   | 46,300   | -----    | 52,300   | 54,700   | 56,700   | 41,100   | 40,700   | 40,600   | 40,400   |
| 30    | 47,000   | 44,300   | 38,400   | 46,200   | -----    | 52,500   | 68,700   | 54,500   | 40,300   | 40,700   | 40,300   | 40,800   |
| 31    | 46,500   | -----    | 36,500   | 47,800   | -----    | 52,000   | -----    | 69,000   | -----    | 41,200   | 40,100   | -----    |
| TOTAL | 2,313.8M | 1,527.5M | 1,227.5M | 1,123.3M | 1,202.2M | 1,437.4M | 1,629.1M | 1,877.1M | 1,481.3M | 1,220.7M | 1,307.8M | 1,153.7M |
| MEAN  | 74,640   | 50,920   | 39,600   | 36,240   | 42,940   | 46,370   | 54,300   | 60,550   | 49,380   | 39,380   | 42,190   | 38,460   |
| MAX   | 195,000  | 64,000   | 47,000   | 54,600   | 53,400   | 53,200   | 75,400   | 106,000  | 83,600   | 41,200   | 47,700   | 40,800   |
| MIN   | 46,500   | 44,300   | 33,500   | 23,000   | 37,300   | 42,700   | 47,900   | 49,300   | 40,300   | 38,400   | 40,100   | 35,700   |
| AC-FT | 4,589M   | 3,030M   | 2,435M   | 2,228M   | 2,385M   | 2,851M   | 3,231M   | 3,723M   | 2,938M   | 2,421M   | 2,594M   | 2,288M   |

CAL YR 1973 TOTAL 21,600,700 MEAN 59,180 MAX 195,000 MIN 16,900 AC-FT 42,840,000  
WTR YR 1974 TOTAL 17,501,400 MEAN 47,950 MAX 195,000 MIN 23,000 AC-FT 34,710,000

M Expressed in thousands.

06819500 One Hundred and Two River at Maryville, Mo.

LOCATION.--Lat 40°20'45", long 94°49'56", in SW¼SW¼ sec.34, T.64 N., R.35 W., Nodaway County, on right bank at intake for city waterworks, just upstream from City Waterworks dam, 150 ft (45.7 m) upstream from bridge on U.S. Highway 136, 0.3 mi (0.48 km) downstream from Thill Branch, 1 mi (1.6 km) east of Maryville and at mile 64.0 (103.0 km).

DRAINAGE AREA.--515 mi<sup>2</sup> (1,334 km<sup>2</sup>).

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

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

AVERAGE DISCHARGE.--42 years, 206 ft<sup>3</sup>/s (5.83 m<sup>3</sup>/s), 5.59 in/yr (142 mm/yr), 149,200 acre-ft/yr (184 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 28,000 ft<sup>3</sup>/s (793 m<sup>3</sup>/s) Oct. 12 (gage height, 19.25 ft or 5.867 m); minimum, 1.1 ft<sup>3</sup>/s (0.031 m<sup>3</sup>/s) Sept. 27 (gage height, 3.44 ft or 1.049 m).

Period of record: Maximum discharge, 28,000 ft<sup>3</sup>/s (793 m<sup>3</sup>/s) Oct. 12, 1973 (gage height, 19.25 ft or 5.867 m); no flow at times in August, September 1934, July 25, 26, 1940, Jan 28-30, 1954, and for part of each day July 29, 30, 1960, caused by temporary storage behind dam, built to direct flow into new channel.

Flood of Sept. 16, 1926, reached a stage of 15 ft (4.6 m), present site, from floodmark (discharge, 14,500 ft<sup>3</sup>/s or 411 m<sup>3</sup>/s).

REMARKS.--Records poor.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT     | NOV    | DEC    | JAN    | FEB    | MAR    | APR    | MAY    | JUN    | JUL   | AUG   | SEP   |
|-------|---------|--------|--------|--------|--------|--------|--------|--------|--------|-------|-------|-------|
| 1     | 2,240   | 183    | 410    | 150    | 835    | 860    | 130    | 320    | 760    | 40    | 9.0   | 4.5   |
| 2     | 920     | 162    | 350    | 100    | 610    | 660    | 130    | 268    | 600    | 38    | 11    | 6.8   |
| 3     | 485     | 148    | 350    | 90     | 560    | 735    | 132    | 258    | 400    | 35    | 12    | 9.5   |
| 4     | 330     | 122    | 3,010  | 80     | 385    | 735    | 200    | 239    | 300    | 39    | 12    | 8.5   |
| 5     | 237     | 117    | 4,230  | 70     | 435    | 1,100  | 132    | 190    | 237    | 29    | 14    | 5.4   |
| 6     | 197     | 117    | 890    | 65     | 410    | 635    | 104    | 168    | 170    | 27    | 14    | 6.7   |
| 7     | 200     | 114    | 485    | 60     | 270    | 460    | 233    | 156    | 364    | 23    | 11    | 7.0   |
| 8     | 204     | 104    | 400    | 60     | 288    | 1,430  | 117    | 152    | 566    | 22    | 10    | 6.0   |
| 9     | 183     | 96     | 300    | 60     | 340    | 1,130  | 96     | 150    | 8,380  | 21    | 18    | 4.7   |
| 10    | 2,820   | 89     | 200    | 60     | 292    | 785    | 96     | 134    | 9,850  | 20    | 27    | 4.3   |
| 11    | 14,200  | 87     | 200    | 60     | 320    | 485    | 204    | 261    | 1,100  | 19    | 22    | 4.2   |
| 12    | 25,500  | 89     | 200    | 60     | 385    | 610    | 117    | 339    | 700    | 18    | 14    | 13    |
| 13    | 5,460   | 94     | 500    | 60     | 435    | 760    | 204    | 169    | 485    | 18    | 11    | 14    |
| 14    | 980     | 96     | 400    | 60     | 460    | 560    | 129    | 610    | 585    | 17    | 13    | 12    |
| 15    | 635     | 91     | 300    | 60     | 360    | 435    | 129    | 542    | 385    | 14    | 35    | 11    |
| 16    | 485     | 87     | 250    | 60     | 320    | 257    | 142    | 239    | 292    | 13    | 27    | 7.3   |
| 17    | 460     | 82     | 200    | 100    | 360    | 240    | 129    | 2,690  | 225    | 11    | 29    | 5.1   |
| 18    | 385     | 78     | 150    | 200    | 435    | 220    | 96     | 1,750  | 200    | 10    | 31    | 3.8   |
| 19    | 360     | 75     | 120    | 500    | 485    | 200    | 152    | 1,470  | 180    | 8.6   | 18    | 3.4   |
| 20    | 310     | 3,480  | 100    | 2,000  | 385    | 190    | 96     | 705    | 169    | 7.2   | 12    | 3.5   |
| 21    | 274     | 4,770  | 100    | 4,690  | 435    | 180    | 1,000  | 493    | 176    | 5.8   | 10    | 4.3   |
| 22    | 245     | 860    | 150    | 1,520  | 710    | 170    | 890    | 696    | 148    | 5.2   | 9.6   | 3.7   |
| 23    | 218     | 535    | 140    | 980    | 510    | 170    | 510    | 435    | 148    | 5.0   | 8.2   | 3.9   |
| 24    | 211     | 1,190  | 200    | 950    | 460    | 160    | 400    | 415    | 122    | 6.3   | 6.6   | 2.7   |
| 25    | 204     | 810    | 1,000  | 1,150  | 385    | 160    | 340    | 373    | 122    | 7.2   | 7.2   | 1.5   |
| 26    | 197     | 510    | 900    | 2,240  | 435    | 150    | 283    | 301    | 114    | 8.6   | 8.1   | 1.4   |
| 27    | 183     | 1,520  | 700    | 2,800  | 760    | 150    | 257    | 322    | 112    | 8.6   | 5.7   | 1.6   |
| 28    | 176     | 1,430  | 500    | 1,160  | 1,280  | 140    | 253    | 353    | 73     | 9.0   | 4.4   | 4.1   |
| 29    | 166     | 610    | 400    | 1,160  | -----  | 140    | 685    | 382    | 44     | 9.0   | 4.4   | 2.0   |
| 30    | 162     | 485    | 300    | 1,580  | -----  | 130    | 710    | 2,720  | 42     | 9.0   | 4.2   | 1.5   |
| 31    | 172     | -----  | 200    | 1,820  | -----  | 130    | -----  | 3,640  | -----  | 9.0   | 4.2   | ----- |
| TOTAL | 58,799  | 18,231 | 17,635 | 24,005 | 13,345 | 14,167 | 8,096  | 20,940 | 27,049 | 512.5 | 422.6 | 167.4 |
| MEAN  | 1,897   | 608    | 569    | 774    | 477    | 457    | 270    | 675    | 902    | 16.5  | 13.6  | 5.58  |
| MAX   | 25,500  | 4,770  | 4,230  | 4,690  | 1,280  | 1,430  | 1,000  | 3,640  | 9,850  | 40    | 35    | 14    |
| MIN   | 162     | 75     | 100    | 60     | 270    | 130    | 96     | 134    | 42     | 5.0   | 4.2   | 1.4   |
| CFSM  | 3.68    | 1.18   | 1.10   | 1.50   | .93    | .89    | .52    | 1.31   | 1.75   | .03   | .03   | .01   |
| IN.   | 4.25    | 1.32   | 1.27   | 1.73   | .96    | 1.02   | .58    | 1.51   | 1.95   | .04   | .03   | .01   |
| AC-FT | 116,600 | 36,160 | 34,980 | 47,610 | 26,470 | 28,100 | 16,060 | 41,530 | 53,650 | 1,020 | 838   | 332   |

CAL YR 1973 TOTAL 258,328.0 MEAN 708 MAX 25,500 MIN 16 CFSM 1.37 IN 18.66 AC-FT 512,400  
WTR YR 1974 TOTAL 203,369.5 MEAN 557 MAX 25,500 MIN 1.4 CFSM 1.08 IN 14.69 AC-FT 403,400

PEAK DISCHARGE (BASE, 7,500 FT<sup>3</sup>/S)

| DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|------|------|-------|-----------|
| 10-12 | 1000 | 19.25 | 28,000    | 6-10 | 0930 | 17.59 | 14,000    |

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, on left bank 10 ft (0.3 m) downstream from bridge of U.S. Highway 169, 1.5 mi (2.4 km) downstream from Third Fork, 3.5 mi (5.6 km) northeast of Agency, and at mile 66.8 (107.5 km).

DRAINAGE AREA.--1,760 mi<sup>2</sup> (4,560 km<sup>2</sup>), approximately.

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

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

AVERAGE DISCHARGE.--47 years (1924-29, 1932-74), 867 ft<sup>3</sup>/s (24.6 m<sup>3</sup>/s), 6.69 in/yr (170 mm/yr), 628,100 acre-ft/yr (774 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 41,100 ft<sup>3</sup>/s (1,160 m<sup>3</sup>/s) Oct. 14 (gage height, 29.45 ft or 8.976 m); minimum daily, 27 ft<sup>3</sup>/s (0.76 m<sup>3</sup>/s) Sept. 30.

Period of record: Maximum discharge, 53,000 ft<sup>3</sup>/s (1,500 m<sup>3</sup>/s) from loop rating, July 20, 1965 (gage height, 35.05 ft or 10.683 m); no flow at times in July and August 1934 and October 1956.

REMARKS.--Records fair above 300 ft<sup>3</sup>/s (8.50 m<sup>3</sup>/s) and poor below and during ice effect.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY             | OCT     | NOV       | DEC     | JAN     | FEB    | MAR    | APR    | MAY     | JUN     | JUL   | AUG   | SEP   |
|-----------------|---------|-----------|---------|---------|--------|--------|--------|---------|---------|-------|-------|-------|
| 1               | 10,400  | 533       | 1,110   | 630     | 4,540  | 2,070  | 544    | 1,500   | 9,260   | 371   | 134   | 42    |
| 2               | 9,060   | 507       | 899     | 600     | 2,410  | 1,850  | 535    | 877     | 3,560   | 356   | 143   | 44    |
| 3               | 4,030   | 481       | 774     | 580     | 1,320  | 1,380  | 480    | 653     | 1,370   | 332   | 125   | 45    |
| 4               | 1,680   | 450       | 4,430   | 560     | 913    | 1,960  | 468    | 571     | 1,530   | 300   | 161   | 44    |
| 5               | 1,020   | 416       | 10,700  | 540     | 778    | 2,390  | 446    | 528     | 906     | 361   | 180   | 41    |
| 6               | 932     | 389       | 8,760   | 520     | 845    | 2,420  | 436    | 483     | 1,010   | 241   | 241   | 38    |
| 7               | 1,150   | 373       | 3,210   | 510     | 685    | 1,730  | 460    | 422     | 4,060   | 200   | 274   | 35    |
| 8               | 753     | 365       | 1,490   | 495     | 644    | 1,310  | 439    | 384     | 1,610   | 165   | 230   | 30    |
| 9               | 641     | 347       | 1,250   | 468     | 547    | 3,460  | 405    | 376     | 12,300  | 154   | 152   | 26    |
| 10              | 2,610   | 331       | 993     | 474     | 584    | 3,250  | 388    | 382     | 20,200  | 139   | 143   | 31    |
| 11              | 21,900  | 331       | 824     | 435     | 615    | 1,950  | 377    | 397     | 18,300  | 136   | 116   | 30    |
| 12              | 34,400  | 326       | 766     | 401     | 624    | 1,410  | 378    | 426     | 12,600  | 116   | 98    | 280   |
| 13              | 39,000  | 321       | 820     | 407     | 621    | 1,400  | 375    | 570     | 7,710   | 103   | 89    | 430   |
| 14              | 40,600  | 321       | 1,220   | 417     | 653    | 1,710  | 384    | 602     | 4,500   | 101   | 96    | 210   |
| 15              | 39,000  | 319       | 1,280   | 423     | 703    | 1,280  | 394    | 562     | 2,290   | 94    | 81    | 143   |
| 16              | 28,300  | 300       | 900     | 452     | 628    | 1,120  | 392    | 1,370   | 1,580   | 86    | 161   | 91    |
| 17              | 12,000  | 289       | 600     | 635     | 554    | 1,010  | 424    | 13,100  | 1,220   | 83    | 180   | 75    |
| 18              | 4,710   | 280       | 550     | 1,230   | 573    | 903    | 416    | 28,000  | 945     | 72    | 167   | 60    |
| 19              | 2,420   | 275       | 500     | 3,440   | 648    | 801    | 382    | 29,700  | 804     | 72    | 123   | 50    |
| 20              | 1,840   | 4,430     | 500     | 6,080   | 717    | 761    | 379    | 16,800  | 715     | 69    | 100   | 41    |
| 21              | 1,510   | 12,100    | 550     | 12,300  | 857    | 726    | 774    | 5,900   | 643     | 64    | 93    | 39    |
| 22              | 1,300   | 12,200    | 600     | 14,100  | 1,480  | 681    | 4,370  | 5,130   | 562     | 64    | 77    | 38    |
| 23              | 1,100   | 7,620     | 700     | 17,400  | 1,550  | 638    | 3,330  | 2,370   | 490     | 64    | 63    | 37    |
| 24              | 990     | 2,480     | 1,000   | 14,700  | 1,010  | 607    | 1,360  | 1,740   | 463     | 60    | 54    | 35    |
| 25              | 871     | 2,920     | 1,240   | 7,910   | 631    | 563    | 873    | 1,250   | 445     | 54    | 50    | 34    |
| 26              | 782     | 2,890     | 2,590   | 3,930   | 705    | 559    | 699    | 1,030   | 430     | 56    | 46    | 32    |
| 27              | 721     | 1,590     | 3,070   | 7,760   | 865    | 557    | 630    | 903     | 420     | 57    | 42    | 31    |
| 28              | 668     | 2,290     | 1,840   | 7,260   | 1,170  | 585    | 585    | 853     | 410     | 54    | 41    | 30    |
| 29              | 613     | 3,530     | 1,160   | 3,750   | -----  | 578    | 795    | 1,010   | 390     | 54    | 39    | 28    |
| 30              | 573     | 1,710     | 841     | 2,930   | -----  | 558    | 951    | 1,030   | 380     | 52    | 39    | 27    |
| 31              | 525     | -----     | 603     | 3,810   | -----  | 546    | -----  | 5,970   | -----   | 60    | 39    | ----- |
| TOTAL           | 266,099 | 60,714    | 55,770  | 115,147 | 27,870 | 40,763 | 22,869 | 124,889 | 111,103 | 4,190 | 3,577 | 2,117 |
| MEAN            | 8,584   | 2,024     | 1,799   | 3,714   | 995    | 1,315  | 762    | 4,029   | 3,703   | 135   | 115   | 70.6  |
| MAX             | 40,600  | 12,200    | 10,700  | 17,400  | 4,540  | 3,460  | 4,370  | 29,700  | 20,200  | 371   | 274   | 430   |
| MIN             | 525     | 275       | 500     | 401     | 547    | 546    | 375    | 376     | 380     | 52    | 39    | 26    |
| CFSM            | 4.88    | 1.15      | 1.02    | 2.11    | .57    | .75    | .43    | 2.29    | 2.10    | .08   | .07   | .04   |
| IN.             | 5.62    | 1.28      | 1.18    | 2.43    | .59    | .86    | .48    | 2.64    | 2.35    | .09   | .08   | .04   |
| AC-FT           | 527,800 | 120,400   | 110,600 | 228,400 | 55,280 | 80,850 | 45,360 | 247,700 | 220,400 | 8,310 | 7,090 | 4,200 |
| CAL YR 1973     | TOTAL   | 1,263,069 | MEAN    | 3,460   | MAX    | 40,600 | MIN    | 83      | CFSM    | 1.97  | IN    | 26.70 |
| WTR YR 1974     | TOTAL   | 835,108   | MEAN    | 2,288   | MAX    | 40,600 | MIN    | 26      | CFSM    | 1.30  | IN    | 17.65 |
| AC-FT 2,505,000 |         |           |         |         |        |        |        |         |         |       |       |       |
| AC-FT 1,656,000 |         |           |         |         |        |        |        |         |         |       |       |       |

PEAK DISCHARGE (BASE, 7,000 FT<sup>3</sup>/S)

| DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|------|------|-------|-----------|
| 10-14 | 1600 | 29.45 | 41,100    | 1-27 | 1745 | 18.69 | 8,380     |
| 11-21 | 2315 | 22.43 | 12,800    | 5-19 | 0430 | 26.83 | 33,100    |
| 12-5  | 2045 | 21.40 | 10,900    | 6-1  | 0430 | 20.38 | 10,400    |
| 1-23  | 1330 | 23.41 | 18,000    | 6-10 | 1230 | 24.06 | 20,800    |



06821000 Jenkins Branch at Gower, Mo.

LOCATION.--Lat 39°37'29", long 94°36'01", in SW¼NW¼ sec.34, T.56 N., R.33 W., Clinton County, on right bank at upstream side of culvert on U.S. Highway 169, 0.8 mi (1.3 km) north of Gower, and 4.4 mi (7.1 km) upstream from mouth.

DRAINAGE AREA.--2.72 mi<sup>2</sup> (7.04 km<sup>2</sup>).

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

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 905 ft (275.8 m) from topographic map.

AVERAGE DISCHARGE.--24 years, 1.66 ft<sup>3</sup>/s (0.047 m<sup>3</sup>/s), 8.29 in/yr (211 mm/yr), 1,200 acre-ft/yr (1.48 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 1,600 ft<sup>3</sup>/s (45.3 m<sup>3</sup>/s) May 18 (gage height, 8.63 ft or 2.630 m); minimum, no flow on many days.

Period of record: Maximum discharge, 3,460 ft<sup>3</sup>/s (98.0 m<sup>3</sup>/s) July 20, 1965 (gage height, 13.27 ft or 4.045 m), from rating curve extended above 240 ft<sup>3</sup>/s (6.8 m<sup>3</sup>/s) on basis of slope-area measurement at gage height, 9.03 ft (2.752 m) and contracted-opening measurement at gage height 13.27 ft (4.045 m); no flow on many days most years.

REMARKS.--Records poor.

REVISIONS (WATER YEARS).--WSP 1440: 1950-51, 1954-55.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT   | NOV   | DEC    | JAN   | FEB   | MAR   | APR   | MAY    | JUN    | JUL  | AUG  | SEP   |
|-------|-------|-------|--------|-------|-------|-------|-------|--------|--------|------|------|-------|
| 1     | 9.0   | 2.8   | 2.4    | .90   | 3.0   | 2.2   | .70   | 1.5    | 1.3    | .20  | 0    | .10   |
| 2     | 4.9   | 2.2   | 2.4    | .90   | 2.6   | 2.2   | .60   | 1.3    | 1.0    | .20  | 0    | .20   |
| 3     | 3.8   | 2.2   | 2.2    | .90   | 2.2   | 2.0   | .60   | .80    | .90    | .20  | 0    | 0     |
| 4     | 3.0   | 2.2   | 4.2    | .90   | 2.2   | 2.2   | .60   | .70    | 2.3    | .40  | 0    | 0     |
| 5     | 2.6   | 2.0   | 5.2    | .90   | 2.6   | 1.8   | .60   | .70    | 1.2    | .30  | 0    | 0     |
| 6     | 8.9   | 1.7   | 3.4    | .90   | 2.2   | 1.8   | .60   | .70    | 77     | .30  | 0    | 0     |
| 7     | 4.6   | 1.4   | 2.8    | .80   | 1.8   | 1.7   | .60   | .70    | 2.2    | .20  | .10  | 0     |
| 8     | 3.8   | 1.7   | 3.2    | .70   | 1.8   | 2.8   | .50   | .60    | 15     | .20  | .20  | 0     |
| 9     | 3.0   | 1.7   | 2.8    | .60   | 1.8   | 1.8   | .50   | .70    | 51     | .20  | .10  | 0     |
| 10    | 94    | 1.7   | 2.4    | .50   | 1.8   | 2.2   | .60   | .70    | .60    | .20  | .10  | 0     |
| 11    | 196   | 1.7   | 2.8    | .40   | 2.0   | 2.2   | .70   | .60    | .60    | .30  | 0    | 0     |
| 12    | 9.0   | 1.8   | 2.8    | .40   | 2.0   | 1.7   | .60   | .40    | 1.3    | .20  | 0    | 0     |
| 13    | 6.1   | 2.0   | 2.4    | .40   | 2.0   | 1.5   | .60   | .40    | .80    | .10  | 0    | 0     |
| 14    | 4.9   | 2.0   | 2.4    | .20   | 1.7   | 1.5   | .60   | 1.2    | .80    | .10  | 0    | 0     |
| 15    | 4.3   | 1.8   | 2.0    | .10   | 1.7   | 1.8   | .60   | .50    | .70    | .10  | 0    | 0     |
| 16    | 3.6   | 1.8   | 1.7    | .10   | 1.7   | 1.4   | .70   | .40    | .60    | .10  | .20  | 0     |
| 17    | 3.4   | 1.8   | 1.8    | .40   | 1.7   | 1.4   | .70   | 149    | .60    | .10  | .10  | 0     |
| 18    | 3.2   | 2.0   | 1.7    | 3.5   | 3.8   | 1.4   | .80   | 250    | .50    | .10  | 0    | 0     |
| 19    | 3.0   | 2.0   | 1.5    | 2.8   | 2.4   | 1.0   | .80   | 6.7    | .40    | .10  | 0    | 0     |
| 20    | 2.8   | 36    | 1.5    | 14    | 1.8   | 1.0   | 1.6   | 3.6    | .40    | .10  | 0    | 0     |
| 21    | 2.4   | 5.5   | 1.3    | 7.5   | 12    | 1.3   | .60   | 3.0    | .40    | .10  | 0    | 0     |
| 22    | 2.4   | 4.1   | 1.1    | 9.5   | 6.4   | 1.0   | .40   | 65     | .30    | .10  | 0    | 0     |
| 23    | 2.2   | 3.8   | .90    | 4.9   | 3.8   | 1.2   | .40   | 3.8    | .30    | .10  | 0    | 0     |
| 24    | 3.2   | 3.6   | 2.0    | 4.9   | 3.4   | .80   | .40   | 2.4    | .30    | .10  | 0    | 0     |
| 25    | 3.2   | 2.8   | 1.0    | 4.3   | 2.4   | .80   | .40   | 2.2    | .20    | .10  | 0    | 0     |
| 26    | 3.2   | 2.6   | .90    | 7.5   | 2.8   | .90   | .30   | 1.7    | .20    | .10  | 0    | 0     |
| 27    | 3.6   | 4.9   | .90    | 5.5   | 2.8   | .90   | .40   | 1.7    | .20    | .10  | 0    | 0     |
| 28    | 3.2   | 3.8   | .90    | 4.0   | 2.2   | .90   | .40   | 1.7    | .20    | 0    | 0    | 0     |
| 29    | 3.0   | 2.8   | .90    | 3.6   | ----- | .90   | 17    | 1.3    | .20    | 0    | 0    | 0     |
| 30    | 2.8   | 2.4   | .90    | 3.4   | ----- | .90   | 2.6   | 20     | .20    | 0    | 0    | 0     |
| 31    | 3.0   | ----- | .90    | 3.0   | ----- | .90   | ----- | 5.8    | -----  | 0    | 0    | ----- |
| TOTAL | 406.1 | 108.8 | 101.10 | 88.40 | 78.6  | 46.10 | 36.50 | 529.80 | 161.70 | 4.40 | .80  | .30   |
| MEAN  | 13.1  | 3.63  | 3.26   | 2.85  | 2.81  | 1.49  | 1.22  | 17.1   | 5.39   | .14  | .026 | .010  |
| MAX   | 196   | 36    | 42     | 14    | 12    | 2.8   | 17    | 250    | 77     | .40  | .20  | .20   |
| MIN   | 2.2   | 1.4   | .90    | .10   | 1.7   | .80   | .30   | .40    | .20    | 0    | 0    | 0     |
| CFSM  | 4.82  | 1.33  | 1.20   | 1.05  | 1.03  | .55   | .45   | 6.29   | 1.98   | .05  | .010 | .004  |
| IN.   | 5.55  | 1.49  | 1.38   | 1.21  | 1.07  | .63   | .50   | 7.25   | 2.21   | .06  | .01  | .004  |
| AC-FT | 805   | 216   | 201    | 175   | 156   | 91    | 72    | 1,050  | 321    | 8.7  | 1.6  | .6    |

CAL YR 1973 TOTAL 2,001.80 MEAN 5.48 MAX 196 MIN .10 CFSM 2.01 IN 27.38 AC-FT 3,970  
WTR YR 1974 TOTAL 1,562.60 MEAN 4.28 MAX 250 MIN 0 CFSM 1.57 IN 21.37 AC-FT 3,100

PEAK DISCHARGE (BASE, 200 FT<sup>3</sup>/S)

| DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|------|------|-------|-----------|
| 10-10 | 2400 | 6.63  | 990       | 5-22 | 0145 | 5.97  | 790       |
| 12-4  | 0700 | 3.10  | 242       | 5-30 | 2145 | 3.63  | 338       |
| 5-17  | 0630 | 5.72  | 737       | 6-6  | 2030 | 6.45  | 923       |
| 5-18  | 0900 | 8.63  | 1,600     | 6-9  | 0115 | 5.60  | 713       |

06821150 Little Platte River at Smithville, Mo.

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

DRAINAGE AREA.--234 mi<sup>2</sup> (606 km<sup>2</sup>).

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

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

AVERAGE DISCHARGE.--9 years, 167 ft<sup>3</sup>/s (4.73 m<sup>3</sup>/s), 9.69 in/yr (246 mm/yr), 121,000 acre-ft/yr (149 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 39,000 ft<sup>3</sup>/s (1,100 m<sup>3</sup>/s) May 18 (gage height, 39.72 ft or 12.107 m); minimum daily, 1.0 ft<sup>3</sup>/s (0.028 m<sup>3</sup>/s) July 25.

Period of record: Maximum discharge, 76,600 ft<sup>3</sup>/s (2,170 m<sup>3</sup>/s), slope-area measurement of peak flow, July 20, 1965 (gage height, 44.8 ft or 13.66 m, from floodmark); no flow at times in many years. Flood of 1947 reached a stage of 37.4 ft (11.40 m).

REMARKS.--Records fair prior to June 10 and poor thereafter. Construction of dam for Smithville Lake began in June.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT    | NOV   | DEC    | JAN    | FEB   | MAR   | APR   | MAY    | JUN    | JUL   | AUG   | SEP   |
|-------|--------|-------|--------|--------|-------|-------|-------|--------|--------|-------|-------|-------|
| 1     | 2,250  | 61    | 56     | 200    | 124   | 87    | 51    | 367    | 1,120  | 19    | 3.3   | 171   |
| 2     | 987    | 55    | 54     | 150    | 113   | 80    | 47    | 198    | 155    | 16    | 2.8   | 74    |
| 3     | 324    | 48    | 52     | 100    | 93    | 79    | 47    | 137    | 51     | 14    | 2.0   | 35    |
| 4     | 214    | 45    | 1,730  | 80     | 70    | 196   | 48    | 103    | 397    | 21    | 2.8   | 18    |
| 5     | 147    | 46    | 1,130  | 60     | 85    | 193   | 46    | 88     | 451    | 109   | 2.5   | 11    |
| 6     | 253    | 41    | 329    | 58     | 95    | 134   | 44    | 77     | 302    | 36    | 4.0   | 8.0   |
| 7     | 428    | 41    | 167    | 56     | 63    | 98    | 43    | 69     | 1,320  | 19    | 4.8   | 5.5   |
| 8     | 245    | 43    | 141    | 54     | 60    | 145   | 43    | 72     | 1,720  | 15    | 3.0   | 4.3   |
| 9     | 149    | 40    | 129    | 52     | 60    | 145   | 39    | 65     | 3,320  | 12    | 5.5   | 4.0   |
| 10    | 130    | 35    | 101    | 50     | 59    | 113   | 35    | 82     | 1,730  | 10    | 8.0   | 3.3   |
| 11    | 12,700 | 35    | 96     | 50     | 54    | 133   | 35    | 102    | 310    | 9.3   | 7.3   | 3.3   |
| 12    | 11,300 | 37    | 95     | 50     | 59    | 128   | 37    | 94     | 184    | 7.6   | 5.9   | 2.8   |
| 13    | 2,260  | 38    | 96     | 50     | 61    | 107   | 36    | 74     | 135    | 12    | 5.4   | 1.8   |
| 14    | 474    | 40    | 83     | 50     | 57    | 92    | 35    | 540    | 115    | 9.1   | 4.8   | 1.5   |
| 15    | 413    | 42    | 75     | 50     | 50    | 92    | 34    | 331    | 89     | 5.5   | 2.0   | 1.3   |
| 16    | 347    | 34    | 57     | 50     | 46    | 92    | 36    | 154    | 65     | 4.5   | 5.2   | 2.3   |
| 17    | 280    | 32    | 54     | 60     | 44    | 84    | 40    | 11,400 | 51     | 1.8   | 23    | 2.8   |
| 18    | 207    | 33    | 54     | 100    | 50    | 81    | 36    | 21,100 | 48     | 11    | 22    | 3.0   |
| 19    | 170    | 35    | 51     | 200    | 71    | 76    | 34    | 7,940  | 43     | 2.7   | 14    | 3.3   |
| 20    | 148    | 1,090 | 101    | 300    | 55    | 70    | 55    | 1,330  | 39     | 2.0   | 9.6   | 5.8   |
| 21    | 126    | 1,090 | 62     | 500    | 199   | 65    | 169   | 367    | 32     | 3.0   | 20    | 2.5   |
| 22    | 116    | 338   | 46     | 750    | 692   | 66    | 80    | 1,220  | 26     | 2.8   | 136   | 2.3   |
| 23    | 103    | 156   | 46     | 578    | 380   | 59    | 58    | 923    | 22     | 2.5   | 35    | 2.0   |
| 24    | 93     | 125   | 108    | 309    | 201   | 52    | 50    | 323    | 19     | 2.3   | 17    | 2.3   |
| 25    | 87     | 103   | 186    | 244    | 113   | 57    | 45    | 244    | 19     | 1.0   | 11    | 2.5   |
| 26    | 71     | 90    | 158    | 317    | 116   | 56    | 42    | 205    | 20     | 1.3   | 7.3   | 2.8   |
| 27    | 72     | 82    | 114    | 827    | 114   | 57    | 37    | 170    | 21     | 2.5   | 5.4   | 3.5   |
| 28    | 68     | 93    | 86     | 413    | 104   | 58    | 46    | 149    | 20     | 2.8   | 3.8   | 4.0   |
| 29    | 65     | 83    | 76     | 242    | ----- | 60    | 814   | 359    | 20     | 2.5   | 3.3   | 3.3   |
| 30    | 60     | 65    | 58     | 190    | ----- | 55    | 1,730 | 192    | 19     | 3.0   | 3.3   | 2.5   |
| 31    | 63     | ----- | 196    | 148    | ----- | 52    | ----- | 608    | -----  | 6.8   | 13    | ----- |
| TOTAL | 34,350 | 4,096 | 5,787  | 6,338  | 3,288 | 2,862 | 3,892 | 49,083 | 11,863 | 367.0 | 393.0 | 389.7 |
| MEAN  | 1,108  | 137   | 187    | 204    | 117   | 92.3  | 130   | 1,583  | 395    | 11.8  | 12.7  | 13.0  |
| MAX   | 12,700 | 1,090 | 1,730  | 827    | 692   | 196   | 1,730 | 21,100 | 3,320  | 109   | 136   | 171   |
| MIN   | 60     | 32    | 46     | 50     | 44    | 52    | 34    | 65     | 19     | 1.0   | 2.0   | 1.3   |
| CFSM  | 4.74   | .59   | .80    | .87    | .50   | .39   | .56   | 6.77   | 1.69   | .05   | .05   | .06   |
| IN.   | 5.46   | .65   | .92    | 1.01   | .52   | .45   | .62   | 7.80   | 1.89   | .06   | .06   | .06   |
| AC-FT | 68,130 | 8,120 | 11,480 | 12,570 | 6,520 | 5,680 | 7,720 | 97,360 | 23,530 | 728   | 780   | 773   |

|             |                 |          |            |         |           |          |               |
|-------------|-----------------|----------|------------|---------|-----------|----------|---------------|
| CAL YR 1973 | TOTAL 181,289.6 | MEAN 497 | MAX 12,700 | MIN 4.6 | CFSM 2.12 | IN 28.82 | AC-FT 359,600 |
| WTR YR 1974 | TOTAL 122,708.7 | MEAN 336 | MAX 21,100 | MIN 1.0 | CFSM 1.44 | IN 19.51 | AC-FT 243,400 |

PEAK DISCHARGE (BASE, 3,000 FT<sup>3</sup>/S)

| DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|------|------|-------|-----------|
| 10-11 | 1445 | 36.39 | 17,700    | 6-9  | 2015 | 26.91 | 3,500     |
| 5-18  | 1045 | 39.72 | 39,000    |      |      |       |           |

06892350 Kansas River at DeSoto, Kans.  
(Formerly published as 06892500 Kansas River at Bonner Springs, Kans.)

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

DRAINAGE AREA.--59,756 mi<sup>2</sup> (154,768 km<sup>2</sup>), of which a large area is noncontributing.

PERIOD OF RECORD.--July 1917 to current year. Monthly discharge only for some periods published in WSP 1310.

GAGE.--Water-stage recorder. Datum of gage is 758.87 ft (231.304 m) above mean sea level. July 9, 1917 to Apr. 23, 1934, nonrecording gage; Apr. 24, 1934 to Nov. 26, 1961, water-stage recorder at site 9.7 mi (15.6 km) downstream at datum 11.81 ft (3.006 m) lower; Nov. 26, 1961 to Sept. 30, 1971, water-stage recorder at site 10.2 mi (16.4 km) downstream at datum 17.81 ft (5.428 m) lower; and Oct. 1, 1971 to Sept. 30, 1973, at site 10.2 mi (16.4 km) downstream at datum 22.81 ft (6.992 m) lower.

AVERAGE DISCHARGE.--57 years, 6,947 ft<sup>3</sup>/s (196.7 m<sup>3</sup>/s), 5,033,000 acre-ft/yr (6.21 km<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 146,000 ft<sup>3</sup>/s (4,130 m<sup>3</sup>/s) Oct. 13 (gage height, 27.54 ft or 8.394 m); minimum, 2,280 ft<sup>3</sup>/s (64.57 m<sup>3</sup>/s) July 24.  
Period of record: Maximum discharge, 510,000 ft<sup>3</sup>/s (14,400 m<sup>3</sup>/s) July 13, 1951 (gage height, 37.3 ft or 11.37 m, from floodmarks) present site and datum, from rating curve extended above 128,000 ft<sup>3</sup>/s (3,620 m<sup>3</sup>/s) on basis of slope-area measurement of peak flow at mile 19.52 (31.41 km) and at mile 18.60 (29.93 km); minimum observed, 160 ft<sup>3</sup>/s (4.53 m<sup>3</sup>/s) Oct. 11, 1956.  
Maximum stage known since at least 1844, that of July 13, 1951.

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

REVISIONS (WATER YEARS).--WSP 806: Drainage area.

#### DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT      | NOV      | DEC     | JAN     | FEB     | MAR     | APR     | MAY     | JUN     | JUL     | AUG     | SEP     |
|-------|----------|----------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1     | 39,400   | 51,700   | 30,400  | 15,200  | 22,100  | 14,000  | 7,750   | 27,100  | 10,900  | 4,580   | 2,560   | 3,920   |
| 2     | 37,100   | 50,500   | 29,700  | 12,100  | 21,800  | 14,000  | 7,630   | 17,600  | 9,200   | 4,420   | 2,550   | 4,650   |
| 3     | 39,900   | 47,400   | 29,300  | 12,600  | 22,100  | 13,800  | 7,240   | 15,800  | 8,490   | 4,260   | 2,540   | 5,610   |
| 4     | 39,000   | 45,800   | 45,600  | 10,300  | 22,300  | 13,100  | 7,110   | 14,100  | 8,540   | 4,680   | 2,500   | 4,580   |
| 5     | 34,000   | 45,600   | 61,800  | 9,720   | 22,800  | 12,300  | 6,410   | 12,500  | 8,480   | 4,170   | 2,460   | 3,570   |
| 6     | 30,400   | 44,700   | 47,200  | 9,200   | 22,300  | 11,400  | 6,060   | 11,900  | 9,450   | 3,780   | 2,520   | 3,350   |
| 7     | 31,600   | 40,300   | 28,700  | 8,800   | 19,900  | 9,740   | 5,850   | 11,700  | 10,900  | 3,590   | 2,580   | 3,180   |
| 8     | 28,800   | 41,500   | 22,600  | 8,400   | 22,800  | 9,770   | 6,770   | 11,500  | 15,400  | 3,460   | 2,610   | 3,110   |
| 9     | 28,800   | 42,800   | 21,000  | 8,200   | 21,900  | 10,100  | 5,620   | 11,200  | 25,500  | 3,340   | 2,610   | 2,880   |
| 10    | 32,800   | 44,100   | 19,600  | 8,200   | 21,200  | 12,600  | 5,330   | 12,400  | 48,800  | 3,190   | 2,640   | 2,670   |
| 11    | 82,600   | 44,200   | 18,900  | 8,200   | 20,100  | 14,400  | 5,230   | 12,200  | 26,900  | 3,070   | 2,630   | 2,570   |
| 12    | 127,000  | 44,200   | 18,500  | 8,400   | 19,300  | 15,100  | 5,160   | 11,700  | 18,900  | 3,000   | 2,650   | 2,500   |
| 13    | 120,000  | 44,300   | 17,300  | 8,400   | 16,200  | 14,000  | 5,080   | 13,500  | 17,000  | 2,930   | 2,580   | 2,480   |
| 14    | 69,300   | 46,100   | 17,000  | 8,600   | 13,400  | 13,200  | 5,010   | 21,300  | 14,900  | 2,830   | 2,620   | 2,620   |
| 15    | 58,800   | 41,500   | 16,400  | 8,600   | 12,000  | 12,700  | 5,090   | 18,100  | 13,900  | 2,780   | 2,580   | 2,660   |
| 16    | 60,100   | 41,700   | 15,600  | 8,800   | 10,700  | 13,800  | 5,410   | 12,700  | 12,300  | 2,680   | 2,580   | 2,660   |
| 17    | 50,100   | 41,900   | 15,200  | 9,000   | 10,600  | 14,300  | 5,770   | 19,300  | 11,600  | 2,650   | 2,770   | 2,630   |
| 18    | 42,300   | 41,300   | 16,000  | 10,000  | 10,400  | 13,900  | 5,810   | 24,300  | 11,100  | 2,640   | 2,770   | 2,670   |
| 19    | 45,000   | 40,900   | 17,000  | 15,000  | 10,300  | 13,700  | 5,680   | 18,600  | 10,800  | 2,660   | 4,630   | 2,600   |
| 20    | 53,000   | 46,300   | 17,000  | 26,100  | 9,940   | 13,400  | 5,780   | 11,500  | 10,400  | 2,660   | 3,480   | 2,600   |
| 21    | 48,300   | 54,800   | 13,000  | 28,000  | 11,800  | 13,100  | 7,640   | 9,940   | 9,810   | 2,630   | 2,990   | 2,750   |
| 22    | 47,800   | 45,500   | 12,000  | 30,000  | 18,300  | 12,300  | 28,000  | 14,800  | 8,650   | 2,580   | 2,950   | 2,660   |
| 23    | 48,700   | 38,200   | 12,300  | 24,800  | 17,200  | 11,800  | 22,200  | 20,300  | 8,270   | 2,530   | 3,000   | 2,660   |
| 24    | 48,900   | 36,500   | 12,200  | 20,300  | 16,000  | 11,200  | 17,300  | 20,800  | 7,830   | 2,450   | 2,840   | 2,660   |
| 25    | 48,200   | 36,100   | 16,600  | 19,600  | 14,700  | 9,280   | 15,800  | 18,400  | 7,070   | 2,490   | 2,800   | 2,670   |
| 26    | 51,700   | 35,800   | 18,200  | 18,000  | 14,400  | 8,250   | 14,300  | 14,200  | 6,130   | 2,780   | 2,760   | 2,640   |
| 27    | 51,500   | 35,800   | 16,600  | 17,400  | 14,400  | 7,980   | 12,300  | 13,300  | 5,370   | 3,240   | 2,770   | 2,640   |
| 28    | 51,400   | 35,000   | 18,400  | 17,200  | 14,300  | 7,720   | 11,500  | 13,300  | 4,730   | 2,980   | 2,950   | 2,600   |
| 29    | 51,500   | 33,400   | 20,700  | 16,200  | -----   | 7,700   | 11,200  | 13,900  | 4,400   | 2,660   | 2,860   | 2,620   |
| 30    | 51,000   | 31,700   | 18,900  | 18,000  | -----   | 7,590   | 16,700  | 12,900  | 4,370   | 2,590   | 2,690   | 2,440   |
| 31    | 51,400   | -----    | 16,400  | 22,700  | -----   | 7,620   | -----   | 14,400  | -----   | 2,560   | 2,830   | -----   |
| TOTAL | 1,600,4M | 1,269,6M | 680,100 | 446,020 | 473,240 | 363,850 | 276,730 | 475,240 | 370,090 | 96,860  | 86,300  | 89,850  |
| MEAN  | 51,630   | 42,320   | 21,940  | 14,390  | 16,900  | 11,740  | 9,224   | 15,330  | 12,340  | 3,125   | 2,784   | 2,995   |
| MAX   | 127,000  | 54,800   | 61,800  | 30,000  | 22,800  | 15,100  | 28,000  | 27,100  | 48,800  | 4,680   | 4,630   | 5,610   |
| MIN   | 28,800   | 31,700   | 12,000  | 8,200   | 9,940   | 7,590   | 5,010   | 9,940   | 4,370   | 2,450   | 2,460   | 2,440   |
| AC-FT | 3,174M   | 2,518M   | 1,349M  | 884,700 | 938,700 | 721,700 | 548,900 | 942,600 | 734,100 | 192,100 | 171,200 | 178,200 |

CAL YR 1973 TOTAL 9,424,660 MEAN 25,820 MAX 127,000 MIN 2,960 AC-FT 18,690,000  
WTR YR 1974 TOTAL 6,228,280 MEAN 17,060 MAX 127,000 MIN 2,440 AC-FT 12,350,000

#### PEAK DISCHARGE (BASE, 17,000 FT/S)

| DATE  | TIME | G. H. | DISCHARGE | DATE  | TIME | G. H. | DISCHARGE | DATE  | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|-------|------|-------|-----------|-------|------|-------|-----------|
| 10-13 | 0300 | 27.54 | 146,000   | 02-22 | 0300 | 10.67 | 18,700    | 05-17 | 2100 | 13.78 | 30,400    |
| 11-21 | 1100 | 17.56 | 56,900    | 04-22 | 1000 | 13.79 | 30,400    | 05-24 | 1500 | 11.77 | 21,100    |
| 12-05 | 1200 | 19.12 | 64,000    | 05-01 | 0300 | 13.75 | 30,200    | 06-10 | 1000 | 17.94 | 54,600    |
| 01-22 | 0800 | 13.76 | 31,400    | 05-14 | 0800 | 12.25 | 23,100    |       |      |       |           |

M Expressed in thousands.

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, on downstream side of right pier of Chicago, Burlington, & Quincy Railroad bridge at Kansas City, 1.4 mi (2.3 km) downstream from Kansas River. River mile, 366.1 (589.1 km).

DRAINAGE AREA.--489,200 mi<sup>2</sup> (1,267,000 km<sup>2</sup>), 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.

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

AVERAGE DISCHARGE.--77 years (1898-1974), 54,740 ft<sup>3</sup>/s (1,550 m<sup>3</sup>/s), 39,660,000 acre-ft/yr (48,900 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 313,000 ft<sup>3</sup>/s (8,860 m<sup>3</sup>/s) Oct. 13 (gage height, 28.86 ft or 8.797 m); minimum, 26,100 ft<sup>3</sup>/s (739 m<sup>3</sup>/s) Jan. 13 (gage height, -0.51 ft or -0.155 m).  
Period of record: Maximum discharge, 573,000 ft<sup>3</sup>/s (16,230 m<sup>3</sup>/s) July 14, 1951; maximum gage height, 36.2 ft (11.03 m) July 14, 1951; minimum discharge, about 1,500 ft<sup>3</sup>/s (42.5 m<sup>3</sup>/s) Jan. 9, 10, 1937; minimum gage height, -2.91 ft (-0.887 m) Jan. 29, 1966.  
Maximum stage known, 38.0 ft (11.58 m) June 16, 1844 (discharge, about 625,000 ft<sup>3</sup>/s or 17,000 m<sup>3</sup>/s, computed by Corps of Engineers).

REMARKS.--Records good. Discharge measurements made 3 or more times a month during winter and 6 or more times monthly during rest of year. Flow partly regulated by many reservoirs above station.

REVISIONS (WATER YEARS).--WSP 761: Drainage area. WSP 1310: 1905.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT      | NOV      | DEC      | JAN      | FEB      | MAR      | APR      | MAY      | JUN      | JUL      | AUG      | SEP      |
|-------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 1     | 137,000  | 94,800   | 77,900   | 49,200   | 79,100   | 54,800   | 55,100   | 84,700   | 81,500   | 43,500   | 42,300   | 42,300   |
| 2     | 116,000  | 94,300   | 73,500   | 42,000   | 80,700   | 57,700   | 52,200   | 74,700   | 72,300   | 42,000   | 42,300   | 42,900   |
| 3     | 114,000  | 94,300   | 72,700   | 40,800   | 77,100   | 57,700   | 51,800   | 69,500   | 65,500   | 43,200   | 42,600   | 43,500   |
| 4     | 112,000  | 94,800   | 94,300   | 40,500   | 71,100   | 56,700   | 53,000   | 67,900   | 61,100   | 46,200   | 43,200   | 43,200   |
| 5     | 105,000  | 94,300   | 142,000  | 40,800   | 65,500   | 58,700   | 54,800   | 64,300   | 59,000   | 46,200   | 43,500   | 42,000   |
| 6     | 93,400   | 91,600   | 121,000  | 39,900   | 64,700   | 59,400   | 56,000   | 61,900   | 58,400   | 43,800   | 42,900   | 40,800   |
| 7     | 89,100   | 85,900   | 87,500   | 34,300   | 61,500   | 56,000   | 57,000   | 60,000   | 66,700   | 42,900   | 42,300   | 39,900   |
| 8     | 86,300   | 85,400   | 71,100   | 32,400   | 59,400   | 54,400   | 58,700   | 58,400   | 70,700   | 42,000   | 42,000   | 39,900   |
| 9     | 82,300   | 87,900   | 65,100   | 30,700   | 59,400   | 54,800   | 56,400   | 58,000   | 95,200   | 42,600   | 42,300   | 39,900   |
| 10    | 85,400   | 90,700   | 60,800   | 27,800   | 59,000   | 57,700   | 55,400   | 59,700   | 144,000  | 42,300   | 41,400   | 39,400   |
| 11    | 202,000  | 91,600   | 59,000   | 27,100   | 58,400   | 60,000   | 55,100   | 61,500   | 113,000  | 42,300   | 42,300   | 39,400   |
| 12    | 268,000  | 91,200   | 58,000   | 27,100   | 57,000   | 58,700   | 55,100   | 60,400   | 89,900   | 42,600   | 45,600   | 40,200   |
| 13    | 307,000  | 88,700   | 56,400   | 26,600   | 55,100   | 56,400   | 57,000   | 66,300   | 85,100   | 42,600   | 43,800   | 43,200   |
| 14    | 279,000  | 87,900   | 58,000   | 27,800   | 52,200   | 55,700   | 57,000   | 73,900   | 85,900   | 43,500   | 42,000   | 43,800   |
| 15    | 247,000  | 86,300   | 59,400   | 28,100   | 54,100   | 56,000   | 57,700   | 71,100   | 80,700   | 43,500   | 42,000   | 43,200   |
| 16    | 211,000  | 87,900   | 57,000   | 31,000   | 56,000   | 55,400   | 59,000   | 60,400   | 73,100   | 43,500   | 47,400   | 42,000   |
| 17    | 166,000  | 87,900   | 52,800   | 33,000   | 53,800   | 55,400   | 58,700   | 78,700   | 65,100   | 42,600   | 48,900   | 40,800   |
| 18    | 138,000  | 85,900   | 51,800   | 37,100   | 50,900   | 54,800   | 57,400   | 144,000  | 59,000   | 41,700   | 48,000   | 39,900   |
| 19    | 124,000  | 85,100   | 53,800   | 46,500   | 52,500   | 54,400   | 56,000   | 177,000  | 57,000   | 41,100   | 46,500   | 39,600   |
| 20    | 121,000  | 92,500   | 50,900   | 54,100   | 60,400   | 54,100   | 56,700   | 145,000  | 57,400   | 41,700   | 45,000   | 40,200   |
| 21    | 112,000  | 119,000  | 45,900   | 59,700   | 59,700   | 54,100   | 63,100   | 135,000  | 56,000   | 42,900   | 42,900   | 40,800   |
| 22    | 103,000  | 118,000  | 43,800   | 69,100   | 64,700   | 54,100   | 98,500   | 107,000  | 54,400   | 42,300   | 42,900   | 40,800   |
| 23    | 101,000  | 109,000  | 41,100   | 73,900   | 66,300   | 55,100   | 93,400   | 95,200   | 53,800   | 42,000   | 42,900   | 41,100   |
| 24    | 99,500   | 104,000  | 42,300   | 78,700   | 61,100   | 57,000   | 81,100   | 93,400   | 52,500   | 41,400   | 43,200   | 40,500   |
| 25    | 98,500   | 102,000  | 49,900   | 145,000  | 57,000   | 59,000   | 73,500   | 80,700   | 51,800   | 41,700   | 42,000   | 40,800   |
| 26    | 101,000  | 97,000   | 65,500   | 127,000  | 54,400   | 58,700   | 67,900   | 69,100   | 53,500   | 41,700   | 42,000   | 41,400   |
| 27    | 102,000  | 93,800   | 64,300   | 86,300   | 52,800   | 57,400   | 64,300   | 66,300   | 52,800   | 42,000   | 42,300   | 41,100   |
| 28    | 99,500   | 89,900   | 61,500   | 83,500   | 53,200   | 58,000   | 62,300   | 67,500   | 45,900   | 42,300   | 43,200   | 40,200   |
| 29    | 99,000   | 85,900   | 63,100   | 75,500   | -----    | 56,700   | 63,500   | 70,700   | 43,800   | 42,000   | 41,700   | 40,200   |
| 30    | 97,500   | 82,700   | 61,500   | 71,900   | -----    | 55,400   | 70,700   | 67,100   | 43,500   | 41,700   | 40,800   | 40,800   |
| 31    | 96,100   | -----    | 56,700   | 74,700   | -----    | 56,000   | -----    | 69,100   | -----    | 41,400   | 40,200   | -----    |
| TOTAL | 4,192.6M | 2,800.3M | 2,018.6M | 1,662.1M | 1,697.1M | 1,750.3M | 1,858.4M | 2,518.5M | 2,048.6M | 1,321.2M | 1,340.4M | 1,233.8M |
| MEAN  | 135,200  | 93,340   | 65,120   | 53,620   | 60,610   | 56,460   | 61,950   | 81,240   | 68,290   | 42,620   | 43,240   | 41,130   |
| MAX   | 307,000  | 119,000  | 142,000  | 145,000  | 80,700   | 60,000   | 98,500   | 177,000  | 144,000  | 46,200   | 48,900   | 43,800   |
| MIN   | 82,300   | 82,700   | 41,100   | 26,600   | 50,900   | 54,100   | 51,800   | 58,000   | 43,500   | 41,100   | 40,200   | 39,400   |
| AC-FT | 8,316M   | 5,554M   | 4,004M   | 3,297M   | 3,366M   | 3,472M   | 3,686M   | 4,995M   | 4,063M   | 2,621M   | 2,659M   | 2,447M   |

CAL YR 1973 TOTAL 32,016,400 MEAN 87,720 MAX 307,000 MIN 24,800 AC-FT 63,500,000  
WTR YR 1974 TOTAL 24,441,900 MEAN 66,960 MAX 307,000 MIN 26,600 AC-FT 48,480,000

M Expressed in thousands.



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, on downstream side of right pier of bridge on Bannister Road, 0.4 mi (0.6 km) downstream from Indian Creek, in Kansas City and at river mile 23.16 (37.3 km).

DRAINAGE AREA.--188 mi<sup>2</sup> (487 km<sup>2</sup>).

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

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

AVERAGE DISCHARGE.--35 years, 150 ft<sup>3</sup>/s (4.25 m<sup>3</sup>/s), 10.83 in/yr (275 mm/yr), 108,700 acre-ft/yr (134 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 14,900 ft<sup>3</sup>/s (422 m<sup>3</sup>/s) Oct. 11 (gage height, 30.47 ft or 9.287 m); minimum, 7.3 ft<sup>3</sup>/s (0.207 m<sup>3</sup>/s) July 30; minimum gage height, 3.90 ft (1.189 m) Oct 10.  
 Period of record: Maximum discharge, 41,000 ft<sup>3</sup>/s (1,160 m<sup>3</sup>/s) Sept. 13, 1961 (gage height, 44.46 ft or 13.551 m); no flow September 1939 to February 1940 and in August 1946.  
 Maximum stage known prior to 1961, about 39 ft (11.9 m) Nov. 17, 1928, from information by City of Kansas City.

REMARKS.--Records poor. Low flow regulated by commercial plants above station.

REVISIONS.--WSP 926: Drainage area.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT    | NOV    | DEC    | JAN    | FEB   | MAR    | APR    | MAY    | JUN    | JUL   | AUG   | SEP   |
|-------|--------|--------|--------|--------|-------|--------|--------|--------|--------|-------|-------|-------|
| 1     | 328    | 67     | 102    | 100    | 180   | 126    | 86     | 197    | 57     | 28    | 12    | 1,780 |
| 2     | 64     | 63     | 98     | 93     | 122   | 121    | 81     | 151    | 53     | 27    | 13    | 853   |
| 3     | 34     | 58     | 97     | 91     | 100   | 115    | 70     | 136    | 49     | 26    | 12    | 436   |
| 4     | 28     | 51     | 6,450  | 83     | 100   | 113    | 88     | 116    | 59     | 324   | 11    | 147   |
| 5     | 22     | 50     | 2,820  | 81     | 100   | 109    | 83     | 102    | 62     | 46    | 12    | 106   |
| 6     | 22     | 49     | 554    | 84     | 100   | 108    | 74     | 92     | 486    | 32    | 43    | 83    |
| 7     | 83     | 47     | 391    | 76     | 110   | 100    | 210    | 83     | 815    | 28    | 39    | 71    |
| 8     | 28     | 47     | 327    | 74     | 100   | 132    | 1,090  | 102    | 3,770  | 28    | 29    | 62    |
| 9     | 22     | 47     | 292    | 74     | 100   | 234    | 209    | 107    | 6,900  | 26    | 66    | 51    |
| 10    | 22     | 45     | 241    | 75     | 100   | 940    | 153    | 856    | 1,790  | 25    | 25    | 48    |
| 11    | 10,200 | 43     | 206    | 78     | 100   | 1,010  | 140    | 396    | 782    | 23    | 19    | 43    |
| 12    | 3,300  | 43     | 182    | 68     | 102   | 367    | 135    | 197    | 497    | 21    | 18    | 40    |
| 13    | 459    | 42     | 146    | 68     | 99    | 223    | 116    | 160    | 293    | 20    | 17    | 36    |
| 14    | 290    | 42     | 128    | 71     | 87    | 202    | 102    | 5,130  | 215    | 18    | 15    | 34    |
| 15    | 220    | 42     | 114    | 79     | 79    | 169    | 90     | 1,800  | 153    | 19    | 15    | 33    |
| 16    | 178    | 40     | 98     | 154    | 115   | 156    | 80     | 534    | 99     | 17    | 22    | 33    |
| 17    | 153    | 39     | 92     | 484    | 134   | 155    | 73     | 4,490  | 89     | 17    | 29    | 30    |
| 18    | 139    | 38     | 94     | 1,340  | 105   | 154    | 80     | 3,560  | 78     | 17    | 34    | 29    |
| 19    | 126    | 37     | 87     | 1,270  | 100   | 148    | 76     | 632    | 264    | 16    | 132   | 27    |
| 20    | 116    | 2,620  | 83     | 825    | 100   | 142    | 127    | 371    | 333    | 15    | 37    | 25    |
| 21    | 106    | 945    | 78     | 625    | 350   | 140    | 577    | 245    | 91     | 16    | 22    | 22    |
| 22    | 99     | 230    | 79     | 925    | 625   | 130    | 154    | 949    | 58     | 16    | 282   | 22    |
| 23    | 93     | 151    | 110    | 550    | 400   | 130    | 118    | 334    | 47     | 15    | 124   | 22    |
| 24    | 85     | 1,160  | 555    | 351    | 300   | 130    | 102    | 294    | 46     | 14    | 82    | 21    |
| 25    | 77     | 241    | 333    | 292    | 200   | 118    | 92     | 154    | 38     | 25    | 40    | 21    |
| 26    | 76     | 174    | 186    | 485    | 180   | 108    | 84     | 142    | 36     | 18    | 31    | 19    |
| 27    | 116    | 151    | 159    | 675    | 160   | 103    | 90     | 114    | 37     | 14    | 933   | 18    |
| 28    | 107    | 149    | 153    | 625    | 142   | 105    | 95     | 96     | 34     | 14    | 505   | 18    |
| 29    | 86     | 126    | 158    | 485    | ----- | 99     | 367    | 82     | 29     | 13    | 177   | 20    |
| 30    | 76     | 113    | 125    | 395    | ----- | 97     | 678    | 73     | 28     | 13    | 77    | 19    |
| 31    | 71     | -----  | 101    | 275    | ----- | 89     | -----  | 64     | -----  | 13    | 405   | ----- |
| TOTAL | 16,826 | 6,950  | 14,639 | 10,951 | 4,490 | 6,073  | 5,520  | 21,759 | 17,288 | 944   | 3,278 | 4,169 |
| MEAN  | 543    | 232    | 472    | 353    | 160   | 196    | 184    | 702    | 576    | 30.5  | 106   | 139   |
| MAX   | 10,200 | 2,620  | 6,450  | 1,340  | 625   | 1,010  | 1,090  | 5,130  | 6,900  | 324   | 933   | 1,780 |
| MIN   | 22     | 37     | 78     | 68     | 79    | 89     | 70     | 64     | 28     | 13    | 11    | 18    |
| CFSM  | 2.89   | 1.23   | 2.51   | 1.88   | .85   | 1.04   | .98    | 3.73   | 3.06   | .16   | .56   | .74   |
| IN.   | 3.33   | 1.38   | 2.90   | 2.17   | .89   | 1.20   | 1.09   | 4.31   | 3.42   | .19   | .65   | .82   |
| AC-FT | 33,370 | 13,790 | 29,040 | 21,720 | 8,910 | 12,050 | 10,950 | 43,160 | 34,290 | 1,870 | 6,500 | 8,270 |

CAL YR 1973 TOTAL 166,243 MEAN 455 MAX 10,200 MIN 16 CFSM 2.42 IN 32.89 AC-FT 329,700  
 WTR YR 1974 TOTAL 112,887 MEAN 309 MAX 10,200 MIN 11 CFSM 1.64 IN 22.34 AC-FT 223,900

PEAK DISCHARGE (BASE, 5,800 FT<sup>3</sup>/S)

| DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|------|------|-------|-----------|
| 10-11 | 1400 | 30.47 | 14,900    | 5-17 | 1545 | 24.48 | 8,840     |
| 12-4  | 1330 | 25.68 | 9,740     | 6-8  | 2145 | 27.35 | 11,200    |
| 5-14  | 0815 | 24.94 | 9,160     |      |      |       |           |



06893560 Brush Creek at Main St. in Kansas City, Mo.

LOCATION.--Lat 39°02'24", long 94°35'12", SW¼NE¼SW¼ sec.29, T.49 N., R.33 W., Jackson County, on right bank 25 ft (8 m) downstream from bridge on Main St. and 4 mi (6.4 km) upstream from Blue River.

DRAINAGE AREA.--14.8 mi<sup>2</sup> (38.3 km<sup>2</sup>).

PERIOD OF RECORD.--October 1970 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 815 ft (248.4 m) from topographic map.

EXTREMES.--Current year: Maximum discharge, 1,850 ft<sup>3</sup>/s (52.4 m<sup>3</sup>/s) Oct. 11 (gage height, 6.59 ft or 2.009 m); minimum discharge, 0.07 ft<sup>3</sup>/s (0.002 m<sup>3</sup>/s) July 18.

Period of record: Maximum discharge, 2,340 ft<sup>3</sup>/s (66.3 m<sup>3</sup>/s) Mar. 31, 1973 (gage height, 7.25 ft or 2.210 m); no flow Dec. 9-16, 1972, July 17, 1973.

Maximum stage since 1969 was 8.46 ft (2.579 m) Sept. 21, 1970.

REMARKS.--Records poor. Flow affected by waste water from urbanized area.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT    | NOV    | DEC   | JAN   | FEB   | MAR   | APR   | MAY    | JUN    | JUL    | AUG    | SEP    |
|-------|--------|--------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|
| 1     | 2.3    | .94    | 2.4   | 1.8   | 4.4   | 2.9   | 1.4   | 4.1    | 1.0    | .67    | .40    | 75     |
| 2     | 1.2    | 1.4    | 5.8   | 1.7   | 4.0   | 2.7   | 1.2   | 4.1    | .96    | .58    | .40    | 17     |
| 3     | .65    | 1.8    | 10    | 1.7   | 3.5   | 3.4   | 1.6   | 2.8    | .86    | 47     | .40    | 3.3    |
| 4     | .40    | 1.3    | 209   | 1.6   | 3.3   | 4.1   | 4.6   | 3.2    | 12     | 60     | .40    | 1.8    |
| 5     | .31    | 1.4    | 7.5   | 1.6   | 3.4   | 3.3   | 1.9   | 3.9    | 13     | 1.4    | .47    | 1.2    |
| 6     | 5.7    | 1.3    | 5.0   | 1.5   | 4.4   | 2.8   | 1.6   | 2.8    | 47     | .94    | 11     | .89    |
| 7     | .61    | 1.6    | 4.0   | 1.5   | 3.4   | 2.9   | 15    | 6.2    | 55     | .82    | 5.0    | .85    |
| 8     | .29    | 1.8    | 3.8   | 1.4   | 3.4   | 15    | 6.2   | 5.6    | 65     | 1.1    | 1.5    | .75    |
| 9     | .20    | 1.8    | 3.6   | 1.4   | 3.0   | 7.5   | 1.9   | 4.1    | 30     | .85    | 41     | .89    |
| 10    | 6.1    | 1.4    | 3.4   | 1.4   | 2.9   | 13    | 1.4   | 10     | 10     | .76    | 1.2    | .76    |
| 11    | 526    | 1.3    | 3.2   | 1.3   | 3.5   | 12    | 2.8   | 12     | 5.0    | .67    | .73    | .76    |
| 12    | 8.4    | 1.6    | 3.0   | 1.3   | 3.0   | 7.6   | 2.6   | 3.0    | 3.0    | .58    | .62    | .86    |
| 13    | 8.8    | 2.4    | 2.8   | 1.3   | 2.7   | 5.6   | 1.6   | 58     | 2.0    | .31    | .21    | .94    |
| 14    | 5.0    | 2.6    | 2.6   | 1.4   | 2.7   | 4.8   | 1.8   | 121    | 1.5    | .25    | .14    | .94    |
| 15    | 3.5    | 2.8    | 2.4   | 11    | 2.5   | 4.1   | 1.3   | 24     | 1.0    | .22    | .18    | .85    |
| 16    | 2.5    | 2.8    | 2.2   | 26    | 2.4   | 3.4   | 1.9   | 17     | .67    | .19    | .99    | .76    |
| 17    | 2.4    | 2.8    | 2.0   | 12    | 2.4   | 3.7   | 1.6   | 418    | .76    | .10    | 3.7    | .67    |
| 18    | 2.1    | 3.0    | 1.9   | 10    | 6.4   | 3.0   | 1.2   | 72     | .76    | .09    | 1.3    | .58    |
| 19    | 1.9    | 2.8    | 1.8   | 10    | 4.3   | 2.4   | 1.2   | 12     | 16     | .16    | 7.3    | .85    |
| 20    | 1.8    | 49     | 1.7   | 10    | 2.2   | 3.0   | 38    | 4.1    | 19     | .10    | .64    | .76    |
| 21    | 1.8    | 4.4    | 1.6   | 9.0   | 14    | 3.5   | 5.6   | 2.8    | 2.0    | .08    | 3.1    | .67    |
| 22    | 1.6    | 2.3    | 1.5   | 9.4   | 7.8   | 2.0   | 3.5   | 3.0    | .58    | .13    | 40     | .58    |
| 23    | 1.3    | 3.2    | 1.4   | 6.5   | 7.4   | 5.9   | 2.8   | 2.6    | .58    | .16    | 2.2    | .58    |
| 24    | 1.8    | 5.4    | 7.9   | 5.7   | 6.2   | 3.6   | 2.4   | 1.3    | .67    | .10    | .59    | .49    |
| 25    | 2.1    | 2.1    | 4.0   | 5.6   | 4.5   | 2.3   | 2.0   | 1.3    | .67    | .08    | .39    | .49    |
| 26    | 2.5    | 2.4    | 2.0   | 9.7   | 3.3   | 1.8   | 2.1   | 1.6    | .67    | .19    | .32    | .49    |
| 27    | 4.1    | 4.3    | 3.8   | 9.6   | 3.0   | 1.4   | 6.4   | 1.0    | .76    | .22    | 23     | .49    |
| 28    | 2.2    | 2.6    | 2.6   | 11    | 3.9   | 1.3   | 4.1   | 1.0    | .76    | .22    | 29     | .40    |
| 29    | .85    | 1.9    | 2.0   | 8.0   | ----- | 1.4   | 12    | .94    | .67    | .28    | 1.9    | .40    |
| 30    | .75    | 2.2    | 1.9   | 6.7   | ----- | 2.5   | 9.1   | .94    | .67    | .34    | 1.2    | .40    |
| 31    | .76    | -----  | 1.8   | 4.7   | ----- | 1.8   | ----- | 1.0    | -----  | .49    | 63     | -----  |
| TOTAL | 599.92 | 116.64 | 308.6 | 185.8 | 117.9 | 134.7 | 140.8 | 805.38 | 292.54 | 119.08 | 242.28 | 115.40 |
| MEAN  | 19.4   | 3.89   | 9.95  | 5.99  | 4.21  | 4.35  | 4.69  | 26.0   | 9.75   | 3.84   | 7.82   | 3.85   |
| MAX   | 526    | 49     | 209   | 26    | 14    | 15    | 38    | 418    | 65     | 60     | 63     | 75     |
| MIN   | .20    | .94    | 1.4   | 1.3   | 2.2   | 1.3   | 1.2   | .94    | .58    | .08    | .14    | .40    |
| CFSM  | 1.31   | .26    | .67   | .40   | .28   | .29   | .32   | 1.76   | .66    | .26    | .53    | .26    |
| IN.   | 1.51   | .29    | .78   | .47   | .30   | .34   | .35   | 2.02   | .74    | .30    | .61    | .29    |
| AC-FT | 1,190  | 231    | 612   | 369   | 234   | 267   | 279   | 1,600  | 580    | 236    | 481    | 229    |

CAL YR 1973 TOTAL 5,710.28 MEAN 15.6 MAX 766 MIN .07 CFSM 1.05 IN 14.35 AC-FT 11,330  
WTR YR 1974 TOTAL 3,179.04 MEAN 8.71 MAX 526 MIN .08 CFSM .59 IN 7.99 AC-FT 6,310

PEAK DISCHARGE (BASE, 800 FT<sup>3</sup>/S)

| DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|------|------|-------|-----------|
| 10-11 | 0800 | 6.59  | 1,850     | 5-17 | 1215 | 6.05  | 1,440     |
| 12-4  | 0530 | 5.64  | 1,080     | 7-4  | 0015 | 6.39  | 1,570     |
| 5-13  | 2345 | 5.22  | 892       | 8-31 | 1630 | 5.64  | 970       |

06893600 Rock Creek at Independence, Mo.

LOCATION.--Lat 39°04'37", long 94°27'03", in NW¼SW¼SE¼ sec.9, T.49 N., R.32 W., Jackson County, on left bank 20 ft (6 m) upstream from bridge on Northern Boulevard in Independence, 0.2 mi (0.3 km) south of 23rd Street and 4 mi (6.4 km) upstream from mouth.

DRAINAGE AREA.--5.20 mi<sup>2</sup> (13.47 km<sup>2</sup>).

PERIOD OF RECORD.--August 1967 to September 1974 (discontinued).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 825.23 ft (251.530 m) above mean sea level.

AVERAGE DISCHARGE.--7 years, 4.58 ft<sup>3</sup>/s (0.129 m<sup>3</sup>/s), 11.96 in/yr (304 mm/yr), 3,320 acre-ft/yr (4.094 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 2,370 ft<sup>3</sup>/s (67.1 m<sup>3</sup>/s) May 18 (gage height, 13.62 ft or 4.151 m); no flow on many days.

Period of record: Maximum discharge, 2,520 ft<sup>3</sup>/s (71.4 m<sup>3</sup>/s) June 19, 1967 (gage height, 14.22 ft or 4.334 m, from floodmark), on basis of contracted-opening and flow-over-road measurement of peak flow; no flow on many days each year.

Maximum stage known prior to 1967 in at least 32 years, 13.4 ft (4.08 m) in July 1965, from information by local resident.

REMARKS.--Records fair to June 12 and poor thereafter.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT    | NOV   | DEC    | JAN   | FEB   | MAR   | APR   | MAY    | JUN    | JUL   | AUG   | SEP    |
|-------|--------|-------|--------|-------|-------|-------|-------|--------|--------|-------|-------|--------|
| 1     | 3.2    | .20   | 1.4    | .60   | 2.9   | 1.4   | .80   | 1.2    | 1.4    | .10   | 0     | 30     |
| 2     | 2.6    | .40   | 1.2    | .60   | 2.9   | 1.0   | .80   | 1.0    | 1.2    | .10   | 0     | 75     |
| 3     | 2.3    | .40   | 1.4    | .60   | 2.6   | 1.4   | .80   | .80    | 1.2    | .10   | 0     | 10     |
| 4     | 1.7    | .20   | 110    | .50   | 2.3   | 1.7   | 1.2   | .60    | 1.2    | 30    | 0     | 5.0    |
| 5     | 1.4    | .20   | 9.1    | .50   | 2.0   | 1.4   | .80   | .60    | 1.2    | 5.0   | 0     | 3.0    |
| 6     | 12     | .20   | 5.3    | .50   | 2.3   | 1.4   | .60   | .60    | 17     | 2.0   | 0     | 2.5    |
| 7     | 2.0    | .60   | 4.1    | .40   | 1.4   | 1.4   | 5.8   | .80    | 18     | 1.0   | .20   | 2.0    |
| 8     | 1.7    | .40   | 3.8    | .40   | 1.2   | 6.5   | 5.3   | 1.2    | 146    | .30   | .30   | 1.6    |
| 9     | 1.2    | .60   | 3.5    | .40   | 1.2   | 7.6   | 1.7   | .80    | 14     | .20   | .20   | 1.3    |
| 10    | 1.2    | .60   | 3.2    | .50   | 1.2   | 8.4   | 1.2   | 3.5    | 4.9    | .20   | .80   | 1.1    |
| 11    | 180    | .40   | 2.9    | .50   | 1.4   | 7.3   | 1.4   | 7.4    | 6.7    | .10   | 1.0   | .90    |
| 12    | 12     | .20   | 2.3    | .50   | 1.4   | 3.5   | 1.2   | .80    | 4.0    | 0     | .50   | .80    |
| 13    | 6.9    | .20   | 1.4    | .50   | 1.4   | 3.2   | 1.0   | .60    | 3.0    | 0     | .50   | .70    |
| 14    | 4.5    | .20   | 1.2    | .50   | 1.4   | 2.9   | 1.0   | 49     | 2.5    | 0     | .40   | .60    |
| 15    | 3.5    | .40   | 1.2    | .70   | 1.2   | 3.2   | 1.0   | 3.5    | 2.0    | 0     | .30   | .50    |
| 16    | 2.9    | .40   | 1.0    | 5.0   | 1.4   | 2.0   | 1.4   | 2.3    | 1.6    | 0     | .30   | .40    |
| 17    | 2.6    | .40   | .80    | 10    | 1.4   | 2.0   | 1.2   | 253    | 1.3    | 0     | .50   | .40    |
| 18    | 2.3    | .40   | .80    | 7.4   | 4.4   | 2.0   | 1.0   | 287    | 1.2    | 0     | .40   | .30    |
| 19    | 2.3    | .60   | .80    | 6.6   | 2.6   | 2.0   | 1.0   | 20     | 7.5    | 0     | .80   | .20    |
| 20    | 2.0    | 58    | 1.4    | 4.5   | 1.4   | 1.7   | 3.4   | 9.8    | 2.0    | 0     | 2.0   | .10    |
| 21    | 1.7    | 3.8   | 2.0    | 3.5   | 19    | 1.7   | 1.7   | 5.7    | .80    | 0     | 1.5   | .10    |
| 22    | 1.4    | 2.3   | 1.4    | 6.9   | 3.8   | 1.4   | .80   | 23     | .40    | 0     | 20    | .10    |
| 23    | 1.2    | 2.0   | 1.2    | 3.2   | 2.9   | 2.3   | .80   | 5.3    | .30    | 0     | 5.0   | .10    |
| 24    | 1.4    | 4.5   | 5.2    | 2.6   | 2.6   | 3.2   | .80   | 3.5    | .20    | 0     | 3.0   | .10    |
| 25    | 1.4    | 1.4   | 1.4    | 2.3   | 2.3   | 1.4   | .60   | 2.9    | .10    | 0     | 2.0   | .10    |
| 26    | 1.4    | 1.2   | 1.0    | 13    | 2.0   | 1.4   | .60   | 2.6    | .10    | 0     | 1.0   | .10    |
| 27    | 2.3    | 5.7   | 1.2    | 5.3   | 1.7   | 1.4   | 1.2   | 2.3    | .10    | 0     | .60   | .10    |
| 28    | .60    | 2.0   | 1.0    | 5.3   | 1.7   | 1.2   | .60   | 2.0    | .10    | 0     | 15    | .20    |
| 29    | .60    | 1.4   | .80    | 3.8   | ----- | 1.0   | 9.8   | 1.7    | .10    | 0     | 5.0   | .20    |
| 30    | .60    | 1.7   | .60    | 3.5   | ----- | .80   | 4.1   | 1.7    | .10    | 0     | 3.0   | .30    |
| 31    | .20    | ----- | .60    | 2.6   | ----- | .80   | ----- | 1.4    | -----  | 0     | 2.0   | -----  |
| TOTAL | 261.10 | 91.00 | 173.20 | 93.20 | 74.0  | 78.60 | 53.60 | 696.60 | 240.20 | 39.10 | 66.30 | 137.80 |
| MEAN  | 8.42   | 3.03  | 5.59   | 3.01  | 2.64  | 2.54  | 1.79  | 22.5   | 8.01   | 1.26  | 2.14  | 4.59   |
| MAX   | 180    | 58    | 110    | 13    | 19    | 8.4   | 9.8   | 287    | 146    | 30    | 20    | 75     |
| MIN   | .20    | .20   | .60    | .40   | 1.2   | .80   | .60   | .60    | .10    | 0     | 0     | .10    |
| CFSM  | 1.62   | .58   | 1.08   | .58   | .51   | .49   | .34   | 4.33   | 1.54   | .24   | .41   | .88    |
| IN.   | 1.87   | .65   | 1.24   | .67   | .53   | .56   | .38   | 4.98   | 1.72   | .28   | .47   | .99    |
| AC-FT | 518    | 180   | 344    | 185   | 147   | 156   | 106   | 1,380  | 476    | 78    | 132   | 273    |

CAL YR 1973 TOTAL 2,922.10 MEAN 8.01 MAX 180 MIN 0 CFSM 1.54 IN 20.90 AC-FT 5,800  
WTR YR 1974 TOTAL 2,004.70 MEAN 5.49 MAX 287 MIN 0 CFSM 1.06 IN 14.34 AC-FT 3,980

PEAK DISCHARGE (BASE, 500 FT<sup>3</sup>/S)

| DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|------|------|-------|-----------|
| 10-11 | 0400 | 8.48  | 860       | 5-18 | 0800 | 13.62 | 2,370     |
| 5-17  | 1130 | 9.25  | 1,220     | 6-8  | 1715 | 10.88 | 1,740     |

06893790 Little Blue River at Longview Road in Kansas City, Mo.

LOCATION.--Lat 38°54'49", long 94°27'57", in SW¼SW¼ sec.4, T.47 N., R.32 W., Jackson County, on downstream side of left main pier of bridge on Longview Road in Kansas City and 3.5 mi (5.6 km) upstream from Cedar Creek.

DRAINAGE AREA.--47.4 mi<sup>2</sup> (122.8 km<sup>2</sup>).

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

GAGE.--Water-stage recorder. Datum of gage is 823.50 ft (251.003 m) above mean sea level.

AVERAGE DISCHARGE.--8 years, 51.9 ft<sup>3</sup>/s (1.47 m<sup>3</sup>/s), 14.87 in/yr (378 mm/yr), 37,600 acre-ft/yr (46.4 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 9,020 ft<sup>3</sup>/s (255 m<sup>3</sup>/s) May 17 (gage height, 9.64 ft or 2.938 m); minimum, 1.0 ft<sup>3</sup>/s (0.028 m<sup>3</sup>/s) July 29, 30 (gage height, 1.80 ft or 0.549 m).  
Period of record: Maximum discharge, 9,880 ft<sup>3</sup>/s (280 m<sup>3</sup>/s) June 27, 1969 (gage height, 11.19 ft or 3.411 m); minimum, 0.5 ft<sup>3</sup>/s (0.014 m<sup>3</sup>/s) Oct. 3, 1966.

REMARKS.--Records fair.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT   | NOV   | DEC   | JAN   | FEB   | MAR   | APR   | MAY   | JUN     | JUL   | AUG   | SEP   |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|---------|-------|-------|-------|
| 1     | 43    | 17    | 35    | 80    | 41    | 23    | 15    | 28    | 21      | 7.9   | 2.0   | 77    |
| 2     | 28    | 15    | 35    | 60    | 41    | 23    | 14    | 20    | 20      | 8.5   | 2.4   | 57    |
| 3     | 24    | 14    | 34    | 50    | 36    | 23    | 13    | 17    | 19      | 7.4   | 2.0   | 16    |
| 4     | 20    | 14    | 2,080 | 35    | 32    | 36    | 14    | 14    | 21      | 21    | 1.6   | 8.1   |
| 5     | 17    | 14    | 151   | 40    | 32    | 26    | 12    | 14    | 21      | 9.5   | 1.8   | 5.4   |
| 6     | 38    | 14    | 58    | 40    | 40    | 24    | 11    | 17    | 79      | 7.7   | 2.5   | 4.6   |
| 7     | 28    | 14    | 42    | 40    | 27    | 22    | 39    | 16    | 355     | 6.4   | 4.9   | 4.0   |
| 8     | 21    | 16    | 39    | 40    | 23    | 19    | 140   | 17    | 815     | 6.0   | 5.7   | 4.4   |
| 9     | 18    | 16    | 37    | 40    | 24    | 55    | 23    | 17    | 149     | 5.9   | 8.5   | 3.6   |
| 10    | 16    | 15    | 32    | 35    | 23    | 488   | 19    | 41    | 49      | 4.9   | 6.1   | 3.5   |
| 11    | 1,130 | 14    | 31    | 30    | 24    | 382   | 17    | 52    | 66      | 6.0   | 3.1   | 3.4   |
| 12    | 147   | 14    | 30    | 30    | 25    | 68    | 17    | 33    | 33      | 5.8   | 3.1   | 3.8   |
| 13    | 73    | 15    | 29    | 30    | 24    | 46    | 14    | 29    | 26      | 5.0   | 4.2   | 2.8   |
| 14    | 49    | 15    | 26    | 30    | 22    | 39    | 14    | 1,710 | 24      | 4.4   | 4.0   | 3.2   |
| 15    | 41    | 15    | 25    | 40    | 21    | 37    | 13    | 115   | 21      | 4.2   | 3.3   | 3.6   |
| 16    | 33    | 14    | 22    | 100   | 20    | 31    | 14    | 60    | 19      | 3.3   | 2.7   | 2.6   |
| 17    | 28    | 14    | 21    | 400   | 20    | 26    | 15    | 1,560 | 18      | 3.4   | 5.0   | 3.5   |
| 18    | 24    | 13    | 21    | 400   | 29    | 27    | 16    | 393   | 17      | 3.4   | 9.2   | 4.1   |
| 19    | 22    | 13    | 30    | 300   | 64    | 25    | 16    | 82    | 23      | 2.5   | 7.0   | 4.6   |
| 20    | 22    | 738   | 50    | 272   | 29    | 23    | 18    | 47    | 24      | 2.2   | 5.4   | 4.6   |
| 21    | 21    | 104   | 30    | 119   | 333   | 24    | 35    | 35    | 16      | 2.2   | 3.5   | 4.1   |
| 22    | 20    | 53    | 25    | 257   | 170   | 22    | 18    | 54    | 14      | 2.1   | 17    | 4.1   |
| 23    | 20    | 43    | 26    | 83    | 50    | 21    | 13    | 34    | 12      | 2.0   | 24    | 4.1   |
| 24    | 19    | 332   | 135   | 58    | 35    | 21    | 12    | 30    | 11      | 1.9   | 6.8   | 4.1   |
| 25    | 18    | 56    | 51    | 50    | 30    | 20    | 12    | 25    | 11      | 1.7   | 5.1   | 4.1   |
| 26    | 19    | 44    | 30    | 337   | 31    | 18    | 12    | 26    | 10      | 1.7   | 4.6   | 4.6   |
| 27    | 56    | 43    | 31    | 144   | 31    | 18    | 12    | 25    | 9.7     | 1.7   | 16    | 4.6   |
| 28    | 68    | 59    | 31    | 158   | 26    | 18    | 14    | 24    | 9.2     | 1.5   | 33    | 4.6   |
| 29    | 50    | 40    | 30    | 90    | ----- | 18    | 106   | 23    | 9.0     | 1.4   | 9.7   | 5.2   |
| 30    | 69    | 37    | 38    | 62    | ----- | 16    | 76    | 22    | 8.2     | 1.8   | 6.0   | 4.6   |
| 31    | 24    | ----- | 100   | 46    | ----- | 15    | ----- | 21    | -----   | 2.1   | 40    | ----- |
| TOTAL | 2,206 | 1,825 | 3,355 | 3,496 | 1,303 | 1,654 | 764   | 4,601 | 1,930.1 | 145.5 | 250.2 | 263.9 |
| MEAN  | 71.2  | 60.8  | 108   | 113   | 46.5  | 53.4  | 25.5  | 148   | 64.3    | 4.69  | 8.07  | 8.80  |
| MAX   | 1,130 | 738   | 2,080 | 400   | 333   | 488   | 140   | 1,710 | 815     | 21    | 40    | 77    |
| MIN   | 16    | 13    | 21    | 30    | 20    | 15    | 11    | 14    | 8.2     | 1.4   | 1.6   | 2.6   |
| CFSM  | 1.50  | 1.28  | 2.28  | 2.38  | .98   | 1.13  | .54   | 3.12  | 1.36    | .10   | .17   | .19   |
| IN.   | 1.73  | 1.43  | 2.63  | 2.74  | 1.02  | 1.30  | .60   | 3.61  | 1.51    | .11   | .20   | .21   |
| AC-FT | 4,380 | 3,620 | 6,650 | 6,930 | 2,580 | 3,280 | 1,520 | 9,130 | 3,830   | 289   | 496   | 523   |

CAL YR 1973 TOTAL 44,882.7 MEAN 123 MAX 2,330 MIN 3.6 CFSM 2.59 IN 35.22 AC-FT 89,020  
WTR YR 1974 TOTAL 21,793.7 MEAN 59.7 MAX 2,080 MIN 1.4 CFSM 1.26 IN 17.10 AC-FT 43,230

PEAK DISCHARGE (BASE, 2,200 FT<sup>3</sup>/S)

| DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|------|------|-------|-----------|
| 11-20 | 1400 | 6.31  | 2,850     | 5-17 | 1515 | 9.64  | 9,020     |
| 12-04 | 0815 | 8.85  | 7,080     | 6-08 | 1745 | 7.81  | 4,870     |
| 5-14  | 0430 | 8.57  | 6,140     |      |      |       |           |

## LITTLE BLUE RIVER BASIN

06894000 Little Blue River near Lake City, Mo.

LOCATION.--Lat 39°06'02", long 94°18'01", in SW¼SE¼ sec.35, T.50 N., R.31 W., Jackson County, at downstream side of right pier of upstream bridge on dual State Highway 78, 3 mi (4.8 km) southwest of Lake City, and 10.5 mi (16.9 km) upstream from mouth.

DRAINAGE AREA.--184 mi<sup>2</sup> (477 km<sup>2</sup>).

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

GAGE.--Water-stage recorder. Datum of gage is 719.15 ft (219.197 m) above mean sea level. Prior to July 24, 1957, nonrecording gage at site 50 ft (15 m) downstream at same datum.

AVERAGE DISCHARGE.--26 years, 135 ft<sup>3</sup>/s (3.82 m<sup>3</sup>/s), 9.96 in/yr (253 mm/yr), 98,100 acre-ft/yr (121 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 9,420 ft<sup>3</sup>/s (267 m<sup>3</sup>/s) May 18 (gage height, 26.09 ft or 7.952 m); minimum, 14 ft<sup>3</sup>/s (0.396 m<sup>3</sup>/s) July 30 (gage height, 5.17 ft or 1.576 m).

Period of record: Maximum discharge, 9,460 ft<sup>3</sup>/s (268 m<sup>3</sup>/s) Sept. 14, 1961 (gage height, 27.94 ft or 8.516 m); no flow at times during 1953-54, 1973.

REMARKS.--Records fair.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT    | NOV   | DEC    | JAN    | FEB    | MAR    | APR   | MAY    | JUN    | JUL   | AUG   | SEP   |
|-------|--------|-------|--------|--------|--------|--------|-------|--------|--------|-------|-------|-------|
| 1     | 273    | 64    | 118    | 185    | 250    | 153    | 93    | 241    | 162    | 45    | 20    | 429   |
| 2     | 222    | 61    | 108    | 150    | 233    | 150    | 86    | 155    | 153    | 45    | 19    | 654   |
| 3     | 171    | 58    | 105    | 140    | 211    | 146    | 87    | 126    | 140    | 42    | 18    | 406   |
| 4     | 139    | 54    | 1,550  | 130    | 190    | 140    | 87    | 106    | 123    | 238   | 19    | 155   |
| 5     | 116    | 53    | 3,290  | 120    | 183    | 168    | 82    | 96     | 133    | 110   | 17    | 90    |
| 6     | 139    | 52    | 996    | 110    | 183    | 142    | 77    | 87     | 193    | 51    | 23    | 66    |
| 7     | 202    | 51    | 367    | 110    | 179    | 133    | 76    | 83     | 611    | 42    | 32    | 55    |
| 8     | 130    | 51    | 299    | 100    | 149    | 136    | 514   | 89     | 1,240  | 37    | 32    | 47    |
| 9     | 110    | 50    | 257    | 95     | 137    | 192    | 277   | 83     | 3,000  | 35    | 38    | 43    |
| 10    | 99     | 47    | 198    | 90     | 131    | 407    | 168   | 91     | 1,230  | 34    | 53    | 41    |
| 11    | 1,620  | 37    | 207    | 85     | 125    | 1,000  | 146   | 177    | 397    | 29    | 45    | 38    |
| 12    | 3,910  | 56    | 192    | 80     | 125    | 502    | 136   | 91     | 362    | 27    | 29    | 38    |
| 13    | 2,200  | 46    | 176    | 80     | 122    | 296    | 117   | 54     | 255    | 26    | 27    | 34    |
| 14    | 368    | 47    | 153    | 75     | 115    | 253    | 104   | 1,060  | 210    | 24    | 27    | 32    |
| 15    | 270    | 46    | 140    | 70     | 108    | 243    | 96    | 2,090  | 181    | 24    | 29    | 31    |
| 16    | 221    | 44    | 126    | 70     | 105    | 229    | 93    | 446    | 155    | 36    | 28    | 32    |
| 17    | 185    | 44    | 115    | 180    | 102    | 200    | 93    | 2,680  | 135    | 36    | 31    | 30    |
| 18    | 158    | 43    | 112    | 757    | 103    | 188    | 88    | 7,200  | 125    | 28    | 71    | 30    |
| 19    | 136    | 43    | 110    | 871    | 175    | 176    | 88    | 5,310  | 115    | 22    | 62    | 28    |
| 20    | 122    | 346   | 106    | 761    | 173    | 163    | 84    | 1,630  | 182    | 21    | 60    | 26    |
| 21    | 110    | 1,240 | 125    | 577    | 242    | 158    | 131   | 546    | 132    | 20    | 41    | 26    |
| 22    | 100    | 277   | 95     | 560    | 816    | 151    | 121   | 797    | 101    | 18    | 98    | 27    |
| 23    | 95     | 169   | 101    | 647    | 367    | 139    | 87    | 516    | 84     | 18    | 105   | 24    |
| 24    | 89     | 415   | 202    | 394    | 252    | 139    | 76    | 390    | 73     | 16    | 75    | 23    |
| 25    | 79     | 312   | 328    | 306    | 209    | 131    | 70    | 313    | 69     | 16    | 54    | 24    |
| 26    | 75     | 178   | 191    | 351    | 199    | 126    | 67    | 290    | 67     | 16    | 37    | 24    |
| 27    | 81     | 154   | 152    | 842    | 194    | 119    | 67    | 268    | 65     | 17    | 133   | 24    |
| 28    | 125    | 191   | 150    | 484    | 173    | 113    | 65    | 239    | 59     | 16    | 234   | 23    |
| 29    | 86     | 161   | 144    | 478    | -----  | 109    | 185   | 217    | 53     | 15    | 202   | 26    |
| 30    | 72     | 134   | 133    | 347    | -----  | 104    | 405   | 200    | 49     | 14    | 80    | 24    |
| 31    | 69     | ----- | 132    | 293    | -----  | 96     | ----- | 183    | -----  | 16    | 72    | ----- |
| TOTAL | 11,772 | 4,524 | 10,478 | 9,538  | 5,551  | 6,402  | 3,866 | 25,854 | 9,854  | 1,134 | 1,811 | 2,550 |
| MEAN  | 380    | 151   | 338    | 308    | 198    | 207    | 129   | 834    | 328    | 36.6  | 58.4  | 85.0  |
| MAX   | 3,910  | 1,240 | 3,290  | 871    | 816    | 1,000  | 514   | 7,200  | 3,000  | 238   | 234   | 654   |
| MIN   | 69     | 37    | 95     | 70     | 102    | 96     | 65    | 54     | 49     | 14    | 17    | 23    |
| CFSM  | 2.07   | .82   | 1.84   | 1.67   | 1.08   | 1.13   | .70   | 4.53   | 1.78   | .20   | .32   | .46   |
| IN.   | 2.38   | .91   | 2.12   | 1.93   | 1.12   | 1.29   | .78   | 5.23   | 1.99   | .23   | .37   | .52   |
| AC-FT | 23,350 | 8,970 | 20,780 | 18,920 | 11,010 | 12,700 | 7,670 | 51,280 | 19,550 | 2,250 | 3,590 | 5,060 |

CAL YR 1973 TOTAL 137,043 MEAN 375 MAX 4,410 MIN 15 CFSM 2.04 IN 27.71 AC-FT 271,800  
WTR YR 1974 TOTAL 93,334 MEAN 256 MAX 7,200 MIN 14 CFSM 1.39 IN 18.87 AC-FT 185,100

PEAK DISCHARGE (BASE, 2,000 FT<sup>3</sup>/S)

| DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|------|------|-------|-----------|
| 10-12 | 2100 | 23.74 | 4,110     | 5-18 | 1245 | 26.09 | 9,420     |
| 12-5  | 1330 | 22.99 | 3,560     | 6-9  | 1930 | 21.87 | 3,120     |
| 5-15  | 1215 | 21.05 | 2,500     |      |      |       |           |

06894680 Sni-A-Bar Creek near Tarsney, Mo.

LOCATION.--Lat 38°56'28", long 94°10'05", in SW¼SW¼NW¼ sec.30, T.48 N., R.29 W., Jackson County, on right bank 8 ft (2.4 m) downstream from bridge on Colburn Road, 2.3 mi (3.7 km) upstream from West Fork, 2.7 mi (4.3 km) east of Tarsney and 5 mi (8.0 km) southeast of Grain Valley.

DRAINAGE AREA.--29.1 mi<sup>2</sup> (75.4 km<sup>2</sup>).

PERIOD OF RECORD.--June 1970 to current year.

GAGE.--Water-stage recorder. Datum of gage is 788.37 ft (240.295 m) above mean sea level.

EXTREMES.--Current year: Maximum discharge, 3,450 ft<sup>3</sup>/s (97.7 m<sup>3</sup>/s) May 18 (gage height, 22.05 ft or 6.721 m); no flow July 2, 3, and 14 to Aug. 21.

Period of record: Maximum discharge, 3,650 ft<sup>3</sup>/s (103.4 m<sup>3</sup>/s) Dec. 14, 1971; maximum gage height, 22.05 ft (6.721 m) May 18, 1974; no flow at times in most years.

REMARKS.--Records poor.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT    | NOV    | DEC     | JAN     | FEB   | MAR   | APR   | MAY     | JUN    | JUL    | AUG    | SEP    |
|-------|--------|--------|---------|---------|-------|-------|-------|---------|--------|--------|--------|--------|
| 1     | 12     | 2.4    | 8.5     | 4.0     | 20    | 21    | 7.6   | 18      | 4.4    | .10    | 0      | 122    |
| 2     | 5.2    | 2.4    | 8.0     | 4.0     | 14    | 21    | 7.6   | 13      | 3.5    | 0      | 0      | 122    |
| 3     | 5.2    | 1.3    | 7.6     | 4.0     | 10    | 18    | 6.8   | 12      | 2.9    | 0      | 0      | 31     |
| 4     | 3.5    | 1.2    | 771     | 3.0     | 7.2   | 17    | 6.4   | 9.5     | 2.9    | 92     | 0      | 13     |
| 5     | 3.2    | 1.2    | 86      | 3.0     | 9.0   | 12    | 6.4   | 8.0     | 3.5    | 10     | 0      | 11     |
| 6     | 11     | 1.0    | 38      | 3.0     | 7.6   | 12    | 6.0   | 5.6     | 37     | 2.4    | 0      | 10     |
| 7     | 12     | 1.2    | 24      | 3.0     | 4.0   | 10    | 8.0   | 5.6     | 122    | 1.2    | 0      | 6.4    |
| 8     | 6.4    | 1.6    | 20      | 3.0     | 4.0   | 8.0   | 34    | 9.0     | 57     | .90    | 0      | 4.4    |
| 9     | 5.6    | 1.2    | 18      | 3.0     | 2.4   | 39    | 15    | 4.0     | 49     | .50    | 0      | 2.6    |
| 10    | 3.7    | .80    | 16      | 3.0     | 2.1   | 179   | 13    | 15      | 45     | .20    | 0      | 1.8    |
| 11    | 162    | 1.6    | 13      | 3.0     | 3.5   | 181   | 12    | 12      | 40     | .20    | 0      | 1.3    |
| 12    | 69     | .90    | 12      | 3.0     | 4.0   | 53    | 12    | 6.0     | 30     | .10    | 0      | 1.1    |
| 13    | 21     | .80    | 8.0     | 3.0     | 4.0   | 22    | 10    | 3.7     | 20     | .10    | 0      | 1.1    |
| 14    | 9.5    | .90    | 6.8     | 3.0     | 2.6   | 18    | 9.5   | 697     | 18     | 0      | 0      | .60    |
| 15    | 9.0    | .90    | 4.8     | 3.0     | 1.8   | 17    | 8.0   | 35      | 15     | 0      | 0      | .30    |
| 16    | 7.2    | 1.2    | 3.5     | 10      | 2.1   | 16    | 8.0   | 19      | 9.0    | 0      | 0      | .20    |
| 17    | 6.8    | .30    | 3.5     | 50      | 2.1   | 15    | 8.0   | 898     | 5.6    | 0      | 0      | .30    |
| 18    | 6.4    | .40    | 7.2     | 100     | 38    | 14    | 7.6   | 1,120   | 4.8    | 0      | 0      | .80    |
| 19    | 7.2    | .50    | 8.0     | 160     | 69    | 12    | 6.8   | 69      | 5.6    | 0      | 0      | .10    |
| 20    | 4.0    | 432    | 2.4     | 140     | 23    | 12    | 11    | 24      | 11     | 0      | 0      | .10    |
| 21    | 3.5    | 87     | 1.1     | 86      | 148   | 13    | 14    | 15      | 3.5    | 0      | 0      | .10    |
| 22    | 2.9    | 20     | 1.0     | 152     | 90    | 12    | 8.0   | 12      | 1.3    | 0      | 44     | .10    |
| 23    | 1.8    | 12     | 1.3     | 49      | 38    | 12    | 5.6   | 12      | .60    | 0      | 18     | .10    |
| 24    | 1.8    | 187    | 38      | 42      | 38    | 11    | 4.0   | 11      | .30    | 0      | 3.7    | .10    |
| 25    | 1.0    | 37     | 41      | 32      | 35    | 13    | 4.0   | 9.5     | .20    | 0      | .80    | .10    |
| 26    | .80    | 27     | 16      | 144     | 30    | 11    | 4.0   | 13      | .20    | 0      | .60    | .10    |
| 27    | 32     | 20     | 14      | 82      | 24    | 10    | 4.0   | 12      | .10    | 0      | .30    | .10    |
| 28    | 11     | 39     | 12      | 100     | 23    | 11    | 4.0   | 11      | .10    | 0      | 3.2    | .20    |
| 29    | 5.2    | 16     | 10      | 57      | ----- | 10    | 22    | 8.0     | .10    | 0      | 12     | .20    |
| 30    | 3.2    | 10     | 4.0     | 39      | ----- | 9.0   | 24    | 6.0     | .10    | 0      | 3.7    | .30    |
| 31    | 3.7    | -----  | 4.0     | 26      | ----- | 8.0   | ----- | 5.6     | -----  | 0      | 33     | -----  |
| TOTAL | 436.80 | 908.80 | 1,208.7 | 1,317.0 | 656.4 | 817.0 | 297.3 | 3,098.5 | 492.70 | 107.70 | 119.30 | 331.50 |
| MEAN  | 14.1   | 30.3   | 39.0    | 42.5    | 23.4  | 26.4  | 9.91  | 100     | 16.4   | 3.47   | 3.85   | 11.1   |
| MAX   | 162    | 432    | 771     | 160     | 148   | 181   | 34    | 1,120   | 122    | 92     | 44     | 122    |
| MIN   | .80    | .30    | 1.0     | 3.0     | 1.8   | 8.0   | 4.0   | 3.7     | .10    | 0      | 0      | .10    |
| CFSM  | .48    | 1.04   | 1.34    | 1.46    | .80   | .91   | .34   | 3.44    | .56    | .12    | .13    | .38    |
| IN.   | .56    | 1.16   | 1.55    | 1.68    | .84   | 1.04  | .38   | 3.96    | .63    | .14    | .15    | .42    |
| AC-FT | 866    | 1,800  | 2,400   | 2,610   | 1,300 | 1,620 | 590   | 6,150   | 977    | 214    | 237    | 658    |

CAL YR 1973 TOTAL 16,122.10 MEAN 44.2 MAX 1,110 MIN 0 CFMS 1.52 IN 20.61 AC-FT 31,980  
WTR YR 1974 TOTAL 9,791.70 MEAN 26.8 MAX 1,120 MIN 0 CFMS .92 IN 12.52 AC-FT 19,420

PEAK DISCHARGE (BASE, 700 FT<sup>3</sup>/S)

| DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|------|------|-------|-----------|
| 10-11 | 1200 | 13.82 | 1,100     | 12-4 | 1035 | 18.40 | 2,630     |
| 11-20 | 1600 | 14.86 | 1,390     | 5-14 | 0830 | 18.35 | 1,910     |
| 11-24 | 0330 | 12.79 | 876       | 5-18 | 1100 | 22.05 | 3,450     |



## 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, on right bank 450 ft (137 m) downstream from bridge on U.S. Highway 65 at Waverly. River mile, 239.4 (385.2 km).

DRAINAGE AREA.--491,200 mi<sup>2</sup> (1,272,000 km<sup>2</sup>), 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.

GAGE.--Water-stage recorder. Datum of gage is 646.00 ft (196.901 m) above mean sea level. Prior to Jan. 1, 1934, at datum 5.00 ft (1.524 m) lower; Mar. 30, 1929, to Apr. 4, 1934, nonrecording gage, Apr. 5, 1934, to June 13, 1943, water-stage recorder, June 14, 1943, to Sept. 15, 1944, nonrecording gage, and Sept. 16, 1944, to May 28, 1969, water-stage recorder at present datum; all at site 450 ft (137 m) upstream.

AVERAGE DISCHARGE.--46 years, 48,360 ft<sup>3</sup>/s (1,370 m<sup>3</sup>/s), 35,040,000 acre-ft/yr (43,200 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 262,000 ft<sup>3</sup>/s (7,420 m<sup>3</sup>/s) Oct. 13 (gage height, 28.85 ft or 8.793 m); minimum daily, 28,000 ft<sup>3</sup>/s (793 m<sup>3</sup>/s) Jan. 11-14, minimum observed gage height, 7.17 ft (2.185 m) Jan. 11.

Period of record: Maximum discharge, 549,000 ft<sup>3</sup>/s (15,550 m<sup>3</sup>/s) July 16, 1951; maximum gage height, 28.85 ft (8.793 m) Oct. 13, 1973; minimum discharge, about 1,700 ft<sup>3</sup>/s (48.1 m<sup>3</sup>/s) Jan. 9, 1940; minimum, gage height, 0.4 ft (0.122 m) Jan. 12, 1930, present datum.

REMARKS.--Records good. Discharge measurements made 3 times a month during winter and 4 or more times monthly during rest of the year. Flow partly regulated by many reservoirs above station.

REVISIONS.--WSP 761: Drainage area.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT      | NOV      | DEC      | JAN      | FEB      | MAR      | APR      | MAY      | JUN      | JUL      | AUG      | SEP      |
|-------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 1     | 201,000  | 98,400   | 75,900   | 51,400   | 79,200   | 58,300   | 56,700   | 88,000   | 79,800   | 45,900   | 42,000   | 45,100   |
| 2     | 155,000  | 98,600   | 70,500   | 45,000   | 83,000   | 60,500   | 55,000   | 88,800   | 81,400   | 45,100   | 41,600   | 49,800   |
| 3     | 132,000  | 97,500   | 67,300   | 41,300   | 81,200   | 62,900   | 52,700   | 72,900   | 70,900   | 43,900   | 41,600   | 50,000   |
| 4     | 119,000  | 97,000   | 77,300   | 41,100   | 75,400   | 62,000   | 54,100   | 69,500   | 66,400   | 45,800   | 42,000   | 47,700   |
| 5     | 111,000  | 96,600   | 127,000  | 40,200   | 70,600   | 62,100   | 55,700   | 66,800   | 62,400   | 47,700   | 42,600   | 45,200   |
| 6     | 99,100   | 95,800   | 133,000  | 40,600   | 68,300   | 64,400   | 56,400   | 63,200   | 60,400   | 46,000   | 42,600   | 43,500   |
| 7     | 91,900   | 93,800   | 103,000  | 36,400   | 67,300   | 63,100   | 57,600   | 61,500   | 63,000   | 44,300   | 42,000   | 42,700   |
| 8     | 87,100   | 89,700   | 79,600   | 33,600   | 63,700   | 60,800   | 58,500   | 59,500   | 66,700   | 43,200   | 41,600   | 42,100   |
| 9     | 80,800   | 90,400   | 70,700   | 31,800   | 62,300   | 60,800   | 58,900   | 56,700   | 75,800   | 42,500   | 41,800   | 41,400   |
| 10    | 82,500   | 91,900   | 64,500   | 29,100   | 61,600   | 62,500   | 55,600   | 56,300   | 122,000  | 42,600   | 42,400   | 40,700   |
| 11    | 125,000  | 92,700   | 60,700   | 28,000   | 61,300   | 67,900   | 54,700   | 58,800   | 136,000  | 42,100   | 41,800   | 40,000   |
| 12    | 207,000  | 91,900   | 59,200   | 28,000   | 60,200   | 68,300   | 54,400   | 58,600   | 101,000  | 41,800   | 44,600   | 39,900   |
| 13    | 251,000  | 90,000   | 58,700   | 28,000   | 58,200   | 63,500   | 55,100   | 59,500   | 87,600   | 42,200   | 47,300   | 40,800   |
| 14    | 256,000  | 90,000   | 58,600   | 28,000   | 55,200   | 60,400   | 56,700   | 72,000   | 85,100   | 42,500   | 45,700   | 44,400   |
| 15    | 250,000  | 90,600   | 60,800   | 29,000   | 54,300   | 59,800   | 56,700   | 88,500   | 82,500   | 43,600   | 43,700   | 44,300   |
| 16    | 236,000  | 86,100   | 61,200   | 31,500   | 57,700   | 59,100   | 57,400   | 75,500   | 76,000   | 44,000   | 45,500   | 43,400   |
| 17    | 220,000  | 87,000   | 59,200   | 33,500   | 58,700   | 58,500   | 57,900   | 89,000   | 67,900   | 43,800   | 51,800   | 41,900   |
| 18    | 199,000  | 86,600   | 53,800   | 34,200   | 56,300   | 58,500   | 57,500   | 179,000  | 62,500   | 43,200   | 50,800   | 40,300   |
| 19    | 172,000  | 86,200   | 54,300   | 48,000   | 55,100   | 58,100   | 55,500   | 224,000  | 60,800   | 41,300   | 48,100   | 39,600   |
| 20    | 152,000  | 92,000   | 55,500   | 55,000   | 59,700   | 56,900   | 53,600   | 202,000  | 60,600   | 41,400   | 46,800   | 39,600   |
| 21    | 140,000  | 119,000  | 51,800   | 62,800   | 67,500   | 55,300   | 55,100   | 165,000  | 58,500   | 42,300   | 43,700   | 39,800   |
| 22    | 122,000  | 128,000  | 48,600   | 66,900   | 75,400   | 54,700   | 70,300   | 143,000  | 55,500   | 43,600   | 44,700   | 40,300   |
| 23    | 109,000  | 117,000  | 45,900   | 75,300   | 77,900   | 54,400   | 94,200   | 116,000  | 54,300   | 43,300   | 44,200   | 41,000   |
| 24    | 106,000  | 110,000  | 45,100   | 74,900   | 72,300   | 55,000   | 81,000   | 102,000  | 53,300   | 42,600   | 42,000   | 41,000   |
| 25    | 102,000  | 106,000  | 49,000   | 108,000  | 65,300   | 56,900   | 73,500   | 97,400   | 52,500   | 42,300   | 41,800   | 40,700   |
| 26    | 99,500   | 102,000  | 59,700   | 142,000  | 60,900   | 59,500   | 67,900   | 80,400   | 52,600   | 42,300   | 41,600   | 41,000   |
| 27    | 101,000  | 95,400   | 66,800   | 105,000  | 59,500   | 58,800   | 64,500   | 71,800   | 54,400   | 42,300   | 41,900   | 41,200   |
| 28    | 98,900   | 92,300   | 61,800   | 89,500   | 58,500   | 58,500   | 61,300   | 69,600   | 52,800   | 42,300   | 43,900   | 40,700   |
| 29    | 97,600   | 86,800   | 60,200   | 84,500   | -----    | 59,000   | 60,800   | 70,000   | 47,700   | 42,600   | 44,700   | 40,400   |
| 30    | 97,500   | 81,300   | 59,600   | 77,900   | -----    | 57,100   | 70,400   | 72,800   | 46,600   | 42,300   | 42,400   | 40,800   |
| 31    | 97,500   | -----    | 56,500   | 76,500   | -----    | 56,200   | -----    | 69,100   | -----    | 42,000   | 41,800   | -----    |
| TOTAL | 4,398.4M | 2,880.6M | 2,055.8M | 1,697.0M | 1,826.6M | 1,853.8M | 1,819.7M | 2,847.2M | 2,097.0M | 1,340.8M | 1,359.0M | 1,269.3M |
| MEAN  | 141,900  | 96,020   | 66,320   | 54,740   | 65,240   | 59,800   | 60,660   | 91,850   | 69,900   | 43,250   | 43,840   | 42,310   |
| MAX   | 256,000  | 128,000  | 133,000  | 142,000  | 83,000   | 68,300   | 94,200   | 224,000  | 136,000  | 47,700   | 51,800   | 50,000   |
| MIN   | 80,800   | 81,300   | 45,100   | 28,000   | 54,300   | 54,400   | 52,700   | 56,300   | 46,600   | 41,300   | 41,600   | 39,600   |
| AC-FT | 8,724M   | 5,714M   | 4,078M   | 3,366M   | 3,623M   | 3,677M   | 3,609M   | 5,647M   | 4,159M   | 2,659M   | 2,696M   | 2,518M   |

CAL YR 1973 TOTAL 33,176,300 MEAN 90,890 MAX 256,000 MIN 27,600 AC-FT 65,810,000  
WTR YR 1974 TOTAL 25,445,200 MEAN 69,710 MAX 256,000 MIN 28,000 AC-FT 50,470,000

M Expressed in thousands.

06897500 Grand River near Gallatin, Mo.

LOCATION.--Lat 39°55'37", long 93°56'33", in SW¼NW¼ sec.16, T.59 N., R.27 W., Daviess County, on left bank 100 ft (30 m) upstream from bridge on State Highway 6, 50 ft (15 m) downstream from Chicago, Rock Island & Pacific Railroad Co. bridge, 1 mi (1.6 km) northeast of Gallatin, and 6 mi (9.7 km) upstream from Honey Creek, and at mile 90 (144.8 km).

DRAINAGE AREA.--2,250 mi<sup>2</sup> (5,830 km<sup>2</sup>), approximately.

PERIOD OF RECORD.--June 1921 to current year.

GAGE.--Water-stage recorder. Datum of gage is 712.56 ft (217.188 m) above mean sea level. Prior to Jan. 31, 1922, nonrecording gage at site 100 ft (30 m) upstream at same datum. Jan. 31, 1922, to Nov. 15, 1936, nonrecording gage, at site about 1,100 ft (335 m) upstream at datum 0.17 ft (0.052 m) higher. Nov. 16, 1936, to Nov. 14, 1937, nonrecording gage, and Nov. 15, 1937, to Sept. 21, 1961, water-stage recorder on center pier of highway bridge at present datum. Sept. 22-27, 1961, nonrecording gage at railroad bridge, 100 ft (30 m) upstream at same datum, Sept. 28, 1961, to Mar. 4, 1964, water-stage recorder on downstream side of left bank pier of highway bridge and wire-weight gage for stages below 7.2 ft (2.2 m) at present datum.

AVERAGE DISCHARGE.--53 years, 1,143 ft<sup>3</sup>/s (32.37 m<sup>3</sup>/s), 6.90 in/yr (175 mm/yr), 828,100 acre-ft/yr (1021 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 57,400 ft<sup>3</sup>/s (1,630 m<sup>3</sup>/s) Oct. 13 (gage height, 33.22 ft or 10.125 m); minimum, 30 ft<sup>3</sup>/s (0.85 m<sup>3</sup>/s) Aug. 3, 4, 5, 6 (gage height, 0.90 ft or 0.274 m).  
Period of record: Maximum discharge, 69,100 ft<sup>3</sup>/s (1,960 m<sup>3</sup>/s) June 24, 1947 (gage height, 34.55 ft or 10.531 m); maximum gage height, 37.02 ft (11.284 m) June 2, 1929 (present site and datum); minimum discharge, 2.2 ft<sup>3</sup>/s (0.062 m<sup>3</sup>/s) June 3, 4, Oct. 27, 28, 29, 1956; minimum gage height, 0.21 ft (0.064 m) Oct. 17, 1971.  
Maximum stage known, about 40 ft (12.2 m) July 8, 1909, from floodmarks.

REMARKS.--Records fair except those for period of ice effect, which are poor.

REVISIONS (WATER YEARS).--WSP 786: 1933-34. WSP 1280: 1922.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY         | OCT             | NOV        | DEC        | JAN     | FEB       | MAR      | APR             | MAY     | JUN     | JUL   | AUG   | SEP   |
|-------------|-----------------|------------|------------|---------|-----------|----------|-----------------|---------|---------|-------|-------|-------|
| 1           | 16,000          | 294        | 1,000      | 443     | 4,810     | 1,420    | 487             | 995     | 11,700  | 264   | 34    | 57    |
| 2           | 16,700          | 268        | 925        | 595     | 3,750     | 1,380    | 422             | 860     | 4,200   | 248   | 35    | 54    |
| 3           | 6,100           | 240        | 850        | 825     | 2,770     | 1,280    | 414             | 646     | 960     | 233   | 31    | 53    |
| 4           | 3,200           | 206        | 828        | 725     | 2,050     | 1,970    | 406             | 562     | 556     | 357   | 30    | 51    |
| 5           | 1,460           | 185        | 850        | 655     | 1,730     | 3,480    | 412             | 559     | 544     | 389   | 30    | 51    |
| 6           | 1,080           | 161        | 8,000      | 600     | 1,930     | 2,450    | 470             | 505     | 580     | 334   | 31    | 48    |
| 7           | 1,290           | 146        | 2,670      | 550     | 1,620     | 2,050    | 490             | 459     | 5,850   | 296   | 34    | 46    |
| 8           | 1,180           | 137        | 1,620      | 500     | 1,240     | 1,590    | 468             | 438     | 4,810   | 257   | 39    | 42    |
| 9           | 875             | 135        | 1,430      | 450     | 1,170     | 2,210    | 420             | 376     | 19,200  | 226   | 114   | 38    |
| 10          | 4,290           | 119        | 1,230      | 400     | 1,100     | 3,300    | 432             | 362     | 25,600  | 202   | 207   | 36    |
| 11          | 27,100          | 104        | 975        | 350     | 1,100     | 2,050    | 424             | 346     | 25,100  | 173   | 190   | 38    |
| 12          | 38,100          | 96         | 1,000      | 300     | 995       | 1,380    | 424             | 382     | 8,110   | 159   | 140   | 57    |
| 13          | 55,200          | 96         | 975        | 300     | 995       | 1,380    | 424             | 577     | 4,020   | 149   | 156   | 88    |
| 14          | 52,900          | 96         | 975        | 300     | 890       | 1,810    | 417             | 583     | 1,340   | 133   | 219   | 51    |
| 15          | 30,500          | 96         | 900        | 300     | 775       | 1,310    | 417             | 630     | 1,660   | 105   | 180   | 61    |
| 16          | 6,700           | 86         | 750        | 300     | 770       | 1,380    | 409             | 571     | 1,310   | 91    | 228   | 68    |
| 17          | 3,840           | 75         | 575        | 300     | 706       | 1,200    | 389             | 1,890   | 1,030   | 85    | 300   | 68    |
| 18          | 2,740           | 57         | 499        | 1,000   | 690       | 1,030    | 394             | 6,060   | 780     | 85    | 230   | 70    |
| 19          | 1,810           | 53         | 615        | 5,000   | 735       | 890      | 394             | 16,700  | 650     | 85    | 161   | 68    |
| 20          | 1,230           | 2,510      | 366        | 9,700   | 860       | 735      | 430             | 8,440   | 559     | 77    | 114   | 64    |
| 21          | 750             | 16,000     | 396        | 17,800  | 1,310     | 646      | 1,560           | 2,940   | 526     | 77    | 86    | 56    |
| 22          | 555             | 9,980      | 471        | 14,100  | 4,110     | 562      | 7,670           | 4,300   | 484     | 88    | 77    | 49    |
| 23          | 491             | 3,680      | 555        | 9,220   | 3,840     | 538      | 4,300           | 3,660   | 417     | 77    | 73    | 40    |
| 24          | 566             | 2,070      | 615        | 5,690   | 2,370     | 505      | 1,730           | 2,290   | 376     | 64    | 72    | 40    |
| 25          | 655             | 1,940      | 2,530      | 4,700   | 1,240     | 490      | 995             | 1,480   | 349     | 63    | 68    | 39    |
| 26          | 575             | 1,940      | 5,100      | 5,250   | 1,240     | 505      | 960             | 1,100   | 310     | 70    | 63    | 40    |
| 27          | 491             | 1,430      | 3,040      | 13,800  | 1,380     | 526      | 925             | 1,060   | 315     | 70    | 59    | 40    |
| 28          | 443             | 1,260      | 1,940      | 11,100  | 1,520     | 592      | 626             | 550     | 298     | 59    | 56    | 46    |
| 29          | 408             | 1,490      | 1,430      | 6,350   | -----     | 562      | 710             | 514     | 300     | 57    | 70    | 36    |
| 30          | 358             | 1,230      | 975        | 4,810   | -----     | 556      | 1,450           | 476     | 267     | 42    | 61    | 38    |
| 31          | 316             | -----      | 491        | 4,920   | -----     | 517      | -----           | 8,460   | -----   | 38    | 59    | ----- |
| TOTAL       | 277,903         | 46,180     | 44,576     | 121,333 | 47,696    | 40,294   | 29,469          | 68,771  | 122,201 | 4,653 | 3,247 | 1,533 |
| MEAN        | 8,965           | 1,539      | 1,438      | 3,914   | 1,703     | 1,300    | 982             | 2,218   | 4,073   | 150   | 105   | 51.1  |
| MAX         | 55,200          | 16,000     | 8,000      | 17,800  | 4,810     | 3,480    | 7,670           | 16,700  | 25,600  | 389   | 300   | 88    |
| MIN         | 316             | 53         | 366        | 300     | 690       | 490      | 389             | 346     | 267     | 38    | 30    | 36    |
| CFSM        | 3.98            | .68        | .64        | 1.74    | .76       | .58      | .44             | .99     | 1.81    | .07   | .05   | .02   |
| IN.         | 4.59            | .76        | .74        | 2.01    | .79       | .67      | .49             | 1.14    | 2.02    | .08   | .05   | .03   |
| AC-FT       | 551,200         | 91,600     | 88,420     | 240,700 | 94,610    | 79,920   | 58,450          | 136,400 | 242,400 | 9,230 | 6,440 | 3,040 |
| CAL YR 1973 | TOTAL 1,356,314 | MEAN 3,716 | MAX 55,200 | MIN 45  | CFSM 1.65 | IN 22.42 | AC-FT 2,690,000 |         |         |       |       |       |
| WTR YR 1974 | TOTAL 807,856   | MEAN 2,213 | MAX 55,200 | MIN 30  | CFSM .98  | IN 13.36 | AC-FT 1,602,000 |         |         |       |       |       |

PEAK DISCHARGE (BASE, 18,000 FT<sup>3</sup>/S)

| DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|------|------|-------|-----------|
| 10-2  | 0200 | 21.00 | 20,800    | 5-19 | 1800 | 20.30 | 21,400    |
| 10-13 | 1430 | 33.22 | 57,400    | 6-11 | 0400 | 23.20 | 27,100    |
| 1-21  | 1200 | 19.20 | 19,400    |      |      |       |           |

## GRAND RIVER BASIN

06898100 Thompson River at Mount Moriah, Mo.

LOCATION.--Lat 40°20'11", long 93°46'02", on line between SE¼ sec.13 and NE¼ sec.24, T.64 N., R.26 W., Harrison County, on downstream side of right pier of bridge on U.S. Highway 136, 0.7 mi (1.1 km) upstream from Panther Creek, 1.5 mi (2.4 km) northeast of Mount Moriah, and at mile 43 (69.2 km).

DRAINAGE AREA.--891 mi<sup>2</sup> (2,308 km<sup>2</sup>), including Panther Creek.

PERIOD OF RECORD.--September 1960 to current year.

GAGE.--Water-stage recorder. Datum of gage is 784 ft (238.96 m) above mean sea level (from data furnished by Missouri State Highway Commission).

AVERAGE DISCHARGE.--14 years, 562 ft<sup>3</sup>/s (15.9 m<sup>3</sup>/s), 8.56 in/yr (217 mm/yr), 407,200 acre-ft/yr (502.1 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 20,100 ft<sup>3</sup>/s (569 m<sup>3</sup>/s) Oct. 11 (gage height, 17.15 ft or 5.227 m); minimum daily discharge, 30 ft<sup>3</sup>/s (0.850 m<sup>3</sup>/s) Sept. 5-10.

Period of record: Maximum discharge, 32,500 ft<sup>3</sup>/s (920 m<sup>3</sup>/s) June 13, 1967 (gage height, 22.00 ft or 6.706 m); minimum, 6.5 ft<sup>3</sup>/s (0.184 m<sup>3</sup>/s) Dec. 6, 1968 (gage height, 1.09 ft or 0.332 m), result of ice conditions upstream.

REMARKS.--Records fair except those for winter months and mud in well at low flow, which are poor.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY             | OCT           | NOV    | DEC        | JAN    | FEB        | MAR    | APR     | MAY    | JUN       | JUL   | AUG      | SEP   |
|-----------------|---------------|--------|------------|--------|------------|--------|---------|--------|-----------|-------|----------|-------|
| 1               | 4,620         | 318    | 496        | 700    | 1,360      | 1,430  | 361     | 2,490  | 1,570     | 140   | 60       | 40    |
| 2               | 2,170         | 321    | 449        | 600    | 1,680      | 1,780  | 326     | 1,090  | 740       | 130   | 60       | 40    |
| 3               | 1,290         | 310    | 412        | 500    | 1,120      | 2,170  | 292     | 701    | 511       | 200   | 50       | 40    |
| 4               | 910           | 286    | 2,410      | 600    | 900        | 1,680  | 289     | 595    | 404       | 366   | 50       | 40    |
| 5               | 740           | 262    | 3,800      | 400    | 700        | 1,890  | 610     | 501    | 344       | 250   | 50       | 30    |
| 6               | 600           | 260    | 2,920      | 300    | 570        | 1,930  | 712     | 435    | 333       | 200   | 50       | 30    |
| 7               | 570           | 258    | 1,180      | 300    | 500        | 1,150  | 496     | 412    | 1,390     | 180   | 51       | 30    |
| 8               | 565           | 249    | 630        | 250    | 470        | 1,000  | 412     | 473    | 1,100     | 160   | 100      | 30    |
| 9               | 530           | 245    | 595        | 250    | 450        | 2,710  | 373     | 404    | 7,520     | 150   | 120      | 30    |
| 10              | 1,170         | 242    | 560        | 250    | 450        | 1,740  | 337     | 408    | 9,900     | 140   | 100      | 30    |
| 11              | 13,100        | 239    | 444        | 200    | 450        | 1,090  | 329     | 463    | 12,600    | 128   | 80       | 40    |
| 12              | 10,200        | 229    | 506        | 200    | 440        | 822    | 325     | 615    | 6,320     | 120   | 60       | 400   |
| 13              | 10,000        | 228    | 560        | 200    | 477        | 1,120  | 325     | 580    | 1,180     | 110   | 100      | 200   |
| 14              | 8,800         | 232    | 729        | 200    | 506        | 940    | 377     | 740    | 1,030     | 110   | 90       | 80    |
| 15              | 5,800         | 229    | 605        | 250    | 605        | 669    | 333     | 2,160  | 768       | 100   | 60       | 60    |
| 16              | 1,540         | 228    | 412        | 300    | 555        | 555    | 333     | 970    | 696       | 100   | 295      | 50    |
| 17              | 970           | 216    | 332        | 320    | 463        | 501    | 352     | 620    | 630       | 100   | 200      | 40    |
| 18              | 822           | 213    | 373        | 500    | 487        | 468    | 329     | 3,200  | 575       | 90    | 100      | 40    |
| 19              | 726           | 216    | 314        | 1,000  | 580        | 408    | 286     | 3,100  | 520       | 90    | 60       | 38    |
| 20              | 674           | 789    | 516        | 2,500  | 657        | 386    | 300     | 3,400  | 473       | 90    | 80       | 40    |
| 21              | 580           | 3,400  | 530        | 3,600  | 768        | 344    | 4,380   | 1,600  | 400       | 90    | 60       | 40    |
| 22              | 525           | 3,300  | 550        | 3,600  | 1,220      | 319    | 4,000   | 970    | 350       | 90    | 50       | 40    |
| 23              | 487           | 1,570  | 501        | 2,920  | 940        | 322    | 3,100   | 910    | 300       | 80    | 50       | 40    |
| 24              | 454           | 696    | 525        | 1,890  | 496        | 322    | 1,600   | 680    | 250       | 80    | 50       | 40    |
| 25              | 412           | 1,320  | 1,710      | 1,540  | 348        | 268    | 822     | 575    | 230       | 80    | 40       | 40    |
| 26              | 390           | 1,430  | 1,740      | 2,570  | 390        | 275    | 636     | 473    | 210       | 70    | 40       | 40    |
| 27              | 365           | 674    | 1,780      | 3,500  | 580        | 333    | 555     | 560    | 190       | 70    | 40       | 50    |
| 28              | 337           | 870    | 1,290      | 2,830  | 729        | 356    | 600     | 1,930  | 170       | 70    | 40       | 40    |
| 29              | 310           | 880    | 910        | 2,250  | -----      | 333    | 652     | 1,320  | 160       | 70    | 40       | 40    |
| 30              | 314           | 630    | 750        | 1,710  | -----      | 329    | 1,500   | 3,090  | 150       | 70    | 40       | 40    |
| 31              | 333           | -----  | 610        | 1,360  | -----      | 329    | -----   | 4,760  | -----     | 60    | 40       | ----- |
| TOTAL           | 70,304        | 20,340 | 29,139     | 37,590 | 18,891     | 27,969 | 25,342  | 40,225 | 51,014    | 3,784 | 2,306    | 1,738 |
| MEAN            | 2,268         | 678    | 940        | 1,213  | 675        | 902    | 845     | 1,298  | 1,700     | 122   | 74.4     | 57.9  |
| MAX             | 13,100        | 3,400  | 3,800      | 3,600  | 1,680      | 2,710  | 4,380   | 4,760  | 12,600    | 366   | 295      | 400   |
| MIN             | 310           | 213    | 314        | 200    | 348        | 268    | 286     | 404    | 150       | 60    | 40       | 30    |
| CFSM            | 2.55          | .76    | 1.06       | 1.36   | .76        | 1.01   | .95     | 1.46   | 1.91      | .14   | .08      | .07   |
| IN.             | 2.94          | .85    | 1.22       | 1.57   | .79        | 1.17   | 1.06    | 1.68   | 2.13      | .16   | .10      | .07   |
| AC-FT           | 139,400       | 40,340 | 57,800     | 74,560 | 37,470     | 55,480 | 50,270  | 79,790 | 101,200   | 7,510 | 4,570    | 3,450 |
| CAL YR 1973     | TOTAL 537,465 |        | MEAN 1,473 |        | MAX 13,100 |        | MIN 119 |        | CFSM 1.65 |       | IN 22.44 |       |
| WTR YR 1974     | TOTAL 328,642 |        | MEAN 900   |        | MAX 13,100 |        | MIN 30  |        | CFSM 1.01 |       | IN 13.72 |       |
| AC-FT 1,066,000 |               |        |            |        |            |        |         |        |           |       |          |       |
| AC-FT 651,900   |               |        |            |        |            |        |         |        |           |       |          |       |

PEAK DISCHARGE (BASE, 8,000 FT<sup>3</sup>/S)

| DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|------|------|-------|-----------|
| 10-11 | 1000 | 17.15 | 20,100    | 6-9  | 0445 | 13.27 | 12,300    |
| 5-30  | 2330 | 11.22 | 8,800     | 6-11 | 0645 | 14.55 | 14,800    |

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, on right bank at downstream side of bridge on old State Highway 6, 1 mi (1.6 km) west of Trenton, 1.8 mi (2.9 km) downstream from Weldon River, and at mile 26.0 (41.8 km).

DRAINAGE AREA.--1,670 mi<sup>2</sup> (4,330 km<sup>2</sup>), 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.

GAGE.--Water-stage recorder. Datum of gage is 721.87 ft (220.026 m) above mean sea level. June 25, 1921, to Aug. 26, 1923, nonrecording gage at two sites 12 mi (19.3 km) downstream (by old channel route) at different datums. Aug. 1, 1928, to Sept. 15, 1930, nonrecording gage at present site and datum. Sept. 16, 1930, to May 31, 1945, nonrecording gage at site 1.5 mi (2.4 km) downstream at datum 3.46 ft (1.055 m) lower. June 1, 1945, to Dec. 7, 1959, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--48 years (1921-23, 1928-74), 930 ft<sup>3</sup>/s (26.3 m<sup>3</sup>/s), 7.56 in/yr (192 mm/yr), 673,800 acre-ft/yr (830.8 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 35,800 ft<sup>3</sup>/s (1,010 m<sup>3</sup>/s) Oct. 12 (gage height, 17.80 ft or 5.425 m); minimum observed, 52 ft<sup>3</sup>/s (1.47 m<sup>3</sup>/s) Sept. 9; minimum observed gage height, 2.05 ft (0.625 m) Aug. 29.

Period of record: Maximum discharge, 95,000 ft<sup>3</sup>/s (2,690 m<sup>3</sup>/s) June 6, 1947 (gage height, 25.7 ft or 7.833 m, from floodmark); minimum daily, 1 ft<sup>3</sup>/s (0.028 m<sup>3</sup>/s) June 17, 1956.

Maximum stage known, 30.7 ft (9.357 m) July 6, 1909, present site and datum, from information by local residents (discharge, 50,000 ft<sup>3</sup>/s or 1,420 m<sup>3</sup>/s, determination by Corps of Engineers, occurred before new channel was dredged).

REMARKS.--Records fair except those for winter periods, which are poor.

REVISIONS (WATER YEARS).--WSP 1116: 1945 (M).

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT     | NOV    | DEC     | JAN     | FEB    | MAR    | APR    | MAY     | JUN     | JUL    | AUG   | SEP   |
|-------|---------|--------|---------|---------|--------|--------|--------|---------|---------|--------|-------|-------|
| 1     | 9,120   | 910    | 1,170   | 1,000   | 4,550  | 2,200  | 515    | 3,290   | 5,000   | 251    | 92    | 66    |
| 2     | 6,200   | 890    | 1,030   | 900     | 3,030  | 2,300  | 490    | 2,100   | 2,420   | 233    | 93    | 67    |
| 3     | 3,100   | 870    | 990     | 900     | 1,900  | 2,100  | 440    | 1,200   | 1,530   | 390    | 90    | 67    |
| 4     | 2,530   | 830    | 1,280   | 800     | 1,440  | 2,420  | 395    | 965     | 1,200   | 4,850  | 86    | 66    |
| 5     | 2,140   | 810    | 7,840   | 800     | 1,200  | 3,420  | 536    | 845     | 965     | 2,200  | 82    | 61    |
| 6     | 1,650   | 770    | 5,230   | 700     | 1,280  | 3,290  | 965    | 755     | 785     | 725    | 81    | 56    |
| 7     | 1,530   | 770    | 2,710   | 700     | 1,200  | 2,420  | 755    | 665     | 4,850   | 465    | 91    | 59    |
| 8     | 1,470   | 770    | 1,930   | 600     | 965    | 1,800  | 590    | 785     | 8,230   | 348    | 108   | 56    |
| 9     | 1,350   | 743    | 1,650   | 600     | 905    | 3,260  | 490    | 680     | 28,500  | 267    | 248   | 52    |
| 10    | 3,100   | 743    | 1,530   | 550     | 845    | 3,290  | 415    | 640     | 13,700  | 231    | 195   | 53    |
| 11    | 25,400  | 732    | 1,470   | 550     | 785    | 2,100  | 395    | 665     | 16,400  | 215    | 151   | 56    |
| 12    | 27,500  | 732    | 1,410   | 550     | 845    | 1,710  | 375    | 785     | 7,860   | 201    | 108   | 1,490 |
| 13    | 14,400  | 722    | 1,230   | 550     | 905    | 2,100  | 395    | 845     | 3,160   | 185    | 166   | 1,040 |
| 14    | 13,400  | 718    | 1,530   | 550     | 845    | 2,000  | 415    | 1,280   | 2,300   | 171    | 130   | 225   |
| 15    | 8,920   | 726    | 1,530   | 550     | 845    | 1,440  | 872    | 2,080   | 2,000   | 166    | 131   | 136   |
| 16    | 3,900   | 715    | 1,290   | 550     | 845    | 1,280  | 590    | 2,100   | 1,280   | 149    | 152   | 108   |
| 17    | 2,280   | 698    | 1,290   | 550     | 725    | 1,120  | 515    | 1,040   | 965     | 141    | 475   | 89    |
| 18    | 1,930   | 680    | 1,650   | 1,000   | 680    | 965    | 490    | 2,510   | 845     | 135    | 177   | 82    |
| 19    | 1,650   | 662    | 1,650   | 2,000   | 755    | 845    | 415    | 8,020   | 785     | 128    | 133   | 76    |
| 20    | 1,530   | 1,190  | 1,790   | 4,000   | 845    | 755    | 375    | 5,000   | 680     | 124    | 104   | 71    |
| 21    | 1,410   | 5,360  | 1,790   | 7,660   | 1,200  | 665    | 5,080  | 3,030   | 615     | 122    | 98    | 66    |
| 22    | 1,290   | 5,100  | 1,790   | 6,980   | 5,000  | 615    | 6,660  | 2,200   | 540     | 117    | 103   | 63    |
| 23    | 1,230   | 3,200  | 2,000   | 5,300   | 3,160  | 565    | 4,400  | 1,200   | 465     | 124    | 99    | 62    |
| 24    | 1,170   | 1,860  | 1,860   | 3,550   | 1,710  | 515    | 3,160  | 1,200   | 415     | 114    | 96    | 60    |
| 25    | 1,070   | 1,590  | 5,630   | 2,780   | 905    | 465    | 1,620  | 905     | 369     | 106    | 82    | 60    |
| 26    | 1,030   | 2,350  | 4,620   | 4,400   | 845    | 490    | 1,280  | 785     | 333     | 103    | 70    | 62    |
| 27    | 990     | 2,800  | 3,420   | 10,800  | 1,120  | 515    | 1,120  | 680     | 318     | 102    | 66    | 62    |
| 28    | 970     | 1,410  | 2,620   | 6,350   | 1,620  | 540    | 1,040  | 1,800   | 294     | 99     | 55    | 74    |
| 29    | 930     | 1,410  | 2,140   | 4,700   | -----  | 540    | 1,970  | 1,800   | 279     | 90     | 53    | 68    |
| 30    | 910     | 1,290  | 1,650   | 3,830   | -----  | 540    | 2,100  | 2,800   | 270     | 88     | 57    | 62    |
| 31    | 910     | -----  | 1,230   | 4,400   | -----  | 540    | -----  | 14,400  | -----   | 86     | 60    | ----- |
| TOTAL | 145,010 | 42,051 | 68,950  | 79,150  | 40,950 | 46,805 | 38,858 | 67,050  | 107,353 | 12,726 | 3,732 | 4,615 |
| MEAN  | 4,678   | 1,402  | 2,224   | 2,553   | 1,463  | 1,510  | 1,295  | 2,163   | 3,578   | 411    | 120   | 154   |
| MAX   | 27,500  | 5,360  | 7,840   | 10,800  | 5,000  | 3,420  | 6,660  | 14,400  | 28,500  | 4,850  | 475   | 1,490 |
| MIN   | 910     | 662    | 990     | 550     | 680    | 465    | 375    | 640     | 270     | 86     | 53    | 52    |
| CFSM  | 2.80    | .84    | 1.33    | 1.53    | .88    | .90    | .78    | 1.30    | 2.14    | .25    | .07   | .09   |
| IN.   | 3.23    | .94    | 1.54    | 1.76    | .91    | 1.04   | .87    | 1.49    | 2.39    | .28    | .08   | .10   |
| AC-FT | 287,600 | 83,410 | 136,800 | 157,000 | 81,220 | 92,840 | 77,070 | 133,000 | 212,900 | 25,240 | 7,400 | 9,150 |

|             |       |           |      |       |     |        |     |     |      |      |    |       |       |           |
|-------------|-------|-----------|------|-------|-----|--------|-----|-----|------|------|----|-------|-------|-----------|
| CAL YR 1973 | TOTAL | 1,026,275 | MEAN | 2,812 | MAX | 33,000 | MIN | 146 | CFSM | 1.68 | IN | 22.86 | AC-FT | 2,036,000 |
| WTR YR 1974 | TOTAL | 657,250   | MEAN | 1,801 | MAX | 28,500 | MIN | 52  | CFSM | 1.08 | IN | 14.64 | AC-FT | 1,304,000 |

PEAK DISCHARGE (BASE, 15,000 FT<sup>3</sup>/S)

| DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|------|------|-------|-----------|
| 10-12 | 0100 | 17.80 | 35,800    | 6-9  | 1100 | 17.55 | 34,600    |
| 5-31  | 0630 | 14.90 | 21,000    | 6-11 | 0400 | 14.50 | 19,500    |



06899700 Shoal Creek near Braymer, Mo.

LOCATION.--Lat 39°40'50", long 93°46'05", in NW¼NE¼ sec.13, T.56 N., R.26 W., Caldwell County, at downstream side of left pier of bridge on State Highway O, 1.8 mi (2.9 km) downstream from Panther Creek, 6 mi (9.7 km) north of Braymer, and at mile 26 (41.8 km).

DRAINAGE AREA.--391 mi<sup>2</sup> (1,013 km<sup>2</sup>).

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

GAGE.--Water-stage recorder. Altitude of gage is 700 ft (213.4 m) from topographic map. Prior to Nov. 21, 1957, and Apr. 4 to Oct. 9, 1962, nonrecording gage at same site and datum. Nov. 21, 1957, to Apr. 3, 1962, water-stage recorder at site 50 ft (15 m) upstream at same datum.

AVERAGE DISCHARGE.--17 years, 268 ft<sup>3</sup>/s (7.59 m<sup>3</sup>/s), 9.31 in/yr (236 mm/yr), 194,200 acre-ft/yr (239.5 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 10,000 ft<sup>3</sup>/s (283 m<sup>3</sup>/s) May 17 (gage height, 26.77 ft or 8.159 m, floodmark); minimum, 2.4 ft<sup>3</sup>/s (0.068 m<sup>3</sup>/s) Aug. 5 (gage height, 1.30 ft or 0.396 m).  
Period of record: Maximum discharge, 26,000 ft<sup>3</sup>/s (736 m<sup>3</sup>/s) from loop rating June 22, 1964 (gage height, 22.00 ft or 6.706 m), result of levee break; maximum gage height, 29.05 ft (8.854 m) June 22, 1964; no flow Oct. 12-14, 1957.

REMARKS.--Records poor.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT    | NOV    | DEC    | JAN    | FEB    | MAR    | APR    | MAY     | JUN    | JUL   | AUG     | SEP   |
|-------|--------|--------|--------|--------|--------|--------|--------|---------|--------|-------|---------|-------|
| 1     | 1,560  | 66     | 122    | 153    | 259    | 200    | 81     | 3,500   | 896    | 19    | 4.7     | 62    |
| 2     | 691    | 64     | 114    | 122    | 217    | 168    | 78     | 638     | 480    | 17    | 5.0     | 82    |
| 3     | 286    | 57     | 110    | 84     | 194    | 158    | 72     | 363     | 200    | 14    | 4.0     | 90    |
| 4     | 519    | 49     | 1,080  | 83     | 158    | 812    | 86     | 241     | 163    | 43    | 4.3     | 48    |
| 5     | 194    | 43     | 3,420  | 83     | 134    | 755    | 77     | 189     | 200    | 462   | 2.7     | 32    |
| 6     | 133    | 41     | 1,320  | 75     | 168    | 350    | 68     | 163     | 163    | 101   | 4.0     | 24    |
| 7     | 205    | 42     | 420    | 74     | 153    | 253    | 64     | 139     | 298    | 40    | 3.6     | 22    |
| 8     | 349    | 43     | 278    | 68     | 106    | 337    | 62     | 130     | 1,530  | 24    | 4.7     | 20    |
| 9     | 153    | 46     | 272    | 62     | 122    | 465    | 60     | 148     | 4,050  | 20    | 5.0     | 16    |
| 10    | 113    | 52     | 223    | 60     | 126    | 266    | 60     | 130     | 5,050  | 16    | 5.5     | 14    |
| 11    | 2,950  | 44     | 168    | 67     | 114    | 229    | 60     | 304     | 3,420  | 14    | 6.9     | 14    |
| 12    | 5,200  | 38     | 178    | 66     | 122    | 272    | 60     | 526     | 526    | 12    | 10      | 14    |
| 13    | 8,990  | 37     | 173    | 67     | 134    | 229    | 60     | 241     | 266    | 8.7   | 1,130   | 12    |
| 14    | 7,600  | 38     | 158    | 76     | 122    | 189    | 60     | 1,400   | 194    | 7.4   | 377     | 9.0   |
| 15    | 1,320  | 40     | 134    | 80     | 110    | 200    | 60     | 1,770   | 139    | 7.1   | 92      | 7.4   |
| 16    | 350    | 39     | 114    | 90     | 104    | 318    | 61     | 558     | 122    | 5.8   | 355     | 7.4   |
| 17    | 278    | 38     | 81     | 163    | 104    | 235    | 71     | 3,990   | 104    | 5.0   | 304     | 5.8   |
| 18    | 211    | 36     | 95     | 855    | 106    | 189    | 83     | 9,000   | 86     | 5.8   | 96      | 4.5   |
| 19    | 184    | 34     | 100    | 2,500  | 122    | 173    | 71     | 7,000   | 75     | 5.2   | 41      | 4.2   |
| 20    | 163    | 183    | 90     | 2,940  | 130    | 148    | 62     | 5,000   | 71     | 4.5   | 21      | 4.5   |
| 21    | 134    | 2,450  | 82     | 3,100  | 210    | 139    | 66     | 3,800   | 60     | 3.6   | 13      | 4.2   |
| 22    | 122    | 1,220  | 64     | 1,890  | 1,450  | 130    | 118    | 4,000   | 53     | 3.6   | 902     | 3.8   |
| 23    | 114    | 391    | 60     | 1,280  | 1,100  | 126    | 110    | 4,200   | 43     | 3.1   | 960     | 3.8   |
| 24    | 106    | 298    | 114    | 670    | 495    | 110    | 60     | 1,060   | 36     | 4.5   | 126     | 3.3   |
| 25    | 98     | 278    | 732    | 435    | 223    | 106    | 48     | 510     | 35     | 4.0   | 50      | 3.3   |
| 26    | 84     | 200    | 738    | 598    | 206    | 110    | 46     | 311     | 32     | 4.0   | 31      | 3.3   |
| 27    | 72     | 168    | 350    | 2,460  | 235    | 110    | 64     | 200     | 30     | 3.6   | 125     | 3.3   |
| 28    | 70     | 158    | 235    | 1,220  | 266    | 107    | 218    | 130     | 26     | 3.1   | 217     | 2.9   |
| 29    | 79     | 158    | 200    | 542    | -----  | 108    | 2,010  | 300     | 24     | 3.1   | 54      | 2.8   |
| 30    | 77     | 144    | 139    | 391    | -----  | 102    | 4,300  | 200     | 22     | 3.1   | 24      | 2.5   |
| 31    | 72     | -----  | 110    | 324    | -----  | 84     | -----  | 300     | -----  | 3.1   | 19      | ----- |
| TOTAL | 32,477 | 6,495  | 11,474 | 20,678 | 6,990  | 7,178  | 8,396  | 50,441  | 18,394 | 870.3 | 4,997.4 | 526.0 |
| MEAN  | 1,048  | 217    | 370    | 667    | 250    | 232    | 280    | 1,627   | 613    | 28.1  | 161     | 17.5  |
| MAX   | 8,990  | 2,450  | 3,420  | 3,100  | 1,450  | 812    | 4,300  | 9,000   | 5,050  | 462   | 1,130   | 90    |
| MIN   | 70     | 34     | 60     | 60     | 104    | 84     | 46     | 130     | 22     | 3.1   | 2.7     | 2.5   |
| CFSM  | 2.68   | .56    | .95    | 1.71   | .64    | .59    | .72    | 4.16    | 1.57   | .07   | .41     | .04   |
| IN.   | 3.09   | .62    | 1.09   | 1.97   | .67    | .68    | .80    | 4.80    | 1.75   | .08   | .48     | .05   |
| AC-FT | 64,420 | 12,880 | 22,760 | 41,010 | 13,860 | 14,240 | 16,650 | 100,000 | 36,480 | 1,730 | 9,910   | 1,040 |

CAL YR 1973 TOTAL 243,946.1 MEAN 668 MAX 8,990 MIN 1.6 CFSM 1.71 IN 23.21 AC-FT 483,900  
WTR YR 1974 TOTAL 168,916.7 MEAN 463 MAX 9,000 MIN 2.5 CFSM 1.18 IN 16.07 AC-FT 335,000

PEAK DISCHARGE (BASE, 3,000 FT<sup>3</sup>/S)

| DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|------|------|-------|-----------|
| 10-13 | 1600 | 26.33 | 9,500     | 5-1  | 0600 | 20.99 | 5,000     |
| 11-21 | 1830 | 16.95 | 3,080     | 5-17 | 2300 | 26.77 | 10,000    |
| 12-5  | 2000 | 18.39 | 3,700     | 6-11 | 0100 | 22.07 | 5,540     |
| 1-21  | 1700 | 17.33 | 3,230     |      |      |       |           |



06900000 Medicine Creek near Galt, Mo.

LOCATION.--Lat 40°07'45", long 93°21'45", in SW¼NW¼ sec.34, T.62 N., R.22 W., Sullivan County, on left bank 30 ft (9 m) upstream from bridge on State Highway 6, 1.2 mi (1.9 km) east of Galt, 2 mi (3.2 km) upstream from West Medicine Creek, and at mile 32.0 (51.5 km).

DRAINAGE AREA.--225 mi<sup>2</sup> (583 km<sup>2</sup>).

PERIOD OF RECORD.--July 1921 to current year. Monthly discharge only for some periods, published in WSP 1310.

GAGE.--Water-stage recorder. Datum of gage is 767.48 ft (233.928 m) above mean sea level. Prior to Dec. 3, 1934, nonrecording gage at site 150 ft (46 m) downstream at following datums: prior to Oct. 1, 1924, at datum 6.97 ft (2.124 m) higher; Oct. 1, 1924 to Sept. 30, 1926, at datum 4.97 ft (1.515 m) higher; Oct. 1, 1926, to Dec. 2, 1934, at datum 1.97 ft (0.600 m) higher; Dec. 3, 1934, to Apr. 25, 1956, nonrecording gage, and Apr. 26 to Sept. 30, 1956; water-stage recorder at site 30 ft (9 m) downstream at datum 2.00 ft (0.610 m) higher; Oct. 1, 1956, to Apr. 5, 1969, water-stage recorder at site 30 ft (9 m) downstream at present datum.

AVERAGE DISCHARGE.--53 years, 139 ft<sup>3</sup>/s (3.94 m<sup>3</sup>/s), 8.39 in/yr (213 mm/yr), 100,700 acre-ft/yr (124 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 6,610 ft<sup>3</sup>/s (187 m<sup>3</sup>/s) May 19 (gage height, 11.57 ft or 3.527 m); minimum, 8.2 ft<sup>3</sup>/s (0.232 m<sup>3</sup>/s) Aug. 30, 31, Sept. 9, 10, 11, 12 (gage height, 1.04 ft or 0.317 m).  
Period of record: Maximum discharge, 24,200 ft<sup>3</sup>/s (685 m<sup>3</sup>/s) June 6, 1947 (gage height, 20.9 ft or 6.37 m, present datum, from floodmark); no flow at times in 1934, 1936-37, 1940, 1954, 1956.  
Flood of July 1909 reached a discharge of about 8,000 ft<sup>3</sup>/s (227 m<sup>3</sup>/s), determined by Corps of Engineers.

REMARKS.--Records poor.

REVISIONS (WATER YEARS).--WSP 1340: 1926. WSP 1730: 1948(M).

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT    | NOV   | DEC   | JAN    | FEB   | MAR   | APR   | MAY    | JUN    | JUL    | AUG   | SEP     |
|-------|--------|-------|-------|--------|-------|-------|-------|--------|--------|--------|-------|---------|
| 1     | 559    | 38    | 41    | 100    | 75    | 168   | 60    | 59     | 595    | 21     | 13    | 9.0     |
| 2     | 369    | 40    | 39    | 90     | 86    | 125   | 51    | 49     | 163    | 20     | 13    | 10      |
| 3     | 479    | 36    | 39    | 80     | 98    | 115   | 51    | 40     | 110    | 19     | 19    | 9.9     |
| 4     | 749    | 32    | 577   | 80     | 45    | 189   | 66    | 36     | 96     | 3,180  | 14    | 9.0     |
| 5     | 207    | 29    | 341   | 70     | 77    | 327   | 151   | 34     | 75     | 2,160  | 13    | 9.0     |
| 6     | 123    | 28    | 264   | 60     | 44    | 203   | 97    | 32     | 60     | 235    | 12    | 9.0     |
| 7     | 98     | 28    | 194   | 60     | 39    | 136   | 69    | 32     | 642    | 100    | 13    | 9.0     |
| 8     | 85     | 28    | 112   | 60     | 31    | 144   | 55    | 48     | 1,080  | 53     | 15    | 9.0     |
| 9     | 76     | 27    | 61    | 60     | 25    | 282   | 47    | 42     | 2,830  | 45     | 23    | 8.2     |
| 10    | 2,050  | 26    | 59    | 50     | 75    | 173   | 43    | 38     | 1,640  | 43     | 30    | 8.2     |
| 11    | 5,560  | 26    | 103   | 50     | 33    | 130   | 43    | 131    | 453    | 41     | 27    | 8.2     |
| 12    | 2,960  | 27    | 133   | 50     | 28    | 236   | 44    | 93     | 276    | 41     | 19    | 551     |
| 13    | 568    | 28    | 142   | 50     | 56    | 281   | 46    | 60     | 300    | 41     | 28    | 178     |
| 14    | 216    | 29    | 153   | 50     | 53    | 155   | 45    | 309    | 348    | 40     | 19    | 50      |
| 15    | 143    | 30    | 53    | 50     | 54    | 140   | 47    | 176    | 200    | 39     | 15    | 30      |
| 16    | 109    | 29    | 39    | 47     | 54    | 126   | 56    | 104    | 100    | 39     | 20    | 21      |
| 17    | 88     | 28    | 59    | 60     | 59    | 107   | 45    | 86     | 69     | 38     | 20    | 16      |
| 18    | 76     | 28    | 84    | 200    | 64    | 96    | 40    | 324    | 56     | 36     | 20    | 13      |
| 19    | 67     | 27    | 71    | 500    | 72    | 89    | 38    | 2,030  | 49     | 32     | 14    | 12      |
| 20    | 60     | 46    | 91    | 764    | 69    | 77    | 39    | 381    | 43     | 30     | 12    | 11      |
| 21    | 55     | 112   | 63    | 842    | 99    | 64    | 48    | 200    | 41     | 28     | 12    | 11      |
| 22    | 51     | 153   | 57    | 657    | 361   | 63    | 134   | 93     | 35     | 26     | 24    | 11      |
| 23    | 47     | 76    | 42    | 330    | 233   | 54    | 78    | 49     | 33     | 26     | 25    | 11      |
| 24    | 45     | 62    | 41    | 220    | 59    | 54    | 49    | 42     | 30     | 31     | 14    | 11      |
| 25    | 42     | 51    | 607   | 266    | 49    | 53    | 41    | 35     | 29     | 26     | 11    | 11      |
| 26    | 39     | 47    | 616   | 618    | 115   | 58    | 37    | 33     | 27     | 26     | 10    | 11      |
| 27    | 38     | 45    | 228   | 1,660  | 111   | 57    | 37    | 31     | 25     | 25     | 9.8   | 11      |
| 28    | 37     | 47    | 165   | 409    | 134   | 57    | 38    | 254    | 24     | 24     | 9.0   | 23      |
| 29    | 35     | 43    | 131   | 289    | ----- | 58    | 46    | 96     | 23     | 23     | 9.0   | 18      |
| 30    | 35     | 42    | 136   | 223    | ----- | 63    | 78    | 80     | 23     | 21     | 8.3   | 14      |
| 31    | 37     | ----- | 112   | 141    | ----- | 68    | ----- | 1,430  | -----  | 18     | 9.5   | -----   |
| TOTAL | 15,103 | 1,288 | 4,853 | 8,186  | 2,298 | 3,948 | 1,719 | 6,447  | 9,475  | 6,527  | 500.6 | 1,112.5 |
| MEAN  | 487    | 42.9  | 157   | 264    | 82.1  | 127   | 57.3  | 208    | 316    | 211    | 16.1  | 37.1    |
| MAX   | 5,560  | 153   | 616   | 1,660  | 361   | 327   | 151   | 2,030  | 2,830  | 3,180  | 30    | 551     |
| MIN   | 35     | 26    | 39    | 47     | 25    | 53    | 37    | 31     | 23     | 18     | 8.3   | 8.2     |
| CFSM  | 2.16   | .19   | .70   | 1.17   | .36   | .56   | .25   | .92    | 1.40   | .94    | .07   | .16     |
| IN.   | 2.50   | .21   | .80   | 1.35   | .38   | .65   | .28   | 1.07   | 1.57   | 1.08   | .08   | .18     |
| AC-FT | 29,960 | 2,550 | 9,630 | 16,240 | 4,560 | 7,830 | 3,410 | 12,790 | 18,790 | 12,950 | 993   | 2,210   |

CAL YR 1973 TOTAL 126,265.9 MEAN 346 MAX 5,690 MIN 7.4 CFSM 1.54 IN 20.88 AC-FT 250,400  
WTR YR 1974 TOTAL 61,457.1 MEAN 168 MAX 5,560 MIN 8.2 CFSM .75 IN 10.16 AC-FT 121,900

PEAK DISCHARGE (BASE, 3,000 FT<sup>3</sup>/S)

| DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H.  | DISCHARGE |
|-------|------|-------|-----------|------|------|--------|-----------|
| 10-11 | 0100 | 11.41 | 6,340     | 6-9  | *    | 810.00 | 5,090     |
| 5-19  | 0615 | 11.57 | 6,610     | 7-4  | *    | 810.80 | 5,790     |

\*Unknown

§From graph

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, near right bank on downstream side of pier of bridge on State Highway 139, 240 ft (73 m) downstream from Chicago, Burlington & Quincy Railroad bridge, 2 mi (3.2 km) southwest of Sumner, 2.5 mi (4.0 km) downstream from Locust Creek, and at mile 41.0 (66.0 km).

DRAINAGE AREA.--6,880 mi<sup>2</sup> (17,800 km<sup>2</sup>), approximately.

PERIOD OF RECORD.--October 1923 to current year. Prior to April 1924 monthly discharge only, published in WSP 1310.

GAGE.--Water-stage recorder. Datum of gage is 631.18 ft (192.384 m) above mean sea level. Prior to July 11, 1926, nonrecording gage at site 200 ft (61 m) upstream at same datum. July 11, 1926 to July 9, 1939, nonrecording gage at same site and datum. July 10, 1939 to Aug. 8, 1952, water-stage recorder at site 200 ft (61 m) upstream at same datum. Aug. 9, 1952 to Nov. 12, 1953, nonrecording gage at site 120 ft (37 m) upstream and at same datum. Nov. 13, 1953 to July 6, 1964, water-stage recorder and nonrecording gage for stages below 8.3 ft (2.53 m) at site 120 ft (37 m) upstream and at same datum. July 7, 1964 to May 26, 1965, nonrecording gage at present site and datum. Auxiliary water-stage recorder at site 3.2 mi (5.1 km) downstream from base gage at datum 631.30 ft (192.420 m) above mean sea level. Mar. 15, 1939 to Aug. 4, 1942, auxiliary nonrecording gage at various sites. Aug. 5, 1942 to Dec. 14, 1956, auxiliary nonrecording gage at present site.

AVERAGE DISCHARGE.--51 years, 3,817 ft<sup>3</sup>/s (108.1 m<sup>3</sup>/s), 7.53 in/yr (191 mm/yr), 2,765,000 acre-ft/yr (3,409 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 83,500 ft<sup>3</sup>/s (2,360 m<sup>3</sup>/s) Oct. 16 (gage height, 36.60 ft or 11.156 m); minimum, 174 ft<sup>3</sup>/s (4.93 m<sup>3</sup>/s) Sept. 29 (gage height, 7.31 ft or 2.228 m).  
Period of record: Maximum discharge, 180,000 ft<sup>3</sup>/s (5,100 m<sup>3</sup>/s) June 7, 8, 1947 (gage height, 39.5 ft or 12.04 m, from floodmark); minimum observed, 10 ft<sup>3</sup>/s (0.28 m<sup>3</sup>/s) Aug. 12, 1934; minimum gage height, 2.19 ft (0.668 m) Aug. 22, 23, 31, Sept. 1, 1936.  
Flood of July 9, 1909, reached a stage of 36.7 ft (11.19 m) from floodmark.

REMARKS.--Records fair. Records of chemical analyses for the current year are published in Part 2 of this report.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT     | NOV     | DEC     | JAN     | FEB     | MAR     | APR     | MAY     | JUN     | JUL     | AUG    | SEP    |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--------|--------|
| 1     | 28,500  | 1,830   | 3,060   | 2,500   | 9,680   | 3,410   | 1,590   | 9,240   | 23,300  | 1,010   | 348    | 351    |
| 2     | 33,300  | 1,710   | 2,430   | 2,000   | 8,400   | 3,620   | 1,530   | 7,560   | 16,900  | 965     | 348    | 479    |
| 3     | 33,900  | 1,650   | 2,190   | 2,500   | 6,100   | 3,550   | 1,410   | 3,700   | 9,680   | 898     | 367    | 798    |
| 4     | 22,700  | 1,590   | 4,520   | 3,000   | 4,300   | 4,200   | 1,340   | 2,430   | 4,750   | 6,540   | 341    | 515    |
| 5     | 15,300  | 1,410   | 22,700  | 2,500   | 3,200   | 8,200   | 1,360   | 2,130   | 3,410   | 13,900  | 338    | 367    |
| 6     | 11,000  | 1,340   | 26,500  | 2,000   | 3,130   | 8,100   | 1,500   | 1,890   | 2,920   | 8,500   | 341    | 330    |
| 7     | 8,560   | 1,310   | 20,300  | 1,500   | 3,200   | 6,820   | 1,830   | 1,710   | 6,020   | 6,100   | 352    | 320    |
| 8     | 6,160   | 1,260   | 10,200  | 2,000   | 3,200   | 4,820   | 1,950   | 1,530   | 21,400  | 3,700   | 355    | 310    |
| 9     | 5,350   | 1,240   | 6,100   | 2,000   | 2,800   | 5,300   | 1,710   | 1,530   | 27,000  | 1,890   | 395    | 299    |
| 10    | 4,080   | 1,180   | 4,520   | 2,000   | 2,500   | 6,740   | 1,590   | 1,590   | 35,800  | 1,280   | 528    | 285    |
| 11    | 19,400  | 1,180   | 3,780   | 2,000   | 2,300   | 6,500   | 1,380   | 1,530   | 45,100  | 1,110   | 718    | 273    |
| 12    | 29,100  | 1,160   | 3,410   | 2,000   | 2,070   | 4,680   | 1,340   | 2,130   | 49,700  | 942     | 740    | 264    |
| 13    | 52,300  | 1,140   | 3,410   | 2,000   | 2,190   | 4,520   | 1,310   | 2,250   | 37,600  | 862     | 998    | 1,540  |
| 14    | 73,400  | 1,110   | 3,410   | 1,500   | 2,190   | 4,680   | 1,310   | 2,570   | 12,900  | 785     | 4,480  | 3,410  |
| 15    | 76,500  | 1,080   | 3,410   | 1,500   | 2,130   | 4,300   | 1,310   | 7,830   | 10,000  | 722     | 1,760  | 1,430  |
| 16    | 75,700  | 1,080   | 3,100   | 1,500   | 2,130   | 4,220   | 1,530   | 5,520   | 6,280   | 682     | 911    | 816    |
| 17    | 57,500  | 1,060   | 2,600   | 1,500   | 2,130   | 3,620   | 1,590   | 4,080   | 4,300   | 637     | 1,530  | 524    |
| 18    | 32,900  | 1,010   | 2,200   | 2,000   | 2,010   | 2,990   | 1,470   | 13,000  | 3,410   | 614     | 1,440  | 407    |
| 19    | 12,100  | 988     | 1,800   | 8,000   | 2,070   | 2,640   | 1,360   | 21,600  | 2,850   | 578     | 1,020  | 330    |
| 20    | 6,630   | 1,060   | 1,500   | 15,000  | 2,190   | 2,430   | 1,260   | 29,700  | 2,430   | 551     | 808    | 285    |
| 21    | 5,630   | 9,840   | 1,500   | 30,000  | 2,310   | 2,250   | 1,240   | 33,300  | 2,190   | 533     | 574    | 261    |
| 22    | 4,980   | 19,900  | 1,500   | 35,800  | 5,970   | 2,070   | 9,010   | 26,100  | 1,950   | 515     | 826    | 243    |
| 23    | 4,150   | 15,300  | 2,000   | 31,800  | 11,800  | 1,890   | 11,000  | 19,800  | 1,700   | 491     | 2,860  | 210    |
| 24    | 3,550   | 7,380   | 2,700   | 20,200  | 7,920   | 1,770   | 6,340   | 13,400  | 1,440   | 475     | 1,820  | 207    |
| 25    | 3,130   | 4,750   | 4,000   | 13,000  | 4,520   | 1,590   | 3,550   | 7,220   | 1,310   | 475     | 772    | 192    |
| 26    | 2,780   | 4,220   | 15,000  | 11,600  | 2,990   | 1,500   | 2,370   | 4,300   | 1,240   | 463     | 528    | 186    |
| 27    | 2,500   | 4,750   | 13,500  | 22,300  | 2,710   | 1,530   | 2,070   | 3,410   | 1,140   | 447     | 411    | 180    |
| 28    | 2,310   | 3,480   | 7,000   | 28,000  | 2,920   | 1,590   | 2,130   | 2,920   | 1,110   | 415     | 427    | 186    |
| 29    | 2,130   | 3,060   | 5,000   | 23,600  | -----   | 1,710   | 4,050   | 3,130   | 1,040   | 403     | 455    | 177    |
| 30    | 2,010   | 3,700   | 4,000   | 15,200  | -----   | 1,710   | 9,900   | 3,620   | 1,060   | 383     | 387    | 192    |
| 31    | 1,950   | -----   | 3,000   | 10,900  | -----   | 1,650   | -----   | 14,300  | -----   | 363     | 327    | -----  |
| TOTAL | 639,500 | 101,768 | 190,340 | 301,400 | 109,060 | 114,600 | 81,330  | 255,020 | 339,930 | 57,229  | 27,505 | 15,367 |
| MEAN  | 20,630  | 3,392   | 6,140   | 9,723   | 3,895   | 3,697   | 2,711   | 8,226   | 11,330  | 1,846   | 887    | 512    |
| MAX   | 76,500  | 19,900  | 26,500  | 35,800  | 11,800  | 8,200   | 11,000  | 33,300  | 49,700  | 13,900  | 4,480  | 3,410  |
| MIN   | 1,950   | 988     | 1,500   | 1,500   | 2,010   | 1,500   | 1,240   | 1,530   | 1,040   | 363     | 327    | 177    |
| CFSM  | 3.00    | .49     | .89     | 1.41    | .57     | .54     | .39     | 1.20    | 1.65    | .27     | .13    | .07    |
| IN.   | 3.46    | .55     | 1.03    | 1.63    | .59     | .62     | .44     | 1.38    | 1.84    | .31     | .15    | .08    |
| AC-FT | 1,268M  | 201,900 | 377,500 | 597,800 | 216,300 | 227,300 | 161,300 | 505,800 | 674,300 | 113,500 | 54,560 | 30,480 |

CAL YR 1973 TOTAL 4,333,038 MEAN 11,870 MAX 76,500 MIN 300 CFSM 1.73 IN 23.43 AC-FT 8,595,000  
WTR YR 1974 TOTAL 2,233,049 MEAN 6,118 MAX 76,500 MIN 177 CFSM .89 IN 12.07 AC-FT 4,429,000

PEAK DISCHARGE (BASE, 38,000 FT<sup>3</sup>/S)

| DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|------|------|-------|-----------|
| 10-16 | 1700 | 36.60 | 83,500    | 6-12 | 1800 | 33.89 | 51,000    |

06902200 West Yellow Creek near Brookfield, Mo.

LOCATION.--Lat 39°50'40", long 93°01'36", in SE¼NE¼ sec.16, T.58 N., R.19 W., Linn County, on right bank at right downstream pier of county highway bridge, 1.5 mi (2.4 km) downstream from Bear Creek, and 3.5 mi (5.6 km) northeast of Brookfield.

DRAINAGE AREA.--135 mi<sup>2</sup> (3,430 km<sup>2</sup>).

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

GAGE.--Water-stage recorder. Datum of gage is 733.64 ft (223.613 m) above mean sea level.

AVERAGE DISCHARGE.--15 years, 112 ft<sup>3</sup>/s (3.17 m<sup>3</sup>/s), 11.27 in/yr (286 mm/yr), 81,140 acre-ft/yr (100 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 5,200 ft<sup>3</sup>/s (147 m<sup>3</sup>/s) June 9 (gage height, 14.48 ft or 4.414 m); no flow on many days.

Period of record: Maximum discharge, 7,400 ft<sup>3</sup>/s (210 m<sup>3</sup>/s) July 9, 1969 (gage height, 15.50 ft or 4.724 m); no flow at times in most years.

REMARKS.--Records poor.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY         | OCT              | NOV      | DEC       | JAN     | FEB       | MAR      | APR           | MAY    | JUN      | JUL      | AUG   | SEP   |
|-------------|------------------|----------|-----------|---------|-----------|----------|---------------|--------|----------|----------|-------|-------|
| 1           | 3,750            | 11       | 7.1       | 40      | 88        | 44       | 34            | 41     | 470      | 5.2      | .30   | .10   |
| 2           | 2,750            | 10       | 6.6       | 35      | 68        | 43       | 30            | 27     | 93       | 4.8      | .20   | .10   |
| 3           | 574              | 7.0      | 6.4       | 30      | 53        | 43       | 27            | 19     | 29       | 4.8      | .20   | .20   |
| 4           | 2,930            | 5.7      | 340       | 27      | 41        | 404      | 28            | 15     | 22       | 442      | .10   | .10   |
| 5           | 4,250            | 5.1      | 660       | 26      | 40        | 326      | 31            | 13     | 16       | 890      | 0     | 0     |
| 6           | 535              | 5.2      | 283       | 25      | 45        | 130      | 42            | 12     | 12       | 308      | 0     | 0     |
| 7           | 295              | 5.7      | 76        | 24      | 41        | 75       | 39            | 11     | 789      | 39       | .10   | 0     |
| 8           | 148              | 5.9      | 47        | 23      | 37        | 72       | 31            | 10     | 3,330    | 26       | .30   | 0     |
| 9           | 95               | 5.9      | 52        | 22      | 33        | 196      | 25            | 13     | 4,820    | 18       | .40   | 0     |
| 10          | 80               | 5.9      | 40        | 21      | 30        | 90       | 23            | 14     | 3,320    | 13       | .60   | 0     |
| 11          | 158              | 5.7      | 39        | 20      | 25        | 58       | 21            | 13     | 680      | 7.5      | .60   | 0     |
| 12          | 535              | 6.2      | 38        | 19      | 35        | 156      | 22            | 26     | 78       | 5.4      | .60   | 0     |
| 13          | 208              | 7.3      | 40        | 19      | 36        | 209      | 21            | 39     | 39       | 5.0      | .30   | 0     |
| 14          | 88               | 9.2      | 42        | 19      | 36        | 92       | 24            | 241    | 26       | 4.0      | .60   | 0     |
| 15          | 57               | 10       | 38        | 19      | 33        | 72       | 21            | 331    | 35       | 3.3      | 4.7   | 0     |
| 16          | 40               | 13       | 29        | 15      | 31        | 115      | 19            | 98     | 30       | 3.0      | 3.2   | 0     |
| 17          | 33               | 11       | 27        | 15      | 32        | 74       | 18            | 194    | 29       | 2.0      | 2.1   | 0     |
| 18          | 28               | 10       | 27        | 200     | 35        | 56       | 16            | 776    | 27       | 1.7      | 1.0   | 0     |
| 19          | 24               | 13       | 25        | 1,140   | 44        | 50       | 16            | 1,750  | 22       | 1.6      | .70   | 0     |
| 20          | 20               | 15       | 18        | 2,250   | 44        | 45       | 13            | 2,900  | 22       | 1.4      | .40   | 0     |
| 21          | 18               | 16       | 17        | 1,870   | 42        | 42       | 20            | 3,500  | 16       | 1.3      | .20   | 0     |
| 22          | 16               | 19       | 16        | 631     | 128       | 40       | 22            | 509    | 12       | 1.2      | .40   | 0     |
| 23          | 14               | 19       | 16        | 548     | 153       | 39       | 16            | 389    | 10       | 1.1      | .90   | 0     |
| 24          | 13               | 13       | 22        | 355     | 83        | 35       | 14            | 80     | 9.2      | .80      | 1.9   | 0     |
| 25          | 12               | 12       | 154       | 189     | 47        | 31       | 12            | 37     | 8.0      | .80      | .90   | 0     |
| 26          | 10               | 10       | 470       | 324     | 45        | 33       | 11            | 26     | 7.3      | .80      | .50   | 0     |
| 27          | 9.8              | 9.2      | 183       | 2,100   | 48        | 37       | 11            | 25     | 6.8      | .80      | .40   | 0     |
| 28          | 9.2              | 8.6      | 82        | 1,220   | 44        | 36       | 11            | 27     | 5.9      | .70      | .30   | 0     |
| 29          | 8.6              | 9.5      | 65        | 217     | -----     | 36       | 58            | 27     | 5.7      | .70      | .10   | 0     |
| 30          | 7.3              | 7.8      | 55        | 128     | -----     | 37       | 75            | 25     | 5.4      | .60      | 0     | 0     |
| 31          | 6.8              | -----    | 42        | 112     | -----     | 35       | -----         | 875    | -----    | .50      | 0     | ----- |
| TOTAL       | 16,722.7         | 291.9    | 2,963.1   | 11,683  | 1,417     | 2,751    | 751           | 12,063 | 13,975.3 | 1,795.00 | 22.00 | .50   |
| MEAN        | 539              | 9.73     | 95.6      | 377     | 50.6      | 88.7     | 25.0          | 389    | 466      | 57.9     | .71   | .017  |
| MAX         | 4,250            | 19       | 660       | 2,250   | 153       | 404      | 75            | 3,500  | 4,820    | 890      | 4.7   | .20   |
| MIN         | 6.8              | 5.1      | 6.4       | 15      | 25        | 31       | 11            | 10     | 5.4      | .50      | 0     | 0     |
| CFSM        | 3.99             | .07      | .71       | 2.79    | .37       | .66      | .19           | 2.88   | 3.45     | .43      | .005  | .0001 |
| IN-         | 4.61             | .08      | .82       | 3.22    | .39       | .76      | .21           | 3.32   | 3.85     | .49      | .006  | 0     |
| AC-FT       | 33,170           | 579      | 5,880     | 23,170  | 2,810     | 5,460    | 1,490         | 23,930 | 27,720   | 3,560    | 44    | 1.0   |
| CAL YR 1973 | TOTAL 128,458.00 | MEAN 352 | MAX 5,500 | MIN 1.0 | CFSM 2.61 | IN 35.40 | AC-FT 254,800 |        |          |          |       |       |
| WTR YR 1974 | TOTAL 64,435.50  | MEAN 177 | MAX 4,820 | MIN 0   | CFSM 1.31 | IN 17.76 | AC-FT 127,800 |        |          |          |       |       |

PEAK DISCHARGE (BASE, 1,200 FT<sup>3</sup>/S)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|------|------|-------|-----------|------|------|-------|-----------|
| 10-1 | 1730 | 14.07 | 4,180     | 5-21 | 0830 | 14.15 | 4,380     |
| 10-4 | 2400 | 14.39 | 4,980     | 5-31 | 1500 | 12.61 | 1,210     |
| 1-20 | 2300 | 13.45 | 2,620     | 6-9  | 1100 | 14.48 | 5,200     |
| 1-27 | 1500 | 13.42 | 2,550     |      |      |       |           |

06904500 Chariton River at Novinger, Mo.

LOCATION.--Lat 40°14'05", long 92°41'14", on south line SE¼NE¼ sec.28, T.63 N., R.16 W., Adair County, on right bank at the downstream side of center pier on bridge on State Highway 6, 0.6 mi (1.0 km) east of Novinger, 1 mi (1.6 km) downstream from Rye Creek, 2 mi (3.2 km) upstream from Spring Creek, and at mile 73.1 (117.6 km).

DRAINAGE AREA.--1,370 mi<sup>2</sup> (3,550 km<sup>2</sup>), 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.

GAGE.--Water-stage recorder. Datum of gage is 737.65 ft (224.836 m) above mean sea level. Prior to Dec. 20, 1939, nonrecording gage at bridge over old channel, 500 ft (152 m) east, at same datum. Dec. 20, 1939 to Sept. 30, 1952, and Oct. 1, 1954 to Aug. 1, 1956, water-stage recorder, supplemented by nonrecording gage, at same site and datum. Aug. 2, 1956 to May 16, 1957, nonrecording gage at present site and datum.

AVERAGE DISCHARGE.--42 years, 761 ft<sup>3</sup>/s (21.55 m<sup>3</sup>/s), 7.55 in/yr (192 mm/yr), 551,300 acre-ft/yr (680 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 17,900 ft<sup>3</sup>/s (507 m<sup>3</sup>/s) Dec. 5 (gage height, 24.14 ft or 7.358 m); minimum observed, 47 ft<sup>3</sup>/s (1.33 m<sup>3</sup>/s) Sept. 9, 10 (gage height, 1.12 ft or 0.341 m).

Period of record: Maximum discharge, 22,900 ft<sup>3</sup>/s (649 m<sup>3</sup>/s) June 7, 13, 1947 (gage height, 28.50 ft or 8.687 m); minimum, 0.1 ft<sup>3</sup>/s (0.003 m<sup>3</sup>/s) Aug. 31, Sept. 1, 1936.  
Maximum stage known, 28.6 ft (8.72 m) in June 1917.

REMARKS.--Records poor. Flow partly regulated by Rathbun Lake.

REVISIONS (WATER YEARS).--WSP 896: 1939. WSP 1116: 1932(M).

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT     | NOV    | DEC     | JAN     | FEB    | MAR    | APR    | MAY     | JUN     | JUL     | AUG    | SEP   |
|-------|---------|--------|---------|---------|--------|--------|--------|---------|---------|---------|--------|-------|
| 1     | 4,900   | 1,020  | 1,600   | 1,300   | 2,500  | 1,750  | 510    | 342     | 5,240   | 1,350   | 134    | 61    |
| 2     | 2,950   | 1,020  | 1,600   | 1,300   | 2,250  | 1,700  | 498    | 318     | 3,150   | 1,300   | 111    | 61    |
| 3     | 13,300  | 1,020  | 1,600   | 1,300   | 2,000  | 1,700  | 474    | 318     | 1,900   | 1,350   | 103    | 63    |
| 4     | 15,000  | 975    | 3,680   | 1,300   | 1,850  | 1,950  | 474    | 314     | 925     | 11,500  | 91     | 65    |
| 5     | 10,100  | 975    | 14,000  | 1,300   | 1,850  | 2,450  | 530    | 456     | 1,300   | 12,000  | 82     | 59    |
| 6     | 7,460   | 925    | 4,200   | 1,300   | 1,850  | 2,400  | 575    | 530     | 1,650   | 9,220   | 71     | 53    |
| 7     | 5,590   | 925    | 750     | 1,300   | 1,800  | 2,050  | 502    | 510     | 8,160   | 5,520   | 63     | 53    |
| 8     | 2,850   | 875    | 418     | 1,300   | 1,650  | 2,000  | 446    | 306     | 7,620   | 3,400   | 64     | 51    |
| 9     | 2,200   | 900    | 975     | 1,000   | 1,500  | 2,400  | 394    | 81      | 8,770   | 2,500   | 73     | 47    |
| 10    | 3,400   | 1,200  | 1,550   | 800     | 1,500  | 2,150  | 386    | 137     | 5,310   | 2,200   | 121    | 47    |
| 11    | 6,180   | 1,350  | 1,610   | 600     | 1,500  | 1,950  | 394    | 650     | 2,950   | 1,900   | 128    | 49    |
| 12    | 6,620   | 1,400  | 1,620   | 400     | 1,550  | 3,050  | 394    | 650     | 1,450   | 1,500   | 117    | 116   |
| 13    | 5,380   | 1,400  | 1,650   | 300     | 1,500  | 2,800  | 426    | 414     | 1,350   | 1,350   | 3,030  | 470   |
| 14    | 3,400   | 1,400  | 1,600   | 300     | 1,500  | 1,500  | 418    | 2,000   | 2,450   | 1,220   | 575    | 350   |
| 15    | 1,600   | 1,400  | 1,550   | 300     | 1,500  | 1,080  | 398    | 1,450   | 4,540   | 1,220   | 190    | 222   |
| 16    | 725     | 1,400  | 1,500   | 290     | 1,500  | 1,000  | 394    | 675     | 3,880   | 1,180   | 155    | 165   |
| 17    | 510     | 1,400  | 1,500   | 300     | 1,500  | 850    | 366    | 2,050   | 1,950   | 1,180   | 134    | 107   |
| 18    | 446     | 1,400  | 1,500   | 1,000   | 1,550  | 675    | 354    | 1,800   | 1,200   | 1,150   | 102    | 88    |
| 19    | 350     | 1,400  | 1,500   | 2,000   | 1,550  | 675    | 350    | 11,400  | 1,750   | 1,100   | 91     | 74    |
| 20    | 290     | 1,600  | 1,450   | 4,000   | 1,500  | 530    | 342    | 5,310   | 2,250   | 1,100   | 82     | 62    |
| 21    | 242     | 2,100  | 1,450   | 3,500   | 1,550  | 442    | 350    | 2,100   | 1,700   | 1,100   | 89     | 59    |
| 22    | 1,020   | 1,700  | 1,550   | 4,000   | 2,100  | 430    | 358    | 1,750   | 1,600   | 1,050   | 442    | 52    |
| 23    | 1,180   | 875    | 1,700   | 3,880   | 2,600  | 458    | 358    | 875     | 1,550   | 1,050   | 250    | 50    |
| 24    | 1,080   | 775    | 1,850   | 2,700   | 2,000  | 450    | 334    | 700     | 1,500   | 1,020   | 149    | 48    |
| 25    | 1,050   | 750    | 4,010   | 2,000   | 1,650  | 450    | 454    | 1,150   | 1,450   | 1,000   | 94     | 49    |
| 26    | 1,020   | 700    | 3,300   | 2,940   | 1,650  | 502    | 550    | 1,550   | 1,400   | 1,000   | 76     | 50    |
| 27    | 1,050   | 700    | 2,850   | 6,780   | 1,600  | 502    | 550    | 1,700   | 1,400   | 1,000   | 67     | 49    |
| 28    | 1,000   | 1,120  | 2,150   | 5,450   | 1,700  | 502    | 446    | 1,700   | 1,400   | 1,050   | 67     | 49    |
| 29    | 1,000   | 1,550  | 1,900   | 3,750   | -----  | 510    | 342    | 1,900   | 1,350   | 925     | 67     | 67    |
| 30    | 1,000   | 1,600  | 1,700   | 2,750   | -----  | 575    | 350    | 3,800   | 1,350   | 850     | 62     | 52    |
| 31    | 1,020   | -----  | 1,500   | 2,350   | -----  | 530    | -----  | 7,220   | -----   | 310     | 61     | ----- |
| TOTAL | 103,913 | 35,855 | 69,813  | 61,790  | 48,750 | 40,011 | 12,717 | 54,156  | 82,495  | 73,595  | 6,941  | 2,788 |
| MEAN  | 3,352   | 1,195  | 2,252   | 1,993   | 1,741  | 1,291  | 424    | 1,747   | 2,750   | 2,374   | 224    | 92.9  |
| MAX   | 15,000  | 2,100  | 14,000  | 6,780   | 2,600  | 3,050  | 575    | 11,400  | 8,770   | 12,000  | 3,030  | 470   |
| MIN   | 242     | 700    | 418     | 290     | 1,500  | 430    | 334    | 81      | 925     | 310     | 61     | 47    |
| CFSM  | 2.45    | .87    | 1.64    | 1.45    | 1.27   | .94    | .31    | 1.28    | 2.01    | 1.73    | .16    | .07   |
| IN.   | 2.82    | .97    | 1.90    | 1.68    | 1.32   | 1.09   | .35    | 1.47    | 2.24    | 2.00    | .19    | .08   |
| AC-FT | 206,100 | 71,120 | 138,500 | 122,600 | 96,700 | 79,360 | 25,220 | 107,400 | 163,600 | 146,000 | 13,770 | 5,530 |

CAL YR 1973 TOTAL 964,443 MEAN 2,642 MAX 17,400 MIN 105 CFSM 1.93 IN 26.19 AC-FT 1,913,000  
WTR YR 1974 TOTAL 592,824 MEAN 1,624 MAX 15,000 MIN 47 CFSM 1.19 IN 16.10 AC-FT 1,176,000

PEAK DISCHARGE (BASE, 6,500 FT<sup>3</sup>/S)

| DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|------|------|-------|-----------|
| 10-3  | 2245 | 23.28 | 16,500    | 5-19 | 1400 | 22.70 | 15,500    |
| 10-11 | 1600 | 15.20 | 7,460     | 5-31 | 0130 | 17.62 | 9,380     |
| 12-5  | 1200 | 24.14 | 17,900    | 6-7  | 1700 | 19.68 | 11,400    |
| 1-27  | 0400 | 16.10 | 8,420     | 7-4  | 1600 | 21.25 | 13,300    |



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, on right bank on downstream side of road at bridge on State Highway 129, 3.2 mi (5.1 km) northwest of Prairie Hill, 13.5 mi (21.7 km) upstream from Puzzle Creek, and at mile 19.6 (31.5 km).

DRAINAGE AREA.--1,870 mi<sup>2</sup> (4,840 km<sup>2</sup>), approximately.

PERIOD OF RECORD.--October 1928 to current year. Prior to Oct. 1, 1953, published as "near Keytesville". Prior to May 1929, monthly discharge only, published in WSP 1309.

GAGE.--Water-stage recorder. Datum of gage is 632.05 ft (192.649 m) above mean sea level (levels by Corps of Engineers). Prior to Oct. 1, 1953, nonrecording gage at site 8.2 mi (13.2 km) downstream at datum 13.68 ft (4.170 m) lower. Oct. 1, 1953, to July 2, 1958, nonrecording gage at present site and datum.

AVERAGE DISCHARGE.--46 years, 1,146 ft<sup>3</sup>/s (32.45 m<sup>3</sup>/s), 8.32 in/yr (211 mm/yr), 830,300 acre-ft/yr (1,024 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 23,000 ft<sup>3</sup>/s (651 m<sup>3</sup>/s) Oct. 5 (gage height, 20.58 ft or 6.273 m); minimum, 57 ft<sup>3</sup>/s (1.61 m<sup>3</sup>/s) Sept. 28 (gage height, 1.86 ft or 0.567 m).  
Period of record: Maximum discharge, 31,900 ft<sup>3</sup>/s (903 m<sup>3</sup>/s) Apr. 23, 1973 (gage height, 21.96 ft or 6.693 m); maximum gage height, 25.3 ft (7.71 m), from floodmark, at site and datum then in use, June 8, 9, 1947; minimum, 4.6 ft<sup>3</sup>/s (0.13 m<sup>3</sup>/s) Aug. 7, 9, 10, 1934.

REMARKS.--Records fair. Flow partly regulated by Rathbun Lake. Records of chemical analyses for the current year are published in Part 2 of this report.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY         | OCT             | NOV    | DEC     | JAN        | FEB     | MAR     | APR    | MAY             | JUN     | JUL     | AUG    | SEP   |
|-------------|-----------------|--------|---------|------------|---------|---------|--------|-----------------|---------|---------|--------|-------|
| 1           | 14,900          | 1,080  | 1,500   | 1,500      | 2,430   | 1,600   | 648    | 834             | 10,500  | 1,280   | 733    | 168   |
| 2           | 7,050           | 1,070  | 1,490   | 1,400      | 2,480   | 1,600   | 613    | 618             | 6,930   | 1,260   | 415    | 148   |
| 3           | 11,400          | 1,060  | 1,490   | 1,300      | 2,220   | 1,700   | 574    | 570             | 3,180   | 1,250   | 316    | 116   |
| 4           | 22,000          | 1,040  | 4,480   | 1,300      | 1,920   | 4,590   | 570    | 540             | 1,470   | 7,830   | 275    | 108   |
| 5           | 22,500          | 1,020  | 8,480   | 1,200      | 1,730   | 4,000   | 591    | 507             | 935     | 16,300  | 239    | 105   |
| 6           | 20,200          | 1,000  | 4,580   | 1,200      | 1,810   | 2,850   | 648    | 544             | 1,460   | 16,400  | 196    | 98    |
| 7           | 13,000          | 997    | 2,170   | 1,100      | 1,730   | 2,660   | 644    | 591             | 8,580   | 11,400  | 186    | 101   |
| 8           | 7,490           | 1,000  | 1,030   | 1,100      | 1,620   | 2,160   | 622    | 675             | 17,900  | 6,300   | 208    | 88    |
| 9           | 3,420           | 999    | 745     | 1,100      | 1,490   | 3,180   | 578    | 635             | 15,700  | 3,800   | 194    | 87    |
| 10          | 1,940           | 1,000  | 1,330   | 1,000      | 1,410   | 3,040   | 532    | 384             | 12,000  | 3,300   | 170    | 83    |
| 11          | 7,340           | 1,240  | 1,510   | 1,000      | 1,400   | 2,480   | 515    | 298             | 6,120   | 2,810   | 196    | 85    |
| 12          | 11,100          | 1,370  | 1,510   | 1,000      | 1,410   | 4,260   | 528    | 523             | 3,120   | 2,430   | 231    | 76    |
| 13          | 8,810           | 1,380  | 1,570   | 985        | 1,490   | 4,460   | 536    | 997             | 1,610   | 1,970   | 227    | 300   |
| 14          | 6,070           | 1,390  | 1,580   | 1,000      | 1,500   | 3,070   | 715    | 1,740           | 1,730   | 1,820   | 2,920  | 522   |
| 15          | 3,650           | 1,400  | 1,510   | 1,040      | 1,500   | 1,740   | 635    | 4,210           | 4,750   | 1,740   | 902    | 639   |
| 16          | 1,660           | 1,380  | 1,460   | 1,090      | 1,500   | 1,500   | 561    | 1,610           | 5,700   | 1,660   | 371    | 390   |
| 17          | 1,040           | 1,370  | 1,420   | 1,200      | 1,500   | 1,230   | 540    | 1,660           | 4,000   | 1,620   | 252    | 267   |
| 18          | 816             | 1,370  | 1,500   | 2,320      | 1,500   | 1,020   | 519    | 6,700           | 1,710   | 1,580   | 179    | 182   |
| 19          | 695             | 1,370  | 1,520   | 6,180      | 1,650   | 912     | 494    | 13,500          | 1,270   | 1,560   | 143    | 142   |
| 20          | 610             | 1,540  | 1,510   | 9,910      | 2,100   | 820     | 473    | 19,900          | 2,290   | 1,520   | 116    | 202   |
| 21          | 547             | 2,350  | 1,500   | 6,900      | 3,500   | 756     | 477    | 8,620           | 2,240   | 1,480   | 100    | 128   |
| 22          | 496             | 2,190  | 1,500   | 5,450      | 3,000   | 631     | 719    | 3,710           | 1,800   | 1,460   | 348    | 96    |
| 23          | 995             | 1,380  | 1,500   | 6,930      | 2,000   | 536     | 519    | 3,810           | 1,580   | 1,450   | 447    | 80    |
| 24          | 1,230           | 1,100  | 2,000   | 4,290      | 1,600   | 477     | 473    | 1,850           | 1,490   | 1,430   | 351    | 69    |
| 25          | 1,130           | 1,010  | 3,640   | 2,810      | 1,600   | 473     | 456    | 1,390           | 1,430   | 1,400   | 239    | 65    |
| 26          | 1,090           | 945    | 5,370   | 2,690      | 1,600   | 582     | 486    | 1,170           | 1,390   | 1,380   | 162    | 62    |
| 27          | 1,090           | 911    | 3,880   | 9,750      | 1,600   | 609     | 600    | 2,040           | 1,360   | 1,360   | 130    | 59    |
| 28          | 1,080           | 933    | 2,940   | 6,700      | 1,600   | 600     | 613    | 2,260           | 1,330   | 1,360   | 117    | 60    |
| 29          | 1,070           | 1,310  | 2,300   | 5,830      | -----   | 604     | 1,340  | 2,230           | 1,310   | 1,340   | 113    | 66    |
| 30          | 1,060           | 1,530  | 1,920   | 3,970      | -----   | 600     | 1,640  | 2,970           | 1,290   | 1,310   | 108    | 78    |
| 31          | 1,070           | -----  | 1,700   | 2,850      | -----   | 640     | -----  | 15,200          | -----   | 1,220   | 98     | ----- |
| TOTAL       | 176,549         | 37,735 | 70,635  | 96,095     | 50,890  | 55,380  | 18,859 | 102,286         | 126,175 | 103,020 | 10,682 | 4,670 |
| MEAN        | 5,695           | 1,258  | 2,279   | 3,100      | 1,818   | 1,786   | 629    | 3,300           | 4,206   | 3,323   | 345    | 156   |
| MAX         | 22,500          | 2,350  | 8,480   | 9,910      | 3,500   | 4,590   | 1,640  | 19,900          | 17,900  | 16,400  | 2,920  | 639   |
| MIN         | 496             | 911    | 745     | 985        | 1,400   | 473     | 456    | 298             | 935     | 1,220   | 98     | 59    |
| CFSM        | 3.05            | .67    | 1.22    | 1.66       | .97     | .96     | .34    | 1.76            | 2.25    | 1.78    | .18    | .08   |
| IN.         | 3.51            | .75    | 1.41    | 1.91       | 1.01    | 1.10    | .38    | 2.03            | 2.51    | 2.05    | .21    | .09   |
| AC-FT       | 350,200         | 74,850 | 140,100 | 190,600    | 100,900 | 109,800 | 37,410 | 202,900         | 250,300 | 204,300 | 21,190 | 9,260 |
| CAL YR 1973 | TOTAL 1,461,737 |        |         |            |         |         |        |                 |         |         |        |       |
| WTR YR 1974 | TOTAL 852,976   |        |         |            |         |         |        |                 |         |         |        |       |
| MEAN 4,005  |                 |        |         | MAX 30,000 |         |         |        | MIN 469         |         |         |        |       |
| MEAN 2,337  |                 |        |         | MAX 22,500 |         |         |        | MIN 59          |         |         |        |       |
|             |                 |        |         |            |         |         |        | CFSM 2.14       |         |         |        |       |
|             |                 |        |         |            |         |         |        | IN 29.08        |         |         |        |       |
|             |                 |        |         |            |         |         |        | AC-FT 2,899,000 |         |         |        |       |
|             |                 |        |         |            |         |         |        | IN 16.97        |         |         |        |       |
|             |                 |        |         |            |         |         |        | AC-FT 1,692,000 |         |         |        |       |

PEAK DISCHARGE (BASE, 5,500 FT<sup>3</sup>/s)

| DATE  | TIME | G. H. | DISCHARGE | DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|-------|------|-------|-----------|------|------|-------|-----------|
| 10-1  | 0515 | 17.44 | 16,300    | 12-26 | 0345 | 10.60 | 5,820     | 5-31 | 1300 | 18.00 | 17,300    |
| 10-5  | 1645 | 20.58 | 23,000    | 1-20  | 1415 | 15.26 | 10,000    | 6-8  | 1345 | 18.66 | 18,500    |
| 10-12 | 0730 | 14.61 | 11,500    | 1-27  | 0930 | 14.23 | 10,900    | 6-16 | 0145 | 11.14 | 6,480     |
| 12-5  | 0600 | 13.15 | 9,320     | 5-20  | 1245 | 19.48 | 20,200    | 7-5  | 1700 | 17.82 | 17,000    |



06906000 Mussel Fork near Musselfork, Mo.

LOCATION.--Lat 39°31'26", long 92°56'59", in SW&SW&SE¼ sec.32, T.55 N., R.18 W., Chariton County, on left bank at downstream side of pier of bridge on State Highway 5, 4.5 mi (7.2 km) southwest of Musselfork, and 1.5 mi (2.4 km) upstream from Long Branch.

DRAINAGE AREA.--267 mi<sup>2</sup> (692 km<sup>2</sup>).

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

GAGE.--Water-stage recorder. Datum of gage is 639.25 ft (194.843 m) above mean sea level. Prior to Jan. 1, 1952, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--15 years (1948-51, 1962-74), 233 ft<sup>3</sup>/s (6.599 m<sup>3</sup>/s), 11.85 in/yr (301 mm/yr), 168,800 acre-ft/yr (208.1 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 5,020 ft<sup>3</sup>/s (142 m<sup>3</sup>/s) Oct. 2 (gage height, 19.64 ft or 5.986 m); minimum, 1.0 ft<sup>3</sup>/s (0.028 m<sup>3</sup>/s) Sept. 29, 30; minimum gage height, 3.67 ft (1.119 m) July 20. Period of record: Maximum discharge, 23,100 ft<sup>3</sup>/s (654 m<sup>3</sup>/s) Apr. 22, 1973 (gage height, 22.11 ft or 6.739 m); no flow, Sept. 29 to Oct. 16, Oct. 30 to Nov. 2, 1963.

REMARKS.--Records poor.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT    | NOV   | DEC    | JAN    | FEB   | MAR    | APR   | MAY    | JUN    | JUL     | AUG   | SEP   |
|-------|--------|-------|--------|--------|-------|--------|-------|--------|--------|---------|-------|-------|
| 1     | 4,530  | 32    | 42     | 76     | 215   | 140    | 61    | 460    | 2,300  | 17      | 6.9   | 8.3   |
| 2     | 4,690  | 31    | 38     | 80     | 167   | 121    | 58    | 171    | 1,290  | 16      | 6.7   | 8.7   |
| 3     | 3,550  | 31    | 37     | 80     | 138   | 107    | 53    | 99     | 225    | 15      | 6.5   | 8.1   |
| 4     | 2,950  | 29    | 925    | 63     | 110   | 368    | 50    | 66     | 122    | 78      | 6.2   | 10    |
| 5     | 2,370  | 28    | 2,380  | 54     | 80    | 1,420  | 49    | 50     | 86     | 1,000   | 6.3   | 9.8   |
| 6     | 2,250  | 26    | 1,860  | 54     | 97    | 771    | 51    | 40     | 69     | 662     | 6.5   | 7.7   |
| 7     | 1,620  | 24    | 407    | 54     | 104   | 311    | 56    | 36     | 720    | 121     | 6.4   | 6.4   |
| 8     | 695    | 23    | 151    | 48     | 67    | 215    | 57    | 34     | 2,280  | 55      | 6.6   | 5.6   |
| 9     | 371    | 22    | 117    | 47     | 64    | 383    | 49    | 33     | 2,670  | 37      | 6.7   | 5.2   |
| 10    | 225    | 22    | 107    | 49     | 75    | 720    | 43    | 54     | 2,790  | 28      | 6.7   | 5.0   |
| 11    | 170    | 22    | 82     | 51     | 68    | 370    | 39    | 45     | 2,020  | 24      | 7.0   | 4.7   |
| 12    | 931    | 22    | 79     | 50     | 67    | 669    | 39    | 38     | 321    | 21      | 7.4   | 4.3   |
| 13    | 432    | 23    | 83     | 49     | 74    | 903    | 40    | 33     | 151    | 19      | 7.5   | 4.1   |
| 14    | 275    | 23    | 86     | 51     | 74    | 474    | 46    | 381    | 111    | 17      | 8.4   | 4.0   |
| 15    | 164    | 24    | 80     | 53     | 68    | 286    | 113   | 1,270  | 183    | 15      | 8.2   | 3.7   |
| 16    | 114    | 25    | 66     | 56     | 65    | 337    | 55    | 557    | 273    | 14      | 30    | 3.5   |
| 17    | 86     | 25    | 53     | 80     | 61    | 342    | 43    | 346    | 220    | 13      | 21    | 3.2   |
| 18    | 73     | 25    | 49     | 619    | 65    | 262    | 36    | 1,240  | 92     | 12      | 16    | 3.0   |
| 19    | 65     | 25    | 48     | 2,040  | 99    | 184    | 34    | 2,520  | 59     | 9.1     | 13    | 2.8   |
| 20    | 61     | 47    | 52     | 2,800  | 97    | 152    | 34    | 2,560  | 47     | 5.7     | 12    | 2.6   |
| 21    | 54     | 301   | 42     | 2,780  | 118   | 132    | 33    | 2,650  | 41     | 6.4     | 11    | 2.4   |
| 22    | 49     | 209   | 37     | 2,320  | 496   | 117    | 47    | 2,240  | 35     | 6.7     | 9.7   | 2.1   |
| 23    | 45     | 85    | 38     | 1,180  | 558   | 104    | 122   | 733    | 30     | 7.0     | 9.6   | 1.8   |
| 24    | 42     | 104   | 125    | 773    | 333   | 90     | 48    | 492    | 28     | 7.4     | 9.9   | 1.6   |
| 25    | 39     | 78    | 564    | 385    | 168   | 77     | 34    | 175    | 25     | 8.7     | 10    | 1.4   |
| 26    | 38     | 55    | 691    | 428    | 136   | 70     | 29    | 114    | 23     | 8.4     | 11    | 1.4   |
| 27    | 36     | 47    | 578    | 2,190  | 206   | 71     | 27    | 89     | 23     | 7.9     | 11    | 1.3   |
| 28    | 35     | 48    | 268    | 2,520  | 181   | 72     | 27    | 84     | 21     | 7.7     | 10    | 1.2   |
| 29    | 34     | 52    | 168    | 1,650  | ----- | 72     | 611   | 87     | 19     | 7.5     | 7.6   | 1.1   |
| 30    | 34     | 48    | 125    | 466    | ----- | 69     | 1,840 | 119    | 18     | 7.3     | 6.7   | 1.1   |
| 31    | 32     | ----- | 69     | 297    | ----- | 65     | ----- | 3,090  | -----  | 7.2     | 6.8   | ----- |
| TOTAL | 26,060 | 1,556 | 9,447  | 21,443 | 4,051 | 9,474  | 3,824 | 19,906 | 16,292 | 2,261.0 | 299.3 | 126.1 |
| MEAN  | 841    | 51.9  | 305    | 692    | 145   | 306    | 127   | 642    | 543    | 72.9    | 9.65  | 4.20  |
| MAX   | 4,690  | 301   | 2,380  | 2,800  | 558   | 1,420  | 1,840 | 3,090  | 2,790  | 1,000   | 30    | 10    |
| MIN   | 32     | 22    | 37     | 47     | 61    | 65     | 27    | 33     | 18     | 5.7     | 6.2   | 1.1   |
| CFSM  | 3.15   | .19   | 1.14   | 2.59   | .54   | 1.15   | .48   | 2.40   | 2.03   | .27     | .04   | .02   |
| IN.   | 3.63   | .22   | 1.32   | 2.99   | .56   | 1.32   | .53   | 2.77   | 2.27   | .32     | .04   | .02   |
| AC-FT | 51,690 | 3,090 | 18,740 | 42,530 | 8,040 | 18,790 | 7,580 | 39,480 | 32,320 | 4,480   | 594   | 250   |

CAL YR 1973 TOTAL 291,745.1 MEAN 799 MAX 18,300 MIN 9.0 CFSM 2.99 IN 40.65 AC-FT 578,700  
WTR YR 1974 TOTAL 114,739.4 MEAN 314 MAX 4,690 MIN 1.1 CFSM 1.18 IN 15.99 AC-FT 227,600

PEAK DISCHARGE (BASE, 1,200 FT<sup>3</sup>/S)

| DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|------|------|-------|-----------|
| 10-02 | 0215 | 19.64 | 5,020     | 5-15 | 1215 | 14.68 | 1,390     |
| 12-05 | 0130 | 17.91 | 2,180     | 5-22 | 0800 | 18.41 | 2,440     |
| 1-20  | 1430 | 18.74 | 2,730     | 5-31 | 1145 | 19.41 | 4,330     |
| 1-28  | 1745 | 18.14 | 2,280     | 6-10 | 1730 | 18.63 | 2,640     |
| 3-05  | 1515 | 15.74 | 1,630     | 7-05 | 1930 | 14.41 | 1,330     |
| 4-30  | 0330 | 17.51 | 2,060     |      |      |       |           |

06906200 East Fork 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, on downstream end of right abutment of bridge on U.S. Highway 36, 2 mi (3.2 km) downstream from Long Branch, and 3 mi (4.8 km) west of Macon.

DRAINAGE AREA.--112 mi<sup>2</sup> (290 km<sup>2</sup>).

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

GAGE.--Water-stage recorder. Datum of gage is 741.43 ft (225.988 m) above mean sea level.

EXTREMES.--Current year: Maximum discharge, 7,340 ft<sup>3</sup>/s (208 m<sup>3</sup>/s) Oct. 4 (gage height, 20.07 ft or 6.117 m); no flow on many days.

Period of record: Maximum discharge, 8,700 ft<sup>3</sup>/s (246 m<sup>3</sup>/s) Apr. 21, 1973 (gage height, 20.60 ft or 6.279 m); no flow in most years.

REMARKS.--Records fair prior to Mar. 26 and poor thereafter. Records of water quality are published in Part 2 of this report.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT      | NOV     | DEC   | JAN    | FEB   | MAR   | APR   | MAY    | JUN     | JUL      | AUG    | SEP    |
|-------|----------|---------|-------|--------|-------|-------|-------|--------|---------|----------|--------|--------|
| 1     | 1,550    | 7.1     | 32    | 42     | 93    | 57    | 26    | 116    | 900     | 1.5      | 0      | 52     |
| 2     | 1,080    | 7.8     | 27    | 28     | 62    | 47    | 23    | 57     | 900     | 1.0      | 0      | 33     |
| 3     | 755      | 7.9     | 24    | 24     | 49    | 42    | 20    | 40     | 400     | .60      | 3.9    | 10     |
| 4     | 5,160    | 8.1     | 700   | 22     | 37    | 385   | 18    | 27     | 100     | 965      | 2.3    | 4.3    |
| 5     | 3,290    | 8.1     | 1,550 | 20     | 35    | 815   | 19    | 20     | 50      | 1,060    | .54    | 2.3    |
| 6     | 416      | 8.4     | 676   | 20     | 36    | 180   | 21    | 16     | 40      | 96       | .24    | 1.4    |
| 7     | 154      | 8.3     | 129   | 20     | 30    | 100   | 23    | 13     | 400     | 34       | 42     | .60    |
| 8     | 187      | 8.2     | 63    | 18     | 29    | 70    | 20    | 91     | 600     | 19       | 83     | .30    |
| 9     | 100      | 9.7     | 57    | 17     | 24    | 196   | 18    | 106    | 900     | 12       | 13     | .06    |
| 10    | 70       | 9.9     | 55    | 17     | 22    | 263   | 16    | 48     | 800     | 8.4      | 7.3    | 0      |
| 11    | 41       | 9.9     | 39    | 18     | 21    | 147   | 18    | 31     | 300     | 6.6      | 7.3    | 0      |
| 12    | 96       | 10      | 34    | 18     | 23    | 510   | 20    | 23     | 200     | 4.6      | 5.6    | 0      |
| 13    | 79       | 12      | 35    | 17     | 24    | 384   | 19    | 18     | 100     | 3.6      | 3.6    | 0      |
| 14    | 47       | 13      | 37    | 17     | 23    | 123   | 176   | 499    | 80      | 2.4      | 2.5    | 0      |
| 15    | 33       | 13      | 36    | 19     | 23    | 90    | 115   | 675    | 60      | 1.7      | 1.6    | 0      |
| 16    | 21       | 16      | 30    | 25     | 22    | 122   | 50    | 155    | 40      | 1.0      | 1.6    | 0      |
| 17    | 13       | 17      | 25    | 77     | 21    | 112   | 32    | 282    | 30      | .60      | 1.9    | 0      |
| 18    | 11       | 16      | 24    | 394    | 23    | 64    | 24    | 1,330  | 26      | .54      | 1.2    | 0      |
| 19    | 8.2      | 17      | 22    | 1,050  | 31    | 50    | 20    | 2,150  | 19      | .42      | .98    | 0      |
| 20    | 7.2      | 147     | 22    | 1,490  | 34    | 42    | 17    | 4,000  | 13      | .30      | .98    | 15     |
| 21    | 7.1      | 471     | 18    | 1,090  | 38    | 37    | 16    | 2,000  | 20      | .24      | 10     | .60    |
| 22    | 6.2      | 255     | 16    | 362    | 229   | 34    | 254   | 1,000  | 19      | .06      | 153    | 0      |
| 23    | 6.3      | 100     | 17    | 372    | 238   | 30    | 69    | 500    | 11      | .06      | 181    | 0      |
| 24    | 6.0      | 66      | 80    | 263    | 128   | 25    | 32    | 200    | 7.6     | 0        | 14     | 0      |
| 25    | 4.8      | 50      | 291   | 198    | 60    | 22    | 21    | 100    | 5.8     | 0        | 4.6    | 0      |
| 26    | 4.4      | 39      | 323   | 275    | 59    | 22    | 18    | 50     | 4.6     | 0        | 3.2    | 0      |
| 27    | 4.6      | 35      | 203   | 1,270  | 86    | 23    | 16    | 40     | 3.6     | 0        | 2.7    | 0      |
| 28    | 5.1      | 50      | 109   | 1,470  | 75    | 24    | 15    | 40     | 3.2     | 0        | 1.9    | 0      |
| 29    | 5.5      | 50      | 68    | 257    | ----- | 24    | 256   | 30     | 2.7     | 0        | 1.4    | 0      |
| 30    | 6.2      | 39      | 39    | 200    | ----- | 25    | 291   | 40     | 3.9     | 0        | .79    | 0      |
| 31    | 6.7      | -----   | 45    | 149    | ----- | 25    | ----- | 800    | -----   | 0        | .54    | -----  |
| TOTAL | 13,181.3 | 1,509.4 | 4,826 | 9,259  | 1,575 | 4,090 | 1,683 | 14,497 | 6,039.4 | 2,219.62 | 552.67 | 119.56 |
| MEAN  | 425      | 50.3    | 156   | 299    | 56.3  | 132   | 56.1  | 468    | 201     | 71.6     | 17.8   | 3.99   |
| MAX   | 5,160    | 471     | 1,550 | 1,490  | 238   | 815   | 291   | 4,000  | 900     | 1,060    | 181    | 52     |
| MIN   | 4.4      | 7.1     | 16    | 17     | 21    | 22    | 15    | 13     | 2.7     | 0        | 0      | 0      |
| CFSM  | 3.79     | .45     | 1.39  | 2.67   | .50   | 1.18  | .50   | 4.18   | 1.79    | .64      | .16    | .04    |
| IN.   | 4.38     | .50     | 1.60  | 3.08   | .52   | 1.36  | .56   | 4.82   | 2.01    | .74      | .18    | .04    |
| AC-FT | 26,150   | 2,990   | 9,570 | 18,370 | 3,120 | 8,110 | 3,340 | 28,750 | 11,980  | 4,400    | 1,100  | 237    |

CAL YR 1973 TOTAL 131,434.43 MEAN 360 MAX 5,460 MIN 0 CFSM 3.21 IN 43.66 AC-FT 260,700  
WTR YR 1974 TOTAL 59,551.95 MEAN 163 MAX 5,160 MIN 0 CFSM 1.46 IN 19.78 AC-FT 118,100

PEAK DISCHARGE (BASE, 1,000 FT<sup>3</sup>/S)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|------|------|-------|-----------|------|------|-------|-----------|
| 10-2 | 0545 | 15.09 | 1,760     | 3-5  | 1030 | 13.40 | 1,060     |
| 10-4 | 0930 | 20.07 | 7,340     | 5-15 | 0130 | 12.71 | 1,230     |
| 12-5 | 2330 | 14.94 | 1,790     | 5-20 | *    | 17.68 | 4,680     |
| 1-20 | 0945 | 14.57 | 1,540     | 7-5  | 0230 | 13.96 | 1,780     |
| 1-28 | 1245 | 15.10 | 1,860     |      |      |       |           |

\*Time Unknown

06906300 East Fork Chariton River near Huntsville, Mo.

LOCATION.--Lat 39°27'19", long 92°34'09", in NE¼NW¼ sec.26, T.54 N., R.15 W., Randolph County, at downstream side of left pile bent of bridge on State Highway C, 1 mi (1.6 km) downstream from Sugar Creek, and 1.5 mi (2.4 km) northwest of Huntsville.

DRAINAGE AREA.--220 mi<sup>2</sup> (570 km<sup>2</sup>).

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 656.43 ft (200.080 m) above mean sea level (levels by Missouri State Highway Commission). From July 18, 1972 to Sept. 23, 1974 at datum 0.63 ft (0.192 m) higher and from Sept. 24, 1974 at present datum.

AVERAGE DISCHARGE.--12 years, 199 ft<sup>3</sup>/s (5.64 m<sup>3</sup>/s), 12.28 in/yr (312 mm/yr), 144,200 acre-ft/yr (177.8 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 5,950 ft<sup>3</sup>/s (169 m<sup>3</sup>/s) Oct. 6 (gage height, 18.84 ft or 5.742 m); minimum, 3.6 ft<sup>3</sup>/s (0.102 m<sup>3</sup>/s) Sept. 27, 28 (gage height, 6.80 ft or 2.073 m).

Period of record: Maximum discharge, 30,000 ft<sup>3</sup>/s (850 m<sup>3</sup>/s) Apr. 21, 1973 (gage height, 20.78 ft or 6.333 m at datum then in use), from rating curve extended above 4,000 ft<sup>3</sup>/s (110 m<sup>3</sup>/s) on basis of slope-area measurement of peak flow; no flow during many days of 1963 and 1964.

REMARKS.--Records poor. Records of water quality are published in Part 2 of this report.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT    | NOV   | DEC    | JAN    | FEB   | MAR    | APR   | MAY    | JUN    | JUL     | AUG     | SEP   |
|-------|--------|-------|--------|--------|-------|--------|-------|--------|--------|---------|---------|-------|
| 1     | 2,000  | 21    | 51     | 87     | 202   | 173    | 55    | 320    | 1,600  | 11      | 8.0     | 121   |
| 2     | 1,600  | 21    | 42     | 77     | 156   | 145    | 55    | 173    | 1,750  | 9.0     | 7.8     | 61    |
| 3     | 1,200  | 20    | 35     | 57     | 127   | 127    | 75    | 133    | 710    | 9.0     | 6.4     | 84    |
| 4     | 1,900  | 17    | 488    | 44     | 97    | 330    | 75    | 94     | 202    | 26      | 5.2     | 43    |
| 5     | 2,300  | 16    | 1,040  | 42     | 80    | 690    | 55    | 67     | 109    | 266     | 5.6     | 24    |
| 6     | 5,150  | 15    | 1,130  | 40     | 97    | 830    | 55    | 49     | 73     | 499     | 6.8     | 15    |
| 7     | 1,230  | 14    | 1,230  | 38     | 106   | 455    | 55    | 37     | 576    | 173     | 16      | 12    |
| 8     | 631    | 14    | 433    | 38     | 75    | 202    | 55    | 36     | 1,040  | 67      | 18      | 10    |
| 9     | 258    | 14    | 133    | 38     | 69    | 202    | 55    | 42     | 1,750  | 40      | 59      | 8.0   |
| 10    | 148    | 15    | 100    | 38     | 57    | 444    | 55    | 121    | 1,600  | 26      | 51      | 6.6   |
| 11    | 94     | 15    | 67     | 38     | 45    | 488    | 55    | 90     | 690    | 18      | 32      | 5.6   |
| 12    | 71     | 14    | 73     | 38     | 65    | 830    | 55    | 59     | 340    | 16      | 23      | 6.2   |
| 13    | 80     | 14    | 166    | 38     | 63    | 576    | 55    | 39     | 152    | 14      | 17      | 13    |
| 14    | 100    | 17    | 103    | 38     | 63    | 499    | 100   | 422    | 109    | 13      | 17      | 12    |
| 15    | 82     | 21    | 80     | 38     | 61    | 282    | 112   | 780    | 103    | 11      | 16      | 9.0   |
| 16    | 65     | 22    | 69     | 38     | 59    | 282    | 142   | 740    | 130    | 11      | 18      | 6.0   |
| 17    | 53     | 20    | 53     | 50     | 57    | 226    | 80    | 710    | 173    | 9.6     | 22      | 5.0   |
| 18    | 41     | 21    | 63     | 100    | 61    | 208    | 53    | 1,450  | 97     | 9.4     | 21      | 4.8   |
| 19    | 34     | 20    | 45     | 500    | 152   | 160    | 40    | 1,600  | 61     | 8.0     | 20      | 5.0   |
| 20    | 31     | 21    | 43     | 1,000  | 124   | 140    | 29    | 1,600  | 44     | 7.6     | 16      | 109   |
| 21    | 27     | 51    | 45     | 1,450  | 130   | 120    | 27    | 1,900  | 35     | 7.6     | 16      | 40    |
| 22    | 25     | 340   | 41     | 1,600  | 320   | 106    | 35    | 3,250  | 29     | 7.4     | 250     | 20    |
| 23    | 23     | 234   | 39     | 1,040  | 370   | 106    | 139   | 780    | 29     | 7.0     | 320     | 13    |
| 24    | 23     | 103   | 226    | 642    | 300   | 75     | 121   | 266    | 30     | 7.0     | 234     | 12    |
| 25    | 23     | 100   | 477    | 477    | 187   | 69     | 57    | 136    | 24     | 6.8     | 71      | 9.6   |
| 26    | 22     | 65    | 400    | 477    | 156   | 71     | 33    | 103    | 20     | 6.4     | 33      | 6.6   |
| 27    | 28     | 45    | 350    | 1,040  | 242   | 63     | 28    | 84     | 16     | 5.8     | 20      | 4.6   |
| 28    | 28     | 51    | 210    | 1,040  | 234   | 55     | 22    | 75     | 14     | 5.2     | 17      | 5.6   |
| 29    | 27     | 90    | 148    | 1,340  | ----- | 75     | 274   | 67     | 13     | 5.2     | 13      | 7.0   |
| 30    | 25     | 69    | 90     | 1,040  | ----- | 75     | 510   | 75     | 12     | 5.2     | 9.6     | 6.6   |
| 31    | 24     | ----- | 67     | 400    | ----- | 55     | ----- | 1,130  | -----  | 7.4     | 13      | ----- |
| TOTAL | 17,343 | 1,500 | 7,537  | 12,923 | 3,755 | 8,159  | 2,557 | 16,428 | 11,531 | 1,314.6 | 1,382.4 | 685.2 |
| MEAN  | 559    | 50.0  | 243    | 417    | 134   | 263    | 85.2  | 530    | 384    | 42.4    | 44.6    | 22.8  |
| MAX   | 5,150  | 340   | 1,230  | 1,600  | 370   | 830    | 510   | 3,250  | 1,750  | 499     | 320     | 121   |
| MIN   | 22     | 14    | 35     | 38     | 45    | 55     | 22    | 36     | 12     | 5.2     | 5.2     | 4.6   |
| CFSM  | 2.54   | .23   | 1.10   | 1.90   | .61   | 1.20   | .39   | 2.41   | 1.75   | .19     | .20     | .10   |
| IN.   | 2.93   | .25   | 1.27   | 2.19   | .63   | 1.38   | .43   | 2.78   | 1.95   | .22     | .23     | .12   |
| AC-FT | 34,400 | 2,980 | 14,950 | 25,630 | 7,450 | 16,180 | 5,070 | 32,580 | 22,870 | 2,610   | 2,740   | 1,360 |

CAL YR 1973 TOTAL 204,985.4 MEAN 562 MAX 17,000 MIN 7.0 CFSM 2.55 IN 34.66 AC-FT 406,600  
WTR YR 1974 TOTAL 85,115.2 MEAN 233 MAX 5,150 MIN 4.6 CFSM 1.06 IN 14.39 AC-FT 168,800

PEAK DISCHARGE (BASE, 1,500 FT<sup>3</sup>/S)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|------|------|-------|-----------|------|------|-------|-----------|
| 10-1 | *    | 17.10 | 2,300     | 5-22 | 0900 | 17.67 | 3,550     |
| 10-6 | 0730 | 18.84 | 5,950     | 5-31 | 0800 | 17.40 | 2,750     |
| 1-22 | 1200 | 16.81 | 1,600     | 6-10 | 0700 | 16.93 | 1,750     |

\*Time Unknown

06906350 Thomas Hill Lake near Thomas Hill, Mo.

LOCATION.--Lat 39°33'01", long 92°38'23", in SW¼ sec.19, T.55 N., R.15 W., Randolph County, on intake structure at dam on Middle Fork Chariton River, 2 mi (3.2 km) north of Thomas Hill, and at mile 36 (57.9 km).

DRAINAGE AREA.--147 mi<sup>2</sup> (381 km<sup>2</sup>).

PERIOD OF RECORD.--January 1966 to September 1974 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is mean sea level. Prior to Dec. 9, 1966, nonrecording gage at present site and datum.

EXTREMES.--Current year: Maximum contents, 87,000 acre-ft (107 hm<sup>3</sup>) Oct. 4 (elevation, 715.34 ft or 218.036 m); minimum, 57,200 acre-ft (70.5 hm<sup>3</sup>) Sept. 30 (elevation, 709.21 ft or 216.167 m).  
Period of record: Maximum contents, 94,200 acre-ft (116 hm<sup>3</sup>) Apr. 22, 23, 1973 (elevation, 716.62 ft or 218.426 m); minimum, since filling to conservation pool level, 55,200 acre-ft (68.1 hm<sup>3</sup>) Nov. 26, 1971 (elevation, 708.73 ft or 216.021 m).

REMARKS.--Lake is formed by an earthfill dam with an ungated outlet. Invert of outlet tunnel, elevation, 708 ft (215.8 m). Initial filling began Jan. 7, 1966. Capacity at top of flood control pool is 85,175 acre-ft (105 hm<sup>3</sup>), elevation, 715.0 ft or 217.93 m, crest of spillway, of which 24,485 acre-ft (30.2 hm<sup>3</sup>), between elevation 710.0 ft or 216.41 m and 715.0 ft or 217.93 m, is used for flood control; 45,990 acre-ft (56.7 hm<sup>3</sup>) is used for power plant cooling water and conservation purposes; and 14,700 acre-ft (18.1 hm<sup>3</sup>) is for sediment storage. Top of conservation pool is elevation 712 ft or 217.0 m. Lake is used for power plant cooling water, flood control, and recreation. Contents computed from daily readings at 0800. Power plant, dam, and reservoir facilities are owned by the Associated Electric Cooperative of Springfield, Missouri.

COOPERATION.--Records furnished by the Corps of Engineers.

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

|     |        |     |        |
|-----|--------|-----|--------|
| 709 | 56,300 | 714 | 79,900 |
| 711 | 65,200 | 716 | 90,700 |

CONTENTS, IN ACRE-FEET, AT 0800, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY | OCT     | NOV    | DEC    | JAN    | FEB    | MAR    | APR    | MAY    | JUN    | JUL    | AUG    | SEP    |
|-----|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1   | 81,900  | 62,300 | 62,300 | 64,200 | 70,100 | 64,500 | 63,200 | 63,700 | 73,800 | 62,800 | 59,400 | 59,600 |
| 2   | 81,400  | 62,400 | 62,100 | 64,000 | 69,500 | 64,300 | 62,800 | 63,700 | 72,800 | 62,400 | 59,200 | 59,600 |
| 3   | 79,500  | 62,900 | 62,100 | 63,800 | 68,900 | 63,800 | 62,800 | 63,900 | 71,800 | 62,200 | 59,200 | 59,500 |
| 4   | 86,300  | 62,800 | 62,200 | 63,700 | 68,300 | 65,100 | 62,800 | 63,400 | 70,900 | 62,900 | 58,900 | 59,300 |
| 5   | 85,600  | 62,600 | 67,300 | 63,500 | 67,700 | 66,100 | 62,700 | 63,200 | 70,100 | 64,600 | 58,800 | 59,200 |
| 6   | 83,400  | 62,300 | 67,700 | 63,400 | 67,600 | 65,800 | 62,400 | 63,100 | 69,400 | 64,300 | 58,800 | 59,100 |
| 7   | 80,900  | 62,200 | 67,200 | 63,300 | 67,100 | 66,100 | 62,400 | 62,700 | 70,200 | 64,100 | 58,800 | 59,000 |
| 8   | 79,000  | 62,200 | 66,800 | 63,100 | 66,700 | 65,900 | 62,500 | 62,800 | 73,800 | 63,800 | 58,800 | 58,900 |
| 9   | 77,300  | 61,900 | 66,500 | 62,900 | 66,300 | 65,900 | 62,000 | 62,600 | 74,900 | 63,500 | 58,700 | 58,900 |
| 10  | 75,900  | 61,700 | 66,200 | 63,000 | 65,900 | 66,400 | 62,000 | 62,400 | 74,300 | 63,200 | 58,800 | 58,800 |
| 11  | 74,400  | 61,500 | 65,700 | 62,900 | 65,500 | 66,100 | 62,000 | 62,300 | 73,300 | 63,000 | 58,800 | 58,700 |
| 12  | 73,400  | 61,400 | 65,400 | 62,800 | 65,200 | 66,800 | 61,600 | 62,300 | 72,300 | 62,900 | 58,600 | 58,600 |
| 13  | 72,500  | 61,400 | 65,300 | 62,600 | 64,000 | 67,800 | 62,000 | 62,000 | 71,300 | 62,600 | 58,500 | 58,700 |
| 14  | 71,500  | 61,400 | 65,000 | 62,500 | 64,800 | 67,100 | 61,900 | 62,400 | 70,400 | 62,300 | 58,400 | 58,500 |
| 15  | 70,600  | 61,400 | 64,800 | 62,500 | 64,500 | 66,900 | 62,000 | 63,700 | 69,800 | 62,300 | 58,300 | 58,300 |
| 16  | 69,800  | 61,200 | 64,600 | 62,300 | 64,400 | 66,800 | 62,000 | 63,500 | 69,300 | 62,000 | 58,200 | 58,200 |
| 17  | 68,900  | 61,000 | 64,200 | 62,400 | 64,100 | 66,500 | 61,800 | 64,200 | 68,500 | 61,700 | 58,500 | 58,100 |
| 18  | 68,400  | 61,000 | 64,000 | 63,700 | 63,900 | 66,200 | 61,700 | 65,700 | 67,900 | 61,500 | 58,400 | 58,000 |
| 19  | 67,700  | 60,900 | 64,300 | 65,800 | 64,100 | 66,100 | 61,700 | 69,100 | 67,200 | 61,300 | 58,200 | 58,000 |
| 20  | 67,200  | 60,900 | 63,800 | 68,400 | 63,800 | 65,700 | 61,400 | 74,600 | 66,600 | 61,100 | 58,000 | 58,500 |
| 21  | 66,700  | 61,400 | 63,500 | 69,700 | 64,000 | 65,300 | 61,300 | 74,400 | 66,300 | 61,000 | 57,900 | 58,300 |
| 22  | 66,200  | 62,000 | 63,400 | 69,700 | 64,700 | 64,900 | 61,300 | 73,600 | 65,900 | 61,000 | 59,000 | 58,200 |
| 23  | 65,800  | 62,100 | 63,300 | 69,700 | 65,000 | 65,000 | 61,500 | 72,800 | 65,400 | 60,700 | 59,800 | 58,000 |
| 24  | 65,300  | 62,400 | 63,500 | 69,300 | 65,000 | 64,600 | 61,300 | 71,900 | 65,000 | 60,500 | 59,800 | 57,800 |
| 25  | 64,000  | 62,400 | 64,400 | 68,900 | 64,200 | 64,100 | 61,100 | 71,000 | 64,600 | 60,300 | 59,700 | 57,700 |
| 26  | 64,700  | 62,300 | 64,900 | 68,500 | 64,400 | 64,000 | 61,000 | 71,100 | 64,300 | 60,200 | 59,600 | 57,600 |
| 27  | 64,500  | 62,300 | 64,900 | 71,600 | 64,400 | 63,900 | 60,900 | 69,400 | 64,000 | 60,200 | 59,500 | 57,400 |
| 28  | 63,300  | 62,400 | 64,700 | 72,400 | 64,700 | 63,700 | 60,900 | 68,700 | 63,700 | 60,000 | 59,600 | 57,500 |
| 29  | 64,000  | 62,300 | 64,600 | 72,200 | -----  | 63,700 | 61,400 | 68,100 | 63,200 | 59,900 | 59,400 | 57,500 |
| 30  | 63,700  | 62,300 | 64,600 | 71,300 | -----  | 63,500 | 63,700 | 67,800 | 63,100 | 59,700 | 59,300 | 57,300 |
| 31  | 63,500  | -----  | 64,400 | 70,800 | -----  | 63,400 | -----  | 73,000 | -----  | 59,500 | 59,200 | -----  |
| (†) | 710.63  | 710.36 | 710.82 | 712.18 | 710.88 | 710.59 | 710.66 | 712.62 | 710.55 | 709.72 | 709.67 | 709.23 |
| (‡) | -16,100 | -1,200 | +2,100 | +6,400 | -6,100 | -1,300 | +300   | +9,300 | -9,900 | -3,600 | -300   | -1,900 |
| MAX | 86,300  | 62,900 | 67,700 | 72,400 | 70,100 | 67,800 | 63,700 | 74,600 | 74,900 | 64,600 | 59,800 | 59,600 |
| MIN | 63,300  | 60,900 | 62,100 | 62,300 | 63,800 | 63,400 | 60,900 | 62,000 | 63,100 | 59,500 | 57,900 | 57,300 |

CAL YR 1973.....‡ +1,300  
WTR YR 1974.....‡ -22,300

† Elevation at 0800 at end of month.  
‡ Change in contents, in acre-feet.

06907500 South Fork Blackwater River near Elm, Mo.

LOCATION.--Lat 38°49'08", long 94°02'08", in SE¼SW¼ sec.5, T.46 N., R.28 W., Johnson County, on left bank at downstream side of bridge on county highway, 2.5 mi (4.0 km) southeast of Elm, and 3 mi (4.8 km) upstream from mouth.

DRAINAGE AREA.--16.6 mi<sup>2</sup> (43.0 km<sup>2</sup>).

PERIOD OF RECORD.--June 1954 to current year. Prior to October 1, 1963 published as "East Branch South Fork Blackwater River."

GAGE.--Waterstage recorder and concrete control. Datum of gage is about 795 ft (242.3 m) above mean sea level.

AVERAGE DISCHARGE.--20 years, 12.7 ft<sup>3</sup>/s (0.360 m<sup>3</sup>/s), 10.39 in/yr (264 mm/yr), 9,200 acre ft/yr (11.3 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 3,240 ft<sup>3</sup>/s (91.8 m<sup>3</sup>/s) May 18 (gage height, 9.71 ft or 2.960 m); no flow on many days.

Period of record: Maximum discharge, 5,600 ft<sup>3</sup>/s (159 m<sup>3</sup>/s) Apr. 15, 1960 (gage height, 12.0 ft or 3.66 m), from rating curve extended above 420 ft<sup>3</sup>/s (11.9 m<sup>3</sup>/s) on basis of contracted-opening and flow over-road measurement of peak flow; no flow for many days each year.

Flood in July 1951 reached a stage of 14.8 ft (4.51 m), from information by local residents.

REMARKS.--Records fair except those for periods of no gage-height record which are poor. Runoff affected at times by many soil conservation ponds upstream.

REVISIONS (WATER YEARS).--WSP 1919: 1958(M).

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT   | NOV    | DEC   | JAN   | FEB   | MAR   | APR   | MAY      | JUN    | JUL   | AUG   | SEP    |
|-------|-------|--------|-------|-------|-------|-------|-------|----------|--------|-------|-------|--------|
| 1     | 4.6   | .73    | 4.2   | 3.0   | 5.7   | 4.4   | 1.9   | 3.9      | 1.4    | .01   | 0     | 44     |
| 2     | 2.4   | .36    | 3.8   | 2.5   | 5.0   | 4.2   | 1.5   | 2.6      | 1.2    | 0     | 0     | 50     |
| 3     | 1.5   | .36    | 4.2   | 2.0   | 3.8   | 3.8   | 1.4   | 1.9      | 1.0    | 0     | 0     | 14     |
| 4     | 6.5   | .46    | 531   | 1.5   | 2.9   | 3.4   | 1.7   | 1.2      | .97    | 42    | 0     | 4.4    |
| 5     | 1.7   | .27    | 23    | 1.0   | 3.2   | 2.8   | 1.5   | .99      | 1.2    | 3.2   | 0     | 2.4    |
| 6     | 2.6   | .27    | 12    | 1.0   | 4.2   | 2.4   | 1.3   | .90      | 4.8    | 1.1   | 0     | 1.5    |
| 7     | 3.2   | .21    | 7.2   | 1.0   | 2.6   | 2.2   | 1.6   | .90      | 112    | .73   | 0     | .97    |
| 8     | 1.7   | .36    | 6.1   | 1.0   | 2.2   | 2.1   | 1.6   | .90      | 71     | .36   | 0     | .73    |
| 9     | 1.1   | .46    | 5.7   | 1.0   | 1.9   | 8.7   | 5.1   | .90      | 41     | .16   | 0     | .46    |
| 10    | .73   | .46    | 4.2   | 1.0   | 1.7   | 146   | 3.3   | 35       | 11     | .06   | 0     | .24    |
| 11    | 14    | .36    | 3.8   | 1.0   | 2.4   | 121   | 2.9   | 9.6      | 7.9    | .01   | 0     | .09    |
| 12    | 8.0   | .36    | 3.8   | 1.0   | 2.6   | 22    | 2.4   | 3.6      | 5.7    | 0     | 0     | .08    |
| 13    | 4.2   | .46    | 3.5   | 1.0   | 2.7   | 11    | 2.0   | 1.8      | 3.5    | 0     | 0     | .12    |
| 14    | 2.6   | .46    | 2.9   | 1.0   | 2.4   | 8.3   | 1.8   | 449      | 2.6    | 0     | 0     | .10    |
| 15    | 1.7   | .90    | 2.4   | 1.0   | 2.2   | 7.2   | 1.2   | 24       | 1.9    | 0     | 0     | .03    |
| 16    | 1.3   | .58    | 1.9   | 2.0   | 2.2   | 6.2   | 1.2   | 9.2      | 3.4    | 0     | 0     | 0      |
| 17    | .90   | .46    | 2.2   | 2.0   | 1.7   | 4.7   | 2.4   | 781      | 1.3    | 0     | 0     | .01    |
| 18    | .90   | .46    | 2.2   | 3.0   | 7.4   | 4.5   | 1.2   | 855      | .91    | 0     | 0     | .01    |
| 19    | .73   | 1.3    | 2.4   | 80    | 60    | 3.7   | 1.2   | 54       | 3.9    | 0     | 0     | 0      |
| 20    | .58   | 375    | 1.9   | 15    | 11    | 3.2   | 1.2   | 16       | 3.5    | 0     | 0     | 0      |
| 21    | .46   | 47     | 1.5   | 8.0   | 86    | 3.2   | 3.2   | 9.6      | 1.1    | 0     | 0     | 0      |
| 22    | .36   | 11     | 1.7   | 6.0   | 59    | 2.8   | 1.8   | 6.8      | .55    | 0     | .77   | 0      |
| 23    | .27   | 6.9    | 1.9   | 20    | 14    | 2.7   | 1.2   | 5.2      | .30    | 0     | 3.8   | 0      |
| 24    | .27   | 86     | 18    | 15    | 7.9   | 2.6   | 1.1   | 4.5      | .21    | 0     | .94   | 0      |
| 25    | .16   | 13     | 16    | 12    | 5.8   | 2.7   | .98   | 3.3      | .21    | 0     | .03   | 0      |
| 26    | .12   | 7.6    | 7.2   | 59    | 7.4   | 2.6   | .74   | 3.3      | .16    | 0     | 0     | 0      |
| 27    | 11    | 6.1    | 6.1   | 47    | 8.5   | 2.2   | .73   | 3.3      | .16    | 0     | 0     | 0      |
| 28    | 3.2   | 15     | 5.3   | 37    | 6.0   | 2.1   | .85   | 2.8      | .12    | 0     | 0     | 0      |
| 29    | 1.5   | 6.9    | 4.6   | 23    | ----- | 2.2   | 2.1   | 2.4      | .09    | 0     | .25   | 0      |
| 30    | 1.1   | 5.3    | 3.5   | 11    | ----- | 2.0   | 10    | 2.1      | .03    | 0     | .10   | 0      |
| 31    | .90   | -----  | 3.2   | 7.6   | ----- | 1.7   | ----- | 1.7      | -----  | 0     | 18    | -----  |
| TOTAL | 80.28 | 589.08 | 697.4 | 367.6 | 322.4 | 398.6 | 75.50 | 2,297.39 | 283.11 | 47.63 | 23.89 | 119.14 |
| MEAN  | 2.59  | 19.6   | 22.5  | 11.9  | 11.5  | 12.9  | 2.52  | 74.1     | 9.44   | 1.54  | .77   | 3.97   |
| MAX   | 14    | 375    | 531   | 80    | 86    | 146   | 16    | 855      | 112    | 42    | 18    | 50     |
| MIN   | .12   | .21    | 1.5   | 1.0   | 1.7   | 1.7   | .73   | .90      | .03    | 0     | 0     | 0      |
| CFSM  | .16   | 1.18   | 1.36  | .72   | .69   | .78   | .15   | 4.46     | .57    | .09   | .05   | .24    |
| IN.   | .18   | 1.32   | 1.56  | .82   | .72   | .89   | .17   | 5.15     | .63    | .11   | .05   | .27    |
| AC-FT | 159   | 1,170  | 1,380 | 729   | 639   | 791   | 150   | 4,560    | 562    | 94    | 47    | 236    |

CAL YR 1973 TOTAL 8,740.33 MEAN 23.9 MAX 613 MIN 0 CFSM 1.44 IN 19.59 AC-FT 17,340  
WTR YR 1974 TOTAL 5,302.02 MEAN 14.5 MAX 855 MIN 0 CFSM .87 IN 11.88 AC-FT 10,520

PEAK DISCHARGE (BASE, 1,100 FT<sup>3</sup>/S)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|------|------|-------|-----------|------|------|-------|-----------|
| 12-4 | 1100 | 6.84  | 1,480     | 5-17 | 1330 | 8.09  | 2,120     |
| 5-14 | 0415 | 6.76  | 1,430     | 5-18 | 1230 | 9.71  | 3,240     |



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, on right bank upstream from bridge on old U.S. Highway 65, 0.8 mile (1.3 km) downstream from Finney Creek, 1 mi (1.6 km) south of Blue Lick, and at mile 30.8 (49.6 km).

DRAINAGE AREA.--1,120 mi<sup>2</sup> (2,900 km<sup>2</sup>), approximately.

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

GAGE.--Water-stage recorder. Datum of gage is 593.79 ft (180.987 m) above mean sea level. Prior to July 25, 1925, nonrecording gage at site 75 ft (23 m) downstream at datum 0.10 ft (0.030 m) lower. July 25, 1925 to Sept. 30, 1933, and May 23, 1938 to Dec. 3, 1956, nonrecording gage at site 25 ft (7.6 m) downstream at same datum.

AVERAGE DISCHARGE.--47 years, 723 ft<sup>3</sup>/s (20.5 m<sup>3</sup>/s), 8.76 in/yr (222 mm/yr), 523,500 acre-ft/yr (645 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 20,900 ft<sup>3</sup>/s (592 m<sup>3</sup>/s) May 21 (gage height, 34.40 ft or 10.485 m); minimum, 3.4 ft<sup>3</sup>/s (0.096 m<sup>3</sup>/s) July 20; minimum gage height, 6.21 ft (1.893 m) July 31, Aug. 1.  
Period of record: Maximum discharge, 54,000 ft<sup>3</sup>/s (1,530 m<sup>3</sup>/s) Nov. 18, 1928 (gage height, 41.25 ft or 12.573 m, from floodmarks), from rating curve extended above 32,000 ft<sup>3</sup>/s (906 m<sup>3</sup>/s) by logarithmic plotting; minimum, 0.1 ft<sup>3</sup>/s (0.003 m<sup>3</sup>/s) Sept. 4 to Oct. 20, Oct. 26, 29, Nov. 16-18, 1956, Oct. 4, 5, 1963; minimum gage height, 0.96 ft (0.293 m) July 6, 1926.

REMARKS.--Records fair except periods of no gage-height record, which are poor.

REVISIONS (WATER YEARS).--WSP 1006: 1929.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT     | NOV    | DEC    | JAN     | FEB    | MAR    | APR    | MAY     | JUN    | JUL   | AUG     | SEP      |
|-------|---------|--------|--------|---------|--------|--------|--------|---------|--------|-------|---------|----------|
| 1     | 1,660   | 94     | 294    | 350     | 1,030  | 450    | 216    | 550     | 300    | 23    | 4.0     | 884      |
| 2     | 630     | 79     | 226    | 300     | 624    | 430    | 200    | 426     | 194    | 20    | 5.6     | 2,680    |
| 3     | 227     | 65     | 195    | 250     | 478    | 420    | 181    | 285     | 149    | 18    | 7.9     | 3,510    |
| 4     | 5,880   | 55     | 2,730  | 200     | 379    | 380    | 166    | 207     | 130    | 20    | 6.8     | 3,150    |
| 5     | 7,400   | 49     | 4,350  | 190     | 300    | 350    | 155    | 157     | 136    | 148   | 5.6     | 1,790    |
| 6     | 8,440   | 45     | 4,620  | 180     | 435    | 320    | 143    | 125     | 154    | 192   | 5.3     | 502      |
| 7     | 8,570   | 43     | 5,170  | 170     | 350    | 290    | 140    | 108     | 2,220  | 81    | 12      | 222      |
| 8     | 7,510   | 43     | 5,610  | 160     | 300    | 250    | 250    | 99      | 5,100  | 47    | 24      | 135      |
| 9     | 5,620   | 43     | 4,150  | 150     | 250    | 1,020  | 311    | 94      | 4,650  | 33    | 29      | 94       |
| 10    | 1,060   | 42     | 839    | 140     | 218    | 2,000  | 312    | 96      | 4,340  | 23    | 86      | 70       |
| 11    | 260     | 41     | 404    | 130     | 200    | 4,520  | 251    | 240     | 3,540  | 18    | 157     | 55       |
| 12    | 234     | 40     | 332    | 120     | 244    | 4,820  | 219    | 487     | 1,330  | 14    | 87      | 48       |
| 13    | 312     | 40     | 292    | 110     | 220    | 5,800  | 200    | 317     | 597    | 12    | 47      | 42       |
| 14    | 268     | 37     | 269    | 194     | 210    | 7,220  | 184    | 2,640   | 309    | 9.9   | 29      | 36       |
| 15    | 185     | 70     | 217    | 208     | 200    | 6,100  | 159    | 4,260   | 224    | 8.4   | 19      | 34       |
| 16    | 126     | 67     | 181    | 255     | 186    | 1,840  | 142    | 4,460   | 184    | 7.1   | 17      | 33       |
| 17    | 89      | 70     | 150    | 627     | 180    | 751    | 131    | 5,370   | 138    | 6.3   | 45      | 28       |
| 18    | 70      | 71     | 134    | 3,550   | 170    | 531    | 124    | 8,820   | 116    | 5.2   | 37      | 26       |
| 19    | 59      | 61     | 136    | 5,060   | 3,260  | 451    | 120    | 12,000  | 98     | 4.2   | 36      | 25       |
| 20    | 53      | 286    | 211    | 5,670   | 3,130  | 390    | 109    | 16,200  | 88     | 3.5   | 28      | 20       |
| 21    | 51      | 2,470  | 180    | 6,290   | 3,510  | 346    | 100    | 19,900  | 82     | 4.3   | 19      | 134      |
| 22    | 46      | 3,090  | 160    | 7,430   | 3,880  | 331    | 136    | 15,900  | 77     | 5.3   | 17      | 123      |
| 23    | 42      | 2,840  | 150    | 7,650   | 3,900  | 308    | 158    | 11,500  | 67     | 5.2   | 65      | 54       |
| 24    | 39      | 1,860  | 2,000  | 6,720   | 3,400  | 277    | 140    | 8,590   | 51     | 4.8   | 974     | 30       |
| 25    | 36      | 2,270  | 3,160  | 5,600   | 1,670  | 270    | 130    | 4,560   | 43     | 55    | 580     | 18       |
| 26    | 33      | 1,330  | 3,400  | 2,940   | 883    | 290    | 120    | 669     | 38     | 65    | 142     | 12       |
| 27    | 98      | 471    | 2,960  | 3,910   | 600    | 314    | 110    | 416     | 35     | 11    | 66      | 9.2      |
| 28    | 901     | 700    | 1,670  | 3,880   | 500    | 296    | 100    | 329     | 31     | 5.6   | 104     | 8.5      |
| 29    | 558     | 782    | 719    | 4,050   | -----  | 282    | 95     | 297     | 28     | 4.7   | 362     | 11       |
| 30    | 212     | 466    | 500    | 3,510   | -----  | 277    | 675    | 322     | 24     | 4.2   | 394     | 38       |
| 31    | 124     | -----  | 400    | 2,100   | -----  | 253    | -----  | 831     | -----  | 3.7   | 256     | -----    |
| TOTAL | 50,793  | 17,620 | 45,809 | 72,094  | 30,707 | 41,577 | 5,477  | 120,255 | 24,473 | 862.4 | 3,667.2 | 13,821.7 |
| MEAN  | 1,638   | 587    | 1,478  | 2,326   | 1,097  | 1,341  | 183    | 3,879   | 816    | 27.8  | 118     | 461      |
| MAX   | 8,570   | 3,090  | 5,610  | 7,650   | 3,900  | 7,220  | 675    | 19,900  | 5,100  | 192   | 974     | 3,510    |
| MIN   | 33      | 37     | 134    | 110     | 170    | 250    | 95     | 94      | 24     | 3.5   | 4.0     | 8.5      |
| CFSM  | 1.46    | .52    | 1.32   | 2.08    | .98    | 1.20   | .16    | 3.46    | .73    | .02   | .11     | .41      |
| IN.   | 1.69    | .59    | 1.52   | 2.39    | 1.02   | 1.38   | .18    | 3.99    | .81    | .03   | .12     | .46      |
| AC-FT | 100,700 | 34,950 | 90,860 | 143,000 | 60,910 | 82,470 | 10,860 | 238,500 | 48,540 | 1,710 | 7,270   | 27,420   |

CAL YR 1973 TOTAL 641,425.3 MEAN 1,757 MAX 33,800 MIN 1.5 CFSM 1.57 IN 21.30 AC-FT 1,272,000  
WTR YR 1974 TOTAL 427,156.3 MEAN 1,170 MAX 19,900 MIN 3.5 CFSM 1.04 IN 14.19 AC-FT 847,300

PEAK DISCHARGE (BASE, 10,000 FT<sup>3</sup>/s).--May 21 (0030) 20,900 ft<sup>3</sup>/s (34.40 ft).

## 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, on downstream side of second pier from right abutment of Missouri-Kansas-Texas Railroad Co. bridge at Boonville. River mile 196.6 (316.3 km).

DRAINAGE AREA.--505,700 mi<sup>2</sup> (1,310,000 km<sup>2</sup>), 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.

GAGE.--Water-stage recorder. Datum of gage is 565.42 ft (172.340 m) above mean sea level. Prior to Oct. 1, 1928, nonrecording gage at site 0.4 mi (0.6 km) downstream at datum 3.14 ft (0.957 m) lower. Oct. 1, 1928, to May 9, 1931, nonrecording gage at site 50 ft (15 m) upstream from present site at present datum. May 10, 1931, to Apr. 12, 1934, water-stage recorder at site 0.4 mi (0.6 km) downstream at different datum.

AVERAGE DISCHARGE.--49 years, 57,800 ft<sup>3</sup>/s (1,637 m<sup>3</sup>/s), 41,880,000 acre-ft/yr (51,640 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 281,000 ft<sup>3</sup>/s (7,960 m<sup>3</sup>/s) Oct. 18 (gage height, 28.68 ft or 8.742 m); minimum, 32,200 ft<sup>3</sup>/s (912 m<sup>3</sup>/s) Jan. 15 (gage height, 6.17 ft or 1.881 m).  
Period of record: Maximum discharge, 550,000 ft<sup>3</sup>/s (15,580 m<sup>3</sup>/s) July 17, 1951; maximum gage height, 32.82 ft (10.004 m) July 17, 1951; minimum discharge, about 1,800 ft<sup>3</sup>/s (51.0 m<sup>3</sup>/s) Jan. 10, 1940; minimum gage height, -0.85 ft (-0.259 m) Jan. 13, 1937.  
Flood of June 21, 1844 reached a stage of 32.7 ft or 9.97 m (discharge, about 710,000 ft<sup>3</sup>/s or 20,110 m<sup>3</sup>/s, computed by Corps of Engineers). Flood of June 6, 1903, reached a stage of 30.5 ft or 9.30 m (discharge, about 612,000 ft<sup>3</sup>/s or 17,330 m<sup>3</sup>/s, computed by Corps of Engineers).

REMARKS.--Records good. Discharge measurements made 3 times a month during winter and 4 or more times monthly during rest of year. Flow partly regulated by many reservoirs above station.

REVISIONS.--WSP 761: Drainage area.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY         | OCT              | NOV      | DEC          | JAN      | FEB         | MAR      | APR        | MAY      | JUN              | JUL      | AUG      | SEP      |
|-------------|------------------|----------|--------------|----------|-------------|----------|------------|----------|------------------|----------|----------|----------|
| 1           | 244,000          | 105,000  | 90,800       | 64,500   | 103,000     | 70,300   | 59,900     | 95,200   | 123,000          | 51,000   | 43,800   | 47,000   |
| 2           | 243,000          | 103,000  | 86,000       | 57,600   | 101,000     | 70,300   | 59,800     | 105,000  | 126,000          | 50,500   | 43,800   | 53,000   |
| 3           | 221,000          | 103,000  | 81,800       | 52,100   | 101,000     | 72,300   | 58,800     | 92,200   | 115,000          | 49,400   | 43,200   | 57,000   |
| 4           | 219,000          | 101,000  | 90,700       | 49,100   | 94,000      | 74,700   | 58,000     | 78,000   | 92,100           | 50,000   | 43,200   | 57,700   |
| 5           | 223,000          | 101,000  | 141,000      | 49,100   | 88,000      | 77,500   | 59,900     | 73,600   | 79,200           | 67,800   | 43,600   | 53,100   |
| 6           | 214,000          | 100,000  | 188,000      | 48,600   | 81,700      | 81,900   | 60,900     | 69,500   | 72,500           | 81,300   | 44,100   | 48,200   |
| 7           | 187,000          | 99,800   | 173,000      | 48,300   | 79,600      | 81,900   | 61,900     | 65,300   | 82,400           | 74,500   | 44,700   | 45,400   |
| 8           | 159,000          | 95,800   | 135,000      | 44,700   | 78,000      | 76,300   | 62,500     | 63,300   | 123,000          | 64,200   | 43,800   | 44,200   |
| 9           | 142,000          | 91,200   | 106,000      | 40,700   | 74,000      | 72,700   | 63,300     | 61,400   | 141,000          | 56,000   | 43,800   | 43,600   |
| 10          | 126,000          | 91,200   | 87,900       | 38,900   | 72,100      | 77,100   | 61,400     | 60,200   | 157,000          | 50,500   | 44,100   | 42,900   |
| 11          | 117,000          | 93,100   | 79,400       | 37,100   | 71,300      | 89,600   | 58,200     | 60,900   | 180,000          | 48,000   | 44,400   | 42,100   |
| 12          | 181,000          | 94,100   | 74,900       | 34,700   | 70,500      | 103,000  | 56,400     | 63,700   | 172,000          | 46,300   | 44,100   | 41,400   |
| 13          | 231,000          | 93,700   | 72,300       | 33,500   | 68,600      | 102,000  | 56,000     | 64,300   | 147,000          | 45,200   | 45,900   | 40,900   |
| 14          | 261,000          | 92,800   | 71,300       | 32,600   | 67,000      | 84,300   | 56,800     | 77,300   | 136,000          | 44,300   | 49,000   | 42,300   |
| 15          | 268,000          | 93,600   | 70,300       | 32,400   | 64,700      | 79,500   | 59,100     | 107,000  | 131,000          | 43,800   | 52,500   | 48,000   |
| 16          | 276,000          | 92,900   | 71,000       | 33,400   | 64,500      | 76,300   | 60,200     | 111,000  | 113,000          | 43,900   | 47,400   | 47,600   |
| 17          | 277,000          | 91,300   | 69,800       | 36,800   | 67,400      | 71,100   | 61,600     | 94,900   | 93,100           | 44,000   | 46,900   | 45,800   |
| 18          | 281,000          | 92,300   | 65,500       | 50,900   | 67,900      | 67,900   | 62,600     | 163,000  | 79,800           | 43,700   | 52,500   | 44,200   |
| 19          | 266,000          | 91,000   | 61,500       | 70,700   | 74,600      | 64,800   | 61,800     | 232,000  | 72,900           | 43,200   | 53,000   | 42,400   |
| 20          | 250,000          | 91,600   | 60,500       | 98,600   | 79,600      | 63,600   | 59,700     | 265,000  | 70,700           | 42,800   | 49,900   | 41,800   |
| 21          | 224,000          | 107,000  | 59,500       | 110,000  | 79,600      | 62,400   | 58,300     | 271,000  | 71,000           | 42,900   | 48,000   | 41,700   |
| 22          | 182,000          | 148,000  | 55,400       | 120,000  | 88,600      | 61,300   | 61,100     | 252,000  | 67,300           | 43,700   | 46,100   | 41,800   |
| 23          | 143,000          | 152,000  | 52,800       | 135,000  | 104,000     | 60,300   | 92,800     | 224,000  | 62,800           | 44,700   | 47,600   | 42,000   |
| 24          | 125,000          | 137,000  | 53,000       | 138,000  | 104,000     | 60,000   | 102,000    | 187,000  | 60,100           | 44,500   | 49,600   | 42,100   |
| 25          | 116,000          | 125,000  | 61,600       | 133,000  | 90,700      | 61,200   | 84,900     | 156,000  | 58,800           | 44,000   | 47,500   | 42,100   |
| 26          | 109,000          | 119,000  | 76,600       | 165,000  | 78,500      | 63,400   | 77,100     | 122,000  | 57,600           | 44,100   | 44,700   | 42,000   |
| 27          | 108,000          | 111,000  | 90,300       | 170,000  | 73,900      | 64,500   | 72,300     | 97,900   | 58,100           | 44,200   | 43,800   | 42,400   |
| 28          | 109,000          | 105,000  | 88,700       | 152,000  | 71,900      | 63,300   | 68,200     | 87,100   | 59,800           | 44,100   | 44,500   | 43,100   |
| 29          | 108,000          | 100,000  | 78,800       | 140,000  | -----       | 62,700   | 66,000     | 83,700   | 57,600           | 44,400   | 44,000   | 42,400   |
| 30          | 107,000          | 95,200   | 75,200       | 133,000  | -----       | 61,800   | 77,900     | 85,000   | 52,600           | 44,400   | 43,000   | 41,700   |
| 31          | 106,000          | -----    | 71,500       | 114,000  | -----       | 60,200   | -----      | 116,000  | -----            | 44,400   | 43,000   | -----    |
| TOTAL       | 5,823.0M         | 3,116.6M | 2,640.1M     | 2,464.3M | 2,259.7M    | 2,238.2M | 1,959.4M   | 3,684.5M | 2,912.4M         | 1,525.8M | 1,425.5M | 1,349.9M |
| MEAN        | 187,800          | 103,900  | 85,160       | 79,490   | 80,700      | 72,200   | 65,310     | 118,900  | 97,080           | 49,220   | 45,980   | 45,000   |
| MAX         | 281,000          | 152,000  | 188,000      | 170,000  | 104,000     | 103,000  | 102,000    | 271,000  | 180,000          | 81,300   | 53,000   | 57,700   |
| MIN         | 106,000          | 91,000   | 52,800       | 32,400   | 64,500      | 60,000   | 56,000     | 60,200   | 52,600           | 42,800   | 43,000   | 40,900   |
| AC-FT       | 11,550M          | 6,182M   | 5,237M       | 4,888M   | 4,482M      | 4,439M   | 3,886M     | 7,308M   | 5,777M           | 3,026M   | 2,827M   | 2,678M   |
| CAL YR 1973 | TOTAL 43,197,200 |          | MEAN 118,300 |          | MAX 320,000 |          | MIN 35,000 |          | AC-FT 85,680,000 |          |          |          |
| WTR YR 1974 | TOTAL 31,399,400 |          | MEAN 86,030  |          | MAX 281,000 |          | MIN 32,400 |          | AC-FT 62,280,000 |          |          |          |

CAL YR 1973 TOTAL 43,197,200 MEAN 118,300 MAX 320,000 MIN 35,000 AC-FT 85,680,000  
WTR YR 1974 TOTAL 31,399,400 MEAN 86,030 MAX 281,000 MIN 32,400 AC-FT 62,280,000

M Expressed in thousands.

06910230 Hinkson Creek at Columbia, Mo.

LOCATION.--Lat 38°55'42", long 92°20'26", in NE¼NW¼SW¼ sec.24, T.48 N., R.13 W., Boone County, on left bank 400 ft (122 m) downstream from bridge on State Highway K, 0.5 mi (0.8 km) south of Columbia, and 1 mi (1.6 km) upstream from Flat Branch.

DRAINAGE AREA.--70.2 mi<sup>2</sup> (182 km<sup>2</sup>).

PERIOD OF RECORD.--October 1966 to current year. Occasional low-flow measurements, 1942, 1943, 1946, 1952, 1953, 1962, 1963.

GAGE.--Water-stage recorder. Datum of gage is 583.52 ft (177.857 m) above mean sea level.

AVERAGE DISCHARGE.--8 years, 66.1 ft<sup>3</sup>/s (1.87 m<sup>3</sup>/s), 12.78 in/yr (325 mm/yr), 47,890 acre-ft/yr (59.1 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 7,990 ft<sup>3</sup>/s (226 m<sup>3</sup>/s) May 31 (gage height, 18.53 ft or 5.648 m); minimum discharge, 0.04 ft<sup>3</sup>/s (0.001 m<sup>3</sup>/s) Aug. 22; minimum gage height, 3.14 ft (0.957 m) Aug. 2.  
Period of record: Maximum discharge, 9,100 ft<sup>3</sup>/s (258 m<sup>3</sup>/s) May 15, 1970 (gage height, 18.91 ft or 5.764 m) from rating extended above 5,000 ft<sup>3</sup>/s (142 m<sup>3</sup>/s) on basis of step-backwater computations; no flow Sept. 11, 12, Oct. 4, 5, 1967, Aug. 13, 25-31, Sept. 1, 3-6, 9-14, Oct. 3-9, 1969, Oct. 10-12, 1972.

REMARKS.--Records fair except periods of ice effect, which are poor.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT     | NOV     | DEC   | JAN     | FEB   | MAR   | APR   | MAY    | JUN     | JUL    | AUG    | SEP    |
|-------|---------|---------|-------|---------|-------|-------|-------|--------|---------|--------|--------|--------|
| 1     | 226     | 26      | 44    | 19      | 87    | 51    | 38    | 84     | 174     | 1.8    | .30    | 97     |
| 2     | 69      | 16      | 34    | 17      | 78    | 41    | 29    | 84     | 101     | 1.7    | 1.7    | 31     |
| 3     | 38      | 11      | 31    | 14      | 73    | 34    | 23    | 70     | 74      | 1.4    | .61    | 25     |
| 4     | 369     | 8.5     | 2,090 | 13      | 64    | 30    | 19    | 52     | 58      | 52     | .62    | 6.1    |
| 5     | 75      | 7.1     | 337   | 12      | 60    | 30    | 19    | 41     | 48      | 16     | .39    | 2.0    |
| 6     | 29      | 6.8     | 119   | 11      | 107   | 33    | 18    | 35     | 126     | 6.3    | .29    | 1.1    |
| 7     | 17      | 6.5     | 73    | 11      | 99    | 36    | 20    | 28     | 1,100   | 3.0    | 12     | .70    |
| 8     | 10      | 7.0     | 52    | 10      | 90    | 39    | 53    | 42     | 370     | 2.3    | 2.7    | .53    |
| 9     | 6.0     | 6.9     | 43    | 10      | 82    | 99    | 42    | 40     | 427     | 1.8    | 4.8    | .53    |
| 10    | 3.6     | 6.6     | 33    | 9.0     | 74    | 131   | 31    | 49     | 113     | 1.1    | 7.3    | .39    |
| 11    | 2.6     | 6.6     | 26    | 9.0     | 82    | 551   | 56    | 84     | 67      | 1.4    | 1.3    | .32    |
| 12    | 290     | 6.6     | 17    | 9.0     | 74    | 186   | 60    | 87     | 49      | 1.2    | .75    | .17    |
| 13    | 2,800   | 6.1     | 27    | 8.0     | 70    | 101   | 44    | 47     | 37      | 1.1    | .36    | .24    |
| 14    | 194     | 6.6     | 22    | 8.0     | 60    | 77    | 41    | 979    | 49      | 1.1    | .25    | .24    |
| 15    | 99      | 28      | 19    | 8.0     | 60    | 68    | 35    | 304    | 920     | 2.5    | .18    | .27    |
| 16    | 65      | 39      | 12    | 8.0     | 54    | 98    | 165   | 112    | 97      | 1.7    | .23    | .21    |
| 17    | 44      | 21      | 14    | 8.0     | 54    | 76    | 108   | 1,340  | 49      | 1.2    | .56    | .21    |
| 18    | 33      | 12      | 14    | 8.0     | 158   | 58    | 65    | 742    | 32      | .98    | .46    | .19    |
| 19    | 25      | 7.5     | 21    | 200     | 1,090 | 52    | 50    | 224    | 25      | .96    | .27    | .26    |
| 20    | 23      | 32      | 15    | 472     | 172   | 44    | 42    | 108    | 21      | .95    | .13    | .25    |
| 21    | 20      | 138     | 15    | 315     | 144   | 41    | 42    | 77     | 13      | .93    | .06    | .28    |
| 22    | 18      | 54      | 15    | 1,200   | 345   | 39    | 36    | 148    | 8.9     | 1.0    | 62     | .23    |
| 23    | 17      | 31      | 15    | 221     | 143   | 31    | 29    | 90     | 6.3     | 1.2    | 12     | .22    |
| 24    | 16      | 27      | 686   | 130     | 93    | 34    | 26    | 56     | 4.4     | 1.2    | 2.1    | .19    |
| 25    | 15      | 403     | 196   | 106     | 82    | 34    | 24    | 46     | 3.6     | .96    | .59    | .16    |
| 26    | 14      | 380     | 98    | 765     | 90    | 34    | 23    | 38     | 2.5     | .90    | .27    | .19    |
| 27    | 14      | 156     | 68    | 448     | 132   | 55    | 20    | 36     | 2.6     | .74    | .94    | .19    |
| 28    | 13      | 159     | 47    | 264     | 78    | 44    | 22    | 32     | 2.4     | .63    | 16     | 1.9    |
| 29    | 13      | 90      | 40    | 211     | ----- | 38    | 297   | 28     | 2.2     | .54    | 3.5    | 2.7    |
| 30    | 13      | 58      | 36    | 128     | ----- | 45    | 189   | 316    | 1.8     | .40    | 1.2    | 1.1    |
| 31    | 37      | -----   | 22    | 104     | ----- | 61    | ----- | 2,910  | -----   | .35    | 13     | -----  |
| TOTAL | 4,608.2 | 1,763.8 | 4,281 | 4,756.0 | 3,795 | 2,291 | 1,666 | 8,329  | 3,984.7 | 109.34 | 146.86 | 173.87 |
| MEAN  | 149     | 58.8    | 138   | 153     | 136   | 73.9  | 55.5  | 269    | 133     | 3.53   | 4.74   | 5.80   |
| MAX   | 2,800   | 403     | 2,090 | 1,200   | 1,090 | 551   | 297   | 2,910  | 1,100   | 52     | 62     | 97     |
| MIN   | 2.6     | 6.1     | 12    | 8.0     | 54    | 30    | 18    | 28     | 1.8     | .35    | .06    | .16    |
| CFSM  | 2.12    | .84     | 1.97  | 2.18    | 1.94  | 1.05  | .79   | 3.83   | 1.89    | .05    | .07    | .08    |
| IN.   | 2.44    | .93     | 2.27  | 2.52    | 2.01  | 1.21  | .88   | 4.41   | 2.11    | .06    | .08    | .09    |
| AC-FT | 9,140   | 3,500   | 8,490 | 9,430   | 7,530 | 4,540 | 3,300 | 16,520 | 7,900   | 217    | 291    | 345    |

CAL YR 1973 TOTAL 49,217.07 MEAN 135 MAX 2,800 MIN .06 CFSM 1.92 IN 26.08 AC-FT 97,620  
WTR YR 1974 TOTAL 35,904.77 MEAN 98.4 MAX 2,910 MIN .06 CFSM 1.40 IN 19.03 AC-FT 71,220

PEAK DISCHARGE (BASE, 2,000 FT<sup>3</sup>/S)

| DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|------|------|-------|-----------|
| 10-13 | 0400 | 18.39 | 7,580     | 5-17 | 1345 | 13.86 | 3,570     |
| 12-4  | 0630 | 14.48 | 3,940     | 5-31 | 0215 | 18.53 | 7,990     |
| 1-26  | 1900 | 11.52 | 2,390     | 6-7  | 0430 | 12.00 | 2,620     |
| 2-19  | 0300 | 11.56 | 2,410     | 6-15 | 0230 | 13.46 | 3,360     |

## CEDAR CREEK BASIN

06910410 Cedar Creek near Columbia, Mo.

LOCATION.--Lat 38°57'16", long 92°08'57", in NW¼SW¼ sec.10, T.48 N., R.11 W., Boone County, on downstream side of right pier of bridge on access road to Interstate Highway 70, 1 mi (1.6 km) downstream from Manacle Creek, and 9.5 mi (15.3 km) east of Columbia.

DRAINAGE AREA.--44.8 mi<sup>2</sup> (116 km<sup>2</sup>).

PERIOD OF RECORD.--June 1964 to current year.

GAGE.--Water-stage recorder. Datum of gage 776.45 ft (236.661 m) above mean sea level (levels by Missouri State Highway Commission).

AVERAGE DISCHARGE.--10 years, 41.4 ft<sup>3</sup>/s (1.17 m<sup>3</sup>/s), 12.56 in/yr (319 mm/yr), 30,010 acre-ft/yr (37.0 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 4,910 ft<sup>3</sup>/s (139 m<sup>3</sup>/s) Oct. 13 (gage height, 15.62 ft or 4.761 m); minimum daily, 0.03 ft<sup>3</sup>/s (0.001 m<sup>3</sup>/s) Sept. 11, 13, 27.

Period of record: Maximum discharge, 5,140 ft<sup>3</sup>/s (146 m<sup>3</sup>/s) Oct. 12, 1969 (gage height, 16.13 ft or 4.916 m); no flow on some days in most years.

REMARKS.--Records fair prior to Aug. 16 and poor thereafter and during periods of ice effect. Records of daily water conductivity and chemical analyses are published in Part 2 of this report.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY         | OCT             | NOV     | DEC     | JAN     | FEB     | MAR     | APR     | MAY     | JUN      | JUL   | AUG    | SEP    |
|-------------|-----------------|---------|---------|---------|---------|---------|---------|---------|----------|-------|--------|--------|
| 1           | 130             | 17      | 16      | 13      | 26      | 24      | 9.1     | 32      | 146      | .60   | .78    | 74     |
| 2           | 32              | 12      | 13      | 12      | 22      | 18      | 7.4     | 51      | 33       | .59   | .97    | 18     |
| 3           | 14              | 7.8     | 14      | 11      | 18      | 15      | 6.0     | 33      | 20       | .52   | .97    | 9.3    |
| 4           | 72              | 5.9     | 1,560   | 9.0     | 14      | 13      | 4.6     | 18      | 19       | 6.4   | .97    | 3.7    |
| 5           | 26              | 5.0     | 411     | 8.0     | 13      | 10      | 4.1     | 12      | 18       | 1.9   | .97    | 1.5    |
| 6           | 12              | 4.1     | 55      | 7.0     | 35      | 8.6     | 4.0     | 9.7     | 66       | 1.1   | 1.1    | .55    |
| 7           | 8.1             | 3.9     | 28      | 6.0     | 41      | 7.5     | 7.1     | 8.5     | 978      | .68   | 3.2    | .45    |
| 8           | 6.2             | 3.9     | 20      | 6.0     | 29      | 7.1     | 34      | 11      | 352      | .54   | 1.5    | .25    |
| 9           | 4.8             | 3.4     | 17      | 5.0     | 20      | 38      | 17      | 15      | 676      | .48   | 3.0    | .09    |
| 10          | 4.1             | 3.2     | 11      | 5.0     | 18      | 109     | 10      | 14      | 92       | .45   | 2.8    | .06    |
| 11          | 3.4             | 3.2     | 10      | 5.0     | 23      | 520     | 16      | 29      | 29       | .45   | 1.5    | .03    |
| 12          | 201             | 3.2     | 10      | 4.0     | 21      | 73      | 20      | 30      | 15       | .45   | 1.5    | .04    |
| 13          | 3,050           | 3.2     | 13      | 4.0     | 18      | 31      | 56      | 15      | 9.6      | .47   | 1.6    | .03    |
| 14          | 133             | 3.4     | 10      | 4.0     | 14      | 20      | 691     | 726     | 8.5      | .47   | 1.8    | .18    |
| 15          | 32              | 5.0     | 9.7     | 4.0     | 11      | 32      | 93      | 328     | 130      | .64   | 1.9    | .13    |
| 16          | 18              | 7.1     | 7.8     | 4.0     | 9.6     | 37      | 284     | 52      | 25       | .69   | 5.3    | .16    |
| 17          | 12              | 9.3     | 6.5     | 4.0     | 8.4     | 22      | 72      | 425     | 9.3      | .71   | 5.5    | .13    |
| 18          | 8.0             | 7.1     | 6.3     | 800     | 45      | 16      | 30      | 909     | 5.6      | .67   | 5.7    | .13    |
| 19          | 6.3             | 7.5     | 7.0     | 339     | 1,060   | 13      | 19      | 247     | 5.0      | .55   | 5.2    | .10    |
| 20          | 5.6             | 18      | 7.1     | 267     | 105     | 10      | 14      | 48      | 4.5      | .57   | 5.0    | .11    |
| 21          | 4.7             | 105     | 7.1     | 167     | 89      | 9.8     | 18      | 27      | 2.8      | .60   | 5.1    | .09    |
| 22          | 4.0             | 27      | 7.1     | 634     | 334     | 8.2     | 14      | 104     | 2.2      | .60   | 328    | .09    |
| 23          | 3.6             | 13      | 7.1     | 188     | 82      | 7.9     | 9.5     | 45      | 1.7      | .60   | 31     | .07    |
| 24          | 3.5             | 12      | 536     | 60      | 40      | 9.1     | 8.1     | 19      | 1.5      | .60   | 4.9    | .05    |
| 25          | 3.4             | 422     | 327     | 39      | 30      | 11      | 7.1     | 14      | 1.3      | .72   | 2.0    | .05    |
| 26          | 5.2             | 363     | 68      | 617     | 44      | 19      | 6.3     | 13      | .98      | .76   | 2.2    | .04    |
| 27          | 17              | 94      | 38      | 682     | 108     | 17      | 5.6     | 13      | .89      | .78   | 3.8    | .03    |
| 28          | 43              | 89      | 27      | 179     | 48      | 13      | 5.0     | 12      | .83      | .68   | 48     | .41    |
| 29          | 15              | 40      | 23      | 153     | -----   | 14      | 188     | 47      | .77      | .60   | 11     | .14    |
| 30          | 9.6             | 22      | 18      | 59      | -----   | 15      | 132     | 397     | .60      | .71   | 3.9    | .07    |
| 31          | 23              | -----   | 16      | 38      | -----   | 12      | -----   | 2,970   | -----    | .71   | 25     | -----  |
| TOTAL       | 3,910.5         | 1,320.2 | 3,306.7 | 4,333.0 | 2,326.0 | 1,160.2 | 1,791.9 | 6,674.2 | 2,655.07 | 26.29 | 516.16 | 109.98 |
| MEAN        | 126             | 44.0    | 107     | 140     | 83.1    | 37.4    | 59.7    | 215     | 88.5     | .85   | 16.7   | 3.67   |
| MAX         | 3,050           | 422     | 1,560   | 800     | 1,060   | 520     | 691     | 2,970   | 978      | 6.4   | 328    | 74     |
| MIN         | 3.4             | 3.2     | 6.3     | 4.0     | 8.4     | 7.1     | 4.0     | 8.5     | .60      | .45   | .78    | .03    |
| CFSM        | 2.81            | .98     | 2.39    | 3.13    | 1.85    | .83     | 1.33    | 4.80    | 1.98     | .02   | .37    | .08    |
| IN.         | 3.25            | 1.10    | 2.75    | 3.60    | 1.93    | .96     | 1.49    | 5.54    | 2.20     | .02   | .43    | .09    |
| AC-FT       | 7,760           | 2,620   | 6,560   | 8,590   | 4,610   | 2,300   | 3,550   | 13,240  | 5,270    | 52    | 1,020  | 218    |
| CAL YR 1973 | TOTAL 38,186.69 |         |         |         |         |         |         |         |          |       |        |        |
| WTR YR 1974 | TOTAL 28,130.20 |         |         |         |         |         |         |         |          |       |        |        |
| MEAN        | 90.9            |         |         |         |         |         |         |         |          |       |        |        |
| MAX         | 3,050           |         |         |         |         |         |         |         |          |       |        |        |
| MIN         | .45             |         |         |         |         |         |         |         |          |       |        |        |
| CFSM        | 2.03            |         |         |         |         |         |         |         |          |       |        |        |
| IN          | 27.56           |         |         |         |         |         |         |         |          |       |        |        |
| AC-FT       | 65,830          |         |         |         |         |         |         |         |          |       |        |        |

PEAK DISCHARGE (BASE, 1,100 FT<sup>3</sup>/S)

| DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|------|------|-------|-----------|------|------|-------|-----------|
| 10-13 | 0945 | 15.62 | 4,910     | 2-19 | 0330 | 10.50 | 1,410     | 5-18 | 1400 | 10.72 | 1,500     |
| 12-4  | 0630 | 12.75 | 2,360     | 3-11 | 0145 | 9.70  | 1,160     | 5-31 | 1000 | 15.12 | 4,530     |
| 1-18  | 1300 | 10.14 | 1,320     | 4-14 | 0130 | 11.48 | 1,750     | 6-7  | 0245 | 11.18 | 1,670     |
| 1-22  | 1130 | 9.52  | 1,210     | 5-14 | 1845 | 11.32 | 1,720     | 6-9  | 0415 | 10.14 | 1,330     |
| 1-26  | 1815 | 11.16 | 1,670     |      |      |       |           |      |      |       |           |

06910500 Moreau River near Jefferson City, Mo.

LOCATION.--Lat 38°31'44", long 92°11'31", SE¼NW¼SE¼ sec. 25, T.44 N., R.11 W., Cole County, near right bank on downstream side of right pier of bridge on Tanner Bridge Road, 3 mi (4.8 km) south of Jefferson City, 15.8 mi (25.4 km) downstream from confluence of North and South Moreau Creeks, and at mile 17 (27.4 km).

DRAINAGE AREA.--561 mi<sup>2</sup> (1,453 km<sup>2</sup>). Prior to May 21, 1968, 531 mi<sup>2</sup> (1,375 km<sup>2</sup>).

PERIOD OF RECORD.--December 1947 to September 1974 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 546.33 ft (166.521 m) above mean sea level. Prior to Aug. 17, 1958, nonrecording gage, and Aug. 17, 1958, to May 20, 1967, water-stage recorder at site 10 mi (16.1 km) upstream and at datum 16.40 ft (4.999 m) higher.

AVERAGE DISCHARGE.--25 years (1948-56, 1958-74), 381 ft<sup>3</sup>/s (10.8 m<sup>3</sup>/s), 9.22 in/yr (234 mm/yr), 276,000 acre-ft/yr (340.3 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 16,200 ft<sup>3</sup>/s (459 m<sup>3</sup>/s) Mar. 11 (gage height, 25.45 ft or 7.757 m); minimum, 4.8 ft<sup>3</sup>/s (0.136 m<sup>3</sup>/s) Aug. 2, 3 (gage height, 0.99 ft or 0.302 m).

Period of record: Maximum discharge, 24,400 ft<sup>3</sup>/s (691 m<sup>3</sup>/s) Oct. 14, 1969 (gage height, 28.60 ft or 8.717 m); minimum discharge observed, 0.1 ft<sup>3</sup>/s (0.003 m<sup>3</sup>/s) Sept. 30, 1956.

Flood in 1904 reached a stage of about 39 ft (11.9 m), flood on Oct. 5, 1941, 36.5 ft (11.13 m), present site, from information and floodmarks by local residents.

REMARKS.--Records fair.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT    | NOV    | DEC    | JAN    | FEB    | MAR    | APR    | MAY    | JUN    | JUL   | AUG     | SEP    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|---------|--------|
| 1     | 36     | 44     | 172    | 240    | 563    | 443    | 287    | 124    | 995    | 39    | 5.2     | 1,300  |
| 2     | 25     | 38     | 139    | 230    | 453    | 377    | 248    | 283    | 346    | 36    | 4.8     | 1,930  |
| 3     | 16     | 34     | 121    | 210    | 383    | 345    | 219    | 570    | 216    | 34    | 5.6     | 1,190  |
| 4     | 109    | 31     | 3,650  | 200    | 324    | 311    | 193    | 379    | 157    | 39    | 7.6     | 747    |
| 5     | 1,260  | 28     | 4,870  | 190    | 285    | 272    | 171    | 253    | 131    | 39    | 7.6     | 350    |
| 6     | 274    | 25     | 833    | 180    | 356    | 241    | 156    | 184    | 297    | 41    | 13      | 215    |
| 7     | 135    | 24     | 431    | 160    | 701    | 224    | 147    | 152    | 6,400  | 39    | 17      | 153    |
| 8     | 85     | 21     | 307    | 160    | 415    | 264    | 342    | 136    | 4,260  | 37    | 10      | 121    |
| 9     | 56     | 22     | 251    | 150    | 302    | 3,160  | 453    | 125    | 1,420  | 34    | 16      | 96     |
| 10    | 42     | 26     | 219    | 150    | 260    | 7,770  | 328    | 128    | 1,580  | 32    | 24      | 77     |
| 11    | 36     | 21     | 189    | 140    | 240    | 14,200 | 275    | 137    | 530    | 28    | 19      | 67     |
| 12    | 31     | 18     | 168    | 130    | 229    | 7,220  | 286    | 257    | 380    | 26    | 16      | 59     |
| 13    | 1,060  | 15     | 159    | 140    | 220    | 917    | 305    | 215    | 303    | 24    | 14      | 51     |
| 14    | 953    | 14     | 148    | 180    | 205    | 669    | 269    | 1,320  | 297    | 21    | 13      | 44     |
| 15    | 259    | 17     | 138    | 300    | 186    | 643    | 297    | 5,590  | 821    | 20    | 13      | 39     |
| 16    | 139    | 22     | 128    | 1,200  | 171    | 589    | 288    | 1,180  | 927    | 19    | 12      | 37     |
| 17    | 94     | 16     | 117    | 3,990  | 164    | 481    | 353    | 517    | 321    | 19    | 12      | 36     |
| 18    | 65     | 15     | 108    | 4,590  | 180    | 425    | 272    | 2,190  | 198    | 18    | 10      | 34     |
| 19    | 50     | 17     | 164    | 1,900  | 3,870  | 381    | 217    | 1,350  | 154    | 16    | 8.8     | 32     |
| 20    | 41     | 24     | 382    | 2,470  | 4,100  | 345    | 183    | 572    | 138    | 15    | 8.8     | 31     |
| 21    | 34     | 83     | 500    | 1,680  | 1,030  | 340    | 175    | 364    | 115    | 12    | 8.8     | 28     |
| 22    | 29     | 80     | 375    | 1,230  | 2,190  | 351    | 270    | 274    | 101    | 11    | 432     | 25     |
| 23    | 26     | 125    | 326    | 3,320  | 1,810  | 347    | 249    | 224    | 84     | 11    | 107     | 23     |
| 24    | 23     | 102    | 3,190  | 972    | 926    | 330    | 195    | 177    | 68     | 8.8   | 62      | 22     |
| 25    | 20     | 1,400  | 3,420  | 592    | 619    | 377    | 162    | 152    | 60     | 8.0   | 62      | 21     |
| 26    | 18     | 1,800  | 1,000  | 1,410  | 548    | 518    | 145    | 140    | 55     | 7.6   | 50      | 19     |
| 27    | 22     | 933    | 545    | 7,680  | 637    | 493    | 133    | 132    | 50     | 6.8   | 49      | 18     |
| 28    | 23     | 431    | 398    | 3,850  | 598    | 398    | 124    | 138    | 47     | 6.8   | 3,000   | 20     |
| 29    | 23     | 292    | 326    | 3,870  | -----  | 383    | 121    | 127    | 44     | 6.8   | 2,500   | 30     |
| 30    | 23     | 228    | 281    | 1,390  | -----  | 442    | 124    | 113    | 42     | 6.8   | 529     | 53     |
| 31    | 48     | -----  | 252    | 805    | -----  | 349    | -----  | 4,210  | -----  | 6.4   | 275     | -----  |
| TOTAL | 5,055  | 5,946  | 23,307 | 43,709 | 21,965 | 43,605 | 6,987  | 21,713 | 20,537 | 668.0 | 7,312.2 | 6,868  |
| MEAN  | 163    | 198    | 752    | 1,410  | 784    | 1,407  | 233    | 700    | 685    | 21.5  | 236     | 229    |
| MAX   | 1,260  | 1,800  | 4,870  | 7,680  | 4,100  | 14,200 | 453    | 5,590  | 6,400  | 41    | 3,000   | 1,930  |
| MIN   | 16     | 14     | 108    | 130    | 164    | 224    | 121    | 113    | 42     | 6.4   | 4.8     | 18     |
| CFSM  | .29    | .35    | 1.34   | 2.51   | 1.40   | 2.51   | .42    | 1.25   | 1.22   | .04   | .42     | .41    |
| IN.   | .34    | .39    | 1.55   | 2.90   | 1.46   | 2.89   | .46    | 1.44   | 1.36   | .04   | .48     | .46    |
| AC-FT | 10,030 | 11,790 | 46,230 | 86,700 | 43,570 | 86,490 | 13,860 | 43,070 | 40,740 | 1,320 | 14,500  | 13,620 |

CAL YR 1973 TOTAL 300,178.6 MEAN 822 MAX 13,000 MIN 7.2 CFSM 1.47 IN 19.90 AC-FT 595,400  
WTR YR 1974 TOTAL 207,672.2 MEAN 569 MAX 14,200 MIN 4.8 CFSM 1.01 IN 13.77 AC-FT 411,900

PEAK DISCHARGE (BASE, 7,500 FT<sup>3</sup>/S)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|------|------|-------|-----------|------|------|-------|-----------|
| 1-27 | 1930 | 20.59 | 8,490     | 6-7  | 2345 | 20.29 | 8,230     |
| 3-11 | 2115 | 25.45 | 16,200    |      |      |       |           |



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, on downstream side of bridge on State Highway 245, 2 mi (3.2 km) upstream from Cave Spring Branch and 2 mi (3.2 km) south of Dadeville.

DRAINAGE AREA.--257 mi<sup>2</sup> (666 km<sup>2</sup>).

PERIOD OF RECORD.--June 1966 to current year. Annual maximum, water years 1965-66.

GAGE.--Water-stage recorder. Datum of gage is 869.78 ft (265.109 m) above mean sea level (levels by Missouri State Highway Commission). Prior to June 1966, crest-stage gage at same site and datum.

AVERAGE DISCHARGE.--8 years, 247 ft<sup>3</sup>/s (7.00 m<sup>3</sup>/s), 13.05 in/yr (331 mm/yr), 179,000 acre-ft/yr (221 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 5,710 ft<sup>3</sup>/s (162 m<sup>3</sup>/s) Mar. 11 (gage height, 17.69 ft or 5.392 m); minimum, 49 ft<sup>3</sup>/s (1.39 m<sup>3</sup>/s) Aug 17 (gage height, 5.01 ft or 1.527 m).

Period of record: Maximum discharge, 8,030 ft<sup>3</sup>/s (227 m<sup>3</sup>/s) Nov. 1, 1972 (gage height, 20.63 ft or 6.288 m), from floodmark; minimum, 9.4 ft<sup>3</sup>/s (0.266 m<sup>3</sup>/s) Aug. 21, 1972 (gage height, 4.34 ft or 1.323 m).

REMARKS.--Records fair.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT    | NOV    | DEC    | JAN    | FEB    | MAR    | APR    | MAY    | JUN    | JUL   | AUG   | SEP   |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|-------|-------|
| 1     | 218    | 208    | 620    | 367    | 480    | 339    | 430    | 190    | 159    | 171   | 60    | 278   |
| 2     | 168    | 186    | 543    | 343    | 444    | 323    | 400    | 197    | 151    | 163   | 77    | 384   |
| 3     | 137    | 170    | 495    | 324    | 405    | 307    | 380    | 241    | 143    | 155   | 63    | 394   |
| 4     | 200    | 157    | 2,420  | 305    | 371    | 291    | 350    | 235    | 497    | 153   | 57    | 288   |
| 5     | 175    | 146    | 2,060  | 293    | 348    | 275    | 330    | 213    | 1,490  | 149   | 55    | 230   |
| 6     | 150    | 133    | 1,210  | 282    | 328    | 263    | 319    | 202    | 818    | 141   | 55    | 195   |
| 7     | 141    | 126    | 908    | 269    | 306    | 252    | 304    | 191    | 4,220  | 133   | 72    | 171   |
| 8     | 124    | 120    | 749    | 258    | 292    | 240    | 326    | 183    | 2,560  | 128   | 66    | 151   |
| 9     | 111    | 113    | 645    | 253    | 278    | 476    | 299    | 178    | 1,710  | 122   | 68    | 136   |
| 10    | 101    | 105    | 557    | 251    | 265    | 4,030  | 279    | 173    | 1,260  | 118   | 82    | 125   |
| 11    | 96     | 100    | 498    | 236    | 252    | 5,110  | 278    | 167    | 1,030  | 112   | 65    | 117   |
| 12    | 122    | 97     | 456    | 221    | 241    | 2,640  | 291    | 159    | 1,050  | 107   | 63    | 111   |
| 13    | 266    | 94     | 419    | 213    | 233    | 1,690  | 270    | 152    | 802    | 104   | 59    | 119   |
| 14    | 287    | 92     | 379    | 211    | 227    | 1,270  | 254    | 246    | 667    | 106   | 55    | 102   |
| 15    | 237    | 90     | 351    | 240    | 226    | 1,360  | 242    | 472    | 574    | 108   | 53    | 96    |
| 16    | 200    | 86     | 323    | 362    | 221    | 1,480  | 238    | 337    | 493    | 101   | 51    | 97    |
| 17    | 172    | 83     | 306    | 391    | 213    | 1,120  | 229    | 286    | 434    | 95    | 55    | 95    |
| 18    | 154    | 81     | 290    | 394    | 221    | 979    | 221    | 254    | 396    | 92    | 79    | 89    |
| 19    | 139    | 79     | 389    | 379    | 757    | 850    | 216    | 230    | 355    | 88    | 117   | 103   |
| 20    | 127    | 106    | 373    | 371    | 621    | 800    | 214    | 210    | 325    | 85    | 85    | 225   |
| 21    | 118    | 146    | 334    | 353    | 541    | 760    | 206    | 195    | 297    | 81    | 70    | 168   |
| 22    | 109    | 124    | 320    | 337    | 529    | 730    | 205    | 188    | 274    | 79    | 82    | 142   |
| 23    | 101    | 114    | 329    | 323    | 490    | 700    | 196    | 180    | 255    | 75    | 108   | 126   |
| 24    | 96     | 743    | 699    | 305    | 464    | 670    | 187    | 180    | 242    | 71    | 84    | 115   |
| 25    | 93     | 4,360  | 779    | 295    | 427    | 640    | 181    | 181    | 228    | 82    | 73    | 109   |
| 26    | 96     | 2,610  | 674    | 301    | 403    | 600    | 175    | 226    | 217    | 81    | 70    | 103   |
| 27    | 562    | 1,770  | 594    | 379    | 382    | 570    | 171    | 229    | 206    | 75    | 112   | 97    |
| 28    | 499    | 1,200  | 530    | 451    | 361    | 550    | 167    | 200    | 198    | 71    | 837   | 94    |
| 29    | 301    | 899    | 483    | 578    | -----  | 520    | 165    | 186    | 187    | 66    | 304   | 98    |
| 30    | 253    | 741    | 441    | 574    | -----  | 500    | 197    | 176    | 179    | 64    | 192   | 90    |
| 31    | 235    | -----  | 409    | 529    | -----  | 460    | -----  | 167    | -----  | 61    | 154   | ----- |
| TOTAL | 5,788  | 15,079 | 19,583 | 10,388 | 10,326 | 30,795 | 7,720  | 6,624  | 21,417 | 3,237 | 3,423 | 4,648 |
| MEAN  | 187    | 503    | 632    | 335    | 369    | 993    | 257    | 214    | 714    | 104   | 110   | 155   |
| MAX   | 562    | 4,360  | 2,420  | 578    | 757    | 5,110  | 430    | 472    | 4,220  | 171   | 837   | 394   |
| MIN   | 93     | 79     | 290    | 211    | 213    | 240    | 165    | 152    | 143    | 61    | 51    | 89    |
| CFSM  | .73    | 1.96   | 2.46   | 1.30   | 1.44   | 3.86   | 1.00   | .83    | 2.78   | .40   | .43   | .60   |
| IN.   | .84    | 2.18   | 2.83   | 1.50   | 1.49   | 4.46   | 1.12   | .96    | 3.10   | .47   | .50   | .67   |
| AC-FT | 11,480 | 29,910 | 38,840 | 20,600 | 20,480 | 61,080 | 15,310 | 13,140 | 42,480 | 6,420 | 6,790 | 9,220 |

CAL YR 1973 TOTAL 178,215 MEAN 488 MAX 5,000 MIN 25 CFSM 1.90 IN 25.80 AC-FT 353,500  
WTR YR 1974 TOTAL 139,028 MEAN 381 MAX 5,110 MIN 51 CFSM 1.48 IN 20.12 AC-FT 275,800

PEAK DISCHARGE (BASE, 3,000 FT<sup>3</sup>/S)

| DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|------|------|-------|-----------|
| 11-25 | 0945 | 16.88 | 5,100     | 3-11 | 1415 | 17.69 | 5,710     |
| 12-4  | 1900 | 14.03 | 3,400     | 6-7  | 1445 | 16.94 | 5,160     |

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, on downstream side of left pier of bridge on County Highway O, 1.5 mi (2.4 km) downstream from Limestone Creek, and 2 mi (3.2 km) southeast of Greenfield.

DRAINAGE AREA.--252 mi<sup>2</sup> (653 km<sup>2</sup>).

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

GAGE.--Water-stage recorder. Datum of gage is 870.34 ft (265.280 m) above mean sea level (levels by Missouri State Highway Commission).

AVERAGE DISCHARGE.--9 years, 258 ft<sup>3</sup>/s (7.31 m<sup>3</sup>/s), 13.90 in/yr (353 mm/yr), 186,900 acre-ft/yr (230 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 11,000 ft<sup>3</sup>/s (312 m<sup>3</sup>/s) June 7 (gage height, 19.15 ft or 5.837 m); minimum, 42 ft<sup>3</sup>/s (1.19 m<sup>3</sup>/s) Aug. 18 (gage height, 6.23 ft or 1.899 m).  
Period of record: Maximum discharge, 23,100 ft<sup>3</sup>/s (654 m<sup>3</sup>/s) Nov. 1, 1972 (gage height, 24.45 ft or 7.452 m, floodmark); minimum, 13 ft<sup>3</sup>/s (0.37 m<sup>3</sup>/s) Aug. 21, 1972; minimum gage height, 5.76 ft (1.756 m) Oct. 5, 10, 1970.

REMARKS.--Records good except during period of no gage-height record and backwater from Stockton Lake, which are fair.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT    | NOV    | DEC    | JAN    | FEB    | MAR    | APR    | MAY    | JUN    | JUL   | AUG   | SEP    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|-------|--------|
| 1     | 435    | 252    | 665    | 423    | 507    | 382    | 400    | 224    | 119    | 184   | 50    | 577    |
| 2     | 339    | 215    | 576    | 404    | 468    | 362    | 371    | 237    | 109    | 175   | 65    | 607    |
| 3     | 268    | 189    | 529    | 362    | 430    | 343    | 353    | 333    | 100    | 166   | 55    | 548    |
| 4     | 282    | 170    | 4,250  | 337    | 396    | 321    | 326    | 288    | 605    | 163   | 50    | 326    |
| 5     | 246    | 151    | 2,320  | 316    | 375    | 297    | 310    | 259    | 1,070  | 158   | 45    | 250    |
| 6     | 212    | 137    | 1,370  | 303    | 355    | 282    | 294    | 242    | 916    | 152   | 45    | 200    |
| 7     | 201    | 128    | 1,060  | 282    | 330    | 267    | 284    | 221    | 7,830  | 145   | 65    | 170    |
| 8     | 175    | 119    | 866    | 271    | 310    | 252    | 295    | 208    | 2,500  | 140   | 60    | 150    |
| 9     | 156    | 109    | 740    | 272    | 292    | 391    | 272    | 194    | 1,750  | 129   | 65    | 130    |
| 10    | 141    | 101    | 634    | 263    | 277    | 6,860  | 259    | 182    | 1,230  | 125   | 80    | 120    |
| 11    | 130    | 95     | 563    | 236    | 262    | 5,740  | 268    | 171    | 1,120  | 118   | 65    | 120    |
| 12    | 166    | 89     | 512    | 220    | 250    | 2,640  | 312    | 157    | 997    | 115   | 61    | 110    |
| 13    | 537    | 86     | 461    | 210    | 237    | 1,710  | 268    | 147    | 793    | 109   | 59    | 120    |
| 14    | 406    | 82     | 418    | 210    | 223    | 1,270  | 251    | 370    | 675    | 105   | 55    | 110    |
| 15    | 328    | 80     | 383    | 347    | 215    | 1,730  | 240    | 462    | 585    | 107   | 52    | 105    |
| 16    | 271    | 75     | 350    | 456    | 208    | 1,440  | 239    | 324    | 512    | 100   | 50    | 105    |
| 17    | 226    | 71     | 325    | 431    | 198    | 1,110  | 231    | 262    | 462    | 95    | 51    | 101    |
| 18    | 198    | 68     | 308    | 425    | 222    | 955    | 225    | 228    | 424    | 90    | 49    | 92     |
| 19    | 174    | 64     | 654    | 412    | 1,100  | 853    | 230    | 198    | 389    | 85    | 58    | 90     |
| 20    | 154    | 425    | 547    | 423    | 770    | 764    | 228    | 178    | 355    | 80    | 56    | 155    |
| 21    | 138    | 633    | 473    | 396    | 684    | 711    | 219    | 160    | 325    | 75    | 52    | 113    |
| 22    | 123    | 449    | 438    | 375    | 674    | 662    | 221    | 147    | 301    | 70    | 47    | 99     |
| 23    | 113    | 365    | 485    | 364    | 599    | 664    | 211    | 139    | 278    | 65    | 54    | 91     |
| 24    | 105    | 1,810  | 1,100  | 343    | 547    | 580    | 202    | 138    | 261    | 60    | 52    | 86     |
| 25    | 96     | 6,430  | 1,030  | 326    | 496    | 595    | 197    | 137    | 243    | 70    | 46    | 84     |
| 26    | 109    | 2,610  | 836    | 366    | 465    | 560    | 191    | 245    | 227    | 75    | 43    | 81     |
| 27    | 855    | 1,720  | 719    | 468    | 437    | 531    | 189    | 216    | 217    | 70    | 160   | 78     |
| 28    | 566    | 1,250  | 646    | 560    | 406    | 517    | 183    | 178    | 208    | 65    | 798   | 76     |
| 29    | 391    | 962    | 569    | 604    | -----  | 504    | 184    | 160    | 201    | 60    | 275   | 79     |
| 30    | 325    | 780    | 517    | 592    | -----  | 459    | 246    | 146    | 192    | 55    | 188   | 73     |
| 31    | 291    | -----  | 467    | 552    | -----  | 429    | -----  | 131    | -----  | 50    | 151   | -----  |
| TOTAL | 8,157  | 19,715 | 24,811 | 11,549 | 11,733 | 34,181 | 7,699  | 6,682  | 24,994 | 3,256 | 3,002 | 5,046  |
| MEAN  | 263    | 657    | 800    | 373    | 419    | 1,103  | 257    | 216    | 833    | 105   | 96.8  | 168    |
| MAX   | 855    | 6,430  | 4,250  | 604    | 1,100  | 6,860  | 400    | 462    | 7,830  | 184   | 798   | 607    |
| MIN   | 96     | 64     | 308    | 210    | 198    | 252    | 183    | 131    | 100    | 50    | 43    | 73     |
| CFSM  | 1.04   | 2.61   | 3.17   | 1.48   | 1.66   | 4.38   | 1.02   | .86    | 3.31   | .42   | .38   | .67    |
| IN.   | 1.20   | 2.91   | 3.66   | 1.70   | 1.73   | 5.05   | 1.14   | .99    | 3.69   | .48   | .44   | .74    |
| AC-FT | 16,180 | 39,100 | 49,210 | 22,910 | 23,270 | 67,800 | 15,270 | 13,250 | 49,580 | 6,460 | 5,950 | 10,010 |

CAL YR 1973 TOTAL 206,705 MEAN 566 MAX 6,500 MIN 34 CFSM 2.25 IN 30.51 AC-FT 410,000  
WTR YR 1974 TOTAL 160,825 MEAN 441 MAX 7,830 MIN 43 CFSM 1.75 IN 23.74 AC-FT 319,000

PEAK DISCHARGE (BASE, 3,000 FT<sup>3</sup>/S)

| DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|------|------|-------|-----------|
| 11-25 | 0215 | 18.54 | 9,530     | 3-10 | 1430 | 18.36 | 9,160     |
| 12-4  | 1000 | 16.00 | 5,400     | 6-7  | 0645 | 19.15 | 11,000    |

06918700 Oak Grove Branch near Brighton, Mo.

LOCATION.--Lat 37°24'11", long 93°21'21", in SE¼NW¼ sec.21, T.31 N., R.22 W., Greene County, on left bank just upstream from culvert on State Highway BB, 0.6 mi (1.0 km) west of State Highway 13 and 4 mi (6.4 km) south of Brighton.

DRAINAGE AREA.--1.30 mi<sup>2</sup> (3.38 km<sup>2</sup>).

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

GAGE.--Water-stage recorder. Altitude of gage is 1,030 ft (314 m) from topographic map.

AVERAGE DISCHARGE.--18 years, 0.95 ft<sup>3</sup>/s (0.03 m<sup>3</sup>/s), 9.92 in/yr (252 mm/yr), 688 acre-ft/yr (848,300 m<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 273 ft<sup>3</sup>/s (7.73 m<sup>3</sup>/s) Dec. 3 (gage height, 3.47 ft or 1.058 m); no flow on many days.

Period of record: Maximum discharge, 845 ft<sup>3</sup>/s (23.9 m<sup>3</sup>/s) May 22, 1957 (gage height, 7.60 ft or 2.316 m); no flow at times each year.

REMARKS.--Records poor.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT   | NOV    | DEC   | JAN   | FEB   | MAR    | APR   | MAY   | JUN   | JUL  | AUG  | SEP   |
|-------|-------|--------|-------|-------|-------|--------|-------|-------|-------|------|------|-------|
| 1     | 1.6   | .50    | 1.2   | .80   | 1.3   | 1.0    | .70   | 2.9   | .20   | 0    | 0    | 4.9   |
| 2     | .80   | .40    | 1.1   | .70   | 1.1   | .90    | .60   | 6.4   | .10   | 0    | 0    | 3.2   |
| 3     | .50   | .30    | 9.1   | .60   | .90   | .90    | .50   | 3.0   | .10   | 0    | 0    | 1.4   |
| 4     | 8.9   | .20    | 37    | .50   | .80   | .90    | .50   | 2.0   | 8.1   | .10  | 0    | .60   |
| 5     | 2.5   | .20    | 4.0   | .50   | .70   | .90    | .40   | 1.4   | 4.8   | .10  | 0    | .30   |
| 6     | 1.7   | .20    | 2.0   | .40   | .60   | .90    | .40   | 1.2   | 30    | .10  | 0    | .20   |
| 7     | 1.2   | .20    | 1.6   | .50   | .50   | .90    | .30   | 1.0   | 8.7   | 0    | 0    | .10   |
| 8     | .90   | .10    | 1.1   | .40   | .40   | .90    | .40   | 1.0   | 4.2   | 0    | 0    | .10   |
| 9     | 1.2   | .10    | 1.0   | .40   | .40   | 5.0    | .50   | .90   | 4.6   | 0    | 0    | .10   |
| 10    | .60   | .10    | .80   | .50   | .40   | 73     | .70   | .90   | 1.9   | 0    | 0    | .10   |
| 11    | .60   | .20    | .70   | .50   | .40   | 20     | 1.1   | .80   | 1.7   | 0    | 0    | .10   |
| 12    | 2.0   | .20    | .60   | .50   | .40   | 4.0    | 3.2   | .70   | 1.4   | 0    | 0    | .10   |
| 13    | 4.0   | .20    | .70   | .50   | .50   | 2.3    | 2.0   | .60   | 1.1   | 0    | 0    | .20   |
| 14    | 2.2   | .20    | .60   | .60   | .90   | 1.9    | 1.3   | 8.0   | .80   | 0    | 0    | .10   |
| 15    | 1.4   | .20    | .50   | 1.7   | .30   | 13     | 1.1   | 3.6   | .70   | 0    | 0    | .10   |
| 16    | 1.1   | .20    | .40   | 5.5   | .20   | 4.4    | 1.0   | 1.4   | .60   | 0    | 0    | .10   |
| 17    | .80   | .20    | .30   | 4.4   | .30   | 2.5    | 1.0   | 1.1   | .50   | 0    | 0    | .10   |
| 18    | .70   | .20    | .30   | 2.7   | 4.6   | 1.9    | .90   | .80   | .50   | 0    | 0    | .10   |
| 19    | .60   | .20    | .90   | 1.9   | 21    | 1.6    | .80   | .70   | .40   | 0    | 0    | 13    |
| 20    | .50   | .30    | 1.6   | 1.7   | 3.4   | 1.3    | .80   | .50   | .30   | 0    | 0    | 3.0   |
| 21    | .40   | .90    | 1.4   | 1.4   | 5.0   | 1.3    | .70   | .40   | .30   | 0    | 0    | 1.2   |
| 22    | .30   | 1.1    | 1.3   | 1.2   | 5.2   | 2.0    | .80   | .30   | .20   | 0    | .20  | .60   |
| 23    | .30   | 1.0    | 3.8   | 1.1   | 3.2   | 2.7    | .80   | .30   | .20   | 0    | 0    | .30   |
| 24    | .20   | 55     | 8.7   | .90   | 2.2   | 1.9    | .80   | .20   | .20   | 0    | 0    | .20   |
| 25    | .20   | 23     | 2.5   | .80   | 1.6   | 2.0    | .80   | .20   | .20   | 0    | 0    | .20   |
| 26    | .20   | 17     | 2.0   | 6.3   | 1.3   | 1.7    | .70   | .20   | .20   | 0    | 0    | .20   |
| 27    | 11    | 4.6    | 1.6   | 4.8   | 1.2   | 1.4    | .70   | .20   | .10   | 0    | 0    | .20   |
| 28    | 2.2   | 3.2    | 1.4   | 10    | 1.1   | 1.2    | .60   | .20   | .10   | 0    | .10  | .30   |
| 29    | 1.1   | 2.2    | 1.3   | 4.0   | ----- | 1.1    | .60   | .20   | 0     | 0    | 0    | .20   |
| 30    | .70   | 1.6    | 1.2   | 2.2   | ----- | 1.0    | 2.3   | .20   | 0     | 0    | 0    | .10   |
| 31    | .60   | -----  | .90   | 1.6   | ----- | .80    | ----- | .20   | ----- | 0    | 1.6  | ----- |
| TOTAL | 51.00 | 114.00 | 91.60 | 59.60 | 59.90 | 155.30 | 27.00 | 41.50 | 72.20 | .30  | 1.90 | 31.40 |
| MEAN  | 1.65  | 3.80   | 2.95  | 1.92  | 2.14  | 5.01   | .90   | 1.34  | 2.41  | .010 | .061 | 1.05  |
| MAX   | 11    | 55     | 37    | 10    | 21    | 73     | 3.2   | 8.0   | 30    | .10  | 1.6  | 13    |
| MIN   | .20   | .10    | .30   | .40   | .20   | .80    | .30   | .20   | 0     | 0    | 0    | .10   |
| CFSM  | 1.27  | 2.92   | 2.27  | 1.48  | 1.65  | 3.85   | .69   | 1.03  | 1.85  | .008 | .05  | .81   |
| IN.   | 1.46  | 3.26   | 2.62  | 1.71  | 1.71  | 4.44   | .77   | 1.19  | 2.07  | .008 | .05  | .90   |
| AC-FT | 101   | 226    | 182   | 118   | 119   | 308    | 54    | 82    | 143   | .6   | 3.8  | 62    |

CAL YR 1973 TOTAL 727.70 MEAN 1.99 MAX 55 MIN 0 CFSM 1.53 IN 20.82 AC-FT 1,440  
 WTR YR 1974 TOTAL 705.70 MEAN 1.93 MAX 73 MIN 0 CFSM 1.48 IN 20.19 AC-FT 1,400

PEAK DISCHARGE (BASE, 100 FT<sup>3</sup>/S)

| DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|------|------|-------|-----------|
| 11-24 | 2145 | 2.94  | 210       | 6-6  | 2045 | 2.32  | 142       |
| 12-3  | 2400 | 3.47  | 273       | 9-19 | 1600 | 2.17  | 121       |
| 3-10  | 0630 | 2.64  | 177       |      |      |       |           |

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, on downstream side of center pier of Hamilton Bridge on State Highway 215, 0.7 mi (1.1 km) upstream from Slagle Creek and 3 mi (4.8 km) west of Morrisville.

DRAINAGE AREA.--237 mi<sup>2</sup> (614 km<sup>2</sup>).

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

GAGE.--Water-stage recorder. Altitude of gage is 881 ft (268.5 m) from topographic map.

AVERAGE DISCHARGE.--6 years, 245 ft<sup>3</sup>/s (6.94 m<sup>3</sup>/s), 14.04 in/yr (357 mm/yr), 177,500 acre-ft/yr (219 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 8,860 ft<sup>3</sup>/s (251 m<sup>3</sup>/s) Mar. 10 (gage height, 17.08 ft or 5.206 m); minimum, 5.9 ft<sup>3</sup>/s (0.17 m<sup>3</sup>/s) Aug. 5, 6 (gage height, 2.20 ft or 0.671 m).  
Period of record: Maximum discharge, 13,200 ft<sup>3</sup>/s (374 m<sup>3</sup>/s) Nov. 1, 1972 (gage height, 21.95 ft or 6.690 m) from rating curve extended above 4,000 ft<sup>3</sup>/s (113 m<sup>3</sup>/s); minimum, 3.2 ft<sup>3</sup>/s (0.091 m<sup>3</sup>/s) Aug. 21, 1972; minimum gage height, 2.20 ft (0.671 m) Aug. 5, 6, 1974.

REMARKS.--Records fair.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY         | OCT                                                                         | NOV    | DEC    | JAN    | FEB    | MAR    | APR   | MAY    | JUN    | JUL   | AUG     | SEP    |
|-------------|-----------------------------------------------------------------------------|--------|--------|--------|--------|--------|-------|--------|--------|-------|---------|--------|
| 1           | 206                                                                         | 125    | 479    | 240    | 416    | 237    | 232   | 149    | 43     | 47    | 6.9     | 761    |
| 2           | 138                                                                         | 105    | 406    | 210    | 342    | 228    | 194   | 207    | 37     | 46    | 6.6     | 623    |
| 3           | 98                                                                          | 92     | 403    | 200    | 297    | 220    | 188   | 242    | 33     | 38    | 6.5     | 464    |
| 4           | 357                                                                         | 82     | 4,110  | 190    | 262    | 202    | 169   | 201    | 229    | 59    | 6.3     | 278    |
| 5           | 228                                                                         | 73     | 1,760  | 180    | 232    | 189    | 146   | 173    | 770    | 49    | 6.2     | 206    |
| 6           | 137                                                                         | 64     | 1,070  | 170    | 217    | 182    | 139   | 142    | 536    | 39    | 8.2     | 162    |
| 7           | 109                                                                         | 62     | 753    | 167    | 195    | 173    | 135   | 116    | 3,530  | 35    | 47      | 131    |
| 8           | 81                                                                          | 62     | 586    | 161    | 188    | 168    | 162   | 106    | 1,540  | 33    | 35      | 104    |
| 9           | 59                                                                          | 58     | 483    | 167    | 169    | 1,020  | 165   | 96     | 1,390  | 30    | 29      | 84     |
| 10          | 46                                                                          | 53     | 406    | 178    | 157    | 7,230  | 143   | 94     | 963    | 29    | 46      | 70     |
| 11          | 38                                                                          | 50     | 345    | 161    | 149    | 6,400  | 152   | 95     | 679    | 28    | 29      | 66     |
| 12          | 46                                                                          | 49     | 315    | 149    | 143    | 2,260  | 212   | 81     | 694    | 26    | 21      | 68     |
| 13          | 285                                                                         | 46     | 288    | 141    | 139    | 1,430  | 175   | 68     | 483    | 24    | 16      | 77     |
| 14          | 242                                                                         | 45     | 261    | 139    | 169    | 1,040  | 153   | 503    | 372    | 24    | 13      | 57     |
| 15          | 149                                                                         | 47     | 245    | 194    | 171    | 1,670  | 136   | 1,250  | 307    | 41    | 12      | 48     |
| 16          | 112                                                                         | 49     | 220    | 521    | 153    | 1,570  | 125   | 495    | 254    | 34    | 8.8     | 49     |
| 17          | 86                                                                          | 48     | 210    | 625    | 139    | 994    | 123   | 287    | 214    | 23    | 8.5     | 48     |
| 18          | 72                                                                          | 46     | 200    | 516    | 147    | 749    | 114   | 225    | 190    | 20    | 8.9     | 42     |
| 19          | 63                                                                          | 45     | 600    | 423    | 2,080  | 610    | 109   | 188    | 168    | 22    | 9.2     | 278    |
| 20          | 57                                                                          | 61     | 360    | 395    | 816    | 524    | 103   | 167    | 148    | 16    | 12      | 696    |
| 21          | 49                                                                          | 93     | 330    | 372    | 603    | 489    | 104   | 149    | 129    | 14    | 9.4     | 299    |
| 22          | 45                                                                          | 104    | 300    | 316    | 667    | 467    | 111   | 132    | 112    | 12    | 10      | 212    |
| 23          | 42                                                                          | 97     | 290    | 286    | 502    | 494    | 120   | 115    | 99     | 9.4   | 85      | 164    |
| 24          | 40                                                                          | 1,960  | 1,200  | 252    | 402    | 445    | 108   | 108    | 87     | 7.5   | 43      | 135    |
| 25          | 37                                                                          | 5,000  | 1,000  | 229    | 339    | 427    | 103   | 103    | 78     | 7.3   | 24      | 118    |
| 26          | 67                                                                          | 2,740  | 600    | 419    | 302    | 404    | 93    | 122    | 69     | 12    | 14      | 103    |
| 27          | 1,290                                                                       | 1,640  | 500    | 826    | 280    | 373    | 85    | 131    | 62     | 14    | 11      | 90     |
| 28          | 410                                                                         | 1,160  | 420    | 1,100  | 257    | 341    | 79    | 91     | 57     | 12    | 482     | 101    |
| 29          | 228                                                                         | 825    | 360    | 969    | -----  | 310    | 77    | 71     | 54     | 8.7   | 195     | 106    |
| 30          | 174                                                                         | 611    | 320    | 692    | -----  | 273    | 136   | 60     | 50     | 7.5   | 130     | 75     |
| 31          | 152                                                                         | -----  | 280    | 517    | -----  | 247    | ----- | 49     | -----  | 6.9   | 105     | -----  |
| TOTAL       | 5,143                                                                       | 15,492 | 19,100 | 11,105 | 9,933  | 31,366 | 4,091 | 6,016  | 13,377 | 774.3 | 1,444.5 | 5,715  |
| MEAN        | 166                                                                         | 516    | 616    | 358    | 355    | 1,012  | 136   | 194    | 446    | 25.0  | 46.6    | 191    |
| MAX         | 1,290                                                                       | 5,000  | 4,110  | 1,100  | 2,080  | 7,230  | 232   | 1,250  | 3,530  | 59    | 482     | 761    |
| MIN         | 37                                                                          | 45     | 200    | 139    | 139    | 168    | 77    | 49     | 33     | 6.9   | 6.2     | 42     |
| CFSM        | .70                                                                         | 2.18   | 2.60   | 1.51   | 1.50   | 4.27   | .57   | .82    | 1.88   | .11   | .20     | .81    |
| IN.         | .81                                                                         | 2.43   | 3.00   | 1.74   | 1.56   | 4.92   | .64   | .94    | 2.10   | .12   | .23     | .90    |
| AC-FT       | 10,200                                                                      | 30,730 | 37,880 | 22,030 | 19,700 | 62,210 | 8,110 | 11,930 | 26,530 | 1,540 | 2,870   | 11,340 |
| CAL YR 1973 | TOTAL 179,573.0 MEAN 492 MAX 6,500 MIN 13 CFSM 2.08 IN 28.19 AC-FT 356,200  |        |        |        |        |        |       |        |        |       |         |        |
| WTR YR 1974 | TOTAL 123,556.8 MEAN 339 MAX 7,230 MIN 6.2 CFSM 1.43 IN 19.39 AC-FT 245,100 |        |        |        |        |        |       |        |        |       |         |        |

PEAK DISCHARGE (BASE, 3,000 FT<sup>3</sup>/S)

| DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|------|------|-------|-----------|
| 11-25 | 0430 | 16.12 | 8,090     | 3-10 | 0945 | 17.08 | 8,860     |
| 12-4  | 0800 | 13.26 | 5,940     | 6-7  | 0830 | 12.06 | 4,900     |
| 2-19  | 0845 | 10.19 | 3,610     |      |      |       |           |

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, in power house at dam on Sac River, 2 mi (3.2 km) east of Stockton.

DRAINAGE AREA.--1,160 mi<sup>2</sup> (3,004 km<sup>2</sup>).

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

GAGE.--Water-stage recorder. Nonrecording gage prior to May 30, 1973. Datum of gage is at mean sea level (levels by Corps of Engineers).

EXTREMES.--Current year: Maximum contents observed, 1,210,000 acre-ft (1,490 hm<sup>3</sup>) Mar. 18 (elevation, 878.60 ft or 276.797 m); minimum, 752,000 acre-ft (927 hm<sup>3</sup>) Oct. 1 (elevation, 861.29 ft or 262.521 m).

Period of record: Maximum contents, 1,450,000 acre-ft (1,790 hm<sup>3</sup>) Apr. 28, 1973 (elevation, 885.94 ft or 270.034 m); minimum, since initial filling to minimum power pool level, 352,000 acre-ft (434 hm<sup>3</sup>) Aug. 27 to Sept. 4, 1970 (elevation, 839.60 ft or 255.910 m).

REMARKS.--Lake is formed by a rock shell earth-fill dam (crest elevation, 911 ft or 277.7 m). Spillway is equipped with 4 tainter gages, 40 ft (12.2 m) by 30.5 ft (9.30 m), crest elevation, 861.5 ft or (262.59 m). Embankment closed and river diverted on Sept. 23, 1968. Gates closed and storage began on Dec. 12, 1969; minimum power elevation 830.0 ft (252.98 m) reached on May 1, 1970. Gross storage at top of flood control pool is 1,166,659 acre-ft (1,440 hm<sup>3</sup>) at elevation 892 ft (271.88 m), of which 779,550 acre-ft (961 hm<sup>3</sup>) between elevations 867 ft (264.3 hm<sup>3</sup>) and 892 ft (271.9 m) is used for flood control, and 887,109 acre-ft (1,093 hm<sup>3</sup>) between elevations 760 ft (231.6 m) and 867 ft (264.3 m) is used for multipurpose and power. Sedimentation reserve is 25,000 acre-ft (30.8 hm<sup>3</sup>). Lake is used for flood control, power, and recreational purposes. Contents computed from daily readings at 0800.

COOPERATION.--Records furnished by Corps of Engineers.

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

|     |           |
|-----|-----------|
| 861 | 745,600   |
| 865 | 883,400   |
| 870 | 963,400   |
| 879 | 1,219,000 |

CONTENTS, IN THOUSANDS OF ACRE-FEET, AT 0800, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY | OCT    | NOV    | DEC    | JAN    | FEB    | MAR    | APR    | MAY    | JUN    | JUL    | AUG    | SEP    |
|-----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1   | 752.0  | 798.0  | 929.0  | 1,060  | 987.0  | 992.0  | 1,120  | 917.0  | 890.0  | 954.0  | 861.0  | 831.0  |
| 2   | 752.0  | 798.0  | 933.0  | 1,060  | 987.0  | 988.0  | 1,120  | 912.0  | 898.0  | 950.0  | 856.0  | 842.0  |
| 3   | 757.0  | 798.0  | 937.0  | 1,060  | 982.0  | 992.0  | 1,110  | 908.0  | 899.0  | 945.0  | 854.0  | 849.0  |
| 4   | 756.0  | 798.0  | 958.0  | 1,060  | 985.0  | 995.0  | 1,100  | 905.0  | 892.0  | 943.0  | 853.0  | 853.0  |
| 5   | 757.0  | 799.0  | 984.0  | 1,050  | 979.0  | 995.0  | 1,090  | 902.0  | 892.0  | 944.0  | 853.0  | 855.0  |
| 6   | 759.0  | 800.0  | 996.0  | 1,050  | 976.0  | 995.0  | 1,080  | 897.0  | 895.0  | 941.0  | 848.0  | 856.0  |
| 7   | 761.0  | 801.0  | 1,000  | 1,050  | 971.0  | 1,000  | 1,080  | 895.0  | 911.0  | 942.0  | 845.0  | 858.0  |
| 8   | 761.0  | 801.0  | 1,010  | 1,050  | 969.0  | 1,000  | 1,070  | 890.0  | 953.0  | 942.0  | 843.0  | 858.0  |
| 9   | 762.0  | 801.0  | 1,010  | 1,040  | 969.0  | 1,000  | 1,060  | 887.0  | 970.0  | 938.0  | 839.0  | 858.0  |
| 10  | 763.0  | 801.0  | 1,020  | 1,040  | 963.0  | 1,000  | 1,050  | 887.0  | 980.0  | 935.0  | 838.0  | 859.0  |
| 11  | 764.0  | 803.0  | 1,020  | 1,030  | 963.0  | 1,080  | 1,040  | 886.0  | 984.0  | 930.0  | 838.0  | 858.0  |
| 12  | 764.0  | 803.0  | 1,020  | 1,030  | 963.0  | 1,130  | 1,040  | 885.0  | 988.0  | 926.0  | 838.0  | 854.0  |
| 13  | 768.0  | 805.0  | 1,020  | 1,020  | 961.0  | 1,150  | 1,030  | 885.0  | 990.0  | 921.0  | 838.0  | 850.0  |
| 14  | 770.0  | 805.0  | 1,020  | 1,020  | 961.0  | 1,160  | 1,020  | 888.0  | 987.0  | 921.0  | 836.0  | 848.0  |
| 15  | 770.0  | 805.0  | 1,020  | 1,020  | 961.0  | 1,170  | 1,010  | 890.0  | 987.0  | 921.0  | 833.0  | 848.0  |
| 16  | 772.0  | 805.0  | 1,020  | 1,010  | 963.0  | 1,190  | 1,000  | 894.0  | 990.0  | 917.0  | 831.0  | 849.0  |
| 17  | 773.0  | 805.0  | 1,020  | 1,010  | 958.0  | 1,200  | 995.0  | 892.0  | 992.0  | 911.0  | 831.0  | 846.0  |
| 18  | 773.0  | 808.0  | 1,020  | 1,010  | 958.0  | 1,210  | 986.0  | 891.0  | 987.0  | 906.0  | 831.0  | 843.0  |
| 19  | 775.0  | 805.0  | 1,020  | 1,010  | 963.0  | 1,200  | 977.0  | 892.0  | 985.0  | 902.0  | 836.0  | 838.0  |
| 20  | 777.0  | 808.0  | 1,020  | 1,010  | 979.0  | 1,200  | 969.0  | 892.0  | 984.0  | 897.0  | 834.0  | 836.0  |
| 21  | 777.0  | 815.0  | 1,020  | 1,010  | 984.0  | 1,190  | 960.0  | 888.0  | 983.0  | 897.0  | 831.0  | 834.0  |
| 22  | 777.0  | 819.0  | 1,020  | 1,010  | 987.0  | 1,180  | 951.0  | 887.0  | 980.0  | 897.0  | 829.0  | 834.0  |
| 23  | 777.0  | 817.0  | 1,020  | 1,000  | 990.0  | 1,180  | 943.0  | 889.0  | 979.0  | 891.0  | 824.0  | 836.0  |
| 24  | 777.0  | 821.0  | 1,030  | 1,000  | 990.0  | 1,180  | 933.0  | 888.0  | 979.0  | 886.0  | 822.0  | 832.0  |
| 25  | 777.0  | 857.0  | 1,040  | 995.0  | 992.0  | 1,170  | 930.0  | 890.0  | 974.0  | 880.0  | 822.0  | 828.0  |
| 26  | 777.0  | 889.0  | 1,050  | 992.0  | 992.0  | 1,160  | 924.0  | 891.0  | 969.0  | 877.0  | 822.0  | 824.0  |
| 27  | 783.0  | 902.0  | 1,050  | 992.0  | 995.0  | 1,160  | 919.0  | 892.0  | 963.0  | 872.0  | 818.0  | 820.0  |
| 28  | 789.0  | 912.0  | 1,050  | 993.0  | 995.0  | 1,150  | 925.0  | 893.0  | 959.0  | 872.0  | 817.0  | 815.0  |
| 29  | 791.0  | 920.0  | 1,050  | 995.0  | -----  | 1,140  | 924.0  | 893.0  | 953.0  | 872.0  | 824.0  | 817.0  |
| 30  | 794.0  | 925.0  | 1,050  | 992.0  | -----  | 1,140  | 918.0  | 894.0  | 954.0  | 867.0  | 826.0  | 817.0  |
| 31  | 796.0  | -----  | 1,060  | 990.0  | -----  | 1,130  | -----  | 890.0  | -----  | 863.0  | 829.0  | -----  |
| (†) | 863.19 | 868.53 | 873.41 | 871.02 | 871.22 | 876.09 | 868.26 | 867.12 | 869.65 | 866.05 | 864.60 | 864.10 |
| (‡) | +46    | +129   | +135   | -70    | +5     | +135   | -212   | -28    | +64    | -91    | -34    | -12    |
| MAX | 796.0  | 925.0  | 1,060  | 1,060  | 995.0  | 1,210  | 1,120  | 917.0  | 992.0  | 954.0  | 861.0  | 859.0  |
| MIN | 752.0  | 798.0  | 929.0  | 990.0  | 958.0  | 988.0  | 918.0  | 885.0  | 890.0  | 863.0  | 817.0  | 815.0  |

CAL YR 1973.....‡ +65

WTR YR 1974.....‡ +67

† Elevation, in feet, at end of month

‡ Change in contents, in thousands of acre-feet.



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, on left bank 0.5 mi (0.8 km) upstream from bridge on State Highway 32, 0.5 mi (0.8 km) downstream from Stockton Dam, 2.0 mi (3.2 km) upstream from Bear Creek, 2.0 mi (3.2 km) east of Stockton, and at mile 49.5 (79.6 km).

DRAINAGE AREA.--1,160 mi<sup>2</sup> (3,000 km<sup>2</sup>), approximately.

PERIOD OF RECORD.--July 1921 to current year.

GAGE.--Water-stage recorder. Datum of gage is 764.12 ft (232.904 m) above mean sea level. Prior to Sept. 30, 1973 all previous gages at site 0.5 mi (0.8 km) downstream and at present datum. Prior to May 4, 1960 nonrecording gage.

AVERAGE DISCHARGE.--53 years, 980 ft<sup>3</sup>/s (27.8 m<sup>3</sup>/s), 710,300 acre-ft/yr (875.4 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 5,690 ft<sup>3</sup>/s (161 m<sup>3</sup>/s) Feb. 7; maximum gage height, 13.88 ft (4.231 m) May 9; minimum observed, 3.8 ft<sup>3</sup>/s (0.108 m<sup>3</sup>/s) Oct. 16 (gage height, 0.24 ft or 0.073 m).

Period of record: Maximum discharge, 120,000 ft<sup>3</sup>/s (3,400 m<sup>3</sup>/s) May 19, 1943 (gage height, 31.8 ft or 9.693 m); no flow Sept. 9-23, 1954, Oct. 14, 17-20, 1956.

Maximum stage known prior to 1943, 29.3 ft (8.93 m) in July, 1909.

REMARKS.--Records poor. Flow regulated by Stockton Lake since Dec. 12, 1969.

REVISIONS (WATER YEARS).--WSP 926: 1940.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT   | NOV   | DEC    | JAN     | FEB     | MAR     | APR     | MAY    | JUN    | JUL     | AUG    | SEP    |
|-------|-------|-------|--------|---------|---------|---------|---------|--------|--------|---------|--------|--------|
| 1     | 18    | 23    | 25     | 30      | 3,500   | 3,440   | 5,080   | 2,650  | 41     | 2,580   | 1,860  | 45     |
| 2     | 17    | 25    | 25     | 3,370   | 3,790   | 248     | 5,070   | 2,810  | 40     | 2,410   | 1,420  | 45     |
| 3     | 20    | 24    | 25     | 3,590   | 40      | 46      | 5,070   | 2,850  | 40     | 1,900   | 61     | 45     |
| 4     | 16    | 24    | 25     | 3,660   | 3,700   | 33      | 5,100   | 2,640  | 1,760  | 69      | 46     | 45     |
| 5     | 7.2   | 23    | 25     | 80      | 3,890   | 14      | 4,850   | 2,670  | 2,190  | 1,840   | 2,040  | 45     |
| 6     | 8.8   | 22    | 25     | 40      | 3,880   | 135     | 4,440   | 2,640  | 2,770  | 65      | 2,370  | 44     |
| 7     | 13    | 20    | 25     | 3,370   | 1,760   | 139     | 5,130   | 2,650  | 2,940  | 33      | 2,140  | 36     |
| 8     | 16    | 20    | 25     | 2,930   | 1,450   | 1,840   | 5,120   | 618    | 475    | 2,250   | 2,180  | 30     |
| 9     | 19    | 20    | 30     | 3,300   | 3,840   | 3,100   | 5,050   | 1,050  | 200    | 1,730   | 2,240  | 720    |
| 10    | 30    | 19    | 56     | 3,830   | 145     | 1,000   | 5,110   | 2,680  | 1,100  | 2,030   | 127    | 1,490  |
| 11    | 30    | 17    | 232    | 3,810   | 1,360   | 40      | 4,940   | 145    | 2,100  | 2,420   | 61     | 1,980  |
| 12    | 18    | 15    | 2,370  | 3,920   | 1,600   | 40      | 5,140   | 49     | 2,550  | 2,640   | 937    | 2,030  |
| 13    | 7.0   | 14    | 2,550  | 40      | 1,580   | 40      | 5,130   | 1,870  | 3,350  | 174     | 1,200  | 1,350  |
| 14    | 6.0   | 21    | 2,510  | 3,730   | 514     | 40      | 5,150   | 157    | 3,350  | 33      | 1,040  | 94     |
| 15    | 4.1   | 41    | 151    | 4,000   | 37      | 40      | 5,150   | 172    | 400    | 2,010   | 884    | 70     |
| 16    | 4.6   | 192   | 50     | 3,850   | 3,660   | 40      | 5,170   | 2,200  | 50     | 2,460   | 65     | 2,180  |
| 17    | 12    | 20    | 2,470  | 4,010   | 241     | 40      | 5,140   | 2,120  | 1,700  | 2,540   | 50     | 1,780  |
| 18    | 11    | 16    | 2,390  | 3,780   | 60      | 3,220   | 5,150   | 226    | 2,200  | 2,500   | 154    | 2,260  |
| 19    | 8.4   | 17    | 2,810  | 3,600   | 50      | 5,200   | 5,100   | 48     | 2,100  | 2,600   | 1,260  | 2,480  |
| 20    | 6.7   | 27    | 2,720  | 40      | 778     | 5,190   | 5,170   | 2,870  | 2,150  | 120     | 1,320  | 1,840  |
| 21    | 6.7   | 21    | 2,570  | 3,520   | 1,680   | 5,250   | 5,170   | 1,070  | 2,360  | 33      | 1,100  | 136    |
| 22    | 6.6   | 16    | 40     | 3,590   | 1,790   | 5,280   | 5,190   | 60     | 134    | 2,810   | 2,170  | 41     |
| 23    | 6.0   | 16    | 40     | 3,920   | 1,690   | 5,280   | 5,200   | 735    | 45     | 2,720   | 1,300  | 2,170  |
| 24    | 4.7   | 23    | 40     | 4,090   | 1,610   | 5,270   | 2,780   | 71     | 3,170  | 2,730   | 79     | 2,240  |
| 25    | 5.2   | 25    | 40     | 4,020   | 1,640   | 5,310   | 3,400   | 54     | 3,270  | 1,900   | 25     | 2,210  |
| 26    | 10    | 25    | 3,350  | 3,940   | 1,600   | 5,320   | 3,570   | 52     | 2,700  | 2,240   | 2,670  | 2,240  |
| 27    | 27    | 25    | 3,660  | 40      | 1,020   | 5,340   | 253     | 48     | 2,700  | 183     | 1,470  | 2,420  |
| 28    | 26    | 25    | 3,650  | 3,850   | 3,520   | 5,330   | 49      | 50     | 3,170  | 44      | 125    | 220    |
| 29    | 26    | 25    | 466    | 4,080   | -----   | 5,200   | 1,090   | 58     | 273    | 2,420   | 166    | 73     |
| 30    | 25    | 25    | 40     | 3,680   | -----   | 5,060   | 2,650   | 2,360  | 37     | 1,710   | 37     | 2,160  |
| 31    | 24    | ----- | 35     | 3,480   | -----   | 5,090   | -----   | 261    | -----  | 1,650   | 45     | -----  |
| TOTAL | 440.0 | 826   | 32,470 | 93,190  | 50,425  | 81,615  | 130,612 | 37,934 | 49,365 | 50,844  | 30,642 | 32,519 |
| MEAN  | 14.2  | 27.5  | 1,047  | 3,006   | 1,801   | 2,633   | 4,354   | 1,224  | 1,646  | 1,640   | 988    | 1,084  |
| MAX   | 30    | 192   | 3,660  | 4,090   | 3,890   | 5,340   | 5,200   | 2,870  | 3,350  | 2,810   | 2,670  | 2,480  |
| MIN   | 4.1   | 14    | 25     | 30      | 37      | 14      | 49      | 48     | 37     | 33      | 25     | 30     |
| AC-FT | 873   | 1,640 | 64,400 | 184,800 | 100,000 | 161,900 | 259,100 | 75,240 | 97,920 | 100,800 | 60,780 | 64,500 |

CAL YR 1973 TOTAL 759,168.0 MEAN 2,080 MAX 7,100 MIN 4.1 AC-FT 1,506,000  
WTR YR 1974 TOTAL 590,882.0 MEAN 1,619 MAX 5,340 MIN 4.1 AC-FT 1,172,000

06919020 Sac River below Stockton, Mo.

LOCATION.--Lat 37°44'11", long 93°46'26", NW¼ sec 3, T.34 N., R.26 W., Cedar County, on right bank 500 ft (152.4 m) upstream from bridge on State Highway J, 4.5 mi (7.2 km) downstream from Bear Creek, 6.3 mi (10.1 km) downstream from Stockton Lake, 3 mi (4.8 km) north of Stockton and at mile 44.9 (72.2 km).

DRAINAGE AREA.--1,292 mi<sup>2</sup> (3,346 km<sup>2</sup>) approximately.

PERIOD OF RECORD.--October 1973 to current year. Occasional discharge measurements water year 1973.

GAGE.--Water-stage recorder. Datum of gage is 750.19 ft (228.658 m) above mean sea level.

EXTREMES.--Current year: Maximum discharge, 7,340 ft<sup>3</sup>/s (209 m<sup>3</sup>/s) March 10 (gage-height, 21.13 ft or 6.440 m); minimum daily discharge, 30 ft<sup>3</sup>/s (0.85 m<sup>3</sup>/s) Oct. 25.

Period of record: Maximum observed discharge, 7,720 ft<sup>3</sup>/s (219 m<sup>3</sup>/s) Nov. 11, 1972 (gage height, 21.20 ft or 6.462 m); minimum discharge not determined.

REMARKS.--Records fair. Flow partly regulated by Stockton Lake.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT   | NOV   | DEC    | JAN     | FEB     | MAR     | APR     | MAY    | JUN     | JUL     | AUG    | SEP    |
|-------|-------|-------|--------|---------|---------|---------|---------|--------|---------|---------|--------|--------|
| 1     | 38    | 46    | 79     | 87      | 3,700   | 3,700   | 5,410   | 2,880  | 85      | 2,260   | 1,730  | 883    |
| 2     | 37    | 51    | 68     | 2,070   | 4,000   | 1,200   | 5,410   | 3,020  | 78      | 2,580   | 1,510  | 1,010  |
| 3     | 35    | 50    | 59     | 2,590   | 2,000   | 600     | 5,380   | 3,090  | 75      | 1,970   | 185    | 623    |
| 4     | 33    | 49    | 2,170  | 3,370   | 4,000   | 300     | 5,380   | 2,880  | 1,480   | 364     | 48     | 251    |
| 5     | 31    | 47    | 1,080  | 1,330   | 4,000   | 200     | 5,260   | 2,890  | 2,200   | 1,640   | 1,590  | 138    |
| 6     | 33    | 46    | 421    | 216     | 4,000   | 300     | 4,740   | 2,850  | 2,910   | 343     | 2,260  | 122    |
| 7     | 37    | 44    | 245    | 2,680   | 3,000   | 350     | 5,410   | 2,870  | 4,410   | 65      | 2,060  | 109    |
| 8     | 41    | 42    | 171    | 3,340   | 2,000   | 2,200   | 5,390   | 1,230  | 1,010   | 1,900   | 2,060  | 88     |
| 9     | 46    | 42    | 140    | 2,940   | 4,000   | 3,470   | 5,330   | 1,210  | 649     | 1,900   | 2,140  | 733    |
| 10    | 49    | 42    | 115    | 3,890   | 2,000   | 5,840   | 5,370   | 2,480  | 1,370   | 2,050   | 505    | 1,450  |
| 11    | 49    | 41    | 303    | 3,270   | 1,800   | 4,770   | 5,200   | 627    | 2,430   | 2,460   | 58     | 2,090  |
| 12    | 46    | 39    | 2,320  | 2,690   | 1,800   | 1,120   | 5,390   | 95     | 2,870   | 2,730   | 49     | 2,160  |
| 13    | 191   | 38    | 2,650  | 1,110   | 1,800   | 635     | 5,390   | 1,610  | 3,640   | 721     | 858    | 1,770  |
| 14    | 102   | 37    | 2,620  | 3,080   | 655     | 468     | 5,370   | 684    | 3,590   | 60      | 1,100  | 274    |
| 15    | 64    | 56    | 512    | 4,040   | 500     | 616     | 5,370   | 404    | 1,100   | 1,680   | 1,100  | 99     |
| 16    | 47    | 205   | 131    | 4,030   | 3,000   | 785     | 5,390   | 1,720  | 113     | 2,300   | 274    | 1,840  |
| 17    | 45    | 66    | 2,220  | 4,230   | 2,000   | 434     | 5,360   | 2,340  | 1,810   | 2,810   | 56     | 1,930  |
| 18    | 44    | 39    | 2,550  | 3,990   | 1,000   | 2,920   | 5,360   | 1,060  | 2,550   | 2,510   | 230    | 2,350  |
| 19    | 42    | 38    | 3,040  | 3,840   | 400     | 5,590   | 5,300   | 102    | 2,420   | 2,570   | 1,060  | 2,590  |
| 20    | 38    | 107   | 2,940  | 1,360   | 1,000   | 5,570   | 5,350   | 2,430  | 2,290   | 577     | 1,420  | 2,010  |
| 21    | 36    | 146   | 2,560  | 3,090   | 2,000   | 5,600   | 5,370   | 2,070  | 2,380   | 55      | 1,220  | 584    |
| 22    | 34    | 84    | 689    | 3,780   | 2,100   | 5,630   | 5,350   | 214    | 593     | 2,060   | 2,200  | 90     |
| 23    | 33    | 55    | 384    | 4,010   | 2,100   | 5,620   | 5,350   | 653    | 94      | 2,920   | 1,440  | 1,820  |
| 24    | 32    | 131   | 1,400  | 4,220   | 2,100   | 5,600   | 3,100   | 296    | 2,540   | 2,620   | 376    | 2,390  |
| 25    | 30    | 1,730 | 997    | 4,170   | 2,100   | 5,640   | 3,630   | 85     | 3,430   | 2,230   | 49     | 2,390  |
| 26    | 31    | 731   | 2,850  | 4,140   | 2,100   | 5,670   | 3,790   | 77     | 2,870   | 1,890   | 2,530  | 2,450  |
| 27    | 52    | 434   | 3,840  | 1,670   | 1,400   | 5,670   | 1,020   | 71     | 2,840   | 726     | 1,390  | 2,630  |
| 28    | 99    | 244   | 3,810  | 3,460   | 3,800   | 5,670   | 106     | 72     | 2,900   | 48      | 549    | 940    |
| 29    | 72    | 151   | 1,310  | 4,400   | -----   | 5,570   | 1,350   | 35     | 969     | 1,730   | 231    | 160    |
| 30    | 60    | 103   | 276    | 3,900   | -----   | 5,420   | 2,760   | 1,690  | 81      | 1,930   | 113    | 2,020  |
| 31    | 56    | ----- | 134    | 3,600   | -----   | 5,450   | -----   | 947    | -----   | 1,760   | 87     | -----  |
| TOTAL | 1,583 | 4,934 | 42,084 | 94,593  | 64,355  | 102,608 | 138,386 | 42,682 | 55,777  | 51,459  | 30,478 | 37,994 |
| MEAN  | 51.1  | 164   | 1,358  | 3,051   | 2,298   | 3,310   | 4,613   | 1,377  | 1,859   | 1,660   | 983    | 1,266  |
| MAX   | 191   | 1,730 | 3,840  | 4,400   | 4,000   | 5,840   | 5,410   | 3,090  | 4,410   | 2,920   | 2,530  | 2,630  |
| MIN   | 30    | 37    | 59     | 87      | 400     | 200     | 106     | 35     | 75      | 48      | 48     | 88     |
| AC-FT | 3,140 | 9,790 | 83,470 | 187,600 | 127,600 | 203,500 | 274,500 | 84,660 | 110,600 | 102,100 | 60,450 | 75,360 |

WTR YR 1974 TOTAL 666,933 MEAN 1,827 MAX 5,840 MIN 30 AC-FT 1,323,000

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, on downstream side of right pier of bridge on State Highway 39, 1.5 mi (2.4 km) north of Pleasant View, 1.8 mi (2.9 km) downstream from Alder Creek, and 5.8 mi (9.3 km) upstream from mouth.

DRAINAGE AREA.--420 mi<sup>2</sup> (1,090 km<sup>2</sup>), approximately.

PERIOD OF RECORD.--April 1923 to September 1926, October 1948 to current year.

GAGE.--Water-stage recorder. Datum of gage is 739.5 ft (225.40 m) above mean sea level. Apr. 22, 1923, to Sept. 30, 1926, and Oct. 1, 1948, to May 10, 1950, nonrecording gage at site 50 ft (15 m) downstream at same datum. May 11, 1950, to Dec. 17, 1952, nonrecording gage, at present site and datum.

AVERAGE DISCHARGE.--29 years, 298 ft<sup>3</sup>/s (8.44 m<sup>3</sup>/s), 9.63 in/yr (245 mm/yr), 215,900 acre-ft/yr (266 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 18,600 ft<sup>3</sup>/s (527 m<sup>3</sup>/s) Mar. 11 (gage height, 24.90 ft or 7.590 m); minimum, 2.3 ft<sup>3</sup>/s (0.065 m<sup>3</sup>/s) Aug. 6 (gage height, 3.05 ft or 0.930 m).

Period of record: Maximum discharge, 33,900 ft<sup>3</sup>/s (960 m<sup>3</sup>/s) July 17, 1958 (gage height, 27.35 ft or 8.336 m); no flow at times in 1953-54, 1956, 1959-61, 1963.

Maximum stage known, 27.7 ft (8.44 m) July 20, 1909, from floodmark.

REMARKS.--Records fair.

REVISIONS (WATER YEARS).--WSP 1146: 1923-26, drainage area. WSP 1176: 1924(M).

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT     | NOV    | DEC    | JAN    | FEB    | MAR     | APR   | MAY    | JUN    | JUL   | AUG     | SEP    |
|-------|---------|--------|--------|--------|--------|---------|-------|--------|--------|-------|---------|--------|
| 1     | 21      | 45     | 252    | 332    | 527    | 304     | 292   | 416    | 36     | 27    | 3.4     | 1,500  |
| 2     | 26      | 34     | 215    | 335    | 434    | 281     | 259   | 264    | 29     | 25    | 3.0     | 2,500  |
| 3     | 28      | 31     | 190    | 300    | 370    | 263     | 233   | 225    | 26     | 22    | 2.7     | 1,500  |
| 4     | 23      | 27     | 4,350  | 270    | 325    | 239     | 206   | 182    | 32     | 20    | 2.6     | 600    |
| 5     | 18      | 23     | 7,200  | 255    | 298    | 213     | 183   | 145    | 34     | 19    | 2.5     | 350    |
| 6     | 19      | 20     | 3,560  | 244    | 270    | 193     | 167   | 122    | 266    | 17    | 2.8     | 250    |
| 7     | 39      | 17     | 711    | 223    | 242    | 178     | 154   | 104    | 1,800  | 15    | 4.2     | 196    |
| 8     | 77      | 15     | 514    | 213    | 215    | 164     | 151   | 84     | 1,000  | 14    | 4.1     | 156    |
| 9     | 59      | 14     | 424    | 204    | 197    | 245     | 140   | 68     | 1,800  | 13    | 6.1     | 126    |
| 10    | 36      | 13     | 365    | 201    | 185    | 5,780   | 132   | 59     | 1,000  | 12    | 31      | 103    |
| 11    | 25      | 14     | 316    | 179    | 175    | 16,700  | 132   | 53     | 500    | 10    | 54      | 84     |
| 12    | 24      | 14     | 280    | 143    | 165    | 9,980   | 141   | 46     | 450    | 11    | 27      | 71     |
| 13    | 232     | 14     | 251    | 145    | 159    | 4,550   | 149   | 41     | 400    | 11    | 22      | 58     |
| 14    | 296     | 15     | 223    | 137    | 151    | 907     | 134   | 68     | 350    | 11    | 24      | 49     |
| 15    | 137     | 19     | 202    | 151    | 138    | 820     | 110   | 597    | 300    | 9.9   | 17      | 43     |
| 16    | 95      | 21     | 178    | 784    | 129    | 1,670   | 99    | 1,130  | 234    | 8.1   | 13      | 41     |
| 17    | 63      | 21     | 160    | 2,450  | 120    | 1,040   | 91    | 443    | 193    | 7.3   | 11      | 48     |
| 18    | 44      | 18     | 150    | 1,630  | 228    | 701     | 83    | 248    | 163    | 7.1   | 78      | 47     |
| 19    | 34      | 18     | 616    | 1,000  | 3,340  | 591     | 76    | 182    | 143    | 6.9   | 80      | 47     |
| 20    | 27      | 237    | 2,500  | 1,200  | 3,020  | 500     | 72    | 141    | 123    | 7.1   | 48      | 52     |
| 21    | 22      | 962    | 2,000  | 914    | 1,140  | 466     | 73    | 105    | 106    | 7.5   | 43      | 68     |
| 22    | 18      | 829    | 1,200  | 671    | 1,470  | 481     | 86    | 81     | 88     | 7.3   | 46      | 87     |
| 23    | 15      | 279    | 782    | 884    | 979    | 496     | 87    | 67     | 69     | 6.8   | 52      | 67     |
| 24    | 12      | 416    | 2,730  | 758    | 650    | 478     | 80    | 59     | 59     | 6.5   | 34      | 52     |
| 25    | 9.3     | 3,390  | 5,630  | 524    | 494    | 520     | 75    | 57     | 51     | 7.2   | 24      | 42     |
| 26    | 7.6     | 3,280  | 3,000  | 614    | 427    | 652     | 61    | 73     | 44     | 6.9   | 18      | 37     |
| 27    | 10      | 1,180  | 980    | 1,300  | 387    | 622     | 55    | 108    | 40     | 6.6   | 15      | 32     |
| 28    | 106     | 616    | 692    | 1,630  | 345    | 493     | 50    | 84     | 37     | 5.5   | 416     | 137    |
| 29    | 258     | 410    | 566    | 2,250  | -----  | 438     | 46    | 82     | 34     | 5.0   | 350     | 211    |
| 30    | 112     | 310    | 476    | 1,060  | -----  | 382     | 149   | 64     | 30     | 4.8   | 203     | 220    |
| 31    | 66      | -----  | 428    | 689    | -----  | 327     | ----- | 43     | -----  | 4.1   | 171     | -----  |
| TOTAL | 1,958.9 | 12,302 | 41,141 | 21,690 | 16,580 | 50,674  | 3,766 | 5,441  | 9,437  | 341.6 | 1,808.4 | 8,774  |
| MEAN  | 63.2    | 410    | 1,327  | 700    | 592    | 1,635   | 126   | 176    | 315    | 11.0  | 58.3    | 292    |
| MAX   | 296     | 3,390  | 7,200  | 2,450  | 3,340  | 16,700  | 292   | 1,130  | 1,800  | 27    | 416     | 2,500  |
| MIN   | 7.6     | 13     | 150    | 137    | 120    | 164     | 46    | 41     | 26     | 4.1   | 2.5     | 32     |
| CFSM  | .15     | .98    | 3.16   | 1.67   | 1.41   | 3.89    | .30   | .42    | .75    | .03   | .14     | .70    |
| IN.   | .17     | 1.09   | 3.64   | 1.92   | 1.47   | 4.49    | .33   | .48    | .84    | .03   | .16     | .78    |
| AC-FT | 3,890   | 24,400 | 81,600 | 43,020 | 32,890 | 100,500 | 7,470 | 10,790 | 18,720 | 678   | 3,590   | 17,400 |

CAL YR 1973 TOTAL 270,912.60 MEAN 742 MAX 10,200 MIN .63 CFSM 1.77 IN 24.00 AC-FT 537,400  
WTR YR 1974 TOTAL 173,913.90 MEAN 476 MAX 16,700 MIN 2.5 CFSM 1.13 IN 15.40 AC-FT 345,000

PEAK DISCHARGE (BASE, 3,500 FT<sup>3</sup>/S)

| DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|------|------|-------|-----------|
| 11-25 | 2100 | 16.17 | 4,100     | 2-19 | 2230 | 16.73 | 4,400     |
| 12-5  | 0730 | 20.56 | 7,460     | 3-11 | 0415 | 24.90 | 18,600    |
| 12-25 | 1715 | 19.25 | 6,150     |      |      |       |           |

06920500 Osage River at Osceola, Mo.

LOCATION.--Lat 38°03'44", long 93°41'37", in NE¼ sec. 17, T. 38 N., R. 25 W., St. Clair County, on left bank at downstream side of bridge on State Highway 13, 0.5 mi (0.8 km) downstream from Gallinipper Creek, 1 mi (1.6 km) downstream from hydroelectric plant of Missouri Public Service Co., 1 mi (1.6 km) northeast of Osceola, and at mile 230.9 (371.5 km).

DRAINAGE AREA.--8,220 mi<sup>2</sup> (21,300 km<sup>2</sup>), approximately.

PERIOD OF RECORD.--October 1917 to September 1928, October 1930 to current year. Monthly discharge only for some periods, published in WSP 1310. Gage-height records collected at site 1.2 mi (1.9 km) upstream April 1910 to November 1930, at present site November 1930 to April 1933 and since February 1938 are contained in reports of National Weather Service.

GAGE.--Water-stage recorder. Datum of gage is 679.23 ft (207.029 m) above mean sea level. Prior to Oct. 1, 1929, nonrecording gage at site 1.2 mi (1.9 km) upstream at datum 3.67 ft (1.119 m) higher. Nov. 28, 1930, to Sept. 27, 1934, water-stage recorder 233 ft (71.0 m) right on downstream side of bridge pier at present datum.

AVERAGE DISCHARGE.--55 years, 5,266 ft<sup>3</sup>/s (149.1 m<sup>3</sup>/s), 3,816,000 acre-ft/yr (4,705 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 54,900 ft<sup>3</sup>/s (1,560 m<sup>3</sup>/s) Mar. 12 (gage height, 28.10 ft or 8.565 m); minimum, 242 ft<sup>3</sup>/s (6.85 m<sup>3</sup>/s) Aug. 6 (gage height 2.33 ft or 0.710 m).  
Period of record: Maximum discharge, 146,000 ft<sup>3</sup>/s (4,135 m<sup>3</sup>/s) May 21, 1943 (gage height, 41.48 ft or 12.643 m, in gage well, 41.7 ft or 12.71 m, from outside gage); minimum, 3.6 ft<sup>3</sup>/s (0.102 m<sup>3</sup>/s) Nov. 16-19, 1956; minimum gage height, 0.22 ft (0.067 m) Aug. 11, 1941.  
Maximum stage known, about 45 ft (13.7 m) in June 1844 (discharge, about 150,000 ft<sup>3</sup>/s or 4,250 m<sup>3</sup>/s).

REMARKS.--Records fair. Low and medium flow regulated by powerplant 1 mi (1.6 km) upstream.

REVISIONS (WATER YEARS).--WSP 606: 1922.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT     | NOV     | DEC     | JAN     | FEB     | MAR     | APR     | MAY     | JUN     | JUL     | AUG     | SEP     |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1     | 18,600  | 10,300  | 5,930   | 4,490   | 15,700  | 8,360   | 8,310   | 9,220   | 2,000   | 1,020   | 1,690   | 18,200  |
| 2     | 21,200  | 5,620   | 4,310   | 2,990   | 13,000  | 7,920   | 7,890   | 12,400  | 921     | 2,190   | 1,660   | 21,500  |
| 3     | 22,800  | 4,080   | 3,480   | 6,100   | 11,200  | 4,920   | 7,540   | 12,400  | 818     | 2,630   | 1,510   | 21,700  |
| 4     | 24,400  | 3,680   | 16,000  | 6,140   | 7,410   | 3,940   | 7,210   | 8,230   | 755     | 2,260   | 670     | 18,900  |
| 5     | 24,900  | 3,520   | 27,800  | 5,770   | 9,050   | 3,470   | 7,000   | 5,760   | 1,820   | 1,300   | 311     | 17,900  |
| 6     | 25,200  | 3,370   | 26,600  | 4,940   | 9,060   | 3,140   | 6,570   | 4,840   | 3,630   | 1,640   | 1,110   | 18,800  |
| 7     | 25,100  | 3,070   | 22,700  | 4,160   | 8,730   | 2,950   | 6,250   | 4,300   | 23,100  | 940     | 2,190   | 20,500  |
| 8     | 23,700  | 2,870   | 21,900  | 4,320   | 6,480   | 2,730   | 7,120   | 4,280   | 23,000  | 488     | 2,060   | 21,700  |
| 9     | 20,200  | 2,610   | 23,000  | 4,990   | 5,670   | 6,120   | 8,430   | 2,960   | 17,300  | 2,070   | 2,120   | 21,600  |
| 10    | 15,500  | 2,530   | 24,000  | 5,920   | 6,810   | 31,100  | 9,650   | 3,140   | 14,000  | 2,130   | 2,300   | 19,100  |
| 11    | 11,600  | 2,340   | 23,200  | 5,710   | 3,450   | 51,900  | 9,710   | 3,850   | 16,000  | 2,190   | 1,000   | 10,800  |
| 12    | 10,700  | 1,930   | 19,200  | 5,600   | 3,210   | 55,400  | 8,390   | 2,620   | 17,500  | 2,430   | 409     | 5,310   |
| 13    | 15,500  | 1,610   | 12,000  | 6,500   | 3,620   | 53,700  | 7,900   | 2,130   | 18,500  | 2,610   | 607     | 3,880   |
| 14    | 17,300  | 1,450   | 7,750   | 6,440   | 3,560   | 47,800  | 7,490   | 9,580   | 16,800  | 1,070   | 967     | 2,930   |
| 15    | 18,300  | 1,440   | 6,680   | 5,630   | 2,800   | 45,700  | 7,160   | 13,400  | 10,200  | 397     | 994     | 1,580   |
| 16    | 20,000  | 1,300   | 4,400   | 5,520   | 2,140   | 46,500  | 6,920   | 14,200  | 4,330   | 1,220   | 1,050   | 1,190   |
| 17    | 22,300  | 1,010   | 3,760   | 7,010   | 4,460   | 45,200  | 6,690   | 16,100  | 3,040   | 2,270   | 753     | 2,620   |
| 18    | 24,500  | 825     | 5,310   | 16,500  | 2,810   | 40,100  | 6,520   | 15,100  | 4,050   | 2,530   | 640     | 3,000   |
| 19    | 26,800  | 772     | 6,010   | 19,600  | 17,000  | 35,200  | 6,360   | 9,780   | 4,050   | 2,410   | 2,180   | 3,290   |
| 20    | 28,700  | 1,060   | 8,090   | 24,200  | 20,900  | 29,300  | 6,170   | 6,480   | 3,900   | 2,440   | 4,020   | 3,830   |
| 21    | 28,800  | 8,300   | 8,520   | 21,200  | 18,000  | 19,500  | 6,200   | 6,530   | 3,940   | 960     | 3,470   | 3,500   |
| 22    | 24,300  | 14,200  | 8,370   | 24,500  | 18,400  | 13,100  | 6,910   | 4,320   | 4,300   | 356     | 2,930   | 1,900   |
| 23    | 15,200  | 15,400  | 5,610   | 27,500  | 18,300  | 11,800  | 9,280   | 2,820   | 3,720   | 1,520   | 3,030   | 1,130   |
| 24    | 6,900   | 16,500  | 11,200  | 29,200  | 17,500  | 11,300  | 8,450   | 2,820   | 2,150   | 2,560   | 2,570   | 2,220   |
| 25    | 5,230   | 22,500  | 22,600  | 29,500  | 16,800  | 10,900  | 5,230   | 2,570   | 3,900   | 2,530   | 2,140   | 2,720   |
| 26    | 4,940   | 25,000  | 21,900  | 28,900  | 15,300  | 10,400  | 5,010   | 2,370   | 4,460   | 2,440   | 1,400   | 2,630   |
| 27    | 5,800   | 22,800  | 20,300  | 28,300  | 11,200  | 10,200  | 4,830   | 2,320   | 3,960   | 2,070   | 2,620   | 2,600   |
| 28    | 9,720   | 18,800  | 19,400  | 23,500  | 7,540   | 9,820   | 2,180   | 2,000   | 3,870   | 1,060   | 5,420   | 3,480   |
| 29    | 12,200  | 13,500  | 18,500  | 25,400  | -----   | 9,910   | 1,370   | 1,660   | 4,000   | 373     | 10,700  | 4,540   |
| 30    | 13,300  | 8,880   | 14,000  | 23,000  | -----   | 9,520   | 3,220   | 1,560   | 1,940   | 1,200   | 11,600  | 5,670   |
| 31    | 13,200  | -----   | 9,240   | 19,200  | -----   | 8,700   | -----   | 2,820   | -----   | 1,760   | 12,100  | -----   |
| TOTAL | 556,890 | 221,267 | 431,760 | 432,730 | 280,100 | 650,600 | 201,960 | 192,560 | 221,954 | 53,064  | 86,221  | 268,720 |
| MEAN  | 17,960  | 7,376   | 13,930  | 13,960  | 10,000  | 20,990  | 6,732   | 6,212   | 7,398   | 1,712   | 2,781   | 8,957   |
| MAX   | 28,800  | 25,000  | 27,800  | 29,500  | 20,900  | 55,400  | 9,710   | 16,100  | 23,100  | 2,630   | 12,100  | 21,700  |
| MIN   | 4,940   | 772     | 3,480   | 2,990   | 2,140   | 2,730   | 1,370   | 1,560   | 755     | 356     | 311     | 1,130   |
| AC-FT | 1,105M  | 438,900 | 856,400 | 858,300 | 555,600 | 1,290M  | 400,600 | 381,900 | 440,200 | 105,300 | 171,000 | 533,000 |

CAL YR 1973 TOTAL 5,686,371 MEAN 15,580 MAX 64,200 MIN 174 AC-FT 11,280,000  
WTR YR 1974 TOTAL 3,597,826 MEAN 9,857 MAX 55,400 MIN 311 AC-FT 7,136,000

PEAK DISCHARGE (BASE, 3,200 FT<sup>3</sup>/s).--Mar. 12 (1515) 54,900 ft<sup>3</sup>/s (28.10 ft).

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, on right bank 150 ft (46 m) upstream from Jefferson Bridge on County Highway D and 5 mi (8.0 km) southwest of Polk.

DRAINAGE AREA.--276 mi<sup>2</sup> (715 km<sup>2</sup>).

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

AVERAGE DISCHARGE.--6 years, 269 ft<sup>3</sup>/s (7.62 m<sup>3</sup>/s), 13.23 in/yr (336 mm/yr), 194,900 acre-ft/yr (240 hm<sup>3</sup>/yr).

GAGE.--Water-stage recorder. Datum of gage is 872.61 ft (265.971 m) above mean sea level.

EXTREMES.--Current year: Maximum discharge, 12,500 ft<sup>3</sup>/s (354 m<sup>3</sup>/s) Mar. 10 (gage height, 16.74 ft or 5.102 m); minimum, 4.4 ft<sup>3</sup>/s (0.125 m<sup>3</sup>/s) Aug. 5, 6; minimum gage height, 1.67 ft (0.509 m) Oct. 26.  
Period of record: Maximum discharge, 20,300 ft<sup>3</sup>/s (575 m<sup>3</sup>/s) Nov. 1, 1972 (gage height, 21.88 ft or 6.669 m); minimum, 4.2 ft<sup>3</sup>/s (0.119 m<sup>3</sup>/s) Aug. 13, 14, 1969; minimum gage height, 1.26 ft (0.384 m) Sept. 1, 2, 1973.

REMARKS.--Records fair. Records of water temperature are published in part 2.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT   | NOV    | DEC    | JAN    | FEB    | MAR    | APR   | MAY    | JUN    | JUL     | AUG     | SEP   |
|-------|-------|--------|--------|--------|--------|--------|-------|--------|--------|---------|---------|-------|
| 1     | 88    | 94     | 347    | 190    | 495    | 181    | 256   | 268    | 64     | 30      | 4.4     | 550   |
| 2     | 62    | 83     | 285    | 190    | 412    | 168    | 230   | 310    | 58     | 27      | 4.4     | 500   |
| 3     | 45    | 75     | 251    | 190    | 346    | 153    | 205   | 616    | 54     | 24      | 4.6     | 300   |
| 4     | 314   | 66     | 1,870  | 184    | 290    | 141    | 184   | 341    | 54     | 47      | 4.4     | 200   |
| 5     | 203   | 60     | 866    | 178    | 260    | 128    | 170   | 230    | 133    | 174     | 4.4     | 120   |
| 6     | 84    | 55     | 451    | 147    | 230    | 117    | 161   | 181    | 161    | 87      | 4.6     | 100   |
| 7     | 65    | 52     | 239    | 145    | 199    | 112    | 153   | 151    | 2,030  | 55      | 7.8     | 90    |
| 8     | 55    | 50     | 215    | 128    | 181    | 106    | 165   | 133    | 850    | 40      | 9.0     | 80    |
| 9     | 46    | 47     | 184    | 145    | 173    | 325    | 175   | 119    | 916    | 32      | 12      | 70    |
| 10    | 38    | 45     | 155    | 156    | 163    | 9,960  | 158   | 111    | 664    | 26      | 16      | 60    |
| 11    | 32    | 44     | 135    | 156    | 151    | 9,110  | 168   | 105    | 366    | 23      | 14      | 55    |
| 12    | 40    | 42     | 124    | 151    | 146    | 1,280  | 205   | 95     | 311    | 19      | 13      | 50    |
| 13    | 236   | 42     | 115    | 129    | 137    | 850    | 208   | 86     | 231    | 17      | 11      | 55    |
| 14    | 160   | 40     | 103    | 112    | 128    | 652    | 173   | 610    | 182    | 19      | 10      | 60    |
| 15    | 106   | 43     | 100    | 199    | 129    | 1,440  | 155   | 1,460  | 163    | 55      | 10      | 50    |
| 16    | 77    | 44     | 98     | 1,050  | 119    | 1,360  | 149   | 556    | 130    | 37      | 9.5     | 50    |
| 17    | 61    | 42     | 95     | 1,010  | 114    | 790    | 141   | 330    | 110    | 163     | 12      | 45    |
| 18    | 51    | 41     | 94     | 736    | 190    | 628    | 135   | 244    | 95     | 285     | 26      | 45    |
| 19    | 45    | 39     | 448    | 598    | 2,790  | 534    | 128   | 184    | 80     | 301     | 14      | 50    |
| 20    | 40    | 45     | 370    | 574    | 903    | 534    | 122   | 151    | 70     | 298     | 12      | 115   |
| 21    | 35    | 71     | 280    | 534    | 740    | 495    | 117   | 126    | 60     | 182     | 11      | 114   |
| 22    | 31    | 70     | 240    | 434    | 863    | 320    | 124   | 114    | 55     | 22      | 14      | 88    |
| 23    | 29    | 70     | 385    | 396    | 622    | 300    | 163   | 104    | 50     | 21      | 104     | 60    |
| 24    | 26    | 1,320  | 1,300  | 330    | 490    | 280    | 147   | 102    | 45     | 19      | 39      | 50    |
| 25    | 23    | 7,530  | 970    | 310    | 374    | 272    | 128   | 96     | 45     | 20      | 19      | 46    |
| 26    | 22    | 2,950  | 501    | 676    | 320    | 290    | 117   | 102    | 44     | 21      | 14      | 43    |
| 27    | 1,110 | 1,210  | 354    | 1,260  | 258    | 250    | 110   | 105    | 42     | 17      | 12      | 42    |
| 28    | 485   | 847    | 284    | 1,320  | 205    | 460    | 102   | 95     | 39     | 15      | 552     | 51    |
| 29    | 169   | 603    | 227    | 1,030  | -----  | 300    | 97    | 84     | 36     | 10      | 825     | 94    |
| 30    | 119   | 453    | 191    | 802    | -----  | 300    | 266   | 76     | 33     | 8.0     | 118     | 62    |
| 31    | 105   | -----  | 190    | 616    | -----  | 280    | ----- | 70     | -----  | 6.0     | 700     | ----- |
| TOTAL | 4,002 | 16,173 | 11,467 | 14,076 | 11,428 | 32,116 | 4,812 | 7,355  | 7,171  | 2,100.0 | 2,611.1 | 3,295 |
| MEAN  | 129   | 539    | 370    | 454    | 408    | 1,036  | 160   | 237    | 239    | 67.7    | 84.2    | 110   |
| MAX   | 1,110 | 7,530  | 1,870  | 1,320  | 2,790  | 9,960  | 266   | 1,460  | 2,030  | 301     | 825     | 550   |
| MIN   | 22    | 39     | 94     | 112    | 114    | 106    | 97    | 70     | 33     | 6.0     | 4.4     | 42    |
| CFSM  | .47   | 1.95   | 1.34   | 1.64   | 1.48   | 3.75   | .58   | .86    | .87    | .25     | .31     | .40   |
| IN.   | .54   | 2.18   | 1.55   | 1.90   | 1.54   | 4.33   | .65   | .99    | .97    | .28     | .35     | .44   |
| AC-FT | 7,940 | 32,080 | 22,740 | 27,920 | 22,670 | 63,700 | 9,540 | 14,590 | 14,220 | 4,170   | 5,180   | 6,540 |

CAL YR 1973 TOTAL 171,241.5 MEAN 469 MAX 8,460 MIN 5.0 CFSM 1.70 IN 23.08 AC-FT 339,700  
WTR YR 1974 TOTAL 116,606.1 MEAN 319 MAX 9,960 MIN 4.4 CFSM 1.16 IN 15.72 AC-FT 231,300

PEAK DISCHARGE (BASE, 5,500 FT<sup>3</sup>/S)

| DATE  | TIME  | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|-------|-------|-----------|------|------|-------|-----------|
| 11-25 | 0445  | 14.62 | 10,500    | 3-10 | 1430 | 16.74 | 12,500    |
| 2-19  | 06000 | 10.78 | 5,630     |      |      |       |           |



## OSAGE RIVER BASIN

06921200 Lindley Creek near Polk, Mo.

LOCATION.--Lat 37°45'02", long 93°15'58", in NE¼SE¼ sec.29, T.35 N., R.21 W., Polk County, on left bank 30 ft (9 m) upstream from county highway bridge, 0.5 mi (0.8 km) downstream from Panther Creek, 2.5 mi (4.0 km) northeast of Polk, and 11 mi (17.7 km) upstream from Ingalls Creek.

DRAINAGE AREA.--112 mi<sup>2</sup> (290 km<sup>2</sup>).

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

GAGE.--Water-stage recorder. Datum of gage is 884.08 ft (269.468 m) above mean sea level. Prior to September 25, 1957, nonrecording gage at site 30 ft (9 m) downstream at same datum.

AVERAGE DISCHARGE.--17 years, 94.0 ft<sup>3</sup>/s (2.66 m<sup>3</sup>/s), 11.39 in/yr (289 mm/yr), 68,100 acre-ft/yr (84 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 6,130 ft<sup>3</sup>/s (174 m<sup>3</sup>/s) Mar. 10 (gage height, 17.10 ft or 5.212 m); no flow on many days.

Period of record: Maximum discharge, 28,000 ft<sup>3</sup>/s (793 m<sup>3</sup>/s) May 5, 1961 (gage height, 23.60 ft or 7.193 m), from rating extended above 12,000 ft<sup>3</sup>/s (340 m<sup>3</sup>/s) on basis of slope-conveyance study; no flow on many days in most years.

Flood in September 1914, reached a stage of about 25.2 ft (7.68 m).

REMARKS.--Records fair.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY         | OCT             | NOV      | DEC       | JAN    | FEB       | MAR      | APR           | MAY   | JUN     | JUL    | AUG      | SEP     |
|-------------|-----------------|----------|-----------|--------|-----------|----------|---------------|-------|---------|--------|----------|---------|
| 1           | 45              | 68       | 88        | 153    | 221       | 132      | 107           | 60    | 26      | 4.8    | 0        | 530     |
| 2           | 16              | 56       | 81        | 155    | 196       | 126      | 99            | 89    | 22      | 3.9    | 0        | 304     |
| 3           | 9.6             | 44       | 77        | 152    | 168       | 120      | 94            | 87    | 18      | 3.0    | 0        | 160     |
| 4           | 39              | 37       | 662       | 150    | 146       | 111      | 88            | 65    | 35      | 17     | 0        | 86      |
| 5           | 68              | 33       | 218       | 151    | 142       | 102      | 84            | 55    | 54      | 21     | 0        | 59      |
| 6           | 28              | 29       | 136       | 153    | 135       | 99       | 80            | 48    | 156     | 14     | 0        | 45      |
| 7           | 23              | 29       | 112       | 147    | 127       | 96       | 80            | 45    | 1,600   | 7.8    | 0        | 34      |
| 8           | 16              | 29       | 105       | 150    | 123       | 93       | 103           | 45    | 204     | 4.2    | 0        | 25      |
| 9           | 11              | 27       | 102       | 170    | 121       | 98       | 90            | 43    | 246     | 3.5    | .01      | 19      |
| 10          | 8.0             | 24       | 95        | 165    | 116       | 3,340    | 83            | 43    | 142     | 2.3    | .12      | 16      |
| 11          | 6.5             | 22       | 91        | 155    | 114       | 1,800    | 111           | 43    | 107     | 1.8    | .12      | 14      |
| 12          | 10              | 21       | 90        | 144    | 112       | 323      | 136           | 39    | 102     | 1.4    | .08      | 19      |
| 13          | 142             | 21       | 88        | 150    | 110       | 221      | 106           | 38    | 82      | .90    | .06      | 16      |
| 14          | 78              | 24       | 84        | 154    | 106       | 179      | 92            | 221   | 70      | 1.8    | .01      | 12      |
| 15          | 48              | 30       | 85        | 200    | 103       | 544      | 85            | 305   | 60      | 8.8    | 0        | 8.7     |
| 16          | 33              | 40       | 82        | 600    | 101       | 295      | 80            | 130   | 50      | 16     | 0        | 9.9     |
| 17          | 24              | 40       | 80        | 488    | 98        | 191      | 76            | 112   | 42      | 8.2    | 0        | 14      |
| 18          | 18              | 38       | 82        | 393    | 122       | 164      | 72            | 148   | 36      | 4.0    | .06      | 12      |
| 19          | 15              | 37       | 456       | 309    | 1,170     | 145      | 69            | 109   | 32      | 2.2    | .02      | 10      |
| 20          | 14              | 43       | 243       | 301    | 273       | 131      | 65            | 88    | 30      | 1.3    | 0        | 12      |
| 21          | 12              | 99       | 181       | 268    | 317       | 137      | 68            | 72    | 26      | .74    | 0        | 11      |
| 22          | 12              | 71       | 168       | 256    | 367       | 142      | 75            | 65    | 21      | .50    | 0        | 9.2     |
| 23          | 11              | 60       | 342       | 281    | 238       | 142      | 69            | 56    | 17      | .32    | 0        | 7.8     |
| 24          | 10              | 218      | 883       | 229    | 192       | 134      | 60            | 61    | 13      | .16    | 0        | 7.5     |
| 25          | 9.2             | 1,700    | 471       | 210    | 166       | 166      | 56            | 52    | 10      | .12    | 0        | 7.4     |
| 26          | 8.8             | 795      | 255       | 681    | 159       | 167      | 53            | 55    | 8.5     | .12    | 0        | 7.8     |
| 27          | 166             | 210      | 209       | 595    | 151       | 142      | 51            | 57    | 6.9     | .06    | 0        | 8.5     |
| 28          | 96              | 166      | 190       | 802    | 142       | 142      | 49            | 45    | 5.9     | .02    | 107      | 33      |
| 29          | 63              | 121      | 173       | 481    | -----     | 159      | 48            | 37    | 5.0     | 0      | 396      | 45      |
| 30          | 49              | 102      | 168       | 326    | -----     | 128      | 54            | 32    | 5.2     | 0      | 85       | 23      |
| 31          | 72              | -----    | 162       | 265    | -----     | 115      | -----         | 30    | -----   | 0      | 600      | -----   |
| TOTAL       | 1,161.1         | 4,234    | 6,259     | 8,834  | 5,536     | 9,884    | 2,383         | 2,375 | 3,232.5 | 129.94 | 1,188.48 | 1,565.8 |
| MEAN        | 37.5            | 141      | 202       | 285    | 198       | 319      | 79.4          | 76.6  | 108     | 4.19   | 38.3     | 52.2    |
| MAX         | 166             | 1,700    | 883       | 802    | 1,170     | 3,340    | 136           | 305   | 1,600   | 21     | 600      | 530     |
| MIN         | 6.5             | 21       | 77        | 144    | 98        | 93       | 48            | 30    | 5.0     | 0      | 0        | 7.4     |
| CFSM        | .33             | 1.26     | 1.80      | 2.54   | 1.77      | 2.85     | .71           | .68   | .96     | .04    | .34      | .47     |
| IN.         | .39             | 1.41     | 2.08      | 2.93   | 1.84      | 3.28     | .79           | .79   | 1.07    | .04    | .39      | .52     |
| AC-FT       | 2,300           | 8,400    | 12,410    | 17,520 | 10,980    | 19,600   | 4,730         | 4,710 | 6,410   | 258    | 2,360    | 3,110   |
| CAL YR 1973 | TOTAL 75,828.32 | MEAN 208 | MAX 4,100 | MIN 0  | CFSM 1.86 | IN 25.19 | AC-FT 150,400 |       |         |        |          |         |
| WTR YR 1974 | TOTAL 46,782.82 | MEAN 128 | MAX 3,340 | MIN 0  | CFSM 1.14 | IN 15.54 | AC-FT 92,790  |       |         |        |          |         |

PEAK DISCHARGE (BASE, 2,000 FT<sup>3</sup>/S)

| DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|------|------|-------|-----------|
| 11-25 | 0500 | 15.87 | 3,750     | 6-7  | 0415 | 14.37 | 3,400     |
| 2-19  | 0800 | 12.78 | 2,310     | 8-31 | 2100 | 13.57 | 2,810     |
| 3-10  | 1130 | 17.10 | 6,130     |      |      |       |           |

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, in intake tower at dam on Pomme de Terre River, and 3 mi (4.8 km) southwest of Hermitage.

DRAINAGE AREA.--611 mi<sup>2</sup> (1,583 km<sup>2</sup>).

PERIOD OF RECORD.--June 1960 to current year.

GAGE.--Water-stage recorder. Nonrecording gage prior to Nov. 9, 1961. Datum of gage is at mean sea level (levels by Corps of Engineers).

EXTREMES.--Current year: Maximum contents, 354,000 acre-ft (436 hm<sup>3</sup>) Mar. 20 (elevation, 851.38 ft or 259.501 m); minimum, 225,000 acre-ft (277 hm<sup>3</sup>) Apr. 13 (elevation, 836.89 ft or 255.084 m).

Period of record: Maximum contents, 481,000 acre-ft (593 hm<sup>3</sup>) Apr. 30, 1973 (elevation, 862.35 ft or 262.844 m), minimum, since initial filling to conservation pool level, 215,880 acre-ft (266 hm<sup>3</sup>) Mar. 3, 1964 (elevation, 835.61 ft or 254.694 m).

REMARKS.--Lake is formed by earth fill embankment with a concrete gravity section-type dam. Closure operation began on June 28, 1960; conservation pool level reached June 15, 1963. Capacity nominal top of flood control pool, 648,700 acre-ft (800 hm<sup>3</sup>) at elevation, 874 ft or 266.4 m, crest of spillway, of which 407,200 acre-ft (502 hm<sup>3</sup>) between elevations 839 ft or 255.7 m and 874 ft or 266.4 m is used for flood control, and 228,700 acre-ft (282 hm<sup>3</sup>) between elevations 783 ft or 238.7 m and 839 ft or 255.7 m is used for conservation and 12,840 acre-ft (15.8 hm<sup>3</sup>) below elevation 783 ft or 238.7 m is sediment storage. Lake used for flood control and recreational purposes. Contents computed from daily readings at 0800.

COOPERATION.--Records furnished by Corps of Engineers.

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

|     |         |     |         |
|-----|---------|-----|---------|
| 836 | 218,800 | 840 | 249,500 |
| 837 | 226,200 | 850 | 339,600 |
| 838 | 233,800 | 860 | 451,200 |

CONTENTS, IN ACRE-FEET, AT 0800, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY | OCT     | NOV     | DEC     | JAN     | FEB     | MAR     | APR     | MAY     | JUN     | JUL     | AUG     | SEP     |
|-----|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1   | 235,000 | 247,000 | 283,000 | 272,000 | 272,000 | 251,000 | 269,000 | 232,000 | 255,000 | 248,000 | 241,000 | 248,000 |
| 2   | 235,000 | 247,000 | 280,000 | 272,000 | 270,000 | 249,000 | 261,000 | 233,000 | 254,000 | 248,000 | 240,000 | 256,000 |
| 3   | 235,000 | 247,000 | 277,000 | 270,000 | 267,000 | 247,000 | 253,000 | 234,000 | 253,000 | 248,000 | 240,000 | 260,000 |
| 4   | 236,000 | 247,000 | 278,000 | 267,000 | 264,000 | 245,000 | 245,000 | 236,000 | 252,000 | 249,000 | 240,000 | 262,000 |
| 5   | 237,000 | 247,000 | 288,000 | 263,000 | 262,000 | 244,000 | 242,000 | 237,000 | 252,000 | 249,000 | 239,000 | 262,000 |
| 6   | 237,000 | 247,000 | 291,000 | 260,000 | 258,000 | 244,000 | 242,000 | 237,000 | 252,000 | 249,000 | 239,000 | 263,000 |
| 7   | 237,000 | 247,000 | 293,000 | 256,000 | 255,000 | 244,000 | 241,000 | 238,000 | 269,000 | 249,000 | 239,000 | 262,000 |
| 8   | 237,000 | 247,000 | 293,000 | 253,000 | 252,000 | 243,000 | 241,000 | 238,000 | 279,000 | 249,000 | 239,000 | 260,000 |
| 9   | 238,000 | 247,000 | 292,000 | 250,000 | 248,000 | 243,000 | 241,000 | 238,000 | 282,000 | 248,000 | 239,000 | 263,000 |
| 10  | 238,000 | 244,000 | 291,000 | 247,000 | 245,000 | 257,000 | 237,000 | 239,000 | 285,000 | 248,000 | 240,000 | 256,000 |
| 11  | 237,000 | 244,000 | 288,000 | 244,000 | 242,000 | 303,000 | 231,000 | 239,000 | 287,000 | 248,000 | 240,000 | 255,000 |
| 12  | 237,000 | 244,000 | 284,000 | 242,000 | 241,000 | 326,000 | 227,000 | 239,000 | 288,000 | 248,000 | 240,000 | 253,000 |
| 13  | 239,000 | 247,000 | 281,000 | 242,000 | 241,000 | 331,000 | 226,000 | 239,000 | 284,000 | 248,000 | 240,000 | 251,000 |
| 14  | 241,000 | 247,000 | 278,000 | 241,000 | 241,000 | 334,000 | 226,000 | 240,000 | 279,000 | 247,000 | 240,000 | 249,000 |
| 15  | 241,000 | 247,000 | 274,000 | 241,000 | 241,000 | 336,000 | 226,000 | 244,000 | 275,000 | 247,000 | 239,000 | 247,000 |
| 16  | 242,000 | 244,000 | 271,000 | 241,000 | 241,000 | 344,000 | 227,000 | 248,000 | 270,000 | 246,000 | 239,000 | 245,000 |
| 17  | 242,000 | 247,000 | 267,000 | 247,000 | 241,000 | 348,000 | 227,000 | 249,000 | 265,000 | 246,000 | 239,000 | 244,000 |
| 18  | 242,000 | 247,000 | 264,000 | 250,000 | 241,000 | 351,000 | 228,000 | 251,000 | 251,000 | 246,000 | 239,000 | 243,000 |
| 19  | 242,000 | 247,000 | 262,000 | 253,000 | 247,000 | 353,000 | 228,000 | 252,000 | 256,000 | 245,000 | 239,000 | 243,000 |
| 20  | 242,000 | 247,000 | 264,000 | 254,000 | 256,000 | 354,000 | 228,000 | 253,000 | 252,000 | 245,000 | 239,000 | 243,000 |
| 21  | 242,000 | 247,000 | 262,000 | 255,000 | 257,000 | 352,000 | 229,000 | 253,000 | 250,000 | 245,000 | 239,000 | 243,000 |
| 22  | 242,000 | 248,000 | 260,000 | 256,000 | 260,000 | 344,000 | 229,000 | 254,000 | 250,000 | 243,000 | 239,000 | 243,000 |
| 23  | 242,000 | 248,000 | 257,000 | 258,000 | 260,000 | 336,000 | 230,000 | 254,000 | 250,000 | 243,000 | 239,000 | 243,000 |
| 24  | 242,000 | 248,000 | 259,000 | 259,000 | 260,000 | 329,000 | 230,000 | 254,000 | 250,000 | 242,000 | 239,000 | 243,000 |
| 25  | 241,000 | 261,000 | 263,000 | 259,000 | 258,000 | 321,000 | 230,000 | 254,000 | 250,000 | 242,000 | 239,000 | 243,000 |
| 26  | 241,000 | 279,000 | 263,000 | 259,000 | 257,000 | 314,000 | 230,000 | 255,000 | 250,000 | 242,000 | 239,000 | 243,000 |
| 27  | 242,000 | 290,000 | 265,000 | 266,000 | 255,000 | 307,000 | 231,000 | 255,000 | 250,000 | 242,000 | 239,000 | 243,000 |
| 28  | 245,000 | 290,000 | 267,000 | 270,000 | 253,000 | 300,000 | 231,000 | 255,000 | 249,000 | 242,000 | 239,000 | 243,000 |
| 29  | 246,000 | 288,000 | 268,000 | 276,000 | -----   | 293,000 | 231,000 | 256,000 | 249,000 | 241,000 | 242,000 | 245,000 |
| 30  | 246,000 | 286,000 | 269,000 | 276,000 | -----   | 285,000 | 231,000 | 256,000 | 249,000 | 241,000 | 244,000 | 245,000 |
| 31  | 246,000 | -----   | 271,000 | 274,000 | -----   | 277,000 | -----   | 256,000 | -----   | 241,000 | 244,000 | -----   |
| (†) | 839.63  | 844.29  | 839.58  | 842.97  | 840.47  | 843.30  | 837.73  | 840.56  | 839.70  | 838.90  | 839.29  | 839.48  |
| (‡) | +11     | +40     | -15     | +3      | -21     | +24     | -46     | +25     | -7      | -8      | +3      | +1      |
| MAX | 246,000 | 290,000 | 293,000 | 276,000 | 272,000 | 354,000 | 269,000 | 256,000 | 288,000 | 249,000 | 244,000 | 263,000 |
| MIN | 235,000 | 244,000 | 257,000 | 241,000 | 241,000 | 243,000 | 226,000 | 232,000 | 249,000 | 241,000 | 239,000 | 243,000 |

CAL YR 1973.....‡

+22

WTR YR 1974.....‡

+10

† Elevation, in feet, at end of month.

‡ Change in contents, in thousands of acre-feet.

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, on right bank 2,000 ft (610 m) downstream from outlet of Pomme de Terre Lake, 2.5 mi (4.0 km) southwest of Hermitage, 4.5 mi (7.2 km) upstream from Green Branch, and at mile 43.4 (69.8 km).

DRAINAGE AREA.--615 mi<sup>2</sup> (1,590 km<sup>2</sup>).

PERIOD OF RECORD.--August 1960 to current year.

GAGE.--Water-stage recorder. Datum of gage is 749.33 ft (228.396 m) above mean sea level.

AVERAGE DISCHARGE.--14 years, 467 ft<sup>3</sup>/s (13.2 m<sup>3</sup>/s), 338,300 acre-ft/yr (417 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 4,430 ft<sup>3</sup>/s (125 m<sup>3</sup>/s) Mar. 21 (gage height, 10.70 ft or 3.261 m); minimum, 46 ft<sup>3</sup>/s (1.30 m<sup>3</sup>/s) Aug. 14; minimum gage height, 2.02 ft (0.616 m) July 28.  
Period of record: Maximum discharge, 9,000 ft<sup>3</sup>/s (255 m<sup>3</sup>/s) May 9, 1961 (gage height, 15.02 ft or 4.578 m); no flow Sept. 10, 1960, Mar. 9-17, 1971.

REMARKS.--Records fair. Flow regulated by Pomme de Terre Lake.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY         | OCT           | NOV    | DEC        | JAN    | FEB       | MAR     | APR    | MAY   | JUN           | JUL   | AUG   | SEP    |
|-------------|---------------|--------|------------|--------|-----------|---------|--------|-------|---------------|-------|-------|--------|
| 1           | 55            | 53     | 1,990      | 51     | 1,900     | 1,450   | 4,070  | 52    | 429           | 99    | 48    | 54     |
| 2           | 55            | 55     | 1,980      | 867    | 1,900     | 1,440   | 4,070  | 52    | 429           | 100   | 49    | 55     |
| 3           | 54            | 55     | 1,970      | 1,900  | 1,900     | 1,440   | 4,070  | 51    | 429           | 99    | 49    | 51     |
| 4           | 60            | 55     | 930        | 1,890  | 1,890     | 1,110   | 2,680  | 50    | 432           | 102   | 49    | 49     |
| 5           | 55            | 55     | 141        | 1,890  | 1,890     | 389     | 745    | 50    | 432           | 103   | 49    | 49     |
| 6           | 54            | 55     | 51         | 1,880  | 1,890     | 494     | 517    | 50    | 424           | 115   | 48    | 356    |
| 7           | 54            | 55     | 387        | 1,880  | 1,890     | 467     | 517    | 50    | 274           | 115   | 48    | 1,050  |
| 8           | 53            | 55     | 1,060      | 1,880  | 1,890     | 420     | 430    | 51    | 177           | 115   | 48    | 1,050  |
| 9           | 54            | 55     | 1,060      | 1,870  | 1,880     | 223     | 1,340  | 50    | 180           | 115   | 49    | 1,050  |
| 10          | 151           | 55     | 1,360      | 1,870  | 1,880     | 101     | 2,680  | 49    | 177           | 114   | 48    | 1,050  |
| 11          | 463           | 55     | 1,970      | 1,460  | 1,150     | 68      | 2,610  | 49    | 177           | 114   | 48    | 1,050  |
| 12          | 49            | 55     | 1,960      | 519    | 298       | 55      | 1,820  | 49    | 1,610         | 114   | 48    | 1,050  |
| 13          | 49            | 56     | 1,960      | 521    | 296       | 54      | 575    | 48    | 2,470         | 113   | 47    | 1,050  |
| 14          | 47            | 58     | 1,950      | 520    | 298       | 54      | 49     | 56    | 2,460         | 112   | 46    | 1,050  |
| 15          | 47            | 63     | 1,950      | 521    | 298       | 56      | 49     | 51    | 2,450         | 112   | 47    | 1,050  |
| 16          | 48            | 63     | 1,950      | 526    | 298       | 55      | 50     | 49    | 2,450         | 112   | 47    | 1,050  |
| 17          | 48            | 60     | 1,940      | 532    | 298       | 54      | 50     | 62    | 2,440         | 110   | 47    | 1,030  |
| 18          | 48            | 60     | 1,930      | 532    | 316       | 54      | 50     | 52    | 2,430         | 110   | 48    | 110    |
| 19          | 48            | 60     | 1,950      | 532    | 634       | 54      | 50     | 50    | 2,420         | 110   | 48    | 112    |
| 20          | 49            | 61     | 1,940      | 532    | 1,040     | 628     | 52     | 48    | 2,400         | 109   | 48    | 113    |
| 21          | 49            | 61     | 1,940      | 532    | 1,060     | 3,380   | 54     | 48    | 843           | 109   | 48    | 111    |
| 22          | 49            | 60     | 1,930      | 532    | 1,210     | 4,340   | 55     | 48    | 98            | 109   | 48    | 111    |
| 23          | 50            | 60     | 1,930      | 532    | 1,490     | 4,340   | 54     | 48    | 98            | 109   | 49    | 111    |
| 24          | 51            | 68     | 1,940      | 532    | 1,480     | 4,340   | 54     | 48    | 99            | 108   | 49    | 111    |
| 25          | 52            | 67     | 1,940      | 532    | 1,470     | 4,250   | 54     | 48    | 99            | 93    | 48    | 110    |
| 26          | 52            | 62     | 1,030      | 546    | 1,470     | 4,250   | 55     | 48    | 99            | 50    | 48    | 110    |
| 27          | 55            | 1,000  | 52         | 546    | 1,460     | 4,250   | 55     | 47    | 98            | 49    | 48    | 110    |
| 28          | 53            | 2,020  | 51         | 1,130  | 1,460     | 4,160   | 55     | 47    | 99            | 49    | 52    | 115    |
| 29          | 53            | 2,000  | 51         | 1,920  | -----     | 4,160   | 54     | 47    | 99            | 49    | 50    | 112    |
| 30          | 53            | 2,000  | 51         | 1,910  | -----     | 4,160   | 53     | 172   | 99            | 48    | 49    | 111    |
| 31          | 53            | -----  | 51         | 1,900  | -----     | 4,160   | -----  | 429   | -----         | 48    | 50    | -----  |
| TOTAL       | 2,111         | 8,537  | 41,395     | 32,785 | 34,936    | 54,456  | 27,017 | 2,049 | 26,421        | 3,014 | 1,498 | 13,591 |
| MEAN        | 68.1          | 285    | 1,335      | 1,058  | 1,248     | 1,757   | 901    | 66.1  | 881           | 97.2  | 48.3  | 453    |
| MAX         | 463           | 2,020  | 1,990      | 1,920  | 1,900     | 4,340   | 4,070  | 429   | 2,470         | 115   | 52    | 1,050  |
| MIN         | 47            | 53     | 51         | 51     | 296       | 54      | 49     | 47    | 98            | 48    | 46    | 49     |
| AC-FT       | 4,190         | 16,930 | 82,110     | 65,030 | 69,300    | 108,000 | 53,590 | 4,060 | 52,410        | 5,980 | 2,970 | 26,960 |
| CAL YR 1973 | TOTAL 376,795 |        | MEAN 1,032 |        | MAX 5,080 |         | MIN 47 |       | AC-FT 747,400 |       |       |        |
| WTR YR 1974 | TOTAL 247,810 |        | MEAN 679   |        | MAX 4,340 |         | MIN 46 |       | AC-FT 491,500 |       |       |        |

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, on right bank 25 ft (8 m) downstream from bridge on State Highway B, 0.9 mi (1.4 km) east of Archie, 1.4 mi (2.3 km) upstream from Mormon Fork, and 7.4 mi (11.9 km) downstream from South Fork.

DRAINAGE AREA.--256 mi<sup>2</sup> (663 km<sup>2</sup>).

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

GAGE.--Water-stage recorder. Datum of gage is 768.99 ft (234.388 m) above mean sea level.

AVERAGE DISCHARGE.--5 years, 329 ft<sup>3</sup>/s (9.32 m<sup>3</sup>/s), 17.44 in/yr (443 mm/yr), 238,400 acre-ft/yr (293.9 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 10,900 ft<sup>3</sup>/s (309 m<sup>3</sup>/s) Dec. 4 (gage height, 15.49 ft or 4.721 m); minimum, 0.25 ft<sup>3</sup>/s (0.007 m<sup>3</sup>/s) Aug. 4, 5, 6 (gage height, 2.22 ft or 0.677 m).  
Period of record: Maximum discharge, 15,600 ft<sup>3</sup>/s (442 m<sup>3</sup>/s) Oct. 13, 1969 (gage height, 19.4 ft or 5.91 m); minimum, 0.03 ft<sup>3</sup>/s (0.001 m<sup>3</sup>/s) Sept. 4, 1971 (gage height, 2.15 ft or 0.655 m).  
Floods of Nov. 13, 1928 and Sept. 15, 1961 reached stages of 27.6 ft (8.41 m) and 23.8 ft (7.25 m), respectively, at point 1 mi (1.6 km) northeast of gage, from information by local resident.

REMARKS.--Records fair.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT    | NOV    | DEC    | JAN    | FEB    | MAR    | APR    | MAY    | JUN     | JUL    | AUG      | SEP    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|---------|--------|----------|--------|
| 1     | 535    | 130    | 224    | 196    | 229    | 197    | 98     | 500    | 25      | 8.5    | .39      | 4,970  |
| 2     | 343    | 113    | 209    | 176    | 206    | 182    | 93     | 370    | 20      | 8.6    | .39      | 2,900  |
| 3     | 268    | 102    | 200    | 160    | 183    | 180    | 88     | 147    | 81      | 7.0    | .33      | 1,510  |
| 4     | 292    | 101    | 7,310  | 150    | 160    | 169    | 245    | 107    | 38      | 118    | .26      | 282    |
| 5     | 200    | 93     | 6,620  | 130    | 147    | 151    | 100    | 85     | 31      | 88     | .25      | 165    |
| 6     | 243    | 85     | 820    | 120    | 152    | 143    | 80     | 71     | 164     | 36     | 2.5      | 111    |
| 7     | 431    | 83     | 444    | 110    | 142    | 137    | 75     | 69     | 1,300   | 21     | 13       | 84     |
| 8     | 263    | 83     | 360    | 100    | 115    | 131    | 70     | 1,010  | 676     | 15     | 10       | 68     |
| 9     | 200    | 82     | 324    | 90     | 103    | 256    | 245    | 190    | 1,520   | 11     | 9.8      | 53     |
| 10    | 166    | 77     | 286    | 90     | 100    | 2,220  | 100    | 1,040  | 288     | 9.6    | 11       | 40     |
| 11    | 1,880  | 77     | 256    | 90     | 99     | 4,770  | 80     | 1,070  | 288     | 7.5    | 10       | 34     |
| 12    | 6,710  | 72     | 242    | 90     | 99     | 812    | 70     | 328    | 292     | 6.1    | 8.6      | 30     |
| 13    | 800    | 72     | 228    | 90     | 99     | 419    | 454    | 188    | 140     | 6.0    | 6.4      | 27     |
| 14    | 379    | 67     | 209    | 90     | 93     | 325    | 200    | 4,410  | 96      | 4.5    | 4.3      | 24     |
| 15    | 280    | 72     | 188    | 90     | 84     | 281    | 100    | 2,730  | 72      | 4.3    | 2.3      | 22     |
| 16    | 225    | 73     | 170    | 100    | 83     | 246    | 70     | 317    | 57      | 3.1    | 2.0      | 22     |
| 17    | 180    | 72     | 139    | 557    | 77     | 215    | 1,100  | 911    | 45      | 3.1    | 1.8      | 23     |
| 18    | 161    | 70     | 147    | 3,380  | 99     | 200    | 200    | 1,000  | 38      | 2.6    | 1.3      | 21     |
| 19    | 146    | 70     | 146    | 3,060  | 828    | 187    | 100    | 500    | 37      | 2.0    | 2.5      | 18     |
| 20    | 133    | 4,020  | 226    | 2,120  | 337    | 162    | 67     | 243    | 37      | 1.7    | 2.7      | 79     |
| 21    | 123    | 2,900  | 152    | 956    | 1,030  | 157    | 60     | 100    | 40      | 1.6    | 2.5      | 55     |
| 22    | 102    | 482    | 132    | 1,810  | 1,910  | 154    | 60     | 80     | 32      | 1.6    | 120      | 24     |
| 23    | 95     | 340    | 138    | 823    | 514    | 143    | 60     | 60     | 23      | 1.5    | 474      | 17     |
| 24    | 88     | 1,480  | 460    | 386    | 338    | 134    | 50     | 50     | 17      | 1.5    | 123      | 14     |
| 25    | 77     | 533    | 555    | 298    | 256    | 139    | 50     | 40     | 15      | 1.5    | 42       | 12     |
| 26    | 1,070  | 348    | 328    | 634    | 245    | 149    | 50     | 50     | 13      | 1.2    | 16       | 11     |
| 27    | 884    | 298    | 254    | 1,480  | 249    | 141    | 46     | 367    | 12      | 1.2    | 27       | 11     |
| 28    | 279    | 392    | 244    | 864    | 225    | 128    | 40     | 60     | 12      | 1.1    | 693      | 36     |
| 29    | 199    | 327    | 242    | 759    | -----  | 126    | 40     | 50     | 10      | .95    | 307      | 38     |
| 30    | 163    | 254    | 219    | 382    | -----  | 114    | 1,940  | 40     | 9.0     | .71    | 97       | 23     |
| 31    | 145    | -----  | 175    | 284    | -----  | 106    | -----  | 30     | -----   | .46    | 203      | -----  |
| TOTAL | 17,060 | 12,968 | 21,647 | 19,665 | 8,202  | 12,874 | 6,031  | 16,213 | 5,428.0 | 376.92 | 2,194.32 | 10,724 |
| MEAN  | 550    | 432    | 698    | 634    | 293    | 415    | 201    | 523    | 181     | 12.2   | 70.8     | 357    |
| MAX   | 6,710  | 4,020  | 7,310  | 3,380  | 1,910  | 4,770  | 1,940  | 4,410  | 1,520   | 118    | 693      | 4,970  |
| MIN   | 77     | 67     | 132    | 90     | 77     | 106    | 40     | 30     | 9.0     | .46    | .25      | 11     |
| CFSM  | 2.15   | 1.69   | 2.73   | 2.48   | 1.14   | 1.62   | .79    | 2.04   | .71     | .05    | .28      | 1.39   |
| IN.   | 2.48   | 1.88   | 3.15   | 2.86   | 1.19   | 1.87   | .88    | 2.36   | .79     | .05    | .32      | 1.56   |
| AC-FT | 33,840 | 25,720 | 42,940 | 39,010 | 16,270 | 25,540 | 11,960 | 32,160 | 10,770  | 748    | 4,350    | 21,270 |

CAL YR 1973 TOTAL 253,852.40 MEAN 695 MAX 10,500 MIN 2.0 CFSM 2.71 IN 36.89 AC-FT 503,500  
WTR YR 1974 TOTAL 133,383.24 MEAN 365 MAX 7,310 MIN .25 CFSM 1.43 IN 19.38 AC-FT 264,600

PEAK DISCHARGE (BASE, 5,500 FT<sup>3</sup>/S)

| DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|------|------|-------|-----------|
| 10-12 | 0600 | 12.86 | 8,030     | 3-11 | 0315 | 11.95 | 6,940     |
| 11-20 | 1715 | 12.16 | 7,330     | 5-14 | 1300 | 11.29 | 6,100     |
| 12-04 | 1715 | 15.49 | 10,900    | 9-01 | 1330 | 11.62 | 6,540     |

06921720 Big Creek at Blairstown, Mo.

LOCATION.--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 State Highway N, 0.3 mi (0.5 km) west of Blairstown, 0.8 mi (1.3 km) downstream from Bear Creek, and 1.5 mi (2.4 km) upstream from Brushy Creek.

DRAINAGE AREA.--414 mi<sup>2</sup> (1,072 km<sup>2</sup>).

PERIOD OF RECORD.--August 1960 to September 1974 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 734.06 ft (223.741 m) above mean sea level.

AVERAGE DISCHARGE.--14 years, 317 ft<sup>3</sup>/s (8.98 m<sup>3</sup>/s), 10.40 in/yr (264 mm/yr), 229,700 acre-ft/yr (283.2 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 7,420 ft<sup>3</sup>/s (210 m<sup>3</sup>/s) May 20 (gage height, 23.13 ft or 7.050 m); minimum, 0.22 ft<sup>3</sup>/s (0.006 m<sup>3</sup>/s) Aug. 5, 6 (gage height, 2.26 ft or 0.689 m).  
Period of record: Maximum discharge, 24,400 ft<sup>3</sup>/s (691 m<sup>3</sup>/s) Sept. 14, 1961 (gage height, 25.40 ft or 7.742 m); no flow at times in 1960, 1962-64, 1966.

REMARKS.--Records poor.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY           | OCT              | NOV    | DEC      | JAN    | FEB        | MAR    | APR     | MAY    | JUN       | JUL    | AUG      | SEP     |
|---------------|------------------|--------|----------|--------|------------|--------|---------|--------|-----------|--------|----------|---------|
| 1             | 237              | 86     | 205      | 170    | 324        | 231    | 89      | 283    | 68        | 2.5    | .28      | 3,590   |
| 2             | 232              | 80     | 186      | 150    | 291        | 213    | 81      | 162    | 48        | 2.5    | .31      | 2,960   |
| 3             | 170              | 77     | 174      | 130    | 267        | 203    | 73      | 125    | 34        | 2.3    | .32      | 1,480   |
| 4             | 338              | 74     | 4,320    | 120    | 243        | 189    | 62      | 99     | 31        | 326    | .26      | 351     |
| 5             | 172              | 72     | 6,300    | 110    | 232        | 169    | 58      | 83     | 30        | 214    | .24      | 165     |
| 6             | 224              | 72     | 3,380    | 100    | 240        | 157    | 53      | 72     | 347       | 59     | .26      | 105     |
| 7             | 287              | 70     | 811      | 90     | 227        | 149    | 52      | 66     | 2,090     | 27     | 9.8      | 77      |
| 8             | 178              | 68     | 364      | 85     | 200        | 144    | 115     | 62     | 1,520     | 16     | 215      | 57      |
| 9             | 131              | 65     | 242      | 80     | 185        | 617    | 182     | 60     | 903       | 11     | 141      | 43      |
| 10            | 146              | 62     | 289      | 80     | 173        | 3,870  | 127     | 198    | 375       | 9.0    | 161      | 33      |
| 11            | 209              | 62     | 271      | 80     | 188        | 5,800  | 97      | 480    | 267       | 6.5    | 27       | 27      |
| 12            | 945              | 62     | 265      | 80     | 182        | 2,320  | 89      | 237    | 256       | 4.7    | 8.5      | 23      |
| 13            | 384              | 62     | 240      | 80     | 181        | 617    | 81      | 152    | 196       | 3.8    | 3.9      | 21      |
| 14            | 253              | 60     | 206      | 80     | 174        | 381    | 73      | 3,120  | 163       | 3.2    | 2.2      | 17      |
| 15            | 208              | 62     | 185      | 80     | 165        | 319    | 61      | 3,350  | 106       | 2.5    | 1.5      | 14      |
| 16            | 181              | 63     | 178      | 100    | 160        | 259    | 54      | 1,170  | 67        | 1.7    | 1.1      | 12      |
| 17            | 164              | 66     | 164      | 400    | 156        | 214    | 47      | 900    | 49        | 1.3    | .89      | 8.8     |
| 18            | 151              | 65     | 156      | 1,000  | 195        | 194    | 51      | 4,250  | 38        | 1.3    | .83      | 7.3     |
| 19            | 142              | 71     | 162      | 2,000  | 1,530      | 178    | 48      | 6,890  | 31        | 1.0    | .80      | 4.8     |
| 20            | 125              | 2,470  | 156      | 2,500  | 562        | 163    | 45      | 5,580  | 32        | .79    | .82      | 7.3     |
| 21            | 101              | 4,670  | 167      | 1,000  | 1,270      | 143    | 80      | 1,800  | 48        | .86    | .80      | 12      |
| 22            | 83               | 1,270  | 150      | 1,810  | 2,260      | 134    | 76      | 548    | 35        | .74    | .32      | 7.2     |
| 23            | 65               | 374    | 160      | 1,320  | 775        | 126    | 63      | 379    | 23        | .70    | 810      | 3.5     |
| 24            | 60               | 876    | 433      | 612    | 409        | 120    | 47      | 332    | 16        | .59    | 394      | 3.0     |
| 25            | 58               | 588    | 816      | 446    | 297        | 125    | 38      | 298    | 11        | .62    | 83       | 3.1     |
| 26            | 57               | 312    | 457      | 798    | 283        | 134    | 34      | 266    | 7.6       | .69    | 44       | 2.2     |
| 27            | 1,530            | 257    | 307      | 1,840  | 299        | 124    | 32      | 249    | 5.5       | .63    | 38       | 1.9     |
| 28            | 409              | 397    | 274      | 1,180  | 267        | 115    | 30      | 199    | 4.6       | .58    | 379      | 5.2     |
| 29            | 159              | 316    | 258      | 1,160  | -----      | 105    | 166     | 135    | 3.7       | .46    | 308      | 15      |
| 30            | 116              | 245    | 233      | 582    | -----      | 105    | 474     | 111    | 3.3       | .37    | 99       | 13      |
| 31            | 100              | -----  | 188      | 396    | -----      | 100    | -----   | 86     | -----     | .34    | 103      | -----   |
| TOTAL         | 7,615            | 13,074 | 21,697   | 18,659 | 11,735     | 17,718 | 2,578   | 31,742 | 6,808.7   | 702.67 | 2,866.81 | 9,069.3 |
| MEAN          | 246              | 436    | 700      | 602    | 419        | 572    | 85.9    | 1,024  | 227       | 22.7   | 92.5     | 302     |
| MAX           | 1,530            | 4,670  | 6,300    | 2,500  | 2,260      | 5,800  | 474     | 6,890  | 2,090     | 326    | 810      | 3,590   |
| MIN           | 57               | 60     | 150      | 80     | 156        | 100    | 30      | 60     | 3.3       | .34    | .24      | 1.9     |
| CFSM          | .59              | 1.05   | 1.69     | 1.45   | 1.01       | 1.38   | .21     | 2.47   | .55       | .05    | .22      | .73     |
| IN.           | .68              | 1.17   | 1.95     | 1.68   | 1.05       | 1.59   | .23     | 2.85   | .61       | .06    | .26      | .81     |
| AC-FT         | 15,100           | 25,930 | 43,040   | 37,010 | 23,280     | 35,140 | 5,110   | 62,960 | 13,510    | 1,390  | 5,690    | 17,990  |
| CAL YR 1973   | TOTAL 234,820.32 |        | MEAN 643 |        | MAX 11,700 |        | MIN .92 |        | CFSM 1.55 |        | IN 21.10 |         |
| WTR YR 1974   | TOTAL 144,265.48 |        | MEAN 395 |        | MAX 6,890  |        | MIN .24 |        | CFSM .95  |        | IN 12.96 |         |
| AC-FT 465,800 |                  |        |          |        |            |        |         |        |           |        |          |         |
| AC-FT 286,200 |                  |        |          |        |            |        |         |        |           |        |          |         |

PEAK DISCHARGE (BASE, 6,000 FT<sup>3</sup>/S)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|------|------|-------|-----------|------|------|-------|-----------|
| 12-4 | 2145 | 23.09 | 7,260     | 5-20 | 0100 | 23.13 | 7,420     |
| 3-11 | 0645 | 22.92 | 6,600     |      |      |       |           |



06921740 Brushy Creek near Blainstown, Mo.

LOCATION.--Lat 38°31'42", long 94°00'37", in NE¼SE¼ sec.9, T.43 N., R.28 W., Henry County, on left bank, upstream from culvert under State Highway B, 3 mi (4.8 km) upstream from mouth, and 3.5 mi (5.6 km) southwest of Blainstown.

DRAINAGE AREA.--1.15 mi<sup>2</sup> (2.98 km<sup>2</sup>).

PERIOD OF RECORD.--October 1960 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 790 ft (240.8 m) from topographic map.

AVERAGE DISCHARGE.--14 years, 1.18 ft<sup>3</sup>/s (0.033 m<sup>3</sup>/s), 13.93 in/yr (354 mm/yr), 855 acre-ft/yr (1.05 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 291 ft<sup>3</sup>/s (2.24 m<sup>3</sup>/s) Aug. 28 (gage height, 4.86 ft or

1.481 m); no flow on many days.

Period of record: Maximum discharge, 1,270 ft<sup>3</sup>/s (40 m<sup>3</sup>/s) May 5, 1961 (gage height, 9.90 ft or 3.018 m); no flow at times each year.

REMARKS.--Records poor.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT   | NOV   | DEC    | JAN    | FEB   | MAR    | APR   | MAY   | JUN   | JUL  | AUG   | SEP   |
|-------|-------|-------|--------|--------|-------|--------|-------|-------|-------|------|-------|-------|
| 1     | .10   | .10   | .10    | 0      | .60   | .30    | 0     | .10   | 0     | 0    | 0     | 36    |
| 2     | 0     | .10   | .10    | 0      | .40   | .30    | 0     | .10   | 0     | 0    | 0     | 25    |
| 3     | 6.7   | .10   | 5.5    | 0      | .30   | .20    | 0     | 0     | 0     | 0    | 0     | .80   |
| 4     | 1.0   | .10   | .95    | 0      | .20   | .30    | 0     | 0     | 0     | 1.0  | 0     | .10   |
| 5     | .10   | .10   | 1.9    | 0      | .30   | .10    | 0     | 0     | 0     | .10  | 0     | .10   |
| 6     | 8.1   | .10   | .50    | 0      | 1.0   | .10    | 0     | 0     | .20   | 0    | 0     | 0     |
| 7     | .40   | .10   | .20    | 0      | .20   | .10    | .10   | 0     | 3.0   | 0    | 0     | 0     |
| 8     | .10   | .10   | .10    | 0      | .20   | 7.1    | .40   | 0     | 1.0   | 0    | 0     | 0     |
| 9     | .10   | .10   | .10    | 0      | .20   | .20    | .10   | 0     | .10   | 0    | .60   | 0     |
| 10    | .10   | .10   | .10    | 0      | .20   | 121    | .10   | .60   | .10   | 0    | 0     | 0     |
| 11    | .50   | 0     | .10    | 0      | .10   | 5.8    | .10   | .30   | .20   | 0    | 0     | 0     |
| 12    | .40   | 0     | .10    | 0      | .20   | 1.0    | .10   | .10   | .10   | 0    | 0     | 0     |
| 13    | .40   | 0     | .10    | 0      | .10   | .40    | 0     | 0     | .10   | 0    | 0     | 0     |
| 14    | .10   | 0     | .10    | 0      | .10   | .30    | 0     | 15    | .10   | 0    | 0     | 0     |
| 15    | .10   | .10   | .10    | .10    | .10   | .30    | 0     | .30   | 0     | 0    | 0     | 0     |
| 16    | .10   | 0     | 0      | 10     | .10   | .10    | 0     | .10   | 0     | 0    | 0     | 0     |
| 17    | .10   | 0     | 0      | 20     | .10   | .10    | 0     | .10   | 0     | 0    | 0     | 0     |
| 18    | 0     | 0     | 0      | 15     | 27    | .10    | 0     | 2.0   | 0     | 0    | 0     | 0     |
| 19    | 0     | .10   | .10    | 26     | 4.6   | .10    | 0     | 1.0   | 0     | 0    | 0     | 0     |
| 20    | 0     | 49    | .30    | 6.2    | 1.0   | .10    | .10   | .10   | 0     | 0    | 0     | 0     |
| 21    | 0     | 1.5   | .40    | 2.2    | 25    | .20    | .10   | .10   | 0     | 0    | 0     | 0     |
| 22    | 0     | .50   | .10    | 25     | 4.2   | .10    | 0     | .10   | 0     | 0    | 0     | 0     |
| 23    | 0     | .40   | 1.3    | 1.7    | 1.0   | .20    | 0     | .10   | 0     | 0    | 1.2   | 0     |
| 24    | 0     | 16    | 11     | 1.0    | .60   | .20    | 0     | 0     | 0     | 0    | 0     | 0     |
| 25    | 0     | .60   | 2.2    | .60    | .50   | .20    | 0     | 0     | 0     | 0    | 0     | 0     |
| 26    | .10   | .40   | 1.3    | 23     | 1.1   | .10    | 0     | 0     | 0     | 0    | 0     | 0     |
| 27    | 32    | .80   | .30    | 2.2    | .60   | .10    | 0     | 0     | 0     | 0    | 9.5   | 0     |
| 28    | .50   | 1.1   | .30    | 15     | .30   | .10    | 0     | 0     | 0     | 0    | 33    | .10   |
| 29    | .30   | .30   | .10    | 1.9    | ----- | .10    | .80   | 0     | 0     | 0    | .50   | 0     |
| 30    | .20   | .20   | .10    | 1.1    | ----- | 0      | .20   | 0     | 0     | 0    | 0     | 0     |
| 31    | .10   | ----- | 0      | .60    | ----- | 0      | ----- | 0     | ----- | 0    | 11    | ----- |
| TOTAL | 51.60 | 72.00 | 121.60 | 151.60 | 70.30 | 159.10 | 2.10  | 20.10 | 4.90  | 1.10 | 55.80 | 62.10 |
| MEAN  | 1.66  | 2.40  | 3.92   | 4.89   | 2.51  | 5.13   | .070  | .65   | .16   | .036 | 1.80  | 2.07  |
| MAX   | 32    | 49    | 95     | 26     | 27    | 121    | .80   | 15    | 3.0   | 1.0  | 33    | 36    |
| MIN   | 0     | 0     | 0      | 0      | .10   | 0      | 0     | 0     | 0     | 0    | 0     | 0     |
| CFSM  | 1.44  | 2.09  | 3.41   | 4.25   | 2.18  | 4.46   | .06   | .57   | .14   | .03  | 1.57  | 1.80  |
| IN.   | 1.67  | 2.33  | 3.93   | 4.90   | 2.27  | 5.15   | .07   | .65   | .16   | .04  | 1.81  | 2.01  |
| AC-FT | 102   | 143   | 241    | 301    | 139   | 316    | 4.2   | 40    | 9.7   | 2.2  | 111   | 123   |

CAL YR 1973 TOTAL 1,100.50 MEAN 3.02 MAX 122 MIN 0 CFSM 2.63 IN 35.60 AC-FT 2,180  
WTR YR 1974 TOTAL 772.30 MEAN 2.12 MAX 121 MIN 0 CFSM 1.84 IN 24.98 AC-FT 1,530

PEAK DISCHARGE (BASE, 200 FT<sup>3</sup>/S)

| DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|------|------|-------|-----------|
| 10-27 | 0100 | 4.40  | 243       | 8-28 | 0630 | 4.86  | 291       |
| 11-20 | 1500 | 4.16  | 221       | 8-31 | 1700 | 3.98  | 200       |
| 12-4  | 0400 | 4.80  | 288       |      |      |       |           |

06922800 Big Buffalo Creek near Stover, Mo.

LOCATION.--Lat 38°20'04", long 93°05'04", NE¼SE¼SW¼ sec.12, T.41 N., R.20 W., Benton County, on right bank, 1.5 mi (2.4 km) southwest of Boylers Mill, 3 mi (4.8 km) upstream from mouth, and 9 mi (14.5 km) southwest of Stover.

DRAINAGE AREA.--24.2 mi<sup>2</sup> (62.7 km<sup>2</sup>).

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

GAGE.--Water-stage recorder. Datum of gage is 716.6 ft (218.420 m) above mean sea level (levels by Missouri Conservation Commission).

AVERAGE DISCHARGE.--9 years, 21.6 ft<sup>3</sup>/s (0.61 m<sup>3</sup>/s), 12.12 in/yr (308 mm/yr), 15,650 acre-ft/yr (19.3 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 1,650 ft<sup>3</sup>/s (46.7 m<sup>3</sup>/s) Mar. 10 (gage height, 6.30 ft or 1.920 m); minimum daily, 1.6 ft<sup>3</sup>/s (0.045 m<sup>3</sup>/s) July 31, Aug. 1 (gage height, 0.73 ft or 0.223 m).  
Period of record: Maximum discharge, 12,400 ft<sup>3</sup>/s (351 m<sup>3</sup>/s) computation of peak flow over roadway, Sept. 4, 1965 (gage height, 10.1 ft or 3.08 m); minimum, 1.2 ft<sup>3</sup>/s (0.034 m<sup>3</sup>/s) Sept. 9, 1967.

REMARKS.--Records fair except Mar. 8 to Aug. 28, which are poor.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT   | NOV   | DEC   | JAN   | FEB   | MAR   | APR   | MAY   | JUN   | JUL   | AUG   | SEP   |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1     | 9.2   | 6.8   | 11    | 12    | 27    | 17    | 30    | 80    | 20    | 8.0   | 1.6   | 83    |
| 2     | 6.5   | 6.5   | 9.2   | 12    | 23    | 17    | 20    | 100   | 20    | 7.0   | 40    | 51    |
| 3     | 6.0   | 6.5   | 8.9   | 10    | 19    | 15    | 20    | 80    | 20    | 7.0   | 10    | 36    |
| 4     | 19    | 6.5   | 171   | 9.6   | 16    | 14    | 20    | 70    | 20    | 50    | 9.0   | 21    |
| 5     | 12    | 6.3   | 57    | 8.9   | 14    | 13    | 20    | 60    | 20    | 20    | 8.0   | 14    |
| 6     | 8.9   | 6.3   | 30    | 8.5   | 18    | 12    | 20    | 40    | 50    | 10    | 7.0   | 9.9   |
| 7     | 8.5   | 6.5   | 20    | 8.5   | 19    | 11    | 40    | 30    | 150   | 9.0   | 6.0   | 8.2   |
| 8     | 7.5   | 6.5   | 16    | 8.5   | 17    | 10    | 150   | 30    | 70    | 9.0   | 10    | 7.2   |
| 9     | 6.8   | 6.3   | 14    | 8.5   | 16    | 30    | 50    | 40    | 80    | 9.0   | 20    | 6.8   |
| 10    | 7.9   | 6.0   | 11    | 8.5   | 14    | 400   | 30    | 40    | 60    | 8.0   | 50    | 6.5   |
| 11    | 7.5   | 6.0   | 9.6   | 8.5   | 13    | 200   | 40    | 50    | 50    | 8.0   | 20    | 6.5   |
| 12    | 11    | 6.0   | 9.6   | 8.5   | 12    | 100   | 40    | 70    | 40    | 8.0   | 15    | 6.5   |
| 13    | 38    | 6.0   | 8.9   | 8.2   | 11    | 80    | 30    | 60    | 30    | 7.0   | 10    | 6.0   |
| 14    | 17    | 6.3   | 8.5   | 7.9   | 10    | 50    | 20    | 200   | 20    | 7.0   | 15    | 5.5   |
| 15    | 11    | 7.2   | 7.9   | 8.2   | 9.9   | 60    | 20    | 100   | 20    | 7.0   | 10    | 5.3   |
| 16    | 8.9   | 6.5   | 7.5   | 18    | 9.6   | 50    | 20    | 60    | 20    | 6.0   | 10    | 5.5   |
| 17    | 8.2   | 6.0   | 7.2   | 59    | 9.2   | 40    | 30    | 30    | 15    | 6.0   | 15    | 5.5   |
| 18    | 7.5   | 5.5   | 6.8   | 97    | 23    | 40    | 20    | 200   | 10    | 6.0   | 20    | 5.1   |
| 19    | 7.2   | 5.5   | 14    | 60    | 210   | 30    | 20    | 80    | 10    | 6.0   | 15    | 4.6   |
| 20    | 6.5   | 7.9   | 15    | 52    | 64    | 30    | 20    | 50    | 10    | 6.0   | 10    | 4.8   |
| 21    | 6.5   | 13    | 13    | 36    | 54    | 100   | 20    | 40    | 10    | 5.0   | 10    | 4.6   |
| 22    | 6.5   | 9.6   | 12    | 42    | 58    | 50    | 40    | 30    | 10    | 5.0   | 10    | 4.6   |
| 23    | 6.5   | 8.2   | 13    | 45    | 48    | 30    | 40    | 30    | 9.0   | 5.0   | 60    | 4.3   |
| 24    | 6.3   | 13    | 54    | 32    | 36    | 70    | 30    | 20    | 9.0   | 5.0   | 20    | 4.3   |
| 25    | 6.3   | 67    | 39    | 25    | 30    | 40    | 20    | 20    | 9.0   | 4.0   | 15    | 4.3   |
| 26    | 6.5   | 33    | 27    | 43    | 24    | 30    | 20    | 20    | 9.0   | 4.0   | 10    | 4.1   |
| 27    | 9.6   | 23    | 21    | 89    | 22    | 20    | 20    | 30    | 9.0   | 3.0   | 10    | 3.8   |
| 28    | 8.2   | 19    | 18    | 79    | 19    | 20    | 20    | 20    | 8.0   | 3.0   | 200   | 5.1   |
| 29    | 7.5   | 16    | 16    | 71    | ----- | 20    | 20    | 20    | 8.0   | 2.0   | 20    | 5.5   |
| 30    | 6.8   | 13    | 14    | 48    | ----- | 30    | 100   | 20    | 8.0   | 2.0   | 11    | 4.8   |
| 31    | 7.2   | ----- | 14    | 36    | ----- | 40    | ----- | 20    | ----- | 1.6   | 16    | ----- |
| TOTAL | 293.0 | 341.9 | 684.1 | 968.3 | 845.7 | 1,669 | 990   | 1,740 | 824.0 | 243.6 | 683.6 | 344.3 |
| MEAN  | 9.45  | 11.4  | 22.1  | 31.2  | 30.2  | 53.8  | 33.0  | 56.1  | 27.5  | 7.86  | 22.1  | 11.5  |
| MAX   | 38    | 67    | 171   | 97    | 210   | 400   | 150   | 200   | 150   | 50    | 200   | 83    |
| MIN   | 6.0   | 5.5   | 6.8   | 7.9   | 9.2   | 10    | 20    | 20    | 8.0   | 1.6   | 1.6   | 3.8   |
| CFSM  | .39   | .47   | .91   | 1.29  | 1.25  | 2.22  | 1.36  | 2.32  | 1.14  | .32   | .91   | .48   |
| IN.   | .45   | .53   | 1.05  | 1.49  | 1.30  | 2.57  | 1.52  | 2.67  | 1.27  | .37   | 1.05  | .53   |
| AC-FT | 581   | 678   | 1,360 | 1,920 | 1,680 | 3,310 | 1,960 | 3,450 | 1,630 | 483   | 1,360 | 683   |

CAL YR 1973 TOTAL 11,758.2 MEAN 32.2 MAX 533 MIN 2.6 CFSM 1.33 IN 18.07 AC-FT 23,320  
WTR YR 1974 TOTAL 9,627.5 MEAN 26.4 MAX 400 MIN 1.6 CFSM 1.09 IN 14.80 AC-FT 19,100

PEAK DISCHARGE (BASE, 1,000 FT<sup>3</sup>/s).--March 10 (Time Unknown) 6.30 ft<sup>3</sup>/s (1,650 ft).

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, on left bank 300 ft (91 m) downstream from spring outlet, 1.5 mi (2.4 km) upstream from Niangua River and at Bennett Springs.

PERIOD OF RECORD.--September 1916 to March 1920, October 1928 to September 1941, October 1965 to current year. Prior to March 1920 and October 1939 to September 1941 monthly discharge only published in WSP 1310. Occasional discharge measurements 1923, 1954, 1964, 1965.

GAGE.--Nonrecording gage. Datum of gage 864.71 ft (263.564 m) above mean sea level. Sept. 1916 to Mar. 1920, in the vicinity, datum unknown; Oct. 17, 1928, to Apr. 11, 1934, at site 1,780 ft (543 m) downstream at datum 2.30 ft (0.70 m) lower; Apr. 12 to Dec. 13, 1934, nonrecording gage, and Dec. 14, 1934, to Sept. 17, 1941, water-stage recorder at present site and datum.

AVERAGE DISCHARGE.--25 years (1916-19, 1928-41, 1965-74), 157 ft<sup>3</sup>/s (4.45 m<sup>3</sup>/s), 113,700 acre-ft/yr (140 hm<sup>3</sup>/s).

EXTREMES.--Current year: Maximum discharge, 2,950 ft<sup>3</sup>/s (83.5 m<sup>3</sup>/s) Mar. 10 (gage height, 4.80 ft or 1.463 m, from floodmark); minimum observed, 73 ft<sup>3</sup>/s (2.07 m<sup>3</sup>/s) Jan. 12-15; minimum observed gage height, 0.60 ft (0.183 m) Nov. 8, 9, 11, 17-19.

Period of record: Maximum discharge, 9,000 ft<sup>3</sup>/s (255 m<sup>3</sup>/s) Nov. 1, 1973 (gage height, 9.14 ft or 2.786 m, from floodmark) includes about 7,200 ft<sup>3</sup>/s (204 m<sup>3</sup>/s) from Spring Creek, by indirect measurement of peak flow over dam; minimum, about 55 ft<sup>3</sup>/s (1.6 m<sup>3</sup>/s) Nov. 13, 1934.

REMARKS.--Records poor. Occasional runoff from drainage area of 42.4 mi<sup>2</sup> (109.8 km<sup>2</sup>) included in records.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT   | NOV    | DEC   | JAN    | FEB    | MAR    | APR    | MAY    | JUN    | JUL   | AUG   | SEP   |
|-------|-------|--------|-------|--------|--------|--------|--------|--------|--------|-------|-------|-------|
| 1     | 96    | 122    | 192   | 95     | 330    | 242    | 300    | 192    | 187    | 152   | 134   | 205   |
| 2     | 96    | 119    | 190   | 95     | 300    | 242    | 285    | 385    | 180    | 150   | 134   | 218   |
| 3     | 101   | 108    | 190   | 90     | 255    | 242    | 270    | 480    | 180    | 148   | 134   | 192   |
| 4     | 101   | 106    | 200   | 90     | 255    | 218    | 270    | 430    | 180    | 168   | 132   | 178   |
| 5     | 122   | 102    | 240   | 87     | 255    | 218    | 255    | 345    | 180    | 160   | 132   | 166   |
| 6     | 101   | 97     | 242   | 85     | 242    | 205    | 242    | 330    | 180    | 156   | 132   | 160   |
| 7     | 96    | 94     | 205   | 85     | 230    | 192    | 242    | 315    | 285    | 150   | 134   | 146   |
| 8     | 96    | 91     | 180   | 80     | 218    | 192    | 242    | 300    | 255    | 145   | 132   | 138   |
| 9     | 94    | 91     | 160   | 77     | 218    | 205    | 242    | 270    | 255    | 136   | 132   | 134   |
| 10    | 94    | 91     | 150   | 75     | 205    | 2,270  | 242    | 255    | 242    | 156   | 136   | 134   |
| 11    | 96    | 91     | 132   | 75     | 205    | 1,670  | 230    | 255    | 218    | 156   | 134   | 130   |
| 12    | 166   | 93     | 124   | 73     | 192    | 1,170  | 230    | 270    | 218    | 152   | 132   | 124   |
| 13    | 101   | 94     | 124   | 73     | 192    | 785    | 230    | 230    | 205    | 150   | 130   | 121   |
| 14    | 155   | 94     | 106   | 73     | 176    | 682    | 230    | 285    | 192    | 150   | 130   | 118   |
| 15    | 140   | 94     | 102   | 73     | 172    | 682    | 230    | 345    | 192    | 150   | 126   | 116   |
| 16    | 119   | 93     | 100   | 94     | 168    | 682    | 218    | 408    | 180    | 148   | 142   | 116   |
| 17    | 115   | 91     | 100   | 330    | 168    | 590    | 205    | 385    | 180    | 146   | 138   | 116   |
| 18    | 105   | 91     | 100   | 330    | 168    | 535    | 205    | 315    | 176    | 144   | 142   | 116   |
| 19    | 105   | 91     | 100   | 315    | 508    | 480    | 205    | 300    | 172    | 142   | 138   | 116   |
| 20    | 101   | 93     | 125   | 300    | 385    | 430    | 192    | 290    | 170    | 142   | 135   | 116   |
| 21    | 93    | 101    | 120   | 285    | 365    | 385    | 192    | 275    | 166    | 140   | 132   | 116   |
| 22    | 98    | 98     | 105   | 285    | 345    | 385    | 192    | 261    | 172    | 140   | 132   | 111   |
| 23    | 96    | 96     | 100   | 255    | 345    | 365    | 192    | 250    | 164    | 138   | 132   | 111   |
| 24    | 98    | 154    | 100   | 242    | 310    | 330    | 180    | 230    | 162    | 136   | 134   | 109   |
| 25    | 94    | 872    | 100   | 242    | 285    | 345    | 180    | 218    | 160    | 148   | 130   | 109   |
| 26    | 94    | 682    | 100   | 242    | 278    | 345    | 180    | 218    | 152    | 148   | 130   | 109   |
| 27    | 130   | 430    | 100   | 408    | 270    | 330    | 180    | 205    | 154    | 142   | 130   | 111   |
| 28    | 122   | 345    | 100   | 430    | 255    | 330    | 180    | 205    | 152    | 140   | 142   | 124   |
| 29    | 117   | 255    | 100   | 455    | -----  | 330    | 180    | 205    | 152    | 138   | 218   | 144   |
| 30    | 110   | 230    | 100   | 385    | -----  | 315    | 205    | 200    | 152    | 136   | 180   | 130   |
| 31    | 126   | -----  | 100   | 345    | -----  | 300    | -----  | 193    | -----  | 134   | 158   | ----- |
| TOTAL | 3,378 | 5,209  | 4,187 | 6,169  | 7,295  | 15,692 | 6,626  | 8,845  | 5,613  | 4,541 | 4,297 | 4,034 |
| MEAN  | 109   | 174    | 135   | 199    | 261    | 506    | 221    | 285    | 187    | 146   | 139   | 134   |
| MAX   | 166   | 872    | 242   | 455    | 508    | 2,270  | 300    | 480    | 285    | 168   | 218   | 218   |
| MIN   | 93    | 91     | 100   | 73     | 168    | 192    | 180    | 192    | 152    | 134   | 126   | 109   |
| AC-FT | 6,700 | 10,330 | 8,300 | 12,240 | 14,470 | 31,130 | 13,140 | 17,540 | 11,130 | 9,010 | 8,520 | 8,000 |

CAL YR 1973 TOTAL 93,716 MEAN 257 MAX 1,850 MIN 91 AC-FT 185,900  
WTR YR 1974 TOTAL 75,886 MEAN 208 MAX 2,270 MIN 73 AC-FT 150,500

06925200 Starks Creek at Preston, Mo.

LOCATION.--Lat 37°56'27", long 93°11'48", in SW¼NW¼ sec.24, T.37 N., R.21 W., Hickory County, in right bank on downstream side of bridge on U.S. Highway 54, 0.6 mi (1.0 km) east of junction of U.S. Highways 65 and 54 at Preston.

DRAINAGE AREA.--4.18 mi<sup>2</sup> (10.8 km<sup>2</sup>).

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

GAGE.--Water-stage recorder. Altitude of gage is 980 ft (298.7 m) from topographic map.

AVERAGE DISCHARGE.--18 years, 3.72 ft<sup>3</sup>/s (0.105 m<sup>3</sup>/s), 12.10 in/yr (307 mm/yr), 2,700 acre-ft/yr (3.33 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 799 ft<sup>3</sup>/s (22.6 m<sup>3</sup>/s) June 6 (gage height, 7.85 ft or 2.393 m); no flow on many days.

Period of record: Maximum discharge, 1,900 ft<sup>3</sup>/s (53.8 m<sup>3</sup>/s) June 23, 1965 (gage height, 10.57 ft or 3.222 m); no flow at times each year.

REMARKS.--Records fair.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT    | NOV    | DEC    | JAN   | FEB   | MAR   | APR   | MAY    | JUN    | JUL  | AUG   | SEP   |
|-------|--------|--------|--------|-------|-------|-------|-------|--------|--------|------|-------|-------|
| 1     | .30    | 2.1    | 2.1    | 1.7   | 4.3   | 1.7   | 3.3   | .70    | .70    | .07  | 0     | 20    |
| 2     | .10    | 1.5    | 2.0    | 1.8   | 3.7   | 1.7   | 2.9   | 1.5    | .64    | .04  | 0     | 29    |
| 3     | 0      | 1.2    | 5.9    | 1.6   | 3.4   | 1.7   | 2.7   | .94    | .58    | .03  | 0     | 2.7   |
| 4     | 9.6    | .80    | 106    | 1.7   | 3.2   | 1.6   | 2.5   | .77    | .64    | .12  | 0     | .80   |
| 5     | .60    | 1.1    | 6.7    | 1.6   | 3.1   | 1.6   | 2.3   | .73    | .70    | .05  | 0     | .41   |
| 6     | .50    | 1.1    | 3.1    | 1.6   | 2.7   | 1.6   | 2.2   | .69    | 140    | .03  | 0     | .31   |
| 7     | .30    | 1.2    | 2.4    | 1.0   | 2.1   | 1.5   | 2.2   | .67    | 142    | .02  | 0     | .25   |
| 8     | .30    | 1.2    | 2.1    | 1.4   | 2.0   | 1.5   | 4.2   | 1.0    | 5.1    | 0    | 0     | .20   |
| 9     | .20    | 1.1    | 2.0    | 2.0   | 1.9   | 11    | 2.4   | .77    | 32     | 0    | .13   | .17   |
| 10    | .20    | 1.0    | 1.6    | 1.7   | 1.9   | 280   | 2.2   | .75    | 2.6    | 0    | .08   | .15   |
| 11    | .20    | 1.0    | 1.6    | 1.6   | 1.7   | 78    | 4.3   | .69    | 3.4    | 0    | .03   | .16   |
| 12    | 29     | .90    | 1.6    | 1.5   | 1.5   | 7.2   | 3.1   | .66    | 2.3    | 0    | 0     | .15   |
| 13    | 16     | .90    | 1.2    | 1.4   | 1.4   | 5.0   | 2.1   | .61    | 1.4    | 0    | 0     | .12   |
| 14    | 1.6    | .90    | .90    | 1.6   | 1.4   | 4.6   | 1.9   | 49     | 1.0    | 0    | 0     | .11   |
| 15    | .60    | 1.3    | 1.0    | 5.6   | 1.3   | 21    | 1.7   | 7.3    | .75    | 0    | 0     | .11   |
| 16    | .60    | 1.2    | .80    | 86    | 1.3   | 6.4   | 1.7   | 1.9    | .55    | 0    | 0     | .23   |
| 17    | .40    | 1.2    | .80    | 37    | 1.2   | 4.1   | 1.6   | 27     | .45    | 0    | .01   | .23   |
| 18    | .40    | 1.2    | .80    | 12    | 37    | 4.1   | 1.5   | 7.2    | .40    | 0    | .01   | .13   |
| 19    | .30    | 1.2    | 48     | 5.6   | 84    | 4.1   | 1.5   | 3.0    | .36    | 0    | 0     | .10   |
| 20    | .30    | 6.6    | 4.8    | 9.9   | 4.5   | 3.9   | 1.3   | 1.7    | .35    | 0    | 0     | .11   |
| 21    | .30    | 5.8    | 3.0    | 5.3   | 15    | 4.3   | 1.4   | 1.3    | .26    | 0    | 0     | .09   |
| 22    | .20    | 3.2    | 2.5    | 42    | 9.5   | 4.7   | 1.3   | 1.2    | .21    | 0    | .01   | .07   |
| 23    | .20    | 2.6    | 65     | 9.9   | 3.6   | 4.2   | 1.1   | 1.1    | .15    | 0    | .25   | .06   |
| 24    | .20    | 51     | 50     | 5.0   | 2.8   | 4.5   | 1.1   | 1.1    | .12    | 0    | .06   | .06   |
| 25    | .20    | 39     | 4.8    | 4.3   | 2.5   | 17    | .96   | 1.0    | .10    | 0    | .03   | .06   |
| 26    | 25     | 25     | 3.4    | 91    | 2.5   | 8.9   | .96   | 1.2    | .10    | 0    | .01   | .06   |
| 27    | 20     | 4.5    | 2.8    | 13    | 2.1   | 4.7   | .95   | 1.1    | .09    | 0    | 0     | .05   |
| 28    | 3.2    | 4.3    | 2.2    | 79    | 1.9   | 9.0   | .87   | .94    | .09    | 0    | 8.3   | 17    |
| 29    | 3.0    | 3.1    | 1.7    | 12    | ----- | 6.2   | .87   | .87    | .08    | 0    | 1.0   | 1.2   |
| 30    | 2.4    | 2.4    | 1.8    | 6.1   | ----- | 3.9   | .87   | .83    | .07    | 0    | .12   | .28   |
| 31    | 3.0    | -----  | 1.7    | 4.6   | ----- | 3.5   | ----- | .70    | -----  | 0    | .44   | ----- |
| TOTAL | 119.20 | 169.60 | 334.30 | 450.5 | 203.5 | 513.2 | 57.98 | 118.92 | 337.19 | .36  | 10.48 | 74.37 |
| MEAN  | 3.85   | 5.65   | 10.8   | 14.5  | 7.27  | 16.6  | 1.93  | 3.84   | 11.2   | .012 | .34   | 2.48  |
| MAX   | 29     | 51     | 106    | 91    | 84    | 280   | 4.3   | 49     | 142    | .12  | 8.3   | 29    |
| MIN   | 0      | .80    | .80    | 1.0   | 1.2   | 1.5   | .87   | .61    | .07    | 0    | 0     | .05   |
| CFSM  | .92    | 1.35   | 2.58   | 3.47  | 1.74  | 3.97  | .46   | .92    | 2.68   | .003 | .08   | .59   |
| IN-   | 1.06   | 1.51   | 2.98   | 4.01  | 1.81  | 4.57  | .52   | 1.06   | 3.00   | .003 | .09   | .66   |
| AC-FT | 236    | 336    | 663    | 894   | 404   | 1,020 | 115   | 236    | 669    | .7   | 21    | 148   |

CAL YR 1973 TOTAL 3,422.50 MEAN 9.38 MAX 233 MIN 0 CFSM 2.24 IN 30.46 AC-FT 6,790  
WTR YR 1974 TOTAL 2,389.60 MEAN 6.55 MAX 280 MIN 0 CFSM 1.57 IN 21.27 AC-FT 4,740

PEAK DISCHARGE (BASE, 200 FT<sup>3</sup>/S)

| DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|------|------|-------|-----------|
| 10-12 | 2145 | 5.26  | 292       | 1-16 | 1645 | 5.24  | 271       |
| 10-26 | 1645 | 5.07  | 259       | 1-26 | 1400 | 5.26  | 274       |
| 11-24 | 2100 | 5.02  | 254       | 2-19 | 0200 | 5.88  | 387       |
| 12-4  | 0300 | 5.00  | 250       | 3-10 | 0200 | 6.40  | 490       |
| 12-19 | 0445 | 4.98  | 227       | 6-6  | 2330 | 7.85  | 799       |

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, at left end of powerhouse section near left end of Bagnell Dam on Osage River, 2 mi (3.2 km) southwest of Bagnell, and at mile 81.7 (131.5 km).

DRAINAGE AREA--14,000 mi<sup>2</sup> (36,000 km<sup>2</sup>), approximately.

PERIOD OF RECORD--April 1931 to current year. Gage-height records collected at same site since 1932 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 mean sea level, adjustment of 1912. To obtain datum of 1929 mean sea level, subtract 0.88 ft (0.286 m).

EXTREMES--Current year: Maximum contents, 1,258,000 acre-ft (1.55 km<sup>3</sup>) Mar. 12-13 (elevation, 660.73 ft or 201.391 m); minimum, 887,000 acre-ft (1.09 km<sup>3</sup>) Jan. 16 (elevation, 653.82 ft or 199.284 m).

Period of record: Maximum contents, 1,527,000 acre-ft (1.88 km<sup>3</sup>) May 22, 1943 (elevation, 665.45 ft or 202.829 m); minimum, 322,100 acre-ft (397 hm<sup>3</sup>) Feb. 13, 1948 (elevation, 639.95 ft or 195.057 m).

REMARKS--Lake is formed by concrete gravity dam. Spillway is equipped with 12 taintor gates 34 ft (10 m) wide by 22 ft (6.7 m) high. Storage began in 1931. Usuable capacity 1,218,000 acre-ft (1.50 km<sup>3</sup>) between elevations 630.00 ft or 192.024 m (maximum draw-down) and 660.00 ft or 201.168 m (top of gates). Dead storage, 708,800 acre-ft (874 hm<sup>3</sup>). Figures given herein are usable contents. Water is used for generating electricity. Elevations given herein are referred to mean sea level, adjustment of 1912.

COOPERATION--Records furnished by Union Electric Company of Missouri.

## MONTH-END ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

|                     | Elevation<br>(feet) | Contents<br>(acre-feet) | Change in contents<br>(acre-feet) |
|---------------------|---------------------|-------------------------|-----------------------------------|
| Sept. 30 .....      | 657.80              | 1,093,000               | ---                               |
| Oct. 31 .....       | 658.57              | 1,136,000               | + 43,000                          |
| Nov. 30 .....       | 659.28              | 1,177,000               | + 41,000                          |
| Dec. 31 .....       | 659.78              | 1,206,000               | + 29,000                          |
| CAL YR 1973 .....   | ---                 | ---                     | + 92,000                          |
| Jan. 31 .....       | 660.03              | 1,220,000               | + 14,000                          |
| Feb. 28 .....       | 656.28              | 1,012,000               | -208,000                          |
| Mar. 31 .....       | 655.80              | 987,000                 | - 25,000                          |
| Apr. 30 .....       | 654.90              | 940,600                 | - 46,400                          |
| May 31 .....        | 656.08              | 1,001,000               | + 60,400                          |
| June 30 .....       | 658.72              | 1,144,000               | +143,000                          |
| July 31 .....       | 655.59              | 976,200                 | -167,800                          |
| Aug. 31 .....       | 657.06              | 1,053,000               | + 76,800                          |
| Sept. 30 .....      | 658.25              | 1,119,000               | + 66,000                          |
| WATER YR 1974 ..... | ---                 | ---                     | + 26,000                          |



06926000 Osage River near Bagnell, Mo.

LOCATION.--Lat 38°12'27", long 92°36'20", in N4SE4 sec.21, T.40 N., R.15 W., Miller County, on left bank 1.5 mi (2.4 km) upstream from Bagnell, 3 mi (4.8 km) downstream from hydroelectric plant of Union Electric Company of Missouri, and at mile 78.5 (126.3 km).

DRAINAGE AREA.--14,000 mi<sup>2</sup> (36,300 km<sup>2</sup>), approximately.

PERIOD OF RECORD.--October 1880 to current year. Monthly discharge only for some periods published in WSP 1310. Gage-height records collected in this vicinity 1880-1931 are contained in reports of Missouri River Commission or National Weather Service.

GAGE.--Water-stage recorder. Datum of gage is 548.87 ft (167.296 m) above mean sea level. 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 (4.8 km) upstream from base gage.

AVERAGE DISCHARGE.--94 years, 9,664 ft<sup>3</sup>/s (273.7 m<sup>3</sup>/s), 7,002,000 acre-ft/yr (8,633 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 91,000 ft<sup>3</sup>/s (2,580 m<sup>3</sup>/s) Mar. 13 (gage height, 29.78 ft or 9.077 m); minimum daily, 356 ft<sup>3</sup>/s (10.08 m<sup>3</sup>/s) Aug. 9 (gage height, 0.85 ft or 0.259 m).  
Period of record: Maximum discharge, 220,000 ft<sup>3</sup>/s (6,230 m<sup>3</sup>/s) May 19, 1943 (gage height, 48.8 ft or 14.87 m); minimum, 183 ft<sup>3</sup>/s (5.18 m<sup>3</sup>/s) Sept. 9, 1969; minimum daily discharge, 220 ft<sup>3</sup>/s (6.23 m<sup>3</sup>/s) Dec. 12, 1917.

Maximum stage known prior to 1943, 43.1 ft (13.14 m) in June 1844 (discharge, 164,000 ft<sup>3</sup>/s or 4,640 m<sup>3</sup>/s).

REMARKS.--Records good except those below 2,000 ft<sup>3</sup>/s (56.6 m<sup>3</sup>/s), which are poor. Flow regulated by Lake of the Ozarks.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT     | NOV     | DEC     | JAN     | FEB     | MAR      | APR     | MAY     | JUN     | JUL     | AUG     | SEP     |
|-------|---------|---------|---------|---------|---------|----------|---------|---------|---------|---------|---------|---------|
| 1     | 13,600  | 13,900  | 19,800  | 23,400  | 34,400  | 20,500   | 13,400  | 7,700   | 680     | 3,430   | 423     | 17,900  |
| 2     | 14,900  | 14,900  | 23,000  | 21,100  | 33,000  | 9,620    | 19,500  | 13,600  | 445     | 3,950   | 430     | 24,700  |
| 3     | 18,300  | 1,200   | 11,800  | 13,600  | 32,700  | 1,430    | 16,300  | 11,600  | 1,400   | 3,580   | 405     | 21,800  |
| 4     | 25,800  | 640     | 16,300  | 25,800  | 32,700  | 7,040    | 17,200  | 14,700  | 1,820   | 861     | 415     | 24,900  |
| 5     | 24,400  | 8,180   | 35,500  | 8,180   | 24,100  | 11,300   | 16,000  | 6,390   | 3,180   | 503     | 419     | 25,500  |
| 6     | 20,800  | 11,800  | 35,500  | 642     | 11,300  | 14,700   | 7,260   | 9,860   | 5,390   | 686     | 412     | 28,000  |
| 7     | 20,500  | 10,600  | 35,500  | 2,700   | 15,100  | 14,700   | 5,370   | 8,660   | 20,100  | 3,950   | 423     | 27,800  |
| 8     | 26,100  | 10,800  | 35,500  | 23,400  | 18,900  | 12,600   | 14,700  | 5,970   | 44,700  | 9,620   | 461     | 25,300  |
| 9     | 19,200  | 10,800  | 38,300  | 18,300  | 23,400  | 1,410    | 19,200  | 6,600   | 41,500  | 6,820   | 356     | 31,500  |
| 10    | 23,400  | 805     | 40,800  | 10,300  | 2,130   | 26,900   | 15,500  | 5,970   | 30,200  | 5,970   | 473     | 26,500  |
| 11    | 19,800  | 573     | 40,800  | 15,000  | 8,420   | 64,500   | 10,600  | 3,560   | 18,000  | 4,520   | 415     | 26,200  |
| 12    | 25,800  | 6,390   | 36,700  | 20,000  | 10,800  | 87,100   | 10,600  | 669     | 17,700  | 3,690   | 434     | 24,600  |
| 13    | 16,600  | 9,620   | 34,200  | 20,000  | 11,300  | 90,400   | 11,800  | 3,690   | 27,800  | 7,260   | 401     | 11,400  |
| 14    | 18,300  | 10,300  | 28,300  | 10,000  | 10,300  | 88,400   | 5,390   | 14,400  | 17,200  | 8,420   | 404     | 4,650   |
| 15    | 22,400  | 9,620   | 20,100  | 11,000  | 9,860   | 86,200   | 12,300  | 31,600  | 20,500  | 7,480   | 680     | 1,760   |
| 16    | 18,000  | 8,660   | 9,380   | 12,000  | 2,820   | 78,400   | 13,100  | 29,600  | 16,000  | 728     | 5,760   | 2,270   |
| 17    | 23,700  | 1,710   | 9,140   | 13,100  | 872     | 73,600   | 14,200  | 20,500  | 10,300  | 3,430   | 580     | 7,320   |
| 18    | 20,500  | 814     | 11,800  | 16,600  | 13,100  | 67,000   | 13,100  | 35,500  | 9,620   | 7,260   | 449     | 9,910   |
| 19    | 18,900  | 4,370   | 11,800  | 17,400  | 18,300  | 60,300   | 5,010   | 36,200  | 8,660   | 8,900   | 2,940   | 6,090   |
| 20    | 18,000  | 7,260   | 14,200  | 14,200  | 33,800  | 51,200   | 740     | 32,000  | 7,440   | 1,300   | 3,430   | 3,040   |
| 21    | 19,500  | 5,970   | 24,400  | 21,100  | 34,100  | 43,600   | 875     | 17,200  | 7,040   | 3,060   | 7,700   | 610     |
| 22    | 20,800  | 2,940   | 9,620   | 32,000  | 34,100  | 35,800   | 5,390   | 16,600  | 2,820   | 2,370   | 7,260   | 380     |
| 23    | 21,100  | 5,560   | 1,000   | 32,700  | 33,900  | 35,500   | 3,300   | 16,300  | 781     | 674     | 7,940   | 1,180   |
| 24    | 21,700  | 5,370   | 11,300  | 32,400  | 33,500  | 34,800   | 1,710   | 9,620   | 477     | 396     | 2,590   | 2,870   |
| 25    | 16,000  | 11,100  | 28,800  | 32,400  | 33,300  | 32,700   | 5,970   | 5,560   | 534     | 429     | 772     | 2,940   |
| 26    | 14,900  | 26,800  | 33,800  | 33,800  | 33,200  | 20,100   | 10,300  | 2,040   | 875     | 4,520   | 6,600   | 3,240   |
| 27    | 20,500  | 35,500  | 34,100  | 42,800  | 27,500  | 22,100   | 6,180   | 494     | 1,030   | 10,800  | 6,120   | 2,740   |
| 28    | 3,690   | 34,800  | 33,400  | 48,300  | 25,400  | 20,800   | 760     | 1,930   | 453     | 1,600   | 8,610   | 2,710   |
| 29    | 13,600  | 33,400  | 23,000  | 43,900  | -----   | 20,100   | 6,820   | 3,820   | 500     | 412     | 6,950   | 4,050   |
| 30    | 12,600  | 25,800  | 19,800  | 41,500  | -----   | 25,800   | 4,840   | 3,180   | 548     | 408     | 10,400  | 10,800  |
| 31    | 16,000  | -----   | 25,800  | 39,000  | -----   | 16,900   | -----   | 2,370   | -----   | 434     | 5,580   | -----   |
| TOTAL | 589,390 | 330,182 | 753,440 | 696,622 | 602,302 | 1,175,5M | 287,415 | 377,883 | 317,693 | 117,461 | 90,232  | 382,660 |
| MEAN  | 19,010  | 11,010  | 24,300  | 22,470  | 21,510  | 37,920   | 9,581   | 12,190  | 10,590  | 3,789   | 2,911   | 12,760  |
| MAX   | 26,100  | 35,500  | 40,800  | 48,300  | 34,400  | 90,400   | 19,500  | 36,200  | 44,700  | 10,800  | 10,400  | 31,500  |
| MIN   | 3,690   | 573     | 1,000   | 642     | 872     | 1,410    | 740     | 494     | 445     | 396     | 356     | 380     |
| AC-FT | 1,169M  | 654,900 | 1,494M  | 1,382M  | 1,195M  | 2,332M   | 570,100 | 749,500 | 630,100 | 233,000 | 179,000 | 759,000 |

CAL YR 1973 TOTAL 9,004,974 MEAN 24,670 MAX 98,400 MIN 335 AC-FT 17,860,000  
WTR YR 1974 TOTAL 5,720,780 MEAN 15,670 MAX 90,400 MIN 356 AC-FT 11,350,000

| DAY         | OCT             | NOV     | DEC     | JAN         | FEB     | MAR      | APR         | MAY     | JUN     | JUL     | AUG     | SEP     |                  |  |
|-------------|-----------------|---------|---------|-------------|---------|----------|-------------|---------|---------|---------|---------|---------|------------------|--|
| 1           | 9,770           | 13,500  | 20,700  | 25,700      | 37,500  | 22,600   | 13,000      | 6,480   | 4,030   | 596     | 530     | 13,200  |                  |  |
| 2           | 17,500          | 14,500  | 21,900  | 20,300      | 35,000  | 16,200   | 15,700      | 10,300  | 1,650   | 5,040   | 530     | 27,200  |                  |  |
| 3           | 19,700          | 11,300  | 17,400  | 16,300      | 33,700  | 8,700    | 16,500      | 12,800  | 950     | 3,690   | 530     | 23,400  |                  |  |
| 4           | 26,700          | 1,740   | 15,100  | 21,800      | 33,400  | 2,960    | 18,500      | 14,900  | 2,460   | 4,640   | 530     | 23,800  |                  |  |
| 5           | 27,200          | 1,590   | 34,800  | 17,500      | 30,200  | 10,100   | 17,700      | 11,400  | 2,690   | 1,100   | 530     | 25,400  |                  |  |
| 6           | 23,200          | 11,300  | 36,500  | 5,360       | 15,000  | 13,000   | 10,300      | 7,670   | 4,860   | 651     | 530     | 25,800  |                  |  |
| 7           | 23,100          | 11,300  | 36,500  | 5,010       | 13,300  | 15,900   | 7,460       | 9,210   | 18,600  | 917     | 530     | 26,100  |                  |  |
| 8           | 25,000          | 9,620   | 36,000  | 21,300      | 18,000  | 14,700   | 9,430       | 7,570   | 41,100  | 6,840   | 530     | 24,600  |                  |  |
| 9           | 20,900          | 11,400  | 36,500  | 19,300      | 23,300  | 9,060    | 19,100      | 7,420   | 45,100  | 9,730   | 530     | 29,500  |                  |  |
| 10          | 22,200          | 8,310   | 40,100  | 14,400      | 13,500  | 14,100   | 19,700      | 7,280   | 35,100  | 6,730   | 530     | 26,100  |                  |  |
| 11          | 20,800          | 1,450   | 40,600  | 13,300      | 3,850   | 54,900   | 13,400      | 6,310   | 19,100  | 6,710   | 530     | 25,200  |                  |  |
| 12          | 24,000          | 1,590   | 38,100  | 21,700      | 9,310   | 73,800   | 10,700      | 4,510   | 17,700  | 5,460   | 530     | 25,300  |                  |  |
| 13          | 20,600          | 8,770   | 33,900  | 21,400      | 11,100  | 85,400   | 10,800      | 1,690   | 29,100  | 5,490   | 530     | 14,900  |                  |  |
| 14          | 22,200          | 8,880   | 27,300  | 8,980       | 11,400  | 90,300   | 10,900      | 9,420   | 16,600  | 9,440   | 522     | 8,090   |                  |  |
| 15          | 23,600          | 9,000   | 23,000  | 11,400      | 10,300  | 86,600   | 9,160       | 32,000  | 22,100  | 8,430   | 517     | 5,170   |                  |  |
| 16          | 22,900          | 9,100   | 13,400  | 11,300      | 9,420   | 82,900   | 13,800      | 32,700  | 16,500  | 6,660   | 2,190   | 1,600   |                  |  |
| 17          | 26,700          | 7,380   | 8,520   | 11,100      | 3,780   | 78,400   | 14,100      | 22,800  | 14,100  | 1,230   | 5,020   | 3,180   |                  |  |
| 18          | 22,700          | 2,480   | 9,800   | 18,400      | 3,340   | 72,700   | 14,000      | 29,900  | 8,930   | 4,930   | 1,040   | 7,750   |                  |  |
| 19          | 22,500          | 2,130   | 12,400  | 19,800      | 19,200  | 66,500   | 12,100      | 40,500  | 8,700   | 8,510   | 649     | 7,580   |                  |  |
| 20          | 20,500          | 5,420   | 12,400  | 15,000      | 34,100  | 57,900   | 4,910       | 36,700  | 7,910   | 7,520   | 4,180   | 5,700   |                  |  |
| 21          | 20,600          | 7,960   | 22,800  | 19,300      | 35,900  | 49,700   | 1,640       | 28,900  | 9,810   | 1,490   | 6,060   | 3,430   |                  |  |
| 22          | 21,500          | 5,060   | 21,500  | 31,700      | 36,900  | 39,900   | 3,450       | 20,300  | 6,460   | 4,610   | 8,370   | 1,050   |                  |  |
| 23          | 21,000          | 3,540   | 4,510   | 35,100      | 35,600  | 36,700   | 6,120       | 21,900  | 3,420   | 2,750   | 8,610   | 647     |                  |  |
| 24          | 20,500          | 5,450   | 4,440   | 34,400      | 34,100  | 36,200   | 4,510       | 13,600  | 1,120   | 972     | 7,540   | 2,400   |                  |  |
| 25          | 19,000          | 9,880   | 23,600  | 34,000      | 33,500  | 34,600   | 4,520       | 10,800  | 611     | 596     | 3,360   | 2,890   |                  |  |
| 26          | 14,600          | 23,700  | 32,900  | 35,300      | 33,200  | 25,800   | 8,740       | 5,830   | 563     | 550     | 2,200   | 2,960   |                  |  |
| 27          | 19,900          | 34,900  | 34,000  | 43,900      | 29,300  | 21,700   | 9,740       | 3,380   | 962     | 4,500   | 7,370   | 3,170   |                  |  |
| 28          | 11,300          | 35,800  | 33,800  | 50,600      | 26,800  | 20,500   | 6,490       | 1,260   | 1,150   | 10,800  | 12,200  | 3,350   |                  |  |
| 29          | 8,670           | 34,300  | 25,800  | 49,500      | -----   | 21,500   | 2,470       | 2,830   | 632     | 2,000   | 11,900  | 3,280   |                  |  |
| 30          | 12,200          | 27,000  | 21,400  | 45,000      | -----   | 26,300   | 7,870       | 5,030   | 574     | 530     | 7,080   | 5,230   |                  |  |
| 31          | 15,200          | -----   | 22,900  | 43,200      | -----   | 22,400   | -----       | 6,060   | -----   | 530     | 9,950   | -----   |                  |  |
| TOTAL       | 626,240         | 338,350 | 762,570 | 741,350     | 634,000 | 1,212,0M | 316,810     | 431,450 | 342,582 | 133,642 | 105,648 | 377,977 |                  |  |
| MEAN        | 20,200          | 11,280  | 24,600  | 23,910      | 22,640  | 39,100   | 10,560      | 13,920  | 11,420  | 4,311   | 3,408   | 12,600  |                  |  |
| MAX         | 27,200          | 35,800  | 40,600  | 50,600      | 37,500  | 90,300   | 19,700      | 40,500  | 45,100  | 10,800  | 12,200  | 29,500  |                  |  |
| MIN         | 8,670           | 1,450   | 4,440   | 5,010       | 3,340   | 2,960    | 1,640       | 1,260   | 563     | 530     | 517     | 647     |                  |  |
| AC-FT       | 1,242M          | 671,100 | 1,513M  | 1,470M      | 1,258M  | 2,404M   | 628,400     | 855,800 | 679,500 | 265,100 | 209,600 | 749,700 |                  |  |
| CAL YR 1973 | TOTAL 6,438,953 |         |         | MEAN 25,860 |         |          | MAX 101,000 |         |         | MIN 684 |         |         | AC-FT 18,720,000 |  |
| WTR YR 1974 | TOTAL 6,022,639 |         |         | MEAN 16,500 |         |          | MAX 90,300  |         |         | MIN 517 |         |         | AC-FT 11,950,000 |  |

## GASCONADE RIVER BASIN

06927800 Osage Fork at Drynob, Mo.

LOCATION.--Lat 37°38'00", long 92°27'12", in NW¼NE¼ sec.27, T.34 N., R.14 W., Laclede County, on downstream end of right bridge pier on State Highway 32, 0.1 mi (0.2 km) downstream from Walker Hollow, 0.6 mi (1.0 km) southwest of Drynob, 1.6 mi (2.6 km) upstream from Core Creek, and 12 mi (19.3 km) southeast of Lebanon.

DRAINAGE AREA.--404 mi<sup>2</sup> (1,046 km<sup>2</sup>).

PERIOD OF RECORD.--August 1962 to current year. Occasional low-flow measurements 1942, 1944-47, 1952, 1953, 1956.

GAGE.--Water-stage recorder. Datum of gage is 927.85 ft (282.809 m) above mean sea level.

AVERAGE DISCHARGE.--12 years, 291 ft<sup>3</sup>/s (8.24 m<sup>3</sup>/s), 9.77 in/yr (248 mm/yr), 210,700 acre-ft/yr (260 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 17,400 ft<sup>3</sup>/s (493 m<sup>3</sup>/s) Nov. 25 (gage height, 16.65 ft or 5.075 m); minimum, 34 ft<sup>3</sup>/s (0.963 m<sup>3</sup>/s) Oct. 11 (gage height, 2.96 ft or 0.902 m).

Period of record: Maximum discharge, 17,400 ft<sup>3</sup>/s (493 m<sup>3</sup>/s) Nov. 25 (gage height, 16.65 ft or 5.075 m); minimum, 16 ft<sup>3</sup>/s (0.453 m<sup>3</sup>/s) Oct. 5-15, 1963, Oct. 21, 22, 1964.

A discharge of 12 ft<sup>3</sup>/s (0.340 m<sup>3</sup>/s) was measured on Sept. 21, 1956.

Maximum stage known about 31 ft (9.45 m) in 1903, flood in September 1914 reached a stage of 29.3 ft (8.93 m), flood in May 1943 reached a stage of 28.5 ft (8.69 m), from information by local resident.

REMARKS.--Records fair.

REVISIONS (WATER YEARS).--WSP 2119: 1963, 1965(M).

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY         | OCT           | NOV      | DEC        | JAN    | FEB       | MAR      | APR           | MAY    | JUN    | JUL   | AUG   | SEP    |
|-------------|---------------|----------|------------|--------|-----------|----------|---------------|--------|--------|-------|-------|--------|
| 1           | 60            | 375      | 800        | 380    | 638       | 494      | 558           | 1,630  | 263    | 132   | 52    | 491    |
| 2           | 60            | 368      | 660        | 306    | 575       | 467      | 509           | 1,340  | 252    | 127   | 48    | 851    |
| 3           | 52            | 291      | 600        | 300    | 521       | 449      | 478           | 1,860  | 240    | 121   | 48    | 716    |
| 4           | 65            | 245      | 1,380      | 290    | 472       | 424      | 445           | 1,110  | 232    | 140   | 42    | 570    |
| 5           | 54            | 218      | 2,260      | 282    | 443       | 399      | 404           | 807    | 234    | 136   | 39    | 417    |
| 6           | 46            | 196      | 1,210      | 280    | 421       | 376      | 376           | 639    | 242    | 131   | 38    | 313    |
| 7           | 44            | 181      | 860        | 270    | 394       | 362      | 355           | 532    | 929    | 129   | 43    | 250    |
| 8           | 42            | 167      | 685        | 260    | 375       | 344      | 552           | 466    | 1,850  | 120   | 45    | 206    |
| 9           | 39            | 158      | 610        | 252    | 362       | 340      | 523           | 411    | 1,310  | 112   | 46    | 179    |
| 10          | 37            | 146      | 500        | 277    | 350       | 2,630    | 443           | 374    | 1,590  | 106   | 49    | 162    |
| 11          | 39            | 136      | 430        | 278    | 339       | 7,510    | 409           | 364    | 839    | 99    | 47    | 152    |
| 12          | 51            | 128      | 362        | 278    | 331       | 3,110    | 442           | 348    | 659    | 95    | 44    | 142    |
| 13          | 339           | 124      | 338        | 275    | 327       | 1,650    | 501           | 314    | 549    | 89    | 43    | 132    |
| 14          | 695           | 120      | 314        | 249    | 321       | 1,230    | 460           | 506    | 448    | 83    | 41    | 124    |
| 15          | 402           | 115      | 295        | 260    | 315       | 1,360    | 453           | 1,550  | 375    | 83    | 39    | 118    |
| 16          | 270           | 110      | 278        | 564    | 308       | 2,630    | 413           | 978    | 320    | 79    | 120   | 119    |
| 17          | 220           | 105      | 263        | 1,060  | 305       | 1,490    | 379           | 673    | 279    | 75    | 98    | 115    |
| 18          | 180           | 102      | 253        | 949    | 312       | 1,170    | 349           | 539    | 257    | 73    | 201   | 107    |
| 19          | 150           | 100      | 262        | 862    | 775       | 1,000    | 327           | 463    | 242    | 70    | 133   | 102    |
| 20          | 132           | 100      | 296        | 848    | 858       | 970      | 314           | 407    | 225    | 66    | 114   | 101    |
| 21          | 120           | 120      | 310        | 804    | 711       | 914      | 305           | 781    | 208    | 64    | 106   | 95     |
| 22          | 110           | 150      | 307        | 692    | 923       | 960      | 366           | 628    | 194    | 61    | 88    | 85     |
| 23          | 102           | 185      | 316        | 617    | 1,030     | 1,040    | 616           | 432    | 181    | 56    | 80    | 80     |
| 24          | 90            | 1,150    | 1,330      | 549    | 840       | 995      | 486           | 377    | 169    | 53    | 97    | 76     |
| 25          | 80            | 13,300   | 1,670      | 497    | 703       | 911      | 401           | 342    | 161    | 106   | 79    | 72     |
| 26          | 75            | 4,090    | 993        | 523    | 615       | 1,000    | 356           | 334    | 154    | 198   | 68    | 70     |
| 27          | 100           | 2,400    | 754        | 1,110  | 571       | 957      | 326           | 332    | 148    | 105   | 63    | 66     |
| 28          | 800           | 1,570    | 622        | 1,030  | 530       | 849      | 304           | 320    | 144    | 80    | 94    | 85     |
| 29          | 398           | 1,210    | 548        | 1,100  | -----     | 762      | 286           | 304    | 139    | 68    | 642   | 99     |
| 30          | 296           | 1,000    | 490        | 873    | -----     | 682      | 886           | 292    | 135    | 62    | 442   | 103    |
| 31          | 297           | -----    | 443        | 740    | -----     | 603      | -----         | 278    | -----  | 57    | 303   | -----  |
| TOTAL       | 5,445         | 28,660   | 20,439     | 17,055 | 14,665    | 38,078   | 13,022        | 19,731 | 12,968 | 2,976 | 3,392 | 6,198  |
| MEAN        | 176           | 955      | 659        | 550    | 524       | 1,228    | 434           | 636    | 432    | 96.0  | 109   | 207    |
| MAX         | 800           | 13,300   | 2,260      | 1,110  | 1,030     | 7,510    | 886           | 1,860  | 1,850  | 198   | 642   | 851    |
| MIN         | 37            | 100      | 253        | 249    | 305       | 340      | 286           | 278    | 135    | 53    | 38    | 66     |
| CFSM        | .44           | 2.36     | 1.63       | 1.36   | 1.30      | 3.04     | 1.07          | 1.57   | 1.07   | .24   | .27   | .51    |
| IN.         | .50           | 2.64     | 1.88       | 1.57   | 1.35      | 3.51     | 1.20          | 1.82   | 1.19   | .27   | .31   | .57    |
| AC-FT       | 10,800        | 56,850   | 40,540     | 33,830 | 29,090    | 75,530   | 25,830        | 39,140 | 25,720 | 5,900 | 6,730 | 12,290 |
| CAL YR 1973 | TOTAL 208,926 | MEAN 572 | MAX 13,300 | MIN 26 | CFSM 1.42 | IN 19.24 | AC-FT 414,400 |        |        |       |       |        |
| WTR YR 1974 | TOTAL 182,629 | MEAN 500 | MAX 13,300 | MIN 37 | CFSM 1.24 | IN 16.82 | AC-FT 362,200 |        |        |       |       |        |

PEAK DISCHARGE (BASE, 5,000 FT<sup>3</sup>/S)

| DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|------|------|-------|-----------|
| 11-25 | 1700 | 16.65 | 17,400    | 3-11 | 0615 | 13.78 | 9,550     |

06928700 Beeler Branch near Cabool, Mo.

LOCATION.--Lat 37°06'06", long 92°04'17", in SE¼NE¼SE¼ sec.18, T.28 N., R.10 W., Texas County, at bridge on U.S. Highway 60 and 63, 2 mi (3.2 km) upstream from mouth, and 2.1 mi (3.4 km) southeast of Cabool.

DRAINAGE AREA.--7.78 mi<sup>2</sup> (20.2 km<sup>2</sup>).

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

GAGE.--Water-stage recorder. Datum of gage is 1,258.46 ft (383.579 m) above mean sea level. Prior to July 8, 1974 datum 2.00 ft (0.610 m) higher.

AVERAGE DISCHARGE.--7 years, 7.41 ft<sup>3</sup>/s (0.210 m<sup>3</sup>/s), 12.93 in/yr (328 mm/yr), 5,370 acre-ft/yr (6.62 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 2,880 ft<sup>3</sup>/s (81.6 m<sup>3</sup>/s) Nov. 24 (gage height, 6.78 ft or 2.067 m); minimum, 0.28 ft<sup>3</sup>/s (0.008 m<sup>3</sup>/s) July 22, 23, 24, 25 (gage height, 1.97 ft or 0.585 m).

Period of record: Maximum discharge, 4,700 ft<sup>3</sup>/s (133 m<sup>3</sup>/s) Oct. 26, 1970, Apr. 15, 1972 estimate of peak flow by slope-area measurement; maximum gage height, 8.90 ft (2.713 m) datum then in use, Apr. 15, 1972; no flow at times in October, November 1971, August 1972.

REMARKS.--Records fair.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT   | NOV   | DEC   | JAN   | FEB   | MAR   | APR   | MAY   | JUN    | JUL   | AUG   | SEP   |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|-------|-------|-------|
| 1     | 2.0   | 30    | 5.8   | 4.6   | 10    | 6.1   | 5.8   | 12    | 5.4    | .90   | .51   | 1.9   |
| 2     | 1.5   | 20    | 4.8   | 4.4   | 9.5   | 5.9   | 5.4   | 35    | 4.6    | 1.2   | 1.1   | 1.9   |
| 3     | 1.2   | 10    | 17    | 4.2   | 8.5   | 5.6   | 6.6   | 45    | 4.4    | 1.2   | .87   | 2.1   |
| 4     | 5.0   | 8.0   | 271   | 3.6   | 7.8   | 5.1   | 5.6   | 26    | 4.2    | 1.3   | .63   | 1.8   |
| 5     | 4.0   | 7.0   | 23    | 3.2   | 7.1   | 4.8   | 5.1   | 18    | 4.0    | 1.2   | .64   | 1.5   |
| 6     | 3.0   | 6.0   | 13    | 3.2   | 6.9   | 4.6   | 4.8   | 15    | 4.2    | 1.2   | .64   | 1.4   |
| 7     | 2.0   | 5.1   | 9.1   | 3.0   | 6.6   | 4.4   | 4.6   | 12    | 149    | .90   | .64   | 1.2   |
| 8     | 1.5   | 4.6   | 7.1   | 3.2   | 6.4   | 4.2   | 6.6   | 11    | 24     | .67   | .64   | 1.1   |
| 9     | 1.4   | 4.1   | 6.1   | 3.4   | 6.1   | 4.4   | 6.1   | 9.5   | 64     | .59   | 1.2   | 1.0   |
| 10    | 1.3   | 3.8   | 5.1   | 3.6   | 5.8   | 193   | 5.6   | 8.8   | 18     | .54   | .78   | .94   |
| 11    | 8.1   | 3.6   | 4.6   | 3.6   | 5.6   | 165   | 18    | 12    | 12     | .52   | 1.0   | 3.0   |
| 12    | 1.3   | 3.2   | 4.2   | 3.2   | 5.6   | 31    | 24    | 10    | 8.8    | .47   | .73   | 2.3   |
| 13    | 43    | 3.0   | 4.1   | 3.0   | 5.6   | 18    | 13    | 9.1   | 6.6    | .45   | .72   | 3.0   |
| 14    | 20    | 2.8   | 3.6   | 3.0   | 5.4   | 13    | 11    | 15    | 5.4    | .43   | .65   | 3.2   |
| 15    | 10    | 2.6   | 3.2   | 4.0   | 5.4   | 19    | 8.1   | 18    | 8.5    | .41   | .64   | 2.8   |
| 16    | 5.0   | 2.6   | 2.8   | 5.4   | 5.4   | 18    | 7.4   | 14    | 4.6    | .38   | .61   | 2.5   |
| 17    | 4.0   | 2.8   | 2.8   | 5.6   | 5.1   | 13    | 6.6   | 10    | 3.8    | .36   | 3.1   | 2.2   |
| 18    | 3.0   | 2.8   | 2.6   | 6.1   | 5.1   | 10    | 6.1   | 9.5   | 3.0    | .35   | 1.8   | 1.9   |
| 19    | 2.5   | 2.8   | 50    | 7.8   | 5.4   | 11    | 5.6   | 8.1   | 2.4    | .33   | 1.0   | 1.8   |
| 20    | 2.0   | 4.6   | 26    | 24    | 4.8   | 12    | 5.4   | 7.4   | 2.3    | .31   | .91   | 1.9   |
| 21    | 1.7   | 4.0   | 15    | 22    | 28    | 12    | 494   | 19    | 2.0    | .30   | .91   | 1.6   |
| 22    | 1.5   | 3.6   | 11    | 18    | 36    | 13    | 144   | 28    | 1.8    | .30   | .86   | 1.5   |
| 23    | 1.3   | 3.2   | 17    | 14    | 16    | 12    | 39    | 16    | 1.8    | .29   | .80   | 1.3   |
| 24    | 1.2   | 415   | 93    | 13    | 11    | 13    | 24    | 10    | 1.6    | .28   | .74   | 1.3   |
| 25    | 1.1   | 139   | 24    | 11    | 9.1   | 13    | 18    | 9.1   | 1.6    | 1.1   | .69   | 1.1   |
| 26    | 1.0   | 124   | 15    | 18    | 8.5   | 13    | 15    | 12    | 1.5    | .55   | .64   | 1.1   |
| 27    | 80    | 29    | 11    | 21    | 7.4   | 11    | 12    | 10    | 1.5    | .54   | .65   | 1.0   |
| 28    | 20    | 16    | 9.1   | 18    | 6.6   | 9.8   | 10    | 8.8   | 1.2    | .54   | 1.2   | 1.4   |
| 29    | 10    | 10    | 7.1   | 15    | ----- | 8.5   | 9.1   | 7.4   | 1.0    | .54   | .78   | 1.0   |
| 30    | 5.0   | 7.4   | 6.4   | 13    | ----- | 7.1   | 15    | 6.6   | .90    | .51   | .67   | .97   |
| 31    | 100   | ----- | 5.6   | 11    | ----- | 6.4   | ----- | 6.1   | -----  | .51   | .71   | ----- |
| TOTAL | 344.6 | 880.6 | 680.1 | 276.1 | 250.7 | 666.9 | 941.5 | 438.4 | 354.10 | 19.17 | 27.46 | 51.71 |
| MEAN  | 11.1  | 29.4  | 21.9  | 8.91  | 8.95  | 21.5  | 31.4  | 14.1  | 11.8   | .62   | .89   | 1.72  |
| MAX   | 100   | 415   | 271   | 24    | 36    | 193   | 494   | 45    | 149    | 1.3   | 3.1   | 3.2   |
| MIN   | 1.0   | 2.6   | 2.6   | 3.0   | 4.8   | 4.2   | 4.6   | 6.1   | .90    | .28   | .51   | .94   |
| CFSM  | 1.43  | 3.78  | 2.81  | 1.15  | 1.15  | 2.76  | 4.04  | 1.81  | 1.52   | .08   | .11   | .22   |
| IN.   | 1.65  | 4.21  | 3.25  | 1.32  | 1.20  | 3.19  | 4.50  | 2.10  | 1.69   | .09   | .13   | .25   |
| AC-FT | 684   | 1,750 | 1,350 | 548   | 497   | 1,320 | 1,870 | 870   | 702    | 38    | 54    | 103   |

CAL YR 1973 TOTAL 4,843.00 MEAN 13.3 MAX 416 MIN .20 CFSM 1.71 IN 23.16 AC-FT 9,610  
WTR YR 1974 TOTAL 4,931.34 MEAN 13.5 MAX 494 MIN .28 CFSM 1.74 IN 23.58 AC-FT 9,780

PEAK DISCHARGE (BASE, 500 FT<sup>3</sup>/S)

| DATE           | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|----------------|------|-------|-----------|------|------|-------|-----------|
| 10-31          | *    | 3.56  | 842       | 3-10 | 1015 | 2.78  | 503       |
| 11-24          | 2100 | 6.78  | 2,880     | 3-11 | 0215 | 3.01  | 594       |
| 11-26          | 0445 | 2.88  | 542       | 4-21 | 0600 | 3.84  | 968       |
| 12-4           | 0300 | 4.83  | 1,490     | 4-21 | 2030 | 6.12  | 2,360     |
| * Time unknown |      |       |           | 6-7  | 0230 | 3.28  | 716       |

06930000 Big Piney River near Big Piney, Mo.

LOCATION.--Lat 37°39'58", long 92°03'02", in NE¼SE¼ sec.8, T.34 N., R.10 W., Pulaski County, on downstream side of left pier of Ross bridge, 3 mi (4.8 km) east of Big Piney, 14.8 mi (23.8 km) upstream from Spring Creek, and at mile 22 (35.4 km).

DRAINAGE AREA.--560 mi<sup>2</sup> (1,450 km<sup>2</sup>), approximately.

PERIOD OF RECORD.--October 1921 to current year.

GAGE.--Water-stage recorder. Datum of gage is 800.99 ft (244.142 m) above mean sea level. Prior to July 12, 1961, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--53 years, 543 ft<sup>3</sup>/s (15.4 m<sup>3</sup>/s), 13.18 in/yr (335 mm/yr), 393,400 acre-ft/yr (485 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 18,000 ft<sup>3</sup>/s (510 m<sup>3</sup>/s) Nov. 26 (gage height, 16.49 ft or 5.026 m); minimum, 210 ft<sup>3</sup>/s (5.95 m<sup>3</sup>/s) Aug. 1, 2; minimum gage height, 2.43 ft (0.741 m) Oct. 11.

Period of record: Maximum discharge, 32,700 ft<sup>3</sup>/s (926 m<sup>3</sup>/s) Dec. 27, 1942 (gage height, 20.7 ft or 6.31 m, from floodmark); minimum, 69 ft<sup>3</sup>/s (1.95 m<sup>3</sup>/s) Sept. 17, 18, 1954; minimum gage height, 1.60 ft (0.488 m) July 30, 31, 1926, Sept. 5, 6, 9-11, 17, 18, 1954.

REMARKS.--Records good.

REVISIONS (WATER YEARS).--WSP 826: 1935. WSP 1176: 1943, 1945. WSP 1340: 1922-23, 1927-28(M), 1933(M), 1935(M).

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT    | NOV     | DEC    | JAN    | FEB    | MAR     | APR    | MAY     | JUN    | JUL    | AUG    | SEP    |
|-------|--------|---------|--------|--------|--------|---------|--------|---------|--------|--------|--------|--------|
| 1     | 284    | 3,850   | 1,090  | 725    | 919    | 744     | 943    | 1,210   | 772    | 339    | 213    | 647    |
| 2     | 266    | 1,550   | 924    | 670    | 849    | 699     | 871    | 1,180   | 704    | 335    | 211    | 1,020  |
| 3     | 245    | 966     | 821    | 620    | 780    | 667     | 818    | 1,900   | 648    | 323    | 222    | 1,290  |
| 4     | 312    | 728     | 3,820  | 570    | 707    | 634     | 838    | 1,620   | 600    | 329    | 228    | 1,090  |
| 5     | 390    | 596     | 8,930  | 520    | 662    | 600     | 778    | 1,300   | 574    | 331    | 221    | 753    |
| 6     | 292    | 512     | 2,360  | 493    | 630    | 565     | 710    | 1,110   | 565    | 317    | 219    | 581    |
| 7     | 274    | 456     | 1,550  | 486    | 596    | 544     | 672    | 978     | 2,280  | 302    | 226    | 489    |
| 8     | 254    | 421     | 1,190  | 475    | 565    | 525     | 765    | 926     | 5,860  | 289    | 222    | 431    |
| 9     | 239    | 389     | 1,000  | 472    | 540    | 510     | 807    | 1,200   | 2,840  | 286    | 217    | 392    |
| 10    | 227    | 363     | 873    | 486    | 521    | 1,380   | 759    | 1,430   | 3,700  | 279    | 229    | 379    |
| 11    | 223    | 339     | 772    | 499    | 501    | 8,020   | 725    | 2,220   | 1,860  | 274    | 228    | 491    |
| 12    | 229    | 322     | 704    | 491    | 485    | 5,860   | 954    | 4,770   | 1,390  | 266    | 219    | 1,840  |
| 13    | 962    | 311     | 659    | 458    | 475    | 2,480   | 1,470  | 2,150   | 1,130  | 263    | 326    | 1,330  |
| 14    | 2,590  | 302     | 611    | 456    | 464    | 1,760   | 1,230  | 1,780   | 963    | 259    | 298    | 1,220  |
| 15    | 1,080  | 291     | 558    | 456    | 450    | 1,680   | 1,300  | 5,640   | 873    | 265    | 252    | 953    |
| 16    | 705    | 281     | 518    | 521    | 439    | 2,960   | 998    | 2,910   | 859    | 262    | 233    | 741    |
| 17    | 540    | 271     | 484    | 833    | 433    | 2,090   | 873    | 1,940   | 729    | 253    | 275    | 614    |
| 18    | 449    | 261     | 458    | 904    | 437    | 1,620   | 791    | 1,550   | 653    | 244    | 2,800  | 531    |
| 19    | 396    | 252     | 476    | 874    | 571    | 1,400   | 733    | 1,290   | 607    | 239    | 1,360  | 471    |
| 20    | 358    | 258     | 1,500  | 944    | 644    | 1,380   | 684    | 1,120   | 562    | 236    | 567    | 475    |
| 21    | 325    | 275     | 1,400  | 2,000  | 658    | 1,380   | 1,130  | 1,020   | 521    | 231    | 421    | 428    |
| 22    | 300    | 444     | 1,000  | 1,650  | 1,950  | 1,530   | 9,500  | 3,210   | 494    | 228    | 359    | 417    |
| 23    | 284    | 413     | 843    | 1,290  | 2,370  | 1,630   | 7,850  | 2,200   | 462    | 229    | 317    | 388    |
| 24    | 271    | 2,200   | 1,540  | 1,060  | 1,540  | 1,550   | 2,460  | 1,540   | 435    | 227    | 291    | 362    |
| 25    | 258    | 14,900  | 3,270  | 913    | 1,190  | 1,350   | 1,740  | 1,260   | 412    | 226    | 273    | 344    |
| 26    | 247    | 10,400  | 1,800  | 854    | 990    | 1,370   | 1,400  | 1,200   | 393    | 236    | 261    | 331    |
| 27    | 276    | 4,690   | 1,330  | 1,010  | 888    | 1,430   | 1,200  | 1,250   | 379    | 241    | 255    | 320    |
| 28    | 2,730  | 2,450   | 1,090  | 1,210  | 812    | 1,320   | 1,060  | 1,100   | 363    | 238    | 1,420  | 411    |
| 29    | 938    | 1,760   | 950    | 1,240  | -----  | 1,270   | 958    | 979     | 353    | 230    | 2,440  | 554    |
| 30    | 628    | 1,340   | 842    | 1,120  | -----  | 1,150   | 1,070  | 891     | 346    | 224    | 1,360  | 522    |
| 31    | 828    | -----   | 764    | 1,000  | -----  | 1,020   | -----  | 831     | -----  | 217    | 728    | -----  |
| TOTAL | 17,400 | 51,591  | 44,127 | 25,300 | 22,066 | 51,118  | 46,087 | 53,705  | 32,327 | 8,218  | 16,891 | 19,815 |
| MEAN  | 561    | 1,720   | 1,423  | 816    | 788    | 1,649   | 1,536  | 1,732   | 1,078  | 265    | 545    | 661    |
| MAX   | 2,730  | 14,900  | 8,930  | 2,000  | 2,370  | 8,020   | 9,500  | 5,640   | 5,860  | 339    | 2,800  | 1,840  |
| MIN   | 223    | 252     | 458    | 456    | 433    | 510     | 672    | 831     | 346    | 217    | 211    | 320    |
| CFSM  | 1.00   | 3.07    | 2.54   | 1.46   | 1.41   | 2.94    | 2.74   | 3.09    | 1.93   | .47    | .97    | 1.18   |
| IN.   | 1.16   | 3.43    | 2.93   | 1.68   | 1.47   | 3.40    | 3.06   | 3.57    | 2.15   | .55    | 1.12   | 1.32   |
| AC-FT | 34,510 | 102,300 | 87,530 | 50,180 | 43,770 | 101,400 | 91,410 | 106,500 | 64,120 | 16,300 | 33,500 | 39,300 |

CAL YR 1973 TOTAL 385,988 MEAN 1,058 MAX 19,000 MIN 146 CFSM 1.89 IN 25.64 AC-FT 765,600  
WTR YR 1974 TOTAL 388,645 MEAN 1,065 MAX 14,900 MIN 211 CFSM 1.90 IN 25.82 AC-FT 770,900

PEAK DISCHARGE (BASE, 6,800 FT<sup>3</sup>/S)

| DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|------|------|-------|-----------|
| 11-26 | 0115 | 16.49 | 18,000    | 4-23 | 0230 | 14.97 | 14,700    |
| 12-5  | 0730 | 14.63 | 13,600    | 6-8  | 0530 | 12.04 | 8,620     |
| 3-11  | 1345 | 12.39 | 9,320     | 8-18 | 2015 | 11.13 | 7,210     |



06931500 Little Beaver Creek near Rolla, Mo.

LOCATION.--Lat 37°56'06", long 91°50'11", in NW¼NW¼ sec.17, T.37 N., R.8 W., Phelps County, on right bank 1,700 ft (520 m) downstream from Interstate Highway 44, 2.9 mi (4.7 km) upstream from mouth, and 3 mi (4.8 km) west of Rolla.

DRAINAGE AREA.--6.41 mi<sup>2</sup> (16.6 km<sup>2</sup>).

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

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 790 ft (240.8 m) from topographic map.

AVERAGE DISCHARGE.--26 years, 5.33 ft<sup>3</sup>/s (0.151 m<sup>3</sup>/s), 11.29 in/yr (287 mm/yr), 3,860 acre-ft/yr (4.8 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 772 ft<sup>3</sup>/s (21.9 m<sup>3</sup>/s) Apr. 21 (gage height, 4.37 ft or 1.332 m); minimum, 0.2 ft<sup>3</sup>/s (0.006 m<sup>3</sup>/s) Aug. 1 (gage height, 1.59 ft or 0.485 m).  
 Period of record: Maximum discharge, 7,420 ft<sup>3</sup>/s (210 m<sup>3</sup>/s) July 17, 1958 (gage height, 8.57 ft or 2.612 m) from rating curve extended above 1,400 ft<sup>3</sup>/s (40 m<sup>3</sup>/s) on basis of slope-area and contracted opening measurements at gage height, 7.57 ft (2.307 m) and logarithmic plotting; no flow Aug. 12, 13, 1964, Aug. 4, 5, 1965, result of construction work on highway upstream.  
 Maximum stage known since 1881 or 1882, that of July 17, 1958.

REMARKS.--Records fair. Sewage effluent included in the records since July 1970.

REVISIONS (WATER YEARS).--WSP 1280: Drainage area. WSP 1730: 1957.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT    | NOV    | DEC   | JAN   | FEB   | MAR   | APR   | MAY   | JUN   | JUL   | AUG   | SEP   |
|-------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1     | 1.0    | 6.2    | 4.0   | 4.3   | 7.4   | 5.6   | 4.3   | 9.2   | 5.3   | .80   | .30   | 6.0   |
| 2     | .70    | 3.6    | 3.4   | 4.0   | 5.6   | 5.6   | 3.7   | 20    | 3.7   | .70   | .30   | 3.7   |
| 3     | .60    | 2.5    | 4.0   | 4.0   | 5.3   | 5.3   | 3.7   | 13    | 3.4   | .60   | .50   | 2.8   |
| 4     | 1.7    | 1.9    | 58    | 4.0   | 4.6   | 4.6   | 3.4   | 7.4   | 3.1   | .80   | .40   | 1.5   |
| 5     | 1.0    | 1.7    | 13    | 4.0   | 4.3   | 4.3   | 2.8   | 5.6   | 3.1   | .60   | .40   | 1.2   |
| 6     | .80    | 1.5    | 7.4   | 4.0   | 4.3   | 4.0   | 2.5   | 5.0   | 3.1   | .60   | .50   | 1.0   |
| 7     | .80    | 1.5    | 5.0   | 4.0   | 4.0   | 3.7   | 3.9   | 4.3   | 4.2   | .60   | .80   | .80   |
| 8     | .60    | 1.3    | 4.3   | 4.0   | 3.7   | 3.7   | 70    | 4.3   | 3.7   | .50   | .60   | .80   |
| 9     | .60    | 1.2    | 4.0   | 4.0   | 3.7   | 7.0   | 17    | 3.7   | 9.1   | .50   | .60   | .80   |
| 10    | .60    | 1.0    | 3.4   | 4.0   | 3.4   | 96    | 9.8   | 3.7   | 4.3   | .50   | .80   | .80   |
| 11    | .80    | 1.0    | 3.1   | 4.0   | 3.1   | 46    | 27    | 4.6   | 3.7   | .50   | .60   | 1.7   |
| 12    | 1.5    | 1.0    | 2.8   | 4.0   | 3.1   | 17    | 23    | 4.0   | 3.4   | .40   | .50   | .80   |
| 13    | 44     | 1.0    | 2.5   | 3.0   | 2.8   | 11    | 14    | 3.1   | 2.8   | .50   | .50   | .60   |
| 14    | 4.3    | 1.0    | 2.2   | 3.0   | 2.5   | 7.8   | 14    | 68    | 2.5   | .50   | .30   | .60   |
| 15    | 2.5    | 1.4    | 2.2   | 4.0   | 2.5   | 18    | 8.3   | 25    | 2.2   | .50   | .30   | .50   |
| 16    | 1.9    | 1.0    | 1.9   | 19    | 2.5   | 11    | 6.9   | 11    | 1.9   | .40   | .50   | .70   |
| 17    | 1.5    | .80    | 1.7   | 29    | 2.2   | 7.8   | 6.0   | 7.4   | 1.7   | .40   | .70   | .70   |
| 18    | 1.4    | .80    | 1.7   | 26    | 38    | 6.9   | 5.6   | 6.0   | 1.7   | .40   | .60   | .70   |
| 19    | 1.0    | .80    | 6.9   | 21    | 59    | 5.6   | 5.0   | 5.3   | 1.5   | .40   | .40   | .70   |
| 20    | 1.2    | 3.6    | 5.0   | 52    | 17    | 6.4   | 4.6   | 4.6   | 1.4   | .40   | .40   | .60   |
| 21    | 1.0    | 3.4    | 4.0   | 23    | 49    | 7.8   | 90    | 4.6   | 1.2   | .40   | .30   | .60   |
| 22    | .80    | 1.9    | 3.5   | 20    | 33    | 9.2   | 37    | 4.3   | 1.0   | .30   | .50   | .50   |
| 23    | .80    | 1.5    | 3.0   | 17    | 17    | 9.8   | 12    | 4.0   | 1.0   | .30   | .40   | .50   |
| 24    | .80    | 108    | 56    | 12    | 16    | 8.3   | 7.4   | 3.7   | 1.0   | .30   | .40   | .60   |
| 25    | .70    | 97     | 16    | 9.8   | 11    | 17    | 5.6   | 3.4   | 1.0   | .30   | .30   | .60   |
| 26    | .70    | 36     | 10    | 36    | 9.8   | 15    | 5.0   | 6.8   | 1.0   | .40   | .30   | .50   |
| 27    | 2.4    | 16     | 8.3   | 21    | 7.8   | 9.8   | 4.3   | 5.0   | .80   | .30   | 1.7   | .50   |
| 28    | 1.3    | 9.8    | 6.9   | 27    | 6.9   | 12    | 4.0   | 4.0   | .80   | .30   | 7.0   | 3.7   |
| 29    | 1.4    | 6.0    | 6.0   | 16    | ----- | 11    | 3.7   | 3.7   | .80   | .30   | 3.5   | 1.7   |
| 30    | 1.2    | 5.0    | 5.3   | 11    | ----- | 6.0   | 18    | 3.4   | 1.0   | .40   | 1.0   | 1.0   |
| 31    | 23     | -----  | 4.6   | 7.8   | ----- | 4.6   | ----- | 14    | ----- | .30   | 1.7   | ----- |
| TOTAL | 102.60 | 319.40 | 260.1 | 405.9 | 329.5 | 387.8 | 422.5 | 272.1 | 75.40 | 14.20 | 27.10 | 37.20 |
| MEAN  | 3.31   | 10.6   | 8.39  | 13.1  | 11.8  | 12.5  | 14.1  | 8.78  | 2.51  | .46   | .87   | 1.24  |
| MAX   | 44     | 108    | 58    | 52    | 59    | 96    | 90    | 68    | 9.1   | .80   | 7.0   | 6.0   |
| MIN   | .60    | .80    | 1.7   | 3.0   | 2.2   | 3.7   | 2.5   | 3.1   | .80   | .30   | .30   | .50   |
| CFSM  | .52    | 1.65   | 1.31  | 2.04  | 1.84  | 1.95  | 2.20  | 1.37  | .39   | .07   | .14   | .19   |
| IN.   | .60    | 1.85   | 1.51  | 2.36  | 1.91  | 2.25  | 2.45  | 1.58  | .44   | .08   | .16   | .22   |
| AC-FT | 204    | 634    | 516   | 805   | 654   | 769   | 838   | 540   | 150   | 28    | 54    | 74    |

CAL YR 1973 TOTAL 2,695.30 MEAN 7.38 MAX 187 MIN .30 CFSM 1.15 IN 15.64 AC-FT 5,350  
 WTR YR 1974 TOTAL 2,653.80 MEAN 7.27 MAX 108 MIN .30 CFSM 1.13 IN 15.40 AC-FT 5,260

PEAK DISCHARGE (BASE, 1,000 FT<sup>3</sup>/S).--No peak above base.

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, on left bank at downstream side of bridge on County Highway P and T at Newburg, and 2 mi (3.2 km) upstream from Mill Creek.

DRAINAGE AREA.--200 mi<sup>2</sup> (520 km<sup>2</sup>), approximately.

PERIOD OF RECORD.--October 1928 to current year.

GAGE.--Water-stage recorder. Datum of gage is 693.40 ft (211.348 m) above mean sea level. Prior to Oct. 1, 1951, all gages at datum 3.0 ft (0.914 m) higher. Prior to Nov. 21, 1963, nonrecording gage at site 100 ft (30 m) downstream. Nov. 21, 1963, to May 9, 1966, nonrecording gage at present site.

AVERAGE DISCHARGE.--46 years, 151 ft<sup>3</sup>/s (4.28 m<sup>3</sup>/s), 10.25 in/yr (260 mm/yr), 109,400 acre-ft/yr (135 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 5,360 ft<sup>3</sup>/s (152 m<sup>3</sup>/s) Nov. 25 (gage height, 9.17 ft or 2.795 m); minimum, 48 ft<sup>3</sup>/s (1.36 m<sup>3</sup>/s) Aug. 2 (gage height, 1.88 ft or 0.573 m).

Period of record: Maximum discharge, 32,500 ft<sup>3</sup>/s (920 m<sup>3</sup>/s) Aug. 14, 1946 (gage height, 16.2 ft or 4.94 m, present datum, from floodmarks), from rating curve extended above 21,000 ft<sup>3</sup>/s (595 m<sup>3</sup>/s) on basis of slope-area measurements at gage heights 15.0 ft (4.57 m) and 16.2 ft (4.94 m); maximum gage height, 16.26 ft (4.956 m) June 26, 1935 (from floodmark, present datum); minimum discharge, 24 ft<sup>3</sup>/s (0.68 m<sup>3</sup>/s) Aug. 22-31, 1936, Sept. 19, 20, 1954, Oct. 10-16, 1956.

Maximum stage known, 16.7 ft (5.09 m) Aug. 20, 1915 (from floodmark, present datum); discharge, 30,000 ft<sup>3</sup>/s (850 m<sup>3</sup>/s), from rating curve based on discharge measurements made in 1935 and extended above 25,000 ft<sup>3</sup>/s (708 m<sup>3</sup>/s).

REMARKS.--Records fair.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT   | NOV    | DEC    | JAN    | FEB    | MAR    | APR    | MAY    | JUN   | JUL   | AUG   | SEP   |
|-------|-------|--------|--------|--------|--------|--------|--------|--------|-------|-------|-------|-------|
| 1     | 82    | 262    | 244    | 132    | 266    | 227    | 274    | 279    | 183   | 88    | 55    | 196   |
| 2     | 79    | 191    | 210    | 125    | 240    | 210    | 245    | 368    | 168   | 79    | 54    | 218   |
| 3     | 76    | 151    | 190    | 116    | 205    | 198    | 238    | 390    | 159   | 76    | 60    | 219   |
| 4     | 186   | 126    | 910    | 108    | 179    | 182    | 227    | 314    | 158   | 84    | 54    | 168   |
| 5     | 127   | 112    | 570    | 107    | 167    | 164    | 223    | 268    | 157   | 78    | 60    | 143   |
| 6     | 91    | 105    | 399    | 104    | 156    | 154    | 213    | 234    | 155   | 78    | 67    | 129   |
| 7     | 81    | 100    | 337    | 98     | 141    | 145    | 207    | 211    | 165   | 68    | 78    | 118   |
| 8     | 75    | 96     | 244    | 98     | 130    | 138    | 454    | 204    | 171   | 57    | 74    | 108   |
| 9     | 72    | 88     | 222    | 96     | 122    | 138    | 312    | 189    | 195   | 73    | 74    | 103   |
| 10    | 69    | 86     | 187    | 94     | 113    | 1,170  | 259    | 180    | 250   | 78    | 79    | 100   |
| 11    | 70    | 84     | 168    | 92     | 106    | 1,570  | 310    | 429    | 200   | 67    | 73    | 114   |
| 12    | 76    | 85     | 153    | 91     | 101    | 769    | 510    | 560    | 180   | 67    | 73    | 105   |
| 13    | 361   | 87     | 140    | 92     | 96     | 538    | 405    | 248    | 160   | 74    | 73    | 103   |
| 14    | 191   | 89     | 125    | 93     | 92     | 433    | 385    | 454    | 150   | 65    | 73    | 97    |
| 15    | 140   | 95     | 123    | 101    | 84     | 530    | 335    | 1,490  | 150   | 65    | 71    | 95    |
| 16    | 112   | 90     | 116    | 199    | 82     | 698    | 299    | 633    | 140   | 60    | 74    | 97    |
| 17    | 98    | 88     | 110    | 335    | 79     | 473    | 269    | 423    | 140   | 67    | 79    | 90    |
| 18    | 89    | 89     | 108    | 380    | 163    | 411    | 253    | 335    | 130   | 95    | 254   | 86    |
| 19    | 83    | 84     | 105    | 439    | 1,160  | 358    | 233    | 262    | 130   | 95    | 101   | 84    |
| 20    | 80    | 94     | 123    | 678    | 550    | 310    | 208    | 233    | 120   | 88    | 90    | 84    |
| 21    | 76    | 119    | 123    | 703    | 554    | 304    | 313    | 226    | 110   | 82    | 85    | 82    |
| 22    | 74    | 105    | 121    | 497    | 998    | 282    | 588    | 219    | 110   | 79    | 80    | 82    |
| 23    | 73    | 97     | 173    | 426    | 571    | 311    | 412    | 196    | 100   | 82    | 80    | 81    |
| 24    | 74    | 740    | 715    | 339    | 485    | 280    | 324    | 183    | 100   | 85    | 77    | 81    |
| 25    | 77    | 3,470  | 440    | 281    | 384    | 312    | 270    | 176    | 97    | 83    | 72    | 84    |
| 26    | 75    | 862    | 324    | 367    | 326    | 408    | 226    | 185    | 88    | 89    | 70    | 84    |
| 27    | 97    | 610    | 262    | 502    | 292    | 374    | 207    | 174    | 84    | 93    | 76    | 84    |
| 28    | 91    | 471    | 223    | 476    | 260    | 355    | 192    | 178    | 81    | 111   | 355   | 125   |
| 29    | 86    | 363    | 194    | 440    | -----  | 389    | 178    | 180    | 84    | 93    | 430   | 182   |
| 30    | 84    | 271    | 172    | 358    | -----  | 325    | 268    | 177    | 84    | 78    | 168   | 149   |
| 31    | 376   | -----  | 156    | 309    | -----  | 287    | -----  | 213    | ----- | 76    | 135   | ----- |
| TOTAL | 3,421 | 9,310  | 7,687  | 8,276  | 8,102  | 12,443 | 8,837  | 9,811  | 4,199 | 2,453 | 3,244 | 3,491 |
| MEAN  | 110   | 310    | 248    | 267    | 289    | 401    | 295    | 316    | 140   | 79.1  | 105   | 116   |
| MAX   | 376   | 3,470  | 910    | 703    | 1,160  | 1,570  | 588    | 1,490  | 250   | 111   | 430   | 219   |
| MIN   | 69    | 84     | 105    | 91     | 79     | 138    | 178    | 174    | 81    | 57    | 54    | 81    |
| CFSM  | .55   | 1.55   | 1.24   | 1.34   | 1.45   | 2.01   | 1.48   | 1.58   | .70   | .40   | .53   | .58   |
| IN.   | .64   | 1.73   | 1.43   | 1.54   | 1.51   | 2.31   | 1.64   | 1.82   | .78   | .46   | .60   | .65   |
| AC-FT | 6,790 | 18,470 | 15,250 | 16,420 | 16,070 | 24,680 | 17,530 | 19,460 | 8,330 | 4,870 | 6,430 | 6,920 |

CAL YR 1973 TOTAL 86,040 MEAN 236 MAX 4,000 MIN 60 CFSM 1.18 IN 16.00 AC-FT 170,700  
WTR YR 1974 TOTAL 81,274 MEAN 223 MAX 3,470 MIN 54 CFSM 1.12 IN 15.12 AC-FT 161,200

PEAK DISCHARGE (BASE, 4,900 FT<sup>3</sup>/S).--Nov. 25 (1100) 5,360 ft<sup>3</sup>/s (9.17 ft).

## 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, on left bank at Jerome, 0.5 mi (0.8 km) downstream from Little Piney Creek, and at mile 107 (172.2 km).

DRAINAGE AREA.--2,840 mi<sup>2</sup> (7,360 km<sup>2</sup>), 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.

GAGE.--Water-stage recorder. Datum of gage is 657.64 ft (200.449 m) above mean sea level. Prior to July 26, 1904, nonrecording gage at site 0.8 mi (1.3 km) downstream at different datum. July 26, 1904 to July 21, 1906, nonrecording gage at site 0.5 mi (0.8 km) upstream from present site at datum about 0.85 ft (0.259 m) higher than present gage. Jan. 3, 1923 to Sept. 29, 1928, nonrecording gage at site 400 ft (122 m) downstream from present site at datum 0.14 ft (0.043 m) lower than present datum. Sept. 30, 1928 to Jan. 17, 1939, nonrecording gage at present site and datum.

AVERAGE DISCHARGE.--54 years (1903-5, 1922-74), 2,521 ft<sup>3</sup>/s (71.4 m<sup>3</sup>/s), 12.05 in/yr (306 mm/yr), 1,826,000 acre-ft/yr (2,250 km<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 37,400 ft<sup>3</sup>/s (1,060 m<sup>3</sup>/s) Nov. 27 (gage height, 18.73 ft or 5.709 m); minimum, 715 ft<sup>3</sup>/s (20.3 m<sup>3</sup>/s) Aug. 13 (gage height, 1.95 ft or 0.594 m).  
Period of record: Maximum discharge, 101,000 ft<sup>3</sup>/s (2,860 m<sup>3</sup>/s) Apr. 15, 1945 (gage height, 27.7 ft or 8.44 m); minimum, 254 ft<sup>3</sup>/s (7.19 m<sup>3</sup>/s) Sept. 21, 22, 1956 (gage height, 1.24 ft or 0.378 m).  
Maximum stage known about 29.0 ft (8.84 m) Jan. 6, 1897 (discharge, 120,000 ft<sup>3</sup>/s or 3,400 m<sup>3</sup>/s). A stage of 28.6 ft (8.72 m) was reached on Aug. 20, 22, 1915 (discharge, 114,000 ft<sup>3</sup>/s or 3,230 m<sup>3</sup>/s).

REMARKS.--Records good.

REVISIONS (WATER YEARS).--WSP 172: 1904. WSP 566: Drainage area. WSP 1340: 1903-4, 1928(M).

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT    | NOV     | DEC     | JAN     | FEB     | MAR     | APR     | MAY     | JUN     | JUL    | AUG    | SEP     |
|-------|--------|---------|---------|---------|---------|---------|---------|---------|---------|--------|--------|---------|
| 1     | 787    | 4,270   | 6,580   | 3,450   | 5,020   | 3,520   | 4,420   | 4,870   | 2,820   | 1,250  | 767    | 2,790   |
| 2     | 811    | 5,780   | 5,320   | 3,030   | 4,420   | 3,240   | 3,970   | 7,080   | 2,560   | 1,200  | 754    | 2,940   |
| 3     | 835    | 4,420   | 4,570   | 2,690   | 3,970   | 2,960   | 3,670   | 7,080   | 2,300   | 1,160  | 760    | 4,060   |
| 4     | 844    | 3,450   | 6,260   | 2,430   | 3,520   | 2,760   | 3,380   | 7,930   | 2,100   | 1,200  | 737    | 4,830   |
| 5     | 907    | 2,690   | 14,100  | 2,360   | 3,170   | 2,560   | 3,170   | 6,910   | 2,040   | 1,160  | 730    | 4,200   |
| 6     | 954    | 2,240   | 15,900  | 2,240   | 2,890   | 2,430   | 2,820   | 5,780   | 1,910   | 1,140  | 723    | 3,400   |
| 7     | 963    | 1,910   | 12,500  | 2,100   | 2,690   | 2,300   | 2,690   | 4,720   | 2,100   | 1,120  | 757    | 2,710   |
| 8     | 963    | 1,670   | 7,420   | 2,040   | 2,500   | 2,170   | 2,960   | 4,120   | 7,350   | 1,080  | 765    | 2,260   |
| 9     | 954    | 1,540   | 5,780   | 1,980   | 2,300   | 2,100   | 2,960   | 3,820   | 10,600  | 1,080  | 755    | 1,960   |
| 10    | 925    | 1,390   | 4,720   | 1,980   | 2,170   | 5,910   | 3,240   | 5,320   | 15,200  | 1,050  | 783    | 1,740   |
| 11    | 907    | 1,280   | 4,120   | 1,910   | 2,040   | 17,200  | 3,240   | 5,320   | 11,400  | 1,020  | 754    | 1,660   |
| 12    | 898    | 1,220   | 3,600   | 1,850   | 1,980   | 25,100  | 3,380   | 8,100   | 9,510   | 978    | 742    | 1,750   |
| 13    | 1,000  | 1,140   | 3,240   | 1,850   | 1,850   | 23,600  | 3,820   | 6,740   | 6,100   | 949    | 727    | 3,090   |
| 14    | 1,300  | 1,100   | 3,100   | 1,790   | 1,790   | 14,600  | 4,120   | 5,020   | 4,720   | 937    | 805    | 2,590   |
| 15    | 2,170  | 1,060   | 2,690   | 1,730   | 1,730   | 8,790   | 4,420   | 9,330   | 4,120   | 926    | 798    | 3,360   |
| 16    | 2,820  | 1,010   | 2,500   | 1,850   | 1,670   | 9,510   | 4,120   | 12,900  | 3,520   | 904    | 750    | 3,000   |
| 17    | 2,820  | 963     | 2,300   | 2,820   | 1,550   | 11,000  | 3,970   | 10,100  | 3,100   | 885    | 734    | 2,550   |
| 18    | 2,560  | 944     | 2,170   | 4,870   | 1,610   | 9,690   | 3,450   | 7,420   | 2,690   | 858    | 1,400  | 2,160   |
| 19    | 2,300  | 925     | 2,170   | 5,780   | 3,970   | 7,420   | 3,100   | 5,780   | 2,430   | 841    | 4,340  | 1,890   |
| 20    | 2,040  | 934     | 2,300   | 6,100   | 4,870   | 6,420   | 2,820   | 4,720   | 2,300   | 826    | 2,060  | 1,710   |
| 21    | 1,790  | 982     | 3,380   | 6,740   | 5,020   | 6,100   | 2,690   | 3,970   | 2,100   | 815    | 1,740  | 1,630   |
| 22    | 1,550  | 975     | 3,100   | 7,420   | 6,100   | 5,940   | 5,450   | 4,120   | 1,910   | 806    | 1,440  | 1,490   |
| 23    | 1,360  | 1,100   | 3,240   | 6,580   | 7,930   | 6,100   | 13,300  | 7,420   | 1,790   | 792    | 1,280  | 1,400   |
| 24    | 1,170  | 2,060   | 4,570   | 5,470   | 7,420   | 6,420   | 12,700  | 6,420   | 1,630   | 780    | 1,150  | 1,310   |
| 25    | 992    | 16,300  | 8,100   | 4,720   | 6,260   | 6,260   | 9,510   | 5,020   | 1,570   | 769    | 1,050  | 1,270   |
| 26    | 925    | 31,400  | 10,300  | 4,420   | 5,170   | 6,100   | 6,100   | 4,270   | 1,490   | 787    | 979    | 1,260   |
| 27    | 972    | 35,300  | 8,440   | 5,020   | 4,420   | 6,260   | 4,870   | 3,970   | 1,420   | 777    | 958    | 1,200   |
| 28    | 1,680  | 29,600  | 6,260   | 5,780   | 3,970   | 6,260   | 4,120   | 3,820   | 1,370   | 785    | 1,320  | 1,290   |
| 29    | 2,620  | 12,900  | 5,170   | 6,420   | -----   | 6,100   | 3,670   | 3,670   | 1,320   | 849    | 4,270  | 1,700   |
| 30    | 2,360  | 8,440   | 4,420   | 6,420   | -----   | 5,470   | 3,670   | 3,380   | 1,290   | 824    | 4,070  | 1,940   |
| 31    | 2,960  | -----   | 3,970   | 5,780   | -----   | 4,870   | -----   | 3,170   | -----   | 789    | 2,980  | -----   |
| TOTAL | 46,137 | 178,993 | 172,290 | 119,620 | 102,000 | 229,160 | 135,800 | 182,290 | 114,760 | 29,337 | 41,878 | 69,140  |
| MEAN  | 1,488  | 5,966   | 5,558   | 3,859   | 3,643   | 7,392   | 4,527   | 5,880   | 3,825   | 946    | 1,351  | 2,305   |
| MAX   | 2,960  | 35,300  | 15,900  | 7,420   | 7,930   | 25,100  | 13,300  | 12,900  | 15,200  | 1,250  | 4,340  | 4,830   |
| MIN   | 787    | 925     | 2,170   | 1,730   | 1,550   | 2,100   | 2,690   | 3,170   | 1,290   | 769    | 723    | 1,200   |
| CFSM  | .52    | 2.10    | 1.96    | 1.36    | 1.28    | 2.60    | 1.59    | 2.07    | 1.35    | .33    | .48    | .81     |
| IN.   | .60    | 2.34    | 2.26    | 1.57    | 1.34    | 3.00    | 1.78    | 2.39    | 1.50    | .38    | .55    | .91     |
| AC-FT | 91,510 | 355,000 | 341,700 | 237,300 | 202,300 | 454,500 | 269,400 | 361,600 | 227,600 | 58,190 | 83,070 | 137,100 |

CAL YR 1973 TOTAL 1,603,179 MEAN 4,392 MAX 44,400 MIN 525 CFSM 1.55 IN 21.00 AC-FT 3,180,000  
WTR YR 1974 TOTAL 1,421,405 MEAN 3,894 MAX 35,300 MIN 723 CFSM 1.37 IN 18.62 AC-FT 2,819,000

PEAK DISCHARGE (BASE, 16,000 FT<sup>3</sup>/S)

| DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|------|------|-------|-----------|
| 11-27 | 2300 | 18.73 | 37,400    | 4-23 | 2330 | 11.55 | 16,800    |
| 12-6  | 0300 | 12.56 | 19,100    | 6-10 | 1730 | 11.60 | 16,800    |
| 3-12  | 2200 | 15.20 | 26,300    |      |      |       |           |

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, on downstream side of third pier from right abutment of bridge on State Highway 19 at Hermann. River mile, 97.9 (157.5 km).

DRAINAGE AREA.--528,200 mi<sup>2</sup> (1,368,000 km<sup>2</sup>), approximately.

PERIOD OF RECORD.--October 1897 to current year. Prior to August 1928 monthly discharge only published in WSP 1310. Gage-height records 1873-99 collected at site 480 ft (146 m) downstream are contained in reports of Missouri River Commission; since 1900 in reports of National Weather Service.

GAGE.--Water-stage recorder. Datum of gage is 481.56 ft (146.779 m) above mean sea level. Prior to Sept. 26, 1930, nonrecording gage at site 480 ft (146 m) downstream at datum 0.07 ft (0.021 m) lower. Sept. 26, 1930 to Mar. 27, 1932, nonrecording gage, Mar. 28, 1932, to June 12, 1945, water-stage recorder, June 13, 1945, to Apr. 2, 1946, nonrecording gage at present site and datum.

AVERAGE DISCHARGE.--77 years, 79,650 ft<sup>3</sup>/s (2,256 m<sup>3</sup>/s), 57,710,000 acre-ft/yr (71,160 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 325,000 ft<sup>3</sup>/s (9,200 m<sup>3</sup>/s) Oct. 18; maximum gage height, 28.42 ft (8.662 m) May 21; minimum discharge, 41,900 ft<sup>3</sup>/s (1,187 m<sup>3</sup>/s), Jan. 15; minimum gage height, 7.07 ft (2.155 m) Sept. 25.

Period of record: Maximum discharge, 676,000 ft<sup>3</sup>/s (19,140 m<sup>3</sup>/s) June 6, 7, 1903 (gage height, 29.5 ft or 8.99 m), discharge computed by Corps of Engineers; maximum gage height, 33.70 ft (10.272 m) Apr. 25, 1973; minimum, about 4,200 ft<sup>3</sup>/s (119 m<sup>3</sup>/s) Jan. 10-12, 1940; minimum gage height observed, -0.80 ft (-0.244 m) Jan. 5, 6, 1940.

Maximum stage known, 35.5 ft (10.82 m) in June 1844 (discharge, about 892,000 ft<sup>3</sup>/s or 25,260 m<sup>3</sup>/s computed by Corps of Engineers).

REMARKS.--Records good. Discharge measurements made 3 times a month during winter and 4 or more times monthly during rest of year. Flow partly regulated by many reservoirs above station. Records of chemical analyses are published in Part 2 of this report.

REVISIONS.--WSP 761: Drainage area.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT      | NOV      | DEC      | JAN      | FEB      | MAR      | APR      | MAY      | JUN      | JUL      | AUG      | SEP      |
|-------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 1     | 250,000  | 135,000  | 146,000  | 117,000  | 168,000  | 106,000  | 94,600   | 98,200   | 187,000  | 57,500   | 45,100   | 69,400   |
| 2     | 256,000  | 131,000  | 125,000  | 96,000   | 149,000  | 99,500   | 88,100   | 118,000  | 154,000  | 55,300   | 44,800   | 79,100   |
| 3     | 258,000  | 133,000  | 117,000  | 84,200   | 145,000  | 91,500   | 88,300   | 136,000  | 137,000  | 58,000   | 44,100   | 90,000   |
| 4     | 249,000  | 125,000  | 129,000  | 74,600   | 142,000  | 85,600   | 85,600   | 122,000  | 121,000  | 57,400   | 43,700   | 89,000   |
| 5     | 250,000  | 116,000  | 171,000  | 78,200   | 135,000  | 83,400   | 84,600   | 110,000  | 102,000  | 57,400   | 43,400   | 89,800   |
| 6     | 247,000  | 116,000  | 211,000  | 67,000   | 123,000  | 93,000   | 83,200   | 98,900   | 92,400   | 65,700   | 43,400   | 86,000   |
| 7     | 237,000  | 123,000  | 233,000  | 61,000   | 106,000  | 101,000  | 76,600   | 92,000   | 139,000  | 79,700   | 44,400   | 81,800   |
| 8     | 208,000  | 122,000  | 212,000  | 53,000   | 102,000  | 102,000  | 74,300   | 87,900   | 173,000  | 74,800   | 45,400   | 78,000   |
| 9     | 180,000  | 117,000  | 186,000  | 70,500   | 103,000  | 95,800   | 82,500   | 82,900   | 214,000  | 71,800   | 45,600   | 75,100   |
| 10    | 159,000  | 115,000  | 156,000  | 62,400   | 102,000  | 95,200   | 92,900   | 79,700   | 232,000  | 67,200   | 54,200   | 79,400   |
| 11    | 144,000  | 109,000  | 138,000  | 69,500   | 91,100   | 152,000  | 91,100   | 78,100   | 230,000  | 60,500   | 49,700   | 76,300   |
| 12    | 148,000  | 104,000  | 129,000  | 51,800   | 81,200   | 200,000  | 85,000   | 77,200   | 241,000  | 57,900   | 47,200   | 75,600   |
| 13    | 218,000  | 105,000  | 121,000  | 59,200   | 85,400   | 222,000  | 80,700   | 77,000   | 228,000  | 54,900   | 46,300   | 73,300   |
| 14    | 263,000  | 111,000  | 113,000  | 49,400   | 85,000   | 219,000  | 80,300   | 79,500   | 203,000  | 54,700   | 47,500   | 64,200   |
| 15    | 284,000  | 110,000  | 106,000  | 44,900   | 82,800   | 209,000  | 79,000   | 137,000  | 187,000  | 57,500   | 50,000   | 58,500   |
| 16    | 298,000  | 110,000  | 99,000   | 45,500   | 79,000   | 194,000  | 79,900   | 169,000  | 175,000  | 56,600   | 53,600   | 59,400   |
| 17    | 310,000  | 107,000  | 89,500   | 54,800   | 75,000   | 180,000  | 88,800   | 157,000  | 147,000  | 53,600   | 52,800   | 57,800   |
| 18    | 318,000  | 102,000  | 85,600   | 76,900   | 71,300   | 170,000  | 85,300   | 153,000  | 120,000  | 49,100   | 53,400   | 55,600   |
| 19    | 316,000  | 97,600   | 84,500   | 105,000  | 92,000   | 159,000  | 84,400   | 229,000  | 102,000  | 51,700   | 54,200   | 58,800   |
| 20    | 311,000  | 95,800   | 83,100   | 120,000  | 135,000  | 145,000  | 79,500   | 265,000  | 92,600   | 55,000   | 56,400   | 55,900   |
| 21    | 295,000  | 101,000  | 84,100   | 145,000  | 130,000  | 135,000  | 71,500   | 278,000  | 87,100   | 52,900   | 58,300   | 51,900   |
| 22    | 271,000  | 121,000  | 91,700   | 153,000  | 140,000  | 123,000  | 70,400   | 272,000  | 85,400   | 47,400   | 59,300   | 48,700   |
| 23    | 230,000  | 151,000  | 82,700   | 185,000  | 150,000  | 112,000  | 76,100   | 264,000  | 78,600   | 49,000   | 61,500   | 46,400   |
| 24    | 181,000  | 152,000  | 79,800   | 184,000  | 154,000  | 109,000  | 114,000  | 244,000  | 71,400   | 48,700   | 61,500   | 44,700   |
| 25    | 160,000  | 162,000  | 106,000  | 174,000  | 148,000  | 109,000  | 125,000  | 204,000  | 66,500   | 47,300   | 60,800   | 45,300   |
| 26    | 148,000  | 170,000  | 116,000  | 178,000  | 131,000  | 107,000  | 109,000  | 166,000  | 63,900   | 45,700   | 55,400   | 46,700   |
| 27    | 143,000  | 175,000  | 131,000  | 238,000  | 119,000  | 103,000  | 101,000  | 130,000  | 62,200   | 45,400   | 52,100   | 46,500   |
| 28    | 144,000  | 173,000  | 142,000  | 244,000  | 112,000  | 101,000  | 92,600   | 107,000  | 62,000   | 53,000   | 73,700   | 47,400   |
| 29    | 134,000  | 172,000  | 135,000  | 221,000  | -----    | 99,300   | 84,900   | 98,200   | 63,300   | 53,700   | 81,000   | 48,700   |
| 30    | 135,000  | 166,000  | 127,000  | 203,000  | -----    | 99,400   | 82,200   | 96,600   | 62,000   | 47,300   | 69,800   | 48,300   |
| 31    | 135,000  | -----    | 118,000  | 190,000  | -----    | 102,000  | -----    | 151,000  | -----    | 45,600   | 64,700   | -----    |
| TOTAL | 6,880.0M | 3,827.4M | 3,948.0M | 3,555.9M | 3,236.8M | 4,002.7M | 2,611.4M | 4,458.2M | 3,979.4M | 1,732.3M | 1,663.3M | 1,927.6M |
| MEAN  | 221,900  | 127,600  | 127,400  | 114,700  | 115,600  | 129,100  | 87,050   | 143,800  | 132,600  | 55,880   | 53,650   | 64,250   |
| MAX   | 318,000  | 175,000  | 233,000  | 244,000  | 168,000  | 222,000  | 125,000  | 278,000  | 241,000  | 79,700   | 81,000   | 90,000   |
| MIN   | 134,000  | 95,800   | 79,800   | 44,900   | 71,300   | 83,400   | 70,400   | 77,000   | 62,000   | 45,400   | 43,400   | 44,700   |
| AC-FT | 13,650M  | 7,592M   | 7,831M   | 7,053M   | 6,420M   | 7,939M   | 5,180M   | 8,843M   | 7,893M   | 3,436M   | 3,299M   | 3,823M   |

CAL YR 1973 TOTAL 57,749,300 MEAN 158,200 MAX 489,000 MIN 44,200 AC-FT 114,500,000  
WTR YR 1974 TOTAL 41,823,000 MEAN 114,600 MAX 318,000 MIN 43,400 AC-FT 82,960,000

M Expressed in thousands.



## 07010000 Mississippi River at St. Louis, Mo.

LOCATION.--Lat 38°37'44", long 90°10'47", on downstream side of west pier of Eads Bridge at St. Louis, 15 mi (24.1 km) downstream from Missouri River, 19.2 mi (30.9 km) upstream from Meramec River, and at mile 180.0 (289.6 km) above the Ohio River.

DRAINAGE AREA.--701,000 mi<sup>2</sup> (1,816,000 km<sup>2</sup>), approximately.

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.

GAGE.--Water-stage recorder. Datum of gage is 379.94 ft (115.806 m) above mean sea level. Prior to May 5, 1934, nonrecording gage 0.4 mi (0.6 km) downstream and May 5, 1934, to Dec. 9, 1952, water-stage recorder at site 20 ft (6 m) downstream at present datum.

AVERAGE DISCHARGE.--113 years, 176,800 ft<sup>3</sup>/s (5,007 m<sup>3</sup>/s), 128,100,000 acre-ft/yr (158 km<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 584,000 ft<sup>3</sup>/s (16,500 m<sup>3</sup>/s) May 24; maximum gage height, 32.53 ft (9.915 m) May 25; minimum, 74,800 ft<sup>3</sup>/s (2,118 m<sup>3</sup>/s) Sept. 27 (gage height, 1.33 ft or 0.405 m).

Period of record: Maximum daily discharge, 1,019,000 ft<sup>3</sup>/s (28,900 m<sup>3</sup>/s) June 10, 11, 1903 (gage height, 38.00 ft or 11.582 m); maximum gage height, 43.23 ft (13.176 m) Apr. 28, 1973; minimum daily discharge, 18,000 ft<sup>3</sup>/s (510 m<sup>3</sup>/s) Dec. 21-23, 1863; minimum gage height, -6.11 ft (-1.862 m) Jan. 16, 1940.

Flood of June 27, 1844, reached a stage of 41.32 ft (12.594 m), from floodmarks (discharge, 1,300,000 ft<sup>3</sup>/s or 36,800 m<sup>3</sup>/s), computed by Corps of Engineers. Flood in April 1785 may have reached a stage of 42.0 ft (12.80 m).

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. Records of water temperatures and suspended sediment loads are published in Part 2 of this report.

## GAGE HEIGHT, IN FEET, AT 0800, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY | OCT   | NOV   | DEC   | JAN   | FEB   | MAR   | APR   | MAY   | JUN   | JUL   | AUG  | SEP   |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|
| 1   | 24.26 | 16.51 | 19.64 | 14.13 | 27.99 | 17.27 | 15.86 | 19.24 | 28.87 | 25.44 | 7.02 | 6.28  |
| 2   | 25.60 | 16.71 | 18.18 | 13.08 | 27.26 | 16.56 | 16.43 | 19.76 | 30.83 | 25.44 | 6.66 | 7.01  |
| 3   | 26.43 | 15.95 | 16.72 | 12.41 | 26.07 | 16.09 | 16.10 | 20.89 | 31.06 | 25.18 | 6.71 | 8.08  |
| 4   | 27.09 | 15.84 | 16.35 | 11.57 | 25.04 | 16.01 | 16.27 | 22.02 | 30.64 | 24.82 | 5.83 | 8.57  |
| 5   | 27.90 | 15.15 | 18.89 | 10.41 | 23.89 | 15.89 | 15.51 | 21.70 | 29.89 | 24.24 | 5.72 | 8.39  |
| 6   | 28.44 | 14.13 | 23.51 | 10.00 | 22.37 | 16.67 | 15.20 | 21.11 | 28.72 | 23.52 | 5.64 | 7.87  |
| 7   | 28.74 | 13.14 | 25.52 | 9.78  | 20.96 | 17.86 | 15.14 | 20.45 | 27.31 | 22.88 | 6.40 | 7.79  |
| 8   | 28.39 | 13.98 | 26.36 | 8.40  | 18.23 | 19.22 | 15.58 | 19.74 | 27.27 | 22.72 | 5.98 | 7.07  |
| 9   | 26.79 | 14.18 | 24.90 | 7.94  | 16.92 | 19.93 | 16.27 | 18.87 | 28.14 | 21.55 | 5.95 | 5.63  |
| 10  | 22.87 | 13.11 | 22.07 | 8.01  | 16.49 | 19.79 | 16.70 | 17.83 | 29.32 | 18.69 | 6.48 | 6.25  |
| 11  | 18.93 | 12.79 | 18.71 | 8.03  | 16.05 | 20.19 | 17.22 | 16.78 | 29.99 | 17.05 | 8.27 | 6.75  |
| 12  | 17.63 | 12.16 | 16.41 | 6.21  | 14.45 | 23.25 | 18.12 | 16.62 | 30.24 | 15.95 | 9.47 | 7.16  |
| 13  | 17.26 | 11.81 | 15.24 | 5.58  | 14.16 | 25.73 | 19.14 | 16.09 | 30.59 | 15.10 | 9.55 | 7.77  |
| 14  | 24.91 | 11.21 | 14.29 | 6.56  | 14.27 | 27.11 | 19.13 | 15.76 | 30.39 | 14.59 | 9.35 | 6.40  |
| 15  | 26.15 | 11.60 | 14.27 | 7.59  | 14.11 | 27.40 | 19.01 | 16.55 | 29.74 | 13.24 | 7.83 | 6.77  |
| 16  | 25.68 | 11.18 | 13.35 | 7.33  | 13.90 | 27.19 | 19.35 | 20.02 | 28.83 | 13.61 | 9.38 | 6.23  |
| 17  | 25.67 | 10.84 | 12.20 | 7.00  | 13.14 | 26.64 | 19.16 | 22.84 | 28.19 | 13.58 | 8.71 | 5.11  |
| 18  | 26.34 | 11.34 | 10.73 | 8.84  | 12.56 | 25.93 | 19.73 | 22.68 | 27.14 | 12.88 | 8.53 | 5.13  |
| 19  | 26.91 | 10.70 | 10.44 | 13.04 | 12.74 | 25.31 | 19.63 | 22.67 | 26.10 | 11.65 | 7.91 | 4.54  |
| 20  | 26.86 | 9.80  | 10.10 | 16.34 | 14.72 | 24.32 | 19.44 | 25.96 | 25.05 | 10.66 | 6.31 | 4.73  |
| 21  | 26.37 | 11.25 | 6.87  | 21.33 | 18.19 | 23.50 | 19.31 | 28.44 | 24.32 | 9.77  | 6.64 | 4.58  |
| 22  | 26.16 | 11.47 | 6.64  | 23.29 | 19.77 | 21.93 | 19.11 | 30.21 | 23.94 | 9.66  | 6.49 | 4.95  |
| 23  | 25.21 | 13.38 | 8.15  | 24.30 | 20.31 | 20.26 | 19.26 | 31.26 | 23.78 | 9.88  | 6.93 | 4.25  |
| 24  | 23.34 | 15.99 | 8.66  | 25.27 | 21.12 | 19.20 | 19.33 | 32.19 | 23.52 | 8.67  | 7.37 | 2.90  |
| 25  | 20.89 | 17.52 | 9.97  | 25.01 | 21.54 | 18.62 | 20.41 | 32.52 | 23.20 | 7.51  | 7.56 | 3.05  |
| 26  | 19.21 | 18.61 | 15.60 | 24.04 | 20.46 | 17.62 | 21.78 | 31.99 | 23.08 | 7.87  | 7.59 | 1.80  |
| 27  | 18.11 | 19.54 | 17.61 | 24.10 | 19.02 | 16.64 | 20.95 | 30.90 | 23.35 | 7.81  | 7.28 | 1.55  |
| 28  | 17.61 | 20.41 | 18.63 | 27.17 | 17.87 | 16.25 | 20.48 | 29.51 | 23.87 | 7.70  | 7.55 | 2.52  |
| 29  | 17.46 | 21.46 | 19.25 | 28.66 | ----- | 15.63 | 20.16 | 28.18 | 24.54 | 8.69  | 8.32 | 4.06  |
| 30  | 16.62 | 20.62 | 18.10 | 28.73 | ----- | 15.37 | 19.63 | 27.03 | 25.15 | 8.54  | 8.51 | 2.83  |
| 31  | 15.99 | ----- | 17.08 | 28.52 | ----- | 15.46 | ----- | 27.49 | ----- | 7.78  | 7.49 | ----- |
| MAX | 28.74 | 21.46 | 26.36 | 28.73 | 27.99 | 27.40 | 21.78 | 32.52 | 31.06 | 25.44 | 9.55 | 8.57  |
| MIN | 15.99 | 9.80  | 6.64  | 5.58  | 12.56 | 15.37 | 15.14 | 15.76 | 23.08 | 7.51  | 5.64 | 1.55  |



## MISSISSIPPI RIVER MAIN STEM

07010000 Mississippi River at St. Louis, Mo.--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY         | OCT               | NOV      | DEC          | JAN      | FEB         | MAR     | APR         | MAY     | JUN               | JUL      | AUG      | SEP      |
|-------------|-------------------|----------|--------------|----------|-------------|---------|-------------|---------|-------------------|----------|----------|----------|
| 1           | 361,000           | 245,000  | 290,000      | 215,000  | 468,000     | 279,000 | 256,000     | 297,000 | 487,000           | 417,000  | 124,000  | 125,000  |
| 2           | 387,000           | 246,000  | 270,000      | 200,000  | 451,000     | 270,000 | 260,000     | 307,000 | 528,000           | 413,000  | 122,000  | 130,000  |
| 3           | 400,000           | 239,000  | 254,000      | 190,000  | 427,000     | 266,000 | 256,000     | 324,000 | 532,000           | 405,000  | 118,000  | 139,000  |
| 4           | 417,000           | 233,000  | 255,000      | 175,000  | 407,000     | 265,000 | 256,000     | 339,000 | 514,000           | 395,000  | 115,000  | 141,000  |
| 5           | 432,000           | 225,000  | 302,000      | 160,000  | 384,000     | 264,000 | 246,000     | 333,000 | 500,000           | 380,000  | 112,000  | 140,000  |
| 6           | 443,000           | 211,000  | 372,000      | 155,000  | 358,000     | 275,000 | 242,000     | 324,000 | 467,000           | 364,000  | 114,000  | 137,000  |
| 7           | 447,000           | 205,000  | 408,000      | 150,000  | 326,000     | 294,000 | 242,000     | 313,000 | 433,000           | 350,000  | 116,000  | 134,000  |
| 8           | 435,000           | 212,000  | 417,000      | 145,000  | 287,000     | 313,000 | 248,000     | 304,000 | 437,000           | 344,000  | 111,000  | 126,000  |
| 9           | 394,000           | 213,000  | 382,000      | 141,000  | 269,000     | 319,000 | 257,000     | 292,000 | 456,000           | 316,000  | 114,000  | 115,000  |
| 10          | 318,000           | 202,000  | 329,000      | 146,000  | 260,000     | 319,000 | 263,000     | 278,000 | 480,000           | 276,000  | 122,000  | 118,000  |
| 11          | 269,000           | 196,000  | 282,000      | 140,000  | 248,000     | 329,000 | 272,000     | 268,000 | 492,000           | 253,000  | 136,000  | 124,000  |
| 12          | 251,000           | 190,000  | 251,000      | 123,000  | 230,000     | 390,000 | 287,000     | 265,000 | 497,000           | 237,000  | 145,000  | 127,000  |
| 13          | 271,000           | 185,000  | 237,000      | 120,000  | 229,000     | 437,000 | 298,000     | 259,000 | 508,000           | 226,000  | 150,000  | 127,000  |
| 14          | 373,000           | 179,000  | 224,000      | 126,000  | 231,000     | 462,000 | 298,000     | 259,000 | 500,000           | 216,000  | 139,000  | 121,000  |
| 15          | 390,000           | 184,000  | 220,000      | 130,000  | 229,000     | 466,000 | 299,000     | 275,000 | 482,000           | 202,000  | 132,000  | 117,000  |
| 16          | 383,000           | 179,000  | 204,000      | 132,000  | 225,000     | 458,000 | 303,000     | 332,000 | 465,000           | 205,000  | 141,000  | 109,000  |
| 17          | 386,000           | 176,000  | 187,000      | 134,000  | 217,000     | 443,000 | 303,000     | 372,000 | 449,000           | 201,000  | 135,000  | 101,000  |
| 18          | 399,000           | 178,000  | 168,000      | 160,000  | 211,000     | 424,000 | 310,000     | 367,000 | 428,000           | 188,000  | 133,000  | 101,000  |
| 19          | 409,000           | 171,000  | 168,000      | 212,000  | 218,000     | 409,000 | 309,000     | 379,000 | 407,000           | 172,000  | 122,000  | 95,600   |
| 20          | 405,000           | 164,000  | 157,000      | 264,000  | 249,000     | 391,000 | 308,000     | 448,000 | 390,000           | 162,000  | 114,000  | 100,000  |
| 21          | 397,000           | 179,000  | 133,000      | 330,000  | 290,000     | 371,000 | 307,000     | 505,000 | 377,000           | 146,000  | 117,000  | 101,000  |
| 22          | 390,000           | 185,000  | 133,000      | 368,000  | 311,000     | 342,000 | 305,000     | 540,000 | 373,000           | 147,000  | 117,000  | 100,000  |
| 23          | 369,000           | 210,000  | 149,000      | 395,000  | 323,000     | 316,000 | 308,000     | 563,000 | 370,000           | 146,000  | 123,000  | 96,300   |
| 24          | 333,000           | 241,000  | 160,000      | 408,000  | 338,000     | 301,000 | 308,000     | 579,000 | 366,000           | 134,000  | 129,000  | 87,400   |
| 25          | 299,000           | 261,000  | 187,000      | 399,000  | 342,000     | 291,000 | 329,000     | 579,000 | 362,000           | 129,000  | 130,000  | 83,800   |
| 26          | 279,000           | 278,000  | 257,000      | 381,000  | 322,000     | 276,000 | 341,000     | 557,000 | 362,000           | 130,000  | 131,000  | 77,700   |
| 27          | 266,000           | 291,000  | 280,000      | 396,000  | 302,000     | 265,000 | 326,000     | 523,000 | 370,000           | 133,000  | 126,000  | 81,400   |
| 28          | 262,000           | 299,000  | 292,000      | 454,000  | 287,000     | 258,000 | 318,000     | 483,000 | 382,000           | 132,000  | 135,000  | 87,200   |
| 29          | 260,000           | 312,000  | 292,000      | 482,000  | -----       | 251,000 | 311,000     | 453,000 | 397,000           | 141,000  | 139,000  | 96,400   |
| 30          | 246,000           | 305,000  | 274,000      | 482,000  | -----       | 247,000 | 302,000     | 430,000 | 409,000           | 138,000  | 139,000  | 90,700   |
| 31          | 245,000           | -----    | 253,000      | 477,000  | -----       | 248,000 | -----       | 445,000 | -----             | 130,000  | 129,000  | -----    |
| TOTAL       | 10,916M           | 6,594.0M | 7,787.0M     | 7,790.0M | 8,439.0M    | 10,239M | 8,668.0M    | 11,992M | 13,220M           | 7,228.0M | 3,930.0M | 3,329.5M |
| MEAN        | 352,100           | 219,800  | 251,200      | 251,300  | 301,400     | 330,300 | 288,900     | 386,800 | 440,700           | 233,200  | 126,800  | 111,000  |
| MAX         | 447,000           | 312,000  | 417,000      | 482,000  | 468,000     | 466,000 | 341,000     | 579,000 | 532,000           | 417,000  | 150,000  | 141,000  |
| MIN         | 245,000           | 164,000  | 133,000      | 120,000  | 211,000     | 247,000 | 242,000     | 259,000 | 362,000           | 129,000  | 111,000  | 77,700   |
| AC-FT       | 21,650M           | 13,080M  | 15,450M      | 15,450M  | 16,740M     | 20,310M | 17,190M     | 23,790M | 26,220M           | 14,340M  | 7,795M   | 6,604M   |
| CAL YR 1973 | TOTAL 126,103,000 |          | MEAN 345,500 |          | MAX 851,000 |         | MIN 117,000 |         | AC-FT 250,100,000 |          |          |          |
| WTR YR 1974 | TOTAL 100,132,500 |          | MEAN 274,300 |          | MAX 579,000 |         | MIN 77,700  |         | AC-FT 198,600,000 |          |          |          |

NOTE.--Daily discharge computed from daily mean gage height.  
M Figure expressed in thousands.

07010350 Meramec River at Cook Station, Mo.

LOCATION.--Lat 37°49'45", long 91°26'15", in NE¼ sec.23, T.36 N., R.5 W., Crawford County, on downstream side of right pier of bridge on County Highway M, 50 ft (15 m) downstream from Frisco Railroad bridge (Salem Branch), 1 mi (1.6 km) north of Cook Station, and 4 mi (6.4 km) upstream from Crooked Creek.

DRAINAGE AREA.--199 mi<sup>2</sup> (515 km<sup>2</sup>).

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

GAGE.--Water-stage recorder. Datum of gage is 864.51 ft (263.503 m) above mean sea level.

AVERAGE DISCHARGE.--9 years, 128 ft<sup>3</sup>/s (3.62 m<sup>3</sup>/s), 8.73 in/yr (222 mm/yr), 92,700 acre-ft/yr (114 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 8,850 ft<sup>3</sup>/s (250.6 m<sup>3</sup>/s) Nov. 25 (gage height, 13.18 ft or 4.017 m); minimum, 20 ft<sup>3</sup>/s (0.566 m<sup>3</sup>/s) July 31, Aug. 1; minimum gage height, 2.17 ft (0.661 m) Oct. 11, 12.  
Period of record: Maximum discharge, 34,900 ft<sup>3</sup>/s (988 m<sup>3</sup>/s) Feb. 10, 1966 (gage height, 17.74 ft or 5.407 m), from rating curve extended above 4,000 ft<sup>3</sup>/s (113 m<sup>3</sup>/s) on basis of slope-area measurement of peak flow; minimum, 9.1 ft<sup>3</sup>/s (0.258 m<sup>3</sup>/s) Sept. 1, 1967; minimum gage height, 2.03 ft (0.619 m) Sept. 15, 16, 1971.

REMARKS.--Records good.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY         | OCT          | NOV      | DEC       | JAN    | FEB       | MAR      | APR           | MAY    | JUN    | JUL   | AUG   | SEP   |
|-------------|--------------|----------|-----------|--------|-----------|----------|---------------|--------|--------|-------|-------|-------|
| 1           | 47           | 938      | 303       | 155    | 236       | 157      | 190           | 279    | 184    | 44    | 21    | 54    |
| 2           | 52           | 336      | 267       | 140    | 220       | 149      | 175           | 279    | 149    | 43    | 23    | 63    |
| 3           | 45           | 220      | 242       | 130    | 202       | 141      | 172           | 315    | 131    | 39    | 25    | 76    |
| 4           | 44           | 164      | 1,060     | 120    | 183       | 133      | 164           | 263    | 117    | 39    | 26    | 64    |
| 5           | 44           | 130      | 807       | 110    | 169       | 133      | 149           | 232    | 110    | 38    | 26    | 51    |
| 6           | 41           | 104      | 433       | 105    | 161       | 129      | 138           | 209    | 106    | 36    | 26    | 44    |
| 7           | 39           | 85       | 320       | 99     | 152       | 124      | 132           | 188    | 891    | 36    | 27    | 40    |
| 8           | 38           | 74       | 263       | 95     | 145       | 115      | 338           | 183    | 572    | 34    | 27    | 37    |
| 9           | 36           | 65       | 223       | 103    | 135       | 123      | 318           | 173    | 594    | 34    | 28    | 35    |
| 10          | 35           | 58       | 192       | 104    | 122       | 1,030    | 231           | 165    | 455    | 35    | 30    | 35    |
| 11          | 35           | 57       | 167       | 96     | 116       | 1,620    | 206           | 171    | 300    | 33    | 29    | 40    |
| 12          | 35           | 54       | 143       | 92     | 111       | 718      | 272           | 196    | 243    | 32    | 29    | 132   |
| 13          | 64           | 51       | 125       | 87     | 105       | 407      | 253           | 176    | 202    | 31    | 28    | 88    |
| 14          | 176          | 47       | 110       | 83     | 100       | 300      | 231           | 319    | 173    | 31    | 28    | 76    |
| 15          | 121          | 45       | 97        | 86     | 101       | 535      | 211           | 3,200  | 161    | 31    | 27    | 62    |
| 16          | 87           | 44       | 86        | 102    | 96        | 803      | 190           | 725    | 134    | 30    | 26    | 53    |
| 17          | 68           | 43       | 76        | 145    | 93        | 412      | 173           | 421    | 113    | 28    | 30    | 48    |
| 18          | 58           | 42       | 72        | 187    | 133       | 307      | 158           | 342    | 101    | 27    | 85    | 43    |
| 19          | 52           | 41       | 102       | 440    | 800       | 259      | 147           | 292    | 92     | 27    | 52    | 39    |
| 20          | 48           | 46       | 240       | 1,900  | 459       | 238      | 137           | 252    | 85     | 26    | 38    | 39    |
| 21          | 45           | 137      | 190       | 1,810  | 383       | 241      | 693           | 223    | 81     | 25    | 32    | 43    |
| 22          | 42           | 122      | 160       | 622    | 935       | 241      | 1,820         | 534    | 76     | 25    | 29    | 40    |
| 23          | 39           | 92       | 157       | 435    | 498       | 279      | 649           | 297    | 68     | 25    | 28    | 36    |
| 24          | 37           | 1,980    | 1,050     | 324    | 334       | 262      | 395           | 235    | 62     | 24    | 27    | 34    |
| 25          | 37           | 5,440    | 838       | 277    | 254       | 253      | 311           | 207    | 58     | 24    | 27    | 34    |
| 26          | 35           | 1,600    | 396       | 258    | 217       | 297      | 268           | 193    | 53     | 24    | 26    | 33    |
| 27          | 44           | 954      | 279       | 278    | 193       | 292      | 237           | 179    | 50     | 23    | 26    | 32    |
| 28          | 65           | 612      | 224       | 294    | 175       | 265      | 215           | 161    | 48     | 23    | 53    | 37    |
| 29          | 57           | 444      | 194       | 320    | -----     | 272      | 200           | 152    | 45     | 22    | 115   | 146   |
| 30          | 50           | 357      | 187       | 284    | -----     | 232      | 301           | 159    | 45     | 22    | 92    | 104   |
| 31          | 1,010        | -----    | 170       | 259    | -----     | 205      | -----         | 191    | -----  | 22    | 60    | ----- |
| TOTAL       | 2,626        | 14,382   | 9,173     | 9,540  | 6,828     | 10,672   | 9,074         | 10,911 | 5,499  | 933   | 1,146 | 1,658 |
| MEAN        | 84.7         | 479      | 296       | 308    | 244       | 344      | 302           | 352    | 183    | 30.1  | 37.0  | 55.3  |
| MAX         | 1,010        | 5,440    | 1,060     | 1,900  | 935       | 1,620    | 1,820         | 3,200  | 891    | 44    | 115   | 146   |
| MIN         | 35           | 41       | 72        | 83     | 93        | 115      | 132           | 152    | 45     | 22    | 21    | 32    |
| CFSM        | .43          | 2.41     | 1.49      | 1.55   | 1.23      | 1.73     | 1.52          | 1.77   | .92    | .15   | .19   | .28   |
| IN.         | .49          | 2.69     | 1.71      | 1.78   | 1.28      | 1.99     | 1.70          | 2.04   | 1.03   | .17   | .21   | .31   |
| AC-FT       | 5,210        | 28,530   | 18,190    | 18,920 | 13,540    | 21,170   | 18,000        | 21,640 | 10,910 | 1,850 | 2,270 | 3,290 |
| CAL YR 1973 | TOTAL 88,284 | MEAN 242 | MAX 5,440 | MIN 27 | CFSM 1.22 | IN 16.50 | AC-FT 175,100 |        |        |       |       |       |
| WTR YR 1974 | TOTAL 82,442 | MEAN 226 | MAX 5,440 | MIN 21 | CFSM 1.14 | IN 15.41 | AC-FT 163,500 |        |        |       |       |       |

PEAK DISCHARGE (BASE, 2,000 FT<sup>3</sup>/S)

| DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|------|------|-------|-----------|
| 10-31 | 2400 | 9.54  | 2,960     | 3-11 | 1400 | 8.63  | 2,020     |
| 11-25 | 1215 | 13.18 | 8,850     | 4-22 | 1245 | 9.53  | 2,680     |
| 12-4  | 1845 | 8.29  | 2,000     | 5-15 | 1015 | 12.41 | 7,020     |
| 1-21  | 0145 | 10.61 | 4,100     |      |      |       |           |

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, 650 ft (198 m) downstream from spring outlet, 1 mi (1.6 km) upstream from Meramec River, and 6 mi (9.7 km) southeast of St. James.

PERIOD OF RECORD.--March 1903 to July 1906, November 1921 to October 1929, October 1965 to current year. Monthly discharge only for some months prior to October 1905 published in WSP 1311. Occasional discharge measurements 1930, 1932, 1934, 1939-40, 1946, 1953-55, 1957, 1961-65.

GAGE.--Nonrecording gage. Datum of gage is 773.97 ft (235.906 m) above mean sea level. Prior to Nov. 11, 1921, gage at site 150 ft (45.7 m) upstream at different datum. Nov. 11, 1921, to June 4, 1928, at site 50 ft (15.2 m) upstream at datum 0.21 ft (0.064 m) higher.

AVERAGE DISCHARGE.--18 years (1903-05, 1922-29, 1965-74), 151 ft<sup>3</sup>/s (4.28 m<sup>3</sup>/s), 109,400 acre-ft/yr (135 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum daily discharge, 500 ft<sup>3</sup>/s (14.2 m<sup>3</sup>/s) Nov. 25, 26; minimum daily, 80 ft<sup>3</sup>/s (2.27 m<sup>3</sup>/s) Oct. 1-4, 9-12, 24-29.

Period of record: Maximum discharge, 650 ft<sup>3</sup>/s (18.4 m<sup>3</sup>/s), estimated, several days during 1927 and 1928, backwater from Meramec River; minimum measured, 56 ft<sup>3</sup>/s (1.59 m<sup>3</sup>/s) Aug. 1, 1934.

REMARKS.--Records poor. Occasional backwater from Meramec River.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT   | NOV    | DEC    | JAN    | FEB    | MAR    | APR    | MAY    | JUN    | JUL   | AUG   | SEP   |
|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|-------|-------|-------|
| 1     | 80    | 150    | 381    | 201    | 244    | 277    | 283    | 323    | 227    | 190   | 130   | 196   |
| 2     | 80    | 140    | 323    | 201    | 233    | 277    | 272    | 306    | 212    | 180   | 130   | 185   |
| 3     | 80    | 140    | 294    | 201    | 217    | 266    | 272    | 306    | 212    | 180   | 130   | 217   |
| 4     | 80    | 130    | 352    | 201    | 217    | 238    | 272    | 272    | 212    | 170   | 130   | 201   |
| 5     | 90    | 120    | 346    | 201    | 212    | 222    | 255    | 272    | 212    | 170   | 130   | 175   |
| 6     | 90    | 120    | 340    | 201    | 212    | 212    | 244    | 266    | 212    | 170   | 130   | 165   |
| 7     | 85    | 110    | 335    | 190    | 201    | 201    | 244    | 238    | 212    | 160   | 130   | 165   |
| 8     | 85    | 110    | 300    | 160    | 201    | 212    | 244    | 227    | 255    | 160   | 130   | 155   |
| 9     | 80    | 100    | 277    | 160    | 190    | 212    | 335    | 217    | 255    | 160   | 130   | 145   |
| 10    | 80    | 100    | 255    | 160    | 190    | 238    | 306    | 217    | 266    | 150   | 130   | 135   |
| 11    | 80    | 100    | 244    | 160    | 190    | 400    | 306    | 217    | 266    | 150   | 130   | 126   |
| 12    | 80    | 100    | 233    | 160    | 190    | 400    | 364    | 352    | 233    | 150   | 130   | 126   |
| 13    | 90    | 100    | 233    | 130    | 190    | 381    | 364    | 294    | 212    | 140   | 130   | 126   |
| 14    | 100   | 100    | 212    | 112    | 190    | 323    | 364    | 266    | 212    | 140   | 130   | 126   |
| 15    | 95    | 100    | 201    | 160    | 160    | 300    | 335    | 400    | 212    | 140   | 130   | 126   |
| 16    | 90    | 100    | 201    | 160    | 160    | 323    | 306    | 380    | 201    | 140   | 130   | 126   |
| 17    | 90    | 100    | 201    | 201    | 160    | 323    | 306    | 350    | 201    | 130   | 130   | 126   |
| 18    | 85    | 100    | 201    | 233    | 160    | 311    | 277    | 320    | 201    | 130   | 155   | 126   |
| 19    | 85    | 100    | 201    | 277    | 381    | 294    | 277    | 294    | 190    | 130   | 155   | 126   |
| 20    | 85    | 100    | 201    | 300    | 352    | 272    | 277    | 272    | 201    | 130   | 155   | 126   |
| 21    | 85    | 100    | 201    | 400    | 335    | 272    | 277    | 249    | 212    | 130   | 140   | 126   |
| 22    | 85    | 100    | 238    | 381    | 381    | 272    | 387    | 249    | 212    | 130   | 140   | 126   |
| 23    | 85    | 100    | 266    | 335    | 369    | 272    | 398    | 249    | 201    | 130   | 160   | 126   |
| 24    | 80    | 100    | 323    | 294    | 323    | 272    | 387    | 238    | 201    | 130   | 140   | 120   |
| 25    | 80    | 500    | 441    | 277    | 323    | 272    | 323    | 227    | 201    | 122   | 140   | 120   |
| 26    | 80    | 500    | 381    | 266    | 311    | 272    | 306    | 212    | 201    | 122   | 130   | 120   |
| 27    | 80    | 450    | 311    | 266    | 311    | 340    | 294    | 196    | 190    | 122   | 130   | 117   |
| 28    | 80    | 420    | 266    | 266    | 294    | 329    | 283    | 196    | 190    | 122   | 130   | 117   |
| 29    | 80    | 400    | 255    | 255    | -----  | 329    | 266    | 196    | 190    | 130   | 288   | 165   |
| 30    | 120   | 381    | 288    | 255    | -----  | 329    | 266    | 196    | 190    | 130   | 288   | 165   |
| 31    | 150   | -----  | 255    | 255    | -----  | 300    | -----  | 196    | -----  | 130   | 201   | ----- |
| TOTAL | 2,715 | 5,271  | 8,556  | 7,019  | 6,897  | 8,941  | 9,090  | 8,193  | 6,392  | 4,468 | 4,562 | 4,301 |
| MEAN  | 87.6  | 176    | 276    | 226    | 246    | 288    | 303    | 264    | 213    | 144   | 147   | 143   |
| MAX   | 150   | 500    | 441    | 400    | 381    | 400    | 398    | 400    | 266    | 190   | 288   | 217   |
| MIN   | 80    | 100    | 201    | 112    | 160    | 201    | 244    | 196    | 190    | 122   | 130   | 117   |
| AC-FT | 5,390 | 10,460 | 16,970 | 13,920 | 13,680 | 17,730 | 18,030 | 16,250 | 12,680 | 8,860 | 9,050 | 8,530 |

CAL YR 1973 TOTAL 79,649 MEAN 218 MAX 504 MIN 80 AC-FT 158,000  
WTR YR 1974 TOTAL 76,405 MEAN 209 MAX 500 MIN 80 AC-FT 151,500

07011500 Green Acre Branch near Rolla, Mo.

LOCATION.--Lat 37°54'50", long 91°43'37", in NW¼SW¼ sec.20, T.37 N., R.7 W., Phelps County, on left bank 35 ft (10.7 m) upstream from double concrete box culvert under State Highway 72, 0.4 mi (0.6 km) upstream from mouth, and 3 mi (4.8 km) southeast of Rolla.

DRAINAGE AREA.--0.62 mi<sup>2</sup> (1.606 km<sup>2</sup>).

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 958.82 ft (292.248 m) above mean sea level.

AVERAGE DISCHARGE.--26 years, 0.388 ft<sup>3</sup>/s (0.011 m<sup>3</sup>/s), 8.50 in/yr (216 mm/yr), 281 acre-ft/yr (347,000 m<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 54 ft<sup>3</sup>/s (1.53 m<sup>3</sup>/s) Nov. 24 (gage height, 2.21 ft or 0.674 m); no flow on many days.

Period of record: Maximum discharge, 1,900 ft<sup>3</sup>/s (53.8 m<sup>3</sup>/s) June 9, 1950 (gage height, 6.85 ft or 2.088 m), from rating curve extended above 520 ft<sup>3</sup>/s (14.7 m<sup>3</sup>/s) on basis of slope-area measurement of peak flow; no flow on many days each year.

REMARKS.--Records fair except period of no gage-height record, which are poor.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT  | NOV   | DEC   | JAN   | FEB   | MAR   | APR   | MAY   | JUN   | JUL  | AUG  | SEP   |
|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|-------|
| 1     | 0    | .13   | .19   | .72   | .35   | .35   | .70   | .17   | .17   | .09  | 0    | .44   |
| 2     | 0    | .05   | .17   | .13   | .25   | .29   | .20   | .88   | .09   | .04  | 0    | .36   |
| 3     | 0    | .01   | .54   | .07   | .22   | .22   | .20   | .25   | .07   | .01  | 0    | .07   |
| 4     | .30  | .01   | 6.6   | .07   | .19   | .17   | .13   | .17   | .07   | .03  | 0    | .02   |
| 5     | .01  | .01   | .70   | .07   | .19   | .15   | .11   | .13   | .09   | .05  | 0    | .01   |
| 6     | 0    | .01   | .35   | .07   | .17   | .15   | .09   | .09   | .11   | .03  | 0    | 0     |
| 7     | 0    | .01   | .25   | .07   | .15   | .13   | .10   | .08   | .44   | .02  | 0    | 0     |
| 8     | 0    | .01   | .25   | .07   | .15   | .11   | 2.2   | .11   | .17   | .01  | 0    | 0     |
| 9     | 0    | 0     | .22   | .08   | .15   | 1.4   | .42   | .11   | 1.7   | 0    | 0    | 0     |
| 10    | 0    | 0     | .17   | .08   | .15   | 9.7   | .22   | .15   | .22   | 0    | 0    | 0     |
| 11    | 0    | 0     | .17   | .08   | .15   | 3.6   | 2.7   | .85   | .19   | .01  | 0    | .07   |
| 12    | .01  | 0     | .17   | .08   | .13   | 1.0   | 1.2   | .22   | .15   | .01  | 0    | .01   |
| 13    | 1.4  | 0     | .13   | .08   | .11   | .60   | .42   | .13   | .13   | 0    | 0    | .01   |
| 14    | .06  | 0     | .13   | .07   | .09   | .42   | .60   | 3.5   | .11   | 0    | 0    | 0     |
| 15    | .01  | 0     | .09   | .86   | .09   | 3.0   | .29   | 1.0   | .13   | .05  | 0    | 0     |
| 16    | .01  | 0     | .08   | 4.1   | .08   | .70   | .25   | .42   | .09   | .02  | 0    | 0     |
| 17    | 0    | 0     | .08   | 2.3   | .07   | .50   | .19   | .29   | .08   | .01  | 0    | 0     |
| 18    | 0    | 0     | .07   | 2.4   | 4.3   | .29   | .17   | .29   | .08   | 0    | 0    | 0     |
| 19    | 0    | 0     | 1.0   | 2.6   | 5.1   | .29   | .15   | .25   | .08   | 0    | 0    | 0     |
| 20    | 0    | .15   | .35   | 7.5   | 1.0   | .42   | .11   | .22   | .08   | 0    | 0    | 0     |
| 21    | 0    | .02   | .29   | 1.7   | 5.0   | .42   | .92   | .29   | .07   | 0    | 0    | 0     |
| 22    | 0    | .01   | .35   | 1.5   | 2.8   | .30   | .74   | .29   | .07   | 0    | 0    | 0     |
| 23    | 0    | 0     | 3.3   | 1.2   | 1.2   | .20   | .22   | .25   | .07   | 0    | 0    | 0     |
| 24    | 0    | 6.9   | 5.8   | .70   | 1.3   | .10   | .15   | .25   | .09   | 0    | 0    | 0     |
| 25    | 0    | 4.7   | 1.0   | .50   | 1.0   | 1.0   | .13   | .25   | .08   | 0    | 0    | 0     |
| 26    | 0    | 2.2   | .60   | 4.1   | 1.0   | .70   | .11   | .55   | .11   | 0    | 0    | 0     |
| 27    | .07  | 1.3   | .50   | 1.7   | .42   | .30   | .09   | .25   | .09   | 0    | .01  | 0     |
| 28    | 0    | .70   | .50   | 3.1   | .29   | .20   | .09   | .19   | .08   | 0    | 1.1  | 1.1   |
| 29    | 0    | .42   | .35   | 1.2   | ----- | .20   | .09   | .15   | .07   | 0    | .08  | .06   |
| 30    | 0    | .25   | .29   | .70   | ----- | .20   | .52   | .11   | .09   | 0    | 0    | .01   |
| 31    | 1.4  | ----- | .29   | .50   | ----- | 1.0   | ----- | 1.4   | ----- | 0    | .27  | ----- |
| TOTAL | 3.27 | 16.89 | 24.98 | 38.40 | 26.10 | 28.11 | 13.51 | 13.29 | 5.07  | .38  | 1.46 | 2.16  |
| MEAN  | .11  | .56   | .81   | 1.24  | .93   | .91   | .45   | .43   | .17   | .012 | .047 | .072  |
| MAX   | 1.4  | 6.9   | 6.6   | 7.5   | 5.1   | 9.7   | 2.7   | 3.5   | 1.7   | .09  | 1.1  | 1.1   |
| MIN   | 0    | 0     | .07   | .07   | .07   | .10   | .09   | .08   | .07   | 0    | 0    | 0     |
| CFSM  | .18  | .90   | 1.31  | 2.00  | 1.50  | 1.47  | .73   | .69   | .27   | .02  | .08  | .12   |
| IN.   | .20  | 1.01  | 1.50  | 2.30  | 1.57  | 1.69  | .81   | .80   | .30   | .02  | .09  | .13   |
| AC-FT | 6.5  | 34    | 50    | 76    | 52    | 56    | 27    | 26    | 10    | .8   | 2.9  | 4.3   |

CAL YR 1973 TOTAL 186.99 MEAN .51 MAX 40 MIN 0 CFSM .82 IN 11.22 AC-FT 371  
WTR YR 1974 TOTAL 173.62 MEAN .48 MAX 9.7 MIN 0 CFSM .77 IN 10.42 AC-FT 344

PEAK DISCHARGE (BASE, 100 FT<sup>3</sup>/S).--No peak above base.

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, on left bank 20 ft (6 m) downstream from railroad bridge, 400 ft (123 m) upstream from highway bridge, 0.8 mi (1.3 km) upstream from Whittenburg Creek, 1.5 mi (2.4 km) north of Steelville, and at mile 146.45 (235.6 km).

DRAINAGE AREA.--781 mi<sup>2</sup> (2,023 km<sup>2</sup>).

PERIOD OF RECORD.--October 1922 to current year. Prior to January 1923 monthly discharges only, published in WSP 1311. Gage-height records for 1916-33 at site 1 mi (1.6 km) upstream in reports of National Weather Service.

GAGE.--Water-stage recorder. Datum of gage is 681.68 ft (207.776 m) above mean sea level. Prior to May 24, 1934, July 20, 1966 to July 20, 1967, nonrecording gage, and May 24, 1934 to Oct. 10, 1942, water-stage recorder at site 400 ft (122 m) downstream. July 21, 1967 to Feb. 13, 1973 at site 1,900 ft (579 m) downstream and at datum 2.0 ft (0.61 m) lower.

AVERAGE DISCHARGE.--52 years, 568 ft<sup>3</sup>/s (16.09 m<sup>3</sup>/s), 9.88 in/yr (251 mm/yr), 411,500 acre-ft/yr (507 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 20,700 ft<sup>3</sup>/s (586 m<sup>3</sup>/s) Nov. 26 (gage height, 16.67 ft or 5.081 m); minimum, 171 ft<sup>3</sup>/s (4.84 m<sup>3</sup>/s) Oct. 11, 12 (gage height, 1.67 ft or 0.509 m).

Period of Record: Maximum discharge, 47,800 ft<sup>3</sup>/s (1,350 m<sup>3</sup>/s) June 26, 1935 (gage height, 23.39 ft or 7.129 m); maximum gage height, 24.30 ft (7.407 m) June 9, 1945; minimum discharge, 74 ft<sup>3</sup>/s (2.10 m<sup>3</sup>/s) July 22, 1934.

Maximum stage known, 26.5 ft (8.08 m) Aug. 20, 1915 (discharge, 60,000 ft<sup>3</sup>/s or 1,700 m<sup>3</sup>/s).

REMARKS.--Records good.

REVISIONS (WATER YEARS).--WSP 897: 1939. WSP 1007: Drainage area.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT    | NOV     | DEC    | JAN    | FEB    | MAR     | APR    | MAY    | JUN    | JUL    | AUG    | SEP    |
|-------|--------|---------|--------|--------|--------|---------|--------|--------|--------|--------|--------|--------|
| 1     | 184    | 2,770   | 1,130  | 734    | 1,130  | 942     | 1,070  | 1,400  | 854    | 304    | 204    | 440    |
| 2     | 184    | 1,550   | 973    | 647    | 1,020  | 860     | 958    | 1,250  | 798    | 299    | 201    | 420    |
| 3     | 208    | 888     | 856    | 593    | 916    | 796     | 882    | 1,610  | 633    | 294    | 201    | 600    |
| 4     | 215    | 686     | 1,900  | 542    | 822    | 716     | 859    | 1,450  | 557    | 286    | 198    | 650    |
| 5     | 249    | 573     | 4,590  | 515    | 759    | 661     | 788    | 1,140  | 524    | 274    | 198    | 600    |
| 6     | 282    | 485     | 2,150  | 492    | 711    | 635     | 723    | 978    | 495    | 270    | 201    | 580    |
| 7     | 240    | 430     | 1,420  | 467    | 661    | 593     | 683    | 863    | 574    | 266    | 201    | 540    |
| 8     | 213    | 385     | 1,120  | 446    | 615    | 562     | 1,050  | 786    | 2,650  | 262    | 204    | 400    |
| 9     | 199    | 348     | 973    | 447    | 583    | 533     | 1,940  | 735    | 1,730  | 258    | 208    | 300    |
| 10    | 188    | 317     | 850    | 485    | 551    | 1,790   | 1,410  | 688    | 2,160  | 254    | 212    | 246    |
| 11    | 181    | 294     | 758    | 475    | 523    | 7,430   | 1,140  | 857    | 1,440  | 246    | 212    | 244    |
| 12    | 175    | 282     | 698    | 420    | 506    | 6,070   | 1,510  | 1,650  | 1,050  | 250    | 212    | 245    |
| 13    | 237    | 274     | 650    | 414    | 465    | 2,310   | 1,660  | 1,490  | 858    | 254    | 204    | 336    |
| 14    | 505    | 262     | 606    | 399    | 465    | 1,660   | 1,380  | 1,120  | 743    | 258    | 204    | 344    |
| 15    | 555    | 258     | 534    | 390    | 442    | 1,400   | 1,190  | 4,790  | 666    | 262    | 204    | 309    |
| 16    | 486    | 246     | 480    | 454    | 430    | 3,250   | 1,000  | 8,440  | 612    | 266    | 208    | 290    |
| 17    | 367    | 240     | 428    | 945    | 415    | 2,320   | 926    | 2,200  | 542    | 258    | 212    | 271    |
| 18    | 318    | 236     | 401    | 1,160  | 443    | 1,610   | 836    | 1,610  | 488    | 250    | 208    | 253    |
| 19    | 280    | 232     | 411    | 1,640  | 3,520  | 1,340   | 782    | 1,310  | 467    | 243    | 299    | 240    |
| 20    | 255    | 243     | 562    | 3,420  | 3,620  | 1,150   | 717    | 1,130  | 472    | 232    | 380    | 230    |
| 21    | 235    | 326     | 644    | 9,950  | 2,130  | 1,090   | 873    | 992    | 425    | 229    | 294    | 223    |
| 22    | 224    | 485     | 706    | 4,220  | 3,630  | 1,080   | 6,230  | 1,410  | 395    | 226    | 250    | 222    |
| 23    | 211    | 441     | 666    | 2,160  | 3,470  | 1,140   | 5,350  | 1,570  | 380    | 222    | 240    | 217    |
| 24    | 203    | 662     | 1,890  | 1,680  | 2,050  | 1,220   | 2,110  | 1,100  | 367    | 215    | 226    | 214    |
| 25    | 194    | 10,200  | 4,760  | 1,390  | 1,590  | 1,170   | 1,550  | 906    | 353    | 212    | 240    | 211    |
| 26    | 189    | 17,000  | 2,350  | 1,220  | 1,320  | 1,390   | 1,260  | 825    | 348    | 212    | 230    | 205    |
| 27    | 210    | 4,730   | 1,560  | 1,600  | 1,160  | 1,520   | 1,070  | 795    | 340    | 212    | 220    | 202    |
| 28    | 220    | 2,470   | 1,240  | 1,500  | 1,060  | 1,440   | 943    | 728    | 330    | 212    | 350    | 222    |
| 29    | 267    | 1,810   | 1,050  | 1,740  | -----  | 1,580   | 850    | 673    | 317    | 208    | 700    | 259    |
| 30    | 262    | 1,410   | 927    | 1,550  | -----  | 1,480   | 874    | 632    | 312    | 208    | 534    | 461    |
| 31    | 338    | -----   | 857    | 1,300  | -----  | 1,220   | -----  | 670    | -----  | 204    | 460    | -----  |
| TOTAL | 8,074  | 50,533  | 38,140 | 43,395 | 35,007 | 50,958  | 42,614 | 45,798 | 21,880 | 7,646  | 8,115  | 9,974  |
| MEAN  | 260    | 1,684   | 1,230  | 1,400  | 1,250  | 1,644   | 1,420  | 1,477  | 729    | 247    | 262    | 332    |
| MAX   | 555    | 17,000  | 4,760  | 9,950  | 3,630  | 7,430   | 6,230  | 8,440  | 2,650  | 304    | 700    | 650    |
| MIN   | 175    | 232     | 401    | 390    | 415    | 533     | 683    | 632    | 312    | 204    | 198    | 202    |
| CFSM  | .33    | 2.16    | 1.57   | 1.79   | 1.60   | 2.11    | 1.82   | 1.89   | .93    | .32    | .34    | .43    |
| IN.   | .38    | 2.41    | 1.82   | 2.07   | 1.67   | 2.43    | 2.03   | 2.18   | 1.04   | .36    | .39    | .48    |
| AC-FT | 16,010 | 100,200 | 75,650 | 86,070 | 69,440 | 101,100 | 84,520 | 90,840 | 43,400 | 15,170 | 16,100 | 19,780 |

CAL YR 1973 TOTAL 354,221 MEAN 970 MAX 17,000 MIN 167 CFSM 1.24 IN 16.87 AC-FT 702,600  
WTR YR 1974 TOTAL 362,134 MEAN 992 MAX 17,000 MIN 175 CFSM 1.27 IN 17.25 AC-FT 718,300

PEAK DISCHARGE (BASE, 6,500 FT<sup>3</sup>/S)

| DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|------|------|-------|-----------|
| 11-26 | 0530 | 16.67 | 20,700    | 4-23 | 0715 | 9.42  | 7,610     |
| 1-21  | 1800 | 11.94 | 11,400    | 5-16 | 1045 | 12.10 | 11,400    |
| 3-11  | 2200 | 10.28 | 8,710     |      |      |       |           |



07014500 Meramec River near Sullivan, Mo.

LOCATION.--Lat 38°09'30", long 91°06'30", in SE¼NE¼ sec.35, T.40 N., R.2 W., Crawford County, on right bank at upstream side of Sappington Bridge, 3.8 mi (6.1 km) downstream from Brazil Creek, 4.0 mi (6.4 km) southeast of Sullivan, and at mile 113.2 (182.1 km).

DRAINAGE AREA.--1,475 mi<sup>2</sup> (3,820 km<sup>2</sup>).

PERIOD OF RECORD.--September 1921 to September 1933, October 1943 to current year. Monthly discharge only for October 1943, published in WSP 1311.

GAGE.--Water-stage recorder. Datum of gage is 581.82 ft (177.339 m) above mean sea level (levels by Corps of Engineers). Prior to Oct. 21, 1952, nonrecording gage at present site and datum.

AVERAGE DISCHARGE.--43 years, 1,174 ft<sup>3</sup>/s (33.25 m<sup>3</sup>/s), 10.81 in/yr (275 mm/yr), 850,600 acre-ft/yr (1,049 m<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 24,500 ft<sup>3</sup>/s (694 m<sup>3</sup>/s) Nov. 26 (gage height, 19.24 ft or 5.864 m); minimum daily, 340 ft<sup>3</sup>/s (9.63 m<sup>3</sup>/s) Oct. 1-3, 12.

Period of record: Maximum discharge, 77,300 ft<sup>3</sup>/s (2,190 m<sup>3</sup>/s) June 9, 1945 (gage height, 32.0 ft or 9.75 m); minimum, 131 ft<sup>3</sup>/s (3.71 m<sup>3</sup>/s) Sept. 20, 22, 1956 (gage height, 1.27 ft or 0.387 m).

Flood in August 1915, reached a stage of 33.5 ft (10.21 m), from information by local residents, (discharge, 90,000 ft<sup>3</sup>/s or 2,550 m<sup>3</sup>/s).

REMARKS.--Records good. Water diverted from river 0.5 mi (0.8 km) above gage by mining company. Records of chemical analyses are published in part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1007: 1922, 1923(M), 1924-30, 1933, drainage area.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY         | OCT           | NOV        | DEC        | JAN     | FEB       | MAR      | APR             | MAY     | JUN    | JUL    | AUG    | SEP    |
|-------------|---------------|------------|------------|---------|-----------|----------|-----------------|---------|--------|--------|--------|--------|
| 1           | 340           | 3,300      | 2,260      | 1,650   | 2,230     | 2,050    | 2,530           | 2,450   | 2,000  | 674    | 364    | 991    |
| 2           | 340           | 3,860      | 1,930      | 1,480   | 2,030     | 1,910    | 2,310           | 2,560   | 1,500  | 660    | 360    | 863    |
| 3           | 340           | 1,970      | 1,730      | 1,360   | 1,850     | 1,800    | 2,170           | 2,890   | 1,300  | 638    | 359    | 882    |
| 4           | 370           | 1,440      | 2,670      | 1,280   | 1,690     | 1,700    | 2,110           | 2,840   | 1,200  | 620    | 355    | 885    |
| 5           | 470           | 1,170      | 6,750      | 1,150   | 1,580     | 1,640    | 2,000           | 2,410   | 1,100  | 607    | 357    | 814    |
| 6           | 430           | 974        | 5,200      | 1,100   | 1,500     | 1,640    | 1,860           | 2,110   | 1,250  | 588    | 354    | 721    |
| 7           | 420           | 845        | 2,800      | 1,050   | 1,410     | 1,560    | 1,770           | 1,910   | 1,500  | 578    | 354    | 651    |
| 8           | 410           | 754        | 2,150      | 1,000   | 1,340     | 1,480    | 2,290           | 1,770   | 2,630  | 567    | 363    | 607    |
| 9           | 400           | 683        | 1,800      | 960     | 1,270     | 1,460    | 4,140           | 1,690   | 3,430  | 551    | 368    | 572    |
| 10          | 380           | 623        | 1,580      | 940     | 1,210     | 2,890    | 3,300           | 1,600   | 3,480  | 542    | 388    | 552    |
| 11          | 360           | 578        | 1,380      | 920     | 1,150     | 9,810    | 2,720           | 1,770   | 3,060  | 531    | 382    | 556    |
| 12          | 340           | 549        | 1,250      | 900     | 1,100     | 13,400   | 2,680           | 2,140   | 2,230  | 530    | 376    | 764    |
| 13          | 380           | 527        | 1,160      | 880     | 1,070     | 6,810    | 3,050           | 2,580   | 1,870  | 516    | 371    | 1,270  |
| 14          | 420           | 512        | 1,070      | 860     | 1,030     | 3,800    | 2,800           | 2,230   | 1,660  | 509    | 369    | 1,020  |
| 15          | 450           | 506        | 986        | 840     | 986       | 3,150    | 2,510           | 7,090   | 1,520  | 517    | 378    | 850    |
| 16          | 560           | 490        | 906        | 900     | 950       | 5,410    | 2,260           | 12,900  | 1,410  | 515    | 365    | 755    |
| 17          | 692           | 472        | 840        | 1,000   | 921       | 6,040    | 2,070           | 7,780   | 1,310  | 500    | 374    | 688    |
| 18          | 616           | 463        | 791        | 2,000   | 900       | 3,770    | 1,900           | 3,310   | 1,200  | 486    | 398    | 634    |
| 19          | 556           | 456        | 817        | 3,000   | 2,000     | 3,100    | 1,770           | 2,620   | 1,120  | 472    | 419    | 572    |
| 20          | 512           | 483        | 1,090      | 5,000   | 7,700     | 2,750    | 1,650           | 2,250   | 1,050  | 458    | 580    | 556    |
| 21          | 476           | 615        | 1,470      | 12,000  | 4,990     | 2,600    | 1,830           | 2,090   | 997    | 450    | 500    | 528    |
| 22          | 452           | 769        | 1,420      | 12,000  | 7,710     | 2,500    | 11,200          | 2,340   | 936    | 449    | 450    | 516    |
| 23          | 432           | 843        | 1,360      | 6,000   | 9,410     | 2,500    | 12,800          | 2,750   | 890    | 443    | 420    | 504    |
| 24          | 420           | 2,160      | 3,680      | 4,000   | 5,040     | 2,600    | 5,980           | 2,240   | 845    | 430    | 411    | 492    |
| 25          | 410           | 15,300     | 10,400     | 2,810   | 3,450     | 2,700    | 3,450           | 1,880   | 808    | 420    | 442    | 480    |
| 26          | 396           | 23,700     | 7,050      | 2,480   | 2,790     | 3,000    | 2,770           | 1,740   | 779    | 417    | 409    | 476    |
| 27          | 420           | 17,900     | 3,640      | 2,660   | 2,470     | 3,500    | 2,400           | 1,650   | 754    | 405    | 396    | 472    |
| 28          | 456           | 5,960      | 2,730      | 2,860   | 2,260     | 5,000    | 2,140           | 1,310   | 729    | 398    | 476    | 508    |
| 29          | 524           | 3,660      | 2,290      | 3,000   | -----     | 4,000    | 1,950           | 1,210   | 700    | 389    | 767    | 638    |
| 30          | 544           | 2,760      | 2,010      | 2,880   | -----     | 3,280    | 1,940           | 1,500   | 683    | 378    | 1,560  | 832    |
| 31          | 719           | -----      | 1,830      | 2,540   | -----     | 2,850    | -----           | 2,500   | -----  | 370    | 1,230  | -----  |
| TOTAL       | 14,035        | 94,322     | 77,040     | 81,500  | 72,037    | 110,700  | 94,350          | 88,110  | 43,941 | 15,608 | 14,695 | 20,649 |
| MEAN        | 453           | 3,144      | 2,485      | 2,629   | 2,573     | 3,571    | 3,145           | 2,842   | 1,465  | 503    | 474    | 688    |
| MAX         | 719           | 23,700     | 10,400     | 12,000  | 9,410     | 13,400   | 12,800          | 12,900  | 3,480  | 674    | 1,560  | 1,270  |
| MIN         | 340           | 456        | 791        | 840     | 900       | 1,460    | 1,650           | 1,210   | 683    | 370    | 354    | 472    |
| CFSM        | .31           | 2.13       | 1.68       | 1.78    | 1.74      | 2.42     | 2.13            | 1.93    | .99    | .34    | .32    | .47    |
| IN.         | .35           | 2.38       | 1.94       | 2.06    | 1.82      | 2.79     | 2.38            | 2.22    | 1.11   | .39    | .37    | .52    |
| AC-FT       | 27,840        | 187,100    | 152,800    | 161,700 | 142,900   | 219,600  | 187,100         | 174,800 | 87,160 | 30,960 | 29,150 | 40,960 |
| CAL YR 1973 | TOTAL 695,535 | MEAN 1,906 | MAX 23,700 | MIN 340 | CFSM 1.29 | IN 17.54 | AC-FT 1,380,000 |         |        |        |        |        |
| WTR YR 1974 | TOTAL 726,987 | MEAN 1,992 | MAX 23,700 | MIN 340 | CFSM 1.35 | IN 18.33 | AC-FT 1,442,000 |         |        |        |        |        |

PEAK DISCHARGE (BASE, 8,500 FT<sup>3</sup>/S)

| DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|------|------|-------|-----------|
| 11-26 | 0445 | 19.24 | 24,500    | 2-23 | 0300 | 13.21 | 11,400    |
| 12-25 | 1415 | 13.33 | 11,600    | 3-12 | 0515 | 14.88 | 14,600    |
| 1-21  | *    | 16.20 | 17,500    | 4-23 | 0045 | 15.14 | 15,100    |
| 2-20  | 1230 | 11.76 | 9,060     | 5-16 | 0415 | 14.76 | 14,300    |

\*Unknown

07015000 Bourbeuse River near St. James, Mo.

LOCATION.--Lat 38°02'00", long 91°38'53", in NW¼NW¼ sec.12, T.38 N., R.7 W., Phelps County, on left bank 650 ft (198 m) upstream from bridge on State Highway 68, 3 mi (4.8 km) northwest of St. James, and at mile 138.8 (223.3 km).

DRAINAGE AREA.--21.3 mi<sup>2</sup> (55.2 km<sup>2</sup>).

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

GAGE.--Water-stage recorder. Datum of gage is 899.46 ft (274.155 m) above mean sea level.

AVERAGE DISCHARGE.--26 years, 16.4 ft<sup>3</sup>/s (0.465 m<sup>3</sup>/s), 10.46 in/yr (266 mm/yr), 11,880 acre-ft/yr (14.7 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 2,490 ft<sup>3</sup>/s (70.5 m<sup>3</sup>/s) Nov. 24 (gage height, 7.86 ft or 2.396 m); no flow on many days.

Period of record: Maximum discharge, 8,250 ft<sup>3</sup>/s (233.6 m<sup>3</sup>/s) Oct. 11, 1949 (gage height, 11.08 ft or 3.377 m); no flow at times in 1953-57, 59-64, 66-74.

Maximum stage known, 14.0 ft (4.267 m) June 8, 1945; flood of June 8, 1947 reached a stage of 12.04 ft (3.670 m), from floodmark and information by local resident.

REMARKS.--Records poor.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT   | NOV     | DEC     | JAN     | FEB     | MAR     | APR     | MAY   | JUN   | JUL   | AUG  | SEP   |
|-------|-------|---------|---------|---------|---------|---------|---------|-------|-------|-------|------|-------|
| 1     | 3.6   | 12      | 9.5     | 9.5     | 18      | 15      | 13      | 35    | 12    | .04   | 0    | 13    |
| 2     | 2.2   | 6.5     | 7.9     | 8.4     | 14      | 14      | 11      | 30    | 6.3   | .03   | 0    | 10    |
| 3     | 1.8   | 4.4     | 7.6     | 7.0     | 12      | 12      | 9.5     | 28    | 3.8   | .02   | 0    | 6.0   |
| 4     | 6.3   | 3.7     | 256     | 6.0     | 9.7     | 11      | 8.5     | 27    | 2.9   | .06   | 0    | 3.0   |
| 5     | 4.9   | 3.3     | 50      | 6.0     | 8.5     | 9.6     | 8.0     | 26    | 2.6   | .04   | 0    | 2.0   |
| 6     | 2.9   | 5.1     | 24      | 5.0     | 8.0     | 8.3     | 7.5     | 25    | 2.6   | .03   | 0    | 1.5   |
| 7     | 2.7   | 9.1     | 15      | 5.0     | 7.5     | 7.8     | 7.0     | 24    | 7.7   | .02   | 0    | 1.0   |
| 8     | 3.3   | 9.6     | 11      | 6.0     | 7.0     | 7.0     | 90      | 23    | 4.9   | .01   | 0    | .80   |
| 9     | 3.0   | 8.8     | 9.7     | 6.0     | 6.1     | 14      | 51      | 22    | 24    | .01   | 0    | .60   |
| 10    | 3.0   | 9.3     | 8.0     | 6.0     | 6.3     | 382     | 29      | 21    | 8.4   | 0     | 0    | .40   |
| 11    | 2.9   | 9.1     | 7.5     | 6.0     | 5.6     | 216     | 115     | 20    | 4.3   | 0     | 0    | .60   |
| 12    | 3.4   | 8.1     | 6.5     | 6.0     | 5.5     | 54      | 50      | 19    | 3.3   | 0     | 0    | 2.0   |
| 13    | 36    | 8.1     | 6.0     | 5.9     | 4.8     | 30      | 42      | 21    | 2.4   | 0     | 0    | 1.2   |
| 14    | 4.7   | 7.0     | 5.5     | 6.9     | 4.3     | 23      | 35      | 120   | 1.7   | 0     | 0    | .80   |
| 15    | 2.3   | 9.4     | 5.0     | 18      | 4.1     | 40      | 30      | 50    | 2.3   | 0     | 0    | .70   |
| 16    | 1.5   | 12      | 4.5     | 149     | 4.0     | 30      | 26      | 27    | 1.8   | 0     | 0    | .60   |
| 17    | 1.5   | 10      | 4.5     | 129     | 3.7     | 25      | 23      | 19    | 1.2   | 0     | 0    | .50   |
| 18    | 2.1   | 10      | 4.2     | 91      | 94      | 20      | 21      | 15    | .81   | 0     | 0    | .40   |
| 19    | 2.3   | 9.7     | 22      | 61      | 313     | 16      | 20      | 13    | .74   | 0     | 0    | .30   |
| 20    | 2.6   | 22      | 24      | 282     | 66      | 14      | 19      | 11    | .62   | 0     | 0    | .20   |
| 21    | 3.1   | 18      | 19      | 77      | 191     | 17      | 18      | 10    | .42   | 0     | 0    | .10   |
| 22    | 3.0   | 11      | 17      | 62      | 178     | 24      | 400     | 9.0   | .22   | 0     | 0    | .10   |
| 23    | 2.8   | 6.3     | 170     | 55      | 60      | 36      | 90      | 8.0   | .17   | 0     | 0    | .10   |
| 24    | 2.8   | 305     | 250     | 32      | 52      | 34      | 70      | 7.0   | .17   | 0     | 0    | .10   |
| 25    | 2.8   | 418     | 50      | 23      | 34      | 50      | 60      | 6.0   | .14   | 0     | 0    | .10   |
| 26    | 2.8   | 122     | 30      | 147     | 29      | 45      | 50      | 5.0   | .12   | 0     | 0    | .10   |
| 27    | 8.5   | 46      | 22      | 81      | 24      | 35      | 40      | 4.5   | .09   | 0     | 0    | .10   |
| 28    | 9.8   | 32      | 18      | 100     | 19      | 28      | 32      | 4.0   | .07   | 0     | 10   | 15    |
| 29    | 7.4   | 18      | 15      | 50      | -----   | 22      | 25      | 4.0   | .04   | 0     | 6.0  | 5.0   |
| 30    | 6.4   | 12      | 13      | 31      | -----   | 18      | 40      | 3.5   | .04   | 0     | 3.0  | 2.0   |
| 31    | 40    | -----   | 12      | 22      | -----   | 15      | -----   | 36    | ----- | 0     | 1.0  | ----- |
| TOTAL | 182.4 | 1,165.5 | 1,104.4 | 1,499.7 | 1,189.1 | 1,272.7 | 1,440.5 | 673.0 | 95.85 | .26   | 20.0 | 68.30 |
| MEAN  | 5.88  | 38.9    | 35.6    | 48.4    | 42.5    | 41.1    | 48.0    | 21.7  | 3.20  | .008  | .65  | 2.28  |
| MAX   | 40    | 418     | 256     | 282     | 313     | 382     | 400     | 120   | 24    | .06   | 10   | 15    |
| MIN   | 1.5   | 3.3     | 4.2     | 5.0     | 3.7     | 7.0     | 7.0     | 3.5   | .04   | 0     | 0    | .10   |
| CFSM  | .28   | 1.83    | 1.67    | 2.27    | 2.00    | 1.93    | 2.25    | 1.02  | .15   | .0004 | .03  | .11   |
| IN.   | .32   | 2.04    | 1.93    | 2.62    | 2.08    | 2.22    | 2.52    | 1.18  | .17   | 0     | .03  | .12   |
| AC-FT | 362   | 2,310   | 2,190   | 2,970   | 2,360   | 2,520   | 2,860   | 1,330 | 190   | .5    | 40   | 135   |

CAL YR 1973 TOTAL 9,381.22 MEAN 25.7 MAX 960 MIN 0 CFSM 1.21 IN 16.38 AC-FT 18,610  
WTR YR 1974 TOTAL 8,711.71 MEAN 23.9 MAX 418 MIN 0 CFSM 1.12 IN 15.21 AC-FT 17,280

PEAK DISCHARGE (BASE, 1,500 FT<sup>3</sup>/s).--Nov. 24 (2315) 2,490 ft<sup>3</sup>/s (7.86 ft).

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, on downstream side of right bridge pier on State Highway B, 1.8 mi (2.9 m) downstream from Lanes Fork, 5 mi (8.0 km) east of High Gate, and 11 mi (17.7 km) north of St. James.

DRAINAGE AREA.--135 mi<sup>2</sup> (350 km<sup>2</sup>).

PERIOD OF RECORD.--July 1965 to current year. Occasional low-flow measurements 1963, 1964.

GAGE.--Water-stage recorder. Datum of gage is 804.1 ft (245.09 m) above mean sea level (levels by Missouri State Highway Commission). Prior to Aug. 17, 1966, nonrecording gage at present site and datum.

AVERAGE DISCHARGE.--9 years, 121 ft<sup>3</sup>/s (3.427 m<sup>3</sup>/s), 12.17 in/yr (309 mm/yr), 87,700 acre-ft/yr (108 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 10,800 ft<sup>3</sup>/s (306 m<sup>3</sup>/s) Nov. 25 (gage height, 15.20 ft or 4.633 m); minimum daily discharge, 0.06 ft<sup>3</sup>/s (0.002 m<sup>3</sup>/s) Aug. 19, 20, 21, 22, 23.  
Period of record: Maximum discharge, 16,300 ft<sup>3</sup>/s (462 m<sup>3</sup>/s) Feb. 9, 1966 (gage height, 17.25 ft or 5.258 m); maximum gage height, 17.97 ft (5.477 m) Nov. 1, 1972; no flow Aug. 27 to Sept. 15, 1971.  
Flood of June 1957 reached a stage of about 23 ft (7.0 m), from information by local resident.

REMARKS.--Records fair.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT   | NOV    | DEC    | JAN    | FEB    | MAR    | APR    | MAY   | JUN     | JUL   | AUG    | SEP   |
|-------|-------|--------|--------|--------|--------|--------|--------|-------|---------|-------|--------|-------|
| 1     | 43    | 129    | 80     | 70     | 103    | 98     | 80     | 273   | 78      | 1.6   | .12    | 76    |
| 2     | 19    | 64     | 66     | 66     | 90     | 89     | 70     | 266   | 49      | 1.6   | .12    | 80    |
| 3     | 10    | 42     | 56     | 62     | 74     | 81     | 70     | 291   | 36      | 1.4   | .12    | 59    |
| 4     | 8.4   | 32     | 1,820  | 58     | 64     | 73     | 66     | 205   | 29      | 1.6   | .12    | 31    |
| 5     | 20    | 29     | 402    | 54     | 60     | 65     | 64     | 171   | 28      | 1.2   | .12    | 16    |
| 6     | 15    | 24     | 158    | 50     | 55     | 60     | 59     | 153   | 26      | 1.0   | .12    | 8.9   |
| 7     | 9.8   | 21     | 103    | 46     | 49     | 55     | 57     | 142   | 65      | .88   | .18    | 5.9   |
| 8     | 6.9   | 19     | 82     | 42     | 45     | 51     | 531    | 137   | 77      | .88   | .18    | 3.9   |
| 9     | 5.0   | 18     | 72     | 39     | 41     | 73     | 328    | 131   | 186     | .74   | .42    | 2.7   |
| 10    | 4.3   | 15     | 60     | 36     | 40     | 2,100  | 226    | 128   | 121     | .60   | .88    | 2.5   |
| 11    | 4.0   | 13     | 52     | 34     | 37     | 1,200  | 445    | 129   | 70      | .60   | .74    | 7.1   |
| 12    | 3.7   | 13     | 48     | 32     | 36     | 293    | 947    | 155   | 53      | .54   | .48    | 11    |
| 13    | 297   | 11     | 45     | 30     | 34     | 173    | 309    | 127   | 39      | .48   | .42    | 10    |
| 14    | 99    | 11     | 38     | 28     | 30     | 129    | 330    | 443   | 32      | .48   | .36    | 7.3   |
| 15    | 52    | 15     | 37     | 56     | 28     | 210    | 242    | 927   | 26      | .60   | .30    | 4.8   |
| 16    | 35    | 23     | 34     | 639    | 28     | 226    | 190    | 209   | 21      | .48   | .24    | 4.5   |
| 17    | 22    | 22     | 32     | 754    | 27     | 147    | 166    | 139   | 16      | .42   | .18    | 4.2   |
| 18    | 18    | 18     | 29     | 599    | 392    | 121    | 140    | 123   | 13      | .36   | .12    | 3.3   |
| 19    | 14    | 17     | 90     | 344    | 1,270  | 100    | 119    | 101   | 10      | .36   | .06    | 2.7   |
| 20    | 11    | 18     | 60     | 1,620  | 291    | 86     | 102    | 83    | 7.8     | .36   | .06    | 2.2   |
| 21    | 10    | 144    | 50     | 501    | 1,160  | 102    | 93     | 73    | 6.6     | .30   | .06    | 2.1   |
| 22    | 9.0   | 72     | 40     | 256    | 631    | 122    | 2,060  | 73    | 6.0     | .30   | .06    | 1.7   |
| 23    | 7.2   | 48     | 310    | 346    | 244    | 152    | 318    | 61    | 4.8     | .24   | .06    | 1.6   |
| 24    | 6.6   | 663    | 1,960  | 174    | 196    | 139    | 212    | 54    | 3.6     | .24   | .12    | 1.5   |
| 25    | 4.8   | 4,150  | 402    | 134    | 174    | 230    | 174    | 48    | 3.2     | .21   | .12    | 1.5   |
| 26    | 4.0   | 805    | 178    | 665    | 158    | 302    | 154    | 47    | 2.8     | .18   | .30    | 1.6   |
| 27    | 10    | 284    | 132    | 597    | 146    | 181    | 141    | 49    | 2.4     | .18   | .62    | 1.5   |
| 28    | 24    | 220    | 108    | 511    | 124    | 139    | 131    | 41    | 2.0     | .18   | 50     | 28    |
| 29    | 18    | 137    | 92     | 286    | -----  | 147    | 125    | 34    | 1.9     | .12   | 69     | 95    |
| 30    | 13    | 103    | 80     | 171    | -----  | 111    | 281    | 31    | 1.7     | .12   | 21     | 41    |
| 31    | 150   | -----  | 75     | 146    | -----  | 91     | -----  | 109   | -----   | .12   | 7.1    | ----- |
| TOTAL | 953.7 | 7,180  | 6,791  | 8,446  | 5,627  | 7,146  | 8,230  | 4,953 | 1,017.8 | 18.37 | 153.78 | 518.5 |
| MEAN  | 30.8  | 239    | 219    | 272    | 201    | 231    | 274    | 160   | 33.9    | .59   | 4.96   | 17.3  |
| MAX   | 297   | 4,150  | 1,960  | 1,620  | 1,270  | 2,100  | 2,060  | 927   | 186     | 1.6   | .69    | 95    |
| MIN   | 3.7   | 11     | 29     | 28     | 27     | 51     | 57     | 31    | 1.7     | .12   | .06    | 1.5   |
| CFSM  | .23   | 1.77   | 1.62   | 2.01   | 1.49   | 1.71   | 2.03   | 1.19  | .25     | .004  | .04    | .13   |
| IN.   | .26   | 1.98   | 1.87   | 2.33   | 1.55   | 1.97   | 2.27   | 1.36  | .28     | .005  | .04    | .14   |
| AC-FT | 1,890 | 14,240 | 13,470 | 16,750 | 11,160 | 14,170 | 16,320 | 9,820 | 2,020   | 36    | 305    | 1,030 |

CAL YR 1973 TOTAL 59,219.05 MEAN 162 MAX 4,840 MIN .36 CFSM 1.20 IN 16.32 AC-FT 117,500  
WTR YR 1974 TOTAL 51,035.15 MEAN 140 MAX 4,150 MIN .06 CFSM 1.04 IN 14.06 AC-FT 101,200

PEAK DISCHARGE (BASE, 3,500 FT<sup>3</sup>/S)

| DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|------|------|-------|-----------|
| 11-25 | 0930 | 15.20 | 10,800    | 3-10 | 1400 | 10.00 | 4,300     |
| 12-4  | 1230 | 10.73 | 5,030     | 4-22 | 0600 | 11.95 | 6,340     |
| 12-24 | 0730 | 9.75  | 4,080     | 5-15 | 0015 | 9.13  | 3,520     |
| 1-20  | 1730 | 10.38 | 4,460     |      |      |       |           |

## MERAMEC RIVER BASIN

07016000 Bourbeuse River near Spring Bluff, Mo.

LOCATION.--Lat 38°18'40", long 91°16'45", in NE¼ sec.8, T.41 N., R.3 W., Franklin County, on downstream side of highway bridge, 1.0 mi (1.6 km) downstream from Boone Creek, 3.5 mi (5.6 km) northwest of Spring Bluff, 9.5 mi (15.3 km) northwest of Sullivan, and at mile 75.3 (121.2 km).

DRAINAGE AREA.--608 mi<sup>2</sup> (1,575 km<sup>2</sup>).

PERIOD OF RECORD.--November 1943 to current year (discharge above 1,000 ft<sup>3</sup>/s or 28.3 m<sup>3</sup>/s only).

GAGE.--Nonrecording gage read once-daily between 5.5 and 7.5 ft (1.68 and 2.29 m), twice-daily between 7.5 and 15.0 ft (2.29 and 4.57 m), and bihourly above. Datum of gage is 626.34 ft (190.908 m) above mean sea level (levels by Corps of Engineers).

EXTREMES.--Current year: Maximum discharge, 11,100 ft<sup>3</sup>/s (314 m<sup>3</sup>/s) Nov.26 (gage height, 21.64 ft or 6.596 m).

Period of record: Maximum discharge, 50,700 ft<sup>3</sup>/s (1,440 m<sup>3</sup>/s) June 30, 1957 (gage height, 34.71 ft or 10.580 m).

Flood in August 1915 reached a stage of 35.7 ft (10.88 m) from information by local residents.

REMARKS.--Records fair. Discharge below 1,000 ft<sup>3</sup>/s (28.3 m<sup>3</sup>/s) not computed.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY | OCT | NOV    | DEC   | JAN   | FEB   | MAR   | APR   | MAY | JUN   | JUL | AUG   | SEP |
|-----|-----|--------|-------|-------|-------|-------|-------|-----|-------|-----|-------|-----|
| 1   |     |        | 1,180 |       |       |       |       |     |       |     |       |     |
| 2   |     |        |       |       |       |       |       |     |       |     |       |     |
| 3   |     |        | 4,620 |       |       |       |       |     |       |     |       |     |
| 4   |     |        | 6,330 |       |       |       |       |     |       |     |       |     |
| 5   |     |        |       |       |       |       |       |     |       |     |       |     |
| 6   |     |        |       |       |       |       |       |     |       |     |       |     |
| 7   |     |        |       |       |       |       |       |     |       |     |       |     |
| 8   |     |        |       |       |       |       |       |     |       |     |       |     |
| 9   |     |        |       |       |       |       |       |     |       |     |       |     |
| 10  |     |        |       |       |       | 4,620 |       |     |       |     |       |     |
| 11  |     |        |       |       |       | 9,040 |       |     |       |     |       |     |
| 12  |     |        |       |       |       | 2,920 |       |     |       |     |       |     |
| 13  |     |        |       |       |       | 1,040 |       |     |       |     |       |     |
| 14  |     |        |       |       |       |       |       |     |       |     |       |     |
| 15  |     |        |       |       |       |       |       |     |       |     |       |     |
| 16  |     |        |       |       |       | 1,170 |       |     |       |     |       |     |
| 17  |     |        |       |       |       |       |       |     |       |     |       |     |
| 18  |     |        |       |       |       |       |       |     |       |     |       |     |
| 19  |     |        |       |       |       |       |       |     |       |     |       |     |
| 20  |     |        |       | 6,500 | 3,310 |       |       |     |       |     |       |     |
| 21  |     |        |       |       | 1,140 |       |       |     |       |     |       |     |
| 22  |     |        |       |       |       |       |       |     |       |     |       |     |
| 23  |     |        |       |       |       |       |       |     |       |     |       |     |
| 24  |     |        | 6,320 |       |       |       |       |     |       |     |       |     |
| 25  |     | 9,170  | 8,500 |       |       |       |       |     |       |     |       |     |
| 26  |     | 10,000 |       |       |       |       |       |     |       |     |       |     |
| 27  |     | 3,980  |       | 2,780 |       |       |       |     |       |     |       |     |
| 28  |     | 2,580  |       | 2,330 |       |       |       |     |       |     |       |     |
| 29  |     | 2,000  |       | 2,780 | ----- |       |       |     |       |     |       |     |
| 30  |     | 1,350  |       | 1,710 | ----- |       |       |     |       |     |       |     |
| 31  |     | -----  |       | 1,420 | ----- |       | ----- |     | ----- |     | ----- |     |

TOTAL  
MEAN  
MAX  
MIN

PEAK DISCHARGE (BASE, 8,000 FT<sup>3</sup>/S)

| DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|------|------|-------|-----------|
| 11-26 | 1100 | 21.64 | 11,100    | 1-20 | 1800 | 20.20 | 9,400     |
| 12-25 | 0200 | 20.20 | 9,600     | 3-11 | 1130 | 20.62 | 10,000    |

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, on right bank downstream side of pier of bridge on U.S. Highway 50, 800 ft (244 m) upstream from Flat Creek, 0.5 mi (0.8 km) east of Union, 7.0 mi (11.3 km) upstream from Birch Creek, and at mile 13.4 (21.6 km). Records include flow of Flat Creek.

DRAINAGE AREA.--808 mi<sup>2</sup> (2,093 km<sup>2</sup>), 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.

GAGE.--Water-stage recorder. Datum of gage is 488.58 ft (148.919 m) above mean sea level. Prior to Oct. 1, 1948, datum of all gages 3.00 ft (0.914 m) higher. Prior to Oct. 21, 1933, nonrecording gage, at site 30 ft (9.1 m) upstream. Oct. 21, 1933, to June 11, 1944, nonrecording gage, at present site.

AVERAGE DISCHARGE.--53 years, 628 ft<sup>3</sup>/s (17.78 m<sup>3</sup>/s), 10.55 in/yr (268 mm/yr), 455,500 acre-ft/yr (561 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 10,100 ft<sup>3</sup>/s (286 m<sup>3</sup>/s) Jan. 22 (gage height, 13.92 ft or 4.243 m); maximum gage height, 14.08 ft (4.292 m) Nov. 27; minimum, 33 ft<sup>3</sup>/s (0.93 m<sup>3</sup>/s) Aug. 9 (gage height 0.60 or 0.183 m).

Period of record: Maximum discharge, 33,100 ft<sup>3</sup>/s (937 m<sup>3</sup>/s) July 1, 1957 (gage height, 24.44 ft or 7.449 m); minimum, 11 ft<sup>3</sup>/s (0.31 m<sup>3</sup>/s) Oct. 10, 1956.

Flood of Aug. 22, 1915 reached a stage of 28.5 ft (8.69 m), present datum, from floodmarks (discharge, about 50,000 ft<sup>3</sup>/s or 1,420 m<sup>3</sup>/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).

REMARKS.--Records good.

REVISIONS (WATER YEARS).--WSP 957: 1941. WSP 1147: Drainage area. WSP 1281: 1924.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY         | OCT           | NOV      | DEC        | JAN     | FEB       | MAR      | APR           | MAY    | JUN    | JUL   | AUG   | SEP   |
|-------------|---------------|----------|------------|---------|-----------|----------|---------------|--------|--------|-------|-------|-------|
| 1           | 75            | 93       | 760        | 551     | 1,080     | 739      | 771           | 321    | 2,260  | 98    | 42    | 255   |
| 2           | 72            | 95       | 605        | 503     | 832       | 641      | 652           | 324    | 847    | 95    | 41    | 173   |
| 3           | 219           | 112      | 514        | 456     | 691       | 570      | 585           | 572    | 554    | 91    | 41    | 386   |
| 4           | 300           | 326      | 850        | 434     | 600       | 521      | 533           | 526    | 423    | 86    | 40    | 351   |
| 5           | 227           | 262      | 3,840      | 398     | 532       | 479      | 496           | 609    | 343    | 81    | 39    | 258   |
| 6           | 186           | 207      | 5,470      | 355     | 488       | 439      | 472           | 483    | 305    | 76    | 39    | 217   |
| 7           | 224           | 174      | 1,560      | 347     | 451       | 405      | 453           | 397    | 336    | 72    | 40    | 202   |
| 8           | 179           | 152      | 882        | 321     | 420       | 375      | 445           | 348    | 586    | 69    | 41    | 164   |
| 9           | 139           | 134      | 662        | 310     | 389       | 503      | 442           | 314    | 1,060  | 65    | 43    | 135   |
| 10          | 120           | 121      | 550        | 361     | 363       | 1,290    | 923           | 294    | 1,190  | 64    | 57    | 116   |
| 11          | 109           | 112      | 479        | 342     | 341       | 5,580    | 936           | 332    | 1,230  | 63    | 61    | 103   |
| 12          | 102           | 105      | 422        | 356     | 325       | 8,530    | 746           | 614    | 722    | 62    | 56    | 96    |
| 13          | 118           | 99       | 383        | 339     | 311       | 6,280    | 2,250         | 756    | 524    | 61    | 61    | 90    |
| 14          | 113           | 95       | 355        | 290     | 298       | 1,490    | 1,780         | 542    | 427    | 60    | 65    | 87    |
| 15          | 99            | 99       | 330        | 258     | 284       | 1,060    | 1,040         | 1,340  | 378    | 59    | 55    | 78    |
| 16          | 400           | 96       | 291        | 313     | 271       | 966      | 987           | 3,660  | 356    | 58    | 56    | 81    |
| 17          | 348           | 93       | 266        | 668     | 258       | 1,300    | 901           | 1,870  | 300    | 56    | 57    | 79    |
| 18          | 262           | 90       | 248        | 3,480   | 252       | 1,190    | 861           | 866    | 255    | 55    | 62    | 75    |
| 19          | 207           | 87       | 258        | 4,710   | 521       | 927      | 649           | 621    | 229    | 54    | 58    | 71    |
| 20          | 169           | 91       | 270        | 5,820   | 2,820     | 795      | 548           | 506    | 209    | 53    | 54    | 68    |
| 21          | 146           | 114      | 296        | 8,360   | 3,940     | 704      | 490           | 484    | 187    | 53    | 50    | 66    |
| 22          | 127           | 125      | 376        | 9,570   | 3,140     | 646      | 546           | 431    | 170    | 52    | 48    | 64    |
| 23          | 115           | 190      | 584        | 4,180   | 5,440     | 635      | 1,960         | 366    | 155    | 52    | 46    | 61    |
| 24          | 105           | 469      | 1,340      | 2,350   | 3,170     | 654      | 2,300         | 344    | 142    | 53    | 44    | 58    |
| 25          | 98            | 2,140    | 5,740      | 1,650   | 1,430     | 701      | 866           | 297    | 129    | 51    | 42    | 57    |
| 26          | 93            | 6,250    | 8,270      | 1,160   | 1,080     | 781      | 621           | 267    | 121    | 50    | 44    | 54    |
| 27          | 95            | 8,640    | 2,460      | 1,660   | 914       | 1,150    | 511           | 242    | 113    | 49    | 54    | 54    |
| 28          | 92            | 4,900    | 1,160      | 4,400   | 811       | 1,280    | 436           | 221    | 108    | 48    | 67    | 87    |
| 29          | 85            | 1,410    | 851        | 3,690   | -----     | 995      | 380           | 207    | 104    | 46    | 74    | 87    |
| 30          | 82            | 1,070    | 696        | 3,130   | -----     | 946      | 347           | 204    | 101    | 44    | 82    | 70    |
| 31          | 94            | -----    | 617        | 1,590   | -----     | 978      | -----         | 2,070  | -----  | 43    | 124   | ----- |
| TOTAL       | 4,800         | 27,951   | 41,385     | 62,352  | 31,452    | 43,550   | 24,927        | 20,428 | 13,864 | 1,919 | 1,683 | 3,743 |
| MEAN        | 155           | 932      | 1,335      | 2,011   | 1,123     | 1,405    | 831           | 659    | 462    | 61.9  | 54.3  | 125   |
| MAX         | 400           | 8,640    | 8,270      | 9,570   | 5,440     | 8,530    | 2,300         | 3,660  | 2,260  | 98    | 124   | 386   |
| MIN         | 72            | 87       | 248        | 258     | 252       | 375      | 347           | 204    | 101    | 43    | 39    | 54    |
| CFSM        | .19           | 1.15     | 1.65       | 2.49    | 1.39      | 1.74     | 1.03          | .82    | .57    | .08   | .07   | .15   |
| IN.         | .22           | 1.29     | 1.91       | 2.87    | 1.45      | 2.01     | 1.15          | .94    | .64    | .09   | .08   | .17   |
| AC-FT       | 9,520         | 55,440   | 82,090     | 123,700 | 62,390    | 86,380   | 49,440        | 40,520 | 27,500 | 3,810 | 3,340 | 7,420 |
| CAL YR 1973 | TOTAL 357,618 | MEAN 980 | MAX 13,700 | MIN 42  | CFSM 1.21 | IN 16.46 | AC-FT 709,300 |        |        |       |       |       |
| WTR YR 1974 | TOTAL 278,054 | MEAN 762 | MAX 9,570  | MIN 39  | CFSM .94  | IN 12.80 | AC-FT 551,500 |        |        |       |       |       |

PEAK DISCHARGE (BASE, 7,500 FT<sup>3</sup>/S)

| DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|------|------|-------|-----------|
| 11-27 | 2245 | 14.08 | 9,380     | 1-22 | 2000 | 13.92 | 10,100    |
| 12-26 | 1615 | 12.96 | 8,890     | 3-13 | 0245 | 13.63 | 9,720     |



## 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, on right bank 50 ft (15 m) upstream from bridge on County Highway U, 0.2 mi (0.3 km) upstream from Mill Creek, and 0.8 mi (1.3 km) west of Irondale.

DRAINAGE AREA.--175 mi<sup>2</sup> (453 km<sup>2</sup>).

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

GAGE.--Water-stage recorder. Datum of gage is 753.28 ft (229.600 m) above mean sea level (Missouri State Highway Commission benchmark). July 1-15, 1965, nonrecording gage at present site and datum.

AVERAGE DISCHARGE.--9 years, 197 ft<sup>3</sup>/s (5.579 m<sup>3</sup>/s), 15.29 in/yr (388 mm/yr), 142,700 acre-ft/yr (176 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 13,900 ft<sup>3</sup>/s (394 m<sup>3</sup>/s) Nov. 25 (gage height, 17.46 ft or 5.322 m); minimum daily 7.7 ft<sup>3</sup>/s (0.22 m<sup>3</sup>/s) Aug. 2.  
Period of record: Maximum discharge, 43,200 ft<sup>3</sup>/s (1,220 m<sup>3</sup>/s) Nov. 1, 1972 (gage height, 27.92 ft or 8.510 m, from floodmarks), from rating extended above 13,000 ft<sup>3</sup>/s (368 m<sup>3</sup>/s) on basis of step-backwater computations and indirect measurement of peak flow of February 1966 flood; minimum, 2.2 ft<sup>3</sup>/s (0.062 m<sup>3</sup>/s) Sept. 16, 1971.

REMARKS.--Records fair.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT     | NOV    | DEC    | JAN    | FEB    | MAR    | APR    | MAY    | JUN   | JUL   | AUG     | SEP   |
|-------|---------|--------|--------|--------|--------|--------|--------|--------|-------|-------|---------|-------|
| 1     | 17      | 613    | 215    | 209    | 216    | 185    | 231    | 253    | 370   | 29    | 7.9     | 127   |
| 2     | 15      | 311    | 196    | 183    | 197    | 169    | 242    | 436    | 209   | 27    | 7.7     | 128   |
| 3     | 14      | 209    | 168    | 158    | 173    | 154    | 358    | 461    | 151   | 24    | 8.8     | 152   |
| 4     | 13      | 160    | 1,870  | 141    | 151    | 145    | 316    | 291    | 121   | 21    | 8.4     | 108   |
| 5     | 13      | 134    | 621    | 128    | 139    | 368    | 244    | 226    | 106   | 19    | 8.0     | 80    |
| 6     | 12      | 111    | 303    | 121    | 125    | 254    | 205    | 185    | 101   | 18    | 7.9     | 64    |
| 7     | 11      | 97     | 212    | 110    | 116    | 213    | 182    | 157    | 250   | 17    | 7.9     | 55    |
| 8     | 11      | 85     | 175    | 108    | 110    | 177    | 271    | 150    | 220   | 16    | 7.9     | 48    |
| 9     | 10      | 74     | 159    | 198    | 105    | 162    | 276    | 134    | 494   | 18    | 8.0     | 44    |
| 10    | 9.6     | 65     | 139    | 164    | 100    | 1,950  | 226    | 124    | 319   | 18    | 8.8     | 42    |
| 11    | 12      | 59     | 128    | 133    | 94     | 3,040  | 196    | 113    | 198   | 17    | 8.9     | 141   |
| 12    | 15      | 55     | 124    | 104    | 89     | 855    | 883    | 111    | 158   | 16    | 8.7     | 350   |
| 13    | 407     | 52     | 118    | 99     | 85     | 451    | 414    | 92     | 126   | 17    | 9.2     | 169   |
| 14    | 243     | 48     | 102    | 97     | 81     | 327    | 389    | 946    | 110   | 17    | 9.6     | 132   |
| 15    | 142     | 47     | 93     | 119    | 77     | 1,350  | 284    | 2,340  | 534   | 16    | 11      | 94    |
| 16    | 95      | 45     | 84     | 269    | 75     | 1,090  | 237    | 571    | 152   | 15    | 15      | 77    |
| 17    | 69      | 42     | 77     | 388    | 71     | 546    | 210    | 324    | 105   | 14    | 102     | 69    |
| 18    | 55      | 40     | 73     | 390    | 117    | 403    | 178    | 234    | 86    | 13    | 228     | 58    |
| 19    | 46      | 39     | 930    | 977    | 1,900  | 349    | 156    | 173    | 75    | 12    | 44      | 51    |
| 20    | 40      | 42     | 921    | 1,500  | 576    | 343    | 139    | 133    | 66    | 12    | 27      | 47    |
| 21    | 34      | 260    | 476    | 1,090  | 2,150  | 570    | 1,650  | 136    | 57    | 11    | 20      | 46    |
| 22    | 31      | 135    | 330    | 531    | 3,090  | 528    | 2,440  | 138    | 51    | 11    | 17      | 40    |
| 23    | 27      | 100    | 422    | 402    | 686    | 539    | 683    | 109    | 45    | 10    | 16      | 36    |
| 24    | 27      | 2,180  | 3,710  | 324    | 440    | 412    | 395    | 89     | 42    | 9.8   | 15      | 35    |
| 25    | 25      | 5,740  | 1,490  | 269    | 343    | 432    | 312    | 76     | 38    | 9.6   | 15      | 34    |
| 26    | 24      | 2,110  | 650    | 273    | 281    | 518    | 252    | 82     | 36    | 9.4   | 14      | 32    |
| 27    | 63      | 815    | 503    | 372    | 249    | 396    | 207    | 75     | 33    | 9.2   | 14      | 32    |
| 28    | 98      | 498    | 431    | 364    | 213    | 331    | 175    | 61     | 32    | 9.0   | 565     | 43    |
| 29    | 66      | 318    | 394    | 359    | -----  | 319    | 152    | 61     | 33    | 8.8   | 1,710   | 214   |
| 30    | 53      | 252    | 305    | 287    | -----  | 274    | 228    | 319    | 30    | 8.6   | 366     | 92    |
| 31    | 1,340   | -----  | 262    | 249    | -----  | 231    | -----  | 870    | ----- | 8.4   | 176     | ----- |
| TOTAL | 3,037.6 | 14,736 | 15,681 | 10,116 | 12,049 | 17,081 | 12,131 | 9,470  | 4,348 | 460.8 | 3,472.7 | 2,640 |
| MEAN  | 98.0    | 491    | 506    | 326    | 430    | 551    | 404    | 305    | 145   | 14.9  | 112     | 88.0  |
| MAX   | 1,340   | 5,740  | 3,710  | 1,500  | 3,090  | 3,040  | 2,440  | 2,340  | 534   | 29    | 1,710   | 350   |
| MIN   | 9.6     | 39     | 73     | 97     | 71     | 145    | 139    | 61     | 30    | 8.4   | 7.7     | 32    |
| CFSM  | .56     | 2.81   | 2.89   | 1.86   | 2.46   | 3.15   | 2.31   | 1.74   | .83   | .09   | .64     | .50   |
| IN.   | .65     | 3.13   | 3.33   | 2.15   | 2.56   | 3.63   | 2.58   | 2.01   | .92   | .10   | .74     | .56   |
| AC-FT | 6,030   | 29,230 | 31,100 | 20,070 | 23,900 | 33,880 | 24,060 | 18,780 | 8,620 | 914   | 6,890   | 5,240 |

CAL YR 1973 TOTAL 114,339.6 MEAN 313 MAX 6,280 MIN 9.6 CFMS 1.79 IN 24.31 AC-FT 226,800  
WTR YR 1974 TOTAL 105,223.1 MEAN 288 MAX 5,740 MIN 7.7 CFMS 1.65 IN 22.37 AC-FT 208,700

PEAK DISCHARGE (BASE, 3,000 FT<sup>3</sup>/S)

| DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|------|------|-------|-----------|------|------|-------|-----------|
| 11-25 | 0630 | 17.46 | 13,900    | 2-22 | 0300 | 13.06 | 6,980     | 4-22 | 0445 | 10.82 | 4,920     |
| 12-4  | 0900 | 10.85 | 4,550     | 3-11 | 0730 | 12.36 | 6,370     | 5-15 | 0215 | 11.43 | 5,630     |
| 12-24 | 1000 | 13.75 | 7,950     | 3-15 | 1730 | 9.90  | 4,100     | 8-28 | 2330 | 8.60  | 3,320     |

07017500 Dry Branch near Bonne Terre, Mo.

LOCATION.--Lat 37°55'46", long 90°27'40", at west-central edge of Survey 3062, T.37 N., R.5 E., St. Francois County, on downstream side of bridge on County Highway K, 0.5 mi (0.8 km) upstream from Terre Bleue Creek, and 4.5 mi (7.2 km) east of junction of State Highway 47 and U.S. Highway 67 at Bonne Terre.

DRAINAGE AREA.--3.35 mi<sup>2</sup> (8.68 km<sup>2</sup>).

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

GAGE.--Water-stage recorder. Altitude of gage is 710 ft (216.4 m), from topographic map.

AVERAGE DISCHARGE.--19 years, 2.76 ft<sup>3</sup>/s (0.078 m<sup>3</sup>/s), 11.19 in/yr (284 mm/yr), 2,000 acre-ft/yr (2.47 hm<sup>3</sup>/yr).

EXTREME.--Current year: Maximum discharge, 522 ft<sup>3</sup>/s (14.8 m<sup>3</sup>/s) Mar. 11 (gage height, 3.28 ft or 1.000 m); no flow on many days.  
Period of record: Maximum discharge, 1,520 ft<sup>3</sup>/s (43.0 m<sup>3</sup>/s) June 30, 1957 (gage height, 5.55 ft or 1.692 m), from rating curve extended above 300 ft<sup>3</sup>/s (8.50 m<sup>3</sup>/s) on basis of contracted opening measurement of peak flow; no flow at times most years.

REMARKS.--Records good.

REVISIONS.--WRD Mo. 1971: Drainage area.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT   | NOV    | DEC    | JAN    | FEB   | MAR   | APR   | MAY   | JUN   | JUL  | AUG   | SEP   |
|-------|-------|--------|--------|--------|-------|-------|-------|-------|-------|------|-------|-------|
| 1     | .05   | 2.8    | 1.5    | 2.0    | 2.0   | 3.3   | 6.6   | 3.9   | 2.7   | .11  | 0     | .24   |
| 2     | .03   | 1.7    | 1.4    | 2.0    | 1.9   | 3.0   | 6.1   | 20    | 1.9   | .10  | 0     | .64   |
| 3     | .03   | 1.0    | 1.1    | 2.0    | 1.6   | 2.8   | 22    | 6.0   | 1.4   | .06  | 0     | 1.3   |
| 4     | .07   | .69    | .45    | 2.2    | 1.5   | 3.8   | 8.3   | 3.4   | 1.2   | .07  | 0     | .41   |
| 5     | .03   | .67    | 4.2    | 2.2    | 1.5   | 5.1   | 6.5   | 2.7   | 1.4   | .06  | 0     | .26   |
| 6     | .03   | .35    | 2.7    | 1.8    | 1.5   | 3.4   | 5.7   | 1.7   | 1.2   | .05  | 0     | .19   |
| 7     | .03   | .35    | 2.0    | 1.5    | 1.5   | 2.9   | 5.5   | 1.5   | 3.5   | .04  | 0     | .12   |
| 8     | .03   | .35    | 1.9    | 2.1    | 1.4   | 3.0   | 32    | 1.5   | 2.0   | .03  | 0     | .10   |
| 9     | .07   | .23    | 1.6    | 3.4    | 1.3   | 3.6   | 6.3   | 1.4   | 3.3   | .03  | 0     | .10   |
| 10    | .07   | .22    | 1.3    | 2.1    | 1.2   | 30    | 4.6   | 1.5   | 1.7   | .01  | 0     | .12   |
| 11    | .03   | .22    | 1.0    | 1.5    | 1.1   | 69    | 4.0   | 2.2   | 1.1   | 0    | 0     | 4.8   |
| 12    | .03   | .22    | 1.1    | 1.0    | 1.0   | 7.6   | 8.3   | 2.4   | 1.3   | 0    | 0     | 2.2   |
| 13    | 5.5   | .22    | 1.2    | .48    | 1.0   | 5.3   | 4.9   | 1.4   | .95   | .30  | 0     | .99   |
| 14    | 1.0   | .22    | 1.0    | .72    | 1.0   | 4.5   | 7.4   | 48    | .86   | .13  | 3.6   | .71   |
| 15    | .35   | .22    | 1.0    | 3.4    | 1.0   | 37    | 4.3   | 15    | 1.3   | .05  | .30   | .43   |
| 16    | .35   | .22    | .83    | 5.0    | 1.0   | 8.1   | 4.7   | 4.1   | .73   | .02  | .13   | .35   |
| 17    | .22   | .20    | .60    | 4.4    | 1.1   | 5.9   | 4.5   | 2.8   | .60   | 0    | .22   | .35   |
| 18    | .22   | .22    | .60    | 6.1    | 19    | 5.1   | 3.6   | 2.3   | .60   | 0    | .08   | .34   |
| 19    | .22   | .22    | 24     | 6.8    | 58    | 5.1   | 3.2   | 2.4   | .44   | 0    | .03   | .20   |
| 20    | .22   | .26    | 8.0    | 50     | 5.6   | 5.9   | 2.8   | 2.0   | .35   | 0    | .02   | .22   |
| 21    | .16   | .35    | 4.7    | 7.3    | 98    | 14    | 33    | 4.3   | .28   | 0    | 0     | .15   |
| 22    | .12   | .35    | 3.6    | 4.3    | 38    | 12    | 30    | 3.6   | .22   | 0    | 0     | .12   |
| 23    | .12   | .35    | 6.7    | 4.4    | 6.2   | 9.4   | 5.7   | 2.7   | .22   | 0    | .02   | .12   |
| 24    | .10   | 39     | 134    | 3.1    | 5.5   | 8.5   | 4.1   | 2.2   | .22   | 0    | .09   | .12   |
| 25    | .07   | 77     | 16     | 2.5    | 4.6   | 14    | 3.4   | 2.1   | .20   | 0    | .03   | .10   |
| 26    | .07   | 33     | 5.7    | 3.6    | 6.0   | 9.9   | 3.0   | 2.3   | .18   | 0    | 0     | .03   |
| 27    | .28   | 5.2    | 6.5    | 3.5    | 5.6   | 7.5   | 2.7   | 2.0   | .15   | 0    | 0     | .07   |
| 28    | .22   | 4.3    | 9.3    | 6.4    | 4.0   | 6.6   | 2.4   | 1.5   | .13   | 0    | 15    | 7.9   |
| 29    | .18   | 3.0    | 5.9    | 4.0    | ----- | 12    | 2.0   | 1.5   | .12   | 0    | 5.7   | 3.4   |
| 30    | .12   | 2.4    | 3.7    | 3.0    | ----- | 7.6   | 5.6   | 1.4   | .12   | 0    | .64   | .90   |
| 31    | 27    | -----  | 2.7    | 2.4    | ----- | 5.9   | ----- | 14    | ----- | 0    | .28   | ----- |
| TOTAL | 37.02 | 175.53 | 300.83 | 145.20 | 273.1 | 321.8 | 243.2 | 163.8 | 30.37 | 1.06 | 26.14 | 26.98 |
| MEAN  | 1.19  | 5.85   | 9.70   | 4.68   | 9.75  | 10.4  | 8.11  | 5.28  | 1.01  | .034 | .84   | .90   |
| MAX   | 27    | 77     | 134    | 50     | 98    | 69    | 33    | 48    | 3.5   | .30  | 15    | 7.9   |
| MIN   | .03   | .20    | .60    | .48    | 1.0   | 2.8   | 2.0   | 1.4   | .12   | 0    | 0     | .03   |
| CFSM  | .33   | 1.60   | 2.66   | 1.28   | 2.67  | 2.85  | 2.22  | 1.45  | .28   | .009 | .23   | .25   |
| IN.   | .38   | 1.79   | 3.07   | 1.48   | 2.78  | 3.28  | 2.48  | 1.67  | .31   | .01  | .27   | .27   |
| AC-FT | 73    | 348    | 597    | 288    | 542   | 638   | 482   | 325   | 60    | 2.1  | 52    | 54    |

CAL YR 1973 TOTAL 1,742.09 MEAN 4.77 MAX 134 MIN 0 CFMS 1.31 IN 17.75 AC-FT 3,460  
WTR YR 1974 TOTAL 1,745.03 MEAN 4.78 MAX 134 MIN 0 CFMS 1.31 IN 17.78 AC-FT 3,460

PEAK DISCHARGE (BASE, 300 FT<sup>3</sup>/S)

| DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|------|------|-------|-----------|
| 11-24 | 2400 | 3.07  | 435       | 3-11 | 0400 | 3.28  | 522       |
| 12-24 | 0645 | 2.94  | 391       | 5-14 | 2115 | 2.95  | 387       |
| 2-21  | 1530 | 3.22  | 490       |      |      |       |           |

07018000 Big River near De Soto, Mo.

LOCATION.--Lat 38°07'20", long 90°40'33", in SW¼NW¼ sec.11, T.39 N., R.3 E., Jefferson County, near right bank on downstream side of pier of Mammoth Bridge, 300 ft (91 m) upstream from Mammoth Creek, 1.5 mi (2.4 km) downstream from Mineral Fork, 6.5 mi (10.5 km) west of De Soto, and at mile 59.2 (95.3 km). Records include flow from Mammoth Creek.

DRAINAGE AREA.--718 mi<sup>2</sup> (1,860 km<sup>2</sup>), includes that of Mammoth Creek.

PERIOD OF RECORD.--October 1948 to current year. Prior to May 1949 monthly discharge only, published in WSP 1311.

GAGE.--Water-stage recorder. Datum of gage is 538.79 ft (164.223 m) above mean sea level.

AVERAGE DISCHARGE.--26 years, 675 ft<sup>3</sup>/s (19.12 m<sup>3</sup>/s), 12.77 in/yr (324 mm/yr), 489,000 acre-ft/yr (603 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 15,900 ft<sup>3</sup>/s (450 m<sup>3</sup>/s) Feb. 22 (gage height, 17.79 ft or 5.422 m); minimum daily, 79 ft<sup>3</sup>/s (2.24 m<sup>3</sup>/s) Aug. 7, 13.

Period of record: Maximum discharge, 55,800 ft<sup>3</sup>/s (1,580 m<sup>3</sup>/s) June 30, 1957 (gage height, 27.15 ft or 8.275 m); minimum discharge, 20 ft<sup>3</sup>/s (0.57 m<sup>3</sup>/s) Sept. 19, 1954; minimum gage height, 1.89 ft (0.576 m) Sept. 15, 1956.

Flood of August 1915 reached a stage of about 29.4 ft (8.96 m), from floodmark, 1.0 mi (1.6 km) downstream, adjusted to gage site by comparison with recorded flood 5.5 ft (1.68 m) lower (discharge, 70,500 ft<sup>3</sup>/s or 2,000 m<sup>3</sup>/s, from rating curve extended above 37,000 ft<sup>3</sup>/s or 1,050 m<sup>3</sup>/s).

REMARKS.--Records good. Records of chemical analyses are published in part 2 of this report.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT    | NOV    | DEC     | JAN    | FEB     | MAR     | APR    | MAY    | JUN    | JUL   | AUG    | SEP    |
|-------|--------|--------|---------|--------|---------|---------|--------|--------|--------|-------|--------|--------|
| 1     | 139    | 2,100  | 785     | 900    | 873     | 998     | 1,120  | 980    | 1,510  | 150   | 85     | 573    |
| 2     | 151    | 937    | 673     | 800    | 807     | 926     | 1,090  | 990    | 842    | 140   | 86     | 465    |
| 3     | 140    | 572    | 595     | 700    | 749     | 875     | 1,170  | 1,470  | 634    | 135   | 92     | 465    |
| 4     | 150    | 423    | 2,690   | 680    | 687     | 826     | 1,370  | 1,120  | 518    | 130   | 87     | 434    |
| 5     | 160    | 352    | 3,880   | 620    | 636     | 1,050   | 1,120  | 884    | 459    | 125   | 82     | 372    |
| 6     | 147    | 302    | 1,440   | 600    | 603     | 1,140   | 978    | 766    | 422    | 120   | 80     | 308    |
| 7     | 138    | 269    | 966     | 560    | 568     | 960     | 909    | 679    | 544    | 115   | 79     | 266    |
| 8     | 136    | 245    | 783     | 520    | 545     | 867     | 1,870  | 623    | 700    | 110   | 80     | 236    |
| 9     | 131    | 227    | 684     | 500    | 524     | 812     | 1,810  | 591    | 765    | 109   | 83     | 228    |
| 10    | 126    | 211    | 605     | 480    | 510     | 2,230   | 1,320  | 585    | 902    | 108   | 86     | 229    |
| 11    | 122    | 200    | 533     | 460    | 490     | 9,760   | 1,110  | 560    | 738    | 105   | 85     | 399    |
| 12    | 121    | 194    | 482     | 440    | 467     | 6,840   | 1,320  | 605    | 591    | 104   | 80     | 631    |
| 13    | 204    | 187    | 446     | 430    | 449     | 2,340   | 2,090  | 544    | 527    | 103   | 79     | 717    |
| 14    | 451    | 185    | 407     | 420    | 435     | 1,620   | 1,570  | 926    | 460    | 102   | 181    | 514    |
| 15    | 483    | 180    | 379     | 400    | 420     | 1,770   | 1,380  | 8,330  | 471    | 101   | 228    | 425    |
| 16    | 311    | 173    | 353     | 617    | 408     | 4,500   | 1,170  | 3,690  | 961    | 100   | 194    | 347    |
| 17    | 241    | 166    | 329     | 1,040  | 397     | 2,250   | 1,120  | 1,450  | 539    | 105   | 157    | 301    |
| 18    | 206    | 169    | 312     | 1,200  | 439     | 1,590   | 1,010  | 1,030  | 415    | 110   | 194    | 267    |
| 19    | 182    | 165    | 467     | 1,820  | 5,840   | 1,320   | 925    | 848    | 365    | 117   | 416    | 244    |
| 20    | 166    | 173    | 2,370   | 3,960  | 4,020   | 1,190   | 860    | 727    | 329    | 120   | 268    | 221    |
| 21    | 155    | 333    | 2,470   | 5,830  | 3,370   | 1,400   | 1,990  | 651    | 300    | 122   | 176    | 209    |
| 22    | 149    | 356    | 2,340   | 2,360  | 14,200  | 1,750   | 8,500  | 703    | 270    | 121   | 148    | 194    |
| 23    | 142    | 370    | 1,810   | 1,570  | 6,720   | 1,710   | 4,450  | 663    | 250    | 119   | 202    | 182    |
| 24    | 137    | 1,360  | 6,340   | 1,230  | 2,270   | 1,540   | 1,800  | 570    | 230    | 112   | 232    | 175    |
| 25    | 134    | 11,600 | 11,800  | 1,020  | 1,600   | 1,420   | 1,260  | 505    | 210    | 109   | 227    | 168    |
| 26    | 131    | 10,700 | 4,010   | 934    | 1,330   | 1,760   | 1,030  | 488    | 200    | 109   | 162    | 162    |
| 27    | 160    | 4,660  | 2,100   | 1,030  | 1,260   | 1,610   | 892    | 475    | 190    | 103   | 132    | 162    |
| 28    | 196    | 1,940  | 1,630   | 1,110  | 1,120   | 1,410   | 797    | 445    | 180    | 99    | 547    | 275    |
| 29    | 184    | 1,270  | 1,570   | 1,290  | -----   | 2,090   | 727    | 403    | 170    | 94    | 2,710  | 681    |
| 30    | 208    | 951    | 1,230   | 1,100  | -----   | 1,610   | 763    | 409    | 160    | 91    | 1,830  | 508    |
| 31    | 497    | -----  | 1,010   | 965    | -----   | 1,270   | -----  | 1,370  | -----  | 88    | 776    | -----  |
| TOTAL | 5,998  | 40,970 | 55,489  | 35,586 | 51,737  | 61,434  | 47,521 | 34,080 | 14,852 | 3,476 | 9,864  | 10,358 |
| MEAN  | 193    | 1,366  | 1,790   | 1,148  | 1,848   | 1,982   | 1,584  | 1,099  | 495    | 112   | 318    | 345    |
| MAX   | 497    | 11,600 | 11,800  | 5,830  | 14,200  | 9,760   | 8,500  | 8,330  | 1,510  | 150   | 2,710  | 717    |
| MIN   | 121    | 165    | 312     | 400    | 397     | 812     | 727    | 403    | 160    | 88    | 79     | 162    |
| CFSM  | .27    | 1.90   | 2.49    | 1.60   | 2.57    | 2.76    | 2.21   | 1.53   | .69    | .16   | .44    | .48    |
| IN.   | .31    | 2.12   | 2.87    | 1.84   | 2.68    | 3.18    | 2.46   | 1.77   | .77    | .18   | .51    | .54    |
| AC-FT | 11,900 | 81,260 | 110,100 | 70,580 | 102,600 | 121,900 | 94,260 | 67,600 | 29,460 | 6,890 | 19,570 | 20,550 |

CAL YR 1973 TOTAL 390,372 MEAN 1.070 MAX 14,100 MIN 109 CFSM 1.49 IN 20.23 AC-FT 774,300  
WTR YR 1974 TOTAL 371,365 MEAN 1.017 MAX 14,200 MIN 79 CFSM 1.42 IN 19.24 AC-FT 736,600

PEAK DISCHARGE (BASE, 8,000 FT<sup>3</sup>/S)

| DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|------|------|-------|-----------|
| 11-25 | 1530 | 17.41 | 14,900    | 3-11 | 2000 | 15.85 | 11,800    |
| 12-25 | 1030 | 16.68 | 13,300    | 4-22 | 1245 | 14.79 | 10,300    |
| 2-22  | 1015 | 17.79 | 15,900    | 5-15 | 1100 | 14.09 | 9,420     |

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, on right bank on downstream side of pier of highway bridge at Byrnesville, 4.0 mi (6.4 km) upstream from Heads Creek, and at mile 14.1 (22.7 km).

DRAINAGE AREA.--917 mi<sup>2</sup> (2,375 km<sup>2</sup>).

PERIOD OF RECORD.--October 1921 to current year. Prior to June 1922 monthly discharge only, published in WSP 1311.

GAGE.--Water-stage recorder. Datum of gage is 433.69 ft (132.189 m) above mean sea level. Prior to Mar. 9, 1940, nonrecording gage at present site and datum.

Auxiliary water-stage recorder 4.0 mi (6.4 km) downstream at datum 433.83 ft (132.231 m) above mean sea level. Prior to Dec. 9, 1969, nonrecording gage at present site and datum.

AVERAGE DISCHARGE.--53 years, 845 ft<sup>3</sup>/s (23.93 m<sup>3</sup>/s), 12.51 in/yr (318 mm/yr), 612,200 acre-ft/yr (755 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 15,400 ft<sup>3</sup>/s (436 m<sup>3</sup>/s) Dec. 26, Feb. 23; maximum gage height, 19.50 ft (5.944 m) Feb. 23; minimum discharge, 104 ft<sup>3</sup>/s (2.95 m<sup>3</sup>/s) Aug. 8, 9, 11 (gage height, 2.30 ft or 0.701 m).

Period of record: Maximum discharge, 42,100 ft<sup>3</sup>/s (1,190 m<sup>3</sup>/s) July 1, 1957 (gage height, 26.41 ft or 8.050 m); minimum discharge, 25 ft<sup>3</sup>/s (0.708 m<sup>3</sup>/s) Aug. 30, 1936, minimum gage height, 1.50 ft (0.457 m) Aug 14, 1934.

Flood of Aug. 21, 1915 reached a stage of 30.2 ft (9.20 m) from floodmarks (discharge, 80,000 ft<sup>3</sup>/s or 2,270 m<sup>3</sup>/s, by slope-area measurement of peak flow).

REMARKS:-- Records good.

REVISIONS.--WSP 667: 1927. WSP 877: 1938. WSP 1007: Drainage area.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT    | NOV     | DEC     | JAN     | FEB     | MAR     | APR     | MAY    | JUN    | JUL   | AUG    | SEP    |
|-------|--------|---------|---------|---------|---------|---------|---------|--------|--------|-------|--------|--------|
| 1     | 203    | 879     | 1,280   | 1,350   | 1,220   | 1,430   | 1,590   | 1,090  | 2,060  | 209   | 113    | 1,110  |
| 2     | 183    | 2,060   | 1,070   | 1,080   | 1,090   | 1,270   | 1,360   | 1,280  | 1,580  | 201   | 112    | 748    |
| 3     | 176    | 988     | 921     | 1,000   | 991     | 1,160   | 1,380   | 1,500  | 1,060  | 198   | 112    | 594    |
| 4     | 253    | 669     | 2,020   | 943     | 902     | 1,070   | 1,540   | 1,780  | 832    | 189   | 116    | 541    |
| 5     | 208    | 512     | 4,600   | 877     | 818     | 1,080   | 1,560   | 1,360  | 688    | 184   | 114    | 504    |
| 6     | 204    | 423     | 3,120   | 790     | 756     | 1,320   | 1,260   | 1,100  | 600    | 177   | 112    | 446    |
| 7     | 195    | 366     | 1,690   | 746     | 708     | 1,290   | 1,120   | 960    | 576    | 171   | 108    | 378    |
| 8     | 179    | 321     | 1,230   | 685     | 661     | 1,100   | 1,400   | 856    | 704    | 167   | 107    | 324    |
| 9     | 168    | 280     | 1,020   | 667     | 622     | 1,190   | 2,600   | 772    | 884    | 167   | 106    | 294    |
| 10    | 162    | 268     | 876     | 751     | 588     | 1,680   | 1,940   | 682    | 944    | 175   | 106    | 287    |
| 11    | 155    | 252     | 755     | 805     | 565     | 5,120   | 1,530   | 732    | 1,120  | 176   | 107    | 284    |
| 12    | 154    | 237     | 663     | 686     | 540     | 10,200  | 1,320   | 692    | 884    | 166   | 109    | 365    |
| 13    | 288    | 225     | 592     | 617     | 513     | 6,530   | 1,890   | 704    | 720    | 161   | 110    | 680    |
| 14    | 259    | 214     | 539     | 618     | 490     | 2,540   | 2,000   | 724    | 636    | 156   | 112    | 778    |
| 15    | 420    | 219     | 497     | 596     | 470     | 2,010   | 1,740   | 3,080  | 554    | 158   | 110    | 579    |
| 16    | 546    | 221     | 459     | 728     | 452     | 3,150   | 1,500   | 7,420  | 668    | 158   | 176    | 486    |
| 17    | 386    | 201     | 424     | 1,400   | 436     | 4,170   | 1,310   | 2,970  | 976    | 162   | 251    | 430    |
| 18    | 298    | 194     | 391     | 1,940   | 429     | 2,410   | 1,210   | 1,770  | 636    | 150   | 204    | 425    |
| 19    | 250    | 189     | 413     | 2,110   | 3,480   | 1,880   | 1,100   | 1,300  | 503    | 144   | 180    | 341    |
| 20    | 222    | 204     | 880     | 4,070   | 6,560   | 1,590   | 996     | 1,100  | 443    | 140   | 331    | 292    |
| 21    | 201    | 419     | 2,350   | 6,920   | 4,400   | 1,480   | 1,080   | 896    | 401    | 137   | 344    | 260    |
| 22    | 186    | 412     | 1,700   | 5,700   | 9,650   | 1,780   | 5,100   | 848    | 346    | 134   | 253    | 228    |
| 23    | 175    | 408     | 1,470   | 2,910   | 14,100  | 1,980   | 8,820   | 876    | 313    | 134   | 203    | 207    |
| 24    | 167    | 1,010   | 3,410   | 2,030   | 7,850   | 1,950   | 3,840   | 824    | 283    | 132   | 215    | 193    |
| 25    | 160    | 6,960   | 10,200  | 1,630   | 2,690   | 1,760   | 2,150   | 716    | 268    | 131   | 251    | 181    |
| 26    | 154    | 11,200  | 14,300  | 1,410   | 2,050   | 1,900   | 1,670   | 644    | 255    | 128   | 254    | 170    |
| 27    | 165    | 13,000  | 4,800   | 1,460   | 1,790   | 2,120   | 1,400   | 604    | 242    | 125   | 233    | 163    |
| 28    | 171    | 4,450   | 2,600   | 1,840   | 1,650   | 2,520   | 1,200   | 576    | 234    | 124   | 203    | 165    |
| 29    | 204    | 2,250   | 2,210   | 1,910   | -----   | 3,770   | 1,080   | 539    | 223    | 123   | 849    | 227    |
| 30    | 212    | 1,650   | 2,030   | 1,730   | -----   | 2,790   | 1,040   | 503    | 217    | 121   | 2,820  | 669    |
| 31    | 381    | -----   | 1,650   | 1,420   | -----   | 1,980   | -----   | 2,160  | -----  | 115   | 1,700  | -----  |
| TOTAL | 7,085  | 50,681  | 70,160  | 51,419  | 66,471  | 76,220  | 57,726  | 41,058 | 19,850 | 4,813 | 10,121 | 12,349 |
| MEAN  | 229    | 1,689   | 2,263   | 1,659   | 2,374   | 2,459   | 1,924   | 1,324  | 662    | 155   | 326    | 412    |
| MAX   | 546    | 13,000  | 14,300  | 6,920   | 14,100  | 10,200  | 8,820   | 7,420  | 2,060  | 209   | 2,820  | 1,110  |
| MIN   | 154    | 189     | 391     | 596     | 429     | 1,070   | 996     | 503    | 217    | 115   | 106    | 163    |
| CFSM  | .25    | 1.84    | 2.47    | 1.81    | 2.59    | 2.68    | 2.10    | 1.44   | .72    | .17   | .36    | .45    |
| IN.   | .29    | 2.06    | 2.85    | 2.09    | 2.70    | 3.09    | 2.34    | 1.67   | .81    | .20   | .41    | .50    |
| AC-FT | 14,050 | 100,500 | 139,200 | 102,000 | 131,800 | 151,200 | 114,500 | 81,440 | 39,370 | 9,550 | 20,080 | 24,490 |

CAL YR 1973 TOTAL 522,826 MEAN 1,432 MAX 15,000 MIN 132 CFSM 1.56 IN 21.21 AC-FT 1,037,000  
WTR YR 1974 TOTAL 467,953 MEAN 1,282 MAX 14,300 MIN 106 CFSM 1.40 IN 18.98 AC-FT 928,200

PEAK DISCHARGE (BASE, 7,000 FT<sup>3</sup>/S)

| DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|------|------|-------|-----------|
| 11-27 | 0515 | 19.12 | 14,400    | 3-12 | 2230 | 17.87 | 11,700    |
| 12-26 | 1315 | 19.01 | 15,400    | 4-23 | 1245 | 16.65 | 9,420     |
| 1-21  | 2130 | 14.71 | 7,850     | 5-16 | 1345 | 15.75 | 8,250     |
| 2-23  | 1945 | 19.50 | 15,400    |      |      |       |           |

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, on right bank 44 ft (13 m) upstream from bridge on north access roadway of I-44, 2.0 mi (3.2 km) east of Eureka, 3.0 mi (4.8 km) downstream from Big River, and at mile 34.6 (55.7 km).

DRAINAGE AREA.--3,788 mi<sup>2</sup> (9,811 km<sup>2</sup>).

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.

GAGE.--Water-stage recorder. Datum of gage is 404.18 ft (123.194 m) above mean sea level. Prior to Jan. 17, 1933, nonrecording gage at site 200 ft (61 m) upstream at different datum. Jan. 17, 1933, to Sept. 22, 1937, nonrecording gage, and Sept. 23, 1937, to Sept. 30, 1971, water-stage recorder at present site at datum 2.00 ft (0.610 m) higher.

AVERAGE DISCHARGE.--55 years, 3,043 ft<sup>3</sup>/s (86.18 m<sup>3</sup>/s), 10.91 in/yr (277 mm/yr), 2,205,000 acre-ft/yr (2.72 km<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 35,400 ft<sup>3</sup>/s (1,000 m<sup>3</sup>/s) Nov. 28 (gage height, 20.87 ft or 6.361 m); minimum, 565 ft<sup>3</sup>/s (16.0 m<sup>3</sup>/s) Aug. 9 (gage height, 2.19 ft or 0.668 m).  
Period of record: Maximum discharge 120,000 ft<sup>3</sup>/s (3,400 m<sup>3</sup>/s) June 11, 1945 (gage height, 38.94 ft or 11.869 m, present datum); minimum, 196 ft<sup>3</sup>/s (5.55 m<sup>3</sup>/s) Aug. 27, 31, Sept. 1, 1936.  
Flood of Aug. 22, 1915 reached a stage of 42.2 ft (12.86 m), from floodmarks, present site and datum (discharge, 175,000 ft<sup>3</sup>/s or 4,960 m<sup>3</sup>/s, by slope-area measurement of peak flow).

REMARKS.--Records good.

REVISIONS (WATER YEARS).--WSP 877: 1938(M). WSP 977: 1942. WSP 1007: Drainage area. WSP 1281: 1924-25.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT    | NOV     | DEC     | JAN     | FEB     | MAR     | APR     | MAY     | JUN     | JUL    | AUG    | SEP    |
|-------|--------|---------|---------|---------|---------|---------|---------|---------|---------|--------|--------|--------|
| 1     | 834    | 1,430   | 6,950   | 4,730   | 6,880   | 5,720   | 6,470   | 3,780   | 8,760   | 1,220  | 619    | 4,310  |
| 2     | 843    | 3,680   | 5,300   | 4,010   | 5,670   | 5,180   | 5,370   | 4,310   | 6,640   | 1,180  | 608    | 2,740  |
| 3     | 825    | 4,900   | 4,400   | 3,590   | 4,900   | 4,680   | 4,850   | 4,920   | 4,280   | 1,150  | 600    | 1,880  |
| 4     | 915    | 3,530   | 6,200   | 3,260   | 4,310   | 4,260   | 4,730   | 5,810   | 3,420   | 1,130  | 595    | 1,830  |
| 5     | 1,130  | 2,740   | 9,570   | 3,030   | 3,850   | 3,960   | 4,580   | 5,560   | 2,870   | 1,090  | 595    | 1,740  |
| 6     | 1,060  | 2,200   | 14,300  | 2,800   | 3,540   | 3,950   | 4,080   | 4,650   | 2,530   | 1,060  | 591    | 1,580  |
| 7     | 1,020  | 1,850   | 14,000  | 2,610   | 3,280   | 3,920   | 3,740   | 4,140   | 2,640   | 1,030  | 588    | 1,440  |
| 8     | 1,020  | 1,640   | 7,730   | 2,470   | 3,070   | 3,590   | 3,880   | 3,700   | 2,620   | 1,010  | 580    | 1,320  |
| 9     | 982    | 1,480   | 5,350   | 2,370   | 2,860   | 3,380   | 5,620   | 3,340   | 3,690   | 1,000  | 588    | 1,200  |
| 10    | 906    | 1,350   | 4,320   | 2,370   | 2,700   | 4,920   | 6,830   | 3,110   | 5,820   | 1,000  | 608    | 1,140  |
| 11    | 852    | 1,250   | 3,700   | 2,430   | 2,560   | 10,600  | 6,900   | 3,220   | 6,190   | 971    | 638    | 1,110  |
| 12    | 834    | 1,180   | 3,280   | 2,320   | 2,440   | 22,100  | 5,720   | 3,920   | 6,010   | 943    | 642    | 1,070  |
| 13    | 944    | 1,120   | 2,990   | 2,400   | 2,340   | 27,900  | 5,810   | 4,360   | 4,370   | 916    | 652    | 1,300  |
| 14    | 1,060  | 1,070   | 2,720   | 2,140   | 2,260   | 22,300  | 8,530   | 4,420   | 3,520   | 900    | 667    | 1,630  |
| 15    | 1,090  | 1,070   | 2,550   | 2,090   | 2,170   | 10,600  | 7,070   | 8,220   | 3,040   | 882    | 637    | 1,750  |
| 16    | 1,430  | 1,060   | 2,350   | 2,180   | 2,100   | 8,620   | 5,930   | 15,800  | 2,740   | 867    | 666    | 1,590  |
| 17    | 1,670  | 1,020   | 2,150   | 3,940   | 2,020   | 12,800  | 5,340   | 17,700  | 2,960   | 859    | 790    | 1,460  |
| 18    | 1,570  | 991     | 2,040   | 6,680   | 1,970   | 11,000  | 4,920   | 16,000  | 2,560   | 848    | 734    | 1,400  |
| 19    | 1,350  | 962     | 2,040   | 10,500  | 5,100   | 8,410   | 4,460   | 8,350   | 2,320   | 827    | 707    | 1,290  |
| 20    | 1,190  | 953     | 2,160   | 15,200  | 13,500  | 6,520   | 3,910   | 5,570   | 2,120   | 812    | 810    | 1,200  |
| 21    | 1,090  | 1,540   | 3,780   | 24,600  | 17,800  | 5,670   | 3,750   | 4,590   | 1,950   | 793    | 895    | 1,130  |
| 22    | 1,010  | 1,420   | 3,750   | 28,900  | 24,900  | 5,510   | 7,830   | 4,250   | 1,830   | 776    | 890    | 1,070  |
| 23    | 953    | 1,410   | 3,840   | 29,200  | 26,200  | 5,660   | 17,000  | 4,160   | 1,700   | 751    | 824    | 1,040  |
| 24    | 906    | 2,300   | 7,120   | 22,500  | 28,500  | 5,560   | 20,500  | 4,420   | 1,600   | 737    | 790    | 1,010  |
| 25    | 852    | 13,500  | 17,800  | 10,900  | 15,900  | 5,510   | 16,300  | 4,090   | 1,520   | 731    | 809    | 996    |
| 26    | 834    | 22,200  | 27,000  | 7,940   | 9,400   | 5,910   | 8,220   | 3,430   | 1,440   | 721    | 800    | 983    |
| 27    | 834    | 31,100  | 26,600  | 7,460   | 7,560   | 6,470   | 6,240   | 3,060   | 1,380   | 703    | 794    | 974    |
| 28    | 834    | 34,700  | 13,400  | 8,940   | 6,540   | 7,340   | 5,100   | 2,830   | 1,330   | 690    | 816    | 1,020  |
| 29    | 852    | 31,100  | 8,210   | 12,400  | -----   | 11,600  | 4,430   | 2,660   | 1,290   | 670    | 1,600  | 1,180  |
| 30    | 888    | 12,800  | 6,680   | 10,800  | -----   | 9,910   | 3,980   | 2,490   | 1,250   | 652    | 3,450  | 1,490  |
| 31    | 1,050  | -----   | 5,580   | 9,110   | -----   | 7,850   | -----   | 8,690   | -----   | 630    | 2,790  | -----  |
| TOTAL | 31,628 | 187,546 | 227,860 | 253,870 | 214,320 | 261,400 | 202,090 | 175,550 | 94,390  | 27,549 | 27,373 | 43,873 |
| MEAN  | 1,020  | 6,252   | 7,350   | 8,189   | 7,654   | 8,432   | 6,736   | 5,663   | 3,146   | 889    | 883    | 1,462  |
| MAX   | 1,670  | 34,700  | 27,000  | 29,200  | 28,500  | 27,900  | 20,500  | 17,700  | 8,760   | 1,220  | 3,450  | 4,310  |
| MIN   | 825    | 953     | 2,040   | 2,090   | 1,970   | 3,380   | 3,740   | 2,490   | 1,250   | 630    | 580    | 974    |
| CFSM  | .27    | 1.65    | 1.94    | 2.16    | 2.02    | 2.23    | 1.78    | 1.50    | .83     | .23    | .23    | .39    |
| IN.   | .31    | 1.84    | 2.24    | 2.49    | 2.10    | 2.57    | 1.98    | 1.72    | .93     | .27    | .27    | .43    |
| AC-FT | 62,730 | 372,000 | 452,000 | 503,600 | 425,100 | 518,500 | 400,800 | 348,200 | 187,200 | 54,640 | 54,290 | 87,020 |

CAL YR 1973 TOTAL 1,930,407 MEAN 5,289 MAX 34,700 MIN 601 CFSM 1.40 IN 18.96 AC-FT 3,829,000  
WTR YR 1974 TOTAL 1,747,449 MEAN 4,788 MAX 34,700 MIN 580 CFSM 1.26 IN 17.16 AC-FT 3,466,000

PEAK DISCHARGE (BASE, 17,000 FT<sup>3</sup>/S)

| DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|------|------|-------|-----------|
| 11-28 | 0430 | 20.87 | 35,400    | 3-13 | 1000 | 18.27 | 29,200    |
| 12-27 | 0300 | 18.85 | 30,500    | 4-24 | 0300 | 14.50 | 21,000    |
| 1-23  | 1815 | 18.42 | 29,600    | 5-17 | 0100 | 13.67 | 19,300    |
| 2-24  | 0915 | 18.94 | 30,800    |      |      |       |           |



07020500 Mississippi River at Chester, Ill.

LOCATION.--Lat 37°54'10", long 89°51'10", in SW¼ sec.24, T.7 S., R.7 W., third principal meridian, Randolph County, on downstream side of left pier of main truss of highway bridge at Chester, 8.1 mi (13.0 km) downstream from Kaskaskia River, and at mile 109.9 (176.8 km) above Ohio River.

DRAINAGE AREA.--712,600 mi<sup>2</sup> (1,846,000 km<sup>2</sup>), approximately.

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.

GAGE.--Water-stage recorder. Datum of gage is 341.05 ft (103.952 m) above mean sea level. Prior to February 1, 1962, nonrecording gage 0.4 mi (0.6 km) downstream at present datum.

AVERAGE DISCHARGE.--47 years, 182,900 ft<sup>3</sup>/s (5,180 m<sup>3</sup>/s), 132,500,000 acre-ft/yr (163 km<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 537,000 ft<sup>3</sup>/s (15,200 m<sup>3</sup>/s) May 26, June 4; maximum gage height, 32.48 ft (9.900 m) May 26; minimum discharge, 80,700 ft<sup>3</sup>/s (2,290 m<sup>3</sup>/s) Sept. 27 (gage height, 3.66 ft or 1.116 m).

Period of record: Maximum discharge determined, 886,000 ft<sup>3</sup>/s (25,100 m<sup>3</sup>/s) July 3, 1947, Apr. 30, 1973 (discharge, including unmeasured overflow, was greater May 24, 1943); maximum gage height, 43.32 ft (13.204 m) Apr. 30, 1973; minimum daily discharge, 30,000 ft<sup>3</sup>/s (850 m<sup>3</sup>/s) Dec. 12, 1937; minimum gage height, -4.10 ft (-1.250 m) Jan. 2, 1964.

Flood of June 30, 1844, reached a stage of 39.8 ft (12.13 m) and a discharge of 1,350,000 ft<sup>3</sup>/s (38,200 m<sup>3</sup>/s), computed by Corps of Engineers.

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.

## GAGE HEIGHT, IN FEET, AT 0800, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY | OCT   | NOV   | DEC   | JAN   | FEB   | MAR   | APR   | MAY   | JUN   | JUL   | AUG   | SEP   |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1   | 22.80 | 17.72 | 21.76 | 18.09 | 28.58 | 20.31 | 18.75 | 21.42 | 28.93 | 26.31 | 9.73  | 10.07 |
| 2   | 24.21 | 17.57 | 20.42 | 16.30 | 28.36 | 19.69 | 19.00 | 21.36 | 29.97 | 26.57 | 9.16  | 9.90  |
| 3   | 25.25 | 17.55 | 18.93 | 15.47 | 27.68 | 19.15 | 19.33 | 22.04 | 31.32 | 26.56 | 8.88  | 10.11 |
| 4   | 25.88 | 17.26 | 18.34 | 14.55 | 26.68 | 18.90 | 19.28 | 22.97 | 31.52 | 26.29 | 8.42  | 10.55 |
| 5   | 26.56 | 16.84 | 19.00 | 13.72 | 25.80 | 18.76 | 19.04 | 23.53 | 31.40 | 25.98 | 8.00  | 10.72 |
| 6   | 27.14 | 16.29 | 21.97 | 12.68 | 24.82 | 18.86 | 18.57 | 23.09 | 30.93 | 25.45 | 7.91  | 10.61 |
| 7   | 27.64 | 15.33 | 24.52 | 12.37 | 23.34 | 19.46 | 18.48 | 22.61 | 30.02 | 24.82 | 7.99  | 10.29 |
| 8   | 27.88 | 15.11 | 26.03 | 11.96 | 21.61 | 20.62 | 18.60 | 22.03 | 29.09 | 24.36 | 8.25  | 9.87  |
| 9   | 27.54 | 15.34 | 26.27 | 11.02 | 19.58 | 21.59 | 19.37 | 21.33 | 28.90 | 23.97 | 7.80  | 9.16  |
| 10  | 25.92 | 15.31 | 24.59 | 10.39 | 18.64 | 22.09 | 19.73 | 20.44 | 29.42 | 22.35 | 8.15  | 8.08  |
| 11  | 22.40 | 14.57 | 22.06 | 10.88 | 18.15 | 22.61 | 20.13 | 19.42 | 30.18 | 19.86 | 9.05  | 8.34  |
| 12  | 19.68 | 14.02 | 19.33 | 10.02 | 17.46 | 23.57 | 20.69 | 18.87 | 30.74 | 18.55 | 10.37 | 9.18  |
| 13  | 18.47 | 13.56 | 17.45 | 9.02  | 16.49 | 25.78 | 21.55 | 18.41 | 31.03 | 17.58 | 11.18 | 9.48  |
| 14  | 20.69 | 13.16 | 16.54 | 8.72  | 16.44 | 27.26 | 21.94 | 17.94 | 31.23 | 16.95 | 11.54 | 9.51  |
| 15  | 24.74 | 12.77 | 15.90 | 9.71  | 16.46 | 28.32 | 21.78 | 19.01 | 31.33 | 16.12 | 11.09 | 9.37  |
| 16  | 25.50 | 13.20 | ----- | 10.44 | 16.20 | 28.67 | 21.87 | 19.92 | 30.79 | 15.40 | 10.48 | 9.08  |
| 17  | 25.42 | 12.85 | ----- | 10.57 | 15.91 | 28.36 | 21.84 | 23.09 | 30.14 | 15.63 | 11.13 | 8.21  |
| 18  | 25.53 | 12.69 | ----- | 10.90 | 15.48 | 27.95 | 21.88 | 24.40 | 29.34 | 15.49 | 10.74 | 7.30  |
| 19  | 26.04 | 12.69 | 12.63 | 13.15 | 15.36 | 27.37 | 22.04 | 24.24 | 28.56 | 14.65 | 10.56 | 7.37  |
| 20  | 26.42 | 12.26 | 12.81 | 17.03 | 16.19 | 26.61 | 21.86 | 24.99 | 27.60 | 13.55 | 9.45  | 6.62  |
| 21  | 26.34 | 11.83 | 11.44 | 21.11 | 18.49 | 25.97 | 21.75 | 27.16 | 26.67 | 12.85 | 8.62  | 6.97  |
| 22  | 26.04 | 12.99 | 9.72  | 23.96 | 22.25 | 25.01 | 22.05 | 28.87 | 25.90 | 11.56 | 8.75  | 6.98  |
| 23  | 25.74 | 13.56 | 9.86  | 25.18 | 22.78 | 23.60 | 21.89 | 30.23 | 25.51 | 12.04 | 8.64  | 6.82  |
| 24  | 24.86 | 15.72 | 11.08 | 26.09 | 23.24 | 22.21 | 21.80 | 31.23 | 25.25 | 11.79 | 9.00  | 6.31  |
| 25  | 23.07 | 19.19 | 13.64 | 26.52 | 23.49 | 21.35 | 22.09 | 32.16 | 25.00 | 10.42 | 9.51  | 5.35  |
| 26  | 21.06 | 20.63 | 15.94 | 25.98 | 23.35 | 20.72 | 23.28 | 32.40 | 24.77 | 9.94  | 9.57  | 4.78  |
| 27  | 19.75 | 21.65 | 19.57 | 25.32 | 22.28 | 19.95 | 23.33 | 32.12 | 24.76 | 9.68  | 9.46  | 3.95  |
| 28  | 18.78 | 21.97 | 20.63 | 25.97 | 21.21 | 19.30 | 22.69 | 31.26 | 24.96 | 10.15 | 8.69  | 4.12  |
| 29  | 18.41 | 22.20 | 21.10 | 27.70 | ----- | 19.11 | 22.24 | 30.27 | 25.38 | 10.06 | 10.40 | 5.10  |
| 30  | 18.10 | 22.64 | 20.76 | 28.68 | ----- | 19.07 | 21.89 | 29.27 | 25.91 | 10.77 | 10.59 | 5.76  |
| 31  | 17.41 | ----- | 19.70 | 28.83 | ----- | 18.64 | ----- | 28.58 | ----- | 10.41 | 10.33 | ----- |
| MAX | 27.88 | 22.64 | ----- | 28.83 | 28.58 | 28.67 | 23.33 | 32.40 | 31.52 | 26.57 | 11.54 | 10.72 |
| MIN | 17.41 | 11.83 | ----- | 8.72  | 15.36 | 18.64 | 18.48 | 17.94 | 24.76 | 9.68  | 7.80  | 3.95  |

## MISSISSIPPI RIVER MAIN STEM

07020500 Mississippi River at Chester, Ill.--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY         | OCT               | NOV      | DEC      | JAN          | FEB      | MAR         | APR      | MAY         | JUN     | JUL               | AUG      | SEP      |
|-------------|-------------------|----------|----------|--------------|----------|-------------|----------|-------------|---------|-------------------|----------|----------|
| 1           | 353,000           | 253,000  | 329,000  | 267,000      | 498,000  | 312,000     | 273,000  | 314,000     | 475,000 | 407,000           | 139,000  | 144,000  |
| 2           | 381,000           | 251,000  | 303,000  | 240,000      | 486,000  | 298,000     | 281,000  | 313,000     | 500,000 | 411,000           | 133,000  | 145,000  |
| 3           | 400,000           | 249,000  | 279,000  | 227,000      | 467,000  | 288,000     | 282,000  | 327,000     | 527,000 | 408,000           | 131,000  | 151,000  |
| 4           | 411,000           | 245,000  | 274,000  | 213,000      | 445,000  | 283,000     | 280,000  | 344,000     | 523,000 | 401,000           | 126,000  | 157,000  |
| 5           | 422,000           | 238,000  | 292,000  | 200,000      | 421,000  | 278,000     | 274,000  | 351,000     | 530,000 | 391,000           | 124,000  | 157,000  |
| 6           | 430,000           | 228,000  | 353,000  | 188,000      | 395,000  | 282,000     | 267,000  | 341,000     | 518,000 | 378,000           | 123,000  | 153,000  |
| 7           | 437,000           | 214,000  | 400,000  | 183,000      | 361,000  | 297,000     | 265,000  | 330,000     | 498,000 | 363,000           | 126,000  | 149,000  |
| 8           | 438,000           | 213,000  | 423,000  | 177,000      | 325,000  | 321,000     | 271,000  | 317,000     | 480,000 | 353,000           | 125,000  | 142,000  |
| 9           | 425,000           | 216,000  | 416,000  | 166,000      | 291,000  | 339,000     | 284,000  | 302,000     | 481,000 | 339,000           | 120,000  | 132,000  |
| 10          | 380,000           | 212,000  | 372,000  | 161,000      | 276,000  | 351,000     | 290,000  | 285,000     | 492,000 | 300,000           | 125,000  | 123,000  |
| 11          | 314,000           | 203,000  | 314,000  | 165,000      | 269,000  | 365,000     | 296,000  | 268,000     | 506,000 | 258,000           | 136,000  | 124,000  |
| 12          | 270,000           | 195,000  | 268,000  | 153,000      | 255,000  | 391,000     | 308,000  | 260,000     | 517,000 | 239,000           | 149,000  | 133,000  |
| 13          | 257,000           | 189,000  | 241,000  | 143,000      | 242,000  | 433,000     | 322,000  | 254,000     | 524,000 | 227,000           | 156,000  | 136,000  |
| 14          | 314,000           | 183,000  | 229,000  | 142,000      | 243,000  | 461,000     | 325,000  | 248,000     | 523,000 | 221,000           | 159,000  | 135,000  |
| 15          | 381,000           | 182,000  | 224,000  | 145,000      | 244,000  | 476,000     | 322,000  | 268,000     | 521,000 | 209,000           | 151,000  | 134,000  |
| 16          | 392,000           | 185,000  | 215,000  | 150,000      | 242,000  | 478,000     | 322,000  | 295,000     | 501,000 | 204,000           | 149,000  | 130,000  |
| 17          | 391,000           | 182,000  | 205,000  | 155,000      | 237,000  | 469,000     | 322,000  | 349,000     | 484,000 | 209,000           | 153,000  | 121,000  |
| 18          | 393,000           | 182,000  | 198,000  | 170,000      | 232,000  | 458,000     | 324,000  | 370,000     | 464,000 | 208,000           | 149,000  | 115,000  |
| 19          | 404,000           | 182,000  | 185,000  | 212,000      | 234,000  | 443,000     | 328,000  | 367,000     | 445,000 | 195,000           | 146,000  | 112,000  |
| 20          | 409,000           | 176,000  | 185,000  | 276,000      | 252,000  | 426,000     | 324,000  | 389,000     | 422,000 | 181,000           | 132,000  | 106,000  |
| 21          | 406,000           | 176,000  | 166,000  | 354,000      | 300,000  | 410,000     | 325,000  | 430,000     | 404,000 | 173,000           | 125,000  | 108,000  |
| 22          | 400,000           | 189,000  | 149,000  | 407,000      | 362,000  | 389,000     | 328,000  | 463,000     | 391,000 | 161,000           | 126,000  | 109,000  |
| 23          | 391,000           | 200,000  | 154,000  | 432,000      | 372,000  | 360,000     | 328,000  | 490,000     | 381,000 | 165,000           | 125,000  | 106,000  |
| 24          | 370,000           | 236,000  | 173,000  | 451,000      | 379,000  | 336,000     | 328,000  | 513,000     | 378,000 | 160,000           | 129,000  | 101,000  |
| 25          | 332,000           | 290,000  | 204,000  | 457,000      | 383,000  | 321,000     | 335,000  | 530,000     | 373,000 | 145,000           | 132,000  | 94,100   |
| 26          | 295,000           | 317,000  | 249,000  | 446,000      | 376,000  | 309,000     | 355,000  | 534,000     | 371,000 | 142,000           | 132,000  | 88,300   |
| 27          | 274,000           | 332,000  | 304,000  | 435,000      | 352,000  | 293,000     | 352,000  | 527,000     | 371,000 | 141,000           | 130,000  | 82,400   |
| 28          | 261,000           | 339,000  | 323,000  | 455,000      | 330,000  | 283,000     | 340,000  | 510,000     | 377,000 | 143,000           | 126,000  | 86,200   |
| 29          | 257,000           | 345,000  | 330,000  | 488,000      | -----    | 279,000     | 331,000  | 489,000     | 387,000 | 144,000           | 145,000  | 95,100   |
| 30          | 253,000           | 347,000  | 320,000  | 505,000      | -----    | 276,000     | 323,000  | 470,000     | 398,000 | 151,000           | 149,000  | 97,200   |
| 31          | 246,000           | -----    | 299,000  | 509,000      | -----    | 271,000     | -----    | 463,000     | -----   | 146,000           | 146,000  | -----    |
| TOTAL       | 11,087M           | 6,949.0M | 8,376.0M | 8,672.0M     | 9,269.0M | 10,976M     | 9,305.0M | 11,711M     | 13,762M | 7,573.0M          | 4,217.0M | 3,666.3M |
| MEAN        | 357,600           | 231,600  | 270,200  | 279,700      | 331,000  | 354,100     | 310,200  | 377,800     | 458,700 | 244,300           | 136,000  | 122,200  |
| MAX         | 438,000           | 347,000  | 423,000  | 509,000      | 498,000  | 478,000     | 355,000  | 534,000     | 530,000 | 411,000           | 159,000  | 157,000  |
| MIN         | 246,000           | 176,000  | 149,000  | 142,000      | 232,000  | 271,000     | 265,000  | 248,000     | 371,000 | 141,000           | 120,000  | 82,400   |
| AC-FT       | 21,990M           | 13,780M  | 16,610M  | 17,200M      | 18,390M  | 21,770M     | 18,460M  | 23,230M     | 27,300M | 15,020M           | 8,364M   | 7,272M   |
| CAL YR 1973 | TOTAL 131,856,000 |          |          | MEAN 361,200 |          | MAX 885,000 |          | MIN 118,000 |         | AC-FT 261,500,000 |          |          |
| WTR YR 1974 | TOTAL 105,563,300 |          |          | MEAN 289,200 |          | MAX 534,000 |          | MIN 82,400  |         | AC-FT 209,400,000 |          |          |

NOTE.--Daily discharge computed from daily mean gage height.  
M Figure expressed in thousands.

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, on downstream side of left bridge pier on State Highway 51 in Zalma, and 2.5 mi (4.0 km) downstream from Perkins Creek.

DRAINAGE AREA.--423 mi<sup>2</sup> (1,096 km<sup>2</sup>).

PERIOD OF RECORD.--January 1920 to current year. Prior to October 1921 monthly discharge only published in WSP 1931.

GAGE.--Water-stage recorder. Datum of gage is 350.38 ft (106.796 m) above mean sea level. Prior to June 9, 1953, nonrecording gage. Prior to Oct. 1, 1925, at site 500 ft (152 m) upstream at datum 49.82 ft (15.185 m) lower, Oct. 1, 1925 to Nov. 12, 1930, at site 500 ft (152 m) upstream at datum 0.18 ft (0.055 m) higher than present gage, Nov. 13, 1930 to June 8, 1953, at present site and datum. Since Dec. 18, 1949, auxiliary nonrecording gage, 6 mi (9.7 km) downstream.

AVERAGE DISCHARGE.--54 years, 508 ft<sup>3</sup>/s (14.4 m<sup>3</sup>/s), 16.32 in/yr (415 mm/yr), 368,300 acre-ft/yr (454 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 21,300 ft<sup>3</sup>/s (603 m<sup>3</sup>/s) Nov. 25 (gage height, 25.42 ft or 7.748 m); minimum, 59 ft<sup>3</sup>/s (1.67 m<sup>3</sup>/s) Aug. 8, 9 (gage height, 1.21 ft or 0.369 m).  
Period of record: Maximum discharge, 40,400 ft<sup>3</sup>/s (1,144 m<sup>3</sup>/s) Jan. 14, 1937 (gage height, 27.67 ft or 8.434 m), from rating curve extended above 25,000 ft<sup>3</sup>/s (708 m<sup>3</sup>/s); maximum gage height, 28.20 ft (8.595 m) Mar. 11, 1935; minimum discharge, 16 ft<sup>3</sup>/s (0.453 m<sup>3</sup>/s) Aug. 31, 1936 (gage height, 0.81 ft or 0.247 m).  
Flood of August 1915 reached a stage of 28.0 ft (8.53 m), present datum, from floodmark by local residents.

REMARKS.--Records fair.

REVISIONS (WATER YEARS).--WSP 1147: 1922-23(M). WSP 1281: Drainage area.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT   | NOV     | DEC    | JAN    | FEB    | MAR    | APR    | MAY    | JUN    | JUL   | AUG    | SEP    |
|-------|-------|---------|--------|--------|--------|--------|--------|--------|--------|-------|--------|--------|
| 1     | 102   | 322     | 794    | 929    | 934    | 589    | 628    | 968    | 543    | 164   | 65     | 618    |
| 2     | 98    | 459     | 667    | 700    | 803    | 534    | 590    | 1,030  | 491    | 155   | 63     | 478    |
| 3     | 93    | 412     | 660    | 600    | 696    | 494    | 607    | 1,430  | 434    | 145   | 64     | 416    |
| 4     | 92    | 351     | 1,980  | 565    | 608    | 459    | 808    | 1,030  | 392    | 139   | 62     | 363    |
| 5     | 97    | 312     | 3,770  | 513    | 598    | 445    | 716    | 819    | 362    | 130   | 61     | 314    |
| 6     | 96    | 285     | 2,190  | 450    | 582    | 488    | 642    | 709    | 348    | 122   | 60     | 278    |
| 7     | 94    | 258     | 1,300  | 432    | 563    | 677    | 598    | 628    | 450    | 119   | 60     | 254    |
| 8     | 92    | 238     | 958    | 417    | 540    | 739    | 833    | 583    | 695    | 114   | 60     | 234    |
| 9     | 94    | 222     | 765    | 410    | 517    | 653    | 954    | 567    | 999    | 108   | 60     | 214    |
| 10    | 104   | 207     | 670    | 400    | 491    | 1,730  | 870    | 537    | 2,820  | 107   | 65     | 212    |
| 11    | 104   | 196     | 591    | 400    | 465    | 4,240  | 760    | 496    | 1,640  | 105   | 72     | 201    |
| 12    | 105   | 186     | 530    | 399    | 442    | 4,430  | 1,450  | 480    | 991    | 103   | 177    | 188    |
| 13    | 170   | 176     | 485    | 380    | 418    | 2,780  | 1,720  | 445    | 713    | 121   | 158    | 191    |
| 14    | 467   | 169     | 439    | 372    | 394    | 1,640  | 1,380  | 411    | 576    | 126   | 127    | 270    |
| 15    | 396   | 162     | 406    | 372    | 371    | 1,300  | 1,090  | 1,190  | 1,540  | 114   | 124    | 277    |
| 16    | 285   | 157     | 376    | 390    | 351    | 1,240  | 908    | 3,000  | 3,440  | 104   | 127    | 254    |
| 17    | 230   | 152     | 344    | 380    | 333    | 1,080  | 805    | 1,510  | 1,530  | 96    | 146    | 218    |
| 18    | 204   | 148     | 320    | 383    | 316    | 913    | 710    | 1,090  | 899    | 92    | 178    | 216    |
| 19    | 186   | 143     | 318    | 401    | 305    | 837    | 636    | 893    | 640    | 88    | 241    | 200    |
| 20    | 174   | 140     | 434    | 926    | 299    | 986    | 575    | 708    | 520    | 86    | 192    | 186    |
| 21    | 160   | 148     | 513    | 2,440  | 461    | 1,320  | 919    | 602    | 437    | 86    | 162    | 175    |
| 22    | 150   | 168     | 514    | 2,260  | 3,760  | 1,490  | 3,640  | 630    | 377    | 87    | 143    | 166    |
| 23    | 140   | 643     | 508    | 1,600  | 4,080  | 1,330  | 3,280  | 866    | 329    | 84    | 133    | 158    |
| 24    | 133   | 5,050   | 1,290  | 1,420  | 2,000  | 1,120  | 1,730  | 683    | 291    | 82    | 126    | 150    |
| 25    | 126   | 16,100  | 4,670  | 1,110  | 1,150  | 970    | 1,220  | 567    | 262    | 80    | 123    | 144    |
| 26    | 120   | 11,800  | 4,600  | 944    | 1,030  | 870    | 956    | 525    | 236    | 78    | 127    | 140    |
| 27    | 117   | 8,190   | 2,860  | 1,140  | 805    | 803    | 763    | 491    | 216    | 76    | 120    | 137    |
| 28    | 144   | 3,870   | 1,940  | 1,450  | 671    | 748    | 659    | 441    | 203    | 74    | 118    | 170    |
| 29    | 170   | 1,560   | 1,690  | 1,930  | -----  | 704    | 590    | 401    | 185    | 71    | 668    | 292    |
| 30    | 168   | 1,020   | 1,530  | 1,480  | -----  | 756    | 612    | 387    | 172    | 68    | 4,070  | 333    |
| 31    | 178   | -----   | 1,240  | 1,160  | -----  | 700    | -----  | 541    | -----  | 67    | 1,280  | -----  |
| TOTAL | 4,889 | 53,244  | 39,352 | 26,753 | 23,983 | 37,065 | 31,649 | 24,658 | 22,731 | 3,191 | 9,232  | 7,447  |
| MEAN  | 158   | 1,775   | 1,269  | 863    | 857    | 1,196  | 1,055  | 795    | 758    | 103   | 298    | 248    |
| MAX   | 467   | 16,100  | 4,670  | 2,440  | 4,080  | 4,430  | 3,640  | 3,000  | 3,440  | 164   | 4,070  | 618    |
| MIN   | 92    | 140     | 318    | 372    | 299    | 445    | 575    | 387    | 172    | 67    | 60     | 137    |
| CFSM  | .37   | 4.20    | 3.00   | 2.04   | 2.03   | 2.83   | 2.49   | 1.88   | 1.79   | .24   | .70    | .59    |
| IN.   | .43   | 4.68    | 3.46   | 2.35   | 2.11   | 3.26   | 2.78   | 2.17   | 2.00   | .28   | .81    | .65    |
| AC-FT | 9,700 | 105,600 | 78,050 | 53,060 | 47,570 | 73,520 | 62,780 | 48,910 | 45,090 | 6,330 | 18,310 | 14,770 |

CAL YR 1973 TOTAL 405,700 MEAN 1,112 MAX 20,300 MIN 64 CFSM 2.63 IN 35.68 AC-FT 804,700  
WTR YR 1974 TOTAL 284,194 MEAN 779 MAX 16,100 MIN 60 CFSM 1.84 IN 24.99 AC-FT 563,700

PEAK DISCHARGE (BASE, 8,000 FT<sup>3</sup>/S).--Nov. 25 (1500) 21,300 ft<sup>3</sup>/s (25.42 ft).

07022000 Mississippi River at Thebes, Ill.

LOCATION.--Lat 37°13'00", long 89°27'50", in NW¼ sec.17, T.15 S., R.3 W., Alexander County, near center span on downstream side of railroad bridge at Thebes, 5.0 mi (8.0 km) downstream from Headwater Diversion Channel, and at mile 43.7 (70.3 km) above Ohio River.

DRAINAGE AREA.--717,200 mi<sup>2</sup> (1,858,000 km<sup>2</sup>), approximately.

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 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.

GAGE.--Water-stage recorder. Datum of gage is at mean sea level. Mar. 17, 1933, to Dec. 21, 1934, nonrecording gage and Dec. 22, 1934, to Apr. 4, 1941, waterstage recorder, at site 8.2 mi (13.2 km) upstream at datum 4.65 ft (1.417 m) higher. Apr. 5, 1941, to Sept. 30, 1941, nonrecording gage at present site and datum and Oct. 1, 1941, to Oct. 11, 1943, at datum 0.07 ft (0.021 m) higher. Prior to Apr. 5, 1941, various auxiliary gages used. Since Oct. 1, 1943, former gage at Cape Girardeau used as auxiliary gage.

AVERAGE DISCHARGE.--42 years, 187,900 ft<sup>3</sup>/s (5,321 m<sup>3</sup>/s), 136,100,000 acre-ft/yr (168 km<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 573,000 ft<sup>3</sup>/s (16,200 m<sup>3</sup>/s) May 26 (elevation, 336.36 ft or 102.523 m); minimum discharge, 89,200 ft<sup>3</sup>/s (2,530 m<sup>3</sup>/s) Sept. 28 (elevation, 307.95 ft or 93.863 m).  
Period of record: Maximum discharge, 893,000 ft<sup>3</sup>/s (25,300 m<sup>3</sup>/s) May 27, 1943 (elevation, 340.33 ft or 103.733 m, present datum); maximum elevation, 343.43 ft (104.678 m) Apr. 30, 1973; minimum discharge, 23,400 ft<sup>3</sup>/s (663 m<sup>3</sup>/s) Dec. 13, 1937, at site then in use; minimum elevation, 301.67 ft (91.949 m) Jan. 2, 1964.  
Flood of July 4, 1844, reached an elevation of 345.14 ft (105.199 m), present datum, at Grays Point, from floodmarks (discharge, 1,375,000 ft<sup>3</sup>/s or 38,900 m<sup>3</sup>/s, computed by Corps of Engineers).

REMARKS.--Records good. 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.

REVISIONS (WATER YEARS).--WSP 1341: 1844(M).

#### GAGE HEIGHT, IN FEET, AT 0800, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY | OCT   | NOV   | DEC   | JAN   | FEB   | MAR   | APR   | MAY   | JUN   | JUL   | AUG   | SEP   |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1   | 25.64 | 21.68 | 28.67 | 26.08 | 35.20 | 26.68 | 24.41 | 25.71 | 33.10 | 30.17 | 14.23 | 14.81 |
| 2   | 27.05 | 21.70 | 27.89 | 24.43 | 34.98 | 25.82 | 24.35 | 25.25 | 33.44 | 30.49 | 13.63 | 14.28 |
| 3   | 28.15 | 21.70 | 26.75 | 23.16 | 34.55 | 24.94 | 24.52 | 25.50 | 34.45 | 30.57 | 13.15 | 14.25 |
| 4   | 28.89 | 21.51 | 25.89 | 22.45 | 33.99 | 24.32 | 24.46 | 26.00 | 35.35 | 30.39 | 12.86 | 14.54 |
| 5   | 29.42 | 21.29 | 26.24 | 21.76 | 33.26 | 24.03 | 24.54 | 26.80 | 35.65 | 30.13 | 12.37 | 14.96 |
| 6   | 30.05 | 20.73 | 27.18 |       | 32.63 | 23.74 | 24.44 | 26.84 | 35.89 | 29.63 | 12.20 | 15.01 |
| 7   | 30.51 | 20.03 | 29.84 | 20.53 | 31.76 | 24.08 | 24.34 | 26.45 | 35.43 | 29.02 | 11.96 | 14.75 |
| 8   | 30.83 | 19.17 | 31.55 | 20.43 | 30.65 | 24.77 | 24.53 | 26.06 | 34.65 | 28.42 | 12.17 | 14.59 |
| 9   | 30.92 | 19.25 | 32.29 | 20.02 | 29.06 | 25.87 | 25.27 | 25.57 | 34.04 | 27.95 | 12.25 | 14.07 |
| 10  | 30.27 | 19.41 | 31.88 | 19.62 | 27.60 | 26.75 | 25.70 | 24.83 | 34.33 | 27.21 | 11.85 | 13.22 |
| 11  | 28.14 | 18.98 | 29.83 | 19.53 | 26.57 | 27.81 | 26.14 | 23.92 | 34.72 | 25.27 | 12.40 | 12.48 |
| 12  | 25.22 | 18.35 | 26.80 | 20.44 | 25.72 | 28.76 | 26.66 | ----- | 35.26 | 23.58 | 13.43 | 12.68 |
| 13  | 23.32 | 17.79 | 24.22 | 22.85 | 24.46 | 30.02 | 27.37 | ----- | 35.59 | 22.42 | 14.66 | 13.35 |
| 14  | 23.30 | 17.40 | 22.38 | 23.62 | 23.35 | 31.56 | 28.02 | ----- | 35.75 | 21.53 | 15.31 | 14.51 |
| 15  | 26.46 | 16.95 | 21.19 | 25.43 | 22.80 | 32.67 | 28.30 | 22.97 | 36.00 | 20.97 | 15.55 | 13.88 |
| 16  | 28.54 | 16.85 | 20.57 | ----- | 22.10 | 33.48 | 28.25 | 24.32 | 35.84 | 19.95 | 14.90 | 13.70 |
| 17  | 28.85 | 16.90 | 19.94 | ----- | 21.46 | 33.70 | 28.22 | 25.57 | 35.20 | 19.61 | 14.86 | 13.21 |
| 18  | 28.80 | 16.56 | 18.91 | ----- | 20.86 | 33.53 | 27.96 | 27.95 | 34.54 | 19.66 | 15.02 | 12.35 |
| 19  | 28.98 | 16.60 | 17.78 | ----- | 20.44 | 33.29 | 27.89 | 28.72 | 33.71 | 19.32 | 14.76 | 11.81 |
| 20  | 29.38 | 16.46 | 17.29 | ----- | 20.78 | 32.90 | 27.57 | 28.96 | 32.79 | 18.40 | 14.40 | 11.39 |
| 21  | 29.53 | 15.90 | 17.10 | ----- | 22.19 | 32.48 | 27.01 | 30.35 | 31.77 | 17.43 | 13.27 | 10.84 |
| 22  | 29.38 | 16.07 | 15.11 | ----- | 26.53 | 31.82 | 27.37 | 32.00 | 30.92 | 16.65 | 12.69 | 11.03 |
| 23  | 29.15 | 17.17 | 14.07 | ----- | 28.31 | 30.85 | 27.13 | 33.89 | 30.38 | 15.82 | 12.81 | 11.03 |
| 24  | 28.58 | 19.05 | 14.68 | ----- | 28.53 | 29.61 | 26.83 | 34.94 | 30.03 | 16.07 | 12.77 | 10.67 |
| 25  | 27.46 | 24.25 | 18.22 | ----- | 29.00 | 28.53 | 26.59 | 35.86 | 29.79 | 15.48 | 13.16 | 10.11 |
| 26  | 25.69 | 26.59 | 20.10 | 33.54 | 29.33 | 27.81 | 27.02 | 36.30 | 29.59 | 14.30 | 13.51 | 9.42  |
| 27  | 24.24 | 27.19 | 23.22 | 33.11 | 28.75 | 27.14 | 27.58 | 36.34 | 29.50 | 14.05 | 13.50 | 8.69  |
| 28  | 23.16 | 27.56 | 25.59 | 33.05 | 27.67 | 26.31 | 27.02 | 35.74 | 29.62 | 13.99 | 13.31 | 7.99  |
| 29  | 22.48 | 28.02 | 26.13 | 33.90 | ----- | 25.86 | 26.43 | 35.10 | 29.94 | 14.16 | 14.56 | 9.11  |
| 30  | 22.30 | 28.62 | 27.09 | 34.73 | ----- | 25.68 | 26.03 | 34.27 | 30.38 | 14.26 | 16.78 | 9.86  |
| 31  | 21.70 | ----- | 26.85 | 35.26 | ----- | 25.06 | ----- | 33.46 | ----- | 14.75 | 15.99 | ----- |
| MAX | 30.92 | 28.62 | 32.29 | ----- | 35.20 | 33.70 | 28.30 | ----- | 36.00 | 30.57 | 16.78 | 15.01 |
| MIN | 21.70 | 15.90 | 14.07 | ----- | 20.44 | 23.74 | 24.34 | ----- | 29.50 | 13.99 | 11.85 | 7.99  |

NOTE.--Add 300.00 ft to obtain elevation above mean sea level.

07022000 Mississippi River at Thebes, Ill.--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT     | NOV      | DEC      | JAN      | FEB      | MAR     | APR      | MAY     | JUN     | JUL      | AUG      | SEP      |
|-------|---------|----------|----------|----------|----------|---------|----------|---------|---------|----------|----------|----------|
| 1     | 336,000 | 261,000  | 347,000  | 304,000  | 523,000  | 343,000 | 289,000  | 332,000 | 483,000 | 398,000  | 146,000  | 144,000  |
| 2     | 369,000 | 260,000  | 326,000  | 275,000  | 512,000  | 326,000 | 293,000  | 327,000 | 497,000 | 403,000  | 139,000  | 140,000  |
| 3     | 394,000 | 258,000  | 303,000  | 258,000  | 494,000  | 311,000 | 296,000  | 335,000 | 524,000 | 401,000  | 135,000  | 141,000  |
| 4     | 408,000 | 254,000  | 294,000  | 246,000  | 468,000  | 300,000 | 296,000  | 349,000 | 541,000 | 398,000  | 132,000  | 144,000  |
| 5     | 419,000 | 248,000  | 303,000  | 230,000  | 446,000  | 292,000 | 286,000  | 362,000 | 546,000 | 393,000  | 127,000  | 147,000  |
| 6     | 431,000 | 239,000  | 338,000  | 216,000  | 422,000  | 290,000 | 281,000  | 360,000 | 539,000 | 384,000  | 125,000  | 147,000  |
| 7     | 440,000 | 226,000  | 390,000  | 208,000  | 394,000  | 293,000 | 280,000  | 351,000 | 526,000 | 372,000  | 124,000  | 144,000  |
| 8     | 445,000 | 217,000  | 424,000  | 201,000  | 364,000  | 310,000 | 284,000  | 340,000 | 505,000 | 363,000  | 125,000  | 142,000  |
| 9     | 442,000 | 219,000  | 439,000  | 191,000  | 327,000  | 329,000 | 295,000  | 329,000 | 494,000 | 356,000  | 125,000  | 136,000  |
| 10    | 421,000 | 221,000  | 421,000  | 180,000  | 302,000  | 349,000 | 304,000  | 313,000 | 502,000 | 336,000  | 124,000  | 127,000  |
| 11    | 362,000 | 213,000  | 374,000  | 176,000  | 290,000  | 370,000 | 310,000  | 296,000 | 512,000 | 297,000  | 130,000  | 123,000  |
| 12    | 299,000 | 205,000  | 317,000  | 175,000  | 277,000  | 390,000 | 322,000  | 283,000 | 526,000 | 270,000  | 142,000  | 128,000  |
| 13    | 273,000 | 197,000  | 281,000  | 167,000  | 260,000  | 421,000 | 337,000  | 274,000 | 534,000 | 253,000  | 154,000  | 137,000  |
| 14    | 282,000 | 192,000  | 259,000  | 167,000  | 252,000  | 456,000 | 347,000  | 266,000 | 538,000 | 241,000  | 161,000  | 143,000  |
| 15    | 346,000 | 187,000  | 246,000  | 167,000  | 252,000  | 485,000 | 346,000  | 286,000 | 543,000 | 231,000  | 160,000  | 137,000  |
| 16    | 378,000 | 188,000  | 239,000  | 174,000  | 249,000  | 495,000 | 345,000  | 303,000 | 539,000 | 218,000  | 152,000  | 136,000  |
| 17    | 385,000 | 188,000  | 227,000  | 183,000  | 245,000  | 496,000 | 344,000  | 338,000 | 524,000 | 215,000  | 153,000  | 131,000  |
| 18    | 387,000 | 186,000  | 212,000  | 188,000  | 240,000  | 485,000 | 342,000  | 375,000 | 507,000 | 214,000  | 152,000  | 123,000  |
| 19    | 395,000 | 187,000  | 197,000  | 209,000  | 239,000  | 472,000 | 342,000  | 384,000 | 487,000 | 207,000  | 148,000  | 119,000  |
| 20    | 405,000 | 185,000  | 194,000  | 262,000  | 250,000  | 455,000 | 338,000  | 393,000 | 461,000 | 194,000  | 141,000  | 114,000  |
| 21    | 408,000 | 177,000  | 185,000  | 330,000  | 283,000  | 442,000 | 334,000  | 429,000 | 435,000 | 183,000  | 130,000  | 111,000  |
| 22    | 407,000 | 180,000  | 162,000  | 385,000  | 357,000  | 426,000 | 341,000  | 475,000 | 414,000 | 171,000  | 127,000  | 113,000  |
| 23    | 402,000 | 193,000  | 154,000  | 417,000  | 388,000  | 400,000 | 337,000  | 514,000 | 401,000 | 166,000  | 128,000  | 112,000  |
| 24    | 390,000 | 232,000  | 170,000  | 440,000  | 399,000  | 370,000 | 333,000  | 539,000 | 393,000 | 167,000  | 129,000  | 108,000  |
| 25    | 359,000 | 296,000  | 214,000  | 454,000  | 409,000  | 352,000 | 336,000  | 558,000 | 387,000 | 158,000  | 132,000  | 103,000  |
| 26    | 320,000 | 327,000  | 246,000  | 452,000  | 408,000  | 336,000 | 349,000  | 570,000 | 380,000 | 147,000  | 135,000  | 98,800   |
| 27    | 296,000 | 338,000  | 298,000  | 443,000  | 393,000  | 319,000 | 359,000  | 567,000 | 376,000 | 146,000  | 134,000  | 93,400   |
| 28    | 280,000 | 340,000  | 328,000  | 446,000  | 367,000  | 305,000 | 350,000  | 554,000 | 376,000 | 145,000  | 131,000  | 90,700   |
| 29    | 272,000 | 340,000  | 341,000  | 480,000  | -----    | 300,000 | 341,000  | 534,000 | 381,000 | 146,000  | 150,000  | 97,600   |
| 30    | 268,000 | 351,000  | 341,000  | 516,000  | -----    | 299,000 | 337,000  | 510,000 | 389,000 | 149,000  | 163,000  | 102,000  |
| 31    | 261,000 | -----    | 326,000  | 525,000  | -----    | 291,000 | -----    | 488,000 | -----   | 152,000  | 154,000  | -----    |
| TOTAL | 11,280M | 7,105.0M | 8,896.0M | 9,065.0M | 9,810.0M | 11,508M | 9,694.0M | 12,334M | 14,260M | 7,874.0M | 4,308.0M | 3,732.5M |
| MEAN  | 363,900 | 236,800  | 287,000  | 292,400  | 350,400  | 371,200 | 323,100  | 397,900 | 475,300 | 254,000  | 139,000  | 124,400  |
| MAX   | 445,000 | 351,000  | 439,000  | 525,000  | 523,000  | 496,000 | 359,000  | 570,000 | 546,000 | 403,000  | 163,000  | 147,000  |
| MIN   | 261,000 | 177,000  | 154,000  | 167,000  | 239,000  | 290,000 | 280,000  | 266,000 | 376,000 | 145,000  | 124,000  | 90,700   |
| AC-FT | 22,370M | 14,090M  | 17,650M  | 17,980M  | 19,460M  | 22,830M | 19,230M  | 24,460M | 28,280M | 15,620M  | 8,545M   | 7,403M   |

CAL YR 1973 TOTAL 136,250,000 MEAN 373,300 MAX 878,000 MIN 122,000 AC-FT 270,300,000  
WTR YR 1974 TOTAL 109,866,500 MEAN 301,000 MAX 570,000 MIN 90,700 AC-FT 217,900,000

NOTE.--Daily discharge computed from daily mean gage heights.  
M Figure expressed in thousands.



07035500 Barnes Creek near Fredericktown, Mo.

LOCATION.--Lat 37°34'20", long 90°23'00", in SW¼SE¼ sec.4, T.33 N., R.6 E., Madison County, on right downstream side of bridge on State Highway 72, 1.1 mi (1.8 km) upstream from mouth, and 5.3 mi (8.5 km) west of Fredericktown.

DRAINAGE AREA.--4.03 mi<sup>2</sup> (10.4 km<sup>2</sup>).

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

GAGE.--Water-stage recorder. Altitude of gage 660 ft (201.2 m) from topographic map.

AVERAGE DISCHARGE.--19 years, 4.76 ft<sup>3</sup>/s (0.135 m<sup>3</sup>/s), 16.04 in/yr (407 mm/yr), 3,450 acre-ft/yr (4.25 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 1,260 ft<sup>3</sup>/s (35.7 m<sup>3</sup>/s) Nov. 24 (gage height, 6.47 ft or 1.972 m); minimum daily, 0.01 ft<sup>3</sup>/s (0.0002 m<sup>3</sup>/s) for many days.

Period of record: Maximum discharge, 5,550 ft<sup>3</sup>/s (157 m<sup>3</sup>/s) May 21, 1957 (gage height, 9.62 ft or 2.932 m), from rating curve extended above 800 ft<sup>3</sup>/s (22.7 m<sup>3</sup>/s) on basis of contracted opening measurement of peak flow; no flow for many days each year.

REMARKS.--Records poor.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT    | NOV    | DEC   | JAN   | FEB   | MAR   | APR   | MAY     | JUN    | JUL  | AUG    | SEP   |
|-------|--------|--------|-------|-------|-------|-------|-------|---------|--------|------|--------|-------|
| 1     | 2.0    | 17     | 6.3   | 4.7   | 4.7   | 1.8   | 5.0   | 20      | 30     | .05  | .01    | 3.6   |
| 2     | 1.2    | 8.6    | 6.3   | 4.0   | 4.2   | 1.6   | 10    | 10      | 20     | .02  | .01    | 1.7   |
| 3     | .53    | 5.4    | 5.9   | 3.5   | 3.7   | 1.5   | 20    | 6.0     | 15     | .01  | .01    | 1.2   |
| 4     | 12     | 4.2    | 122   | 2.8   | 3.2   | 1.8   | 9.0   | 4.0     | 10     | .41  | .01    | 1.1   |
| 5     | 12     | 3.5    | 6.0   | 2.6   | 3.0   | 3.0   | 5.0   | 2.5     | 9.0    | .33  | .01    | 1.1   |
| 6     | 3.7    | 2.8    | 5.0   | 2.4   | 2.5   | 10    | 3.0   | 1.4     | 7.0    | .30  | .02    | 1.1   |
| 7     | 3.2    | 2.8    | 4.5   | 2.1   | 2.5   | 5.9   | 10    | 1.3     | 6.0    | .08  | .03    | 1.0   |
| 8     | 3.2    | 2.4    | 4.0   | 2.1   | 2.5   | 3.7   | 40    | 1.7     | 5.0    | .03  | .03    | 1.0   |
| 9     | 2.6    | 1.6    | 3.5   | 2.2   | 2.5   | 3.5   | 8.0   | 1.5     | 4.0    | .01  | .08    | 1.0   |
| 10    | 2.4    | 1.2    | 3.0   | 2.2   | 2.0   | 57    | 2.0   | 1.4     | 3.5    | .02  | .16    | 1.2   |
| 11    | 1.6    | 1.0    | 2.5   | 2.0   | 2.0   | 47    | 2.5   | 1.6     | 3.0    | .01  | .11    | 6.7   |
| 12    | 79     | .82    | 2.0   | 1.5   | 2.0   | 18    | 3.0   | 1.5     | 2.5    | 4.0  | .09    | 5.9   |
| 13    | 65     | .61    | 1.6   | 1.4   | 2.0   | 6.8   | 2.5   | 1.4     | 2.0    | .05  | .08    | 2.3   |
| 14    | 2.1    | .49    | 1.6   | 1.5   | 2.0   | 4.2   | 2.2   | 218     | 1.8    | .03  | .16    | 1.5   |
| 15    | 1.4    | .45    | 1.6   | 2.0   | 1.5   | 7.7   | 2.6   | 48      | 1.6    | .01  | 7.2    | 1.1   |
| 16    | 1.2    | .29    | 1.5   | 4.0   | 1.5   | 8.6   | 2.4   | 8.5     | 1.5    | .01  | 12     | 1.1   |
| 17    | .90    | .25    | 1.3   | 6.0   | 1.5   | 4.7   | 2.0   | 3.5     | 1.4    | .01  | 72     | 1.0   |
| 18    | .85    | .23    | 1.2   | 25    | 1.5   | 3.7   | 1.6   | 2.4     | 1.3    | .01  | 66     | 1.0   |
| 19    | .80    | .22    | 6.8   | 30    | 5.0   | 38    | 1.5   | 1.7     | 1.2    | .01  | 45     | .98   |
| 20    | .70    | 25     | 9.1   | 50    | 10    | 24    | 40    | 1.3     | .65    | .01  | 43     | .94   |
| 21    | .60    | 14     | 5.4   | 20    | 44    | 31    | 30    | 82      | .65    | .01  | 48     | .87   |
| 22    | .50    | 8.2    | 4.4   | 10    | 41    | 17    | 10    | 201     | .41    | .01  | 142    | .87   |
| 23    | .40    | 7.7    | 13    | 6.0   | 12    | 8.6   | 7.0   | 82      | .23    | .01  | 157    | 6.5   |
| 24    | .40    | 212    | 104   | 4.0   | 5.9   | 15    | 5.0   | 71      | .22    | .01  | 36     | 6.3   |
| 25    | .29    | 136    | 31    | 3.0   | 3.7   | 7.0   | 4.0   | 64      | .19    | .01  | .65    | 2.0   |
| 26    | .25    | 86     | 18    | 4.0   | 2.8   | 5.0   | 2.5   | 57      | .14    | .01  | .62    | 1.5   |
| 27    | 144    | 21     | 20    | 5.0   | 2.6   | 4.0   | 1.5   | 54      | .11    | .01  | 118    | 1.1   |
| 28    | 37     | 15     | 18    | 20    | 2.1   | 15    | 1.0   | 52      | .10    | .01  | 12     | .87   |
| 29    | 27     | 8.2    | 16    | 10    | ----- | 5.0   | 1.0   | 62      | .09    | .01  | 4.1    | .79   |
| 30    | 20     | 6.8    | 10    | 6.3   | ----- | 3.0   | 2.0   | 28      | .05    | .01  | 9.9    | .73   |
| 31    | 94     | -----  | 6.8   | 5.9   | ----- | 3.0   | ----- | 44      | -----  | .01  | 8.7    | ----- |
| TOTAL | 520.82 | 593.76 | 442.3 | 246.2 | 173.9 | 366.1 | 236.3 | 1,134.7 | 128.64 | 5.52 | 782.98 | 58.05 |
| MEAN  | 16.8   | 19.8   | 14.3  | 7.94  | 6.21  | 11.8  | 7.88  | 36.6    | 4.29   | .18  | 25.3   | 1.94  |
| MAX   | 144    | 212    | 122   | 50    | 44    | 57    | 40    | 218     | 30     | 4.0  | 157    | 6.7   |
| MIN   | .25    | .22    | 1.2   | 1.4   | 1.5   | 1.5   | 1.0   | 1.3     | .05    | .01  | .01    | .73   |
| CFSM  | 4.17   | 4.91   | 3.55  | 1.97  | 1.54  | 2.93  | 1.96  | 9.08    | 1.06   | .04  | 6.28   | .48   |
| IN.   | 4.81   | 5.48   | 4.08  | 2.27  | 1.61  | 3.38  | 2.18  | 10.47   | 1.19   | .05  | 7.23   | .54   |
| AC-FT | 1,030  | 1,180  | 877   | 488   | 345   | 726   | 469   | 2,250   | 255    | 11   | 1,550  | 115   |

CAL YR 1973 TOTAL 4,616.83 MEAN 12.6 MAX 514 MIN 0 CFSM 3.13 IN 42.62 AC-FT 9,160  
WTR YR 1974 TOTAL 4,689.27 MEAN 12.8 MAX 218 MIN .01 CFSM 3.18 IN 43.29 AC-FT 9,300

PEAK DISCHARGE (BASE, 300 FT<sup>3</sup>/S)

| DATE  | TIME | G. H. | DISCHARGE | DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|-------|------|-------|-----------|------|------|-------|-----------|
| 10-13 | 0545 | 6.28  | 512       | 12-4  | 0430 | 4.13  | 379       | 5-22 | 0915 | 4.34  | 456       |
| 10-27 | 0845 | 5.40  | 400       | 12-24 | 0215 | 3.99  | 337       | 5-29 | 1945 | 4.30  | 440       |
| 10-31 | 0645 | 5.55  | 580       | 2-21  | 1500 | 4.30  | 440       | 8-22 | 1100 | 4.34  | 408       |
| 11-24 | 0815 | 6.47  | 1,260     | 5-14  | 2130 | 4.78  | 632       | 8-27 | 1130 | 4.76  | 636       |

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, near left bank on downstream side of pier of bridge on State Highway 34, 1 mi (1.6 km) upstream from Clark Creek, and 3 mi (4.8 km) east of Patterson.

DRAINAGE AREA.--956 mi<sup>2</sup> (2,476 km<sup>2</sup>).

PERIOD OF RECORD.--October 1920 to current year. Prior to June 1921, monthly discharge only, published in WSP 1311.

GAGE.--Water-stage recorder. Datum of gage is 370.45 ft (112.913 m) above mean sea level. Prior to Oct. 1, 1938, nonrecording gage at site 50 ft (15 m) upstream at datum 2.00 ft (0.610 m) higher. Oct. 1, 1938 to Apr. 12, 1939, nonrecording gage and Apr. 13, 1939 to Sept. 5, 1956, water-stage recorder at site 50 ft (15 m) upstream at present datum. Sept. 6, 1956 to Sept. 26, 1958, nonrecording gage at present site and datum.

AVERAGE DISCHARGE.--54 years, 1,099 ft<sup>3</sup>/s (31.12 m<sup>3</sup>/s), 15.62 in/yr (397 mm/yr), 796,200 acre-ft/yr (982 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 42,200 ft<sup>3</sup>/s (1,290 m<sup>3</sup>/s) Nov. 25 (gage height, 24.17 ft or 7.367 m); minimum, 39 ft<sup>3</sup>/s (1.10 m<sup>3</sup>/s) Aug. 8, 9 (gage height, 2.79 ft or 0.850 m).

Period of record: Maximum discharge, 79,200 ft<sup>3</sup>/s (2,240 m<sup>3</sup>/s) Mar. 11, 1935 (gage height, 30.70 ft or 9.357 m), from rating curve extended above 55,000 ft<sup>3</sup>/s (1,560 m<sup>3</sup>/s); maximum gage height, 31.0 ft or 9.949 m Apr. 14, 1945 (backwater from Wappapello Dam); minimum discharge, 8 ft<sup>3</sup>/s (0.23 m<sup>3</sup>/s) Aug. 28 to Sept. 1, 1936; minimum gage height, 1.32 ft (0.402 m) Aug. 16, 1941.

Maximum stage known, 33.8 ft or 10.302 m (present datum) in August 1915, from floodmarks (discharge, 100,000 ft<sup>3</sup>/s or 2,830 m<sup>3</sup>/s, from rating curve extended above 55,000 ft<sup>3</sup>/s or 1,560 m<sup>3</sup>/s).

REMARKS.--Records poor.

REVISIONS (WATER YEARS).--WSP 732: 1922-23.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT    | NOV     | DEC     | JAN     | FEB     | MAR     | APR     | MAY     | JUN    | JUL   | AUG    | SEP    |
|-------|--------|---------|---------|---------|---------|---------|---------|---------|--------|-------|--------|--------|
| 1     | 125    | 4,510   | 1,790   | 2,040   | 1,800   | 1,290   | 1,240   | 1,190   | 2,590  | 192   | 49     | 1,140  |
| 2     | 115    | 3,130   | 1,490   | 1,700   | 1,540   | 1,060   | 1,130   | 1,400   | 2,010  | 178   | 48     | 1,040  |
| 3     | 107    | 1,740   | 1,320   | 1,400   | 1,300   | 890     | 1,110   | 1,380   | 1,290  | 165   | 48     | 1,090  |
| 4     | 153    | 1,160   | 5,160   | 1,200   | 1,150   | 770     | 1,310   | 1,580   | 980    | 155   | 46     | 960    |
| 5     | 213    | 880     | 11,600  | 1,060   | 1,030   | 750     | 1,340   | 1,290   | 782    | 149   | 44     | 762    |
| 6     | 222    | 718     | 4,400   | 970     | 950     | 1,140   | 1,140   | 1,100   | 698    | 136   | 42     | 621    |
| 7     | 220    | 579     | 3,280   | 870     | 865     | 2,630   | 1,000   | 935     | 1,120  | 131   | 41     | 515    |
| 8     | 201    | 520     | 2,720   | 810     | 800     | 2,070   | 1,100   | 860     | 2,530  | 131   | 40     | 426    |
| 9     | 155    | 458     | 2,210   | 782     | 700     | 1,600   | 1,720   | 840     | 4,260  | 124   | 40     | 370    |
| 10    | 132    | 400     | 1,700   | 890     | 660     | 5,030   | 1,430   | 785     | 7,000  | 113   | 49     | 332    |
| 11    | 115    | 355     | 1,220   | 940     | 621     | 14,500  | 1,220   | 718     | 3,080  | 107   | 55     | 300    |
| 12    | 149    | 319     | 880     | 830     | 568     | 12,100  | 1,380   | 774     | 1,980  | 101   | 72     | 287    |
| 13    | 636    | 290     | 679     | 742     | 546     | 4,200   | 3,040   | 758     | 1,480  | 96    | 71     | 295    |
| 14    | 4,600  | 259     | 557     | 663     | 516     | 2,590   | 2,930   | 840     | 1,220  | 94    | 98     | 498    |
| 15    | 2,250  | 246     | 520     | 656     | 455     | 2,490   | 2,290   | 6,160   | 1,450  | 96    | 67     | 1,240  |
| 16    | 1,220  | 228     | 483     | 774     | 419     | 3,730   | 1,810   | 11,100  | 1,700  | 104   | 58     | 766    |
| 17    | 774    | 213     | 448     | 1,140   | 394     | 2,590   | 1,480   | 5,300   | 1,190  | 94    | 76     | 587    |
| 18    | 583    | 201     | 416     | 2,150   | 442     | 2,140   | 1,290   | 2,300   | 845    | 85    | 132    | 483    |
| 19    | 469    | 203     | 483     | 2,810   | 505     | 2,260   | 1,150   | 1,800   | 683    | 80    | 132    | 407    |
| 20    | 426    | 228     | 1,800   | 5,620   | 1,590   | 3,310   | 1,020   | 1,300   | 579    | 73    | 205    | 350    |
| 21    | 334    | 345     | 2,400   | 13,500  | 17,000  | 3,810   | 2,740   | 1,100   | 498    | 71    | 222    | 316    |
| 22    | 295    | 483     | 2,080   | 5,890   | 16,000  | 3,400   | 11,600  | 1,300   | 445    | 71    | 171    | 277    |
| 23    | 259    | 722     | 1,910   | 3,430   | 7,000   | 2,870   | 9,480   | 3,000   | 391    | 73    | 182    | 251    |
| 24    | 228    | 10,700  | 6,140   | 2,650   | 3,900   | 2,600   | 3,600   | 2,300   | 342    | 71    | 145    | 228    |
| 25    | 205    | 39,300  | 20,000  | 2,150   | 2,750   | 2,330   | 2,450   | 1,800   | 293    | 67    | 131    | 207    |
| 26    | 201    | 21,200  | 7,900   | 1,870   | 2,170   | 2,230   | 1,920   | 1,500   | 269    | 64    | 124    | 192    |
| 27    | 295    | 11,600  | 4,350   | 1,940   | 1,800   | 2,450   | 1,550   | 1,200   | 251    | 62    | 127    | 182    |
| 28    | 373    | 4,600   | 3,720   | 2,600   | 1,510   | 2,080   | 1,290   | 900     | 235    | 61    | 151    | 226    |
| 29    | 379    | 3,040   | 3,360   | 2,970   | -----   | 1,830   | 1,170   | 700     | 218    | 58    | 8,300  | 422    |
| 30    | 367    | 2,230   | 3,080   | 2,660   | -----   | 1,730   | 1,140   | 970     | 203    | 55    | 6,000  | 675    |
| 31    | 626    | -----   | 2,530   | 2,170   | -----   | 1,500   | -----   | 2,210   | -----  | 53    | 1,930  | -----  |
| TOTAL | 16,427 | 110,857 | 100,626 | 69,877  | 68,981  | 93,970  | 67,070  | 59,390  | 40,612 | 3,110 | 18,896 | 15,445 |
| MEAN  | 530    | 3,695   | 3,246   | 2,254   | 2,464   | 3,031   | 2,236   | 1,916   | 1,354  | 100   | 610    | 515    |
| MAX   | 4,600  | 39,300  | 20,000  | 13,500  | 17,000  | 14,500  | 11,600  | 11,100  | 7,000  | 192   | 8,300  | 1,240  |
| MIN   | 107    | 201     | 416     | 656     | 394     | 750     | 1,000   | 700     | 203    | 53    | 40     | 182    |
| CFSM  | .55    | 3.87    | 3.40    | 2.36    | 2.58    | 3.17    | 2.34    | 2.00    | 1.42   | .10   | .64    | .54    |
| IN.   | .64    | 4.31    | 3.92    | 2.72    | 2.68    | 3.66    | 2.61    | 2.31    | 1.58   | .12   | .74    | .60    |
| AC-FT | 32,580 | 219,900 | 199,600 | 138,600 | 136,800 | 186,400 | 133,000 | 117,800 | 80,550 | 6,170 | 37,480 | 30,640 |

CAL YR 1973 TOTAL 699,602 MEAN 1,917 MAX 39,300 MIN 44 CFSM 2.01 IN 27.22 AC-FT 1,388,000  
WTR YR 1974 TOTAL 665,261 MEAN 1,823 MAX 39,300 MIN 40 CFSM 1.91 IN 25.89 AC-FT 1,320,000

PEAK DISCHARGE (BASE, 21,000 FT<sup>3</sup>/S)

| DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|------|------|-------|-----------|
| 11-25 | 0900 | 24.17 | 42,200    | 2-22 | 1600 | 19.40 | 22,800    |
| 12-25 | 0800 | 19.24 | 22,200    |      |      |       |           |

07037700 Clark Creek near Piedmont, Mo.

LOCATION.--Lat 37°11'09", long 90°37'47", in SE¼NE¼ sec.17, T.29 N., R.4 E., Wayne County, at downstream right abutment of bridge on State Highway 34, and 3.5 mi (5.6 km) northeast of Piedmont.

DRAINAGE AREA.--4.39 mi<sup>2</sup> (11.37 km<sup>2</sup>).

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

GAGE.--Water-stage recorder. Altitude of gage is 530 ft (161.5 m) from topographic map.

AVERAGE DISCHARGE.--18 years, 4.26 ft<sup>3</sup>/s (0.121 m<sup>3</sup>/s), 13.17 in/yr (335 mm/yr), 3,086 acre-ft/yr (3.81 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 936 ft<sup>3</sup>/s (26.5 m<sup>3</sup>/s) Nov. 24 (gage height, 5.31 ft or 1.618 m); minimum daily discharge, 0.5 ft<sup>3</sup>/s (0.014 m<sup>3</sup>/s) Oct. 3.

Period of record: Maximum discharge, 1,400 ft<sup>3</sup>/s (39.6 m<sup>3</sup>/s) May 22, 1957 (gage height, 6.10 ft or 1.859 m) from rating curve extended above 360 ft<sup>3</sup>/s (10.2 m<sup>3</sup>/s) on basis of slope-area measurements at gage heights 5.45 ft (1.661 m) and 6.25 ft (1.905 m); maximum gage height, 6.25 ft (1.905 m) Sept. 22, 1965; minimum, 0.2 ft<sup>3</sup>/s (0.006 m<sup>3</sup>/s) Feb. 21, 1958 and Jan. 29, 30, 1963.

REMARKS.--Records fair.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT   | NOV   | DEC   | JAN   | FEB   | MAR   | APR   | MAY   | JUN    | JUL   | AUG   | SEP   |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|-------|-------|-------|
| 1     | .60   | 5.0   | 7.0   | 3.8   | 3.6   | 3.8   | 3.1   | 5.4   | 3.1    | .80   | .70   | 1.6   |
| 2     | .60   | 3.6   | 6.6   | 3.4   | 3.4   | 3.8   | 3.1   | 7.4   | 2.6    | .80   | .80   | 1.7   |
| 3     | .50   | 3.1   | 9.9   | 2.8   | 3.1   | 3.8   | 3.6   | 5.8   | 2.4    | .80   | .70   | 1.6   |
| 4     | .60   | 2.6   | 107   | 2.8   | 2.6   | 3.8   | 2.8   | 4.6   | 2.1    | .80   | .70   | 1.4   |
| 5     | .60   | 2.4   | 19    | 2.6   | 2.6   | 3.8   | 2.6   | 4.4   | 2.4    | .80   | .70   | 1.4   |
| 6     | .60   | 2.1   | 9.3   | 2.6   | 2.4   | 7.3   | 2.4   | 3.8   | 2.6    | .80   | .70   | 1.3   |
| 7     | .60   | 2.0   | 6.6   | 2.6   | 2.1   | 5.0   | 2.6   | 3.6   | 23     | .70   | .70   | 1.3   |
| 8     | .60   | 2.0   | 5.8   | 2.8   | 2.1   | 4.6   | 2.6   | 3.4   | 5.4    | .70   | .70   | 1.3   |
| 9     | .60   | 1.8   | 5.0   | 3.1   | 2.0   | 4.4   | 2.4   | 9.1   | 51     | .80   | .90   | 1.3   |
| 10    | .60   | 1.7   | 4.4   | 3.4   | 1.8   | 66    | 2.1   | 6.6   | 9.3    | .80   | 1.1   | 1.3   |
| 11    | .60   | 1.7   | 4.4   | 2.8   | 1.7   | 83    | 3.4   | 7.0   | 4.6    | .80   | .80   | 1.4   |
| 12    | 1.7   | 1.7   | 4.1   | 2.6   | 1.7   | 22    | 4.6   | 9.3   | 3.4    | .80   | .80   | 1.3   |
| 13    | 10    | 1.7   | 4.1   | 2.6   | 1.6   | 8.6   | 3.6   | 6.2   | 2.6    | .80   | .80   | 3.4   |
| 14    | 1.7   | 1.7   | 4.0   | 2.4   | 1.4   | 6.2   | 4.1   | 49    | 2.1    | .80   | .80   | 1.8   |
| 15    | 1.6   | 1.7   | 4.0   | 2.8   | 1.4   | 8.3   | 2.8   | 75    | 4.0    | .80   | .80   | 1.7   |
| 16    | 1.4   | 1.7   | 3.6   | 2.8   | 1.4   | 7.0   | 3.1   | 17    | 2.4    | .80   | .80   | 1.6   |
| 17    | 1.4   | 1.6   | 3.4   | 2.6   | 1.4   | 5.4   | 2.8   | 9.3   | 2.1    | .80   | 1.6   | 1.6   |
| 18    | 1.3   | 1.6   | 3.1   | 2.6   | 1.7   | 4.6   | 2.6   | 7.0   | 1.8    | .70   | 1.3   | 1.4   |
| 19    | 1.3   | 1.6   | 7.0   | 2.6   | 1.6   | 15    | 2.6   | 5.4   | 1.8    | .80   | .90   | 1.4   |
| 20    | 1.3   | 7.9   | 6.6   | 10    | 1.4   | 11    | 2.4   | 5.0   | 1.7    | .80   | .80   | 1.4   |
| 21    | 1.3   | 2.4   | 5.0   | 6.2   | 66    | 15    | 81    | 5.4   | 1.6    | .80   | .80   | 1.4   |
| 22    | 1.3   | 2.0   | 4.4   | 5.0   | 48    | 10    | 31    | 12    | 1.3    | .80   | .80   | 1.3   |
| 23    | 1.3   | 24    | 4.6   | 5.0   | 15    | 7.0   | 12    | 6.6   | 1.2    | .80   | .80   | 1.4   |
| 24    | 1.3   | 201   | 81    | 4.1   | 8.2   | 6.2   | 7.0   | 5.4   | 1.1    | .80   | .80   | 1.4   |
| 25    | 1.3   | 79    | 23    | 3.8   | 6.2   | 5.4   | 5.8   | 4.6   | 1.1    | .80   | .80   | 1.4   |
| 26    | 1.3   | 74    | 11    | 4.6   | 5.4   | 5.0   | 4.6   | 4.6   | 1.1    | .80   | .80   | 1.4   |
| 27    | 3.4   | 27    | 11    | 4.4   | 4.6   | 4.1   | 4.4   | 4.1   | .90    | .80   | .80   | 1.4   |
| 28    | 1.8   | 14    | 7.8   | 18    | 4.4   | 4.1   | 4.1   | 3.6   | .80    | .80   | 10    | 5.6   |
| 29    | 1.7   | 9.3   | 9.3   | 7.4   | ----- | 3.8   | 3.8   | 3.4   | .80    | .80   | 2.6   | 1.4   |
| 30    | 1.6   | 7.8   | 6.2   | 5.0   | ----- | 3.4   | 8.2   | 3.1   | .80    | .70   | 1.6   | 1.1   |
| 31    | 20    | ----- | 4.6   | 4.1   | ----- | 3.1   | ----- | 4.4   | -----  | .70   | 1.4   | ----- |
| TOTAL | 64.50 | 489.7 | 392.8 | 131.3 | 198.8 | 344.5 | 221.2 | 301.5 | 141.10 | 24.30 | 38.30 | 49.0  |
| MEAN  | 2.08  | 16.3  | 12.7  | 4.24  | 7.10  | 11.1  | 7.37  | 9.73  | 4.70   | .78   | 1.24  | 1.63  |
| MAX   | 20    | 201   | 107   | 18    | 66    | 83    | 81    | 75    | 51     | .80   | 10    | 5.6   |
| MIN   | .50   | 1.6   | 3.1   | 2.4   | 1.4   | 3.1   | 2.1   | 3.1   | .80    | .70   | .70   | 1.1   |
| CFSM  | .47   | 3.71  | 2.89  | .97   | 1.62  | 2.53  | 1.68  | 2.22  | 1.07   | .18   | .28   | .37   |
| IN.   | .55   | 4.15  | 3.33  | 1.11  | 1.68  | 2.92  | 1.87  | 2.55  | 1.20   | .21   | .32   | .42   |
| AC-FT | 128   | 971   | 779   | 260   | 394   | 683   | 439   | 598   | 280    | 48    | 76    | 97    |

CAL YR 1973 TOTAL 3,345.40 MEAN 9.17 MAX 201 MIN .50 CFSM 2.09 IN 28.35 AC-FT 6,640  
WTR YR 1974 TOTAL 2,397.00 MEAN 6.57 MAX 201 MIN .50 CFSM 1.50 IN 20.31 AC-FT 4,750

PEAK DISCHARGE (BASE, 250 FT<sup>3</sup>/S)

| DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|------|------|-------|-----------|
| 11-24 | 0745 | 5.31  | 936       | 5-15 | 0030 | 3.28  | 252       |
| 12-4  | 0300 | 3.95  | 451       |      |      |       |           |

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, at intake tower at dam on St. Francis River, 0.8 mi (1.2 km) southwest of Wappapello, and at mile 309 (497 km).

DRAINAGE AREA.--1,310 mi<sup>2</sup> (3,390 km<sup>2</sup>), approximately.

PERIOD OF RECORD.--April 1941 to current year.

GAGE.--Water-stage recorder. Datum of gage is 347.74 ft (105.991 m) above mean sea level. Prior to June 19, 1941, nonrecording gage at same site and datum.

EXTREMES.--Current year: Maximum contents, 301,000 acre-ft (371 hm<sup>3</sup>) Dec 8 (gage height, 31.36 ft or 9.559 m); minimum, 29,600 acre-ft (36.5 hm<sup>3</sup>) Feb. 21 (gage height, 6.93 ft or 2.112 m).

Period of record: Maximum contents, 729,800 acre-ft (900 hm<sup>3</sup>) Apr. 16, 1945 (gage height, 51.35 ft or 15.651 m); minimum, since initial filling to conservation pool level, 23,340 acre-ft (28.8 hm<sup>3</sup>) Mar. 1, 2, 3, 1970; minimum gage height, 4.20 ft (1.280 m) Sept. 26, 27, 1967.

REMARKS.--Lake is formed by earth-fill dam. Closure of channel at dam began July 10, 1940; river began to flow through outlet structure July 24, 1940. Stop logs placed in outlet structure and storage began Apr. 1, 1941; conservation pool level reached Apr. 20, 1941. Capacity at bottom of outlet tunnels (gage height, -9.0 ft or -2.743 m), 2,600 acre-ft (3.21 km<sup>3</sup>); at conservation pool level (gage height, 7.0 ft or 2.134 m), 30,900 acre-ft (38.1 hm<sup>3</sup>); at spillway crest (gage height, 47.0 ft or 14.326 m), 613,200 acre-ft (756 hm<sup>3</sup>); at maximum pool level (gage height, 62.4 ft or 19.020 m), uncontrollable above spillway crest, 1,022,000 acre-ft (1.26 km<sup>3</sup>). 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. Contents computed from daily readings at 0800.

COOPERATION.--Records furnished by Corps of Engineers.

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

|      |        |      |         |
|------|--------|------|---------|
| 6.0  | 27,100 | 20.0 | 142,300 |
| 8.0  | 35,900 | 24.0 | 192,000 |
| 10.0 | 48,300 | 30.0 | 283,000 |
| 13.0 | 71,400 | 32.0 | 316,000 |
| 16.0 | 99,600 |      |         |

CONTENTS, IN ACRE-FEET, AT 0800, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY | OCT    | NOV     | DEC     | JAN    | FEB    | MAR    | APR    | MAY    | JUN     | JUL    | AUG    | SEP    |
|-----|--------|---------|---------|--------|--------|--------|--------|--------|---------|--------|--------|--------|
| 1   | 62,899 | 64,500  | 261,000 | 99,599 | 63,000 | 68,299 | 41,399 | 50,000 | 65,299  | 67,199 | 63,099 | 81,799 |
| 2   | 62,899 | 69,199  | 261,000 | 92,899 | 61,000 | 63,299 | 41,399 | 49,799 | 69,000  | 63,700 | 62,899 | 81,500 |
| 3   | 62,799 | 70,599  | 261,000 | 85,799 | 58,899 | 58,799 | 42,099 | 52,799 | 71,599  | 62,599 | 62,899 | 80,500 |
| 4   | 62,799 | 69,000  | 260,000 | 78,899 | 56,399 | 54,500 | 42,599 | 55,899 | 72,899  | 62,599 | 63,000 | 78,899 |
| 5   | 63,099 | 66,099  | 278,000 | 72,699 | 53,799 | 51,200 | 41,899 | 57,500 | 73,500  | 63,099 | 63,000 | 77,500 |
| 6   | 63,099 | 63,700  | 295,000 | 67,599 | 51,200 | 50,000 | 41,399 | 61,399 | 73,799  | 63,399 | 63,000 | 76,299 |
| 7   | 63,099 | 63,000  | 299,000 | 63,200 | 49,099 | 49,799 | 41,599 | 63,099 | 74,099  | 63,500 | 63,000 | 75,000 |
| 8   | 63,099 | 63,099  | 301,000 | 60,000 | 47,000 | 49,000 | 42,799 | 63,799 | 75,500  | 63,399 | 63,000 | 73,699 |
| 9   | 63,200 | 63,099  | 298,000 | 57,599 | 47,500 | 47,399 | 42,700 | 64,000 | 79,799  | 63,200 | 63,000 | 72,000 |
| 10  | 63,099 | 62,700  | 287,000 | 55,099 | 43,299 | 48,099 | 41,299 | 63,500 | 92,099  | 62,799 | 63,299 | 70,899 |
| 11  | 62,799 | 62,599  | 271,000 | 52,599 | 41,500 | 51,200 | 40,700 | 62,700 | 103,000 | 62,599 | 63,399 | 68,599 |
| 12  | 62,700 | 63,099  | 255,000 | 49,899 | 39,899 | 75,199 | 45,099 | 62,700 | 108,000 | 62,399 | 63,299 | 66,699 |
| 13  | 63,500 | 63,500  | 239,000 | 46,899 | 38,399 | 88,099 | 42,799 | 64,500 | 110,000 | 62,599 | 63,099 | 65,299 |
| 14  | 64,299 | 63,299  | 222,000 | 43,799 | 36,899 | 88,899 | 43,399 | 62,599 | 111,000 | 63,000 | 63,000 | 64,399 |
| 15  | 67,799 | 62,599  | 193,000 | 41,000 | 35,599 | 86,799 | 44,000 | 64,500 | 117,000 | 63,200 | 63,099 | 63,700 |
| 16  | 67,399 | 63,000  | 187,000 | 40,399 | 34,399 | 82,899 | 43,000 | 76,599 | 121,000 | 63,399 | 63,299 | 64,299 |
| 17  | 64,700 | 62,799  | 171,000 | 41,200 | 33,399 | 78,899 | 41,599 | 87,699 | 122,000 | 63,299 | 63,399 | 64,399 |
| 18  | 63,000 | 62,599  | 155,000 | 43,000 | 32,299 | 76,000 | 41,000 | 89,000 | 121,000 | 63,200 | 63,899 | 63,899 |
| 19  | 63,000 | 63,099  | 139,000 | 43,899 | 31,500 | 72,299 | 40,899 | 88,699 | 120,000 | 63,099 | 64,099 | 63,099 |
| 20  | 63,000 | 63,099  | 127,000 | 45,599 | 30,899 | 68,000 | 41,099 | 86,500 | 117,000 | 63,099 | 63,399 | 63,000 |
| 21  | 63,200 | 63,299  | 115,000 | 54,500 | 30,000 | 64,200 | 41,299 | 83,000 | 113,000 | 63,000 | 62,799 | 63,399 |
| 22  | 63,200 | 63,500  | 107,000 | 72,099 | 37,799 | 61,799 | 49,700 | 79,299 | 109,000 | 62,799 | 62,899 | 63,500 |
| 23  | 63,099 | 63,899  | 99,000  | 76,399 | 71,000 | 60,399 | 65,099 | 79,699 | 105,000 | 62,799 | 63,299 | 63,399 |
| 24  | 63,000 | 72,799  | 91,599  | 76,699 | 85,799 | 59,200 | 73,899 | 79,299 | 101,000 | 62,700 | 63,599 | 63,099 |
| 25  | 62,899 | 112,000 | 94,000  | 75,299 | 85,899 | 57,000 | 73,500 | 77,599 | 96,199  | 62,700 | 63,700 | 63,000 |
| 26  | 63,099 | 184,000 | 118,000 | 72,199 | 82,799 | 54,899 | 70,299 | 74,599 | 91,500  | 62,700 | 63,599 | 63,000 |
| 27  | 63,599 | 231,000 | 121,000 | 68,899 | 78,199 | 52,599 | 62,599 | 71,099 | 86,899  | 62,899 | 63,200 | 63,000 |
| 28  | 64,000 | 253,000 | 119,000 | 66,099 | 73,199 | 50,599 | 61,099 | 66,799 | 82,000  | 63,099 | 62,899 | 63,000 |
| 29  | 63,500 | 258,000 | 115,000 | 65,099 | -----  | 48,299 | 56,099 | 63,200 | 77,099  | 63,099 | 63,399 | 63,899 |
| 30  | 62,899 | 260,000 | 111,000 | 64,899 | -----  | 46,000 | 51,700 | 62,000 | 72,099  | 63,200 | 74,299 | 64,200 |
| 31  | 63,099 | -----   | 106,000 | 64,299 | -----  | 43,200 | -----  | 62,599 | -----   | 63,200 | 80,799 | -----  |
| (†) | 12.29  | 28.86   | 16.88   | 12.44  | 13.47  | 9.46   | 10.73  | 12.26  | 13.30   | 12.29  | 14.29  | 12.44  |
| (‡) | 0      | +196.9  | -154.0  | -41.7  | +8.9   | -30.0  | +8.5   | +10.9  | +9.5    | -8.9   | +17.6  | -16.6  |
| MAX | 67,799 | 260,000 | 301,000 | 99,599 | 85,899 | 88,899 | 73,899 | 89,000 | 122,000 | 67,199 | 80,799 | 81,799 |
| MIN | 62,700 | 62,599  | 91,599  | 40,399 | 30,000 | 43,200 | 40,700 | 49,799 | 65,299  | 62,399 | 62,799 | 63,000 |

CAL YR 1973.....‡ -88  
WTR YR 1974.....‡ +1.1

† Gage height, in feet, at end of month.  
‡ Change in contents, in hundreds of acre-feet.

LOCATION.--Lat 36°55'41", long 90°15'55", in NW¼SE¼ sec.2, T.26 N., R.7 E., Wayne County, on right bank at downstream side of highway bridge, 0.5 mi (0.8 km) southeast of Wappapello and 1.25 mi (2.0 km) downstream from Wappapello Dam.

PERIOD OF RECORD.--October 1940 to current year. Since January 1939 in reports of Mississippi River Commission. Gage-height records collected in this vicinity since April 1920 are contained in reports of the Corps of Engineers.

AVERAGE DISCHARGE.--34 years, 1,541 ft<sup>3</sup>/s (43.64 m<sup>3</sup>/s), 1,117,000 acre-ft/yr (1.38 km<sup>3</sup>/yr).

REMARKS.--Records good above 500 ft<sup>3</sup>/s (14.2 m<sup>3</sup>/s) and fair below. Discharge computed using gate openings and pool elevation at Wappapello Lake. Flow regulated by Wappapello Lake.

REVISIONS.--WSP 1211: Drainage area.

| DAY         | OCT    | NOV       | DEC     | JAN     | FEB     | MAR     | APR     | MAY     | JUN     | JUL       | AUG    | SEP    |
|-------------|--------|-----------|---------|---------|---------|---------|---------|---------|---------|-----------|--------|--------|
| 1           | 220    | 1,160     | 2,600   | 6,740   | 4,560   | 4,710   | 1,490   | 1,540   | 970     | 2,320     | 120    | 1,980  |
| 2           | 220    | 2,240     | 2,600   | 6,040   | 4,520   | 4,480   | 950     | 670     | 930     | 719       | 40     | 1,980  |
| 3           | 160    | 2,920     | 2,580   | 5,370   | 4,490   | 4,400   | 1,550   | 390     | 930     | 450       | 40     | 1,980  |
| 4           | 120    | 2,910     | 2,590   | 4,820   | 4,370   | 3,840   | 2,650   | 390     | 1,060   | 430       | 40     | 1,770  |
| 5           | 220    | 2,410     | 2,640   | 4,040   | 4,180   | 1,910   | 2,250   | 400     | 980     | 450       | 40     | 1,410  |
| 6           | 220    | 1,060     | 2,670   | 3,510   | 4,040   | 510     | 1,060   | 460     | 980     | 480       | 40     | 1,400  |
| 7           | 220    | 530       | 2,670   | 2,950   | 3,840   | 3,400   | 1,040   | 800     | 980     | 480       | 40     | 1,400  |
| 8           | 220    | 580       | 4,840   | 2,580   | 3,410   | 3,930   | 2,360   | 1,500   | 985     | 500       | 40     | 1,490  |
| 9           | 350    | 750       | 9,000   | 2,580   | 2,990   | 3,900   | 3,200   | 2,000   | 990     | 530       | 40     | 1,530  |
| 10          | 350    | 420       | 9,780   | 2,890   | 2,960   | 3,880   | 2,200   | 1,960   | 1,020   | 500       | 160    | 1,530  |
| 11          | 140    | 220       | 9,860   | 2,890   | 2,920   | 4,550   | 1,120   | 1,420   | 1,000   | 490       | 340    | 1,520  |
| 12          | 190    | 320       | 9,800   | 2,930   | 2,900   | 6,020   | 2,040   | 1,210   | 980     | 430       | 400    | 1,270  |
| 13          | 770    | 530       | 9,850   | 2,960   | 2,880   | 6,800   | 3,440   | 1,590   | 1,460   | 430       | 280    | 1,060  |
| 14          | 1,750  | 630       | 9,830   | 2,680   | 2,850   | 6,810   | 4,160   | 1,300   | 1,990   | 440       | 220    | 960    |
| 15          | 2,740  | 470       | 9,880   | 1,010   | 2,820   | 6,480   | 4,370   | 2,170   | 2,040   | 470       | 220    | 750    |
| 16          | 2,770  | 410       | 9,880   | 290     | 2,800   | 6,220   | 3,800   | 3,500   | 2,070   | 490       | 160    | 960    |
| 17          | 2,040  | 350       | 9,840   | 400     | 2,770   | 5,980   | 2,470   | 3,690   | 2,070   | 490       | 225    | 1,070  |
| 18          | 730    | 220       | 9,650   | 2,150   | 2,750   | 5,690   | 1,740   | 3,730   | 2,290   | 220       | 450    | 1,210  |
| 19          | 610    | 280       | 9,090   | 3,060   | 2,460   | 5,040   | 1,460   | 3,720   | 2,740   | 220       | 700    | 1,620  |
| 20          | 420    | 470       | 8,680   | 3,120   | 1,830   | 5,310   | 1,340   | 3,700   | 2,730   | 220       | 520    | 400    |
| 21          | 520    | 610       | 7,950   | 3,570   | 3,550   | 5,580   | 1,980   | 3,680   | 2,790   | 220       | 100    | 520    |
| 22          | 510    | 700       | 6,520   | 4,590   | 3,770   | 5,530   | 3,770   | 3,650   | 2,920   | 220       | 40     | 580    |
| 23          | 410    | 2,590     | 6,150   | 5,030   | 5,120   | 5,440   | 5,580   | 3,640   | 2,890   | 220       | 160    | 580    |
| 24          | 350    | 3,110     | 6,100   | 5,200   | 6,000   | 5,280   | 6,290   | 3,310   | 2,870   | 100       | 350    | 500    |
| 25          | 220    | 3,080     | 6,790   | 5,200   | 6,300   | 4,380   | 6,400   | 3,620   | 2,840   | 40        | 410    | 400    |
| 26          | 220    | 2,780     | 8,200   | 5,150   | 6,060   | 4,120   | 6,370   | 3,600   | 2,900   | 40        | 410    | 400    |
| 27          | 510    | 2,580     | 8,410   | 5,090   | 5,250   | 4,090   | 4,860   | 3,580   | 2,910   | 40        | 410    | 400    |
| 28          | 750    | 2,580     | 8,270   | 4,920   | 4,780   | 4,060   | 4,790   | 3,050   | 2,880   | 40        | 190    | 400    |
| 29          | 700    | 2,580     | 7,770   | 4,590   | -----   | 4,020   | 4,430   | 1,630   | 2,930   | 40        | 1,070  | 690    |
| 30          | 340    | 2,580     | 7,360   | 4,590   | -----   | 3,960   | 2,920   | 460     | 2,930   | 90        | 2,810  | 800    |
| 31          | 500    | -----     | 7,080   | 4,590   | -----   | 3,010   | -----   | 970     | -----   | 40        | 2,020  | -----  |
| TOTAL       | 19,490 | 42,070    | 218,930 | 115,530 | 107,170 | 143,330 | 92,080  | 67,330  | 58,055  | 11,849    | 12,085 | 32,560 |
| MEAN        | 629    | 1,402     | 7,062   | 3,727   | 3,828   | 4,624   | 3,069   | 2,172   | 1,935   | 382       | 390    | 1,085  |
| MAX         | 2,770  | 3,110     | 9,880   | 6,740   | 6,300   | 6,810   | 6,400   | 3,730   | 2,930   | 2,320     | 2,810  | 1,980  |
| MIN         | 120    | 220       | 2,580   | 290     | 1,830   | 510     | 950     | 390     | 930     | 40        | 40     | 400    |
| AC-FT       | 38,660 | 83,450    | 434,200 | 229,200 | 212,600 | 284,300 | 182,600 | 133,500 | 115,200 | 23,500    | 23,970 | 64,580 |
| CAL YR 1973 | TOTAL  | 1,273,550 | MEAN    | 3,489   | MAX     | 10,100  | MIN     | 40      | AC-FT   | 2,526,000 |        |        |
| WTR YR 1974 | TOTAL  | 920,479   | MEAN    | 2,522   | MAX     | 9,880   | MIN     | 40      | AC-FT   | 1,826,000 |        |        |



07041000 Little River ditch 81 near Kennett, Mo.

LOCATION.--Lat 36°14'10", long 89°58'58", in NE¼ sec.4, T.18 N., R.10 E., Dunklin County, on downstream side of bridge on State Highway 84, and about 4 mi (6.4 km) east of Kennett.

DRAINAGE AREA.--111 mi<sup>2</sup> (287 km<sup>2</sup>).

PERIOD OF RECORD.--October 1926 to current year.

GAGE.--Nonrecording gage. Datum of gage is 241.00 ft (73.457 m) above mean sea level (Corps of Engineers bench mark). Prior to Oct. 19, 1966, at site 100 ft (30.5 m) upstream at present datum.

AVERAGE DISCHARGE.--48 years, 200 ft<sup>3</sup>/s (5.66 m<sup>3</sup>/s), 144,900 acre-ft/yr (179 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 2,830 ft<sup>3</sup>/s (80.1 m<sup>3</sup>/s) Nov. 25 (gage height, 9.28 ft or 2.829 m); minimum, 43 ft<sup>3</sup>/s (1.22 m<sup>3</sup>/s) Nov. 16 (gage height, 1.01 or 0.308 m).

Period of record: Maximum discharge, 3,090 ft<sup>3</sup>/s (87.5 m<sup>3</sup>/s) Apr. 25, 1973 (gage height, 9.83 ft or 2.996 m); maximum gage height, 15.1 ft (4.60 m), including some overflow from levee breaks on St. Francis River Apr. 21, 1927; minimum discharge observed, 8 ft<sup>3</sup>/s (0.277 m<sup>3</sup>/s) Sept. 1, 1943, Sept. 18, 1954; minimum, gage height, 0.87 ft (0.265 m) Sept. 13-15, 1968.

REMARKS.--Records fair.

REVISIONS (WATER YEARS).--WSP 877: 1938.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY         | OCT   | NOV     | DEC    | JAN    | FEB    | MAR    | APR    | MAY    | JUN    | JUL     | AUG   | SEP   |
|-------------|-------|---------|--------|--------|--------|--------|--------|--------|--------|---------|-------|-------|
| 1           | 53    | 54      | 250    | 288    | 227    | 138    | 146    | 122    | 216    | 108     | 71    | 69    |
| 2           | 52    | 57      | 205    | 238    | 216    | 138    | 130    | 130    | 138    | 100     | 68    | 89    |
| 3           | 52    | 47      | 205    | 205    | 194    | 138    | 138    | 138    | 122    | 100     | 74    | 282   |
| 4           | 51    | 47      | 595    | 205    | 194    | 138    | 130    | 155    | 115    | 94      | 76    | 122   |
| 5           | 51    | 47      | 719    | 194    | 174    | 130    | 130    | 130    | 122    | 96      | 69    | 80    |
| 6           | 57    | 50      | 342    | 184    | 164    | 164    | 122    | 122    | 122    | 92      | 68    | 69    |
| 7           | 52    | 47      | 227    | 184    | 164    | 174    | 122    | 115    | 505    | 93      | 66    | 65    |
| 8           | 53    | 49      | 194    | 174    | 164    | 164    | 194    | 115    | 697    | 565     | 65    | 61    |
| 9           | 52    | 48      | 174    | 372    | 164    | 138    | 138    | 122    | 358    | 262     | 63    | 60    |
| 10          | 51    | 50      | 164    | 1,210  | 155    | 164    | 130    | 434    | 205    | 164     | 67    | 62    |
| 11          | 50    | 46      | 155    | 1,600  | 155    | 719    | 115    | 238    | 164    | 138     | 71    | 83    |
| 12          | 52    | 46      | 155    | 830    | 146    | 535    | 238    | 146    | 155    | 108     | 68    | 65    |
| 13          | 57    | 51      | 146    | 415    | 130    | 300    | 164    | 122    | 138    | 100     | 66    | 80    |
| 14          | 53    | 52      | 146    | 300    | 130    | 205    | 146    | 122    | 155    | 96      | 72    | 83    |
| 15          | 52    | 50      | 138    | 372    | 138    | 194    | 130    | 1,150  | 475    | 90      | 67    | 73    |
| 16          | 51    | 43      | 138    | 475    | 138    | 216    | 122    | 948    | 288    | 89      | 66    | 66    |
| 17          | 49    | 45      | 138    | 386    | 130    | 262    | 122    | 535    | 184    | 87      | 90    | 62    |
| 18          | 47    | 46      | 138    | 300    | 130    | 205    | 122    | 250    | 146    | 86      | 174   | 58    |
| 19          | 47    | 100     | 130    | 250    | 194    | 205    | 115    | 174    | 138    | 82      | 130   | 57    |
| 20          | 47    | 110     | 262    | 565    | 155    | 205    | 108    | 155    | 130    | 78      | 80    | 56    |
| 21          | 46    | 300     | 262    | 832    | 138    | 275    | 100    | 146    | 122    | 81      | 71    | 71    |
| 22          | 46    | 115     | 194    | 475    | 915    | 238    | 1,320  | 560    | 122    | 80      | 63    | 72    |
| 23          | 46    | 289     | 238    | 657    | 595    | 194    | 505    | 738    | 115    | 81      | 63    | 66    |
| 24          | 47    | 2,220   | 915    | 342    | 314    | 184    | 194    | 445    | 122    | 81      | 62    | 59    |
| 25          | 47    | 2,590   | 1,970  | 275    | 174    | 174    | 164    | 205    | 122    | 77      | 61    | 60    |
| 26          | 46    | 2,310   | 1,350  | 238    | 164    | 164    | 146    | 174    | 115    | 78      | 62    | 59    |
| 27          | 46    | 1,800   | 1,160  | 357    | 164    | 155    | 138    | 164    | 115    | 87      | 61    | 58    |
| 28          | 50    | 1,280   | 657    | 704    | 146    | 155    | 130    | 146    | 115    | 78      | 61    | 63    |
| 29          | 50    | 626     | 719    | 595    | -----  | 138    | 122    | 146    | 108    | 76      | 77    | 108   |
| 30          | 49    | 372     | 898    | 342    | -----  | 155    | 122    | 138    | 108    | 71      | 115   | 72    |
| 31          | 51    | -----   | 460    | 275    | -----  | 138    | -----  | 138    | -----  | 71      | 96    | ----- |
| TOTAL       | 1,553 | 12,987  | 13,444 | 13,839 | 5,872  | 6,502  | 5,703  | 8,423  | 5,737  | 3,489   | 2,363 | 2,330 |
| MEAN        | 50.1  | 433     | 434    | 446    | 210    | 210    | 190    | 272    | 191    | 113     | 76.2  | 77.7  |
| MAX         | 57    | 2,590   | 1,970  | 1,600  | 915    | 719    | 1,320  | 1,150  | 697    | 565     | 174   | 282   |
| MIN         | 46    | 43      | 130    | 174    | 130    | 130    | 100    | 115    | 108    | 71      | 61    | 56    |
| AC-FT       | 3,080 | 25,760  | 26,670 | 27,450 | 11,650 | 12,900 | 11,310 | 16,710 | 11,380 | 6,920   | 4,690 | 4,620 |
| CAL YR 1973 | TOTAL | 130,232 | MEAN   | 357    | MAX    | 3,090  | MIN    | 43     | AC-FT  | 258,300 |       |       |
| WTR YR 1974 | TOTAL | 82,242  | MEAN   | 225    | MAX    | 2,590  | MIN    | 43     | AC-FT  | 163,100 |       |       |

07042000 Little River ditch 1 near Kennett, Mo.

LOCATION.--Lat 36°14'09", long 89°58'53", in NE¼ sec.4, T.18 N., R.10 E., Dunklin County, on downstream side of bridge on State Highway 84, and 4 mi (6.4 km) east of Kennett.

DRAINAGE AREA.--235 mi<sup>2</sup> (608 km<sup>2</sup>).

PERIOD OF RECORD.--October 1926 to current year.

GAGE.--Nonrecording gage. Datum of gage is 241.00 ft (73.457 m) above mean sea level (Corps of Engineers bench mark). Prior to Oct. 20, 1966, at site 100 ft (30.5 m) upstream at present datum.

AVERAGE DISCHARGE.--48 years, 418 ft<sup>3</sup>/s (11.8 m<sup>3</sup>/s), 302,600 acre-ft/yr (373 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 4,540 ft<sup>3</sup>/s (129 m<sup>3</sup>/s) Jan. 11 (gage height, 10.60 ft or 3.231 m); minimum, 55 ft<sup>3</sup>/s (1.56 m<sup>3</sup>/s) Nov. 12 (gage height, 1.04 ft or 0.317 m).  
Period of record: Maximum discharge, 7,900 ft<sup>3</sup>/s (224.7 m<sup>3</sup>/s) Apr. 23, 1973 (gage height, 14.55 ft or 4.435 m); maximum gage height, 16.80 ft (5.121 m) Jan. 25, 1937; minimum discharge, 8 ft<sup>3</sup>/s (0.227 m<sup>3</sup>/s) Sept. 13-18, 1932; minimum gage height observed, 0.71 ft (0.216 m) Sept. 15, 1956.

REMARKS.--Records fair.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT   | NOV    | DEC    | JAN    | FEB    | MAR    | APR    | MAY    | JUN    | JUL   | AUG    | SEP   |
|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|-------|--------|-------|
| 1     | 66    | 66     | 902    | 830    | 510    | 279    | 265    | 188    | 213    | 125   | 74     | 188   |
| 2     | 64    | 65     | 615    | 975    | 476    | 265    | 226    | 200    | 188    | 125   | 70     | 145   |
| 3     | 64    | 59     | 510    | 1,130  | 412    | 265    | 226    | 226    | 165    | 125   | 78     | 444   |
| 4     | 65    | 56     | 1,040  | 1,300  | 382    | 252    | 213    | 252    | 155    | 123   | 580    | 176   |
| 5     | 69    | 64     | 1,660  | 885    | 367    | 252    | 213    | 213    | 165    | 123   | 293    | 125   |
| 6     | 64    | 64     | 1,050  | 412    | 352    | 252    | 200    | 188    | 145    | 200   | 125    | 108   |
| 7     | 64    | 60     | 650    | 293    | 322    | 308    | 188    | 165    | 1,190  | 135   | 95     | 102   |
| 8     | 65    | 61     | 444    | 322    | 322    | 293    | 226    | 155    | 2,000  | 165   | 85     | 95    |
| 9     | 64    | 56     | 352    | 686    | 308    | 252    | 200    | 165    | 1,310  | 213   | 82     | 94    |
| 10    | 64    | 56     | 279    | 1,800  | 293    | 279    | 188    | 352    | 704    | 135   | 81     | 91    |
| 11    | 63    | 58     | 252    | 3,870  | 293    | 846    | 176    | 308    | 444    | 122   | 97     | 88    |
| 12    | 67    | 55     | 226    | 2,260  | 279    | 1,540  | 226    | 213    | 337    | 111   | 108    | 88    |
| 13    | 67    | 56     | 213    | 1,550  | 279    | 775    | 239    | 165    | 279    | 113   | 97     | 97    |
| 14    | 82    | 57     | 213    | 937    | 265    | 476    | 213    | 290    | 240    | 135   | 82     | 135   |
| 15    | 60    | 62     | 200    | 884    | 252    | 476    | 200    | 1,540  | 252    | 102   | 84     | 113   |
| 16    | 59    | 59     | 188    | 1,210  | 252    | 476    | 188    | 1,660  | 476    | 97    | 81     | 110   |
| 17    | 56    | 58     | 176    | 1,130  | 239    | 720    | 176    | 1,090  | 580    | 94    | 188    | 88    |
| 18    | 57    | 61     | 165    | 828    | 239    | 476    | 165    | 598    | 367    | 97    | 510    | 84    |
| 19    | 57    | 135    | 412    | 615    | 308    | 367    | 165    | 352    | 279    | 100   | 720    | 82    |
| 20    | 58    | 82     | 382    | 766    | 252    | 367    | 165    | 265    | 226    | 106   | 756    | 82    |
| 21    | 58    | 279    | 322    | 2,410  | 330    | 412    | 226    | 240    | 188    | 103   | 213    | 102   |
| 22    | 56    | 135    | 279    | 1,520  | 1,980  | 476    | 748    | 405    | 188    | 100   | 145    | 125   |
| 23    | 60    | 246    | 265    | 1,050  | 1,480  | 444    | 615    | 828    | 176    | 98    | 111    | 102   |
| 24    | 60    | 1,400  | 1,190  | 900    | 704    | 382    | 412    | 510    | 165    | 95    | 89     | 86    |
| 25    | 61    | 3,420  | 4,020  | 650    | 444    | 293    | 308    | 308    | 165    | 91    | 91     | 79    |
| 26    | 61    | 3,930  | 3,360  | 545    | 382    | 279    | 265    | 279    | 165    | 88    | 108    | 78    |
| 27    | 63    | 3,760  | 3,630  | 685    | 279    | 265    | 239    | 252    | 155    | 200   | 98     | 78    |
| 28    | 59    | 3,200  | 2,210  | 961    | 239    | 265    | 226    | 226    | 155    | 226   | 95     | 79    |
| 29    | 59    | 1,980  | 1,610  | 1,510  | -----  | 252    | 213    | 213    | 145    | 120   | 92     | 213   |
| 30    | 66    | 1,250  | 2,280  | 939    | -----  | 308    | 200    | 226    | 135    | 88    | 200    | 188   |
| 31    | 64    | -----  | 1,470  | 650    | -----  | 239    | -----  | 200    | -----  | 81    | 226    | ----- |
| TOTAL | 1,942 | 20,890 | 30,565 | 34,503 | 12,240 | 12,831 | 7,510  | 12,272 | 11,352 | 3,836 | 5,754  | 3,665 |
| MEAN  | 62.6  | 696    | 986    | 1,113  | 437    | 414    | 250    | 396    | 378    | 124   | 186    | 122   |
| MAX   | 82    | 3,930  | 4,020  | 3,870  | 1,980  | 1,540  | 748    | 1,660  | 2,000  | 226   | 756    | 444   |
| MIN   | 56    | 55     | 165    | 293    | 239    | 239    | 165    | 155    | 135    | 81    | 70     | 78    |
| AC-FT | 3,850 | 41,440 | 60,630 | 68,440 | 24,280 | 25,450 | 14,900 | 24,340 | 22,520 | 7,610 | 11,410 | 7,270 |

CAL YR 1973 TOTAL 273,367 MEAN 749 MAX 7,800 MIN 55 AC-FT 542,200  
WTR YR 1974 TOTAL 157,360 MEAN 431 MAX 4,020 MIN 55 AC-FT 312,100

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, on right bank 150 ft (45.7 m) upstream from bridge on U.S. Highway 62, 3.7 mi (5.95 km) southwest of Lilbourn, and 4 mi (6.4 km) northwest of Marston.

DRAINAGE AREA.--235 mi<sup>2</sup> (609 km<sup>2</sup>).

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 263.46 ft (80.303 m) above mean sea level (levels by Missouri State Highway Commission). Prior to Oct. 27, 1967, nonrecording gage at present site and datum.

AVERAGE DISCHARGE.--29 years, 324 ft<sup>3</sup>/s (9.18 m<sup>3</sup>/s), 18.72 in/yr (475 mm/yr), 234,700 acre-ft/yr (289 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 3,000 ft<sup>3</sup>/s (85.0 m<sup>3</sup>/s) Dec. 25 (gage height, 10.65 ft or 3.246 m); minimum, 105 ft<sup>3</sup>/s (2.97 m<sup>3</sup>/s) Nov. 17, 18 (gage height, 2.03 ft or 0.619 m).

Period of record: Maximum discharge, 5,200 ft<sup>3</sup>/s (147 m<sup>3</sup>/s) Apr. 20, 1973 (gage height, 13.00 ft or 3.962 m); maximum gage height, 15.16 ft (4.621 m) Feb. 15, 1950; minimum discharge, 29 ft<sup>3</sup>/s (0.82 m<sup>3</sup>/s) Sept. 20, 1954; minimum gage height, 2.00 ft (0.610 m) Sept. 30, Oct. 2, 3, 4, 5, 6, 9, Nov. 11, 13, 21, 22, 1971.

Flood in June 1945 reached a stage of 15.6 ft (4.755 m) from floodmark (discharge, 3,200 ft<sup>3</sup>/s or 90.6 m<sup>3</sup>/s).

REMARKS.--Records fair.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT   | NOV    | DEC    | JAN    | FEB    | MAR    | APR    | MAY    | JUN    | JUL    | AUG    | SEP   |
|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|
| 1     | 117   | 127    | 494    | 589    | 533    | 330    | 311    | 246    | 261    | 201    | 132    | 185   |
| 2     | 113   | 123    | 410    | 491    | 503    | 333    | 293    | 273    | 253    | 195    | 131    | 214   |
| 3     | 113   | 119    | 356    | 448    | 462    | 334    | 292    | 294    | 243    | 189    | 856    | 243   |
| 4     | 113   | 121    | 824    | 405    | 429    | 333    | 290    | 284    | 240    | 183    | 476    | 173   |
| 5     | 113   | 120    | 830    | 379    | 417    | 313    | 267    | 277    | 238    | 190    | 203    | 159   |
| 6     | 111   | 118    | 539    | 362    | 405    | 317    | 259    | 265    | 255    | 177    | 155    | 155   |
| 7     | 111   | 118    | 420    | 344    | 372    | 325    | 262    | 251    | 663    | 193    | 140    | 155   |
| 8     | 116   | 119    | 371    | 331    | 362    | 311    | 271    | 250    | 991    | 276    | 134    | 138   |
| 9     | 119   | 119    | 346    | 522    | 354    | 299    | 256    | 248    | 604    | 201    | 132    | 140   |
| 10    | 117   | 119    | 322    | 1,800  | 346    | 336    | 247    | 256    | 445    | 185    | 134    | 139   |
| 11    | 116   | 119    | 301    | 2,300  | 329    | 1,070  | 248    | 248    | 363    | 182    | 134    | 135   |
| 12    | 116   | 122    | 296    | 1,170  | 330    | 752    | 271    | 242    | 320    | 178    | 133    | 134   |
| 13    | 122   | 125    | 291    | 706    | 327    | 499    | 262    | 229    | 297    | 184    | 137    | 160   |
| 14    | 122   | 119    | 263    | 615    | 306    | 432    | 265    | 232    | 282    | 176    | 202    | 160   |
| 15    | 117   | 122    | 242    | 782    | 297    | 418    | 247    | 530    | 374    | 173    | 149    | 140   |
| 16    | 115   | 113    | 247    | 885    | 294    | 586    | 242    | 826    | 350    | 167    | 134    | 135   |
| 17    | 111   | 106    | 238    | 802    | 290    | 464    | 233    | 603    | 292    | 162    | 151    | 133   |
| 18    | 113   | 112    | 237    | 667    | 288    | 412    | 226    | 458    | 273    | 157    | 807    | 126   |
| 19    | 113   | 110    | 250    | 591    | 310    | 386    | 226    | 406    | 269    | 157    | 326    | 124   |
| 20    | 114   | 114    | 358    | 1,210  | 360    | 364    | 219    | 356    | 260    | 154    | 191    | 148   |
| 21    | 114   | 168    | 292    | 1,390  | 600    | 416    | 243    | 343    | 248    | 150    | 167    | 203   |
| 22    | 114   | 124    | 275    | 883    | 1,400  | 415    | 583    | 657    | 249    | 144    | 152    | 138   |
| 23    | 114   | 791    | 285    | 959    | 850    | 380    | 404    | 501    | 232    | 145    | 145    | 127   |
| 24    | 115   | 2,330  | 978    | 742    | 500    | 354    | 319    | 360    | 228    | 144    | 141    | 125   |
| 25    | 116   | 2,020  | 2,720  | 605    | 420    | 340    | 298    | 330    | 228    | 139    | 151    | 126   |
| 26    | 115   | 1,640  | 2,160  | 618    | 400    | 331    | 286    | 317    | 222    | 234    | 140    | 123   |
| 27    | 123   | 1,870  | 1,990  | 692    | 378    | 320    | 275    | 306    | 210    | 196    | 138    | 121   |
| 28    | 119   | 1,590  | 1,050  | 1,020  | 363    | 321    | 269    | 289    | 212    | 152    | 144    | 145   |
| 29    | 116   | 899    | 1,560  | 910    | -----  | 319    | 262    | 286    | 208    | 143    | 190    | 345   |
| 30    | 118   | 633    | 1,380  | 686    | -----  | 314    | 250    | 278    | 205    | 135    | 195    | 159   |
| 31    | 122   | -----  | 818    | 592    | -----  | 295    | -----  | 264    | -----  | 135    | 205    | ----- |
| TOTAL | 3,588 | 14,430 | 21,143 | 24,496 | 12,225 | 12,419 | 8,376  | 10,705 | 9,515  | 5,397  | 6,625  | 4,708 |
| MEAN  | 116   | 481    | 682    | 790    | 437    | 401    | 279    | 345    | 317    | 174    | 214    | 157   |
| MAX   | 123   | 2,330  | 2,720  | 2,300  | 1,400  | 1,070  | 583    | 826    | 991    | 276    | 856    | 345   |
| MIN   | 111   | 106    | 237    | 331    | 288    | 295    | 219    | 229    | 205    | 135    | 131    | 121   |
| CFSM  | .49   | 2.05   | 2.90   | 3.36   | 1.86   | 1.71   | 1.19   | 1.47   | 1.35   | .74    | .91    | .67   |
| IN.   | .57   | 2.28   | 3.35   | 3.88   | 1.94   | 1.97   | 1.33   | 1.69   | 1.51   | .85    | 1.05   | .75   |
| AC-FT | 7,120 | 28,620 | 41,940 | 48,590 | 24,250 | 24,630 | 16,610 | 21,230 | 18,870 | 10,700 | 13,140 | 9,340 |

CAL YR 1973 TOTAL 203,492 MEAN 558 MAX 4,410 MIN 106 CFSM 2.37 IN 32.21 AC-FT 403,600  
WTR YR 1974 TOTAL 133,627 MEAN 366 MAX 2,720 MIN 106 CFSM 1.56 IN 21.15 AC-FT 265,000

## ST. FRANCIS RIVER BASIN

07043000 Castor River at Aquilla, Mo.

LOCATION.--Lat 36°57'08", long 89°54'25", in NE&SE& sec.25, T.27 N., R.10 E., Stoddard County, on downstream side of right pier of bridge on State Highway 25, 0.5 mi (0.8 km) north of Aquilla, and 4 mi (6.4 km) north of Bloomfield.

DRAINAGE AREA.--175 mi<sup>2</sup> (453 km<sup>2</sup>).

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 317.11 ft (96.655 m) above mean sea level (levels by Missouri State Highway Commission). Prior to Apr. 11, 1948, nonrecording gage at site 50 ft (15.24 m) downstream at same datum, Apr. 12, 1948, to July 31, 1968, nonrecording gage at present site and datum.

AVERAGE DISCHARGE.--29 years, 165 ft<sup>3</sup>/s (4.67 m<sup>3</sup>/s), 12.77 in/yr (324 mm/yr), 119,200 acre-ft/yr (147 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 3,000 ft<sup>3</sup>/s (85.0 m<sup>3</sup>/s) Nov. 26 (gage height, 13.67 ft or 4.167 m, floodmark); minimum, 0.10 ft<sup>3</sup>/s (0.003 m<sup>3</sup>/s) Sept. 26, 27 (gage height, 4.30 ft or 1.311 m).  
Period of record: Maximum discharge, 5,900 ft<sup>3</sup>/s (167 m<sup>3</sup>/s) Mar. 9, 1964 (gage height, 15.7 ft or 4.79 m, from floodmark); no flow Sept. 4-7, 1946, Sept. 22 to Oct. 4, Oct. 8-11, 1953, Sept. 18-20, 1955, Oct. 27 to Nov. 4, 1964.  
Flood in June 1945 reached a stage of 14.2 ft (4.33 m). from floodmark.

REMARKS.--Records poor. Entire flow from headwaters of Castor River is diverted 22 mi (35.4 km) above station to Headwater diversion channel. See Castor River at Zalma for records of flow above diversion.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY         | OCT   | NOV        | DEC    | JAN    | FEB    | MAR    | APR    | MAY    | JUN   | JUL   | AUG      | SEP      |
|-------------|-------|------------|--------|--------|--------|--------|--------|--------|-------|-------|----------|----------|
| 1           | 1.9   | 11         | 1,550  | 450    | 243    | 83     | 63     | 274    | 54    | 16    | 5.8      | 138      |
| 2           | 1.6   | 12         | 1,300  | 234    | 176    | 70     | 91     | 217    | 52    | 14    | 5.6      | 96       |
| 3           | 1.1   | 14         | 906    | 170    | 137    | 57     | 118    | 160    | 46    | 13    | 5.2      | 67       |
| 4           | 2.5   | 14         | 1,310  | 135    | 114    | 51     | 88     | 120    | 37    | 12    | 3.2      | 48       |
| 5           | 3.0   | 13         | 1,300  | 103    | 102    | 53     | 68     | 89     | 31    | 13    | 1.5      | 33       |
| 6           | 1.4   | 11         | 1,150  | 90     | 123    | 117    | 59     | 64     | 28    | 12    | .54      | 24       |
| 7           | 1.6   | 9.2        | 854    | 83     | 137    | 120    | 54     | 49     | 108   | 11    | .54      | 17       |
| 8           | 2.7   | 8.0        | 420    | 76     | 130    | 97     | 86     | 41     | 164   | 10    | .57      | 10       |
| 9           | 1.4   | 7.1        | 249    | 130    | 122    | 78     | 165    | 41     | 149   | 10    | .64      | 7.7      |
| 10          | .30   | 6.2        | 170    | 348    | 112    | 350    | 126    | 82     | 107   | 9.6   | 2.2      | 265      |
| 11          | .26   | 5.7        | 136    | 575    | 100    | 821    | 86     | 78     | 83    | 9.2   | 3.8      | 408      |
| 12          | .28   | 5.4        | 119    | 515    | 88     | 959    | 264    | 60     | 68    | 8.8   | 4.7      | 267      |
| 13          | .30   | 5.0        | 107    | 291    | 81     | 881    | 434    | 44     | 54    | 8.4   | 5.5      | 156      |
| 14          | 1.6   | 4.8        | 98     | 207    | 69     | 470    | 288    | 99     | 42    | 8.4   | 5.3      | 122      |
| 15          | 2.5   | 5.5        | 91     | 208    | 64     | 244    | 195    | 1,200  | 168   | 9.2   | 6.4      | 100      |
| 16          | 1.9   | 6.0        | 81     | 430    | 63     | 189    | 108    | 1,170  | 237   | 8.8   | 35       | 68       |
| 17          | 1.9   | 6.9        | 75     | 594    | 60     | 144    | 78     | 1,010  | 188   | 8.0   | 99       | 42       |
| 18          | 2.2   | 8.4        | 70     | 558    | 59     | 116    | 74     | 584    | 118   | 7.2   | 160      | 26       |
| 19          | 3.3   | 9.3        | 63     | 469    | 88     | 98     | 56     | 244    | 75    | 6.0   | 152      | 15       |
| 20          | 4.6   | 10         | 255    | 741    | 119    | 94     | 47     | 126    | 57    | 5.4   | 142      | 11       |
| 21          | 5.5   | 40         | 220    | 1,040  | 225    | 248    | 250    | 90     | 47    | 5.1   | 110      | 5.7      |
| 22          | 5.7   | 71         | 165    | 926    | 1,250  | 278    | 892    | 260    | 36    | 4.8   | 77       | 2.7      |
| 23          | 5.6   | 580        | 142    | 642    | 1,260  | 218    | 924    | 462    | 29    | 5.1   | 51       | 1.9      |
| 24          | 5.2   | 1,420      | 845    | 449    | 1,140  | 150    | 613    | 478    | 26    | 5.1   | 50       | .30      |
| 25          | 4.4   | 2,760      | 1,530  | 309    | 695    | 120    | 286    | 388    | 23    | 5.3   | 59       | .20      |
| 26          | 3.7   | 2,900      | 1,570  | 257    | 300    | 100    | 151    | 242    | 21    | 5.9   | 37       | .14      |
| 27          | 5.0   | 2,520      | 1,650  | 383    | 194    | 94     | 97     | 156    | 21    | 6.6   | 27       | .12      |
| 28          | 5.7   | 2,190      | 1,520  | 815    | 156    | 85     | 73     | 104    | 22    | 7.5   | 21       | 4.5      |
| 29          | 5.4   | 1,910      | 1,570  | 887    | -----  | 78     | 59     | 74     | 21    | 7.6   | 111      | 82       |
| 30          | 5.6   | 1,740      | 1,320  | 725    | -----  | 74     | 123    | 59     | 19    | 7.5   | 253      | 110      |
| 31          | 8.5   | -----      | 947    | 410    | -----  | 69     | -----  | 52     | ----- | 5.9   | 203      | -----    |
| TOTAL       | 96.64 | 16,303.5   | 21,783 | 13,250 | 7,407  | 6,606  | 6,016  | 8,117  | 2,131 | 266.4 | 1,638.49 | 2,128.26 |
| MEAN        | 3.12  | 543        | 703    | 427    | 265    | 213    | 201    | 262    | 71.0  | 8.59  | 52.9     | 70.9     |
| MAX         | 8.5   | 2,900      | 1,650  | 1,040  | 1,260  | 959    | 924    | 1,200  | 237   | 16    | 253      | 408      |
| MIN         | .26   | 4.8        | 63     | 76     | 59     | 51     | 47     | 41     | 19    | 4.8   | .54      | .12      |
| CFSM        | .02   | 3.10       | 4.02   | 2.44   | 1.51   | 1.22   | 1.15   | 1.50   | .41   | .05   | .30      | .41      |
| IN.         | .02   | 3.47       | 4.63   | 2.82   | 1.57   | 1.40   | 1.28   | 1.73   | .45   | .06   | .35      | .45      |
| AC-FT       | 192   | 32,340     | 43,210 | 26,280 | 14,690 | 13,100 | 11,930 | 16,100 | 4,230 | 528   | 3,250    | 4,220    |
| CAL YR 1973 | TOTAL | 162,980.50 | MEAN   | 447    | MAX    | 4,180  | MIN    | .18    | CFSM  | 2.55  | IN       | 34.64    |
| WTR YR 1974 | TOTAL | 85,743.29  | MEAN   | 235    | MAX    | 2,900  | MIN    | .12    | CFSM  | 1.34  | IN       | 18.23    |
|             |       |            |        |        |        |        |        |        |       | AC-FT | 323,300  |          |
|             |       |            |        |        |        |        |        |        |       | AC-FT | 170,100  |          |

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, on downstream side of second pier right of left abutment of bridge on State Highway 114, 1.5 mi (2.4 km) downstream from Little River ditch 39, and 2 mi (3.2 km) west of Morehouse.

DRAINAGE AREA.--450 mi<sup>2</sup> (1,166 km<sup>2</sup>).

PERIOD OF RECORD.--October 1945 to current year. Prior to January 1946 monthly discharge only, published in WSP 1311.

GAGE.--Water-stage recorder. Datum of gage is 280.76 ft (85.576 m) above mean sea level. Prior to Nov. 17, 1949, June 11, 1951 to Feb. 22, 1962, nonrecording gage at same site and datum. Nov. 17, 1949, to June 10, 1951, nonrecording gage at site 50 ft (15.2 m) downstream at present datum.

AVERAGE DISCHARGE.--29 years, 518 ft<sup>3</sup>/s (14.7 m<sup>3</sup>/s), 15.63 in/yr (397 mm/yr), 375,300 acre-ft/yr (463 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum daily discharge, 5,000 ft<sup>3</sup>/s (142 m<sup>3</sup>/s) Nov. 27; maximum gage height observed, 15.86 ft (4.834 m) Nov. 28; minimum, 87 ft<sup>3</sup>/s (2.46 m<sup>3</sup>/s) Aug. 8, 9, 10 (gage height 3.64 ft or 1.109 m).  
Period of record: Maximum discharge, 8,250 ft<sup>3</sup>/s (234 m<sup>3</sup>/s) May 10, 1961 (gage height, 19.35 ft or 5.898 m); maximum gage height, 19.81 ft (6.038 m) Mar. 11, 1964; minimum discharge, 21 ft<sup>3</sup>/s (0.59 m<sup>3</sup>/s) Sept. 18, 1954 (gage height, 3.13 ft or 0.954 m).  
Flood in June 1945 reached a stage of 19.85 ft (6.050 m) from floodmark (discharge, 5,830 ft<sup>3</sup>/s or 165.1 m<sup>3</sup>/s).

REMARKS.--Records fair. This Little River ditch 1 flows into Little River ditch 251 at point 35.3 mi (56.8 km) downstream, and is independent of the ditch for which records are published as Little River ditch 1 near Kennett.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY         | OCT           | NOV        | DEC       | JAN    | FEB       | MAR      | APR           | MAY    | JUN    | JUL   | AUG    | SEP    |
|-------------|---------------|------------|-----------|--------|-----------|----------|---------------|--------|--------|-------|--------|--------|
| 1           | 110           | 146        | 2,990     | 1,470  | 814       | 368      | 350           | 816    | 303    | 173   | 97     | 518    |
| 2           | 108           | 139        | 2,440     | 891    | 608       | 337      | 348           | 953    | 280    | 165   | 98     | 351    |
| 3           | 110           | 129        | 1,890     | 504    | 482       | 312      | 369           | 866    | 265    | 160   | 99     | 272    |
| 4           | 108           | 127        | 2,640     | 394    | 411       | 298      | 364           | 592    | 249    | 157   | 97     | 219    |
| 5           | 115           | 129        | 3,030     | 337    | 371       | 297      | 347           | 454    | 243    | 159   | 95     | 183    |
| 6           | 110           | 128        | 1,860     | 301    | 369       | 391      | 347           | 379    | 237    | 152   | 93     | 166    |
| 7           | 125           | 126        | 1,480     | 279    | 371       | 550      | 345           | 322    | 508    | 147   | 91     | 154    |
| 8           | 132           | 125        | 1,200     | 264    | 364       | 441      | 386           | 293    | 813    | 151   | 89     | 145    |
| 9           | 112           | 124        | 761       | 349    | 345       | 370      | 529           | 278    | 640    | 167   | 87     | 140    |
| 10          | 109           | 123        | 435       | 1,210  | 324       | 610      | 433           | 344    | 491    | 158   | 94     | 151    |
| 11          | 110           | 123        | 321       | 1,720  | 303       | 1,880    | 353           | 327    | 376    | 149   | 92     | 597    |
| 12          | 111           | 122        | 283       | 1,190  | 291       | 2,120    | 573           | 303    | 318    | 152   | 93     | 688    |
| 13          | 117           | 123        | 260       | 868    | 280       | 1,490    | 940           | 261    | 281    | 152   | 93     | 470    |
| 14          | 121           | 124        | 227       | 676    | 267       | 1,190    | 823           | 267    | 255    | 145   | 95     | 383    |
| 15          | 122           | 123        | 212       | 838    | 256       | 831      | 582           | 3,160  | 561    | 141   | 96     | 284    |
| 16          | 118           | 120        | 197       | 1,890  | 252       | 757      | 404           | 3,300  | 947    | 136   | 96     | 233    |
| 17          | 115           | 117        | 184       | 2,060  | 247       | 600      | 332           | 2,330  | 672    | 132   | 145    | 190    |
| 18          | 113           | 118        | 178       | 1,680  | 244       | 500      | 305           | 1,820  | 484    | 129   | 873    | 165    |
| 19          | 113           | 118        | 196       | 1,460  | 290       | 446      | 282           | 1,190  | 354    | 128   | 575    | 149    |
| 20          | 112           | 120        | 495       | 2,140  | 352       | 491      | 259           | 659    | 291    | 123   | 345    | 140    |
| 21          | 112           | 152        | 514       | 3,450  | 626       | 1,000    | 474           | 469    | 257    | 123   | 281    | 133    |
| 22          | 113           | 200        | 393       | 2,370  | 3,430     | 1,180    | 2,130         | 730    | 236    | 119   | 224    | 126    |
| 23          | 113           | 800        | 335       | 1,690  | 2,830     | 782      | 2,060         | 1,890  | 217    | 117   | 184    | 122    |
| 24          | 114           | 2,000      | 1,220     | 1,410  | 1,780     | 585      | 1,490         | 1,480  | 201    | 117   | 177    | 120    |
| 25          | 113           | 3,000      | 4,150     | 1,000  | 1,390     | 485      | 1,060         | 1,210  | 198    | 112   | 189    | 118    |
| 26          | 112           | 4,000      | 4,200     | 853    | 959       | 456      | 670           | 965    | 195    | 114   | 153    | 118    |
| 27          | 116           | 5,000      | 3,910     | 1,440  | 590       | 422      | 460           | 689    | 187    | 110   | 136    | 118    |
| 28          | 121           | 4,370      | 2,850     | 1,900  | 441       | 388      | 373           | 498    | 182    | 109   | 159    | 118    |
| 29          | 120           | 4,110      | 2,810     | 2,200  | -----     | 372      | 329           | 403    | 178    | 105   | 434    | 361    |
| 30          | 119           | 3,670      | 2,860     | 1,490  | -----     | 386      | 323           | 351    | 175    | 101   | 1,090  | 636    |
| 31          | 126           | -----      | 1,970     | 1,160  | -----     | 366      | -----         | 322    | -----  | 100   | 947    | -----  |
| TOTAL       | 3,570         | 29,806     | 46,491    | 39,484 | 19,287    | 20,701   | 18,040        | 27,921 | 10,594 | 4,203 | 7,417  | 7,568  |
| MEAN        | 115           | 994        | 1,500     | 1,274  | 689       | 668      | 601           | 901    | 353    | 136   | 239    | 252    |
| MAX         | 132           | 5,000      | 4,200     | 3,450  | 3,430     | 2,120    | 2,130         | 3,300  | 947    | 173   | 1,090  | 688    |
| MIN         | 108           | 117        | 178       | 264    | 244       | 297      | 259           | 261    | 175    | 100   | 87     | 118    |
| CFSM        | .26           | 2.21       | 3.33      | 2.83   | 1.53      | 1.48     | 1.34          | 2.00   | .78    | .30   | .53    | .56    |
| IN.         | .30           | 2.46       | 3.84      | 3.26   | 1.59      | 1.71     | 1.49          | 2.31   | .88    | .35   | .61    | .63    |
| AC-FT       | 7,080         | 59,120     | 92,210    | 78,320 | 38,260    | 41,060   | 35,780        | 55,380 | 21,010 | 8,340 | 14,710 | 15,010 |
| CAL YR 1973 | TOTAL 399,741 | MEAN 1,095 | MAX 5,810 | MIN 98 | CFSM 2.43 | IN 33.05 | AC-FT 792,900 |        |        |       |        |        |
| WTR YR 1974 | TOTAL 235,082 | MEAN 644   | MAX 5,000 | MIN 87 | CFSM 1.43 | IN 19.43 | AC-FT 466,300 |        |        |       |        |        |



07044000 Little River ditch 251 near Kennett, Mo.

LOCATION.--36°14'08", long 89°58'45", in NW¼ sec.3, T.18 N., R.10 E., Dunklin County, on downstream side of bridge on State Highway 84, and 4 mi (6.4 km) east of Kennett.

DRAINAGE AREA.--883 mi<sup>2</sup> (2,287 km<sup>2</sup>), includes that of Little River ditch 66.

PERIOD OF RECORD.--November 1926 to current year.

GAGE.--Nonrecording gage. Datum of gage is 241.00 ft (73.457 m) above mean sea level (Corps of Engineers bench mark). Prior to Oct. 20, 1966, at site 100 ft (30.5 m) upstream at present datum.

AVERAGE DISCHARGE.--47 years, 698 ft<sup>3</sup>/s (19.77 m<sup>3</sup>/s), 505,700 acre-ft/yr (624 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 4,700 ft<sup>3</sup>/s (133 m<sup>3</sup>/s) Nov. 27 (gage height, 14.59 ft or 4.447 m); minimum, 64 ft<sup>3</sup>/s (1.81 m<sup>3</sup>/s) Nov. 13 (gage height, 1.57 ft or 0.478 m).  
Period of record: Maximum discharge, 8,380 ft<sup>3</sup>/s (237 m<sup>3</sup>/s) Nov. 20, 1957 (gage height, 21.18 ft or 6.456 m); maximum gage height, 21.80 ft (6.644 m) Mar. 11, 1964; minimum discharge, 22 ft<sup>3</sup>/s (0.62 m<sup>3</sup>/s) Sept. 23, 1969 (gage height, 1.59 ft or 0.485 m).

REMARKS.--Records fair. Since Oct. 27, 1965 some base flow has been diverted into ditch 66. Little River ditch 66 diverts water 7.6 mi (12.23 km) upstream. Ditches 66 and 66-A made one ditch in vicinity of gage on May 12, 1965. Prior to April 1951, above discharges of about 4,000 ft<sup>3</sup>/s (113.3 m<sup>3</sup>/s), a spillway 6.3 mi (10.1 km) upstream diverted water from ditches 66, 66-A and 251 to Little River ditch 1. On Mar. 11, 1964 old spillway between Cotton Belt and Frisco Railroads upstream near Peach Orchard was blasted to divert floodwater.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT   | NOV    | DEC    | JAN    | FEB    | MAR    | APR    | MAY    | JUN    | JUL    | AUG    | SEP    |
|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1     | 83    | 82     | 2,470  | 1,330  | 781    | 443    | 312    | 252    | 292    | 203    | 69     | 489    |
| 2     | 74    | 88     | 1,980  | 940    | 656    | 376    | 312    | 333    | 376    | 212    | 67     | 376    |
| 3     | 71    | 89     | 1,560  | 940    | 512    | 354    | 272    | 466    | 272    | 194    | 163    | 489    |
| 4     | 69    | 76     | 1,440  | 1,300  | 466    | 354    | 272    | 512    | 232    | 186    | 744    | 900    |
| 5     | 78    | 85     | 2,120  | 1,120  | 398    | 376    | 272    | 398    | 203    | 176    | 398    | 656    |
| 6     | 72    | 85     | 1,880  | 681    | 376    | 333    | 252    | 333    | 376    | 203    | 142    | 443    |
| 7     | 74    | 76     | 1,270  | 398    | 376    | 376    | 232    | 272    | 822    | 168    | 96     | 312    |
| 8     | 75    | 79     | 940    | 354    | 354    | 466    | 252    | 242    | 1,980  | 203    | 78     | 203    |
| 9     | 86    | 79     | 756    | 354    | 376    | 420    | 272    | 242    | 1,560  | 466    | 75     | 126    |
| 10    | 75    | 71     | 584    | 1,190  | 354    | 354    | 312    | 272    | 1,060  | 333    | 71     | 103    |
| 11    | 68    | 71     | 443    | 2,860  | 333    | 833    | 292    | 333    | 731    | 194    | 74     | 96     |
| 12    | 69    | 71     | 376    | 2,330  | 333    | 1,980  | 292    | 376    | 536    | 354    | 72     | 126    |
| 13    | 79    | 64     | 333    | 1,330  | 312    | 1,390  | 312    | 272    | 398    | 232    | 69     | 272    |
| 14    | 85    | 67     | 333    | 940    | 312    | 910    | 466    | 232    | 312    | 176    | 82     | 272    |
| 15    | 79    | 65     | 312    | 833    | 292    | 756    | 443    | 680    | 292    | 134    | 126    | 232    |
| 16    | 75    | 78     | 272    | 1,030  | 272    | 584    | 354    | 2,330  | 466    | 118    | 110    | 168    |
| 17    | 72    | 65     | 272    | 1,420  | 272    | 632    | 272    | 1,770  | 632    | 118    | 92     | 124    |
| 18    | 69    | 68     | 252    | 1,300  | 252    | 489    | 242    | 1,490  | 489    | 110    | 306    | 110    |
| 19    | 68    | 186    | 252    | 1,090  | 272    | 466    | 232    | 1,060  | 354    | 96     | 1,060  | 96     |
| 20    | 67    | 212    | 443    | 1,060  | 292    | 443    | 212    | 756    | 292    | 96     | 781    | 85     |
| 21    | 65    | 176    | 584    | 2,360  | 413    | 420    | 245    | 466    | 252    | 93     | 398    | 96     |
| 22    | 65    | 512    | 489    | 2,300  | 1,510  | 656    | 1,000  | 676    | 222    | 90     | 222    | 142    |
| 23    | 65    | 312    | 443    | 1,630  | 2,190  | 781    | 2,050  | 1,240  | 292    | 86     | 150    | 96     |
| 24    | 65    | 1,060  | 536    | 1,560  | 1,660  | 584    | 1,630  | 1,120  | 272    | 84     | 118    | 85     |
| 25    | 67    | 3,250  | 2,470  | 1,060  | 1,060  | 443    | 1,120  | 859    | 252    | 82     | 96     | 81     |
| 26    | 67    | 4,400  | 3,720  | 781    | 781    | 376    | 833    | 632    | 252    | 79     | 150    | 79     |
| 27    | 67    | 4,630  | 3,860  | 885    | 632    | 354    | 656    | 584    | 242    | 222    | 124    | 82     |
| 28    | 74    | 4,260  | 3,080  | 1,180  | 489    | 333    | 512    | 398    | 232    | 194    | 103    | 82     |
| 29    | 74    | 3,700  | 2,430  | 1,770  | -----  | 333    | 398    | 354    | 222    | 103    | 93     | 96     |
| 30    | 74    | 3,030  | 2,780  | 1,460  | -----  | 333    | 312    | 333    | 203    | 82     | 159    | 398    |
| 31    | 88    | -----  | 2,120  | 1,000  | -----  | 312    | -----  | 292    | -----  | 72     | 354    | -----  |
| TOTAL | 2,259 | 27,087 | 40,800 | 38,786 | 16,326 | 17,260 | 14,633 | 19,575 | 14,116 | 5,159  | 6,642  | 6,915  |
| MEAN  | 72.9  | 903    | 1,316  | 1,251  | 583    | 557    | 488    | 631    | 471    | 166    | 214    | 231    |
| MAX   | 88    | 4,630  | 3,860  | 2,860  | 2,190  | 1,980  | 2,050  | 2,330  | 1,980  | 466    | 1,060  | 900    |
| MIN   | 65    | 64     | 252    | 354    | 252    | 312    | 212    | 232    | 203    | 72     | 67     | 79     |
| AC-FT | 4,480 | 53,730 | 80,930 | 76,930 | 32,380 | 34,240 | 29,020 | 38,830 | 28,000 | 10,230 | 13,170 | 13,720 |

CAL YR 1973 TOTAL 337,919 MEAN 926 MAX 6,070 MIN 64 AC-FT 670,300  
WTR YR 1974 TOTAL 209,558 MEAN 574 MAX 4,630 MIN 64 AC-FT 415,700

07045000 Little River ditch 66 near Kennett, Mo.

LOCATION.--Lat 36°14'09", long 89°58'48", in NE¼ sec.4, T.18 N., R.10 E., Dunklin County, on downstream side of bridge on State Highway 84, and 4 mi (6.4 km) east of Kennett.

PERIOD OF RECORD.--October 1926 to current year.

GAGE.--Nonrecording gage. Datum of gage is 241.00 ft (73.457 m) above mean sea level (Corps of Engineers bench mark). Prior to Oct. 20, 1966, at site 100 ft (30 m) upstream at present datum.

AVERAGE DISCHARGE.--48 years, 365 ft<sup>3</sup>/s (10.34 m<sup>3</sup>/s), 264,400 acre-ft/yr (325.6 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 7,080 ft<sup>3</sup>/s (201 m<sup>3</sup>/s) Nov. 27 (gage height, 14.42 ft or 4.395 m); minimum observed, 170 ft<sup>3</sup>/s (4.81 m<sup>3</sup>/s) Oct. 4, Nov. 13, 14; minimum gage height, 1.10 ft (0.335 m) Oct. 4.

Period of record: Maximum discharge, 8,610 ft<sup>3</sup>/s (243.8 m<sup>3</sup>/s) Apr. 24, 1973 (gage height, 16.30 ft or 4.968 m); maximum gage height, 21.79 ft (6.642 m) Mar. 11, 1964; no flow at times 1944-65.

REMARKS.--Records fair. Ditches 66 and 66-A made one ditch in vicinity of gage on May 12, 1965. Little River ditch 66 heads in Little River ditch 251 at a point 7.6 mi (12.2 km) upstream. Since Oct. 27, 1965 some base flow received from ditch 251.

REVISIONS (WATER YEARS).--WSP 877: 1938.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY         | OCT    | NOV     | DEC     | JAN     | FEB    | MAR    | APR    | MAY    | JUN    | JUL     | AUG    | SEP    |
|-------------|--------|---------|---------|---------|--------|--------|--------|--------|--------|---------|--------|--------|
| 1           | 192    | 227     | 3,420   | 1,980   | 1,260  | 623    | 557    | 525    | 525    | 388     | 239    | 725    |
| 2           | 181    | 227     | 2,730   | 1,540   | 1,060  | 525    | 557    | 623    | 525    | 359     | 215    | 525    |
| 3           | 181    | 215     | 2,230   | 1,460   | 865    | 493    | 493    | 830    | 493    | 359     | 388    | 493    |
| 4           | 170    | 204     | 1,920   | 1,630   | 795    | 493    | 493    | 865    | 462    | 359     | 1,010  | 462    |
| 5           | 181    | 204     | 2,970   | 1,930   | 725    | 525    | 525    | 725    | 462    | 332     | 525    | 345    |
| 6           | 181    | 192     | 2,750   | 1,180   | 725    | 493    | 493    | 623    | 493    | 388     | 318    | 304    |
| 7           | 181    | 204     | 1,780   | 725     | 657    | 493    | 462    | 557    | 990    | 345     | 278    | 278    |
| 8           | 181    | 204     | 1,420   | 623     | 657    | 590    | 462    | 493    | 2,240  | 373     | 252    | 252    |
| 9           | 204    | 192     | 1,260   | 657     | 691    | 525    | 462    | 493    | 1,680  | 557     | 252    | 252    |
| 10          | 192    | 192     | 940     | 1,360   | 623    | 493    | 590    | 525    | 1,100  | 388     | 239    | 239    |
| 11          | 181    | 204     | 725     | 3,900   | 657    | 1,150  | 525    | 590    | 830    | 388     | 239    | 239    |
| 12          | 181    | 192     | 623     | 3,300   | 623    | 2,360  | 525    | 525    | 657    | 388     | 239    | 304    |
| 13          | 192    | 170     | 590     | 1,730   | 623    | 1,880  | 525    | 493    | 590    | 345     | 239    | 493    |
| 14          | 204    | 170     | 590     | 1,340   | 590    | 1,340  | 760    | 462    | 525    | 332     | 252    | 462    |
| 15          | 192    | 181     | 557     | 1,220   | 557    | 1,100  | 725    | 983    | 525    | 304     | 318    | 388    |
| 16          | 181    | 181     | 525     | 1,500   | 557    | 940    | 657    | 2,970  | 691    | 291     | 304    | 332    |
| 17          | 192    | 181     | 493     | 2,030   | 525    | 1,020  | 525    | 3,000  | 940    | 291     | 265    | 291    |
| 18          | 181    | 192     | 493     | 1,980   | 525    | 830    | 462    | 2,080  | 795    | 278     | 496    | 265    |
| 19          | 181    | 227     | 462     | 1,630   | 525    | 760    | 462    | 1,580  | 657    | 265     | 1,060  | 252    |
| 20          | 181    | 215     | 590     | 1,540   | 557    | 691    | 432    | 1,180  | 590    | 275     | 725    | 227    |
| 21          | 181    | 252     | 795     | 3,300   | 691    | 725    | 432    | 830    | 525    | 290     | 432    | 252    |
| 22          | 181    | 345     | 760     | 3,300   | 1,740  | 1,020  | 462    | 900    | 462    | 280     | 373    | 318    |
| 23          | 181    | 291     | 725     | 2,380   | 2,920  | 1,220  | 2,200  | 1,420  | 462    | 270     | 332    | 252    |
| 24          | 181    | 1,320   | 889     | 1,980   | 2,280  | 940    | 1,930  | 1,500  | 432    | 250     | 291    | 227    |
| 25          | 192    | 4,950   | 3,350   | 1,500   | 1,500  | 760    | 1,340  | 1,300  | 416    | 260     | 278    | 215    |
| 26          | 181    | 6,760   | 5,800   | 1,220   | 1,180  | 691    | 657    | 1,060  | 416    | 280     | 304    | 215    |
| 27          | 181    | 7,010   | 6,000   | 1,500   | 830    | 657    | 657    | 900    | 402    | 340     | 278    | 215    |
| 28          | 204    | 6,550   | 4,620   | 1,580   | 725    | 657    | 691    | 760    | 402    | 500     | 265    | 215    |
| 29          | 204    | 5,340   | 3,450   | 1,980   | -----  | 590    | 590    | 657    | 388    | 640     | 252    | 252    |
| 30          | 192    | 4,260   | 3,960   | 2,130   | -----  | 557    | 557    | 623    | 359    | 410     | 345    | 462    |
| 31          | 204    | -----   | 3,060   | 1,540   | -----  | 557    | -----  | 590    | -----  | 290     | 257    | -----  |
| TOTAL       | 5,792  | 41,052  | 60,477  | 55,665  | 25,663 | 25,698 | 20,208 | 30,662 | 20,034 | 10,815  | 11,260 | 9,751  |
| MEAN        | 187    | 1,368   | 1,951   | 1,796   | 917    | 829    | 674    | 989    | 668    | 349     | 363    | 325    |
| MAX         | 204    | 7,010   | 6,000   | 3,900   | 2,920  | 2,360  | 2,200  | 3,000  | 2,240  | 640     | 1,060  | 725    |
| MIN         | 170    | 170     | 462     | 623     | 525    | 493    | 432    | 462    | 359    | 250     | 215    | 215    |
| AC-FT       | 11,490 | 81,430  | 120,000 | 110,400 | 50,900 | 50,970 | 40,080 | 60,820 | 39,740 | 21,450  | 22,330 | 19,340 |
| CAL YR 1973 | TOTAL  | 495,346 | MEAN    | 1,357   | MAX    | 8,610  | MIN    | 170    | AC-FT  | 982,500 |        |        |
| WTR YR 1974 | TOTAL  | 317,077 | MEAN    | 869     | MAX    | 7,010  | MIN    | 170    | AC-FT  | 628,900 |        |        |

LOCATION.--Lat 36°14'08", long 89°58'41", in NW¼ sec.3, T.18 N., R.10 E., Dunklin County, on downstream side of bridge on State Highway 84, and 4 mi (6.4 km) east of Kennett.

PERIOD OF RECORD.--November 1926 to current year.

GAGE.--Nonrecording gage. Datum of gage is 241.00 ft (73.457 m) above mean sea level (Corps of Engineers bench mark). Prior to Oct. 20, 1966, at site 100 ft (30.5 m) upstream at present datum.

EXTREMES.--Current year: Maximum discharge, 2,850 ft<sup>3</sup>/s (80.7 m<sup>3</sup>/s) Nov. 26; maximum gage height, 12.15 ft (3.703 m), Nov. 27; minimum, 6.6 ft<sup>3</sup>/s (0.187 m<sup>3</sup>/s) Nov. 9 (gage height, -0.87 ft or -0.265 m).  
Period of record: Maximum discharge, 4,140 ft<sup>3</sup>/s (117 m<sup>3</sup>/s), including some overflow from levee breaks on Mississippi River, Apr. 29, 1927 (gage height, 15.57 ft or 4.746 m); no flow on many days in 1936. 1944-45. 1952-53.

REMARKS.--Records fair. Discharge affected by drainage from rice fields.

REVISIONS (WATER YEARS).--WSP 1281: 1932.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY         | OCT   | NOV       | DEC    | JAN    | FEB   | MAR   | APR    | MAY   | JUN   | JUL     | AUG   | SEP   |
|-------------|-------|-----------|--------|--------|-------|-------|--------|-------|-------|---------|-------|-------|
| 1           | 10    | 8.4       | 1,660  | 102    | 75    | 38    | 39     | 43    | 160   | 26      | 15    | 18    |
| 2           | 11    | 8.0       | 658    | 81     | 67    | 38    | 34     | 45    | 116   | 26      | 14    | 79    |
| 3           | 10    | 7.7       | 263    | 74     | 59    | 37    | 33     | 43    | 52    | 26      | 16    | 445   |
| 4           | 9.6   | 8.4       | 528    | 68     | 53    | 36    | 30     | 42    | 39    | 25      | 18    | 268   |
| 5           | 9.2   | 15        | 430    | 64     | 54    | 35    | 30     | 40    | 46    | 24      | 18    | 78    |
| 6           | 9.2   | 12        | 164    | 59     | 55    | 116   | 29     | 39    | 98    | 24      | 16    | 44    |
| 7           | 9.6   | 9.6       | 102    | 57     | 50    | 95    | 28     | 37    | 666   | 79      | 15    | 30    |
| 8           | 9.6   | 11        | 81     | 77     | 49    | 49    | 60     | 36    | 1,150 | 415     | 18    | 28    |
| 9           | 9.6   | 6.6       | 71     | 310    | 47    | 37    | 82     | 34    | 360   | 347     | 18    | 24    |
| 10          | 9.6   | 8.0       | 64     | 1,010  | 44    | 70    | 39     | 528   | 120   | 140     | 18    | 23    |
| 11          | 9.6   | 10        | 59     | 1,710  | 43    | 373   | 33     | 445   | 77    | 46      | 18    | 22    |
| 12          | 11    | 8.0       | 56     | 762    | 43    | 360   | 116    | 95    | 75    | 30      | 18    | 20    |
| 13          | 14    | 7.7       | 54     | 200    | 42    | 120   | 75     | 51    | 55    | 27      | 16    | 24    |
| 14          | 12    | 8.0       | 50     | 148    | 43    | 74    | 40     | 66    | 88    | 25      | 20    | 20    |
| 15          | 11    | 8.4       | 50     | 225    | 39    | 55    | 34     | 428   | 347   | 24      | 18    | 24    |
| 16          | 10    | 9.2       | 47     | 334    | 46    | 49    | 31     | 582   | 182   | 22      | 18    | 22    |
| 17          | 10    | 9.2       | 43     | 258    | 42    | 55    | 28     | 206   | 63    | 22      | 23    | 20    |
| 18          | 10    | 88        | 43     | 173    | 40    | 46    | 28     | 95    | 49    | 22      | 38    | 18    |
| 19          | 10    | 236       | 90     | 144    | 160   | 55    | 27     | 64    | 43    | 20      | 69    | 18    |
| 20          | 9.6   | 140       | 268    | 390    | 98    | 136   | 28     | 52    | 41    | 20      | 36    | 18    |
| 21          | 9.6   | 373       | 128    | 582    | 208   | 200   | 478    | 46    | 37    | 20      | 26    | 19    |
| 22          | 9.2   | 215       | 77     | 230    | 983   | 120   | 2,050  | 148   | 36    | 20      | 22    | 18    |
| 23          | 9.2   | 255       | 92     | 347    | 373   | 58    | 880    | 334   | 34    | 22      | 20    | 18    |
| 24          | 9.2   | 1,560     | 785    | 230    | 116   | 50    | 719    | 116   | 32    | 20      | 19    | 18    |
| 25          | 9.6   | 2,450     | 2,330  | 109    | 64    | 40    | 148    | 67    | 30    | 19      | 18    | 16    |
| 26          | 9.2   | 2,780     | 1,950  | 95     | 52    | 39    | 80     | 64    | 30    | 18      | 18    | 16    |
| 27          | 9.6   | 2,710     | 1,540  | 360    | 46    | 37    | 64     | 49    | 29    | 18      | 19    | 17    |
| 28          | 9.2   | 2,710     | 658    | 461    | 38    | 36    | 54     | 43    | 28    | 19      | 18    | 18    |
| 29          | 8.8   | 2,640     | 347    | 322    | ----- | 35    | 50     | 31    | 28    | 18      | 18    | 18    |
| 30          | 9.2   | 2,390     | 360    | 132    | ----- | 34    | 47     | 51    | 28    | 16      | 18    | 18    |
| 31          | 7.3   | -----     | 168    | 92     | ----- | 44    | -----  | 44    | ----- | 16      | 18    | ----- |
| TOTAL       | 304.7 | 18,702.2  | 13,216 | 9,206  | 3,029 | 2,567 | 5,414  | 3,964 | 4,139 | 1,596   | 654   | 1,419 |
| MEAN        | 9.83  | 623       | 426    | 297    | 108   | 82.8  | 180    | 128   | 138   | 51.5    | 21.1  | 47.3  |
| MAX         | 14    | 2,780     | 2,330  | 1,710  | 983   | 373   | 2,050  | 582   | 1,150 | 415     | 69    | 445   |
| MIN         | 7.3   | 6.6       | 43     | 57     | 38    | 34    | 27     | 31    | 28    | 16      | 14    | 16    |
| AC-FT       | 604   | 37,100    | 26,210 | 18,260 | 6,010 | 5,090 | 10,740 | 7,860 | 8,210 | 3,170   | 1,300 | 2,810 |
| CAL YR 1973 | TOTAL | 110,570.1 | MEAN   | 303    | MAX   | 3,680 | MIN    | 6.6   | AC-FT | 219,300 |       |       |
| WTR YR 1974 | TOTAL | 64,210.9  | MEAN   | 176    | MAX   | 2,780 | MIN    | 6.6   | AC-FT | 127,400 |       |       |

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, on right bank 15 ft (5 m) downstream from bridge on county road, 1.6 mi (2.6 km) downstream from County Line Damsite, 1 mi (1.6 km) downstream from Davis Creek and 4 mi (6.4 km) south of Strafford.

DRAINAGE AREA.--165 mi<sup>2</sup> (427 km<sup>2</sup>)

PERIOD OF RECORD.--October 1973 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1210 ft (369 m) above mean sea level.

EXTREMES.--Current year: Maximum discharge, 9,810 ft<sup>3</sup>/s (278 m<sup>3</sup>/s), Nov. 25 (gage height, 14.92 ft or 4.548 m); minimum recorded discharge, 7.8 ft<sup>3</sup>/s (0.221 m<sup>3</sup>/s), Aug 4 (gage height 2.18 ft or 0.664 m).

REMARKS.--Records fair.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT     | NOV    | DEC    | JAN    | FEB   | MAR    | APR    | MAY    | JUN    | JUL   | AUG   | SEP   |
|-------|---------|--------|--------|--------|-------|--------|--------|--------|--------|-------|-------|-------|
| 1     | 10      | 93     | 304    | 163    | 200   | 131    | 183    | 190    | 47     | 55    | 9.3   | 350   |
| 2     | 9.0     | 81     | 260    | 146    | 175   | 123    | 160    | 405    | 43     | 50    | 8.5   | 240   |
| 3     | 8.0     | 66     | 231    | 133    | 152   | 115    | 150    | 571    | 38     | 44    | 8.5   | 130   |
| 4     | 9.0     | 55     | 1,150  | 122    | 133   | 108    | 137    | 423    | 40     | 57    | 10    | 110   |
| 5     | 8.0     | 48     | 781    | 114    | 122   | 100    | 122    | 303    | 65     | 53    | 14    | 80    |
| 6     | 7.0     | 41     | 438    | 107    | 111   | 95     | 110    | 240    | 88     | 42    | 16    | 50    |
| 7     | 8.0     | 37     | 325    | 101    | 99    | 90     | 102    | 198    | 3,150  | 33    | 19    | 43    |
| 8     | 9.0     | 35     | 270    | 94     | 92    | 87     | 120    | 172    | 1,230  | 29    | 19    | 37    |
| 9     | 7.0     | 32     | 235    | 100    | 86    | 87     | 128    | 147    | 2,320  | 27    | 20    | 33    |
| 10    | 6.0     | 30     | 207    | 109    | 79    | 3,990  | 122    | 131    | 919    | 25    | 21    | 30    |
| 11    | 8.0     | 29     | 183    | 106    | 74    | 3,000  | 123    | 118    | 547    | 24    | 21    | 26    |
| 12    | 13      | 28     | 165    | 99     | 72    | 1,150  | 238    | 105    | 436    | 23    | 13    | 23    |
| 13    | 270     | 26     | 152    | 92     | 69    | 630    | 227    | 91     | 370    | 21    | 12    | 22    |
| 14    | 160     | 25     | 140    | 90     | 67    | 437    | 205    | 310    | 320    | 18    | 11    | 22    |
| 15    | 90      | 24     | 129    | 102    | 64    | 912    | 178    | 519    | 280    | 21    | 10    | 20    |
| 16    | 60      | 24     | 118    | 330    | 63    | 976    | 161    | 286    | 240    | 20    | 10    | 23    |
| 17    | 42      | 24     | 111    | 370    | 60    | 524    | 144    | 207    | 200    | 18    | 10    | 22    |
| 18    | 35      | 23     | 103    | 310    | 60    | 399    | 130    | 166    | 170    | 17    | 11    | 20    |
| 19    | 30      | 22     | 116    | 250    | 171   | 343    | 117    | 137    | 140    | 15    | 11    | 30    |
| 20    | 26      | 25     | 153    | 230    | 219   | 323    | 107    | 113    | 130    | 14    | 11    | 154   |
| 21    | 23      | 32     | 153    | 210    | 191   | 348    | 139    | 97     | 120    | 14    | 10    | 110   |
| 22    | 20      | 46     | 153    | 190    | 362   | 420    | 715    | 87     | 110    | 14    | 21    | 90    |
| 23    | 19      | 48     | 165    | 170    | 321   | 516    | 469    | 77     | 100    | 16    | 19    | 70    |
| 24    | 17      | 3,670  | 1,420  | 151    | 250   | 405    | 309    | 70     | 95     | 14    | 18    | 50    |
| 25    | 16      | 4,990  | 784    | 135    | 200   | 371    | 239    | 64     | 90     | 15    | 15    | 45    |
| 26    | 15      | 1,920  | 462    | 184    | 175   | 399    | 196    | 74     | 85     | 18    | 13    | 38    |
| 27    | 260     | 990    | 345    | 440    | 157   | 365    | 167    | 73     | 80     | 16    | 17    | 36    |
| 28    | 151     | 715    | 278    | 429    | 144   | 318    | 145    | 67     | 75     | 16    | 21    | 33    |
| 29    | 94      | 490    | 239    | 380    | ----- | 277    | 128    | 61     | 70     | 14    | 26    | 32    |
| 30    | 71      | 376    | 210    | 293    | ----- | 236    | 158    | 56     | 60     | 12    | 27    | 29    |
| 31    | 70      | -----  | 187    | 237    | ----- | 208    | -----  | 51     | -----  | 10    | 24    | ----- |
| TOTAL | 1,571.0 | 14,045 | 9,967  | 5,987  | 3,968 | 17,483 | 5,629  | 5,609  | 11,658 | 765   | 476.3 | 1,998 |
| MEAN  | 50.7    | 468    | 322    | 193    | 142   | 564    | 188    | 181    | 389    | 24.7  | 15.4  | 66.6  |
| MAX   | 270     | 4,990  | 1,420  | 440    | 362   | 3,990  | 715    | 571    | 3,150  | 57    | 27    | 350   |
| MIN   | 6.0     | 22     | 103    | 90     | 60    | 87     | 102    | 51     | 38     | 10    | 8.5   | 20    |
| CFSM  | .31     | 2.84   | 1.95   | 1.17   | .86   | 3.42   | 1.14   | 1.10   | 2.36   | .15   | .09   | .40   |
| IN.   | .35     | 3.17   | 2.25   | 1.35   | .89   | 3.94   | 1.27   | 1.26   | 2.63   | .17   | .11   | .45   |
| AC-FT | 3,120   | 27,860 | 19,770 | 11,880 | 7,870 | 34,680 | 11,170 | 11,130 | 23,120 | 1,520 | 945   | 3,960 |

WTR YR 1974 TOTAL 79,156.3 MEAN 217 MAX 4,990 MIN 6.0 CFSM 1.32 IN 17.85 AC-FT 157,000

PEAK DISCHARGE (BASE, 3,000 FT<sup>3</sup>/S)

| DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|------|------|-------|-----------|
| 11-25 | 0130 | 14.92 | 9,810     | 6-7  | 0645 | 11.27 | 4,520     |
| 3-10  | 1315 | 12.82 | 5,980     |      |      |       |           |

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, on left bank on county road at Kinser bridge, 1.1 mi (1.8 km) downstream from Pearson Creek, and 2.5 mi (4.0 km) southeast of Springfield.

DRAINAGE AREA.--246 mi<sup>2</sup> (637 km<sup>2</sup>).

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

GAGE.--Water-stage recorder. Datum of gage is 1,143.27 ft (348.469 m) above mean sea level (levels by Corps of Engineers). Prior to Dec. 19, 1955, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--19 years, 211 ft<sup>3</sup>/s (5.98 m<sup>3</sup>/s), 11.65 in/yr (296 mm/yr), 152,900 acre-ft/yr (189 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 14,300 ft<sup>3</sup>/s (405 m<sup>3</sup>/s) Nov. 25 (gage height, 15.68 ft or 4.779 m); minimum, 13 ft<sup>3</sup>/s (0.368 m<sup>3</sup>/s) Oct. 10, 11; minimum, gage height 2.84 ft (0.866 m) Oct. 11.  
Period of record: Maximum discharge, 24,800 ft<sup>3</sup>/s (702 m<sup>3</sup>/s) Dec. 17, 1957 (gage height, 18.20 ft or 5.547 m); minimum, 0.1 ft<sup>3</sup>/s (0.003 m<sup>3</sup>/s) Sept. 16, 24, 25, 1956 (gage height, 2.18 ft or 0.664 m).  
Maximum stage known about 22 ft (6.7 m) in July 1909, from information by local resident.

REMARKS.--Records good.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT   | NOV    | DEC    | JAN    | FEB    | MAR    | APR    | MAY    | JUN    | JUL   | AUG   | SEP   |
|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|-------|-------|-------|
| 1     | 21    | 147    | 590    | 321    | 379    | 197    | 321    | 281    | 123    | 110   | 20    | 280   |
| 2     | 19    | 141    | 512    | 276    | 332    | 182    | 284    | 386    | 114    | 101   | 18    | 450   |
| 3     | 18    | 116    | 456    | 240    | 285    | 170    | 270    | 534    | 105    | 94    | 19    | 268   |
| 4     | 17    | 96     | 1,190  | 217    | 249    | 158    | 245    | 650    | 108    | 117   | 16    | 202   |
| 5     | 17    | 78     | 1,240  | 183    | 224    | 144    | 221    | 494    | 203    | 113   | 16    | 147   |
| 6     | 16    | 66     | 811    | 170    | 204    | 133    | 204    | 379    | 239    | 98    | 15    | 111   |
| 7     | 17    | 58     | 626    | 157    | 187    | 127    | 192    | 320    | 3,930  | 84    | 19    | 91    |
| 8     | 18    | 53     | 520    | 155    | 172    | 119    | 205    | 276    | 1,790  | 76    | 19    | 75    |
| 9     | 14    | 49     | 448    | 165    | 160    | 118    | 208    | 243    | 2,800  | 69    | 21    | 63    |
| 10    | 13    | 45     | 390    | 165    | 149    | 3,780  | 201    | 220    | 1,450  | 63    | 23    | 57    |
| 11    | 15    | 43     | 348    | 156    | 139    | 4,400  | 197    | 200    | 969    | 58    | 22    | 52    |
| 12    | 20    | 40     | 318    | 144    | 130    | 1,580  | 285    | 183    | 833    | 53    | 21    | 47    |
| 13    | 270   | 36     | 289    | 139    | 124    | 1,040  | 321    | 168    | 668    | 50    | 20    | 46    |
| 14    | 260   | 34     | 260    | 139    | 117    | 782    | 284    | 335    | 550    | 47    | 19    | 46    |
| 15    | 157   | 32     | 236    | 156    | 109    | 1,020  | 256    | 803    | 458    | 49    | 18    | 44    |
| 16    | 115   | 31     | 212    | 352    | 104    | 1,320  | 234    | 524    | 388    | 46    | 17    | 47    |
| 17    | 89    | 29     | 197    | 484    | 98     | 879    | 214    | 380    | 340    | 42    | 17    | 46    |
| 18    | 71    | 29     | 182    | 418    | 97     | 702    | 198    | 302    | 299    | 39    | 23    | 44    |
| 19    | 60    | 28     | 197    | 361    | 164    | 603    | 185    | 253    | 267    | 36    | 21    | 54    |
| 20    | 52    | 32     | 238    | 340    | 288    | 552    | 172    | 219    | 239    | 33    | 21    | 156   |
| 21    | 47    | 41     | 235    | 323    | 263    | 562    | 187    | 194    | 217    | 32    | 21    | 174   |
| 22    | 42    | 47     | 235    | 288    | 383    | 638    | 554    | 177    | 198    | 30    | 31    | 154   |
| 23    | 37    | 53     | 242    | 262    | 433    | 741    | 641    | 164    | 186    | 28    | 29    | 130   |
| 24    | 34    | 2,840  | 1,320  | 235    | 365    | 658    | 440    | 157    | 180    | 26    | 28    | 111   |
| 25    | 31    | 9,160  | 1,100  | 214    | 303    | 596    | 343    | 154    | 170    | 30    | 25    | 96    |
| 26    | 29    | 2,460  | 900    | 222    | 261    | 607    | 288    | 176    | 160    | 33    | 23    | 83    |
| 27    | 202   | 1,480  | 754    | 558    | 236    | 577    | 249    | 172    | 150    | 30    | 23    | 74    |
| 28    | 274   | 1,090  | 587    | 610    | 216    | 518    | 220    | 158    | 140    | 27    | 31    | 67    |
| 29    | 187   | 892    | 484    | 624    | -----  | 447    | 198    | 147    | 130    | 25    | 36    | 61    |
| 30    | 139   | 714    | 415    | 526    | -----  | 384    | 225    | 138    | 116    | 23    | 37    | 56    |
| 31    | 130   | -----  | 362    | 449    | -----  | 349    | -----  | 131    | -----  | 22    | 34    | ----- |
| TOTAL | 2,431 | 19,960 | 15,894 | 9,049  | 6,171  | 24,083 | 8,042  | 8,918  | 17,520 | 1,684 | 703   | 3,332 |
| MEAN  | 78.4  | 665    | 513    | 292    | 220    | 777    | 268    | 288    | 584    | 54.3  | 22.7  | 111   |
| MAX   | 274   | 9,160  | 1,320  | 624    | 433    | 4,400  | 641    | 803    | 3,930  | 117   | 37    | 450   |
| MIN   | 13    | 28     | 182    | 139    | 97     | 118    | 172    | 131    | 105    | 22    | 15    | 44    |
| CFSM  | .32   | 2.70   | 2.09   | 1.19   | .89    | 3.16   | 1.09   | 1.17   | 2.37   | .22   | .09   | .45   |
| IN.   | .37   | 3.02   | 2.40   | 1.37   | .93    | 3.64   | 1.22   | 1.35   | 2.65   | .25   | .11   | .50   |
| AC-FT | 4,820 | 39,590 | 31,530 | 17,950 | 12,240 | 47,770 | 15,950 | 17,690 | 34,750 | 3,340 | 1,390 | 6,610 |

CAL YR 1973 TOTAL 146,375.6 MEAN 401 MAX 9,160 MIN 6.7 CFSM 1.63 IN 22.13 AC-FT 290,300  
WTR YR 1974 TOTAL 117,787.0 MEAN 323 MAX 9,160 MIN 13 CFSM 1.31 IN 17.81 AC-FT 233,600

PEAK DISCHARGE (BASE, 4,000 FT<sup>3</sup>/S)

| DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|------|------|-------|-----------|
| 11-25 | 0645 | 15.68 | 14,300    | 6-7  | 1445 | 13.33 | 5,770     |
| 3-10  | 1700 | 14.14 | 8,340     |      |      |       |           |



07052100 Wilson Creek near Springfield, Mo.

LOCATION.--Lat. 37°10'06", long 93°22'14", in NE¼NE¼ sec.6, T.28 N., R.22 W., Greene County, on right bank just downstream from bridge on county road, 1 mi (1.6 km) upstream from Southwest Sewage Treatment Plant of Springfield and South Creek and in Springfield.

DRAINAGE AREA.--31.4 mi<sup>2</sup> (81.3 km<sup>2</sup>).

PERIOD OF RECORD.--October 1972 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,149.65 ft (350.413 m) above mean sea level.

EXTREMES.--Current year: Maximum discharge, 2,510 ft<sup>3</sup>/s (71.1 m<sup>3</sup>/s), Mar. 11 (gage height, 8.24 ft or 2.512 m); minimum, no flow on many days.

Period of record: Maximum discharge, 2,840 ft<sup>3</sup>/s (80.4 m<sup>3</sup>/s) Nov. 1, 1972 (gage height, 8.57 ft or 2.612 m); minimum, no flow at times most years.

REMARKS.--Records fair. Runoff affected by urbanized area. Records of water quality are published in Part 2 of this report.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT   | NOV     | DEC     | JAN    | FEB   | MAR     | APR    | MAY   | JUN     | JUL    | AUG    | SEP   |
|-------|-------|---------|---------|--------|-------|---------|--------|-------|---------|--------|--------|-------|
| 1     | 9.4   | 9.2     | 20      | 7.0    | 13    | 7.3     | 5.1    | 4.5   | 11      | 7.8    | .42    | 127   |
| 2     | 5.1   | 8.8     | 15      | 4.0    | 12    | 6.3     | 4.5    | 61    | 11      | 6.7    | .38    | 60    |
| 3     | 5.1   | 8.2     | 37      | 2.8    | 11    | 5.6     | 3.8    | 30    | 10      | 5.8    | 12     | 12    |
| 4     | 25    | 7.4     | 437     | 1.8    | 9.8   | 5.6     | 2.9    | 11    | 58      | 148    | .27    | 8.2   |
| 5     | 5.1   | 6.7     | 61      | 1.5    | 9.2   | 5.7     | 1.9    | 9.2   | 78      | 10     | .09    | 6.2   |
| 6     | 7.8   | 6.7     | 38      | 1.2    | 8.1   | 6.5     | .93    | 8.6   | 82      | 8.7    | 1.2    | 5.1   |
| 7     | 4.3   | 6.9     | 29      | .90    | 6.5   | 6.5     | .29    | 6.9   | 508     | 7.7    | 12     | 4.4   |
| 8     | 4.3   | 6.6     | 23      | .70    | 6.0   | 6.0     | 34     | 6.5   | 168     | 7.0    | 2.2    | 4.0   |
| 9     | 3.6   | 6.2     | 21      | .68    | 5.0   | 29      | 4.6    | 8.1   | 171     | 6.5    | 23     | 3.5   |
| 10    | 4.3   | 5.9     | 18      | .60    | 3.1   | 563     | 2.5    | 6.0   | 64      | 5.5    | 4.3    | 3.6   |
| 11    | 29    | 6.2     | 17      | .50    | 2.1   | 848     | 42     | 5.0   | 106     | 4.3    | 2.1    | 21    |
| 12    | 26    | 6.2     | 16      | .50    | 2.4   | 129     | 11     | 4.4   | 52      | 3.8    | 1.3    | 4.7   |
| 13    | 136   | 7.3     | 14      | .50    | 3.7   | 65      | 5.0    | 4.2   | 36      | 3.1    | 1.1    | 11    |
| 14    | 9.4   | 7.5     | 13      | 8.2    | 3.5   | 36      | 3.8    | 269   | 27      | 5.7    | .52    | 4.1   |
| 15    | 5.9   | 8.0     | 12      | 16     | 2.9   | 177     | 2.7    | 47    | 22      | 5.1    | .35    | 3.1   |
| 16    | 5.1   | 6.8     | 9.0     | 13     | 2.6   | 57      | 7.9    | 24    | 19      | 2.4    | .24    | 17    |
| 17    | 4.3   | 6.4     | 7.4     | 11     | 2.3   | 38      | 2.3    | 18    | 18      | .70    | 2.9    | 5.1   |
| 18    | 4.0   | 7.1     | 7.5     | 9.4    | 12    | 29      | 2.2    | 15    | 18      | .70    | 21     | 3.8   |
| 19    | 3.6   | 5.6     | 27      | 8.4    | 41    | 32      | 1.8    | 13    | 16      | .70    | 2.7    | 123   |
| 20    | 2.9   | 27      | 5.9     | 13     | 9.8   | 24      | .02    | 12    | 15      | .42    | 2.5    | 42    |
| 21    | 2.6   | 10      | 3.3     | 9.8    | 17    | 37      | 13     | 11    | 13      | .31    | 5.9    | 12    |
| 22    | 2.6   | 6.4     | 1.8     | 7.7    | 16    | 18      | 57     | 11    | 12      | .02    | 24     | 8.9   |
| 23    | 2.9   | 5.6     | 24      | 7.4    | 10    | 15      | 5.1    | 17    | 11      | .34    | 9.9    | 7.8   |
| 24    | 2.6   | 596     | 61      | 5.0    | 9.6   | 20      | 3.2    | 15    | 11      | .38    | 3.5    | 7.2   |
| 25    | 3.1   | 364     | 36      | 3.7    | 8.6   | 14      | 3.8    | 56    | 11      | 20     | 2.2    | 6.6   |
| 26    | 3.3   | 197     | 25      | 46     | 8.6   | 13      | 4.1    | 41    | 10      | 5.6    | 2.9    | 6.0   |
| 27    | 203   | 71      | 23      | 17     | 8.8   | 11      | 3.3    | 17    | 10      | 2.4    | 30     | 5.6   |
| 28    | 14    | 48      | 18      | 43     | 7.8   | 8.5     | 2.6    | 13    | 9.4     | 1.7    | 21     | 11    |
| 29    | 9.8   | 32      | 14      | 19     | ----- | 7.2     | 2.5    | 13    | 8.9     | 1.0    | 7.0    | 6.3   |
| 30    | 11    | 26      | 13      | 17     | ----- | 5.7     | 46     | 12    | 7.9     | .89    | 4.0    | 4.8   |
| 31    | 19    | -----   | 9.6     | 15     | ----- | 5.1     | -----  | 14    | -----   | .71    | 3.2    | ----- |
| TOTAL | 574.1 | 1,516.7 | 1,056.5 | 292.28 | 252.4 | 2,231.0 | 279.84 | 783.4 | 1,594.2 | 273.97 | 204.17 | 545.0 |
| MEAN  | 18.5  | 50.6    | 34.1    | 9.43   | 9.01  | 72.0    | 9.33   | 25.3  | 53.1    | 8.84   | 6.59   | 18.2  |
| MAX   | 203   | 596     | 437     | 46     | 41    | 848     | 57     | 269   | 508     | 148    | 30     | 127   |
| MIN   | 2.6   | 5.6     | 1.8     | .50    | 2.1   | 5.1     | .02    | 4.2   | 7.9     | .02    | .09    | 3.1   |
| AC-FT | 1,140 | 3,010   | 2,100   | 580    | 501   | 4,430   | 555    | 1,550 | 3,160   | 543    | 405    | 1,080 |

CAL YR 1973 TOTAL 11,421.00 MEAN 31.3 MAX 795 MIN 1.8 AC-FT 22,650  
WTR YR 1974 TOTAL 9,603.56 MEAN 26.3 MAX 848 MIN .02 AC-FT 19,050

PEAK DISCHARGE (BASE, 1,000 FT<sup>3</sup>/S)

| DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|------|------|-------|-----------|
| 11-25 | 0030 | 6.97  | 1,640     | 6-7  | 0215 | 6.36  | 1,360     |
| 12-4  | 0300 | 7.16  | 1,760     | 7-4  | 0745 | 6.09  | 1,180     |
| 3-11  | 0200 | 8.24  | 2,510     |      |      |       |           |

07052160 Wilson Creek near Battlefield, Mo.

LOCATION.--Lat 37°07'02", long 93°24'14", in SW¼NW¼ sec.24, T.28 N., R.23 W., Greene County, on left bank 300 ft (91 m) downstream from bridge on county road, 0.3 mi (0.5 km) upstream from McElhane Branch, and 1.8 mi (2.9 km) west of Battlefield.

DRAINAGE AREA.--55.0 mi<sup>2</sup> (142.4 km<sup>2</sup>).

PERIOD OF RECORD.--March 1968 to September 1970, October 1972 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,100 ft (335.3 m) above mean sea level. Prior to Sept. 20, 1972 at site 300 ft (91 m) upstream.

EXTREMES.--Current year: Maximum discharge, 2,820 ft<sup>3</sup>/s (79.9 m<sup>3</sup>/s), Mar. 11 (gage height, 9.13 ft or 2.783 m); minimum, 30 ft<sup>3</sup>/s (0.85 m<sup>3</sup>/s) Oct. 8, Aug. 26; minimum gage height, 1.80 ft (0.549 m) Aug. 26.  
Period of record.--Maximum discharge, 3,860 ft<sup>3</sup>/s (109 m<sup>3</sup>/s), Nov. 1, 1972 (gage height, 10.57 ft or 3.222 m); minimum, 7.6 ft<sup>3</sup>/s (0.22 m<sup>3</sup>/s) Aug. 25, 27, 29, 1970 (gage height, 1.42 ft or 0.432 m).

REMARKS.--Records fair. Natural flow partly regulated and affected by sewage effluent. Records of water-quality are published in Part 2 of this report.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT   | NOV    | DEC    | JAN   | FEB   | MAR    | APR   | MAY   | JUN    | JUL   | AUG   | SEP   |
|-------|-------|--------|--------|-------|-------|--------|-------|-------|--------|-------|-------|-------|
| 1     | 53    | 69     | 181    | 124   | 130   | 90     | 114   | 68    | 79     | 65    | 38    | 241   |
| 2     | 42    | 63     | 155    | 113   | 119   | 87     | 107   | 134   | 72     | 60    | 38    | 185   |
| 3     | 38    | 56     | 155    | 107   | 107   | 84     | 103   | 107   | 71     | 58    | 52    | 108   |
| 4     | 54    | 51     | 949    | 99    | 99    | 85     | 95    | 82    | 117    | 246   | 35    | 79    |
| 5     | 40    | 50     | 419    | 91    | 96    | 86     | 89    | 74    | 180    | 76    | 34    | 68    |
| 6     | 39    | 50     | 291    | 86    | 91    | 82     | 82    | 72    | 177    | 64    | 57    | 61    |
| 7     | 35    | 49     | 224    | 82    | 85    | 79     | 77    | 71    | 1,090  | 56    | 55    | 55    |
| 8     | 35    | 48     | 195    | 82    | 79    | 77     | 117   | 69    | 581    | 56    | 41    | 49    |
| 9     | 36    | 47     | 174    | 81    | 75    | 87     | 82    | 67    | 669    | 55    | 64    | 48    |
| 10    | 35    | 43     | 158    | 74    | 66    | 956    | 77    | 64    | 390    | 54    | 50    | 49    |
| 11    | 54    | 40     | 149    | 71    | 64    | 1,560  | 112   | 60    | 367    | 52    | 40    | 71    |
| 12    | 44    | 41     | 142    | 66    | 64    | 596    | 97    | 57    | 276    | 50    | 37    | 48    |
| 13    | 245   | 43     | 142    | 63    | 65    | 383    | 76    | 58    | 218    | 48    | 38    | 44    |
| 14    | 67    | 45     | 135    | 79    | 62    | 295    | 69    | 421   | 180    | 48    | 36    | 41    |
| 15    | 55    | 43     | 120    | 95    | 60    | 433    | 67    | 247   | 160    | 50    | 36    | 37    |
| 16    | 49    | 41     | 107    | 109   | 58    | 333    | 74    | 154   | 140    | 48    | 36    | 40    |
| 17    | 45    | 40     | 109    | 101   | 54    | 264    | 67    | 123   | 130    | 46    | 37    | 44    |
| 18    | 43    | 37     | 109    | 98    | 76    | 233    | 66    | 104   | 126    | 45    | 74    | 44    |
| 19    | 41    | 37     | 168    | 93    | 133   | 220    | 64    | 92    | 110    | 44    | 46    | 163   |
| 20    | 38    | 89     | 135    | 97    | 87    | 194    | 63    | 86    | 111    | 41    | 41    | 186   |
| 21    | 34    | 61     | 132    | 93    | 98    | 211    | 78    | 79    | 104    | 38    | 38    | 95    |
| 22    | 36    | 43     | 132    | 89    | 103   | 188    | 141   | 75    | 92     | 39    | 66    | 77    |
| 23    | 38    | 39     | 159    | 86    | 95    | 190    | 77    | 78    | 85     | 40    | 61    | 70    |
| 24    | 37    | 1,070  | 299    | 80    | 95    | 180    | 71    | 78    | 80     | 41    | 43    | 65    |
| 25    | 38    | 1,170  | 317    | 79    | 93    | 178    | 68    | 124   | 79     | 114   | 36    | 62    |
| 26    | 38    | 749    | 275    | 131   | 94    | 172    | 66    | 240   | 73     | 66    | 37    | 59    |
| 27    | 392   | 442    | 244    | 133   | 93    | 162    | 64    | 143   | 68     | 45    | 66    | 58    |
| 28    | 120   | 325    | 217    | 175   | 91    | 153    | 60    | 117   | 68     | 38    | 78    | 57    |
| 29    | 83    | 251    | 167    | 165   | ----- | 141    | 61    | 105   | 64     | 37    | 56    | 55    |
| 30    | 72    | 213    | 151    | 157   | ----- | 129    | 111   | 94    | 60     | 39    | 44    | 51    |
| 31    | 86    | -----  | 139    | 143   | ----- | 117    | ----- | 92    | -----  | 38    | 40    | ----- |
| TOTAL | 2,062 | 5,345  | 6,449  | 3,142 | 2,432 | 8,045  | 2,495 | 3,435 | 6,017  | 1,797 | 1,450 | 2,310 |
| MEAN  | 66.5  | 178    | 208    | 101   | 86.9  | 260    | 83.2  | 111   | 201    | 58.0  | 46.8  | 77.0  |
| MAX   | 392   | 1,170  | 949    | 175   | 133   | 1,560  | 141   | 421   | 1,090  | 246   | 78    | 241   |
| MIN   | 34    | 37     | 107    | 63    | 54    | 77     | 60    | 57    | 60     | 37    | 34    | 37    |
| AC-FT | 4,090 | 10,600 | 12,790 | 6,230 | 4,820 | 15,960 | 4,950 | 6,810 | 11,930 | 3,560 | 2,880 | 4,580 |

CAL YR 1973 TOTAL 51,925 MEAN 142 MAX 1,370 MIN 26 AC-FT 103,000  
WTR YR 1974 TOTAL 44,979 MEAN 123 MAX 1,560 MIN 34 AC-FT 89,220

PEAK DISCHARGE (BASE, 1,200 FT<sup>3</sup>/S)

| DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|------|------|-------|-----------|
| 11-25 | 0200 | 8.24  | 2,300     | 3-11 | 0515 | 9.13  | 2,820     |
| 12-4  | 0530 | 7.14  | 1,720     | 6-7  | 0615 | 7.39  | 1,840     |

07052250 James River near Boaz, Mo.

LOCATION.--Lat 37°00'25", long 93°21'50", in NE¼NE¼NW¼ sec. 32, T.27 N., R.22 W., Christian County, on left bank 150 ft (46 m) downstream from Frazier bridge, 0.2 mi (0.3 km) upstream from Turkey Hollow, and 2 mi (3.2 km) southeast of Boaz.

DRAINAGE AREA.--462 mi<sup>2</sup> (1,200 km<sup>2</sup>).

PERIOD OF RECORD.--October 1972 to current year. Occasional miscellaneous discharge measurements 1966-67.

GAGE.--Water-stage recorder. Datum of gage is 1,035.35 ft (315.575 m) above mean sea level.

EXTREMES.--Current year: Maximum discharge, 16,900 ft<sup>3</sup>/s (478.6 m<sup>3</sup>/s) Nov. 25 (gage height, 14.88 ft or 4.535 m); minimum, 77 ft<sup>3</sup>/s (2.18 m<sup>3</sup>/s) Aug. 17 (gage height, 2.16 ft or 0.658 m).  
Period of record: Maximum discharge, 31,400 ft<sup>3</sup>/s (889.3 m<sup>3</sup>/s) July 1, 1973 (gage height, 20.56 ft or 6.267 m); minimum, 55 ft<sup>3</sup>/s (1.58 m<sup>3</sup>/s) Sept. 2, 3, 4, 23, 24, 1973 (gage height, 2.08 ft or 0.634 m).

REMARKS.--Records fair. Partly regulated at low flow by Lake Springfield and sewage effluent from City of Springfield Southwest Treatment Plant. Records of water quality are published in Part 2 of this report.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY         | OCT           | NOV    | DEC      | JAN    | FEB        | MAR     | APR    | MAY    | JUN           | JUL   | AUG   | SEP    |
|-------------|---------------|--------|----------|--------|------------|---------|--------|--------|---------------|-------|-------|--------|
| 1           | 159           | 397    | 1,360    | 629    | 882        | 433     | 657    | 438    | 346           | 231   | 96    | 448    |
| 2           | 133           | 397    | 1,090    | 564    | 772        | 411     | 600    | 529    | 312           | 218   | 92    | 878    |
| 3           | 119           | 366    | 931      | 519    | 677        | 396     | 554    | 884    | 290           | 206   | 100   | 637    |
| 4           | 118           | 311    | 3,230    | 478    | 596        | 382     | 507    | 977    | 282           | 376   | 90    | 440    |
| 5           | 123           | 254    | 3,400    | 450    | 544        | 369     | 470    | 765    | 491           | 276   | 80    | 332    |
| 6           | 105           | 218    | 2,200    | 422    | 496        | 360     | 436    | 628    | 530           | 228   | 82    | 278    |
| 7           | 102           | 194    | 1,650    | 399    | 455        | 350     | 412    | 533    | 5,830         | 200   | 92    | 240    |
| 8           | 93            | 191    | 1,300    | 381    | 420        | 345     | 447    | 458    | 5,750         | 185   | 98    | 212    |
| 9           | 92            | 182    | 1,070    | 379    | 395        | 343     | 416    | 411    | 5,050         | 176   | 106   | 186    |
| 10          | 86            | 162    | 897      | 387    | 366        | 4,630   | 396    | 376    | 4,430         | 168   | 128   | 170    |
| 11          | 87            | 151    | 781      | 381    | 348        | 12,300  | 393    | 346    | 2,680         | 157   | 106   | 181    |
| 12          | 121           | 157    | 706      | 368    | 333        | 5,450   | 471    | 319    | 1,910         | 149   | 123   | 168    |
| 13          | 537           | 149    | 640      | 353    | 318        | 3,040   | 491    | 297    | 1,680         | 141   | 102   | 157    |
| 14          | 684           | 148    | 582      | 352    | 303        | 2,220   | 471    | 915    | 1,340         | 133   | 96    | 154    |
| 15          | 430           | 144    | 533      | 389    | 290        | 2,050   | 438    | 1,640  | 1,100         | 133   | 90    | 140    |
| 16          | 318           | 135    | 484      | 513    | 282        | 2,830   | 420    | 1,170  | 870           | 136   | 82    | 156    |
| 17          | 248           | 131    | 442      | 720    | 273        | 2,110   | 391    | 807    | 748           | 128   | 80    | 168    |
| 18          | 216           | 124    | 422      | 757    | 268        | 1,660   | 370    | 634    | 658           | 123   | 138   | 153    |
| 19          | 193           | 121    | 481      | 703    | 359        | 1,430   | 353    | 519    | 580           | 123   | 102   | 150    |
| 20          | 177           | 142    | 488      | 655    | 422        | 1,250   | 337    | 450    | 524           | 118   | 98    | 510    |
| 21          | 162           | 205    | 473      | 636    | 485        | 1,220   | 342    | 394    | 470           | 114   | 90    | 422    |
| 22          | 149           | 169    | 468      | 592    | 514        | 1,230   | 504    | 358    | 436           | 109   | 103   | 360    |
| 23          | 142           | 157    | 469      | 555    | 685        | 1,390   | 996    | 333    | 393           | 109   | 140   | 316    |
| 24          | 135           | 3,350  | 1,300    | 505    | 649        | 1,370   | 708    | 330    | 361           | 104   | 120   | 288    |
| 25          | 123           | 14,000 | 2,580    | 472    | 581        | 1,240   | 557    | 350    | 339           | 118   | 103   | 261    |
| 26          | 116           | 6,770  | 1,810    | 495    | 525        | 1,170   | 475    | 839    | 322           | 194   | 93    | 238    |
| 27          | 1,770         | 4,040  | 1,400    | 776    | 487        | 1,140   | 420    | 679    | 302           | 144   | 101   | 223    |
| 28          | 1,000         | 2,780  | 1,130    | 1,170  | 459        | 1,030   | 376    | 545    | 279           | 118   | 163   | 206    |
| 29          | 628           | 2,170  | 942      | 1,380  | -----      | 914     | 347    | 467    | 263           | 109   | 141   | 204    |
| 30          | 470           | 1,730  | 813      | 1,260  | -----      | 809     | 404    | 412    | 244           | 100   | 127   | 180    |
| 31          | 456           | -----  | 716      | 1,060  | -----      | 723     | -----  | 377    | -----         | 96    | 124   | -----  |
| TOTAL       | 9,292         | 39,445 | 34,788   | 18,700 | 13,184     | 54,595  | 14,159 | 18,180 | 38,810        | 4,920 | 3,286 | 8,456  |
| MEAN        | 300           | 1,315  | 1,122    | 603    | 471        | 1,761   | 472    | 586    | 1,294         | 159   | 106   | 282    |
| MAX         | 1,770         | 14,000 | 3,400    | 1,380  | 882        | 12,300  | 996    | 1,640  | 5,830         | 376   | 163   | 878    |
| MIN         | 86            | 121    | 422      | 352    | 268        | 343     | 337    | 297    | 244           | 96    | 80    | 140    |
| AC-FT       | 18,430        | 78,240 | 69,000   | 37,090 | 26,150     | 108,300 | 28,080 | 36,060 | 76,980        | 9,760 | 6,520 | 16,770 |
| CAL YR 1973 | TOTAL 308,082 |        | MEAN 844 |        | MAX 14,000 |         | MIN 55 |        | AC-FT 611,100 |       |       |        |
| WTR YR 1974 | TOTAL 257,815 |        | MEAN 706 |        | MAX 14,000 |         | MIN 80 |        | AC-FT 511,400 |       |       |        |

PEAK DISCHARGE (BASE, 7,000 FT<sup>3</sup>/S)

| DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|------|------|-------|-----------|
| 11-25 | 1715 | 14.88 | 16,900    | 6-8  | 0045 | 10.11 | 8,280     |
| 3-11  | 0715 | 14.11 | 15,300    |      |      |       |           |

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, near left bank on downstream side of right pier of first arch span from left end of bridge on State Highways 13 and 248 in Galena, 0.7 mi (1.1 km) upstream from Riley Creek, and 42.3 mi (68.1 km) above mouth.

DRAINAGE AREA.--987 mi<sup>2</sup> (2,556 km<sup>2</sup>).

PERIOD OF RECORD.--October 1921 to current year (October 1921, monthly discharge only published in WSP 1311).

GAGE.--Water-stage recorder. Datum of gage is 921.37 ft (280.834 m) above mean sea level. Prior to Dec. 11, 1927, nonrecording gage at site 500 ft (152 m) downstream at datum 1.48 ft (0.451 m) higher. Dec. 11, 1927, to July 22, 1939, nonrecording gage, and July 23, 1939, to Sept. 30, 1953, water-stage recorder at present site and at datum 2.00 ft (0.610 m) higher.

AVERAGE DISCHARGE.--53 years, 946 ft<sup>3</sup>/s (26.8 m<sup>3</sup>/s), 13.02 in/yr (331 mm/yr), 685,400 acre-ft/yr (845 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 28,500 ft<sup>3</sup>/s (807 m<sup>3</sup>/s) Nov. 26 (gage height, 20.49 ft or 6.245 m); minimum, 188 ft<sup>3</sup>/s (5.32 m<sup>3</sup>/s) Aug. 17; minimum gage height, 3.27 ft (0.999 m) Oct. 11. Period of record: Maximum discharge, 52,700 ft<sup>3</sup>/s (1,490 m<sup>3</sup>/s) May 20, 1943 (gage height, 29.82 ft or 9.089 m) present datum; minimum, 10 ft<sup>3</sup>/s (0.28 m<sup>3</sup>/s) Sept. 20, 1954; minimum gage height, 1.15 ft (0.351 m) Jan. 13, 1964 (result of ice conditions upstream).

REMARKS.--Records good.

REVISIONS (WATER YEARS).--WSP 977: 1935(M), 1941(M).

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY         | OCT                                                                            | NOV     | DEC     | JAN    | FEB    | MAR     | APR    | MAY    | JUN     | JUL    | AUG    | SEP    |
|-------------|--------------------------------------------------------------------------------|---------|---------|--------|--------|---------|--------|--------|---------|--------|--------|--------|
| 1           | 410                                                                            | 935     | 2,520   | 1,370  | 1,720  | 916     | 1,580  | 980    | 1,000   | 733    | 227    | 342    |
| 2           | 371                                                                            | 855     | 2,110   | 1,260  | 1,570  | 865     | 1,480  | 1,100  | 885     | 697    | 231    | 1,330  |
| 3           | 315                                                                            | 789     | 1,790   | 1,170  | 1,430  | 824     | 1,420  | 1,410  | 793     | 655    | 233    | 1,480  |
| 4           | 282                                                                            | 700     | 6,580   | 1,160  | 1,300  | 778     | 1,320  | 1,670  | 839     | 655    | 224    | 1,070  |
| 5           | 274                                                                            | 625     | 7,100   | 1,130  | 1,210  | 737     | 1,220  | 1,560  | 1,580   | 896    | 207    | 812    |
| 6           | 263                                                                            | 565     | 4,660   | 1,120  | 1,130  | 704     | 1,140  | 1,350  | 1,450   | 680    | 200    | 616    |
| 7           | 243                                                                            | 519     | 3,190   | 1,080  | 1,060  | 674     | 1,090  | 1,200  | 11,000  | 605    | 210    | 486    |
| 8           | 229                                                                            | 485     | 2,340   | 1,050  | 992    | 649     | 1,100  | 1,070  | 13,100  | 553    | 212    | 397    |
| 9           | 209                                                                            | 453     | 2,030   | 1,040  | 930    | 627     | 1,060  | 1,000  | 10,600  | 509    | 238    | 328    |
| 10          | 205                                                                            | 418     | 1,790   | 1,040  | 880    | 3,320   | 1,050  | 977    | 9,670   | 482    | 268    | 287    |
| 11          | 207                                                                            | 383     | 1,620   | 1,030  | 827    | 18,100  | 1,040  | 900    | 5,730   | 455    | 265    | 272    |
| 12          | 224                                                                            | 358     | 1,490   | 1,000  | 792    | 11,100  | 1,130  | 818    | 4,570   | 430    | 239    | 271    |
| 13          | 660                                                                            | 338     | 1,380   | 973    | 762    | 5,360   | 1,260  | 731    | 3,940   | 410    | 245    | 261    |
| 14          | 1,470                                                                          | 325     | 1,290   | 966    | 714    | 3,840   | 1,270  | 751    | 3,470   | 390    | 221    | 284    |
| 15          | 1,090                                                                          | 312     | 1,200   | 1,010  | 687    | 3,190   | 1,190  | 1,960  | 3,150   | 385    | 209    | 280    |
| 16          | 804                                                                            | 293     | 1,120   | 1,140  | 669    | 3,760   | 1,150  | 1,990  | 2,750   | 375    | 197    | 286    |
| 17          | 644                                                                            | 266     | 1,060   | 1,280  | 636    | 3,460   | 1,070  | 1,600  | 2,450   | 360    | 196    | 302    |
| 18          | 539                                                                            | 272     | 1,010   | 1,400  | 610    | 2,900   | 994    | 1,330  | 2,210   | 342    | 217    | 273    |
| 19          | 475                                                                            | 261     | 1,020   | 1,380  | 666    | 2,580   | 945    | 1,130  | 1,990   | 325    | 304    | 251    |
| 20          | 425                                                                            | 278     | 1,090   | 1,340  | 751    | 2,360   | 903    | 990    | 1,790   | 312    | 260    | 700    |
| 21          | 376                                                                            | 420     | 1,050   | 1,290  | 883    | 2,280   | 861    | 880    | 1,630   | 296    | 229    | 1,120  |
| 22          | 339                                                                            | 497     | 1,070   | 1,270  | 939    | 2,280   | 868    | 788    | 1,480   | 278    | 217    | 1,100  |
| 23          | 310                                                                            | 470     | 1,090   | 1,210  | 1,100  | 2,440   | 2,650  | 719    | 1,310   | 267    | 241    | 861    |
| 24          | 287                                                                            | 4,270   | 1,640   | 1,150  | 1,240  | 2,480   | 1,880  | 708    | 1,170   | 266    | 278    | 687    |
| 25          | 267                                                                            | 23,000  | 3,870   | 1,090  | 1,170  | 2,320   | 1,500  | 748    | 1,080   | 271    | 238    | 569    |
| 26          | 252                                                                            | 19,300  | 3,020   | 1,070  | 1,090  | 2,200   | 1,290  | 1,480  | 998     | 393    | 212    | 484    |
| 27          | 2,150                                                                          | 9,660   | 2,440   | 1,280  | 1,020  | 2,150   | 1,140  | 2,110  | 930     | 385    | 212    | 416    |
| 28          | 2,320                                                                          | 5,300   | 2,080   | 1,780  | 970    | 2,050   | 1,040  | 1,690  | 868     | 311    | 237    | 364    |
| 29          | 1,610                                                                          | 3,920   | 1,840   | 2,040  | -----  | 1,950   | 917    | 1,410  | 822     | 270    | 295    | 336    |
| 30          | 1,160                                                                          | 3,090   | 1,650   | 2,050  | -----  | 1,830   | 917    | 1,220  | 769     | 251    | 261    | 304    |
| 31          | 986                                                                            | -----   | 1,510   | 1,900  | -----  | 1,690   | -----  | 1,110  | -----   | 242    | 239    | -----  |
| TOTAL       | 19,396                                                                         | 79,357  | 67,650  | 39,069 | 27,748 | 90,414  | 36,475 | 37,380 | 94,024  | 13,479 | 7,262  | 16,569 |
| MEAN        | 626                                                                            | 2,645   | 2,182   | 1,260  | 991    | 2,917   | 1,216  | 1,206  | 3,134   | 435    | 234    | 552    |
| MAX         | 2,320                                                                          | 23,000  | 7,100   | 2,050  | 1,720  | 18,100  | 2,650  | 2,110  | 13,100  | 896    | 304    | 1,480  |
| MIN         | 205                                                                            | 261     | 1,010   | 966    | 610    | 627     | 861    | 708    | 769     | 242    | 196    | 251    |
| CFSM        | .63                                                                            | 2.68    | 2.21    | 1.28   | 1.00   | 2.96    | 1.23   | 1.22   | 3.18    | .44    | .24    | .56    |
| IN.         | .73                                                                            | 2.99    | 2.55    | 1.47   | 1.05   | 3.41    | 1.37   | 1.41   | 3.54    | .51    | .27    | .62    |
| AC-FT       | 38,470                                                                         | 157,400 | 134,200 | 77,490 | 55,040 | 179,300 | 72,350 | 74,140 | 186,500 | 26,740 | 14,400 | 32,860 |
| CAL YR 1973 | TOTAL 721,699 MEAN 1,977 MAX 23,000 MIN 148 CFSM 2.00 IN 27.20 AC-FT 1,431,000 |         |         |        |        |         |        |        |         |        |        |        |
| WTR YR 1974 | TOTAL 528,823 MEAN 1,449 MAX 23,000 MIN 196 CFSM 1.47 IN 19.93 AC-FT 1,049,000 |         |         |        |        |         |        |        |         |        |        |        |

PEAK DISCHARGE (BASE, 12,000 FT<sup>3</sup>/S)

| DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|------|------|-------|-----------|
| 11-26 | 0030 | 20.49 | 28,500    | 6-8  | 0545 | 17.06 | 16,300    |
| 3-11  | 1345 | 19.79 | 22,600    |      |      |       |           |

07053400 Table Rock Lake near Branson, Mo.

LOCATION.--Lat 36°35'46", long 93°18'35", in NW¼ sec.22, T.22 N., R.22 W., Taney County, at dam on White River, 3 mi (4.8 km) upstream from Fall Creek, and 6.1 mi (9.82 km) southwest of Branson.

DRAINAGE AREA.--4,020 mi<sup>2</sup> (10,412 km<sup>2</sup>).

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

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (levels by Corps of Engineers). Prior to July 18, 1958, nonrecording gage at same site and datum.

EXTREMES.--Current year: Maximum daily contents, 3,320,000 acre-ft (4.09 km<sup>3</sup>) June 12-14; maximum elevation, 928.17 ft (282.906 m) June 13, 14; minimum daily contents, 2,620,000 acre-ft (3.23 km<sup>3</sup>) Nov. 8-19; minimum elevation, 913.00 ft (278.282 m) Nov. 12.

Period of record: Maximum contents, 3,541,800 acre-ft (4.37 km<sup>3</sup>) May 10, 1961 (elevation, 932.52 ft or 284.232 m); minimum, since initial filling to bottom of power pool level, 1,535,500 acre-ft (1.89 km<sup>3</sup>) Feb. 8, 1965 (elevation, 881.54 ft or 268.693 m).

REMARKS.--Lake is formed by a 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 (268.5 m) and capacity 1,520,500 acre-ft (1.87 km<sup>3</sup>) began Nov. 24, 1958 and was reached Dec. 19, 1959. Capacity is 3,567,500 acre-ft (4.40 km<sup>3</sup>) at top of spillway gates, elevation 933 ft (284.4 m). Capacity is 3,462,000 acre-ft (4.27 km<sup>3</sup>) at top of flood control pool, elevation 931 ft (283.8 m). Capacity between elevations 915 ft (278.9 m) and 931 ft (283.8 m) is reserved for flood control, 760,000 acre-ft (0.937 km<sup>3</sup>). Capacity between elevation 881 ft (268.5 m) and 915 ft (278.9 m) of 1,181,500 acre-ft (1.46 km<sup>3</sup>) is used for power generation. The capacity at the lowest outlet, elevation 721.96 ft (220.053 m), is 3,530 acre-ft (4.35 km<sup>3</sup>). 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 Corps of Engineers.

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

|       |           |
|-------|-----------|
| 913   | 2,617,000 |
| 920   | 2,923,000 |
| 928.2 | 3,318,000 |

# CONTENTS, IN THOUSANDS OF ACRE-FEET, AT 2400, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY | OCT    | NOV    | DEC    | JAN    | FEB    | MAR    | APR    | MAY    | JUN    | JUL    | AUG    | SEP    |
|-----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1   | 2,680  | 2,640  | 2,970  | 2,750  | 2,730  | 2,740  | 2,780  | 2,730  | 2,840  | 3,060  | 2,910  | 2,700  |
| 2   | 2,690  | 2,640  | 2,960  | 2,750  | 2,730  | 2,740  | 2,770  | 2,740  | 2,840  | 3,040  | 2,910  | 2,710  |
| 3   | 2,680  | 2,630  | 2,960  | 2,750  | 2,720  | 2,740  | 2,760  | 2,750  | 2,840  | 3,030  | 2,910  | 2,710  |
| 4   | 2,690  | 2,640  | 3,010  | 2,750  | 2,720  | 2,730  | 2,750  | 2,750  | 2,840  | 3,030  | 2,900  | 2,700  |
| 5   | 2,680  | 2,630  | 3,040  | 2,750  | 2,720  | 2,730  | 2,740  | 2,760  | 2,850  | 3,020  | 2,900  | 2,690  |
| 6   | 2,690  | 2,630  | 3,050  | 2,750  | 2,720  | 2,720  | 2,720  | 2,760  | 2,880  | 3,020  | 2,890  | 2,680  |
| 7   | 2,690  | 2,630  | 3,050  | 2,750  | 2,710  | 2,720  | 2,710  | 2,760  | 3,030  | 3,020  | 2,880  | 2,680  |
| 8   | 2,680  | 2,620  | 3,030  | 2,740  | 2,710  | 2,710  | 2,700  | 2,750  | 3,120  | 3,010  | 2,870  | 2,680  |
| 9   | 2,680  | 2,620  | 3,020  | 2,740  | 2,710  | 2,720  | 2,690  | 2,760  | 3,230  | 3,000  | 2,870  | 2,680  |
| 10  | 2,670  | 2,620  | 3,000  | 2,730  | 2,700  | 2,740  | 2,680  | 2,770  | 3,300  | 2,990  | 2,860  | 2,690  |
| 11  | 2,670  | 2,620  | 2,990  | 2,720  | 2,700  | 2,830  | 2,680  | 2,770  | 3,310  | 2,980  | 2,860  | 2,690  |
| 12  | 2,670  | 2,620  | 2,970  | 2,710  | 2,700  | 2,860  | 2,680  | 2,780  | 3,320  | 2,970  | 2,850  | 2,690  |
| 13  | 2,680  | 2,620  | 2,950  | 2,710  | 2,690  | 2,870  | 2,680  | 2,780  | 3,320  | 2,960  | 2,830  | 2,690  |
| 14  | 2,680  | 2,620  | 2,930  | 2,720  | 2,690  | 2,870  | 2,680  | 2,790  | 3,310  | 2,960  | 2,810  | 2,690  |
| 15  | 2,680  | 2,620  | 2,910  | 2,710  | 2,690  | 2,870  | 2,690  | 2,810  | 3,300  | 2,950  | 2,790  | 2,690  |
| 16  | 2,680  | 2,620  | 2,890  | 2,710  | 2,670  | 2,870  | 2,690  | 2,810  | 3,280  | 2,950  | 2,780  | 2,690  |
| 17  | 2,670  | 2,620  | 2,870  | 2,710  | 2,700  | 2,870  | 2,700  | 2,820  | 3,270  | 2,940  | 2,770  | 2,690  |
| 18  | 2,670  | 2,620  | 2,850  | 2,710  | 2,700  | 2,870  | 2,690  | 2,820  | 3,250  | 2,940  | 2,770  | 2,690  |
| 19  | 2,660  | 2,620  | 2,840  | 2,710  | 2,700  | 2,870  | 2,690  | 2,820  | 3,240  | 2,930  | 2,760  | 2,690  |
| 20  | 2,660  | 2,630  | 2,830  | 2,710  | 2,700  | 2,870  | 2,690  | 2,820  | 3,220  | 2,930  | 2,740  | 2,700  |
| 21  | 2,660  | 2,630  | 2,810  | 2,710  | 2,700  | 2,870  | 2,740  | 2,820  | 3,210  | 2,940  | 2,730  | 2,710  |
| 22  | 2,650  | 2,630  | 2,790  | 2,710  | 2,710  | 2,860  | 2,770  | 2,820  | 3,190  | 2,930  | 2,720  | 2,720  |
| 23  | 2,650  | 2,630  | 2,780  | 2,710  | 2,730  | 2,860  | 2,780  | 2,820  | 3,160  | 2,930  | 2,720  | 2,720  |
| 24  | 2,640  | 2,730  | 2,780  | 2,710  | 2,740  | 2,850  | 2,780  | 2,820  | 3,150  | 2,920  | 2,710  | 2,720  |
| 25  | 2,640  | 2,860  | 2,780  | 2,710  | 2,740  | 2,840  | 2,780  | 2,820  | 3,130  | 2,930  | 2,710  | 2,720  |
| 26  | 2,630  | 2,960  | 2,770  | 2,710  | 2,740  | 2,840  | 2,770  | 2,830  | 3,110  | 2,920  | 2,710  | 2,710  |
| 27  | 2,640  | 2,990  | 2,760  | 2,720  | 2,740  | 2,830  | 2,760  | 2,840  | 3,100  | 2,930  | 2,710  | 2,710  |
| 28  | 2,640  | 3,000  | 2,750  | 2,720  | 2,740  | 2,830  | 2,740  | 2,840  | 3,090  | 2,930  | 2,710  | 2,710  |
| 29  | 2,640  | 2,990  | 2,750  | 2,720  | -----  | 2,820  | 2,730  | 2,840  | 3,070  | 2,920  | 2,700  | 2,700  |
| 30  | 2,640  | 2,980  | 2,750  | 2,720  | -----  | 2,800  | 2,730  | 2,840  | 3,070  | 2,920  | 2,700  | 2,700  |
| 31  | 2,640  | -----  | 2,750  | 2,730  | -----  | 2,790  | -----  | 2,840  | -----  | 2,920  | 2,700  | -----  |
| (†) | 913.57 | 921.34 | 916.20 | 915.61 | 915.95 | 916.93 | 915.66 | 918.19 | 923.05 | 919.90 | 914.85 | 915.00 |
| (‡) | -40    | +340   | -230   | -20    | +10    | +50    | -60    | +110   | +230   | -150   | -220   | 0      |
| MAX | 2,690  | 3,000  | 3,050  | 2,750  | 2,740  | 2,870  | 2,780  | 2,840  | 3,320  | 3,060  | 2,910  | 2,720  |
| MIN | 2,630  | 2,620  | 2,750  | 2,710  | 2,670  | 2,710  | 2,680  | 2,730  | 2,840  | 2,920  | 2,700  | 2,680  |

CAL YR 1973.....‡ +140

WTR YR 1974.....‡ +20

† Elevation, in feet, at end of month.

‡ Change in contents, in thousands of acre-feet.



07053500 White River near Branson, Mo.

LOCATION.--Lat 36°35'51", long 93°17'42", in SE¼NE¼ sec.22, T.22 N., R.22 W., Taney County, on left bank 0.9 mi (1.4 km) downstream from Table Rock Dam, 2.1 mi (3.4 km) upstream from Fall Creek, 5 mi (8.0 km) southwest of Branson, 7.4 mi (11.9 km) upstream from Missouri Pacific bridge, and at mile 527.8 (849.2 km).

DRAINAGE AREA.--4,022 mi<sup>2</sup> (10,417 km<sup>2</sup>).

PERIOD OF RECORD.--July 1909 to December 1910 (gage heights and discharge measurements only), October 1951 to current year.

GAGE.--Water-stage recorder. Datum of gage is 696.00 ft (212.141 m) above mean sea level (levels by Corps of Engineers). July 19, 1909 to Dec. 31, 1910, nonrecording gage at site 7.4 mi (11.9 km) downstream at different datum. Oct. 1, 1951 to Mar. 6, 1952, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--23 years, 3,534 ft<sup>3</sup>/s (100.08 m<sup>3</sup>/s), 2,561,000 acre-ft/yr (3.16 km<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum daily discharge, 17,500 ft<sup>3</sup>/s (496 m<sup>3</sup>/s) June 12; maximum gage-height, 16.28 ft (4.962 m) June 12; minimum daily discharge, 40 ft<sup>3</sup>/s (1.13 m<sup>3</sup>/s) Sept. 7.

Period of record: Maximum discharge, 89,100 ft<sup>3</sup>/s (2,523 m<sup>3</sup>/s) May 16, 1956 (gage height, 36.9 ft or 11.25 m); minimum, prior to building dam, 24 ft<sup>3</sup>/s (0.68 m<sup>3</sup>/s) Sept. 20, 1954; no outflow from reservoir at various times.

Maximum stage known, 52.8 ft (16.09 m), from floodmark, Apr. 16, 1945 (discharge, 203,000 ft<sup>3</sup>/s or 5,750 m<sup>3</sup>/s).

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, some regulation since Sept. 9, 1956.

COOPERATION.--Computations of daily discharge furnished by Corps of Engineers and reviewed by Geological Survey.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY         | OCT             | NOV     | DEC        | JAN     | FEB        | MAR     | APR     | MAY     | JUN             | JUL     | AUG     | SEP     |
|-------------|-----------------|---------|------------|---------|------------|---------|---------|---------|-----------------|---------|---------|---------|
| 1           | 41              | 2,990   | 15,500     | 6,450   | 4,300      | 3,890   | 11,300  | 8,150   | 2,390           | 8,830   | 5,250   | 42      |
| 2           | 183             | 2,340   | 15,500     | 8,260   | 4,710      | 4,200   | 11,300  | 10,000  | 2,100           | 8,810   | 4,730   | 183     |
| 3           | 2,540           | 1,580   | 14,600     | 7,240   | 4,670      | 4,820   | 11,200  | 9,930   | 4,960           | 8,780   | 2,130   | 4,030   |
| 4           | 400             | 534     | 9,640      | 5,750   | 6,740      | 7,080   | 11,300  | 2,550   | 5,550           | 3,090   | 2,110   | 5,890   |
| 5           | 383             | 2,030   | 14,300     | 4,190   | 6,810      | 6,760   | 11,200  | 2,560   | 4,960           | 4,020   | 4,310   | 5,950   |
| 6           | 43              | 3,120   | 14,300     | 4,210   | 7,790      | 8,070   | 11,200  | 9,710   | 4,700           | 4,100   | 6,210   | 5,620   |
| 7           | 45              | 2,030   | 14,200     | 7,190   | 9,070      | 6,880   | 11,300  | 9,600   | 2,510           | 3,130   | 7,590   | 40      |
| 8           | 3,440           | 2,870   | 14,300     | 8,140   | 8,340      | 6,860   | 11,400  | 10,100  | 9,380           | 7,120   | 8,380   | 42      |
| 9           | 3,680           | 2,520   | 14,300     | 9,350   | 2,780      | 41      | 11,400  | 6,160   | 9,460           | 8,150   | 8,980   | 1,000   |
| 10          | 2,700           | 588     | 14,300     | 10,400  | 2,760      | 3,290   | 10,200  | 6,210   | 16,000          | 8,360   | 3,540   | 1,220   |
| 11          | 1,880           | 251     | 14,900     | 12,800  | 6,710      | 7,650   | 6,710   | 2,710   | 16,900          | 8,100   | 3,590   | 1,520   |
| 12          | 1,660           | 948     | 14,500     | 13,700  | 6,840      | 11,000  | 6,830   | 1,980   | 17,500          | 8,330   | 8,200   | 2,150   |
| 13          | 41              | 49      | 14,600     | 3,390   | 6,050      | 11,000  | 2,920   | 6,950   | 17,000          | 3,110   | 10,300  | 3,380   |
| 14          | 173             | 48      | 14,600     | 1,800   | 6,900      | 11,000  | 2,900   | 6,020   | 16,400          | 2,970   | 10,400  | 41      |
| 15          | 3,450           | 49      | 14,600     | 4,130   | 5,460      | 11,000  | 4,280   | 6,880   | 16,400          | 6,420   | 10,400  | 42      |
| 16          | 1,320           | 868     | 14,700     | 3,610   | 2,570      | 9,570   | 4,200   | 6,190   | 16,500          | 6,070   | 10,400  | 2,240   |
| 17          | 3,820           | 48      | 14,700     | 3,560   | 2,440      | 9,590   | 3,720   | 6,460   | 16,600          | 7,740   | 4,520   | 2,420   |
| 18          | 3,920           | 49      | 14,800     | 4,130   | 6,640      | 11,000  | 7,430   | 2,470   | 16,300          | 7,600   | 1,040   | 2,640   |
| 19          | 4,110           | 668     | 14,800     | 3,310   | 6,060      | 11,000  | 7,280   | 2,630   | 16,400          | 5,290   | 9,380   | 2,530   |
| 20          | 759             | 587     | 14,800     | 3,280   | 7,390      | 11,100  | 41      | 6,260   | 14,900          | 4,930   | 9,140   | 2,760   |
| 21          | 41              | 625     | 14,800     | 3,550   | 6,840      | 10,800  | 4,810   | 5,030   | 14,000          | 2,460   | 9,400   | 41      |
| 22          | 4,140           | 46      | 14,900     | 3,020   | 6,140      | 11,000  | 8,500   | 4,930   | 14,200          | 6,330   | 7,020   | 224     |
| 23          | 3,930           | 47      | 14,900     | 6,420   | 45         | 11,100  | 11,000  | 4,880   | 14,200          | 6,040   | 5,570   | 2,990   |
| 24          | 3,900           | 47      | 14,800     | 5,950   | 49         | 11,100  | 11,100  | 4,980   | 14,200          | 5,860   | 2,810   | 4,560   |
| 25          | 4,110           | 5,060   | 14,900     | 5,510   | 6,740      | 11,000  | 10,900  | 2,560   | 14,400          | 4,050   | 1,160   | 4,080   |
| 26          | 4,370           | 9,570   | 14,800     | 3,220   | 7,270      | 11,100  | 10,900  | 1,580   | 10,700          | 4,420   | 5,800   | 5,030   |
| 27          | 4,380           | 13,700  | 14,900     | 1,310   | 6,220      | 11,100  | 11,000  | 2,560   | 10,400          | 1,120   | 2,430   | 4,810   |
| 28          | 2,500           | 15,400  | 14,100     | 7,420   | 4,610      | 11,200  | 11,000  | 5,040   | 10,600          | 800     | 2,800   | 5,580   |
| 29          | 3,000           | 15,400  | 7,990      | 7,070   | -----      | 11,200  | 11,000  | 5,040   | 7,690           | 5,180   | 4,830   | 5,570   |
| 30          | 603             | 15,400  | 6,920      | 4,540   | -----      | 11,200  | 11,300  | 5,510   | 5,890           | 5,130   | 5,210   | 2,300   |
| 31          | 1,990           | -----   | 6,060      | 5,170   | -----      | 11,200  | -----   | 5,070   | -----           | 5,000   | 41      | -----   |
| TOTAL       | 67,552          | 99,462  | 427,010    | 178,070 | 152,944    | 277,801 | 259,621 | 170,700 | 343,190         | 171,340 | 177,671 | 78,925  |
| MEAN        | 2,179           | 3,315   | 13,770     | 5,744   | 5,462      | 8,961   | 8,654   | 5,506   | 11,440          | 5,527   | 5,731   | 2,631   |
| MAX         | 4,380           | 15,400  | 15,500     | 13,700  | 9,070      | 11,200  | 11,400  | 10,100  | 17,500          | 8,830   | 10,400  | 5,950   |
| MIN         | 41              | 46      | 6,060      | 1,310   | 45         | 41      | 41      | 1,580   | 2,100           | 800     | 41      | 40      |
| AC-FT       | 134,000         | 197,300 | 847,000    | 353,200 | 303,400    | 551,000 | 515,000 | 338,600 | 680,700         | 339,900 | 352,400 | 156,500 |
| CAL YR 1973 | TOTAL 2,877,585 |         | MEAN 7,884 |         | MAX 18,500 |         | MIN 41  |         | AC-FT 5,708,000 |         |         |         |
| WTR YR 1974 | TOTAL 2,404,286 |         | MEAN 6,587 |         | MAX 17,500 |         | MIN 40  |         | AC-FT 4,769,000 |         |         |         |

07057500 North Fork River near Tecumseh, Mo.

LOCATION.--Lat 36°37'22", long 92°14'53", in NE&SE¼ sec.35, T.23 N., R.12 W., Ozark County, on right bank 3.2 mi (5.2 km) downstream from Spring Creek, and 3.5 mi (5.6 km) northeast of Tecumseh.

DRAINAGE AREA.--561 mi<sup>2</sup> (1,453 km<sup>2</sup>).

PERIOD OF RECORD.--October 1944 to current year.

GAGE.--Water-stage recorder. Datum of gage is 584.67 ft (178.207 m) above mean sea level (levels by Corps of Engineers). Prior to May 12, 1945, nonrecording gage at same site at datum 0.22 ft (0.067 m) lower.

AVERAGE DISCHARGE.--30 years, 723 ft<sup>3</sup>/s (20.48 m<sup>3</sup>/s), 17.50 in/yr (444 mm/yr), 523,800 acre-ft/yr (646 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 37,900 ft<sup>3</sup>/s (1,073 m<sup>3</sup>/s) Apr. 22 (gage height, 22.15 ft or 6.751 m); minimum, 392 ft<sup>3</sup>/s (11.10 m<sup>3</sup>/s) Oct. 5, 6, 9, 10, 11 (gage height, 2.48 ft or 0.756 m).  
Period of record: Maximum discharge, 37,900 ft<sup>3</sup>/s (1,073 m<sup>3</sup>/s) Apr. 22, 1974 (gage height, 22.15 ft or 6.751 m); minimum, 187 ft<sup>3</sup>/s (5.30 m<sup>3</sup>/s) Sept. 14-18, 1954 (gage height, 2.06 ft or 0.628 m).

REMARKS.--Records good.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY         | OCT           | NOV        | DEC        | JAN     | FEB       | MAR      | APR           | MAY     | JUN    | JUL    | AUG    | SEP    |
|-------------|---------------|------------|------------|---------|-----------|----------|---------------|---------|--------|--------|--------|--------|
| 1           | 424           | 1,910      | 1,480      | 1,120   | 1,170     | 1,100    | 1,060         | 1,350   | 1,190  | 878    | 576    | 528    |
| 2           | 414           | 1,130      | 1,320      | 1,020   | 1,140     | 1,060    | 1,000         | 1,530   | 1,110  | 858    | 588    | 581    |
| 3           | 408           | 884        | 1,240      | 1,010   | 1,070     | 1,030    | 1,010         | 2,280   | 1,050  | 833    | 611    | 581    |
| 4           | 404           | 764        | 6,050      | 970     | 1,010     | 992      | 1,010         | 2,300   | 1,030  | 833    | 588    | 549    |
| 5           | 398           | 695        | 4,490      | 943     | 970       | 952      | 938           | 1,840   | 1,030  | 826    | 575    | 524    |
| 6           | 397           | 645        | 2,590      | 943     | 948       | 918      | 885           | 1,620   | 1,070  | 803    | 564    | 506    |
| 7           | 398           | 613        | 1,960      | 925     | 912       | 893      | 879           | 1,450   | 2,840  | 785    | 563    | 495    |
| 8           | 398           | 590        | 1,660      | 898     | 880       | 860      | 890           | 1,340   | 3,610  | 772    | 561    | 481    |
| 9           | 397           | 567        | 1,490      | 889     | 857       | 871      | 857           | 1,260   | 5,410  | 760    | 567    | 479    |
| 10          | 395           | 543        | 1,350      | 898     | 825       | 3,010    | 831           | 1,360   | 3,830  | 752    | 593    | 475    |
| 11          | 402           | 530        | 1,240      | 916     | 806       | 6,990    | 846           | 1,340   | 2,520  | 741    | 578    | 502    |
| 12          | 426           | 514        | 1,180      | 898     | 794       | 4,370    | 1,170         | 1,350   | 2,050  | 729    | 558    | 517    |
| 13          | 651           | 508        | 1,140      | 889     | 791       | 2,870    | 1,420         | 1,280   | 1,720  | 714    | 572    | 579    |
| 14          | 1,170         | 502        | 1,080      | 880     | 771       | 2,260    | 1,270         | 1,740   | 1,540  | 725    | 551    | 548    |
| 15          | 767           | 496        | 1,060      | 880     | 762       | 1,990    | 1,150         | 3,400   | 1,420  | 717    | 538    | 528    |
| 16          | 646           | 484        | 998        | 880     | 766       | 2,160    | 1,070         | 2,170   | 1,340  | 705    | 532    | 514    |
| 17          | 579           | 473        | 961        | 923     | 744       | 1,940    | 1,000         | 1,780   | 1,260  | 686    | 532    | 497    |
| 18          | 537           | 477        | 934        | 946     | 745       | 1,790    | 958           | 1,540   | 1,210  | 673    | 550    | 486    |
| 19          | 508           | 470        | 1,500      | 940     | 772       | 1,670    | 927           | 1,370   | 1,160  | 662    | 532    | 477    |
| 20          | 487           | 482        | 2,430      | 1,130   | 763       | 1,530    | 897           | 1,250   | 1,120  | 654    | 525    | 501    |
| 21          | 470           | 540        | 1,890      | 1,660   | 861       | 1,520    | 2,650         | 1,700   | 1,090  | 647    | 517    | 496    |
| 22          | 458           | 609        | 1,690      | 1,590   | 2,430     | 1,520    | 19,600        | 3,690   | 1,070  | 639    | 510    | 481    |
| 23          | 446           | 600        | 1,500      | 1,430   | 2,210     | 1,560    | 4,970         | 3,200   | 1,030  | 633    | 506    | 466    |
| 24          | 436           | 4,650      | 1,800      | 1,290   | 1,760     | 1,440    | 3,080         | 2,240   | 999    | 623    | 502    | 459    |
| 25          | 430           | 17,800     | 2,300      | 1,200   | 1,460     | 1,320    | 2,370         | 1,870   | 976    | 632    | 493    | 458    |
| 26          | 425           | 5,340      | 1,920      | 1,190   | 1,290     | 1,270    | 2,000         | 1,740   | 952    | 635    | 500    | 458    |
| 27          | 582           | 3,870      | 1,680      | 1,300   | 1,220     | 1,240    | 1,750         | 1,730   | 936    | 626    | 511    | 458    |
| 28          | 1,320         | 2,680      | 1,480      | 1,400   | 1,160     | 1,210    | 1,570         | 1,580   | 922    | 612    | 522    | 476    |
| 29          | 826           | 2,070      | 1,390      | 1,350   | -----     | 1,200    | 1,430         | 1,460   | 907    | 602    | 508    | 488    |
| 30          | 693           | 1,720      | 1,290      | 1,270   | -----     | 1,150    | 1,380         | 1,360   | 887    | 590    | 502    | 475    |
| 31          | 771           | -----      | 1,210      | 1,230   | -----     | 1,090    | -----         | 1,270   | -----  | 582    | 496    | -----  |
| TOTAL       | 17,063        | 53,156     | 54,303     | 33,808  | 29,887    | 53,776   | 60,868        | 55,390  | 47,279 | 21,927 | 16,821 | 15,063 |
| MEAN        | 550           | 1,772      | 1,752      | 1,091   | 1,067     | 1,735    | 2,029         | 1,787   | 1,576  | 707    | 543    | 502    |
| MAX         | 1,320         | 17,800     | 6,050      | 1,660   | 2,430     | 6,990    | 19,600        | 3,690   | 5,410  | 878    | 611    | 581    |
| MIN         | 395           | 470        | 934        | 880     | 744       | 860      | 831           | 1,250   | 887    | 582    | 493    | 458    |
| CFSM        | .98           | 3.16       | 3.12       | 1.94    | 1.90      | 3.09     | 3.62          | 3.19    | 2.81   | 1.26   | .97    | .89    |
| IN.         | 1.13          | 3.52       | 3.60       | 2.24    | 1.98      | 3.57     | 4.04          | 3.67    | 3.14   | 1.45   | 1.12   | 1.00   |
| AC-FT       | 33,840        | 105,400    | 107,700    | 67,060  | 59,280    | 106,700  | 120,700       | 109,900 | 93,780 | 43,490 | 33,360 | 29,880 |
| CAL YR 1973 | TOTAL 468,372 | MEAN 1,283 | MAX 17,800 | MIN 395 | CFSM 2.29 | IN 31.06 | AC-FT 929,000 |         |        |        |        |        |
| WTR YR 1974 | TOTAL 459,341 | MEAN 1,258 | MAX 19,600 | MIN 395 | CFSM 2.24 | IN 30.46 | AC-FT 911,100 |         |        |        |        |        |

PEAK DISCHARGE (BASE, 5,000 FT<sup>3</sup>/S)

| DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|------|------|-------|-----------|
| 11-25 | 0515 | 16.73 | 24,500    | 5-15 | 0200 | 7.06  | 5,680     |
| 12-4  | 2130 | 9.61  | 10,100    | 5-22 | 2045 | 6.72  | 5,210     |
| 3-11  | 0415 | 8.47  | 8,100     | 6-7  | 2100 | 7.13  | 5,780     |
| 4-22  | 1000 | 22.15 | 37,900    | 6-9  | 1230 | 8.97  | 8,800     |

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, on left bank 0.8 mi (1.3 km) downstream from Pine Creek, 3 mi (4.8 km) northwest of Tecumseh, and 5 mi (8.0 km) upstream from mouth.

DRAINAGE AREA.--570 mi<sup>2</sup> (1,476 km<sup>2</sup>).

PERIOD OF RECORD.--October 1944 to current year.

GAGE.--Water-stage recorder. Datum of gage is 573.15 ft (174.696 m) above mean sea level (levels by Corps of Engineers). Prior to July 30, 1945, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--30 years, 532 ft<sup>3</sup>/s (15.1 m<sup>3</sup>/s), 12.67 in/yr (322 mm/yr), 385,400 acre-ft/yr (475 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 23,600 ft<sup>3</sup>/s (668 m<sup>3</sup>/s) Apr. 22 (gage height, 18.57 ft or 5.660 m); minimum, 195 ft<sup>3</sup>/s (5.52 m<sup>3</sup>/s) Oct. 5-7, 9-11; minimum gage height, 2.61 ft (0.796 m) Aug. 26.

Period of record: Maximum discharge, 33,200 ft<sup>3</sup>/s (940 m<sup>3</sup>/s) Mar. 11, 1973 (gage height, 21.93 ft or 6.684 m); minimum, 96 ft<sup>3</sup>/s (2.72 m<sup>3</sup>/s) Sept. 16, 17, 1954; minimum gage height, 1.98 ft (0.604 m) Aug. 13, 1964.

REMARKS.--Records good.

REVISIONS (WATER YEARS).--WSP 1117: Drainage area. WSP 1441: 1945, 1946-47(M), 1950. WSP 1731 1945-47, 1950.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT    | NOV    | DEC    | JAN    | FEB    | MAR    | APR    | MAY    | JUN    | JUL    | AUG    | SEP    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1     | 222    | 1,180  | 1,240  | 816    | 708    | 634    | 786    | 1,210  | 736    | 441    | 243    | 253    |
| 2     | 213    | 751    | 1,110  | 753    | 699    | 607    | 734    | 1,410  | 670    | 427    | 245    | 452    |
| 3     | 207    | 597    | 1,050  | 711    | 660    | 593    | 754    | 1,740  | 620    | 411    | 290    | 470    |
| 4     | 202    | 515    | 5,520  | 679    | 615    | 576    | 728    | 1,500  | 594    | 430    | 268    | 385    |
| 5     | 198    | 464    | 4,040  | 652    | 593    | 546    | 658    | 1,330  | 605    | 515    | 246    | 324    |
| 6     | 195    | 431    | 2,220  | 633    | 583    | 530    | 612    | 1,190  | 640    | 438    | 240    | 290    |
| 7     | 201    | 407    | 1,670  | 615    | 560    | 517    | 595    | 1,090  | 4,880  | 410    | 238    | 267    |
| 8     | 199    | 399    | 1,420  | 594    | 541    | 496    | 609    | 1,010  | 6,270  | 393    | 242    | 250    |
| 9     | 197    | 386    | 1,270  | 594    | 524    | 484    | 579    | 952    | 5,180  | 381    | 255    | 239    |
| 10    | 195    | 376    | 1,140  | 600    | 511    | 2,460  | 560    | 1,080  | 3,860  | 372    | 280    | 236    |
| 11    | 199    | 367    | 1,040  | 593    | 497    | 5,460  | 566    | 1,080  | 2,310  | 365    | 260    | 252    |
| 12    | 220    | 369    | 975    | 569    | 490    | 3,480  | 781    | 1,240  | 1,830  | 353    | 245    | 447    |
| 13    | 735    | 369    | 925    | 550    | 488    | 2,140  | 832    | 1,080  | 1,490  | 346    | 243    | 471    |
| 14    | 563    | 373    | 855    | 550    | 480    | 1,660  | 807    | 1,680  | 1,300  | 345    | 247    | 391    |
| 15    | 371    | 372    | 797    | 545    | 476    | 1,470  | 843    | 2,930  | 1,160  | 339    | 237    | 355    |
| 16    | 313    | 373    | 743    | 551    | 491    | 1,660  | 787    | 1,850  | 1,040  | 333    | 229    | 322    |
| 17    | 280    | 370    | 699    | 550    | 466    | 1,430  | 732    | 1,460  | 945    | 320    | 228    | 302    |
| 18    | 260    | 372    | 671    | 553    | 464    | 1,310  | 684    | 1,240  | 882    | 313    | 254    | 284    |
| 19    | 247    | 372    | 1,000  | 553    | 482    | 1,230  | 654    | 1,090  | 819    | 305    | 247    | 268    |
| 20    | 236    | 381    | 1,480  | 623    | 465    | 1,120  | 623    | 969    | 760    | 298    | 236    | 280    |
| 21    | 228    | 460    | 1,190  | 667    | 651    | 1,180  | 3,120  | 1,030  | 712    | 294    | 227    | 507    |
| 22    | 222    | 480    | 1,060  | 660    | 1,460  | 1,180  | 15,500 | 1,580  | 674    | 289    | 221    | 490    |
| 23    | 217    | 470    | 1,010  | 642    | 1,160  | 1,190  | 4,790  | 1,170  | 635    | 284    | 217    | 382    |
| 24    | 213    | 5,730  | 1,400  | 609    | 980    | 1,110  | 2,760  | 998    | 594    | 278    | 219    | 341    |
| 25    | 210    | 11,500 | 1,760  | 586    | 827    | 1,020  | 2,040  | 924    | 562    | 279    | 214    | 317    |
| 26    | 206    | 4,920  | 1,480  | 613    | 744    | 988    | 1,690  | 1,040  | 541    | 290    | 212    | 299    |
| 27    | 342    | 3,270  | 1,300  | 755    | 702    | 959    | 1,480  | 1,130  | 517    | 277    | 221    | 285    |
| 28    | 645    | 2,170  | 1,150  | 835    | 671    | 930    | 1,320  | 994    | 493    | 267    | 223    | 276    |
| 29    | 478    | 1,670  | 1,070  | 804    | -----  | 915    | 1,190  | 902    | 475    | 261    | 225    | 296    |
| 30    | 407    | 1,410  | 968    | 767    | -----  | 870    | 1,150  | 837    | 459    | 253    | 226    | 303    |
| 31    | 727    | -----  | 908    | 744    | -----  | 814    | -----  | 784    | -----  | 247    | 224    | -----  |
| TOTAL | 9,348  | 41,304 | 43,161 | 19,966 | 17,988 | 39,559 | 48,964 | 38,520 | 42,253 | 10,554 | 7,402  | 10,034 |
| MEAN  | 302    | 1,377  | 1,392  | 644    | 642    | 1,276  | 1,632  | 1,243  | 1,408  | 340    | 239    | 334    |
| MAX   | 735    | 11,500 | 5,520  | 835    | 1,460  | 5,460  | 15,500 | 2,930  | 6,270  | 515    | 290    | 507    |
| MIN   | 195    | 367    | 671    | 545    | 464    | 484    | 560    | 784    | 459    | 247    | 212    | 236    |
| CFSM  | .53    | 2.42   | 2.44   | 1.13   | 1.13   | 2.24   | 2.86   | 2.18   | 2.47   | .60    | .42    | .59    |
| IN.   | .61    | 2.70   | 2.82   | 1.30   | 1.17   | 2.58   | 3.20   | 2.51   | 2.76   | .69    | .48    | .65    |
| AC-FT | 18,540 | 81,930 | 85,610 | 39,600 | 35,680 | 78,470 | 97,120 | 76,400 | 83,810 | 20,930 | 14,680 | 19,900 |

CAL YR 1973 TOTAL 421,447 MEAN 1,155 MAX 20,800 MIN 187 CFSM 2.03 IN 27.50 AC-FT 835,900  
WTR YR 1974 TOTAL 329,053 MEAN 902 MAX 15,500 MIN 195 CFSM 1.58 IN 21.48 AC-FT 652,700

PEAK DISCHARGE (BASE, 6,000 FT<sup>3</sup>/S)

| DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|------|------|-------|-----------|
| 11-24 | 2230 | 15.45 | 16,100    | 4-22 | 1030 | 18.57 | 23,600    |
| 12-4  | 1800 | 11.32 | 7,380     | 6-8  | 0045 | 14.34 | 12,700    |
| 3-10  | 2330 | 10.80 | 6,330     | 6-9  | 1900 | 11.09 | 6,420     |

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, at bridge on State Highway 21 at Lesterville, and 0.8 mi (1.3 km) upstream from Black River.

DRAINAGE AREA.--94.5 mi<sup>2</sup> (244.8 km<sup>2</sup>).

PERIOD OF RECORD.--January 1960 to current year.

GAGE.--Water-stage recorder. Datum of gage is 655.34 ft (199.748 m) above mean sea level.

AVERAGE DISCHARGE.--14 years, 103 ft<sup>3</sup>/s (2.92 m<sup>3</sup>/s), 74,620 acre-ft/yr (92.0 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 6,270 ft<sup>3</sup>/s (178 m<sup>3</sup>/s) Nov. 25 (gage height, 9.23 ft or 2.813 m); minimum, 0.48 ft<sup>3</sup>/s (0.014 m<sup>3</sup>/s) Aug. 3, 4 (gage height, 1.53 ft or 0.466 m).

Period of record: Maximum discharge, 10,400 ft<sup>3</sup>/s (295 m<sup>3</sup>/s) Nov. 2, 1972 (gage height, 11.13 ft or 3.392 m); no flow Oct. 15 to Nov. 21, 1963, July 17-21, July 31 to Aug. 20, 1964, Nov. 13, 14, 1971. Flood of March 1935 reached a stage of about 13.8 ft (4.21 m) from information by local resident.

REMARKS.--Records fair. Low flow regulated by Union Electric Company Taum Sauk pumped-storage power plant lower reservoir, 4 mi (6.4 km) upstream, since Feb. 19, 1963, capacity 6,350 acre-ft (7.83 hm<sup>3</sup>).

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT     | NOV    | DEC    | JAN    | FEB    | MAR    | APR    | MAY    | JUN     | JUL   | AUG    | SEP     |
|-------|---------|--------|--------|--------|--------|--------|--------|--------|---------|-------|--------|---------|
| 1     | 33      | 967    | 284    | 115    | 111    | 115    | 111    | 89     | 127     | 4.6   | .72    | 132     |
| 2     | 15      | 601    | 273    | 97     | 102    | 95     | 119    | 74     | 52      | 4.2   | .64    | 67      |
| 3     | 18      | 246    | 192    | 97     | 120    | 86     | 172    | 556    | 14      | 3.8   | .55    | 7.5     |
| 4     | 61      | 238    | 1,560  | 103    | 53     | 102    | 210    | 380    | 11      | 3.6   | .59    | 114     |
| 5     | 111     | 319    | 959    | 47     | 34     | 159    | 64     | 179    | 9.9     | 3.4   | .62    | 46      |
| 6     | 109     | 372    | 218    | 61     | 82     | 222    | 202    | 133    | 9.6     | 3.3   | .70    | 33      |
| 7     | 88      | 358    | 286    | 83     | 124    | 251    | 122    | 111    | 74      | 3.0   | .85    | 35      |
| 8     | 13      | 245    | 59     | 68     | 28     | 239    | 92     | 118    | 241     | 2.8   | .86    | 33      |
| 9     | 7.6     | 63     | 189    | 79     | 31     | 190    | 151    | 104    | 849     | 2.7   | .94    | 26      |
| 10    | 6.3     | 59     | 104    | 74     | 42     | 487    | 139    | 97     | 490     | 2.5   | 1.1    | 29      |
| 11    | 5.4     | 56     | 115    | 75     | 44     | 1,640  | 102    | 97     | 88      | 2.3   | 1.1    | 38      |
| 12    | 5.9     | 55     | 51     | 35     | 77     | 1,680  | 505    | 151    | 131     | 2.0   | .96    | 23      |
| 13    | 655     | 55     | 73     | 25     | 46     | 227    | 369    | 118    | 169     | 2.3   | .82    | 30      |
| 14    | 1,040   | 54     | 139    | 39     | 45     | 295    | 304    | 236    | 138     | 3.5   | .72    | 46      |
| 15    | 105     | 54     | 129    | 42     | 45     | 171    | 208    | 1,820  | 192     | 3.3   | .77    | 77      |
| 16    | 90      | 50     | 39     | 101    | 44     | 526    | 170    | 462    | 32      | 3.1   | .93    | 154     |
| 17    | 27      | 45     | 41     | 179    | 44     | 512    | 141    | 240    | 12      | 3.0   | 2.1    | 100     |
| 18    | 226     | 45     | 42     | 246    | 46     | 152    | 122    | 171    | 9.0     | 2.8   | 3.8    | 63      |
| 19    | 49      | 44     | 441    | 975    | 374    | 398    | 160    | 135    | 7.6     | 2.5   | 1.8    | 69      |
| 20    | 20      | 48     | 1,100  | 1,100  | 333    | 508    | 60     | 107    | 6.4     | 2.3   | 1.4    | 502     |
| 21    | 17      | 54     | 279    | 1,220  | 901    | 272    | 876    | 96     | 5.2     | 2.2   | 1.2    | 21      |
| 22    | 16      | 58     | 229    | 346    | 2,270  | 467    | 2,060  | 104    | 4.5     | 2.0   | 1.2    | 9.3     |
| 23    | 26      | 57     | 232    | 257    | 1,460  | 376    | 887    | 107    | 4.0     | 1.9   | 1.9    | 6.7     |
| 24    | 50      | 1,820  | 1,520  | 140    | 216    | 346    | 311    | 88     | 11      | 1.7   | 1.5    | 5.3     |
| 25    | 42      | 3,610  | 1,890  | 159    | 234    | 277    | 198    | 76     | 43      | 1.6   | 1.2    | 4.8     |
| 26    | 22      | 1,750  | 303    | 82     | 114    | 206    | 224    | 77     | 14      | 1.4   | 1.1    | 4.3     |
| 27    | 61      | 970    | 328    | 243    | 165    | 236    | 129    | 70     | 17      | 1.3   | .58    | 4.2     |
| 28    | 62      | 779    | 191    | 183    | 163    | 209    | 127    | 62     | 73      | 1.2   | .19    | 6.5     |
| 29    | 62      | 736    | 220    | 204    | -----  | 216    | 105    | 55     | 24      | 1.2   | 636    | 10      |
| 30    | 62      | 551    | 196    | 89     | -----  | 169    | 124    | 70     | 5.9     | .97   | 164    | 7.1     |
| 31    | 548     | -----  | 180    | 125    | -----  | 53     | -----  | 117    | -----   | .80   | 71     | -----   |
| TOTAL | 3,653.2 | 14,359 | 11,862 | 6,689  | 7,348  | 10,882 | 8,564  | 6,300  | 2,864.1 | 77.27 | 978.07 | 1,703.7 |
| MEAN  | 118     | 479    | 383    | 216    | 262    | 351    | 285    | 203    | 95.5    | 2.49  | 31.6   | 56.8    |
| MAX   | 1,040   | 3,610  | 1,890  | 1,220  | 2,270  | 1,680  | 2,060  | 1,820  | 849     | 4.6   | 636    | 502     |
| MIN   | 5.4     | 44     | 39     | 25     | 28     | 53     | 60     | 55     | 4.0     | .80   | .55    | 4.2     |
| AC-FT | 7,250   | 28,480 | 23,530 | 13,270 | 14,570 | 21,580 | 16,990 | 12,500 | 5,680   | 153   | 1,940  | 3,380   |

CAL YR 1973 TOTAL 87,891.70 MEAN 241 MAX 3,610 MIN 1.2 AC-FT 174,300  
WTR YR 1974 TOTAL 75,280.34 MEAN 206 MAX 3,610 MIN .55 AC-FT 149,300

## 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, on right bank 0.4 mi (0.6 km) downstream from Mayberry Branch, 7 mi (11.2 km) southwest of Annapolis, 11 mi (17.7 km) downstream from East Fork, and at mile 278.5 (448.1 km).

DRAINAGE AREA.--484 mi<sup>2</sup> (1,254 km<sup>2</sup>).

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

GAGE.--Water-stage recorder. Datum of gage is 569.72 ft (173.651 m) above mean sea level (levels by Corps of Engineers). Prior to Aug. 21, 1942, at site 415 ft (126 m) upstream at same datum.

AVERAGE DISCHARGE.--35 years, 568 ft<sup>3</sup>/s (16.09 m<sup>3</sup>/s), 15.94 in/yr (405 mm/yr), 411,500 acre-ft/yr (507 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 27,800 ft<sup>3</sup>/s (787 m<sup>3</sup>/s) Nov. 25 (gage height, 15.57 ft or 4.746 m); minimum, 136 ft<sup>3</sup>/s (3.85 m<sup>3</sup>/s) Aug. 1, 2, 4, 5, 6, 7; minimum gage height, 1.30 ft (0.396 m) Aug. 5, 6, 7, 8, 9.

Period of record: Maximum discharge, 49,700 ft<sup>3</sup>/s (1,410 m<sup>3</sup>/s) Nov. 2, 1972 (gage height, 21.55 ft or 6.568 m); minimum, 65 ft<sup>3</sup>/s (1.84 m<sup>3</sup>/s) Aug. 16, 17, 18, 1965; minimum gage height, 1.26 ft (0.384 m) Sept. 15, 16, 17, 18, 1971.

REMARKS.--Records good. Small regulation from upstream reservoir since Feb. 1963.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT    | NOV     | DEC     | JAN    | FEB    | MAR    | APR    | MAY    | JUN    | JUL    | AUG    | SEP    |
|-------|--------|---------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1     | 400    | 5,300   | 1,230   | 877    | 796    | 783    | 788    | 832    | 797    | 231    | 137    | 718    |
| 2     | 250    | 2,310   | 1,070   | 767    | 742    | 734    | 772    | 758    | 653    | 226    | 136    | 627    |
| 3     | 220    | 1,270   | 930     | 673    | 697    | 673    | 821    | 1,290  | 528    | 217    | 138    | 563    |
| 4     | 270    | 988     | 3,880   | 676    | 609    | 607    | 896    | 1,340  | 475    | 214    | 137    | 581    |
| 5     | 300    | 871     | 4,730   | 558    | 526    | 652    | 722    | 1,020  | 441    | 209    | 137    | 460    |
| 6     | 320    | 863     | 1,860   | 532    | 534    | 770    | 745    | 858    | 428    | 204    | 137    | 390    |
| 7     | 310    | 793     | 1,500   | 533    | 556    | 914    | 662    | 767    | 643    | 198    | 136    | 345    |
| 8     | 250    | 708     | 989     | 504    | 469    | 788    | 635    | 765    | 1,650  | 196    | 138    | 317    |
| 9     | 203    | 439     | 964     | 530    | 414    | 800    | 654    | 732    | 2,290  | 191    | 140    | 298    |
| 10    | 198    | 374     | 801     | 526    | 402    | 2,180  | 670    | 675    | 2,680  | 188    | 143    | 284    |
| 11    | 192    | 339     | 718     | 507    | 386    | 6,340  | 596    | 639    | 1,390  | 186    | 147    | 287    |
| 12    | 198    | 315     | 613     | 451    | 402    | 5,040  | 1,300  | 710    | 1,030  | 186    | 148    | 391    |
| 13    | 1,220  | 296     | 568     | 402    | 371    | 2,140  | 1,750  | 650    | 992    | 188    | 148    | 589    |
| 14    | 2,450  | 283     | 557     | 407    | 353    | 1,660  | 1,360  | 657    | 710    | 209    | 153    | 568    |
| 15    | 1,010  | 275     | 622     | 414    | 359    | 1,420  | 1,170  | 3,360  | 844    | 206    | 163    | 502    |
| 16    | 706    | 262     | 448     | 509    | 318    | 2,380  | 965    | 2,210  | 583    | 194    | 163    | 461    |
| 17    | 535    | 248     | 411     | 637    | 318    | 2,060  | 874    | 1,470  | 480    | 184    | 172    | 507    |
| 18    | 600    | 243     | 387     | 861    | 318    | 1,380  | 777    | 1,150  | 433    | 179    | 241    | 369    |
| 19    | 421    | 238     | 687     | 1,250  | 516    | 1,520  | 748    | 949    | 402    | 177    | 257    | 327    |
| 20    | 342    | 245     | 3,320   | 1,940  | 1,970  | 1,810  | 665    | 821    | 375    | 170    | 220    | 697    |
| 21    | 297    | 354     | 1,840   | 2,920  | 1,840  | 1,720  | 1,520  | 726    | 348    | 167    | 198    | 361    |
| 22    | 273    | 475     | 1,390   | 2,620  | 9,720  | 1,840  | 7,720  | 823    | 325    | 165    | 192    | 274    |
| 23    | 257    | 438     | 1,210   | 1,830  | 5,180  | 1,690  | 4,640  | 859    | 303    | 165    | 209    | 246    |
| 24    | 261    | 5,100   | 3,940   | 1,280  | 2,100  | 1,530  | 2,170  | 739    | 287    | 158    | 212    | 227    |
| 25    | 253    | 21,700  | 6,720   | 1,150  | 1,530  | 1,340  | 1,530  | 654    | 298    | 150    | 200    | 217    |
| 26    | 228    | 8,210   | 2,970   | 894    | 1,100  | 1,230  | 1,310  | 636    | 280    | 150    | 198    | 211    |
| 27    | 309    | 5,250   | 1,990   | 1,120  | 1,020  | 1,200  | 1,060  | 602    | 263    | 147    | 200    | 205    |
| 28    | 434    | 2,970   | 1,460   | 1,070  | 920    | 1,130  | 935    | 548    | 288    | 141    | 242    | 227    |
| 29    | 420    | 2,160   | 1,320   | 1,070  | -----  | 1,080  | 839    | 508    | 273    | 141    | 2,270  | 366    |
| 30    | 377    | 1,720   | 1,160   | 877    | -----  | 986    | 818    | 536    | 240    | 138    | 1,610  | 421    |
| 31    | 1,380  | -----   | 1,020   | 861    | -----  | 788    | -----  | 613    | -----  | 139    | 832    | -----  |
| TOTAL | 14,884 | 65,037  | 51,305  | 29,246 | 34,466 | 49,185 | 40,112 | 28,897 | 20,729 | 5,614  | 9,554  | 12,036 |
| MEAN  | 480    | 2,168   | 1,655   | 943    | 1,231  | 1,587  | 1,337  | 932    | 691    | 181    | 308    | 401    |
| MAX   | 2,450  | 21,700  | 6,720   | 2,920  | 9,720  | 6,340  | 7,720  | 3,360  | 2,680  | 231    | 2,270  | 718    |
| MIN   | 192    | 238     | 387     | 402    | 318    | 607    | 596    | 508    | 240    | 138    | 136    | 205    |
| CFSM  | .99    | 4.48    | 3.42    | 1.95   | 2.54   | 3.28   | 2.76   | 1.93   | 1.43   | .37    | .64    | .83    |
| IN.   | 1.14   | 5.00    | 3.94    | 2.25   | 2.65   | 3.78   | 3.08   | 2.22   | 1.59   | .43    | .73    | .93    |
| AC-FT | 29,520 | 129,000 | 101,800 | 58,010 | 68,360 | 97,560 | 79,560 | 57,320 | 41,120 | 11,140 | 18,950 | 23,870 |

CAL YR 1973 TOTAL 448,649 MEAN 1,229 MAX 21,700 MIN 163 CFSM 2.54 IN 34.48 AC-FT 889,900  
WTR YR 1974 TOTAL 361,065 MEAN 989 MAX 21,700 MIN 136 CFSM 2.04 IN 27.75 AC-FT 716,200

PEAK DISCHARGE (BASE, 7,000 FT<sup>3</sup>/S)

| DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|------|------|-------|-----------|
| 11-1  | 0445 | 8.85  | 8,440     | 2-22 | 1300 | 10.20 | 11,700    |
| 11-25 | 1515 | 15.57 | 27,800    | 3-11 | 1830 | 8.76  | 8,130     |
| 12-4  | 2200 | 8.59  | 7,840     | 3-22 | 1545 | 9.18  | 9,320     |
| 12-24 | 2400 | 8.81  | 8,350     |      |      |       |           |



## 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, in intake tower at dam on Black River, 2.3 mi (3.70 km) upstream from Brewer Bay, 4.5 mi (7.24 km) west of Piedmont, and at mile 257.4 (414.16 km).

DRAINAGE AREA.--898 mi<sup>2</sup> (2,326 km<sup>2</sup>).

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

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (levels by Corps of Engineers).

EXTREMES.--Current year: Maximum contents, 180,000 acre-ft (222 hm<sup>3</sup>) Dec. 27 (elevation, 537.83 ft or 163.930 m), minimum daily, 22,000 acre-ft (27.1 hm<sup>3</sup>) Oct. 11, Feb. 18, Apr. 6-10; minimum elevation, 494.03 ft (150.580 m) Apr. 10.

Period of record: Maximum contents, 399,400 acre-ft (492 hm<sup>3</sup>) May 28, 1957 (elevation, 565.59 ft or 172.392 m); minimum, since initial filling to conservation pool level, 15,800 acre-ft (19.5 hm<sup>3</sup>) Jan. 23, 1972 (elevation, 490.00 ft or 149.352 m).

REMARKS.--Lake is formed by earth-fill dam. Storage began June 3, 1948; conservation pool level reached July 4, 1948. Capacity at crest of spillway 413,700 acre-ft (510 hm<sup>3</sup>) at elevation 567 ft (172.8 m), of which 391,800 acre-ft (483 hm<sup>3</sup>) is available for flood-control storage, and 21,920 acre-ft (27.0 hm<sup>3</sup>) is permanent storage which under normal operating conditions will be maintained for purposes of conservation and recreation at elevation 494 ft (150.6 m). Lake used for flood control and incidental recreational purposes. Contents computed from daily readings at 2400.

COOPERATION.--Records furnished by Corps of Engineers.

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

|     |        |     |         |
|-----|--------|-----|---------|
| 494 | 21,900 | 520 | 91,600  |
| 495 | 23,600 | 530 | 137,000 |
| 500 | 32,800 | 538 | 181,000 |
| 510 | 57,300 |     |         |

## CONTENTS, IN ACRE-FEET, AT 2400, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY | OCT    | NOV     | DEC     | JAN     | FEB    | MAR    | APR    | MAY    | JUN    | JUL    | AUG    | SEP    |
|-----|--------|---------|---------|---------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1   | 24,899 | 35,299  | 135,000 | 169,000 | 86,500 | 52,399 | 23,000 | 37,200 | 28,899 | 32,000 | 26,599 | 29,099 |
| 2   | 24,500 | 39,099  | 135,000 | 166,000 | 85,799 | 48,200 | 22,399 | 34,099 | 28,299 | 31,599 | 26,700 | 28,299 |
| 3   | 24,099 | 40,599  | 135,000 | 161,000 | 83,899 | 43,799 | 22,399 | 31,599 | 27,799 | 31,200 | 26,700 | 27,299 |
| 4   | 23,700 | 41,200  | 144,000 | 158,000 | 80,199 | 39,399 | 22,700 | 31,099 | 27,799 | 31,000 | 26,700 | 26,799 |
| 5   | 23,399 | 41,399  | 156,000 | 153,000 | 75,500 | 35,500 | 22,599 | 30,500 | 27,799 | 30,500 | 26,700 | 26,700 |
| 6   | 23,200 | 41,399  | 160,000 | 149,000 | 71,099 | 32,299 | 22,000 | 29,399 | 27,899 | 30,099 | 26,599 | 26,500 |
| 7   | 23,000 | 41,399  | 162,000 | 144,000 | 66,399 | 29,099 | 22,000 | 28,899 | 28,500 | 29,700 | 26,399 | 26,200 |
| 8   | 23,000 | 40,399  | 162,000 | 140,000 | 61,500 | 26,299 | 22,000 | 29,299 | 30,799 | 29,200 | 26,399 | 25,799 |
| 9   | 22,299 | 38,200  | 162,000 | 135,000 | 56,299 | 24,299 | 22,000 | 29,599 | 35,599 | 28,700 | 26,599 | 25,700 |
| 10  | 22,099 | 35,899  | 162,000 | 131,000 | 51,200 | 27,599 | 22,000 | 29,700 | 42,000 | 28,200 | 26,700 | 25,500 |
| 11  | 22,000 | 33,500  | 161,000 | 126,000 | 46,399 | 44,500 | 22,200 | 30,000 | 44,200 | 28,000 | 26,799 | 25,500 |
| 12  | 22,200 | 31,200  | 160,000 | 122,000 | 42,000 | 58,399 | 22,899 | 31,000 | 44,200 | 28,000 | 26,500 | 25,899 |
| 13  | 23,899 | 28,799  | 158,000 | 118,000 | 37,099 | 60,500 | 25,399 | 31,099 | 42,899 | 28,099 | 26,299 | 26,599 |
| 14  | 28,599 | 26,599  | 156,000 | 113,000 | 32,599 | 59,500 | 27,099 | 30,799 | 41,500 | 27,799 | 26,000 | 27,000 |
| 15  | 31,000 | 24,299  | 155,000 | 108,000 | 28,299 | 58,299 | 28,399 | 36,700 | 39,599 | 27,399 | 26,000 | 27,000 |
| 16  | 32,000 | 22,599  | 153,000 | 103,000 | 24,500 | 58,500 | 28,799 | 40,700 | 37,599 | 27,000 | 26,200 | 26,799 |
| 17  | 32,399 | 22,299  | 151,000 | 98,399  | 22,500 | 59,700 | 28,599 | 41,099 | 35,299 | 26,799 | 26,599 | 26,700 |
| 18  | 32,700 | 22,299  | 148,000 | 93,899  | 22,000 | 58,299 | 28,500 | 40,799 | 34,099 | 26,899 | 26,899 | 26,099 |
| 19  | 32,799 | 22,399  | 147,000 | 91,000  | 22,399 | 56,000 | 28,500 | 39,799 | 34,000 | 27,099 | 26,799 | 25,500 |
| 20  | 32,700 | 22,599  | 151,000 | 90,599  | 24,700 | 54,899 | 28,399 | 38,299 | 34,000 | 27,200 | 26,500 | 25,000 |
| 21  | 32,500 | 22,799  | 153,000 | 96,899  | 27,700 | 54,799 | 30,399 | 36,500 | 34,099 | 27,399 | 26,099 | 24,799 |
| 22  | 31,099 | 22,899  | 153,000 | 97,500  | 48,000 | 53,099 | 45,099 | 36,700 | 34,099 | 27,200 | 25,799 | 24,399 |
| 23  | 31,799 | 23,200  | 152,000 | 95,599  | 60,399 | 51,099 | 55,399 | 37,500 | 33,899 | 26,799 | 26,000 | 23,799 |
| 24  | 31,000 | 34,799  | 159,000 | 93,000  | 64,599 | 48,700 | 56,200 | 37,899 | 33,799 | 26,700 | 26,299 | 23,399 |
| 25  | 29,899 | 81,399  | 173,000 | 90,199  | 65,200 | 46,000 | 54,899 | 37,500 | 33,599 | 26,799 | 26,500 | 23,200 |
| 26  | 28,799 | 108,000 | 179,000 | 87,199  | 62,700 | 43,000 | 52,700 | 36,799 | 33,399 | 26,899 | 26,399 | 23,000 |
| 27  | 28,200 | 122,000 | 179,000 | 85,000  | 59,500 | 39,099 | 49,899 | 35,899 | 33,200 | 27,000 | 26,099 | 22,799 |
| 28  | 27,599 | 128,000 | 178,000 | 84,599  | 56,200 | 36,399 | 46,899 | 34,500 | 32,899 | 27,200 | 26,399 | 22,899 |
| 29  | 27,000 | 132,000 | 171,000 | 85,500  | -----  | 33,099 | 43,599 | 32,500 | 32,700 | 27,200 | 29,299 | 23,099 |
| 30  | 26,399 | 134,000 | 176,000 | 86,199  | -----  | 29,700 | 40,399 | 30,500 | 32,399 | 26,799 | 31,500 | 23,399 |
| 31  | 26,700 | -----   | 173,000 | 86,599  | -----  | 26,000 | -----  | 29,299 | -----  | 26,599 | 30,200 | -----  |
| (+) | 496.84 | 529.56  | 536.74  | 518.71  | 509.63 | 496.42 | 503.56 | 498.23 | 499.80 | 496.77 | 498.69 | 494.90 |
| (-) | +1.6   | +107.7  | +38.7   | -86.5   | -30.4  | -30.2  | +14.4  | -11.1  | +3.0   | -5.7   | +3.6   | -6.8   |
| MAX | 32,799 | 134,000 | 179,000 | 169,000 | 86,500 | 60,500 | 56,200 | 41,099 | 44,200 | 32,000 | 31,500 | 29,099 |
| MIN | 22,000 | 22,299  | 135,000 | 84,599  | 22,000 | 24,299 | 22,000 | 28,899 | 27,799 | 26,599 | 25,799 | 22,799 |

CAL YR 1973.....‡ +114.5

WTR YR 1974.....‡ -1.7

† Elevation, in feet, at end of month

‡ Change in contents, in hundreds of acre-feet.

## WHITE RIVER BASIN

07062500 Black River at Leeper, Mo.

LOCATION.--Lat 37°04'42", long 90°42'52", in SE¼SW¼ sec.22, T.28 N., R.3 E., Wayne County, on downstream side of pier at right end of left truss of bridge on State Highway 34, 0.5 mi (0.8 km) northwest of Leeper, 2 mi (3.2 km) downstream from McKenzie Creek, 6 mi (9.7 km) downstream from Clearwater Dam, and at mile 251.0 (403.9 km).

DRAINAGE AREA.--957 mi<sup>2</sup> (2,480 km<sup>2</sup>).

PERIOD OF RECORD.--June 1921 to current year.

GAGE.--Water-stage recorder. Datum of gage is 428.51 ft (130.610 m) above mean sea level. Prior to Oct. 22, 1937, nonrecording gage, Oct. 22, 1937, to Jan. 21, 1942, water-stage recorder, and Jan. 22 to Apr. 6, 1942, nonrecording gage, all at site 1,900 ft (579 m) downstream at datum 3.85 ft (1.173 m) lower.

AVERAGE DISCHARGE.--53 years, 954 ft<sup>3</sup>/s (27.02 m<sup>3</sup>/s), 691,200 acre-ft/yr (852 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 4,140 ft<sup>3</sup>/s (117.2 m<sup>3</sup>/s) Nov. 25 (gage height, 5.88 ft or 1.792 m); minimum, 245 ft<sup>3</sup>/s (6.94 m<sup>3</sup>/s) July 12; minimum gage height, 0.78 ft (0.238 m) Aug. 11.

Period of record: Maximum discharge, 78,400 ft<sup>3</sup>/s (2,220 m<sup>3</sup>/s) May 14, 1933 (gage height, 20.01 ft or 6.009 m, site and datum then in use), from rating curve extended above 55,000 ft<sup>3</sup>/s (1,560 m<sup>3</sup>/s); minimum, 62 ft<sup>3</sup>/s (1.76 m<sup>3</sup>/s) Sept. 22-25, 1966 (gage height, 0.42 ft or 1.128 m), result of closure of Clearwater Dam; minimum, prior to regulation, 133 ft<sup>3</sup>/s (3.77 m<sup>3</sup>/s) Aug. 11, 1934.

Maximum stage known, about 22.3 ft (6.80 m) in March 1904 (present site and datum), from floodmarks (discharge, 125,000 ft<sup>3</sup>/s or 3,540 m<sup>3</sup>/s, from rating curve extended above 55,000 ft<sup>3</sup>/s or 1,560 m<sup>3</sup>/s).

REMARKS.--Records good. Flow regulated by Clearwater Lake since June 3, 1948.

REVISIONS (WATER YEARS).--WSP 762: 1933(M). WSP 1007: 1943. WSP 1281: 1922-23, 1927-29(M).

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY         | OCT           | NOV    | DEC        | JAN     | FEB       | MAR     | APR     | MAY     | JUN             | JUL    | AUG    | SEP    |
|-------------|---------------|--------|------------|---------|-----------|---------|---------|---------|-----------------|--------|--------|--------|
| 1           | 666           | 1,110  | 1,700      | 3,510   | 1,470     | 3,390   | 3,140   | 2,920   | 1,520           | 725    | 357    | 1,750  |
| 2           | 659           | 1,140  | 1,690      | 3,510   | 1,590     | 3,500   | 2,100   | 2,890   | 1,490           | 725    | 344    | 1,440  |
| 3           | 653           | 1,140  | 1,700      | 3,480   | 2,030     | 3,420   | 1,500   | 2,760   | 1,370           | 710    | 339    | 1,410  |
| 4           | 654           | 1,140  | 1,760      | 3,450   | 2,750     | 3,340   | 1,380   | 2,120   | 1,010           | 698    | 336    | 1,310  |
| 5           | 643           | 1,130  | 714        | 3,420   | 3,360     | 3,250   | 1,400   | 1,880   | 965             | 662    | 338    | 902    |
| 6           | 641           | 1,160  | 794        | 3,410   | 3,330     | 3,210   | 1,500   | 1,840   | 923             | 628    | 349    | 887    |
| 7           | 636           | 1,140  | 1,420      | 3,470   | 3,380     | 3,100   | 1,540   | 1,550   | 986             | 631    | 435    | 909    |
| 8           | 636           | 1,420  | 1,560      | 3,630   | 3,560     | 2,850   | 1,300   | 1,090   | 944             | 631    | 397    | 845    |
| 9           | 630           | 1,840  | 1,580      | 3,600   | 3,580     | 2,420   | 1,100   | 1,160   | 1,060           | 631    | 308    | 779    |
| 10          | 602           | 1,830  | 1,670      | 3,550   | 3,510     | 2,710   | 1,070   | 1,270   | 979             | 635    | 312    | 735    |
| 11          | 435           | 1,810  | 1,790      | 3,190   | 3,420     | 1,430   | 1,020   | 1,210   | 1,120           | 574    | 311    | 686    |
| 12          | 457           | 1,780  | 1,790      | 3,150   | 3,320     | 930     | 1,050   | 914     | 1,610           | 382    | 476    | 491    |
| 13          | 516           | 1,760  | 1,780      | 3,130   | 3,240     | 1,970   | 1,050   | 1,120   | 2,180           | 331    | 461    | 504    |
| 14          | 469           | 1,740  | 1,850      | 3,340   | 3,140     | 3,650   | 1,060   | 1,660   | 2,170           | 396    | 470    | 695    |
| 15          | 508           | 1,710  | 1,960      | 3,350   | 3,040     | 3,430   | 1,060   | 1,130   | 2,160           | 528    | 496    | 881    |
| 16          | 641           | 1,560  | 1,950      | 3,660   | 2,840     | 2,980   | 1,210   | 1,180   | 2,110           | 555    | 331    | 890    |
| 17          | 713           | 945    | 1,940      | 3,750   | 1,920     | 2,640   | 1,440   | 2,170   | 2,060           | 516    | 326    | 896    |
| 18          | 724           | 563    | 2,060      | 3,710   | 1,190     | 2,980   | 1,310   | 2,240   | 1,660           | 384    | 337    | 981    |
| 19          | 730           | 542    | 2,460      | 3,670   | 857       | 3,550   | 1,190   | 2,250   | 1,010           | 331    | 422    | 982    |
| 20          | 756           | 576    | 1,670      | 3,860   | 966       | 3,330   | 1,180   | 2,310   | 800             | 325    | 605    | 980    |
| 21          | 756           | 700    | 1,450      | 3,850   | 1,810     | 2,960   | 1,500   | 2,430   | 770             | 328    | 613    | 966    |
| 22          | 749           | 696    | 2,040      | 3,770   | 1,480     | 3,040   | 852     | 2,110   | 757             | 394    | 601    | 857    |
| 23          | 749           | 846    | 2,280      | 3,770   | 1,220     | 3,350   | 1,040   | 976     | 742             | 508    | 442    | 822    |
| 24          | 828           | 1,910  | 2,250      | 3,570   | 1,370     | 3,370   | 2,550   | 1,150   | 726             | 464    | 329    | 726    |
| 25          | 1,050         | 1,950  | 1,270      | 3,290   | 1,880     | 3,370   | 2,880   | 1,580   | 709             | 363    | 320    | 625    |
| 26          | 1,050         | 1,060  | 1,040      | 3,270   | 3,100     | 3,480   | 3,010   | 1,630   | 709             | 330    | 494    | 606    |
| 27          | 1,090         | 770    | 2,830      | 2,890   | 3,430     | 3,420   | 2,970   | 1,680   | 710             | 294    | 535    | 598    |
| 28          | 1,060         | 671    | 3,060      | 2,560   | 3,380     | 3,380   | 2,930   | 1,720   | 712             | 291    | 564    | 602    |
| 29          | 1,050         | 1,060  | 2,970      | 1,340   | -----     | 3,510   | 2,960   | 2,100   | 717             | 312    | 610    | 552    |
| 30          | 1,040         | 1,460  | 2,810      | 1,270   | -----     | 3,580   | 3,080   | 2,070   | 722             | 503    | 879    | 535    |
| 31          | 1,120         | -----  | 3,030      | 1,320   | -----     | 3,550   | -----   | 1,860   | -----           | 466    | 1,760  | -----  |
| TOTAL       | 22,911        | 37,159 | 58,868     | 100,740 | 70,163    | 95,090  | 51,372  | 54,970  | 35,401          | 15,251 | 14,897 | 25,842 |
| MEAN        | 739           | 1,239  | 1,899      | 3,250   | 2,506     | 3,067   | 1,712   | 1,773   | 1,180           | 492    | 481    | 861    |
| MAX         | 1,120         | 1,950  | 3,060      | 3,860   | 3,580     | 3,650   | 3,140   | 2,920   | 2,180           | 725    | 1,760  | 1,750  |
| MIN         | 435           | 542    | 714        | 1,270   | 857       | 930     | 852     | 914     | 709             | 291    | 308    | 491    |
| AC-FT       | 45,440        | 73,700 | 116,800    | 199,800 | 139,200   | 188,600 | 101,900 | 109,000 | 70,220          | 30,250 | 29,550 | 51,260 |
| CAL YR 1973 | TOTAL 642,390 |        | MEAN 1,760 |         | MAX 3,740 |         | MIN 310 |         | AC-FT 1,274,000 |        |        |        |
| WTR YR 1974 | TOTAL 582,664 |        | MEAN 1,596 |         | MAX 3,860 |         | MIN 291 |         | AC-FT 1,156,000 |        |        |        |

| DAY   | OCT    | NOV    | DEC    | JAN     | FEB    | MAR     | APR    | MAY    | JUN    | JUL    | AUG    | SEP    |
|-------|--------|--------|--------|---------|--------|---------|--------|--------|--------|--------|--------|--------|
| 1     | 794    | 1,440  | 2,150  | 3,420   | 1,990  | 3,600   | 3,480  | 3,450  | 2,160  | 903    | 630    | 1,640  |
| 2     | 790    | 1,420  | 2,260  | 3,670   | 2,020  | 3,620   | 3,350  | 3,370  | 1,840  | 896    | 551    | 1,740  |
| 3     | 787    | 1,390  | 2,270  | 3,700   | 2,080  | 3,700   | 2,430  | 3,480  | 1,740  | 887    | 517    | 1,530  |
| 4     | 785    | 1,380  | 3,900  | 3,640   | 2,370  | 3,650   | 1,960  | 3,350  | 1,610  | 877    | 504    | 1,470  |
| 5     | 783    | 1,380  | 5,400  | 3,580   | 2,830  | 3,600   | 1,750  | 2,850  | 1,340  | 867    | 498    | 1,330  |
| 6     | 776    | 1,350  | 2,900  | 3,530   | 3,280  | 3,560   | 1,740  | 2,500  | 1,250  | 861    | 491    | 1,030  |
| 7     | 778    | 1,370  | 1,990  | 3,490   | 3,380  | 3,540   | 1,740  | 2,350  | 1,370  | 862    | 494    | 958    |
| 8     | 775    | 1,360  | 2,130  | 3,520   | 3,410  | 3,430   | 1,780  | 2,050  | 1,500  | 865    | 549    | 959    |
| 9     | 774    | 1,560  | 2,180  | 3,680   | 3,540  | 3,200   | 1,710  | 1,660  | 1,590  | 853    | 554    | 919    |
| 10    | 769    | 1,880  | 2,160  | 3,860   | 3,590  | 3,090   | 1,590  | 1,770  | 2,660  | 850    | 511    | 863    |
| 11    | 741    | 1,950  | 2,190  | 3,960   | 3,540  | 4,400   | 1,520  | 1,790  | 1,990  | 855    | 479    | 813    |
| 12    | 658    | 1,950  | 2,260  | 3,520   | 3,470  | 4,340   | 2,130  | 1,770  | 1,730  | 815    | 493    | 770    |
| 13    | 715    | 1,940  | 2,250  | 3,310   | 3,400  | 2,770   | 1,970  | 1,470  | 1,990  | 678    | 580    | 636    |
| 14    | 825    | 1,930  | 2,210  | 3,260   | 3,320  | 3,110   | 1,760  | 1,600  | 2,370  | 644    | 599    | 622    |
| 15    | 762    | 1,920  | 2,240  | 3,380   | 3,230  | 3,660   | 1,640  | 2,950  | 2,700  | 679    | 606    | 714    |
| 16    | 725    | 1,890  | 2,290  | 3,460   | 3,150  | 3,800   | 1,560  | 2,800  | 2,710  | 775    | 635    | 879    |
| 17    | 793    | 1,760  | 2,270  | 3,580   | 2,970  | 3,340   | 1,650  | 2,200  | 2,450  | 785    | 510    | 915    |
| 18    | 852    | 1,300  | 2,260  | 3,730   | 2,370  | 3,130   | 1,780  | 2,560  | 2,360  | 754    | 533    | 933    |
| 19    | 868    | 925    | 2,380  | 3,750   | 1,870  | 3,670   | 1,670  | 2,600  | 2,030  | 630    | 506    | 1,000  |
| 20    | 878    | 880    | 2,790  | 4,060   | 1,470  | 3,660   | 1,560  | 2,540  | 1,460  | 564    | 519    | 1,030  |
| 21    | 894    | 966    | 2,260  | 4,580   | 1,650  | 3,570   | 1,630  | 2,620  | 1,200  | 539    | 674    | 1,040  |
| 22    | 897    | 1,050  | 2,010  | 4,420   | 4,500  | 3,260   | 2,530  | 3,390  | 1,110  | 539    | 709    | 1,020  |
| 23    | 894    | 1,850  | 2,350  | 4,300   | 4,260  | 3,670   | 2,140  | 4,460  | 1,050  | 581    | 709    | 943    |
| 24    | 890    | 5,170  | 3,140  | 4,250   | 2,660  | 3,860   | 1,950  | 2,420  | 1,010  | 688    | 598    | 900    |
| 25    | 939    | 11,000 | 4,750  | 3,990   | 2,230  | 3,830   | 2,700  | 1,870  | 981    | 669    | 500    | 822    |
| 26    | 1,120  | 11,800 | 3,370  | 3,710   | 2,470  | 3,780   | 3,080  | 2,010  | 958    | 592    | 470    | 727    |
| 27    | 1,220  | 7,580  | 2,700  | 3,790   | 3,200  | 3,740   | 3,230  | 2,010  | 939    | 541    | 555    | 690    |
| 28    | 1,270  | 4,270  | 3,330  | 3,770   | 3,570  | 3,720   | 3,220  | 1,990  | 927    | 513    | 655    | 694    |
| 29    | 1,240  | 2,440  | 3,830  | 3,660   | -----  | 3,760   | 3,180  | 2,010  | 915    | 496    | 899    | 745    |
| 30    | 1,220  | 2,010  | 3,850  | 2,540   | -----  | 3,700   | 3,240  | 2,220  | 910    | 495    | 760    | 660    |
| 31    | 1,280  | -----  | 3,480  | 2,100   | -----  | 3,570   | -----  | 2,300  | -----  | 611    | 937    | -----  |
| TOTAL | 27,492 | 79,111 | 85,550 | 113,210 | 81,820 | 111,330 | 65,670 | 76,410 | 48,850 | 22,164 | 18,225 | 28,992 |
| MEAN  | 887    | 2,637  | 2,760  | 3,652   | 2,922  | 3,591   | 2,1    |        |        |        |        |        |

07064300 Fudge Hollow near Licking, Mo.

LOCATION.--Lat 37°31'50", long 91°44'13", in NW¼SW¼ sec.29, T.33 N., R.7 W., Dent County, on downstream side of right abutment of bridge on State Highway 32, 8 mi (12.9 km) east of junction of U.S. Highway 63 and State Highway 32 at Licking.

DRAINAGE AREA.--1.72 mi<sup>2</sup> (4.45 km<sup>2</sup>).

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

GAGE.--Water-stage recorder. Datum of gage is 1,157.59 ft (352.833 m) above mean sea level.

AVERAGE DISCHARGE.--18 years, 0.23 ft<sup>3</sup>/s (0.006 m<sup>3</sup>/s), 1.82 in/yr (46 mm/yr), 167 acre-ft/yr (206,000 m<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 204 ft<sup>3</sup>/s (5.78 m<sup>3</sup>/s) May 14 (gage height, 4.71 ft or 1.436 m); no flow on many days.

Period of record: Maximum discharge, 580 ft<sup>3</sup>/s (16.4 m<sup>3</sup>/s) Sept. 4, 1965 (gage height, 6.46 ft or 1.969 m); no flow at times each year.

REMARKS.--Records poor.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT   | NOV   | DEC   | JAN  | FEB   | MAR   | APR   | MAY    | JUN   | JUL | AUG  | SEP   |
|-------|-------|-------|-------|------|-------|-------|-------|--------|-------|-----|------|-------|
| 1     | 0     | .10   | .50   | .10  | .10   | 0     | .30   | .10    | .20   | 0   |      | .30   |
| 2     | 0     | 0     | .40   | .10  | .10   | 0     | .30   | .20    | .10   | 0   |      | .20   |
| 3     | 0     | 0     | .50   | .10  | 0     | 0     | .30   | .10    | .10   | 0   |      | .10   |
| 4     | 2.6   | 0     | 12    | .10  | 0     | 0     | .20   | .10    | .10   | 0   |      | 0     |
| 5     | 0     | 0     | 1.1   | .10  | 0     | 0     | .10   | 0      | .10   | 0   |      | 0     |
| 6     | 0     | 0     | .80   | 0    | 0     | 0     | .10   | 0      | .10   | 0   |      | 0     |
| 7     | 0     | 0     | .70   | 0    | 0     | 0     | .10   | 0      | 14    | 0   |      | 0     |
| 8     | 0     | 0     | .50   | 0    | 0     | 0     | 3.5   | .10    | .50   | 0   |      | 0     |
| 9     | 0     | 0     | .50   | 0    | 0     | 0     | .30   | 13     | 5.8   | .10 |      | 0     |
| 10    | 0     | 0     | .30   | 0    | 0     | 1.5   | .20   | .80    | .40   | 0   |      | 0     |
| 11    | 0     | 0     | .30   | 0    | 0     | 4.1   | 2.8   | 26     | .30   | 0   |      | .20   |
| 12    | 0     | 0     | .30   | 0    | 0     | .70   | .70   | 1.3    | .10   | 0   |      | .10   |
| 13    | 9.7   | 0     | .20   | 0    | 0     | .50   | .40   | 1.1    | .10   | 0   |      | .20   |
| 14    | .10   | 0     | .20   | 0    | 0     | .50   | .30   | 32     | 0     | 0   |      | .10   |
| 15    | .10   | 0     | .10   | 0    | 0     | 4.4   | .20   | 8.9    | 0     | 0   |      | .10   |
| 16    | .10   | 0     | .10   | .10  | 0     | 1.0   | .20   | 1.5    | 0     | 0   |      | .10   |
| 17    | .10   | 0     | .10   | 0    | 0     | .70   | .10   | 6.3    | 0     | 0   |      | .10   |
| 18    | .10   | 0     | .10   | .10  | 0     | .60   | .10   | 1.3    | 0     | 0   |      | .10   |
| 19    | .10   | 0     | .30   | .10  | 0     | .50   | .10   | 1.0    | 0     | 0   |      | .10   |
| 20    | .10   | 5.0   | .10   | 6.6  | 0     | .60   | .10   | .80    | 0     | 0   |      | .20   |
| 21    | .10   | 0     | .10   | .40  | .80   | .60   | 6.2   | 1.2    | 0     | 0   |      | .10   |
| 22    | .10   | 0     | .10   | .30  | .50   | .60   | 5.8   | .90    | 0     | 0   |      | 0     |
| 23    | .10   | 0     | .10   | .30  | .10   | .50   | .50   | .80    | 0     | 0   |      | 0     |
| 24    | .10   | 42    | 2.8   | .20  | .10   | .50   | .40   | .50    | 0     | 0   |      | 0     |
| 25    | .10   | 22    | .50   | .10  | .10   | .50   | .30   | .40    | 0     | 0   |      | 0     |
| 26    | .10   | 3.1   | .50   | .30  | .10   | .50   | .30   | .70    | 0     | 0   |      | 0     |
| 27    | .30   | 1.7   | .40   | .20  | 0     | .50   | .20   | .50    | 0     | 0   |      | 0     |
| 28    | .10   | 1.3   | .40   | .20  | 0     | .50   | .10   | .50    | 0     | 2.6 |      | 4.8   |
| 29    | .10   | .90   | .30   | .20  | ----- | .50   | .10   | .40    | 0     | 0   |      | .10   |
| 30    | .10   | .70   | .30   | .20  | ----- | .30   | .10   | .20    | 0     | 0   |      | 0     |
| 31    | 11    | ----- | .20   | .10  | ----- | .30   | ----- | .70    | ----- | 0   |      | ----- |
| TOTAL | 25.20 | 76.80 | 24.80 | 9.90 | 1.90  | 20.40 | 24.40 | 101.40 | 21.90 | 0   | 2.70 | 6.90  |
| MEAN  | .81   | 2.56  | .80   | .32  | .068  | .66   | .81   | 3.27   | .73   | 0   | .087 | .23   |
| MAX   | 11    | 42    | 12    | 6.6  | .80   | 4.4   | 6.2   | 32     | 14    | 0   | 2.6  | 4.8   |
| MIN   | 0     | 0     | .10   | 0    | 0     | 0     | .10   | 0      | 0     | 0   | 0    | 0     |
| CFSM  | .47   | 1.49  | .47   | .19  | .04   | .38   | .47   | 1.90   | .42   | 0   | .05  | .13   |
| IN.   | .55   | 1.66  | .54   | .21  | .04   | .44   | .53   | 2.19   | .47   | 0   | .06  | .15   |
| AC-FT | 50    | 152   | 49    | 20   | 3.8   | 40    | 48    | 201    | 43    | 0   | 5.4  | 14    |

CAL YR 1973 TOTAL 225.69 MEAN .62 MAX 42 MIN 0 CFSM .36 IN 4.88 AC-FT 448  
WTR YR 1974 TOTAL 316.30 MEAN .87 MAX 42 MIN 0 CFSM .51 IN 6.84 AC-FT 627

PEAK DISCHARGE (BASE, 100 FT<sup>3</sup>/S)

| DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|------|------|-------|-----------|
| 10-13 | 0715 | 3.92  | 110       | 5-11 | 0930 | 4.07  | 126       |
| 11-24 | 2200 | 4.19  | 140       | 5-14 | 2100 | 4.71  | 204       |

07064500 Big Creek near Yukon, Mo.

LOCATION.--Lat 37°13'57", long 91°50'59", in SW¼NW¼ sec.5, T.29 N., R.8 W., Texas County, on downstream side of left pier of bridge on State Highway 137, and 3 mi (4.8 km) south of Yukon.

DRAINAGE AREA.--8.36 mi<sup>2</sup> (21.7 km<sup>2</sup>).

PERIOD OF RECORD.--June 1949 to current year.

GAGE.--Water-stagerecorder. Datum of gage is 1,194.81 ft (364.178 m) above sea level.

AVERAGE DISCHARGE.--25 years, 8.07 ft<sup>3</sup>/s (0.229 m<sup>3</sup>/s), 13.11 in/yr (333 mm/yr), 5,850 acre-ft/yr (7.21 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 2,240 ft<sup>3</sup>/s (63.4 m<sup>3</sup>/s) Aug. 17 (gage height, 6.50 ft or 1.981 m); no flow on many days.

Period of record: Maximum discharge, 5,520 ft<sup>3</sup>/s (156 m<sup>3</sup>/s) Oct. 27, 1970 (gage height, 5.44 ft or 1.658 m in gage well and about 6.5 ft or 1.98 m at outside gage), from rating curve extended above 2,800 ft<sup>3</sup>/s (79.3 m<sup>3</sup>/s) on basis of contracted opening measurement at gage height, 5.20 ft (1.585 m) in gage well, 6.15 ft (1.875 m) from floodmark outside; maximum gage height, 6.50 ft (1.981 m) Aug. 17, 1974; no flow at times in most years.

Flood of April 1945 reached a stage of about 10.5 ft (3.20 m) and next highest since 1932 reached a stage of about 10.0 ft (3.05 m) in February 1935 from information by local resident.

REVISIONS.--The maximum discharge for the water year 1973 has been revised to 1,460 ft<sup>3</sup>/s (41.3 m<sup>3</sup>/s) May 7, 1973 (gage height, 5.77 ft or 1.759 m) superceding figure published in WRD Mo. 1973.

REMARKS.--Records poor.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

| DAY   | OCT  | NOV   | DEC   | JAN    | FEB   | MAR   | APR   | MAY   | JUN    | JUL   | AUG   | SEP   |
|-------|------|-------|-------|--------|-------|-------|-------|-------|--------|-------|-------|-------|
| 1     | 0    | 218   | 2.9   | 7.4    | 40    | 3.1   | 27    | 9.9   | 5.4    | .56   | .90   | 0     |
| 2     | 0    | 44    | 2.3   | 4.4    | 20    | 3.6   | 17    | 11    | 9.6    | .52   | .80   | 0     |
| 3     | 0    | 13    | 2.0   | 12     | 10    | 4.1   | 40    | 8.5   | 37     | .50   | .65   | 0     |
| 4     | 0    | 5.5   | 1.8   | 9.4    | 8.0   | 12    | 45    | 6.9   | 17     | .51   | .60   | .19   |
| 5     | 0    | 2.8   | 1.8   | 5.2    | 7.0   | 16    | 25    | 5.9   | 14     | .50   | .57   | .19   |
| 6     | 0    | 10    | 2.5   | 3.1    | 50    | 29    | 18    | 9.7   | 9.3    | .46   | .53   | .19   |
| 7     | 0    | 11    | 2.1   | 2.2    | 40    | 38    | 14    | 277   | 6.4    | .46   | .52   | .24   |
| 8     | 0    | 5.0   | 2.6   | 1.7    | 29    | 20    | 16    | 51    | 4.9    | .45   | .46   | .26   |
| 9     | 0    | 2.8   | 4.1   | 1.3    | 16    | 11    | 84    | 25    | 3.7    | .43   | .44   | .33   |
| 10    | 0    | 1.9   | 3.3   | 1.0    | 11    | 228   | 26    | 18    | 3.0    | .45   | .44   | .41   |
| 11    | 0    | 1.2   | 2.7   | .92    | 9.0   | 52    | 15    | 16    | 2.3    | .47   | .43   | .43   |
| 12    | 0    | 5.8   | 38    | .80    | 17    | 23    | 11    | 13    | 1.9    | .45   | .45   | .36   |
| 13    | 0    | 218   | 31    | .80    | 59    | 16    | 7.9   | 11    | 2.3    | .43   | .44   | .33   |
| 14    | 0    | 22    | 15    | .80    | 30    | 28    | 6.3   | 9.3   | 2.0    | .41   | .42   | .32   |
| 15    | 0    | 12    | 9.0   | .80    | 17    | 15    | 5.4   | 8.3   | 1.6    | .46   | .41   | .30   |
| 16    | 0    | 11    | 5.8   | .80    | 12    | 11    | 23    | 7.6   | 1.3    | .43   | .41   | .31   |
| 17    | 0    | 7.7   | 4.5   | 20     | 9.7   | 7.6   | 14    | 7.0   | 1.2    | .41   | .39   | .30   |
| 18    | 0    | 5.9   | 4.5   | 10     | 8.1   | 5.8   | 10    | 6.5   | 1.1    | .46   | .34   | .28   |
| 19    | 0    | 5.9   | 6.4   | 5.0    | 7.0   | 5.3   | 24    | 6.2   | .97    | .49   | .33   | .31   |
| 20    | 0    | 5.6   | 6.5   | 4.0    | 6.5   | 6.1   | 31    | 5.8   | .98    | .47   | .31   | .31   |
| 21    | .01  | 6.5   | 5.8   | 50     | 5.6   | 4.6   | 22    | 5.4   | .89    | .55   | .30   | .28   |
| 22    | .05  | 6.5   | 4.9   | 20     | 5.2   | 3.7   | 144   | 5.1   | .82    | .51   | .28   | .31   |
| 23    | .05  | 6.2   | 4.2   | 10     | 4.8   | 3.8   | 55    | 7.7   | .76    | 6.6   | .23   | .31   |
| 24    | .05  | 6.7   | 3.6   | 9.0    | 4.4   | 30    | 30    | 8.1   | .70    | 16    | .21   | .33   |
| 25    | .06  | 9.2   | 3.2   | 8.0    | 4.0   | 69    | 50    | 6.2   | .65    | 9.0   | .17   | 5.6   |
| 26    | .08  | 10    | 2.8   | 7.0    | 3.8   | 24    | 30    | 5.5   | .65    | 5.7   | .13   | 2.7   |
| 27    | .09  | 7.0   | 2.5   | 6.0    | 3.5   | 14    | 20    | 5.4   | .61    | 2.9   | .07   | 1.6   |
| 28    | .09  | 4.8   | 2.3   | 5.0    | 3.3   | 9.6   | 15    | 5.0   | .56    | 1.9   | 0     | 5.4   |
| 29    | .08  | 3.9   | 6.8   | 4.0    | ----- | 14    | 12    | 4.9   | .53    | 1.3   | 0     | 4.9   |
| 30    | .08  | 3.3   | 70    | 4.0    | ----- | 9.9   | 9.8   | 8.6   | .58    | 1.2   | 0     | 2.8   |
| 31    | 2.5  | ----- | 18    | 4.0    | ----- | 69    | ----- | 6.2   | -----  | 1.0   | 0     | ----- |
| TOTAL | 3.14 | 673.2 | 272.9 | 218.62 | 440.9 | 786.2 | 847.4 | 581.7 | 132.70 | 55.98 | 11.23 | 29.29 |
| MEAN  | .10  | 22.4  | 8.80  | 7.05   | 15.7  | 25.4  | 28.2  | 18.8  | 4.42   | 1.81  | .36   | .98   |
| MAX   | 2.5  | 218   | 70    | 50     | 59    | 228   | 144   | 277   | 37     | 16    | .90   | 5.6   |
| MIN   | 0    | 1.2   | 1.8   | .80    | 3.3   | 3.1   | 5.4   | 4.9   | .53    | .41   | 0     | 0     |
| CFSM  | .01  | 2.68  | 1.05  | .84    | 1.88  | 3.04  | 3.37  | 2.25  | .53    | .22   | .04   | .12   |
| IN.   | .01  | 3.00  | 1.21  | .97    | 1.96  | 3.50  | 3.77  | 2.59  | .59    | .25   | .05   | .13   |
| AC-FT | 6.2  | 1,340 | 541   | 434    | 875   | 1,560 | 1,680 | 1,150 | 263    | 111   | 22    | 58    |

CAL YR 1972 TOTAL 3,258.45 MEAN 8.90 MAX 802 MIN 0 CFSM 1.06 IN 14.50 AC-FT 6,460  
WTR YR 1973 TOTAL 4,053.26 MEAN 11.1 MAX 277 MIN 0 CFSM 1.33 IN 18.04 AC-FT 8,040

1973 REVISED PEAK DISCHARGE (BASE, 500 FT<sup>3</sup>/S)

| DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|------|------|-------|-----------|
| 11-1  | 1745 | 5.49  | 1,220     | 3-10 | 1430 | 5.18  | 986       |
| 11-13 | 0445 | 5.34  | 1,100     | 5-7  | 0430 | 5.77  | 1,460     |



07064500 Big Creek near Yukon, Mo.--Continued

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT   | NOV     | DEC   | JAN   | FEB   | MAR   | APR   | MAY   | JUN    | JUL   | AUG    | SEP   |
|-------|-------|---------|-------|-------|-------|-------|-------|-------|--------|-------|--------|-------|
| 1     | 2.0   | 21      | 8.9   | 5.4   | 5.7   | 5.8   | 7.9   | 7.5   | 3.6    | .84   | .15    | 25    |
| 2     | 1.6   | 11      | 7.8   | 4.8   | 5.1   | 5.1   | 6.7   | 49    | 2.8    | .76   | .16    | 35    |
| 3     | 1.3   | 6.8     | 23    | 4.0   | 4.2   | 4.6   | 11    | 22    | 2.2    | .68   | .19    | 29    |
| 4     | 5.9   | 5.3     | 231   | 3.7   | 3.7   | 4.0   | 8.3   | 12    | 2.0    | .67   | .17    | 9.9   |
| 5     | 4.2   | 4.1     | 26    | 3.5   | 3.6   | 3.3   | 6.4   | 8.7   | 1.9    | .62   | .17    | 5.5   |
| 6     | 2.8   | 3.3     | 13    | 3.5   | 3.4   | 2.9   | 5.8   | 6.6   | 1.9    | .57   | .17    | 3.6   |
| 7     | 2.2   | 3.1     | 9.3   | 3.2   | 3.0   | 2.6   | 5.3   | 5.6   | 168    | .53   | .19    | 2.5   |
| 8     | 2.0   | 2.5     | 7.2   | 3.2   | 2.8   | 2.2   | 5.6   | 4.9   | 39     | .46   | .18    | 1.7   |
| 9     | 1.7   | 2.1     | 6.2   | 4.3   | 2.8   | 2.0   | 4.8   | 4.4   | 123    | .43   | .23    | 1.5   |
| 10    | 1.5   | 2.0     | 5.0   | 6.9   | 2.5   | 186   | 4.3   | 4.4   | 31     | .40   | .26    | 1.9   |
| 11    | 4.8   | 1.8     | 4.6   | 5.7   | 2.3   | 141   | 19    | 24    | 18     | .40   | .23    | 26    |
| 12    | 8.5   | 1.7     | 4.2   | 4.3   | 2.3   | 37    | 29    | 20    | 13     | .37   | .24    | 21    |
| 13    | 109   | 1.7     | 4.0   | 3.9   | 2.3   | 20    | 14    | 10    | 9.9    | .38   | .27    | 30    |
| 14    | 12    | 1.7     | 3.4   | 4.1   | 2.1   | 14    | 14    | 38    | 8.1    | .38   | .32    | 21    |
| 15    | 6.3   | 1.7     | 3.3   | 10    | 2.0   | 39    | 9.9   | 34    | 8.5    | .37   | .33    | 12    |
| 16    | 4.2   | 1.6     | 3.0   | 16    | 2.0   | 30    | 8.3   | 16    | 4.6    | .32   | .38    | 8.8   |
| 17    | 3.2   | 1.6     | 2.9   | 13    | 2.0   | 17    | 7.0   | 11    | 3.7    | .31   | 208    | 6.9   |
| 18    | 2.5   | 1.4     | 2.7   | 9.5   | 2.1   | 12    | 6.1   | 8.9   | 3.3    | .29   | 47     | 5.4   |
| 19    | 2.0   | 1.4     | 84    | 8.4   | 3.7   | 11    | 5.7   | 7.2   | 2.9    | .28   | 8.8    | 4.2   |
| 20    | 1.7   | 33      | 33    | 69    | 3.7   | 11    | 5.1   | 6.0   | 2.7    | .27   | 3.9    | 7.0   |
| 21    | 1.6   | 30      | 19    | 30    | 51    | 18    | 209   | 45    | 2.3    | .25   | 2.1    | 8.8   |
| 22    | 1.3   | 17      | 13    | 16    | 62    | 20    | 106   | 31    | 2.0    | .26   | 1.2    | 6.4   |
| 23    | 1.2   | 14      | 24    | 11    | 24    | 19    | 23    | 14    | 1.7    | .22   | .84    | 5.1   |
| 24    | 1.1   | 496     | 99    | 8.1   | 17    | 14    | 13    | 9.9   | 1.6    | .22   | .64    | 4.6   |
| 25    | 1.1   | 121     | 30    | 6.6   | 12    | 15    | 8.9   | 8.0   | 1.4    | .23   | .52    | 4.7   |
| 26    | 1.0   | 133     | 17    | 13    | 9.8   | 17    | 6.6   | 9.1   | 1.3    | .23   | .44    | 4.6   |
| 27    | 144   | 33      | 13    | 15    | 8.1   | 13    | 5.5   | 6.8   | 1.2    | .22   | .37    | 4.6   |
| 28    | 12    | 23      | 11    | 13    | 6.9   | 14    | 4.5   | 5.5   | 1.1    | .21   | .44    | 5.1   |
| 29    | 6.1   | 15      | 8.8   | 10    | ----- | 14    | 4.1   | 4.5   | 1.1    | .20   | 5.6    | 6.7   |
| 30    | 3.6   | 11      | 7.6   | 8.0   | ----- | 11    | 8.8   | 3.9   | .96    | .18   | 3.5    | 6.1   |
| 31    | 151   | -----   | 5.9   | 6.7   | ----- | 8.9   | ----- | 4.9   | -----  | .17   | 2.0    | ----- |
| TOTAL | 503.4 | 1,001.8 | 730.8 | 323.8 | 252.1 | 714.4 | 573.6 | 442.8 | 464.76 | 11.72 | 288.99 | 314.6 |
| MEAN  | 16.2  | 33.4    | 23.6  | 10.4  | 9.00  | 23.0  | 19.1  | 14.3  | 15.5   | .38   | 9.32   | 10.5  |
| MAX   | 151   | 496     | 231   | 69    | 62    | 186   | 209   | 49    | 168    | .84   | 208    | 35    |
| MIN   | 1.0   | 1.4     | 2.7   | 3.2   | 2.0   | 2.0   | 4.1   | 3.9   | .96    | .17   | .15    | 1.5   |
| CFSM  | 1.94  | 4.00    | 2.82  | 1.24  | 1.08  | 2.75  | 2.28  | 1.71  | 1.85   | .05   | 1.11   | 1.26  |
| IN.   | 2.24  | 4.46    | 3.25  | 1.44  | 1.12  | 3.18  | 2.55  | 1.97  | 2.07   | .05   | 1.29   | 1.40  |
| AC-FT | 998   | 1,990   | 1,450 | 642   | 500   | 1,420 | 1,140 | 878   | 922    | 23    | 573    | 624   |

CAL YR 1973 TOTAL 5,340.02 MEAN 14.6 MAX 496 MIN 0 CFSM 1.75 IN 23.76 AC-FT 10,590  
WTR YR 1974 TOTAL 5,622.77 MEAN 15.4 MAX 496 MIN .15 CFSM 1.84 IN 25.02 AC-FT 11,150

1974 PEAK DISCHARGE (BASE, 500 FT<sup>3</sup>/S)

| DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|------|------|-------|-----------|
| 10-13 | 0430 | 4.88  | 710       | 12-4 | 0300 | 5.26  | 1,080     |
| 10-27 | 0430 | 5.50  | 1,060     | 4-21 | 0500 | 4.98  | 848       |
| 10-31 | 0830 | 4.73  | 560       | 6-7  | 0215 | 4.87  | 830       |
| 11-24 | 2130 | 6.44  | 2,170     | 8-17 | 2000 | 6.50  | 2,240     |

07065000 Round Spring at Round Spring, Mo.

LOCATION.--Lat 37°16'57", long 91°24'27", in SW¼NW¼ sec.20, T.30 N., R.4 W., Shannon County, inside spring basin at Round Spring, 1,500 ft (457 m) upstream from Current River on State Highway 19 in Round Spring State Park, and 10 mi (16.9 km) northwest of Eminence.

PERIOD OF RECORD.--October 1928 to September 1939, August 1965 to current year. Occasional discharge measurements in 1923-25, 1948, 1954, 1956, 1964-65.

GAGE.--Nonrecording gage. Datum of gage is 665.06 ft (202.710 m) above mean sea level.

AVERAGE DISCHARGE.--20 years (1928-39, 1965-74), 45.4 ft<sup>3</sup>/s (1.29 m<sup>3</sup>/s), 32,890 acre-ft/yr (40.6 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum daily discharge estimated, 350 ft<sup>3</sup>/s (9.9 m<sup>3</sup>/s) Nov. 25, Apr. 22 (backwater from Current River); minimum daily, 29 ft<sup>3</sup>/s (0.82 m<sup>3</sup>/s) July 23, 24 (gage height, 1.46 ft or 0.445 m).  
Period of record: Maximum discharge observed, 520 ft<sup>3</sup>/s (14.7 m<sup>3</sup>/s) May 14, 1933, during period of backwater from Current River; maximum gage height, 15.4 ft (4.69 m), from floodmark, Apr. 17, 1939, backwater from Current River; minimum discharge observed, 10 ft<sup>3</sup>/s (0.28 m<sup>3</sup>/s) Dec. 10-12, 1937.

REMARKS.--Records poor. Records of chemical analyses are published in Part 2 of this report.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT   | NOV   | DEC    | JAN   | FEB   | MAR   | APR   | MAY   | JUN   | JUL   | AUG   | SEP   |
|-------|-------|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1     | 47    | 280   | 240    | 87    | 104   | 71    | 98    | 127   | 98    | 50    | 44    | 71    |
| 2     | 44    | 260   | 220    | 87    | 98    | 71    | 92    | 133   | 92    | 50    | 36    | 71    |
| 3     | 39    | 240   | 200    | 87    | 92    | 66    | 82    | 152   | 87    | 46    | 38    | 87    |
| 4     | 38    | 200   | 280    | 87    | 87    | 66    | 71    | 133   | 76    | 46    | 38    | 104   |
| 5     | 39    | 121   | 300    | 82    | 87    | 61    | 61    | 121   | 76    | 46    | 38    | 87    |
| 6     | 38    | 71    | 250    | 76    | 82    | 61    | 61    | 104   | 158   | 50    | 38    | 76    |
| 7     | 38    | 66    | 220    | 71    | 76    | 61    | 56    | 98    | 250   | 50    | 36    | 71    |
| 8     | 37    | 66    | 200    | 66    | 76    | 61    | 66    | 98    | 260   | 50    | 36    | 66    |
| 9     | 37    | 66    | 186    | 66    | 66    | 109   | 61    | 92    | 230   | 46    | 35    | 61    |
| 10    | 37    | 56    | 158    | 66    | 66    | 300   | 61    | 98    | 220   | 45    | 33    | 54    |
| 11    | 36    | 54    | 139    | 66    | 61    | 340   | 61    | 121   | 210   | 45    | 35    | 49    |
| 12    | 43    | 52    | 121    | 61    | 61    | 320   | 71    | 127   | 230   | 44    | 38    | 47    |
| 13    | 139   | 52    | 115    | 61    | 66    | 300   | 87    | 127   | 200   | 42    | 38    | 47    |
| 14    | 133   | 52    | 109    | 61    | 66    | 280   | 87    | 121   | 172   | 42    | 40    | 51    |
| 15    | 92    | 52    | 98     | 61    | 61    | 260   | 76    | 121   | 121   | 41    | 39    | 66    |
| 16    | 71    | 54    | 92     | 61    | 61    | 240   | 71    | 104   | 109   | 39    | 35    | 76    |
| 17    | 56    | 56    | 82     | 61    | 56    | 220   | 66    | 92    | 98    | 38    | 35    | 54    |
| 18    | 51    | 61    | 82     | 66    | 61    | 200   | 66    | 87    | 87    | 36    | 35    | 49    |
| 19    | 42    | 56    | 98     | 71    | 71    | 172   | 61    | 82    | 76    | 35    | 35    | 47    |
| 20    | 41    | 56    | 230    | 127   | 71    | 165   | 56    | 76    | 66    | 33    | 35    | 47    |
| 21    | 38    | 61    | 200    | 250   | 76    | 158   | 109   | 71    | 66    | 32    | 35    | 51    |
| 22    | 37    | 66    | 186    | 220   | 186   | 145   | 350   | 230   | 66    | 31    | 35    | 51    |
| 23    | 37    | 66    | 172    | 200   | 152   | 139   | 320   | 200   | 61    | 29    | 35    | 49    |
| 24    | 37    | 200   | 240    | 185   | 127   | 127   | 280   | 170   | 61    | 29    | 35    | 49    |
| 25    | 37    | 350   | 250    | 145   | 98    | 121   | 260   | 140   | 61    | 31    | 36    | 47    |
| 26    | 49    | 340   | 240    | 127   | 87    | 121   | 240   | 121   | 55    | 35    | 36    | 47    |
| 27    | 127   | 320   | 210    | 127   | 82    | 115   | 220   | 127   | 56    | 41    | 36    | 45    |
| 28    | 133   | 300   | 172    | 127   | 76    | 115   | 200   | 115   | 55    | 38    | 38    | 47    |
| 29    | 152   | 280   | 152    | 115   | ----- | 109   | 172   | 104   | 55    | 35    | 39    | 47    |
| 30    | 200   | 260   | 133    | 115   | ----- | 109   | 139   | 104   | 53    | 35    | 41    | 45    |
| 31    | 250   | ----- | 109    | 109   | ----- | 104   | ----- | 104   | ----- | 35    | 61    | ----- |
| TOTAL | 2,195 | 4,214 | 5,484  | 3,191 | 2,353 | 4,787 | 3,701 | 3,700 | 3,505 | 1,245 | 1,164 | 1,759 |
| MEAN  | 70.8  | 140   | 177    | 103   | 84.0  | 154   | 123   | 119   | 117   | 40.2  | 37.5  | 58.6  |
| MAX   | 250   | 350   | 300    | 250   | 186   | 340   | 350   | 230   | 260   | 50    | 61    | 104   |
| MIN   | 36    | 52    | 82     | 61    | 56    | 61    | 56    | 71    | 53    | 29    | 33    | 45    |
| AC-FT | 4,350 | 8,360 | 10,880 | 6,330 | 4,670 | 9,500 | 7,340 | 7,340 | 6,950 | 2,470 | 2,310 | 3,490 |

CAL YR 1973 TOTAL 38,812 MEAN 106 MAX 461 MIN 26 AC-FT 76,980  
WTR YR 1974 TOTAL 37,298 MEAN 102 MAX 350 MIN 29 AC-FT 73,980

07065500 Alley Spring at Alley, Mo.

LOCATION.--Lat 37°09'14", long 91°26'29", in NW¼SE¼ sec.25, T.29 N., R.5 W., Shannon County, in Ozark National Scenic Riverways, 200 ft (61 m) below spring outlet, 0.6 mi (1.0 km) upstream from Jacks Fork, and 5 mi (8.0 km) west of Eminence.

PERIOD OF RECORD.--October 1928 to September 1939, October 1965 to current year. Occasional discharge measurements 1922, 1925, 1939-41, 1954-55, 1964-65.

GAGE.--Nonrecording gage. Datum of gage is about 665 ft (202.692 m) above mean sea level. Prior to June 26, 1929, at site 230 ft (70 m) downstream and June 26, 1929, to Sept. 30, 1939, at site 200 ft (61 m) downstream; datum of both gages 664.35 ft (202.494 m) above mean sea level.

AVERAGE DISCHARGE.--20 years (1928-39, 1965-74), 133 ft<sup>3</sup>/s (3.80 m<sup>3</sup>/s), 96,360 acre-ft/yr (119 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 2,750 ft<sup>3</sup>/s (77.9 m<sup>3</sup>/s) Apr. 22 (gage height, 7.67 ft or 2.338 m, floodmark); minimum, 120 ft<sup>3</sup>/s (3.40 m<sup>3</sup>/s) Oct. 11, 12 (gage height, 1.54 ft or 0.469 m).

Period of record: Maximum discharge, 2,750 ft<sup>3</sup>/s (77.9 m<sup>3</sup>/s) Apr. 22, 1974 (gage height, 7.67 ft or 2.338 m, floodmark); minimum discharge, 54 ft<sup>3</sup>/s (1.53 m<sup>3</sup>/s) Oct. 15-18, 1934.

REMARKS.--Records fair below 700 ft<sup>3</sup>/s (19.8 m<sup>3</sup>/s) and poor above. Occasional runoff from drainage area of 15.8 mi<sup>2</sup> (40.9 km<sup>2</sup>) included in records. Records of chemical analyses are published in Part 2 of this report.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY         | OCT          | NOV    | DEC      | JAN       | FEB     | MAR           | APR    | MAY    | JUN    | JUL   | AUG   | SEP    |
|-------------|--------------|--------|----------|-----------|---------|---------------|--------|--------|--------|-------|-------|--------|
| 1           | 181          | 480    | 380      | 230       | 218     | 206           | 228    | 340    | 215    | 174   | 125   | 196    |
| 2           | 169          | 430    | 330      | 218       | 215     | 196           | 215    | 335    | 218    | 174   | 122   | 215    |
| 3           | 162          | 355    | 320      | 205       | 205     | 196           | 228    | 330    | 208    | 174   | 122   | 215    |
| 4           | 157          | 318    | 455      | 193       | 201     | 191           | 215    | 328    | 203    | 174   | 122   | 215    |
| 5           | 157          | 280    | 418      | 191       | 201     | 191           | 200    | 315    | 203    | 174   | 122   | 210    |
| 6           | 138          | 242    | 405      | 205       | 193     | 181           | 186    | 302    | 201    | 174   | 122   | 167    |
| 7           | 138          | 218    | 380      | 191       | 181     | 174           | 181    | 290    | 240    | 174   | 122   | 162    |
| 8           | 129          | 205    | 355      | 181       | 186     | 174           | 191    | 285    | 265    | 174   | 122   | 150    |
| 9           | 122          | 193    | 305      | 172       | 181     | 172           | 172    | 280    | 318    | 167   | 122   | 148    |
| 10          | 122          | 189    | 280      | 169       | 181     | 568           | 178    | 270    | 360    | 167   | 122   | 148    |
| 11          | 120          | 181    | 255      | 181       | 181     | 598           | 184    | 265    | 348    | 167   | 122   | 190    |
| 12          | 120          | 169    | 242      | 181       | 167     | 518           | 228    | 255    | 298    | 167   | 127   | 230    |
| 13          | 125          | 173    | 242      | 177       | 167     | 450           | 222    | 255    | 270    | 165   | 127   | 222    |
| 14          | 196          | 177    | 230      | 177       | 167     | 420           | 248    | 245    | 245    | 167   | 127   | 215    |
| 15          | 242          | 169    | 205      | 177       | 162     | 390           | 218    | 240    | 222    | 165   | 122   | 186    |
| 16          | 201          | 157    | 205      | 169       | 167     | 375           | 218    | 235    | 218    | 160   | 122   | 181    |
| 17          | 193          | 153    | 193      | 186       | 167     | 320           | 215    | 230    | 210    | 160   | 122   | 170    |
| 18          | 186          | 145    | 181      | 196       | 215     | 320           | 215    | 225    | 198    | 160   | 136   | 168    |
| 19          | 172          | 149    | 193      | 196       | 172     | 320           | 215    | 220    | 186    | 160   | 167   | 167    |
| 20          | 167          | 153    | 405      | 255       | 172     | 258           | 205    | 215    | 208    | 160   | 148   | 162    |
| 21          | 157          | 181    | 380      | 380       | 245     | 295           | 240    | 213    | 200    | 160   | 138   | 157    |
| 22          | 148          | 172    | 342      | 355       | 345     | 305           | 1,000  | 385    | 189    | 155   | 134   | 157    |
| 23          | 143          | 167    | 305      | 330       | 320     | 315           | 500    | 392    | 179    | 155   | 129   | 154    |
| 24          | 134          | 380    | 330      | 290       | 282     | 290           | 450    | 365    | 174    | 150   | 129   | 150    |
| 25          | 129          | 598    | 355      | 260       | 270     | 265           | 400    | 328    | 172    | 145   | 129   | 143    |
| 26          | 455          | 558    | 355      | 255       | 230     | 265           | 350    | 290    | 169    | 141   | 125   | 138    |
| 27          | 405          | 480    | 330      | 255       | 220     | 260           | 300    | 278    | 169    | 141   | 130   | 138    |
| 28          | 382          | 430    | 305      | 255       | 216     | 255           | 265    | 278    | 171    | 136   | 200   | 134    |
| 29          | 362          | 405    | 305      | 255       | -----   | 252           | 300    | 265    | 174    | 132   | 240   | 134    |
| 30          | 305          | 400    | 280      | 230       | -----   | 252           | 340    | 248    | 174    | 127   | 290   | 134    |
| 31          | 318          | -----  | 255      | 218       | -----   | 240           | -----  | 248    | -----  | 122   | 290   | -----  |
| TOTAL       | 6,135        | 8,307  | 9,521    | 6,933     | 5,827   | 9,212         | 8,307  | 8,750  | 6,605  | 4,921 | 4,477 | 5,156  |
| MEAN        | 198          | 277    | 307      | 224       | 208     | 297           | 277    | 282    | 220    | 159   | 144   | 172    |
| MAX         | 455          | 598    | 455      | 380       | 345     | 598           | 1,000  | 392    | 360    | 174   | 290   | 230    |
| MIN         | 120          | 145    | 181      | 169       | 162     | 172           | 172    | 213    | 169    | 122   | 122   | 134    |
| AC-FT       | 12,170       | 16,480 | 18,880   | 13,750    | 11,560  | 18,270        | 16,480 | 17,360 | 13,100 | 9,760 | 8,880 | 10,230 |
| CAL YR 1973 | TOTAL 85,902 |        | MEAN 235 | MAX 598   | MIN 84  | AC-FT 170,400 |        |        |        |       |       |        |
| WTR YR 1974 | TOTAL 84,151 |        | MEAN 231 | MAX 1,000 | MIN 120 | AC-FT 166,900 |        |        |        |       |       |        |

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, on left bank 50 ft (15 m) upstream from bridge on State Highway 19, at Eminence, 1.5 mi (2.4 km) downstream from Mahans Creek, and 8.0 mi (12.9 km) upstream from mouth.

DRAINAGE AREA.--398 mi<sup>2</sup> (1,031 km<sup>2</sup>).

PERIOD OF RECORD.--October 1921 to current year. Monthly discharge only for October 1921, published in WSP 1311.

GAGE.--Water-stage recorder. Datum of gage is 617.87 ft (188.327 m) above mean sea level. Prior to Jan. 27, 1934, nonrecording gage at site 1,350 ft (411 m) upstream at datum 2.11 ft (0.643 m) higher. Jan. 27, 1934, to Jan. 10, 1935, nonrecording gage at site 75 ft (22.239 m) downstream at datum 0.04 ft (0.012 m) lower. Jan. 11, 1935, to July 9, 1964, nonrecording gage at site 50 ft (15 m) downstream at present datum.

AVERAGE DISCHARGE.--53 years, 442 ft<sup>3</sup>/s (12.5 m<sup>3</sup>/s), 15.08 in/yr (383 mm/yr), 320,200 acre-ft/yr (395 hm<sup>3</sup>/s).

EXTREMES.--Current year: Maximum discharge, 33,600 ft<sup>3</sup>/s (952 m<sup>3</sup>/s) Apr. 22 (gage height, 15.83 ft or 4.825 m); minimum, 198 ft<sup>3</sup>/s (5.61 m<sup>3</sup>/s) Oct. 11 (gage height, 1.20 ft or 0.366 m).  
Period of record: Maximum discharge observed, 40,000 ft<sup>3</sup>/s (1,130 m<sup>3</sup>/s) June 13, 1928 (gage height, about 17.2 ft or 5.24 m, present site and datum), from rating curve extended above 21,000 ft<sup>3</sup>/s (595 m<sup>3</sup>/s); minimum, 0.64 ft<sup>3</sup>/s (0.018 m<sup>3</sup>/s) Aug. 28, 1936; minimum gage height, 0.64 ft (0.195 m) Sept. 18, 1971.

Floods in 1895 and March 1904 reached a stage of about 25 ft (7.6 m) present site and datum, from information by local residents.

REMARKS.--Records good except periods of no gage-height record, which are fair.

REVISIONS (WATER YEARS).--WSP 787: 1928(M), 1934. WSP 877: 1938. WSP 927: Drainage area. WSP 1281: 1929.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT    | NOV     | DEC    | JAN    | FEB    | MAR    | APR    | MAY    | JUN    | JUL    | AUG    | SEP    |
|-------|--------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1     | 332    | 2,890   | 978    | 663    | 652    | 626    | 718    | 918    | 804    | 354    | 236    | 371    |
| 2     | 302    | 1,320   | 845    | 587    | 620    | 590    | 671    | 961    | 737    | 345    | 233    | 535    |
| 3     | 278    | 916     | 769    | 551    | 567    | 572    | 655    | 1,680  | 677    | 338    | 233    | 575    |
| 4     | 262    | 731     | 4,550  | 525    | 515    | 546    | 649    | 1,380  | 640    | 339    | 233    | 496    |
| 5     | 247    | 619     | 5,000  | 506    | 484    | 521    | 604    | 1,170  | 623    | 336    | 233    | 418    |
| 6     | 237    | 550     | 1,760  | 487    | 477    | 522    | 561    | 1,040  | 604    | 326    | 230    | 365    |
| 7     | 226    | 480     | 1,280  | 476    | 454    | 505    | 544    | 956    | 745    | 319    | 228    | 336    |
| 8     | 221    | 443     | 1,060  | 463    | 432    | 487    | 549    | 901    | 1,690  | 310    | 228    | 317    |
| 9     | 213    | 413     | 931    | 447    | 421    | 486    | 557    | 848    | 2,250  | 304    | 230    | 309    |
| 10    | 208    | 384     | 828    | 485    | 405    | 3,010  | 538    | 824    | 2,490  | 304    | 236    | 304    |
| 11    | 204    | 365     | 740    | 478    | 395    | 5,060  | 551    | 816    | 1,400  | 304    | 257    | 303    |
| 12    | 211    | 350     | 688    | 457    | 389    | 3,050  | 865    | 1,030  | 1,110  | 295    | 238    | 446    |
| 13    | 425    | 341     | 666    | 428    | 385    | 1,840  | 1,130  | 944    | 926    | 286    | 236    | 537    |
| 14    | 781    | 330     | 605    | 423    | 380    | 1,530  | 938    | 879    | 808    | 284    | 236    | 480    |
| 15    | 650    | 320     | 548    | 426    | 369    | 1,350  | 818    | 1,030  | 768    | 279    | 230    | 455    |
| 16    | 477    | 305     | 509    | 459    | 363    | 1,470  | 731    | 1,040  | 700    | 277    | 225    | 395    |
| 17    | 390    | 295     | 480    | 539    | 358    | 1,330  | 668    | 926    | 628    | 273    | 230    | 360    |
| 18    | 343    | 285     | 463    | 559    | 362    | 1,180  | 619    | 850    | 580    | 268    | 561    | 337    |
| 19    | 316    | 281     | 1,090  | 569    | 410    | 1,120  | 589    | 800    | 543    | 265    | 550    | 314    |
| 20    | 296    | 295     | 2,680  | 988    | 409    | 1,100  | 563    | 754    | 503    | 263    | 364    | 305    |
| 21    | 281    | 400     | 1,580  | 1,970  | 689    | 1,200  | 1,480  | 881    | 461    | 257    | 313    | 298    |
| 22    | 268    | 542     | 1,220  | 1,440  | 2,050  | 1,280  | 19,600 | 1,630  | 416    | 257    | 285    | 287    |
| 23    | 258    | 464     | 1,050  | 1,130  | 1,780  | 1,260  | 4,140  | 2,230  | 390    | 257    | 271    | 272    |
| 24    | 250    | 2,610   | 1,480  | 912    | 1,250  | 1,120  | 2,250  | 1,480  | 383    | 257    | 316    | 273    |
| 25    | 241    | 16,100  | 2,210  | 780    | 969    | 994    | 1,680  | 1,210  | 381    | 255    | 274    | 268    |
| 26    | 235    | 12,800  | 1,490  | 733    | 815    | 949    | 1,390  | 1,140  | 378    | 255    | 260    | 263    |
| 27    | 794    | 4,370   | 1,210  | 801    | 737    | 935    | 1,220  | 1,170  | 374    | 255    | 255    | 263    |
| 28    | 704    | 1,860   | 1,030  | 852    | 682    | 908    | 1,080  | 1,050  | 373    | 249    | 265    | 264    |
| 29    | 429    | 1,360   | 927    | 816    | -----  | 879    | 975    | 966    | 367    | 244    | 381    | 274    |
| 30    | 546    | 1,170   | 822    | 751    | -----  | 828    | 941    | 895    | 360    | 241    | 515    | 272    |
| 31    | 1,090  | -----   | 747    | 707    | -----  | 756    | -----  | 879    | -----  | 238    | 410    | -----  |
| TOTAL | 11,715 | 53,589  | 40,236 | 21,408 | 17,819 | 38,004 | 48,274 | 33,278 | 23,109 | 8,834  | 8,992  | 10,692 |
| MEAN  | 378    | 1,786   | 1,298  | 691    | 636    | 1,226  | 1,609  | 1,073  | 770    | 285    | 290    | 356    |
| MAX   | 1,090  | 16,100  | 5,000  | 1,970  | 2,050  | 5,060  | 19,600 | 2,230  | 2,490  | 354    | 561    | 575    |
| MIN   | 204    | 281     | 463    | 423    | 358    | 486    | 538    | 754    | 360    | 238    | 225    | 263    |
| CFSM  | .95    | 4.49    | 3.26   | 1.74   | 1.60   | 3.08   | 4.04   | 2.70   | 1.93   | .72    | .73    | .89    |
| IN.   | 1.09   | 5.01    | 3.76   | 2.00   | 1.67   | 3.55   | 4.51   | 3.11   | 2.16   | .83    | .84    | 1.00   |
| AC-FT | 23,240 | 106,300 | 79,810 | 42,460 | 35,340 | 75,380 | 95,750 | 66,010 | 45,840 | 17,520 | 17,840 | 21,210 |

CAL YR 1973 TOTAL 343,844 MEAN 942 MAX 16,100 MIN 174 CFSM 2.37 IN 32.14 AC-FT 682,000  
WTR YR 1974 TOTAL 315,950 MEAN 866 MAX 19,600 MIN 204 CFSM 2.18 IN 29.53 AC-FT 626,700

PEAK DISCHARGE (BASE, 3,900 FT<sup>3</sup>/S)

| DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|------|------|-------|-----------|
| 11-25 | 1430 | 13.30 | 22,600    | 3-11 | 2030 | 7.76  | 7,250     |
| 12-4  | 2130 | 9.88  | 12,200    | 4-22 | 1015 | 15.83 | 33,600    |
| 3-10  | 1800 | 7.24  | 6,280     | 6-9  | 2230 | 6.04  | 4,300     |

07066500 Current River near Eminence, Mo.

LOCATION.--Lat 37°11'02", long 91°15'30", in SW¼NE¼ sec.15, T.29 N., R.3 W., Shannon County, on right bank 1 mi (1.6 km) downstream from Jacks Fork, 8 mi (12.9 km) northeast of Eminence, and at mile 123.0 (197.9 km).

DRAINAGE AREA.--1,272 mi<sup>2</sup> (3,294 km<sup>2</sup>).

PERIOD OF RECORD.--August 1921 to current year.

GAGE.--Water-stage recorder. Datum of gage is 568.82 ft (173.376 m) above mean sea level. Prior to Oct. 20, 1921, nonrecording gage at site 1,200 ft (366 m) upstream at different datum. Oct. 20, 1921, to Dec. 8, 1934, nonrecording gage at site 30 ft (9 m) upstream at datum 0.06 ft (0.018 m) higher than present datum.

AVERAGE DISCHARGE.--53 years, 1,447 ft<sup>3</sup>/s (40.98 m<sup>3</sup>/s), 15.45 in/yr (392 mm/yr), 1,048,000 acre-ft/yr (1,290 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 49,800 ft<sup>3</sup>/s (1,410 m<sup>3</sup>/s) Apr. 22 (gage height, 21.10 ft or 6.431 m); minimum, 799 ft<sup>3</sup>/s (22.6 m<sup>3</sup>/s) Oct. 11 (gage height, 0.99 ft or 0.302 m).  
Period of record: Maximum discharge, 88,500 ft<sup>3</sup>/s (2,510 m<sup>3</sup>/s) Feb. 10, 1966 (gage height, 29.69 ft or 9.050 m) from rating curve extended above 50,000 ft<sup>3</sup>/s (1,420 m<sup>3</sup>/s); minimum, 324 ft<sup>3</sup>/s (9.18 m<sup>3</sup>/s), Oct. 7, 8, 1956; minimum gage height, 0.22 ft (0.067 m) Sept. 15, 16, 1971.  
Maximum stage known, 37.5 ft (11.43 m) March 1904, present datum, from floodmark.

REMARKS.--Records good.

REVISIONS.--WSP 927: Drainage area.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT    | NOV     | DEC     | JAN     | FEB     | MAR     | APR     | MAY     | JUN     | JUL    | AUG    | SEP    |
|-------|--------|---------|---------|---------|---------|---------|---------|---------|---------|--------|--------|--------|
| 1     | 1,080  | 9,340   | 3,720   | 2,400   | 2,420   | 2,310   | 2,640   | 3,100   | 3,570   | 1,460  | 946    | 1,410  |
| 2     | 1,010  | 4,600   | 3,290   | 2,210   | 2,350   | 2,210   | 2,500   | 3,210   | 2,930   | 1,430  | 949    | 1,630  |
| 3     | 947    | 3,370   | 3,010   | 2,090   | 2,230   | 2,140   | 2,440   | 4,320   | 2,600   | 1,400  | 969    | 1,680  |
| 4     | 939    | 2,700   | 6,750   | 2,010   | 2,100   | 2,080   | 2,390   | 3,890   | 2,380   | 1,390  | 931    | 1,580  |
| 5     | 1,060  | 2,270   | 11,900  | 1,940   | 1,990   | 2,030   | 2,250   | 3,400   | 2,260   | 1,370  | 914    | 1,350  |
| 6     | 1,010  | 2,000   | 5,710   | 1,890   | 1,960   | 2,050   | 2,140   | 3,070   | 2,170   | 1,330  | 908    | 1,210  |
| 7     | 944    | 1,820   | 4,370   | 1,850   | 1,900   | 1,990   | 2,080   | 2,830   | 4,090   | 1,300  | 903    | 1,130  |
| 8     | 906    | 1,700   | 3,680   | 1,800   | 1,820   | 1,910   | 2,130   | 2,680   | 6,470   | 1,270  | 901    | 1,070  |
| 9     | 873    | 1,580   | 3,280   | 1,810   | 1,770   | 1,890   | 2,130   | 2,570   | 6,250   | 1,240  | 915    | 1,050  |
| 10    | 845    | 1,480   | 2,970   | 1,860   | 1,720   | 6,640   | 2,090   | 3,720   | 7,660   | 1,250  | 932    | 1,050  |
| 11    | 831    | 1,390   | 2,700   | 1,810   | 1,670   | 16,800  | 2,090   | 3,260   | 4,870   | 1,250  | 939    | 1,090  |
| 12    | 864    | 1,340   | 2,510   | 1,710   | 1,640   | 10,100  | 2,660   | 4,190   | 3,910   | 1,210  | 930    | 1,460  |
| 13    | 2,150  | 1,300   | 2,380   | 1,640   | 1,630   | 6,270   | 3,260   | 3,600   | 3,350   | 1,200  | 898    | 1,680  |
| 14    | 3,170  | 1,270   | 2,250   | 1,630   | 1,600   | 4,910   | 2,980   | 3,380   | 2,980   | 1,200  | 890    | 1,540  |
| 15    | 2,270  | 1,240   | 2,100   | 1,650   | 1,540   | 4,440   | 2,730   | 4,740   | 3,110   | 1,190  | 880    | 1,430  |
| 16    | 1,800  | 1,180   | 1,970   | 1,730   | 1,520   | 5,160   | 2,550   | 4,220   | 2,940   | 1,170  | 887    | 1,310  |
| 17    | 1,540  | 1,130   | 1,870   | 1,890   | 1,490   | 4,630   | 2,390   | 3,560   | 2,590   | 1,140  | 903    | 1,210  |
| 18    | 1,380  | 1,100   | 1,800   | 2,020   | 1,530   | 4,100   | 2,270   | 3,220   | 2,380   | 1,120  | 1,270  | 1,130  |
| 19    | 1,280  | 1,090   | 3,530   | 2,130   | 2,240   | 3,900   | 2,190   | 2,940   | 2,240   | 1,100  | 1,650  | 1,080  |
| 20    | 1,190  | 1,140   | 6,320   | 3,950   | 2,330   | 3,910   | 2,110   | 2,710   | 2,110   | 1,080  | 1,170  | 1,070  |
| 21    | 1,130  | 1,530   | 4,480   | 7,200   | 3,240   | 4,120   | 4,280   | 3,030   | 2,000   | 1,080  | 1,020  | 1,050  |
| 22    | 1,080  | 1,730   | 3,620   | 5,130   | 6,690   | 4,090   | 32,700  | 5,120   | 1,920   | 1,070  | 952    | 1,010  |
| 23    | 1,030  | 1,560   | 3,190   | 4,080   | 5,440   | 4,040   | 12,000  | 5,580   | 1,830   | 1,060  | 929    | 972    |
| 24    | 1,010  | 6,050   | 4,560   | 3,380   | 4,020   | 3,750   | 6,730   | 4,200   | 1,750   | 1,040  | 994    | 955    |
| 25    | 977    | 34,400  | 6,810   | 3,000   | 3,260   | 3,440   | 5,180   | 3,520   | 1,680   | 1,030  | 1,020  | 944    |
| 26    | 954    | 17,600  | 5,010   | 2,810   | 2,820   | 3,310   | 4,420   | 3,330   | 1,620   | 1,030  | 965    | 941    |
| 27    | 2,150  | 11,200  | 4,140   | 2,880   | 2,600   | 3,280   | 3,930   | 3,230   | 1,580   | 1,030  | 920    | 943    |
| 28    | 4,490  | 6,750   | 3,550   | 2,930   | 2,440   | 3,160   | 3,550   | 2,980   | 1,540   | 1,010  | 999    | 1,040  |
| 29    | 2,450  | 5,110   | 3,180   | 2,810   | -----   | 3,100   | 3,240   | 2,730   | 1,510   | 987    | 3,150  | 1,310  |
| 30    | 1,920  | 4,290   | 2,900   | 2,670   | -----   | 2,920   | 3,160   | 2,570   | 1,480   | 970    | 2,080  | 1,300  |
| 31    | 4,200  | -----   | 2,660   | 2,560   | -----   | 2,760   | -----   | 3,840   | -----   | 956    | 1,580  | -----  |
| TOTAL | 47,480 | 133,260 | 120,210 | 79,470  | 67,960  | 127,440 | 127,210 | 108,740 | 87,770  | 36,363 | 34,294 | 36,625 |
| MEAN  | 1,532  | 4,442   | 3,878   | 2,564   | 2,427   | 4,111   | 4,240   | 3,508   | 2,926   | 1,173  | 1,106  | 1,221  |
| MAX   | 4,490  | 34,400  | 11,900  | 7,200   | 6,690   | 16,800  | 32,700  | 5,580   | 7,660   | 1,460  | 3,150  | 1,680  |
| MIN   | 831    | 1,090   | 1,800   | 1,630   | 1,490   | 1,890   | 2,080   | 2,570   | 1,480   | 956    | 880    | 941    |
| CFSM  | 1.20   | 3.49    | 3.05    | 2.02    | 1.91    | 3.23    | 3.33    | 2.76    | 2.30    | .92    | .87    | .96    |
| IN.   | 1.39   | 3.90    | 3.52    | 2.32    | 1.99    | 3.73    | 3.72    | 3.18    | 2.57    | 1.06   | 1.00   | 1.07   |
| AC-FT | 94,180 | 264,300 | 238,400 | 157,600 | 134,800 | 252,800 | 252,300 | 215,700 | 174,100 | 72,130 | 68,020 | 72,650 |

CAL YR 1973 TOTAL 1,002,975 MEAN 2,748 MAX 34,400 MIN 755 CFSM 2.16 IN 29.33 AC-FT 1,989,000  
WTR YR 1974 TOTAL 1,006,822 MEAN 2,758 MAX 34,400 MIN 831 CFSM 2.17 IN 29.44 AC-FT 1,997,000

PEAK DISCHARGE (BASE, 12,000 FT<sup>3</sup>/S)

| DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|------|------|-------|-----------|
| 11-1  | 0745 | 9.55  | 12,400    | 3-11 | 0830 | 13.03 | 21,400    |
| 11-25 | 1900 | 20.85 | 48,800    | 4-22 | 1445 | 21.10 | 49,800    |
| 12-5  | 0300 | 12.82 | 20,500    |      |      |       |           |



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, near right bank on downstream side of pier of bridge on U.S. Highway 60 in Van Buren, 0.4 mi (0.6 km) downstream from Pike Creek, 4.7 mi (7.6 km) upstream from Big Spring, and at mile 90.4 (145.5 km).

DRAINAGE AREA.--1,667 mi<sup>2</sup> (4,318 km<sup>2</sup>).

PERIOD OF RECORD.--October 1912 to current year. Prior to July 1921 monthly discharge only, published in WSP 1311.

GAGE.--Water-stage recorder. Datum of gage is 442.78 ft (134.959 m) above mean sea level. Prior to Sept. 1, 1926, nonrecording gage at site 100 ft (30 m) downstream at different datum. Sept. 1, 1926, to Oct. 19, 1934, nonrecording gage and Oct. 20, 1934 to Sept. 30, 1939, water-stage recorder, at present site at datum 3.00 ft (0.914 m) higher, set to read same as gage 100 ft (30 m) downstream.

AVERAGE DISCHARGE.--62 years, 1,862 ft<sup>3</sup>/s (52.73 m<sup>3</sup>/s), 15.17 in/yr (385 mm/yr), 1,349,000 acre-ft/yr (1,660 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 49,300 ft<sup>3</sup>/s (1,400 m<sup>3</sup>/s) Nov. 26 (gage height, 18.80 ft or 5.730 m); minimum, 1,080 ft<sup>3</sup>/s (30.6 m<sup>3</sup>/s) Aug. 16; minimum gage height, 2.36 ft (0.719 m) Oct. 11, 12.

Period of record: Maximum discharge, 125,000 ft<sup>3</sup>/s (3,540 m<sup>3</sup>/s) Aug. 21, 1915 (gage height, 25.9 ft or 7.89 m, present datum), from rating curve extended above 62,000 ft<sup>3</sup>/s (1,760 m<sup>3</sup>/s); minimum, 473 ft<sup>3</sup>/s (13.4 m<sup>3</sup>/s) Oct. 7, 8, 1956; minimum gage height, 1.55 ft (0.472 m) Sept. 16, 1971.

Maximum stage known, 29.0 ft (8.84 m) Mar. 26, 1904, present datum, from floodmarks.

REMARKS.--Records good.

REVISIONS (WATER YEARS).--WSP 877: 1938. WSP 897: 1939. WSP 927: Drainage area. WSP 1281: 1929.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY         | OCT             | NOV        | DEC        | JAN       | FEB       | MAR      | APR             | MAY     | JUN     | JUL    | AUG    | SEP    |
|-------------|-----------------|------------|------------|-----------|-----------|----------|-----------------|---------|---------|--------|--------|--------|
| 1           | 1,540           | 9,150      | 4,700      | 3,560     | 3,600     | 3,220    | 3,470           | 4,230   | 4,500   | 2,100  | 1,190  | 1,910  |
| 2           | 1,460           | 6,310      | 4,210      | 3,290     | 3,450     | 3,040    | 3,350           | 4,200   | 4,000   | 2,050  | 1,180  | 1,940  |
| 3           | 1,400           | 4,340      | 3,880      | 3,110     | 3,300     | 2,930    | 3,250           | 4,850   | 3,700   | 1,990  | 1,190  | 2,120  |
| 4           | 1,340           | 3,520      | 7,740      | 2,970     | 3,100     | 2,820    | 3,190           | 5,020   | 3,400   | 1,950  | 1,180  | 2,030  |
| 5           | 1,380           | 3,000      | 15,000     | 2,850     | 2,900     | 2,730    | 3,040           | 4,550   | 3,100   | 1,940  | 1,140  | 1,820  |
| 6           | 1,460           | 2,570      | 7,830      | 2,780     | 2,800     | 2,820    | 2,880           | 4,200   | 3,000   | 1,880  | 1,130  | 1,630  |
| 7           | 1,390           | 2,330      | 5,660      | 2,720     | 2,740     | 2,770    | 2,790           | 3,910   | 4,700   | 1,820  | 1,120  | 1,500  |
| 8           | 1,340           | 2,140      | 4,760      | 2,670     | 2,630     | 2,620    | 2,810           | 3,740   | 7,200   | 1,790  | 1,110  | 1,410  |
| 9           | 1,300           | 1,990      | 4,270      | 2,660     | 2,540     | 2,540    | 2,790           | 3,610   | 7,000   | 1,750  | 1,140  | 1,380  |
| 10          | 1,280           | 1,860      | 3,900      | 2,730     | 2,450     | 5,970    | 2,770           | 4,170   | 8,400   | 1,710  | 1,190  | 1,370  |
| 11          | 1,260           | 1,750      | 3,570      | 2,690     | 2,370     | 16,800   | 2,730           | 4,600   | 7,000   | 1,720  | 1,160  | 1,370  |
| 12          | 1,350           | 1,680      | 3,380      | 2,590     | 2,300     | 14,900   | 3,350           | 4,810   | 5,600   | 1,670  | 1,200  | 1,550  |
| 13          | 2,540           | 1,600      | 3,210      | 2,500     | 2,270     | 8,010    | 4,160           | 4,900   | 4,800   | 1,640  | 1,140  | 2,020  |
| 14          | 4,180           | 1,580      | 3,040      | 2,480     | 2,220     | 6,090    | 4,080           | 4,560   | 4,000   | 1,660  | 1,130  | 2,040  |
| 15          | 3,570           | 1,540      | 2,850      | 2,500     | 2,160     | 5,340    | 3,780           | 5,700   | 4,600   | 1,610  | 1,110  | 1,850  |
| 16          | 2,810           | 1,490      | 2,660      | 2,590     | 2,100     | 5,600    | 3,570           | 6,030   | 4,100   | 1,570  | 1,120  | 1,710  |
| 17          | 2,340           | 1,420      | 2,530      | 2,750     | 2,040     | 5,600    | 3,380           | 4,980   | 3,900   | 1,530  | 1,240  | 1,590  |
| 18          | 2,040           | 1,380      | 2,430      | 2,930     | 2,020     | 5,000    | 3,210           | 4,540   | 3,600   | 1,500  | 1,580  | 1,490  |
| 19          | 1,850           | 1,360      | 3,030      | 3,080     | 2,530     | 4,710    | 3,080           | 4,220   | 3,300   | 1,450  | 1,960  | 1,410  |
| 20          | 1,690           | 1,380      | 7,210      | 3,900     | 3,180     | 4,680    | 2,980           | 3,930   | 3,100   | 1,400  | 1,660  | 1,380  |
| 21          | 1,600           | 1,780      | 6,130      | 8,080     | 4,090     | 4,890    | 4,530           | 3,880   | 2,950   | 1,400  | 1,380  | 1,380  |
| 22          | 1,500           | 2,070      | 4,840      | 7,190     | 8,430     | 4,930    | 18,300          | 4,640   | 2,750   | 1,400  | 1,270  | 1,330  |
| 23          | 1,420           | 2,120      | 4,270      | 5,690     | 7,550     | 4,870    | 29,300          | 6,400   | 2,650   | 1,380  | 1,220  | 1,290  |
| 24          | 1,370           | 6,570      | 5,130      | 4,880     | 5,560     | 4,690    | 8,820           | 5,600   | 2,500   | 1,360  | 1,230  | 1,250  |
| 25          | 1,320           | 23,600     | 7,760      | 4,360     | 4,600     | 4,390    | 6,560           | 5,100   | 2,420   | 1,340  | 1,290  | 1,230  |
| 26          | 1,270           | 37,900     | 6,650      | 4,100     | 3,990     | 4,200    | 5,620           | 4,500   | 2,400   | 1,350  | 1,270  | 1,220  |
| 27          | 2,000           | 15,000     | 5,540      | 4,120     | 3,640     | 4,120    | 5,080           | 4,100   | 2,320   | 1,310  | 1,210  | 1,210  |
| 28          | 4,540           | 8,800      | 4,870      | 4,220     | 3,430     | 4,040    | 4,680           | 3,900   | 2,250   | 1,280  | 1,240  | 1,270  |
| 29          | 3,600           | 6,520      | 4,460      | 4,090     | -----     | 3,960    | 4,350           | 3,700   | 2,190   | 1,250  | 2,690  | 1,480  |
| 30          | 2,680           | 5,400      | 4,120      | 3,920     | -----     | 3,830    | 4,270           | 3,500   | 2,130   | 1,220  | 3,200  | 1,620  |
| 31          | 2,960           | -----      | 3,840      | 3,760     | -----     | 3,620    | -----           | 4,000   | -----   | 1,200  | 2,210  | -----  |
| TOTAL       | 61,780          | 162,150    | 153,470    | 111,760   | 93,990    | 155,730  | 156,170         | 140,070 | 117,560 | 49,220 | 43,080 | 46,800 |
| MEAN        | 1,993           | 5,405      | 4,951      | 3,605     | 3,357     | 5,024    | 5,206           | 4,518   | 3,919   | 1,588  | 1,390  | 1,560  |
| MAX         | 4,540           | 37,900     | 15,000     | 8,080     | 8,430     | 16,800   | 29,300          | 6,400   | 8,400   | 2,100  | 3,200  | 2,120  |
| MIN         | 1,260           | 1,360      | 2,430      | 2,480     | 2,020     | 2,540    | 2,730           | 3,500   | 2,130   | 1,200  | 1,110  | 1,210  |
| CFSM        | 1.20            | 3.24       | 2.97       | 2.16      | 2.01      | 3.01     | 3.12            | 2.71    | 2.35    | .95    | .83    | .94    |
| IN.         | 1.38            | 3.62       | 3.42       | 2.49      | 2.10      | 3.48     | 3.49            | 3.13    | 2.62    | 1.10   | .96    | 1.04   |
| AC-FT       | 122,500         | 321,600    | 304,400    | 221,700   | 186,400   | 308,900  | 309,800         | 277,800 | 233,200 | 97,630 | 85,450 | 92,830 |
| CAL YR 1973 | TOTAL 1,296,810 | MEAN 3,553 | MAX 37,900 | MIN 1,050 | CFSM 2.13 | IN 28.94 | AC-FT 2,572,000 |         |         |        |        |        |
| WTR YR 1974 | TOTAL 1,291,780 | MEAN 3,539 | MAX 37,900 | MIN 1,110 | CFSM 2.12 | IN 28.83 | AC-FT 2,562,000 |         |         |        |        |        |

PEAK DISCHARGE (BASE, 14,000 FT<sup>3</sup>/S)

| DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|------|------|-------|-----------|
| 11-26 | 0800 | 18.80 | 49,300    | 3-11 | 2100 | 12.88 | 22,000    |
| 12-5  | 1500 | 12.08 | 19,300    | 4-23 | 0315 | 17.91 | 44,400    |

LOCATION.--Lat 36°57'05", long 90°59'36", in SW¼NE¼ sec.6, T.26 N., R.1 E., Carter County, on right bank 400 ft (122 m) downstream from spring outlet, 0.4 mi (0.6 km) upstream from Current River, and 3.5 mi (5.6 km) southeast of Van Buren.

GAGE.--Water-stage recorder. Datum of gage is 429.08 ft (130.784 m) above mean sea level. Prior to Feb. 19, 1971, nonrecording gage, prior to Oct. 1, 1934 at datum 1.0 ft (0.3 m) higher.

EXTREMES.--Current year: Maximum daily discharge, 1,000 ft<sup>3</sup>/s (28.3 m<sup>3</sup>/s) Nov. 26, during period of backwater from Current River; minimum, 358 ft<sup>3</sup>/s (10.1 m<sup>3</sup>/s) Nov. 19, 20 (gage height, 1.08 ft or 0.329 m). Period of record: Maximum discharge, 1,300 ft<sup>3</sup>/s (36.8 m<sup>3</sup>/s), estimated, sometime in June 1928, during period of backwater from Current River; minimum, 236 ft<sup>3</sup>/s (6.68 m<sup>3</sup>/s) Oct. 6, 1956.

REVISIONS (WATER YEARS).--WSP 1311: 1922-23, 1928(M) 1929.

| DAY         | OCT           | NOV    | DEC    | JAN      | FEB       | MAR     | APR       | MAY    | JUN    | JUL    | AUG    | SEP    |
|-------------|---------------|--------|--------|----------|-----------|---------|-----------|--------|--------|--------|--------|--------|
| 1           | 422           | 700    | 600    | 630      | 550       | 600     | 600       | 660    | 640    | 615    | 573    | 491    |
| 2           | 422           | 600    | 600    | 619      | 540       | 600     | 600       | 660    | 640    | 612    | 573    | 486    |
| 3           | 419           | 550    | 600    | 594      | 540       | 600     | 580       | 680    | 640    | 612    | 573    | 483    |
| 4           | 419           | 500    | 650    | 573      | 540       | 600     | 580       | 700    | 640    | 605    | 563    | 480    |
| 5           | 419           | 450    | 900    | 559      | 540       | 594     | 580       | 680    | 640    | 605    | 563    | 472    |
| 6           | 416           | 440    | 850    | 546      | 520       | 598     | 579       | 680    | 640    | 605    | 556    | 462    |
| 7           | 416           | 415    | 800    | 539      | 520       | 595     | 570       | 680    | 640    | 601    | 549    | 458    |
| 8           | 413           | 401    | 780    | 526      | 520       | 580     | 565       | 660    | 700    | 601    | 546    | 456    |
| 9           | 413           | 390    | 760    | 519      | 520       | 571     | 562       | 660    | 750    | 597    | 542    | 451    |
| 10          | 413           | 383    | 740    | 513      | 520       | 600     | 561       | 660    | 700    | 597    | 542    | 452    |
| 11          | 393           | 377    | 721    | 513      | 520       | 800     | 556       | 660    | 680    | 597    | 536    | 451    |
| 12          | 413           | 373    | 707    | 500      | 500       | 750     | 600       | 680    | 680    | 597    | 536    | 456    |
| 13          | 503           | 373    | 676    | 486      | 500       | 700     | 600       | 700    | 680    | 597    | 536    | 466    |
| 14          | 698           | 370    | 645    | 483      | 500       | 700     | 600       | 700    | 680    | 597    | 526    | 475    |
| 15          | 550           | 369    | 615    | 480      | 500       | 700     | 580       | 700    | 720    | 597    | 519    | 467    |
| 16          | 500           | 364    | 594    | 477      | 500       | 680     | 580       | 700    | 700    | 597    | 516    | 460    |
| 17          | 470           | 364    | 569    | 483      | 500       | 680     | 580       | 680    | 680    | 597    | 519    | 457    |
| 18          | 463           | 361    | 552    | 493      | 500       | 680     | 580       | 680    | 680    | 597    | 600    | 456    |
| 19          | 454           | 361    | 576    | 500      | 500       | 660     | 580       | 680    | 680    | 597    | 580    | 451    |
| 20          | 446           | 361    | 700    | 590      | 550       | 660     | 580       | 680    | 680    | 594    | 560    | 449    |
| 21          | 438           | 409    | 680    | 750      | 600       | 660     | 700       | 700    | 680    | 594    | 550    | 451    |
| 22          | 432           | 413    | 660    | 700      | 750       | 650     | 950       | 727    | 680    | 597    | 530    | 446    |
| 23          | 428           | 482    | 650    | 600      | 700       | 650     | 900       | 750    | 680    | 597    | 518    | 444    |
| 24          | 425           | 600    | 660    | 600      | 650       | 650     | 800       | 700    | 676    | 594    | 503    | 442    |
| 25          | 423           | 800    | 750    | 580      | 600       | 645     | 700       | 680    | 656    | 594    | 496    | 445    |
| 26          | 420           | 1,000  | 700    | 560      | 600       | 640     | 700       | 660    | 645    | 594    | 490    | 445    |
| 27          | 500           | 800    | 700    | 550      | 600       | 640     | 680       | 660    | 641    | 590    | 483    | 448    |
| 28          | 600           | 700    | 680    | 550      | 600       | 640     | 680       | 660    | 630    | 590    | 480    | 449    |
| 29          | 550           | 700    | 660    | 550      | -----     | 620     | 680       | 660    | 626    | 590    | 527    | 451    |
| 30          | 500           | 650    | 650    | 550      | -----     | 620     | 660       | 660    | 619    | 576    | 550    | 451    |
| 31          | 500           | -----  | 640    | 550      | -----     | 620     | -----     | 660    | -----  | 576    | 514    | -----  |
| TOTAL       | 14,278        | 15,056 | 21,065 | 17,163   | 15,480    | 19,983  | 19,063    | 21,097 | 20,023 | 18,509 | 16,649 | 13,751 |
| MEAN        | 461           | 502    | 680    | 554      | 553       | 645     | 635       | 681    | 667    | 597    | 537    | 458    |
| MAX         | 698           | 1,000  | 900    | 750      | 750       | 800     | 950       | 750    | 750    | 615    | 600    | 491    |
| MIN         | 393           | 361    | 552    | 477      | 500       | 571     | 556       | 660    | 619    | 576    | 480    | 442    |
| AC-FT       | 28,320        | 29,860 | 41,780 | 34,040   | 30,700    | 39,640  | 37,810    | 41,850 | 39,720 | 36,710 | 33,020 | 27,280 |
| CAL YR 1973 | TOTAL 230,784 |        |        | MEAN 632 | MAX 1,100 | MIN 361 | AC-FT 457 |        |        |        |        |        |

## 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, on right bank 0.5 mi (0.8 km) upstream from U.S. Highway 160, 1 mi (1.6 km) west of Doniphan, 2.5 mi (4.0 km) upstream from Brian Creek, and at mile 51.3 (82.5 km).

DRAINAGE AREA.--2,038 mi<sup>2</sup> (5,278 km<sup>2</sup>).

PERIOD OF RECORD.--October 1918 to current year. Prior to July 1921 monthly discharge only, published in WSP 1311.

GAGE.--Water-stage recorder. Datum of gage is 321.21 ft (97.905 m), above mean sea level. July 3, 1936 to Sept. 30, 1971 datum is 1.00 ft (0.305 m) higher. Prior to July 3, 1936, nonrecording gages at several sites 0.5 mi (0.8 km) downstream at various datums.

AVERAGE DISCHARGE.--56 years, 2,709 ft<sup>3</sup>/s (76.7 m<sup>3</sup>/s), 18.05 in/yr (458 mm/yr), 1,963,000 acre-ft/yr (2,420 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 38,600 ft<sup>3</sup>/s (1,093 m<sup>3</sup>/s) Nov. 27 (gage height, 16.51 ft or 5.032 m); minimum, 1,660 ft<sup>3</sup>/s (47.01 m<sup>3</sup>/s) Oct. 11, 12 (gage height, 2.18 ft or 0.664 m).  
Period of record: Maximum discharge, 94,400 ft<sup>3</sup>/s (2,670 m<sup>3</sup>/s) Mar. 12, 1935 (gage height, 23.0 ft or 7.01 m, present site and datum), from rating curve extended above 60,000 ft<sup>3</sup>/s (1,700 m<sup>3</sup>/s); minimum, 852 ft<sup>3</sup>/s (24.1 m<sup>3</sup>/s) Oct. 8-19, 1956.  
Maximum stage known, 25.9 ft (7.89 m) in March 1904, from floodmarks, present site and datum (discharge, 130,000 ft<sup>3</sup>/s or 3,680 m<sup>3</sup>/s) from rating curve extended above 60,000 ft<sup>3</sup>/s (1,700 m<sup>3</sup>/s).

REMARKS.--Records good. Records of water temperature are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 877: 1937-38(M). WSP 927: Drainage area.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY         | OCT             | NOV        | DEC        | JAN       | FEB       | MAR      | APR             | MAY     | JUN     | JUL     | AUG     | SEP     |
|-------------|-----------------|------------|------------|-----------|-----------|----------|-----------------|---------|---------|---------|---------|---------|
| 1           | 1,970           | 5,300      | 6,500      | 5,000     | 5,030     | 4,510    | 4,650           | 5,590   | 5,680   | 2,940   | 2,120   | 2,870   |
| 2           | 1,930           | 8,890      | 5,830      | 4,850     | 4,830     | 4,310    | 4,460           | 5,460   | 5,310   | 2,900   | 2,120   | 2,750   |
| 3           | 1,860           | 6,020      | 5,440      | 4,650     | 4,650     | 4,160    | 4,400           | 5,680   | 4,800   | 2,840   | 2,110   | 2,820   |
| 4           | 1,800           | 4,630      | 10,300     | 4,550     | 4,450     | 4,040    | 4,280           | 6,320   | 4,460   | 2,790   | 2,110   | 2,840   |
| 5           | 1,770           | 3,890      | 12,600     | 4,500     | 4,260     | 3,970    | 4,120           | 5,960   | 4,300   | 2,780   | 2,080   | 2,750   |
| 6           | 1,830           | 3,470      | 14,700     | 4,350     | 4,120     | 3,960    | 3,950           | 5,520   | 4,210   | 2,720   | 2,080   | 2,570   |
| 7           | 1,820           | 3,120      | 7,870      | 4,250     | 4,000     | 4,030    | 3,800           | 5,180   | 4,880   | 2,670   | 2,070   | 2,420   |
| 8           | 1,770           | 2,890      | 6,600      | 4,200     | 3,890     | 3,910    | 3,800           | 4,930   | 7,300   | 2,630   | 2,060   | 2,340   |
| 9           | 1,740           | 2,750      | 5,910      | 4,100     | 3,780     | 3,790    | 3,730           | 4,740   | 9,780   | 2,590   | 2,100   | 2,280   |
| 10          | 1,700           | 2,620      | 5,410      | 4,000     | 3,690     | 4,160    | 3,710           | 4,720   | 10,600  | 2,560   | 2,140   | 2,260   |
| 11          | 1,670           | 2,510      | 5,050      | 3,950     | 3,590     | 10,800   | 3,680           | 5,620   | 9,740   | 2,550   | 2,110   | 2,230   |
| 12          | 1,820           | 2,420      | 4,740      | 3,900     | 3,510     | 17,200   | 4,030           | 5,700   | 7,540   | 2,530   | 2,100   | 2,260   |
| 13          | 2,080           | 2,360      | 4,530      | 3,850     | 3,450     | 13,500   | 4,720           | 6,110   | 6,180   | 2,500   | 2,130   | 2,500   |
| 14          | 3,420           | 2,310      | 4,350      | 3,800     | 3,380     | 8,810    | 5,050           | 5,700   | 5,600   | 2,500   | 2,090   | 2,760   |
| 15          | 3,920           | 2,290      | 4,180      | 3,750     | 3,320     | 7,610    | 4,740           | 7,080   | 7,300   | 2,490   | 2,070   | 2,630   |
| 16          | 3,250           | 2,220      | 4,010      | 3,750     | 3,300     | 7,210    | 4,470           | 7,470   | 6,850   | 2,450   | 2,070   | 2,550   |
| 17          | 2,830           | 2,170      | 3,870      | 3,700     | 3,210     | 7,390    | 4,250           | 6,670   | 5,590   | 2,420   | 2,130   | 2,430   |
| 18          | 2,570           | 2,130      | 3,770      | 3,680     | 3,180     | 6,920    | 4,060           | 5,910   | 5,050   | 2,380   | 2,700   | 2,330   |
| 19          | 2,380           | 2,100      | 3,790      | 3,700     | 3,350     | 6,450    | 3,910           | 5,430   | 4,740   | 2,360   | 2,640   | 2,270   |
| 20          | 2,260           | 2,100      | 5,920      | 3,900     | 3,970     | 6,220    | 3,780           | 5,050   | 4,460   | 2,340   | 2,860   | 2,250   |
| 21          | 2,170           | 2,270      | 7,540      | 4,950     | 5,250     | 6,260    | 3,980           | 4,810   | 4,180   | 2,320   | 2,490   | 2,190   |
| 22          | 2,100           | 2,530      | 6,330      | 9,000     | 9,900     | 6,350    | 8,090           | 5,800   | 3,990   | 2,310   | 2,320   | 2,170   |
| 23          | 2,040           | 5,120      | 5,640      | 7,120     | 9,800     | 6,290    | 20,600          | 7,560   | 3,690   | 2,290   | 2,250   | 2,110   |
| 24          | 2,000           | 11,300     | 6,060      | 6,470     | 7,900     | 6,130    | 20,700          | 7,330   | 3,470   | 2,270   | 2,210   | 2,080   |
| 25          | 1,970           | 17,200     | 7,910      | 5,840     | 6,460     | 5,830    | 8,950           | 6,240   | 3,330   | 2,240   | 2,230   | 2,070   |
| 26          | 1,940           | 26,400     | 8,770      | 5,490     | 5,620     | 5,530    | 7,570           | 5,700   | 3,270   | 2,270   | 2,240   | 2,060   |
| 27          | 2,050           | 29,900     | 7,510      | 5,410     | 5,090     | 5,380    | 6,820           | 5,410   | 3,230   | 2,230   | 2,210   | 2,050   |
| 28          | 3,050           | 15,100     | 6,700      | 5,660     | 4,770     | 5,290    | 6,290           | 5,200   | 3,130   | 2,210   | 2,180   | 2,060   |
| 29          | 4,590           | 9,850      | 6,280      | 5,710     | -----     | 5,180    | 5,870           | 4,930   | 3,060   | 2,180   | 2,480   | 2,150   |
| 30          | 3,430           | 7,430      | 5,590      | 5,460     | -----     | 5,030    | 5,620           | 4,710   | 2,990   | 2,150   | 3,910   | 2,270   |
| 31          | 3,120           | -----      | 5,200      | 5,240     | -----     | 4,830    | -----           | 4,750   | -----   | 2,130   | 3,320   | -----   |
| TOTAL       | 72,850          | 193,290    | 198,900    | 148,780   | 131,750   | 195,050  | 178,080         | 177,280 | 158,710 | 76,540  | 71,730  | 71,320  |
| MEAN        | 2,350           | 6,443      | 6,416      | 4,799     | 4,705     | 6,292    | 5,936           | 5,719   | 5,290   | 2,469   | 2,314   | 2,377   |
| MAX         | 4,590           | 29,900     | 14,700     | 9,000     | 9,900     | 17,200   | 20,700          | 7,560   | 10,600  | 2,940   | 3,910   | 2,870   |
| MIN         | 1,670           | 2,100      | 3,770      | 3,680     | 3,180     | 3,790    | 3,680           | 4,710   | 2,990   | 2,130   | 2,060   | 2,050   |
| CFSM        | 1.15            | 3.16       | 3.15       | 2.35      | 2.31      | 3.09     | 2.91            | 2.81    | 2.60    | 1.21    | 1.14    | 1.17    |
| IN.         | 1.33            | 3.53       | 3.63       | 2.72      | 2.40      | 3.56     | 3.25            | 3.24    | 2.90    | 1.40    | 1.31    | 1.30    |
| AC-FT       | 144,500         | 383,400    | 394,500    | 295,100   | 261,300   | 386,900  | 353,200         | 351,600 | 314,800 | 151,800 | 142,300 | 141,500 |
| CAL YR 1973 | TOTAL 1,739,880 | MEAN 4,767 | MAX 29,900 | MIN 1,670 | CFSM 2.34 | IN 31.76 | AC-FT 3,451,000 |         |         |         |         |         |
| WTR YR 1974 | TOTAL 1,674,280 | MEAN 4,587 | MAX 29,900 | MIN 1,670 | CFSM 2.25 | IN 30.56 | AC-FT 3,321,000 |         |         |         |         |         |

PEAK DISCHARGE (BASE, 14,000 FT<sup>3</sup>/S)

| DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|------|------|-------|-----------|
| 11-27 | 0230 | 16.51 | 38,600    | 3-12 | 1630 | 11.01 | 18,900    |
| 12-6  | 0845 | 10.18 | 16,800    | 4-23 | 2330 | 15.13 | 31,900    |

07070500 Eleven Point River near Thomasville, Mo.

LOCATION.--Lat 36°47'05", long 91°29'31", NE¼NE¼ sec.3, T.24 N., R.5 W., Oregon County, on left bank attached to bluff at end of Grandpappy Ridge, 500 ft (152 m) upstream from Posy Spring, 1.5 mi (2.4 km) downstream from Barren Fork, 2.5 mi (4.0 km) east of Thomasville, and at mile 86.5 (139 km).

DRAINAGE AREA.--361 mi<sup>2</sup> (935 km<sup>2</sup>).

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

GAGE.--Water-stage recorder. Altitude of gage is 610 ft (185.9 m) from topographic map.

AVERAGE DISCHARGE.--24 years, 98.5 ft<sup>3</sup>/s (2.79 m<sup>3</sup>/s), 3.71 in/yr (94 mm/yr), 71,360 acre-ft/yr (88 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 12,800 ft<sup>3</sup>/s (362 m<sup>3</sup>/s) Apr. 22 (gage height, 16.86 ft or 5.139 m); minimum, 26 ft<sup>3</sup>/s (0.736 m<sup>3</sup>/s) Oct. 11; minimum gage height, 1.62 ft (0.494 m) Oct. 11, Sept. 25, 26, 27, and 28.

Period of record: Maximum discharge, 31,000 ft<sup>3</sup>/s (878 m<sup>3</sup>/s) Feb. 10, 1966 (gage height, 21.65 ft or 6.599 m); from rating curve extended above 2,400 ft<sup>3</sup>/s (68.0 m<sup>3</sup>/s) on basis of slope-area measurements at gage heights 13.8 ft (4.21 m) and 17.95 ft (5.471 m); minimum, 2.7 ft<sup>3</sup>/s (0.076 m<sup>3</sup>/s) Sept. 13, 14, 15, 16, 1954; minimum gage height, 1.13 ft (0.344 m) Feb. 4, 5, 1964.

REMARKS.--Records poor.

REVISIONS (WATER YEARS).--WSP 1341: 1951-52(P).

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT   | NOV    | DEC    | JAN    | FEB    | MAR    | APR    | MAY    | JUN    | JUL   | AUG   | SEP   |
|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|-------|-------|-------|
| 1     | 37    | 112    | 322    | 199    | 206    | 204    | 207    | 284    | 257    | 153   | 75    | 74    |
| 2     | 34    | 119    | 283    | 181    | 198    | 193    | 193    | 313    | 236    | 151   | 73    | 75    |
| 3     | 32    | 105    | 256    | 170    | 181    | 185    | 196    | 404    | 218    | 144   | 71    | 72    |
| 4     | 32    | 93     | 1,390  | 160    | 160    | 175    | 178    | 391    | 206    | 149   | 66    | 66    |
| 5     | 30    | 80     | 1,540  | 153    | 150    | 167    | 162    | 346    | 214    | 144   | 66    | 60    |
| 6     | 28    | 72     | 580    | 148    | 145    | 157    | 151    | 306    | 206    | 136   | 64    | 57    |
| 7     | 28    | 66     | 419    | 139    | 133    | 147    | 152    | 276    | 364    | 132   | 62    | 53    |
| 8     | 27    | 61     | 350    | 136    | 125    | 137    | 148    | 260    | 419    | 129   | 61    | 51    |
| 9     | 27    | 54     | 312    | 133    | 117    | 130    | 134    | 240    | 1,620  | 122   | 71    | 51    |
| 10    | 27    | 48     | 277    | 139    | 110    | 662    | 128    | 228    | 1,190  | 166   | 77    | 50    |
| 11    | 34    | 44     | 251    | 126    | 102    | 1,790  | 136    | 231    | 577    | 149   | 66    | 55    |
| 12    | 39    | 41     | 235    | 115    | 99     | 882    | 160    | 263    | 455    | 120   | 62    | 52    |
| 13    | 251   | 39     | 224    | 108    | 97     | 517    | 163    | 216    | 385    | 117   | 62    | 50    |
| 14    | 113   | 37     | 202    | 102    | 91     | 418    | 157    | 272    | 345    | 113   | 62    | 46    |
| 15    | 91    | 37     | 190    | 96     | 92     | 408    | 144    | 1,040  | 342    | 111   | 59    | 45    |
| 16    | 80    | 34     | 172    | 93     | 98     | 414    | 138    | 512    | 302    | 108   | 64    | 43    |
| 17    | 67    | 32     | 155    | 90     | 84     | 374    | 126    | 394    | 270    | 105   | 117   | 42    |
| 18    | 57    | 33     | 147    | 87     | 88     | 357    | 121    | 328    | 252    | 101   | 231   | 40    |
| 19    | 51    | 32     | 204    | 84     | 113    | 340    | 117    | 283    | 236    | 99    | 99    | 39    |
| 20    | 45    | 44     | 744    | 130    | 104    | 314    | 112    | 280    | 218    | 95    | 80    | 45    |
| 21    | 40    | 82     | 441    | 390    | 596    | 322    | 1,320  | 299    | 206    | 95    | 70    | 45    |
| 22    | 37    | 64     | 352    | 330    | 946    | 303    | 5,620  | 655    | 201    | 95    | 64    | 39    |
| 23    | 36    | 159    | 317    | 700    | 514    | 303    | 1,250  | 676    | 194    | 93    | 67    | 36    |
| 24    | 34    | 1,650  | 354    | 310    | 386    | 279    | 693    | 444    | 189    | 88    | 68    | 35    |
| 25    | 33    | 5,230  | 389    | 212    | 307    | 263    | 530    | 364    | 180    | 97    | 62    | 35    |
| 26    | 31    | 1,830  | 349    | 224    | 267    | 253    | 457    | 345    | 173    | 99    | 59    | 34    |
| 27    | 61    | 1,040  | 314    | 224    | 245    | 243    | 408    | 315    | 169    | 88    | 61    | 33    |
| 28    | 49    | 629    | 278    | 267    | 225    | 239    | 362    | 285    | 164    | 85    | 75    | 35    |
| 29    | 48    | 462    | 265    | 252    | -----  | 236    | 326    | 275    | 159    | 82    | 79    | 40    |
| 30    | 58    | 377    | 240    | 238    | -----  | 223    | 315    | 272    | 157    | 78    | 72    | 38    |
| 31    | 97    | -----  | 224    | 223    | -----  | 212    | -----  | 270    | -----  | 76    | 68    | ----- |
| TOTAL | 1,654 | 12,706 | 11,776 | 5,959  | 5,979  | 10,847 | 14,304 | 11,067 | 10,104 | 3,520 | 2,333 | 1,436 |
| MEAN  | 53.4  | 424    | 380    | 192    | 214    | 350    | 477    | 357    | 337    | 114   | 75.3  | 47.9  |
| MAX   | 251   | 5,230  | 1,540  | 700    | 946    | 1,790  | 5,620  | 1,040  | 1,620  | 166   | 231   | 75    |
| MIN   | 27    | 32     | 147    | 84     | 84     | 130    | 112    | 216    | 157    | 76    | 59    | 33    |
| CFSM  | .15   | 1.17   | 1.05   | .53    | .59    | .97    | 1.32   | .99    | .93    | .32   | .21   | .13   |
| IN.   | .17   | 1.31   | 1.21   | .61    | .62    | 1.12   | 1.47   | 1.14   | 1.04   | .36   | .24   | .15   |
| AC-FT | 3,280 | 25,200 | 23,360 | 11,820 | 11,860 | 21,520 | 28,370 | 21,950 | 20,040 | 6,980 | 4,630 | 2,850 |

CAL YR 1973 TOTAL 112,164 MEAN 307 MAX 5,230 MIN 27 CFSM .85 IN 11.56 AC-FT 222,500  
WTR YR 1974 TOTAL 91,685 MEAN 251 MAX 5,620 MIN 27 CFSM .70 IN 9.45 AC-FT 181,900

PEAK DISCHARGE (BASE, 1,800 FT<sup>3</sup>/S)

| DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|------|------|-------|-----------|
| 11-25 | 1730 | 14.59 | 7,680     | 4-22 | 1015 | 16.86 | 12,800    |
| 12-4  | 1630 | 8.57  | 2,670     | 6-9  | 1745 | 9.55  | 3,300     |
| 3-11  | 0315 | 8.94  | 2,900     |      |      |       |           |

LOCATION.--Lat 36°47'11", long 91°20'53", in SE¼SW¼ sec.36, T.25 N., R.4 W., Oregon County, on right bank 300 ft (91 m) downstream from lower outlet of spring, 1 mi (1.6 km) north of Greer, and 1 mi (1.6 km) upstream from Eleven Point River.

GAGE.--Water-stage recorder. Datum of gage is 564.00 ft (171.907 m) above mean sea level. Aug. 10 to Dec. 31, 1904, nonrecording gage at site 250 ft (76 m) downstream at different datum. Nov. 17, 1921 to June 25, 1934, nonrecording gage at site 250 ft (76 m) downstream at datum 0.74 ft (0.226 m) lower than present datum.

EXTREMES.--Current year: Maximum discharge, 789 ft<sup>3</sup>/s (22.3 m<sup>3</sup>/s) June 9 (gage height, 1.69 ft or 0.515 m); minimum, 341 ft<sup>3</sup>/s (9.66 m<sup>3</sup>/s) Oct. 10 (gage height, 0.93 ft or 0.283 m).  
Period of record: Maximum discharge, 1,510 ft<sup>3</sup>/s (42.8 m<sup>3</sup>/s) Nov. 17, 1958, includes about 900 ft<sup>3</sup>/s (25 m<sup>3</sup>/s) of surface runoff (gage height, 2.63 ft or 0.802 m) from rating curve extended about 700 ft<sup>3</sup>/s (20 m<sup>3</sup>/s) maximum excluding surface runoff, 903 ft<sup>3</sup>/s (25.57 m<sup>3</sup>/s) May 26, 1927; minimum, 104 ft<sup>3</sup>/s (2.95 m<sup>3</sup>/s) Nov. 16-19, 1956, Jan. 18, 19, 1957.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY         | OCT    | NOV     | DEC    | JAN    | FEB    | MAR    | APR    | MAY    | JUN    | JUL     | AUG    | SEP    |
|-------------|--------|---------|--------|--------|--------|--------|--------|--------|--------|---------|--------|--------|
| 1           | 358    | 413     | 610    | 564    | 540    | 591    | 617    | 675    | 664    | 612     | 530    | 461    |
| 2           | 354    | 426     | 606    | 559    | 540    | 580    | 612    | 675    | 659    | 606     | 530    | 461    |
| 3           | 354    | 418     | 601    | 550    | 540    | 580    | 612    | 687    | 654    | 601     | 520    | 461    |
| 4           | 354    | 454     | 668    | 550    | 540    | 575    | 606    | 692    | 643    | 596     | 520    | 461    |
| 5           | 350    | 404     | 649    | 540    | 540    | 570    | 601    | 692    | 643    | 591     | 510    | 456    |
| 6           | 350    | 396     | 630    | 530    | 540    | 560    | 596    | 687    | 638    | 591     | 500    | 456    |
| 7           | 350    | 396     | 625    | 510    | 540    | 560    | 591    | 687    | 643    | 586     | 495    | 451    |
| 8           | 350    | 387     | 620    | 500    | 540    | 560    | 591    | 687    | 654    | 580     | 495    | 451    |
| 9           | 345    | 379     | 610    | 490    | 540    | 555    | 586    | 681    | 721    | 580     | 495    | 456    |
| 10          | 341    | 374     | 606    | 480    | 540    | 550    | 580    | 687    | 716    | 575     | 495    | 446    |
| 11          | 345    | 370     | 596    | 480    | 540    | 586    | 570    | 681    | 698    | 575     | 490    | 442    |
| 12          | 350    | 366     | 591    | 470    | 530    | 670    | 580    | 675    | 692    | 570     | 490    | 442    |
| 13          | 366    | 362     | 587    | 460    | 530    | 675    | 580    | 670    | 687    | 565     | 485    | 442    |
| 14          | 392    | 362     | 578    | 460    | 525    | 675    | 580    | 664    | 681    | 560     | 480    | 442    |
| 15          | 392    | 362     | 573    | 460    | 520    | 670    | 586    | 692    | 681    | 560     | 480    | 442    |
| 16          | 387    | 362     | 564    | 450    | 520    | 664    | 580    | 692    | 681    | 560     | 475    | 446    |
| 17          | 383    | 358     | 555    | 450    | 515    | 670    | 575    | 681    | 670    | 560     | 475    | 446    |
| 18          | 379    | 358     | 550    | 460    | 515    | 664    | 570    | 675    | 670    | 555     | 490    | 442    |
| 19          | 374    | 358     | 545    | 470    | 515    | 659    | 570    | 670    | 664    | 555     | 480    | 442    |
| 20          | 366    | 358     | 587    | 490    | 520    | 659    | 565    | 659    | 659    | 555     | 480    | 442    |
| 21          | 362    | 374     | 587    | 520    | 570    | 654    | 612    | 659    | 654    | 550     | 475    | 437    |
| 22          | 354    | 370     | 587    | 540    | 654    | 648    | 733    | 692    | 648    | 550     | 470    | 432    |
| 23          | 354    | 392     | 582    | 540    | 643    | 648    | 727    | 698    | 638    | 550     | 465    | 432    |
| 24          | 345    | 518     | 596    | 540    | 633    | 648    | 721    | 687    | 643    | 545     | 470    | 432    |
| 25          | 345    | 649     | 601    | 540    | 617    | 643    | 716    | 681    | 654    | 545     | 465    | 432    |
| 26          | 345    | 668     | 596    | 540    | 612    | 638    | 692    | 681    | 643    | 545     | 465    | 432    |
| 27          | 354    | 649     | 591    | 540    | 601    | 633    | 687    | 675    | 638    | 540     | 465    | 432    |
| 28          | 374    | 639     | 587    | 540    | 596    | 633    | 687    | 670    | 633    | 540     | 465    | 428    |
| 29          | 374    | 634     | 587    | 540    | -----  | 627    | 681    | 670    | 622    | 540     | 461    | 428    |
| 30          | 374    | 620     | 578    | 540    | -----  | 627    | 675    | 664    | 617    | 540     | 461    | 428    |
| 31          | 387    | -----   | 573    | 540    | -----  | 622    | -----  | 664    | -----  | 530     | 461    | -----  |
| TOTAL       | 11,208 | 13,176  | 18,416 | 15,843 | 15,556 | 19,294 | 18,679 | 21,050 | 19,808 | 17,508  | 15,038 | 13,301 |
| MEAN        | 362    | 439     | 594    | 511    | 556    | 622    | 623    | 679    | 660    | 565     | 485    | 443    |
| MAX         | 392    | 668     | 668    | 564    | 654    | 675    | 733    | 698    | 721    | 612     | 530    | 461    |
| MIN         | 341    | 358     | 545    | 450    | 515    | 550    | 565    | 659    | 617    | 530     | 461    | 428    |
| AC-FT       | 22,230 | 26,130  | 36,530 | 31,420 | 30,860 | 38,270 | 37,050 | 41,750 | 39,290 | 34,730  | 29,830 | 26,380 |
| CAL YR 1973 | TOTAL  | 181,753 | MEAN   | 498    | MAX    | 742    | MIN    | 341    | AC-FT  | 360,500 |        |        |
| WTR YR 1974 | TOTAL  | 198,877 | MEAN   | 545    | MAX    | 733    | MIN    | 341    | AC-FT  | 394,500 |        |        |



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, on downstream side of right pier of main truss of bridge on U.S. Highway 160, 7 mi (11.3 km) southwest of Bardley, 7.5 mi (12.1 km) upstream from Fredericks Fork, and at mile 53.7 (86.4 km).

DRAINAGE AREA.--793 mi<sup>2</sup> (2,050 km<sup>2</sup>).

PERIOD OF RECORD.--October 1921 to current year. October 1921 monthly discharge only, published in WSP 1311.

GAGE.--Water-stage recorder. Datum of gage is 410.84 ft (125.224 m) above mean sea level. Prior to June 26, 1934, nonrecording gage at site 100 ft (30 m) upstream at datum 0.06 ft (0.018 m) higher. June 26, 1934, to Oct. 19, 1939, nonrecording gage, at present site and datum.

AVERAGE DISCHARGE.--53 years, 755 ft<sup>3</sup>/s (21.4 m<sup>3</sup>/s), 12.93 in/yr (328 mm/yr), 547,000 acre-ft/yr (674 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 13,100 ft<sup>3</sup>/s (371 m<sup>3</sup>/s) Apr. 23 (gage height, 11.76 ft or 3.584 m); minimum, 634 ft<sup>3</sup>/s (18.0 m<sup>3</sup>/s) Oct. 11 (gage height, 2.65 ft or 0.808 m).

Period of record: Maximum discharge, 40,000 ft<sup>3</sup>/s (1,133 m<sup>3</sup>/s) Apr. 14, 1927 (gage height, 18.74 ft or 5.712 m, from floodmarks), from rating curve extended above 25,000 ft<sup>3</sup>/s (708 m<sup>3</sup>/s); minimum, 152 ft<sup>3</sup>/s (4.30 m<sup>3</sup>/s) Jan. 27, 1956, Jan. 11, 1957; minimum gage height, 1.06 ft (0.323 m) Sept. 6-11, 1925 (present site and datum).

Maximum stage known, 19.7 ft (6.00 m) in August 1915, from floodmarks (discharge, 44,000 ft<sup>3</sup>/s or 1,250 m<sup>3</sup>/s, from rating curve extended above 25,000 ft<sup>3</sup>/s or 708 m<sup>3</sup>/s).

REMARKS.--Records good. Records of chemical analyses downstream are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 827: 1927-28, 1935. WSP 927: Drainage area.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY         | OCT           | NOV        | DEC        | JAN     | FEB       | MAR      | APR             | MAY     | JUN     | JUL    | AUG    | SEP    |
|-------------|---------------|------------|------------|---------|-----------|----------|-----------------|---------|---------|--------|--------|--------|
| 1           | 675           | 825        | 1,830      | 1,410   | 1,440     | 1,530    | 1,430           | 1,620   | 1,610   | 1,190  | 855    | 781    |
| 2           | 669           | 823        | 1,710      | 1,360   | 1,410     | 1,480    | 1,400           | 1,640   | 1,520   | 1,170  | 852    | 787    |
| 3           | 663           | 799        | 1,640      | 1,320   | 1,350     | 1,440    | 1,400           | 1,760   | 1,460   | 1,140  | 845    | 778    |
| 4           | 657           | 778        | 4,410      | 1,290   | 1,290     | 1,400    | 1,380           | 1,930   | 1,430   | 1,140  | 832    | 763    |
| 5           | 651           | 754        | 4,570      | 1,260   | 1,260     | 1,380    | 1,340           | 1,830   | 1,420   | 1,130  | 830    | 751    |
| 6           | 645           | 736        | 2,670      | 1,250   | 1,240     | 1,350    | 1,290           | 1,740   | 1,410   | 1,100  | 827    | 743    |
| 7           | 645           | 722        | 2,160      | 1,220   | 1,200     | 1,320    | 1,280           | 1,650   | 1,810   | 1,080  | 821    | 737    |
| 8           | 645           | 710        | 1,930      | 1,200   | 1,190     | 1,290    | 1,290           | 1,610   | 2,270   | 1,070  | 820    | 733    |
| 9           | 645           | 697        | 1,810      | 1,180   | 1,160     | 1,270    | 1,280           | 1,560   | 3,950   | 1,060  | 841    | 737    |
| 10          | 639           | 690        | 1,700      | 1,180   | 1,140     | 1,410    | 1,240           | 1,540   | 4,400   | 1,080  | 842    | 739    |
| 11          | 638           | 682        | 1,610      | 1,160   | 1,120     | 3,140    | 1,230           | 1,520   | 2,680   | 1,230  | 824    | 738    |
| 12          | 690           | 678        | 1,550      | 1,130   | 1,100     | 2,860    | 1,380           | 1,520   | 2,250   | 1,060  | 820    | 733    |
| 13          | 835           | 676        | 1,520      | 1,110   | 1,100     | 2,260    | 1,410           | 1,480   | 2,020   | 1,030  | 812    | 732    |
| 14          | 945           | 670        | 1,450      | 1,110   | 1,090     | 2,000    | 1,380           | 1,480   | 1,870   | 1,020  | 807    | 725    |
| 15          | 804           | 676        | 1,400      | 1,110   | 1,090     | 1,900    | 1,320           | 2,390   | 2,390   | 1,010  | 801    | 718    |
| 16          | 759           | 665        | 1,350      | 1,110   | 1,170     | 1,980    | 1,290           | 2,280   | 1,970   | 993    | 798    | 712    |
| 17          | 733           | 656        | 1,300      | 1,110   | 1,150     | 1,910    | 1,250           | 1,960   | 1,780   | 979    | 814    | 705    |
| 18          | 712           | 660        | 1,280      | 1,110   | 1,140     | 1,860    | 1,220           | 1,780   | 1,690   | 970    | 1,250  | 699    |
| 19          | 699           | 658        | 1,320      | 1,110   | 1,250     | 1,810    | 1,200           | 1,660   | 1,600   | 962    | 973    | 693    |
| 20          | 687           | 670        | 1,930      | 1,280   | 1,260     | 1,730    | 1,180           | 1,580   | 1,540   | 953    | 880    | 705    |
| 21          | 679           | 738        | 1,820      | 1,730   | 2,220     | 1,700    | 1,640           | 1,620   | 1,490   | 940    | 839    | 699    |
| 22          | 668           | 750        | 1,640      | 1,680   | 4,320     | 1,660    | 5,980           | 2,920   | 1,450   | 936    | 819    | 693    |
| 23          | 663           | 2,070      | 1,570      | 1,570   | 2,760     | 1,660    | 6,360           | 2,820   | 1,410   | 932    | 811    | 687    |
| 24          | 657           | 3,980      | 1,730      | 1,460   | 2,240     | 1,610    | 2,670           | 2,310   | 1,360   | 920    | 805    | 681    |
| 25          | 652           | 8,990      | 1,920      | 1,400   | 1,920     | 1,560    | 2,230           | 2,010   | 1,330   | 911    | 796    | 675    |
| 26          | 647           | 8,120      | 1,840      | 1,390   | 1,770     | 1,540    | 2,010           | 1,910   | 1,300   | 931    | 788    | 675    |
| 27          | 682           | 3,820      | 1,740      | 1,450   | 1,680     | 1,520    | 1,870           | 1,820   | 1,290   | 905    | 782    | 675    |
| 28          | 707           | 2,760      | 1,650      | 1,550   | 1,610     | 1,510    | 1,780           | 1,730   | 1,260   | 891    | 782    | 681    |
| 29          | 702           | 2,270      | 1,610      | 1,630   | -----     | 1,520    | 1,700           | 1,660   | 1,230   | 878    | 806    | 681    |
| 30          | 694           | 2,010      | 1,540      | 1,560   | -----     | 1,490    | 1,660           | 1,610   | 1,210   | 869    | 792    | 675    |
| 31          | 744           | -----      | 1,490      | 1,490   | -----     | 1,460    | -----           | 1,630   | -----   | 862    | 778    | -----  |
| TOTAL       | 21,531        | 49,733     | 57,690     | 40,920  | 42,670    | 52,550   | 54,090          | 56,570  | 54,400  | 31,342 | 25,942 | 21,531 |
| MEAN        | 695           | 1,658      | 1,861      | 1,320   | 1,524     | 1,695    | 1,803           | 1,825   | 1,813   | 1,011  | 837    | 718    |
| MAX         | 945           | 8,990      | 4,570      | 1,730   | 4,320     | 3,140    | 6,360           | 2,920   | 4,400   | 1,230  | 1,250  | 787    |
| MIN         | 638           | 656        | 1,280      | 1,110   | 1,090     | 1,270    | 1,180           | 1,480   | 1,210   | 862    | 778    | 675    |
| CFSM        | .88           | 2.09       | 2.35       | 1.66    | 1.92      | 2.14     | 2.27            | 2.30    | 2.29    | 1.27   | 1.06   | .91    |
| IN.         | 1.01          | 2.33       | 2.71       | 1.92    | 2.00      | 2.47     | 2.54            | 2.65    | 2.55    | 1.47   | 1.22   | 1.01   |
| AC-FT       | 42,710        | 98,650     | 114,400    | 81,160  | 84,640    | 104,200  | 107,300         | 112,200 | 107,900 | 62,170 | 51,460 | 42,710 |
| CAL YR 1973 | TOTAL 604,732 | MEAN 1,657 | MAX 15,300 | MIN 638 | CFSM 2.09 | IN 28.37 | AC-FT 1,199,000 |         |         |        |        |        |
| WTR YR 1974 | TOTAL 508,969 | MEAN 1,394 | MAX 8,990  | MIN 638 | CFSM 1.76 | IN 23.88 | AC-FT 1,010,000 |         |         |        |        |        |

PEAK DISCHARGE (BASE, 4,000 FT<sup>3</sup>/S)

| DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|------|------|-------|-----------|
| 11-26 | 0400 | 11.28 | 11,900    | 3-11 | 1530 | 6.42  | 4,090     |
| 12-4  | 2400 | 7.66  | 5,520     | 4-23 | 0200 | 11.76 | 13,100    |
| 2-22  | 0200 | 7.44  | 5,360     | 6-10 | 0230 | 8.01  | 6,050     |

07185500 Stahl Creek near Miller, Mo.

LOCATION.--Lat 37°11'42", long 93°50'37", in SE¼ sec.26, T.29 N., R.27 W., Lawrence County, on left downstream wingwall of bridge on State Highway 39, 1.5 mi (2.4 km) south of Miller and 6.4 mi (10.3 km) upstream from mouth.

DRAINAGE AREA.--3.86 mi<sup>2</sup> (10.0 km<sup>2</sup>).

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

GAGE.--Water-stage recorder. Datum of gage is 1,184.49 ft (361.033 m) above mean sea level.

AVERAGE DISCHARGE.--24 years, 2.89 ft<sup>3</sup>/s (0.082 m<sup>3</sup>/s), 10.17 in/yr (258 mm/yr), 2,090 acre-ft/yr (2.58 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 1,190 ft<sup>3</sup>/s (33.7 m<sup>3</sup>/s) June 6 (gage height, 7.18 ft or 2.188 m); minimum, no flow Aug. 2-6, 22, 26.

Period of record: Maximum discharge, 1,250 ft<sup>3</sup>/s or 35.4 m<sup>3</sup>/s (revised) Nov. 1, 1972 (gage height, 7.30 ft or 2.225 m); no flow at times most years.

REVISIONS.--The maximum discharge for the water year 1973 has been revised to 1,250 ft<sup>3</sup>/s (35.4 m<sup>3</sup>/s) Nov. 1, 1972 (gage height, 7.30 ft or 2.225 m) superseding figure published in WRD Mo. 1973.

REMARKS.--Records fair.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

| DAY   | OCT   | NOV   | DEC   | JAN   | FEB   | MAR   | APR   | MAY   | JUN    | JUL  | AUG  | SEP    |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|------|------|--------|
| 1     | 5.6   | 327   | 3.8   | 3.0   | 6.1   | 2.3   | 7.8   | 19    | 1.7    | .26  | .02  | 0      |
| 2     | 4.1   | 12    | 3.8   | 2.8   | 4.9   | 5.4   | 6.4   | 10    | 4.0    | .23  | .02  | .14    |
| 3     | 3.6   | 7.8   | 3.7   | 16    | 4.0   | 3.4   | 5.7   | 6.7   | 39     | .18  | .02  | .01    |
| 4     | 3.2   | 6.4   | 3.4   | 9.2   | 3.7   | 14    | 5.4   | 5.7   | 5.4    | .18  | .01  | 29     |
| 5     | 3.0   | 5.7   | 3.4   | 4.7   | 3.4   | 7.8   | 4.9   | 5.0   | 9.7    | .18  | .01  | 2.4    |
| 6     | 2.7   | 6.4   | 3.3   | 4.1   | 3.3   | 87    | 4.4   | 5.4   | 5.0    | .16  | .01  | .40    |
| 7     | 2.8   | 5.6   | 3.3   | 3.9   | 5.4   | 12    | 4.3   | 14    | 3.7    | .14  | .01  | .29    |
| 8     | 2.5   | 4.9   | 3.2   | 3.9   | 4.4   | 7.4   | 5.9   | 7.8   | 2.9    | .14  | .01  | .26    |
| 9     | 2.2   | 5.0   | 3.2   | 4.0   | 4.0   | 9.4   | 7.6   | 5.2   | 2.2    | .12  | .01  | .26    |
| 10    | 2.2   | 7.1   | 3.2   | 4.1   | 3.7   | 194   | 5.4   | 4.4   | 1.8    | .12  | .01  | .20    |
| 11    | 2.1   | 4.7   | 3.2   | 4.1   | 3.3   | 9.7   | 4.7   | 4.9   | 1.5    | .12  | .02  | .20    |
| 12    | 2.0   | 68    | 8.6   | 4.1   | 3.4   | 7.1   | 4.3   | 4.0   | 1.2    | .10  | .01  | .52    |
| 13    | 2.0   | 60    | 5.6   | 4.1   | 4.6   | 6.4   | 3.9   | 3.4   | 1.1    | .08  | .01  | 2.9    |
| 14    | 2.3   | 9.2   | 5.0   | 4.1   | 2.9   | 6.1   | 3.7   | 3.0   | 4.3    | .10  | 0    | .48    |
| 15    | 2.3   | 7.1   | 4.1   | 4.3   | 2.3   | 4.7   | 5.9   | 2.8   | 7.9    | .14  | 0    | .29    |
| 16    | 2.1   | 6.9   | 4.0   | 5.7   | 2.2   | 4.4   | 22    | 2.6   | 1.8    | .12  | 0    | .20    |
| 17    | 2.0   | 6.1   | 4.0   | 7.9   | 2.0   | 4.1   | 7.1   | 2.4   | 1.3    | .12  | 0    | .18    |
| 18    | 2.3   | 5.6   | 9.2   | 12    | 2.0   | 3.9   | 5.9   | 2.3   | .98    | .12  | 0    | .16    |
| 19    | 2.2   | 6.9   | 19    | 6.6   | 2.2   | 6.5   | 11    | 2.0   | 1.9    | .10  | 0    | .16    |
| 20    | 1.9   | 6.6   | 9.0   | 54    | 2.2   | 6.8   | 6.9   | 1.9   | 1.2    | .06  | 0    | .14    |
| 21    | 7.7   | 7.1   | 7.2   | 12    | 1.9   | 5.0   | 7.5   | 1.8   | .75    | .10  | 0    | .12    |
| 22    | 89    | 7.2   | 5.4   | 10    | 1.8   | 4.4   | 86    | 2.8   | .62    | .08  | 0    | 4.7    |
| 23    | 9.8   | 7.8   | 5.0   | 9.0   | 1.7   | 5.1   | 7.8   | 2.5   | .52    | .08  | 0    | 1.8    |
| 24    | 5.2   | 7.1   | 4.6   | 7.4   | 1.6   | 104   | 6.6   | 2.6   | .44    | .06  | 0    | 1.4    |
| 25    | 4.3   | 8.3   | 4.3   | 6.2   | 1.5   | 22    | 15    | 3.7   | .36    | .08  | 0    | 71     |
| 26    | 3.6   | 6.7   | 4.0   | 6.4   | 1.5   | 8.6   | 12    | 2.4   | .36    | .04  | 0    | 3.9    |
| 27    | 3.2   | 5.0   | 3.6   | 5.2   | 1.5   | 7.1   | 7.2   | 3.6   | .44    | .04  | 0    | 2.8    |
| 28    | 3.0   | 4.4   | 3.3   | 4.7   | 1.4   | 7.4   | 5.9   | 2.5   | .32    | .02  | 0    | 5.7    |
| 29    | 2.7   | 4.1   | 4.3   | 4.1   | ----- | 9.2   | 5.0   | 2.2   | .36    | .02  | 0    | 3.9    |
| 30    | 5.4   | 4.0   | 4.4   | 4.3   | ----- | 6.7   | 4.6   | 1.8   | .29    | .02  | 0    | 41     |
| 31    | 57    | ----- | 3.3   | 4.3   | ----- | 23    | ----- | 1.7   | -----  | .02  | 0    | -----  |
| TOTAL | 244.0 | 630.7 | 155.4 | 236.2 | 82.9  | 604.9 | 290.8 | 140.1 | 103.04 | 3.33 | .17  | 174.51 |
| MEAN  | 7.87  | 21.0  | 5.01  | 7.62  | 2.96  | 19.5  | 9.69  | 4.52  | 3.43   | .11  | .006 | 5.82   |
| MAX   | 89    | 327   | 19    | 54    | 6.1   | 194   | 86    | 19    | 39     | .26  | .02  | 71     |
| MIN   | 1.9   | 4.0   | 3.2   | 2.8   | 1.4   | 2.3   | 3.7   | 1.7   | .29    | .02  | 0    | 0      |
| CFSM  | 2.04  | 5.44  | 1.30  | 1.97  | .77   | 5.05  | 2.51  | 1.17  | .89    | .03  | .002 | 1.51   |
| IN.   | 2.35  | 6.08  | 1.50  | 2.28  | .80   | 5.83  | 2.80  | 1.35  | .99    | .03  | .001 | 1.68   |
| AC-FT | 484   | 1,250 | 308   | 469   | 164   | 1,200 | 577   | 278   | 204    | 6.6  | .3   | 346    |

CAL YR 1972 TOTAL 1,468.78 MEAN 4.01 MAX 327 MIN .02 CFSM 1.04 IN 14.16 AC-FT 2,910  
WTR YR 1973 TOTAL 2,666.05 MEAN 7.30 MAX 327 MIN 0 CFSM 1.89 IN 25.69 AC-FT 5,290

1973 REVISED PEAK DISCHARGE (BASE, 300 FT<sup>3</sup>/S)

| DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|------|------|-------|-----------|
| 11-1  | 0300 | 7.30  | 1,250     | 3-24 | 2115 | 5.52  | 488       |
| 11-12 | 2115 | 5.89  | 607       | 4-22 | 0130 | 6.14  | 700       |
| 1-20  | *    | 5.03  | 352       | 9-4  | 1945 | 5.18  | 391       |
| 3-10  | 1230 | 6.61  | 905       | 9-25 | 0145 | 5.58  | 506       |

\*Unknown

07185500 Stahl Creek near Miller, Mo.--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT   | NOV    | DEC   | JAN   | FEB   | MAR   | APR   | MAY   | JUN    | JUL  | AUG  | SEP   |
|-------|-------|--------|-------|-------|-------|-------|-------|-------|--------|------|------|-------|
| 1     | 4.7   | 2.0    | 4.9   | 3.1   | 3.2   | 2.6   | 2.3   | 1.2   | .66    | .72  | .01  | 3.2   |
| 2     | 3.6   | 1.7    | 4.7   | 2.9   | 2.9   | 2.5   | 2.2   | 2.3   | .59    | .64  | 0    | 5.6   |
| 3     | 2.9   | 1.5    | 30    | 2.7   | 2.6   | 2.3   | 2.1   | 2.4   | .53    | .54  | 0    | 2.9   |
| 4     | 3.0   | 1.5    | 124   | 2.5   | 2.5   | 2.1   | 1.8   | 1.4   | 12     | .52  | 0    | 1.6   |
| 5     | 2.5   | 1.4    | 7.5   | 2.3   | 2.4   | 2.0   | 1.7   | 1.2   | 18     | .55  | 0    | 1.3   |
| 6     | 3.4   | 1.3    | 5.3   | 2.1   | 2.3   | 1.9   | 1.7   | .98   | 122    | .49  | 0    | 1.1   |
| 7     | 3.0   | 1.2    | 4.5   | 1.9   | 2.2   | 1.7   | 1.5   | .86   | 105    | .48  | .19  | .88   |
| 8     | 2.4   | 1.1    | 4.2   | 1.7   | 2.1   | 1.7   | 2.2   | .77   | 11     | .43  | .04  | .75   |
| 9     | 2.0   | .98    | 4.0   | 1.6   | 2.1   | 43    | 1.7   | .73   | 12     | .42  | .33  | .67   |
| 10    | 1.8   | .90    | 3.6   | 1.4   | 2.0   | 266   | 1.5   | .68   | 6.4    | .35  | .19  | .59   |
| 11    | 2.4   | .90    | 3.5   | 1.3   | 1.9   | 46    | 3.1   | .64   | 8.5    | .29  | .10  | .50   |
| 12    | 3.3   | .82    | 3.3   | 1.2   | 1.8   | 6.7   | 2.5   | .56   | 6.4    | .30  | .07  | .90   |
| 13    | 9.4   | .82    | 3.1   | 1.1   | 1.7   | 5.3   | 1.7   | .52   | 5.0    | .31  | .05  | 1.1   |
| 14    | 3.7   | .75    | 2.9   | 4.1   | 1.6   | 4.7   | 1.4   | 3.6   | 4.4    | .29  | .02  | .50   |
| 15    | 3.0   | .90    | 2.7   | 6.6   | 1.6   | 20    | 1.3   | 2.2   | 3.8    | .36  | .01  | .45   |
| 16    | 2.5   | .86    | 2.4   | 5.4   | 1.7   | 6.2   | 1.4   | 1.2   | 3.4    | .32  | .02  | .72   |
| 17    | 2.2   | .68    | 2.5   | 4.5   | 1.5   | 4.9   | 1.3   | .84   | 3.0    | .24  | .02  | .53   |
| 18    | 1.9   | .68    | 2.5   | 4.0   | 12    | 4.5   | 1.3   | .72   | 2.7    | .24  | .12  | .38   |
| 19    | 1.7   | .68    | 6.1   | 3.8   | 20    | 4.2   | 1.4   | .64   | 2.5    | .19  | .04  | 1.5   |
| 20    | 1.6   | 47     | 4.4   | 3.9   | 5.3   | 3.9   | 1.3   | .56   | 2.3    | .16  | .07  | 3.3   |
| 21    | 1.5   | 5.9    | 4.4   | 3.3   | 5.3   | 4.5   | 1.3   | .52   | 2.1    | .13  | .01  | 1.8   |
| 22    | 1.3   | 4.0    | 4.4   | 3.0   | 5.8   | 5.0   | 1.3   | .52   | 1.8    | .11  | 0    | 1.2   |
| 23    | 1.2   | 3.4    | 8.4   | 2.8   | 4.5   | 4.4   | 1.1   | .55   | 1.5    | .08  | .09  | .83   |
| 24    | 1.1   | 238    | 13    | 2.6   | 3.7   | 4.4   | .97   | .57   | 1.4    | .06  | .06  | .76   |
| 25    | .98   | 39     | 5.7   | 2.5   | 3.5   | 4.5   | .90   | 4.3   | 1.3    | .21  | .01  | .63   |
| 26    | 1.7   | 18     | 4.7   | 5.6   | 3.3   | 4.0   | .84   | 4.2   | 1.3    | .24  | 0    | .52   |
| 27    | 19    | 7.4    | 4.7   | 4.4   | 3.0   | 3.5   | .73   | 1.7   | 1.1    | .08  | .50  | .46   |
| 28    | 3.6   | 6.7    | 4.5   | 7.3   | 2.8   | 3.3   | .68   | 1.2   | 1.1    | .04  | 1.6  | .52   |
| 29    | 2.8   | 6.1    | 3.8   | 4.5   | ----- | 3.0   | .64   | .95   | .88    | .02  | .27  | .50   |
| 30    | 2.5   | 5.4    | 3.6   | 3.9   | ----- | 2.7   | 2.7   | .80   | .82    | .01  | .24  | .39   |
| 31    | 2.9   | -----  | 3.3   | 3.4   | ----- | 2.5   | ----- | .75   | -----  | .01  | .22  | ----- |
| TOTAL | 99.58 | 401.57 | 286.6 | 101.4 | 105.3 | 474.0 | 46.56 | 40.06 | 343.48 | 8.83 | 4.28 | 36.08 |
| MEAN  | 3.21  | 13.4   | 9.25  | 3.27  | 3.76  | 15.3  | 1.55  | 1.29  | 11.4   | .28  | .14  | 1.20  |
| MAX   | 19    | 238    | 124   | 7.3   | 20    | 266   | 3.1   | 4.3   | 122    | .72  | 1.6  | 5.6   |
| MIN   | .98   | .68    | 2.4   | 1.1   | 1.5   | 1.7   | .64   | .52   | .53    | .01  | 0    | .38   |
| CFSM  | .83   | 3.47   | 2.40  | .85   | .97   | 3.96  | .40   | .33   | 2.95   | .07  | .04  | .31   |
| IN-   | .96   | 3.87   | 2.76  | .98   | 1.01  | 4.57  | .45   | .39   | 3.31   | .09  | .04  | .35   |
| AC-FT | 198   | 797    | 568   | 201   | 209   | 940   | 92    | 79    | 681    | 18   | 8.5  | 72    |

CAL YR 1973 TOTAL 2,423.70 MEAN 6.64 MAX 238 MIN 0 CFSM 1.72 IN 23.36 AC-FT 4,810  
WTR YR 1974 TOTAL 1,947.74 MEAN 5.34 MAX 266 MIN 0 CFSM 1.38 IN 18.77 AC-FT 3,860

1974 PEAK DISCHARGE (BASE, 300 FT<sup>3</sup>/S)

| DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|------|------|-------|-----------|
| 11-20 | 1415 | 4.85  | 308       | 6-6  | 2215 | 7.18  | 1,190     |
| 11-24 | 2100 | 6.24  | 741       | 12-4 | 0215 | 5.48  | 473       |
| 3-10  | 0015 | 6.49  | 850       |      |      |       |           |

07185700 Spring River at Larussell, Mo.

LOCATION.--Lat 37°09'13", long 94°03'21", SW¼SW¼ sec.12, T.28 N., R.29 W., Lawrence County, on right bank on upstream side of Bower Mills Bridge, 0.8 mi (1.3 km) north of Larussell, and 2.5 mi (4.0 km) upstream from Cave Spring Branch.

DRAINAGE AREA.--306 mi<sup>2</sup> (793 km<sup>2</sup>).

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

GAGE.--Water-stage recorder. Altitude of gage is 1,030 ft (313.9 m) from topographic map. Prior to Oct. 18, 1961, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--17 years, 241 ft<sup>3</sup>/s (6.83 m<sup>3</sup>/s), 10.70 in/yr (272 mm/yr), 174,600 acre-ft/yr (215 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 15,500 ft<sup>3</sup>/s (439 m<sup>3</sup>/s) Nov. 25 (gage height, 15.63 ft or 4.764 m); minimum, 104 ft<sup>3</sup>/s (2.95 m<sup>3</sup>/s) Sept. 30; minimum gage height, 5.03 ft (1.533 m) Sept. 19, 30.

Period of record: Maximum discharge, 22,500 ft<sup>3</sup>/s (637 m<sup>3</sup>/s) Nov. 1, 1972 (gage height, 17.58 ft or 5.358 m); minimum, 15 ft<sup>3</sup>/s (0.425 m<sup>3</sup>/s) Dec. 21, 1963, result of ice conditions upstream; minimum gage height, 3.87 ft (1.180 m) Sept. 12, 13, 1959.

REMARKS.--Records good.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT    | NOV    | DEC    | JAN    | FEB    | MAR    | APR    | MAY    | JUN    | JUL    | AUG   | SEP   |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|-------|
| 1     | 436    | 418    | 859    | 597    | 478    | 424    | 519    | 306    | 309    | 292    | 135   | 198   |
| 2     | 334    | 372    | 789    | 540    | 459    | 413    | 491    | 287    | 288    | 283    | 141   | 211   |
| 3     | 281    | 338    | 771    | 473    | 432    | 405    | 477    | 295    | 273    | 275    | 135   | 224   |
| 4     | 260    | 309    | 5,620  | 449    | 414    | 391    | 453    | 289    | 372    | 269    | 129   | 191   |
| 5     | 242    | 289    | 3,420  | 431    | 400    | 381    | 431    | 274    | 1,190  | 266    | 126   | 172   |
| 6     | 233    | 271    | 1,350  | 419    | 389    | 370    | 418    | 265    | 875    | 259    | 126   | 157   |
| 7     | 237    | 257    | 1,140  | 400    | 377    | 363    | 411    | 256    | 9,690  | 256    | 138   | 147   |
| 8     | 212    | 247    | 1,030  | 387    | 366    | 354    | 459    | 250    | 3,810  | 267    | 132   | 138   |
| 9     | 196    | 230    | 935    | 389    | 355    | 463    | 405    | 246    | 2,030  | 247    | 141   | 132   |
| 10    | 185    | 218    | 842    | 385    | 347    | 8,040  | 386    | 247    | 1,280  | 236    | 157   | 129   |
| 11    | 188    | 210    | 788    | 361    | 331    | 6,930  | 395    | 238    | 1,010  | 230    | 132   | 126   |
| 12    | 288    | 202    | 747    | 342    | 328    | 2,370  | 423    | 229    | 958    | 226    | 126   | 122   |
| 13    | 919    | 191    | 701    | 332    | 320    | 1,470  | 381    | 221    | 788    | 225    | 122   | 122   |
| 14    | 517    | 186    | 653    | 340    | 314    | 1,290  | 360    | 241    | 699    | 223    | 116   | 119   |
| 15    | 394    | 183    | 614    | 421    | 305    | 1,440  | 345    | 302    | 671    | 220    | 113   | 116   |
| 16    | 339    | 175    | 569    | 484    | 310    | 1,440  | 346    | 257    | 632    | 216    | 113   | 116   |
| 17    | 302    | 169    | 546    | 442    | 298    | 1,130  | 336    | 238    | 557    | 212    | 113   | 116   |
| 18    | 277    | 161    | 527    | 431    | 317    | 1,040  | 327    | 227    | 517    | 204    | 122   | 110   |
| 19    | 258    | 154    | 647    | 412    | 899    | 967    | 324    | 217    | 483    | 195    | 126   | 110   |
| 20    | 243    | 932    | 656    | 412    | 609    | 900    | 312    | 209    | 452    | 191    | 122   | 135   |
| 21    | 232    | 1,140  | 571    | 399    | 548    | 870    | 307    | 203    | 425    | 182    | 119   | 146   |
| 22    | 219    | 558    | 544    | 384    | 569    | 849    | 311    | 199    | 404    | 179    | 116   | 135   |
| 23    | 210    | 446    | 571    | 368    | 538    | 843    | 302    | 194    | 384    | 175    | 116   | 126   |
| 24    | 201    | 3,230  | 1,150  | 360    | 504    | 762    | 287    | 205    | 363    | 172    | 116   | 123   |
| 25    | 194    | 11,500 | 993    | 350    | 476    | 753    | 279    | 278    | 352    | 172    | 113   | 120   |
| 26    | 185    | 3,000  | 799    | 366    | 461    | 708    | 273    | 1,200  | 340    | 175    | 113   | 116   |
| 27    | 1,510  | 1,760  | 734    | 471    | 452    | 659    | 266    | 638    | 330    | 163    | 116   | 113   |
| 28    | 1,790  | 1,270  | 687    | 514    | 437    | 619    | 262    | 443    | 321    | 154    | 163   | 110   |
| 29    | 618    | 1,080  | 636    | 599    | -----  | 599    | 257    | 384    | 308    | 150    | 147   | 119   |
| 30    | 490    | 961    | 598    | 531    | -----  | 561    | 294    | 349    | 299    | 141    | 129   | 110   |
| 31    | 451    | -----  | 597    | 504    | -----  | 542    | -----  | 328    | -----  | 138    | 122   | ----- |
| TOTAL | 12,441 | 30,457 | 31,084 | 13,293 | 12,033 | 38,346 | 10,837 | 9,515  | 30,410 | 6,593  | 3,935 | 4,109 |
| MEAN  | 401    | 1,015  | 1,003  | 429    | 430    | 1,237  | 361    | 307    | 1,014  | 213    | 127   | 137   |
| MAX   | 1,790  | 11,500 | 5,620  | 599    | 899    | 8,040  | 519    | 1,200  | 9,690  | 292    | 163   | 224   |
| MIN   | 185    | 154    | 527    | 332    | 298    | 354    | 257    | 194    | 273    | 138    | 113   | 110   |
| CFSM  | 1.31   | 3.32   | 3.28   | 1.40   | 1.41   | 4.04   | 1.18   | 1.00   | 3.31   | .70    | .42   | .45   |
| IN.   | 1.51   | 3.70   | 3.78   | 1.62   | 1.46   | 4.66   | 1.32   | 1.16   | 3.70   | .80    | .48   | .50   |
| AC-FT | 24,680 | 60,410 | 61,660 | 26,370 | 23,870 | 76,060 | 21,500 | 18,870 | 60,320 | 13,080 | 7,810 | 8,150 |

CAL YR 1973 TOTAL 225,103 MEAN 617 MAX 11,500 MIN 72 CFSM 2.02 IN 27.37 AC-FT 446,500  
WTR YR 1974 TOTAL 203,053 MEAN 556 MAX 11,500 MIN 110 CFSM 1.82 IN 24.68 AC-FT 402,800

PEAK DISCHARGE (BASE, 3,000 FT<sup>3</sup>/S)

| DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|------|------|-------|-----------|
| 10-28 | 0530 | 10.59 | 3,580     | 3-10 | 1630 | 14.29 | 10,900    |
| 11-25 | 0330 | 15.63 | 15,500    | 6-7  | 0945 | 15.08 | 13,500    |
| 12-4  | 1645 | 13.34 | 7,980     |      |      |       |           |

## 07185765 Spring River at Carthage, Mo.

LOCATION.--Lat 37°11'11", long 94°18'56", in N $\frac{1}{2}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec.33, T.29 N., R.31 W., Jasper County, on downstream side of second pier from left abutment of Missouri Pacific Railroad bridge in Carthage and 600 ft (183 m) downstream from U.S. Highway 71 bridge.

DRAINAGE AREA.--425 mi<sup>2</sup> (1,100 km<sup>2</sup>).

PERIOD OF RECORD.--October 1966 to current year. Occasional discharge measurements 1951-54. Intermittent gage readings since Oct. 31, 1945 collected by Corps of Engineers.

GAGE.--Water-stage recorder. Datum of gage is 923.68 ft (281.538 m) above mean sea level. Prior to Jan. 26, 1967, nonrecording gage at site 600 ft (183 m) upstream at same datum.

AVERAGE DISCHARGE.--8 years, 414 ft<sup>3</sup>/s (11.72 m<sup>3</sup>/s), 13.23 in/yr (336 mm/yr), 299,900 acre-ft/yr (370 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 16,800 ft<sup>3</sup>/s (476 m<sup>3</sup>/s) Nov. 25 (gage height, 15.45 ft or 4.709 m); minimum, 136 ft<sup>3</sup>/s (3.85 m<sup>3</sup>/s) Sept. 28; minimum gage height, 3.28 ft (1.00 m) Aug. 15, Sept. 28.

Period of record: Maximum discharge, 24,800 ft<sup>3</sup>/s (702 m<sup>3</sup>/s) Nov. 1, 1972 (gage height, 17.15 ft or 5.227 m); minimum, 37 ft<sup>3</sup>/s (1.05 m<sup>3</sup>/s) July 26, 27, 1972.

Flood of May 18, 1943 reached a stage of 22.0 ft (6.71 m) by highwater mark 1,800 ft (549 m) upstream.

REMARKS.--Records fair. Low-flow slightly regulated by gristmills upstream.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT    | NOV    | DEC    | JAN    | FEB    | MAR    | APR    | MAY    | JUN    | JUL    | AUG   | SEP    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|--------|
| 1     | 774    | 530    | 1,160  | 754    | 655    | 534    | 596    | 379    | 361    | 361    | 160   | 215    |
| 2     | 537    | 474    | 1,060  | 728    | 636    | 517    | 572    | 340    | 342    | 344    | 162   | 313    |
| 3     | 451    | 427    | 1,010  | 691    | 607    | 497    | 552    | 346    | 317    | 331    | 165   | 287    |
| 4     | 417    | 397    | 5,490  | 667    | 572    | 474    | 522    | 346    | 418    | 319    | 156   | 259    |
| 5     | 397    | 374    | 7,520  | 644    | 558    | 452    | 498    | 326    | 2,080  | 315    | 152   | 222    |
| 6     | 376    | 352    | 2,210  | 633    | 530    | 434    | 481    | 310    | 1,290  | 302    | 154   | 203    |
| 7     | 400    | 335    | 1,640  | 603    | 513    | 425    | 469    | 300    | 8,540  | 294    | 168   | 190    |
| 8     | 364    | 324    | 1,410  | 582    | 490    | 409    | 496    | 292    | 8,450  | 319    | 165   | 179    |
| 9     | 328    | 310    | 1,270  | 575    | 477    | 431    | 474    | 289    | 2,850  | 295    | 182   | 170    |
| 10    | 305    | 295    | 1,130  | 572    | 455    | 8,940  | 445    | 284    | 2,140  | 275    | 186   | 164    |
| 11    | 298    | 284    | 1,040  | 540    | 446    | 9,960  | 443    | 276    | 1,280  | 263    | 175   | 160    |
| 12    | 337    | 275    | 979    | 494    | 422    | 5,520  | 470    | 265    | 1,260  | 254    | 160   | 154    |
| 13    | 1,320  | 269    | 919    | 490    | 409    | 1,980  | 447    | 257    | 1,030  | 247    | 155   | 150    |
| 14    | 826    | 263    | 851    | 497    | 401    | 1,550  | 415    | 339    | 931    | 245    | 151   | 150    |
| 15    | 568    | 259    | 800    | 586    | 388    | 1,730  | 399    | 427    | 873    | 247    | 147   | 148    |
| 16    | 479    | 249    | 749    | 741    | 386    | 2,030  | 400    | 355    | 830    | 243    | 144   | 146    |
| 17    | 418    | 240    | 713    | 695    | 383    | 1,330  | 388    | 305    | 780    | 229    | 148   | 144    |
| 18    | 385    | 236    | 695    | 659    | 396    | 1,180  | 377    | 284    | 679    | 223    | 158   | 143    |
| 19    | 359    | 227    | 1,170  | 629    | 1,410  | 1,070  | 374    | 270    | 640    | 215    | 159   | 148    |
| 20    | 336    | 670    | 1,090  | 621    | 970    | 995    | 368    | 257    | 607    | 207    | 162   | 157    |
| 21    | 317    | 2,670  | 874    | 607    | 785    | 946    | 361    | 248    | 568    | 198    | 152   | 165    |
| 22    | 299    | 882    | 821    | 578    | 807    | 931    | 360    | 243    | 537    | 198    | 179   | 165    |
| 23    | 284    | 653    | 851    | 558    | 754    | 926    | 350    | 240    | 507    | 195    | 164   | 157    |
| 24    | 270    | 1,380  | 1,810  | 530    | 691    | 854    | 336    | 244    | 481    | 190    | 152   | 150    |
| 25    | 258    | 11,800 | 2,290  | 513    | 629    | 840    | 325    | 301    | 461    | 188    | 148   | 148    |
| 26    | 250    | 7,460  | 1,340  | 513    | 600    | 807    | 317    | 893    | 440    | 196    | 142   | 144    |
| 27    | 1,390  | 3,100  | 1,140  | 699    | 585    | 754    | 314    | 993    | 422    | 190    | 144   | 142    |
| 28    | 2,600  | 1,800  | 1,030  | 683    | 561    | 726    | 306    | 540    | 406    | 180    | 172   | 137    |
| 29    | 842    | 1,470  | 951    | 845    | -----  | 700    | 304    | 455    | 393    | 173    | 183   | 142    |
| 30    | 629    | 1,320  | 884    | 741    | -----  | 660    | 317    | 412    | 378    | 168    | 165   | 142    |
| 31    | 567    | -----  | 824    | 707    | -----  | 626    | -----  | 378    | -----  | 163    | 155   | -----  |
| TOTAL | 17,381 | 39,325 | 45,721 | 19,375 | 16,516 | 49,228 | 12,476 | 11,194 | 40,291 | 7,567  | 4,965 | 5,194  |
| MEAN  | 561    | 1,311  | 1,475  | 625    | 590    | 1,588  | 416    | 361    | 1,343  | 244    | 160   | 173    |
| MAX   | 2,600  | 11,800 | 7,520  | 845    | 1,410  | 9,960  | 596    | 993    | 8,540  | 361    | 186   | 313    |
| MIN   | 250    | 227    | 695    | 490    | 383    | 409    | 304    | 240    | 317    | 163    | 142   | 137    |
| CFSM  | 1.32   | 3.08   | 3.47   | 1.47   | 1.39   | 3.74   | .98    | .85    | 3.16   | .57    | .38   | .41    |
| IN.   | 1.52   | 3.44   | 4.00   | 1.70   | 1.45   | 4.31   | 1.09   | .98    | 3.53   | .66    | .43   | .45    |
| AC-FT | 34,480 | 78,000 | 90,690 | 38,430 | 32,760 | 97,640 | 24,750 | 22,200 | 79,920 | 15,010 | 9,850 | 10,300 |

CAL YR 1973 TOTAL 325,899 MEAN 893 MAX 11,800 MIN 107 CFSM 2.10 IN 28.53 AC-FT 646,400  
WTR YR 1974 TOTAL 269,233 MEAN 738 MAX 11,800 MIN 137 CFSM 1.74 IN 23.57 AC-FT 534,000

PEAK DISCHARGE (BASE, 3,500 FT<sup>3</sup>/S)

| DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|------|------|-------|-----------|
| 11-21 | 0630 | 10.09 | 3,960     | 3-10 | 1900 | 14.35 | 12,600    |
| 11-25 | 1045 | 15.45 | 16,800    | 6-7  | 1800 | 14.60 | 13,400    |
| 12-5  | 0230 | 12.93 | 8,850     |      |      |       |           |



07186000 Spring River near Waco, Mo.

LOCATION.--Lat 37°14'44", long 94°33'58", on line between SE¼ sec. 7 and NE¼ sec.18, T.29 N., R.33 W., Jasper County, on left bank on downstream side of left pier of county highway bridge, 0.8 mi (1.3 km) downstream from Blackberry Creek, 1.5 mi (2.4 km) east of Waco, and 47.6 mi (76.6 km) upstream from mouth.

DRAINAGE AREA.--1,164 mi<sup>2</sup> (3,015 km<sup>2</sup>).

PERIOD OF RECORD.--April 1924 to current year.

GAGE.--Water-stage recorder. Datum of gage is 833.23 ft (253.969 m) above mean sea level. Prior to Feb. 23, 1935, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--50 years, 849 ft<sup>3</sup>/s (24.0 m<sup>3</sup>/s), 9.91 in/yr (252 mm/yr), 615,100 acre-ft/yr (758 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 50,600 ft<sup>3</sup>/s (1,433 m<sup>3</sup>/s) Mar. 11 (gage height, 26.29 ft or 8.014 m); minimum, 151 ft<sup>3</sup>/s (4.28 m<sup>3</sup>/s) Aug. 5 (gage height, 2.07 ft or 0.631 m).

Period of record: Maximum discharge, 103,000 ft<sup>3</sup>/s (2,920 m<sup>3</sup>/s) May 19, 1943 (gage height, 30.94 ft or 9.431 m, from floodmark); minimum, 4.2 ft<sup>3</sup>/s (0.119 m<sup>3</sup>/s) Aug. 28, 1954; minimum gage height, 0.80 ft (0.244 m) July 24, 1934.

REMARKS.--Records fair. Low flow slightly regulated by gristmills above station. Records of chemical analyses are published in Part 2 of this report.

REVISIONS.--WSP 1117: Drainage area.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY         | OCT           | NOV        | DEC        | JAN     | FEB       | MAR      | APR             | MAY    | JUN     | JUL    | AUG    | SEP    |
|-------------|---------------|------------|------------|---------|-----------|----------|-----------------|--------|---------|--------|--------|--------|
| 1           | 1,170         | 730        | 1,750      | 1,100   | 1,170     | 891      | 974             | 1,570  | 592     | 465    | 158    | 1,430  |
| 2           | 804           | 654        | 1,580      | 1,030   | 1,060     | 851      | 908             | 896    | 532     | 444    | 176    | 2,210  |
| 3           | 632           | 577        | 1,540      | 980     | 968       | 820      | 850             | 675    | 494     | 418    | 168    | 2,070  |
| 4           | 598           | 524        | 9,690      | 920     | 894       | 780      | 810             | 855    | 477     | 404    | 165    | 1,190  |
| 5           | 585           | 483        | 17,500     | 880     | 848       | 736      | 760             | 604    | 1,240   | 391    | 158    | 630    |
| 6           | 594           | 451        | 11,900     | 860     | 814       | 698      | 730             | 524    | 3,300   | 375    | 165    | 433    |
| 7           | 617           | 424        | 4,860      | 830     | 771       | 668      | 705             | 467    | 15,900  | 359    | 176    | 344    |
| 8           | 586           | 400        | 2,230      | 795     | 736       | 640      | 700             | 428    | 23,200  | 340    | 183    | 297    |
| 9           | 501           | 380        | 1,870      | 785     | 707       | 745      | 710             | 412    | 15,400  | 371    | 258    | 265    |
| 10          | 432           | 357        | 1,650      | 775     | 689       | 16,300   | 655             | 397    | 7,020   | 326    | 250    | 240    |
| 11          | 425           | 337        | 1,480      | 735     | 665       | 46,700   | 650             | 386    | 2,710   | 304    | 238    | 223    |
| 12          | 467           | 321        | 1,370      | 665     | 652       | 30,800   | 680             | 366    | 2,310   | 286    | 222    | 208    |
| 13          | 962           | 307        | 1,280      | 655     | 639       | 16,500   | 680             | 351    | 2,140   | 276    | 199    | 195    |
| 14          | 1,620         | 297        | 1,190      | 645     | 621       | 4,220    | 627             | 1,240  | 1,590   | 269    | 180    | 189    |
| 15          | 945           | 287        | 1,100      | 835     | 598       | 4,640    | 586             | 3,150  | 1,360   | 260    | 168    | 182    |
| 16          | 770           | 279        | 1,020      | 2,210   | 585       | 6,810    | 572             | 1,710  | 1,270   | 260    | 162    | 183    |
| 17          | 617           | 268        | 955        | 3,500   | 580       | 3,880    | 559             | 776    | 1,150   | 246    | 176    | 181    |
| 18          | 533           | 259        | 915        | 3,260   | 655       | 2,300    | 536             | 560    | 1,030   | 231    | 242    | 178    |
| 19          | 472           | 253        | 3,470      | 1,910   | 6,050     | 1,870    | 523             | 474    | 962     | 224    | 526    | 181    |
| 20          | 426           | 1,180      | 4,420      | 1,780   | 4,850     | 1,660    | 518             | 422    | 886     | 222    | 343    | 290    |
| 21          | 392           | 4,860      | 2,830      | 1,730   | 3,420     | 1,590    | 572             | 388    | 827     | 210    | 236    | 313    |
| 22          | 357           | 2,970      | 1,820      | 1,330   | 3,000     | 1,670    | 1,020           | 372    | 761     | 202    | 197    | 262    |
| 23          | 332           | 1,360      | 1,810      | 1,800   | 2,040     | 1,710    | 795             | 359    | 711     | 202    | 915    | 232    |
| 24          | 311           | 1,630      | 8,170      | 1,500   | 1,440     | 1,610    | 595             | 543    | 660     | 199    | 307    | 215    |
| 25          | 292           | 13,700     | 8,410      | 1,080   | 1,170     | 1,770    | 518             | 652    | 626     | 191    | 219    | 207    |
| 26          | 285           | 21,000     | 5,650      | 1,070   | 1,050     | 1,840    | 482             | 1,030  | 594     | 191    | 182    | 191    |
| 27          | 3,150         | 10,300     | 3,180      | 2,600   | 999       | 1,640    | 456             | 1,620  | 568     | 195    | 167    | 180    |
| 28          | 3,640         | 4,530      | 1,850      | 2,500   | 943       | 1,400    | 433             | 976    | 536     | 187    | 411    | 211    |
| 29          | 2,460         | 2,550      | 1,570      | 2,810   | -----     | 1,260    | 433             | 742    | 509     | 176    | 503    | 326    |
| 30          | 1,050         | 2,100      | 1,390      | 2,010   | -----     | 1,140    | 1,070           | 641    | 482     | 168    | 324    | 244    |
| 31          | 816           | -----      | 1,280      | 1,390   | -----     | 1,040    | -----           | 740    | -----   | 165    | 298    | -----  |
| TOTAL       | 26,841        | 73,768     | 109,730    | 44,970  | 38,614    | 159,179  | 20,107          | 24,326 | 89,837  | 8,557  | 8,072  | 13,500 |
| MEAN        | 866           | 2,459      | 3,540      | 1,451   | 1,379     | 5,135    | 670             | 785    | 2,995   | 276    | 260    | 450    |
| MAX         | 3,640         | 21,000     | 17,500     | 3,500   | 6,050     | 46,700   | 1,070           | 3,150  | 23,200  | 465    | 915    | 2,210  |
| MIN         | 285           | 253        | 915        | 645     | 580       | 640      | 433             | 351    | 477     | 165    | 158    | 178    |
| CFSM        | .74           | 2.11       | 3.04       | 1.25    | 1.18      | 4.41     | .58             | .67    | 2.57    | .24    | .22    | .39    |
| IN.         | .86           | 2.36       | 3.51       | 1.44    | 1.23      | 5.09     | .64             | .78    | 2.87    | .27    | .26    | .43    |
| AC-FT       | 53,240        | 146,300    | 217,600    | 89,200  | 76,590    | 315,700  | 39,880          | 48,250 | 178,200 | 16,970 | 16,010 | 26,780 |
| CAL YR 1973 | TOTAL 854,551 | MEAN 2,341 | MAX 21,000 | MIN 108 | CFSM 2.01 | IN 27.31 | AC-FT 1,695,000 |        |         |        |        |        |
| WTR YR 1974 | TOTAL 617,501 | MEAN 1,692 | MAX 46,700 | MIN 158 | CFSM 1.45 | IN 19.73 | AC-FT 1,225,000 |        |         |        |        |        |

PEAK DISCHARGE (BASE, 13,000 FT<sup>3</sup>/S)

| DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|------|------|-------|-----------|
| 11-26 | 0315 | 21.97 | 26,300    | 3-11 | 0915 | 26.29 | 50,600    |
| 12-5  | 1300 | 19.33 | 18,000    | 6-8  | 0930 | 22.00 | 26,400    |

## ARKANSAS RIVER BASIN

07186400 Center Creek near Cartersville, Mo.

LOCATION.--Lat 37°08'26", long 94°22'57", in NW¼NW¼NW¼ sec.24, T.28 N., R.32 W., Jasper County, at downstream side of right pier of bridge on County Road HH, 1.5 mi (2.4 km) downstream from Grove Creek, 3 mi (4.8 km) east of Cartersville, and 17 mi (27.4 km) above mouth.

DRAINAGE AREA.--232 mi<sup>2</sup> (601 km<sup>2</sup>).

PERIOD OF RECORD.--June 1962 to current year.

GAGE.--Water-stage recorder. Datum of gage is 913.21 ft (278.346 m) above mean sea level (levels by Missouri State Highway Commission).

AVERAGE DISCHARGE.--12 years, 186 ft<sup>3</sup>/s (5.27 m<sup>3</sup>/s), 10.89 in/yr (277 mm/yr), 134,800 acre-ft/yr (166 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 10,600 ft<sup>3</sup>/s (300 m<sup>3</sup>/s) June 7 (gage height, 14.31 ft or 4.361 m); minimum, 63 ft<sup>3</sup>/s (1.78 m<sup>3</sup>/s) Aug. 17, 22; minimum gage height, 0.71 ft or 0.216 m Nov. 19, 20.  
Period of record: Maximum discharge, 22,500 ft<sup>3</sup>/s (637 m<sup>3</sup>/s) Nov. 1, 1972 (gage height, 15.94 ft or 4.859 m); minimum, 9.4 ft<sup>3</sup>/s (0.266 m<sup>3</sup>/s) Aug. 20, 21, 1972; minimum gage height, 0.28 ft (0.085 m) Oct. 20, 1964.  
Flood of Oct. 2, 1959 reached a stage of 18.57 ft (5.660 m), from floodmark.

REMARKS.--Records fair. Records of water quality are published in Part 2 of this report.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY         | OCT                                                                      | NOV    | DEC    | JAN    | FEB    | MAR    | APR    | MAY    | JUN    | JUL   | AUG   | SEP   |
|-------------|--------------------------------------------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|-------|-------|-------|
| 1           | 272                                                                      | 271    | 768    | 445    | 342    | 346    | 393    | 197    | 294    | 167   | 72    | 108   |
| 2           | 247                                                                      | 242    | 689    | 407    | 325    | 327    | 371    | 182    | 255    | 159   | 85    | 147   |
| 3           | 223                                                                      | 219    | 662    | 390    | 307    | 308    | 356    | 176    | 226    | 152   | 74    | 147   |
| 4           | 207                                                                      | 200    | 5,550  | 362    | 288    | 290    | 336    | 167    | 432    | 152   | 70    | 140   |
| 5           | 173                                                                      | 182    | 2,680  | 325    | 273    | 270    | 316    | 160    | 1,100  | 148   | 68    | 127   |
| 6           | 168                                                                      | 166    | 1,460  | 306    | 264    | 252    | 302    | 152    | 918    | 143   | 70    | 115   |
| 7           | 160                                                                      | 157    | 1,140  | 282    | 250    | 238    | 294    | 146    | 8,060  | 137   | 82    | 108   |
| 8           | 147                                                                      | 148    | 975    | 264    | 236    | 224    | 358    | 142    | 2,850  | 135   | 75    | 99    |
| 9           | 136                                                                      | 138    | 856    | 261    | 227    | 279    | 310    | 143    | 2,480  | 131   | 95    | 94    |
| 10          | 124                                                                      | 127    | 758    | 252    | 217    | 5,990  | 288    | 140    | 1,240  | 127   | 92    | 90    |
| 11          | 128                                                                      | 120    | 685    | 241    | 207    | 4,710  | 284    | 133    | 927    | 124   | 77    | 85    |
| 12          | 135                                                                      | 114    | 627    | 243    | 202    | 1,980  | 294    | 128    | 866    | 119   | 74    | 82    |
| 13          | 663                                                                      | 109    | 576    | 241    | 196    | 1,370  | 280    | 121    | 684    | 116   | 70    | 81    |
| 14          | 420                                                                      | 104    | 526    | 236    | 188    | 1,130  | 260    | 154    | 583    | 115   | 68    | 74    |
| 15          | 315                                                                      | 103    | 481    | 277    | 181    | 1,350  | 247    | 155    | 511    | 121   | 67    | 73    |
| 16          | 266                                                                      | 96     | 440    | 285    | 176    | 1,330  | 246    | 142    | 450    | 115   | 66    | 76    |
| 17          | 232                                                                      | 90     | 410    | 283    | 166    | 975    | 231    | 133    | 405    | 111   | 64    | 74    |
| 18          | 209                                                                      | 87     | 389    | 286    | 184    | 865    | 223    | 125    | 369    | 108   | 79    | 69    |
| 19          | 191                                                                      | 82     | 1,050  | 280    | 979    | 783    | 220    | 119    | 338    | 104   | 79    | 78    |
| 20          | 176                                                                      | 802    | 723    | 281    | 622    | 712    | 214    | 113    | 309    | 100   | 79    | 102   |
| 21          | 163                                                                      | 1,720  | 597    | 275    | 592    | 671    | 211    | 110    | 286    | 97    | 68    | 89    |
| 22          | 153                                                                      | 558    | 553    | 264    | 664    | 635    | 204    | 109    | 266    | 94    | 67    | 87    |
| 23          | 146                                                                      | 431    | 610    | 250    | 564    | 616    | 195    | 108    | 245    | 91    | 95    | 82    |
| 24          | 139                                                                      | 1,580  | 1,580  | 239    | 510    | 568    | 185    | 141    | 230    | 88    | 87    | 80    |
| 25          | 130                                                                      | 7,660  | 1,800  | 227    | 458    | 545    | 179    | 1,520  | 217    | 86    | 81    | 79    |
| 26          | 125                                                                      | 2,430  | 973    | 242    | 426    | 519    | 175    | 2,630  | 207    | 88    | 73    | 74    |
| 27          | 958                                                                      | 1,600  | 804    | 307    | 399    | 495    | 169    | 858    | 197    | 85    | 73    | 70    |
| 28          | 1,090                                                                    | 1,240  | 701    | 338    | 371    | 473    | 164    | 577    | 188    | 81    | 101   | 68    |
| 29          | 429                                                                      | 1,020  | 619    | 386    | -----  | 458    | 162    | 463    | 179    | 78    | 103   | 79    |
| 30          | 354                                                                      | 873    | 563    | 368    | -----  | 430    | 178    | 387    | 172    | 75    | 91    | 79    |
| 31          | 313                                                                      | -----  | 505    | 358    | -----  | 411    | -----  | 351    | -----  | 73    | 84    | ----- |
| TOTAL       | 8,592                                                                    | 22,669 | 30,750 | 9,201  | 9,814  | 29,550 | 7,645  | 10,182 | 25,484 | 3,520 | 2,429 | 2,756 |
| MEAN        | 277                                                                      | 756    | 992    | 297    | 351    | 953    | 255    | 328    | 849    | 114   | 78.4  | 91.9  |
| MAX         | 1,090                                                                    | 7,660  | 5,550  | 445    | 979    | 5,990  | 393    | 2,630  | 8,060  | 167   | 103   | 147   |
| MIN         | 124                                                                      | 82     | 389    | 227    | 166    | 224    | 162    | 108    | 172    | 73    | 64    | 68    |
| CFSM        | 1.19                                                                     | 3.26   | 4.28   | 1.28   | 1.51   | 4.11   | 1.10   | 1.41   | 3.66   | .49   | .34   | .40   |
| IN.         | 1.38                                                                     | 3.63   | 4.93   | 1.48   | 1.57   | 4.74   | 1.23   | 1.63   | 4.09   | .56   | .39   | .44   |
| AC-FT       | 17,040                                                                   | 44,960 | 60,990 | 18,250 | 19,470 | 58,610 | 15,160 | 20,200 | 50,550 | 6,980 | 4,820 | 5,470 |
| CAL YR 1973 | TOTAL 195,394 MEAN 535 MAX 7,660 MIN 38 CFSM 2.31 IN 31.33 AC-FT 387,600 |        |        |        |        |        |        |        |        |       |       |       |
| WTR YR 1974 | TOTAL 162,592 MEAN 445 MAX 8,060 MIN 64 CFSM 1.92 IN 26.07 AC-FT 322,500 |        |        |        |        |        |        |        |        |       |       |       |

PEAK DISCHARGE (BASE, 2,500 FT<sup>3</sup>/S)

| DATE  | TIME | G. H. | DISCHARGE | DATE  | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|-------|------|-------|-----------|
| 10-28 | 0130 | 6.97  | 2,820     | 12-25 | 0345 | 7.23  | 2,770     |
| 11-20 | 2245 | 7.78  | 3,360     | 3-10  | 0515 | 11.82 | 6,500     |
| 11-25 | 0630 | 13.65 | 10,100    | 5-25  | 1830 | 8.82  | 3,810     |
| 12-4  | 1000 | 12.09 | 6,990     | 6-7   | 0845 | 14.31 | 10,600    |

07187000 Shoal Creek above Joplin, Mo.

LOCATION.--Lat 37°01'23", long 94°30'58", in SE&NE&NE¼ sec.34, T.27 N., R.33 W., Newton County, on right bank 250 ft (76 m) upstream from mouth of Spring Creek, 1,400 ft (427 m) downstream from bridge on State Highway 86, 0.5 mi (0.8 km) south of city limits of Joplin and 13.2 mi (21.2 km) above mouth.

DRAINAGE AREA.--427 mi<sup>2</sup> (1,106 km<sup>2</sup>).

PERIOD OF RECORD.--October 1941 to current year.

GAGE.--Water-stage recorder. Datum of gage is 886.87 ft (270.318 m) above mean sea level. Prior to July 21, 1966, water-stage recorder at site 1.8 mi (2.9 km) upstream, at datum 15.5 ft (4.72 m) higher.

AVERAGE DISCHARGE.--33 years, 397 ft<sup>3</sup>/s (11.24 m<sup>3</sup>/s), 12.62 in/yr (321 mm/yr), 587,626 acre-ft/yr (355 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 12,700 ft<sup>3</sup>/s (360 m<sup>3</sup>/s) June 8 (gage height, 13.64 ft or 4.157 m); minimum, 212 ft<sup>3</sup>/s (6.00 m<sup>3</sup>/s) July 30, 31, Aug. 1, 17; minimum gage height, 2.81 ft (0.856 m) Sept. 30. Period of record: Maximum discharge, 62,100 ft<sup>3</sup>/s (1,730 m<sup>3</sup>/s) May 18, 1943 (gage height, 16.8 ft or 5.12 m) former site and datum; minimum, 12 ft<sup>3</sup>/s (0.340 m<sup>3</sup>/s) Sept. 7, 1954.

REMARKS.--Records fair.

REVISIONS.--WSP 1117: Drainage area.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY         | OCT           | NOV        | DEC       | JAN     | FEB       | MAR      | APR           | MAY    | JUN     | JUL    | AUG    | SEP    |
|-------------|---------------|------------|-----------|---------|-----------|----------|---------------|--------|---------|--------|--------|--------|
| 1           | 487           | 641        | 1,410     | 930     | 728       | 767      | 736           | 545    | 845     | 569    | 216    | 305    |
| 2           | 420           | 580        | 1,270     | 887     | 715       | 741      | 700           | 545    | 749     | 546    | 448    | 405    |
| 3           | 368           | 523        | 1,190     | 866     | 689       | 715      | 682           | 551    | 689     | 520    | 282    | 380    |
| 4           | 347           | 481        | 5,100     | 845     | 656       | 689      | 660           | 529    | 688     | 510    | 251    | 350    |
| 5           | 311           | 442        | 5,980     | 832     | 638       | 656      | 631           | 521    | 1,300   | 494    | 233    | 310    |
| 6           | 301           | 409        | 2,850     | 819     | 626       | 632      | 603           | 511    | 1,400   | 473    | 233    | 290    |
| 7           | 283           | 384        | 2,210     | 793     | 602       | 614      | 592           | 483    | 8,230   | 447    | 240    | 280    |
| 8           | 267           | 363        | 1,850     | 767     | 590       | 590      | 734           | 473    | 9,650   | 430    | 236    | 270    |
| 9           | 248           | 348        | 1,620     | 754     | 572       | 602      | 650           | 518    | 4,630   | 407    | 316    | 260    |
| 10          | 233           | 325        | 1,420     | 748     | 560       | 3,840    | 612           | 577    | 4,570   | 378    | 385    | 250    |
| 11          | 239           | 315        | 1,280     | 708     | 536       | 6,590    | 620           | 578    | 2,130   | 363    | 307    | 240    |
| 12          | 265           | 303        | 1,180     | 670     | 530       | 4,350    | 647           | 523    | 1,960   | 349    | 263    | 235    |
| 13          | 490           | 300        | 1,090     | 656     | 518       | 2,540    | 622           | 495    | 1,710   | 337    | 248    | 230    |
| 14          | 701           | 294        | 998       | 663     | 506       | 2,020    | 599           | 570    | 1,530   | 328    | 236    | 230    |
| 15          | 543           | 288        | 930       | 682     | 494       | 1,830    | 571           | 600    | 1,460   | 325    | 230    | 235    |
| 16          | 468           | 282        | 859       | 696     | 506       | 1,840    | 573           | 569    | 1,310   | 322    | 226    | 235    |
| 17          | 411           | 272        | 819       | 682     | 488       | 1,550    | 558           | 531    | 1,180   | 310    | 226    | 230    |
| 18          | 371           | 271        | 786       | 676     | 512       | 1,410    | 540           | 504    | 1,090   | 299    | 248    | 235    |
| 19          | 340           | 267        | 1,120     | 663     | 945       | 1,310    | 535           | 481    | 1,020   | 286    | 248    | 240    |
| 20          | 313           | 378        | 1,160     | 650     | 1,070     | 1,200    | 520           | 455    | 950     | 274    | 281    | 250    |
| 21          | 296           | 1,630      | 998       | 638     | 1,040     | 1,150    | 515           | 437    | 894     | 263    | 270    | 260    |
| 22          | 276           | 937        | 945       | 620     | 1,080     | 1,090    | 699           | 435    | 849     | 255    | 223    | 310    |
| 23          | 263           | 759        | 952       | 608     | 1,040     | 1,060    | 732           | 431    | 804     | 247    | 226    | 300    |
| 24          | 249           | 1,500      | 1,480     | 590     | 990       | 1,010    | 588           | 613    | 761     | 236    | 410    | 291    |
| 25          | 238           | 9,490      | 1,870     | 578     | 915       | 961      | 556           | 1,150  | 727     | 236    | 251    | 285    |
| 26          | 256           | 7,650      | 1,550     | 590     | 873       | 928      | 540           | 2,170  | 695     | 247    | 230    | 265    |
| 27          | 1,720         | 3,210      | 1,370     | 620     | 838       | 890      | 525           | 1,650  | 665     | 240    | 223    | 253    |
| 28          | 2,970         | 2,440      | 1,220     | 644     | 806       | 852      | 512           | 1,250  | 640     | 233    | 286    | 245    |
| 29          | 1,090         | 1,930      | 1,120     | 715     | -----     | 823      | 502           | 1,080  | 617     | 226    | 286    | 248    |
| 30          | 839           | 1,630      | 1,050     | 734     | -----     | 795      | 531           | 964    | 590     | 219    | 299    | 231    |
| 31          | 728           | -----      | 982       | 741     | -----     | 762      | -----         | 934    | -----   | 216    | 280    | -----  |
| TOTAL       | 16,331        | 38,642     | 48,659    | 22,065  | 20,063    | 44,807   | 18,085        | 21,673 | 54,333  | 10,585 | 8,337  | 8,148  |
| MEAN        | 527           | 1,288      | 1,570     | 712     | 717       | 1,445    | 603           | 699    | 1,811   | 341    | 269    | 272    |
| MAX         | 2,970         | 9,490      | 5,980     | 930     | 1,080     | 6,590    | 736           | 2,170  | 9,650   | 569    | 448    | 405    |
| MIN         | 233           | 267        | 786       | 578     | 488       | 590      | 502           | 431    | 590     | 216    | 216    | 230    |
| CFSM        | 1.23          | 3.02       | 3.68      | 1.67    | 1.68      | 3.38     | 1.41          | 1.64   | 4.24    | .80    | .63    | .64    |
| IN.         | 1.42          | 3.37       | 4.24      | 1.92    | 1.75      | 3.90     | 1.58          | 1.89   | 4.73    | .92    | .73    | .71    |
| AC-FT       | 32,390        | 76,650     | 96,520    | 43,770  | 39,790    | 88,870   | 35,870        | 42,990 | 107,800 | 21,000 | 16,540 | 16,160 |
| CAL YR 1973 | TOTAL 385,161 | MEAN 1,055 | MAX 9,490 | MIN 167 | CFSM 2.47 | IN 33.56 | AC-FT 764,000 |        |         |        |        |        |
| WTR YR 1974 | TOTAL 311,728 | MEAN 854   | MAX 9,650 | MIN 216 | CFSM 2.00 | IN 27.16 | AC-FT 618,300 |        |         |        |        |        |

PEAK DISCHARGE (BASE, 6,000 FT<sup>3</sup>/S)

| DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|------|------|-------|-----------|
| 11-26 | 0130 | 13.40 | 12,000    | 3-11 | 0845 | 11.08 | 8,140     |
| 12-4  | 1715 | 10.49 | 7,070     | 6-8  | 0700 | 13.64 | 12,700    |

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, on downstream side of right pier of bridge on State Highway 43, 0.8 mi (1.3 km) downstream from Blackfoot Branch, 2.8 mi (4.5 km) upstream from Buffalo Creek, 3.0 mi (4.8 km) southeast of Tiff City, and at mile 15.8 (25.4 km).

DRAINAGE AREA.--872 mi<sup>2</sup> (2,258 km<sup>2</sup>).

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

GAGE.--Water-stage recorder. Datum of gage is 750.61 ft (228.786 m) above mean sea level (levels by Corps of Engineers). Sept. 6, 1960, to Aug. 24, 1961, at site 100 ft (30.5 m) downstream.

AVERAGE DISCHARGE.--35 years, 795 ft<sup>3</sup>/s (22.51 m<sup>3</sup>/s), 12.38 in/yr (314 mm/yr), 576,000 acre-ft/yr (710 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 40,000 ft<sup>3</sup>/s (1,130 m<sup>3</sup>/s) June 9 (gage height, 22.32 ft or 6.803 m); minimum, 190 ft<sup>3</sup>/s (5.38 m<sup>3</sup>/s) Aug. 31.

Period of record: Maximum discharge, 137,000 ft<sup>3</sup>/s (3,880 m<sup>3</sup>/s) Apr. 19, 1941, (gage height, 28.4 ft or 8.66 m, from floodmark), from rating curve extended above 60,000 ft<sup>3</sup>/s (1,700 m<sup>3</sup>/s) on basis of slope-area measurement of peak flow; minimum daily, 5.1 ft<sup>3</sup>/s (0.14 m<sup>3</sup>/s), Sept. 5, 6, 1954.

REMARKS.--Records good. Records of chemical analyses are published in part 2 of this report.

REVISIONS (WATER YEARS).--WSP 927: 1940. WSP 1117: Drainage area.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCT    | NOV     | DEC     | JAN    | FEB    | MAR     | APR    | MAY    | JUN     | JUL    | AUG    | SEP    |
|-------|--------|---------|---------|--------|--------|---------|--------|--------|---------|--------|--------|--------|
| 1     | 359    | 638     | 2,330   | 1,410  | 1,310  | 1,330   | 1,110  | 1,020  | 1,140   | 675    | 203    | 312    |
| 2     | 337    | 628     | 2,040   | 1,300  | 1,220  | 1,220   | 1,050  | 1,090  | 1,020   | 639    | 232    | 514    |
| 3     | 305    | 576     | 1,900   | 1,190  | 1,150  | 1,140   | 997    | 1,130  | 911     | 598    | 263    | 768    |
| 4     | 279    | 512     | 14,300  | 1,100  | 1,060  | 1,070   | 944    | 1,150  | 814     | 558    | 252    | 700    |
| 5     | 261    | 452     | 16,900  | 1,040  | 989    | 994     | 892    | 1,110  | 767     | 518    | 242    | 581    |
| 6     | 253    | 407     | 10,000  | 985    | 922    | 937     | 850    | 1,050  | 1,340   | 486    | 235    | 501    |
| 7     | 242    | 372     | 7,520   | 937    | 853    | 892     | 800    | 989    | 21,500  | 448    | 244    | 429    |
| 8     | 230    | 345     | 4,690   | 893    | 800    | 824     | 776    | 930    | 24,400  | 418    | 240    | 373    |
| 9     | 215    | 319     | 2,730   | 863    | 745    | 792     | 744    | 1,040  | 28,200  | 406    | 291    | 331    |
| 10    | 202    | 295     | 2,080   | 889    | 694    | 2,090   | 706    | 2,750  | 11,400  | 386    | 449    | 306    |
| 11    | 216    | 277     | 1,820   | 849    | 652    | 13,400  | 706    | 2,570  | 5,800   | 372    | 406    | 289    |
| 12    | 265    | 262     | 1,630   | 806    | 616    | 10,900  | 736    | 1,750  | 3,800   | 359    | 336    | 277    |
| 13    | 598    | 251     | 1,500   | 771    | 586    | 4,720   | 728    | 1,420  | 2,920   | 342    | 308    | 314    |
| 14    | 945    | 241     | 1,360   | 767    | 556    | 3,240   | 698    | 1,220  | 2,390   | 326    | 294    | 383    |
| 15    | 792    | 232     | 1,210   | 776    | 570    | 2,650   | 675    | 1,260  | 2,050   | 302    | 283    | 371    |
| 16    | 661    | 224     | 1,100   | 779    | 664    | 2,610   | 668    | 1,180  | 1,810   | 295    | 274    | 351    |
| 17    | 550    | 215     | 1,030   | 753    | 720    | 2,380   | 653    | 1,010  | 1,610   | 287    | 264    | 328    |
| 18    | 475    | 211     | 989     | 758    | 803    | 2,190   | 646    | 907    | 1,440   | 302    | 292    | 303    |
| 19    | 417    | 204     | 1,000   | 747    | 1,140  | 2,030   | 632    | 792    | 1,350   | 302    | 294    | 292    |
| 20    | 373    | 285     | 1,420   | 741    | 1,600  | 1,870   | 626    | 699    | 1,240   | 297    | 302    | 682    |
| 21    | 332    | 2,470   | 1,970   | 724    | 1,760  | 1,780   | 675    | 627    | 1,130   | 294    | 303    | 1,200  |
| 22    | 303    | 2,280   | 1,460   | 700    | 2,370  | 1,720   | 1,880  | 583    | 1,030   | 289    | 311    | 999    |
| 23    | 279    | 1,560   | 1,400   | 675    | 2,440  | 1,720   | 2,430  | 645    | 974     | 286    | 311    | 788    |
| 24    | 260    | 7,450   | 2,580   | 642    | 2,160  | 1,700   | 1,830  | 985    | 922     | 277    | 322    | 668    |
| 25    | 243    | 32,000  | 4,200   | 615    | 1,910  | 1,630   | 1,500  | 1,110  | 892     | 272    | 299    | 592    |
| 26    | 229    | 14,200  | 3,290   | 616    | 1,690  | 1,550   | 1,310  | 1,760  | 858     | 285    | 270    | 524    |
| 27    | 445    | 7,240   | 2,580   | 674    | 1,550  | 1,480   | 1,180  | 1,930  | 833     | 287    | 229    | 461    |
| 28    | 1,580  | 4,980   | 2,140   | 819    | 1,430  | 1,410   | 1,060  | 1,540  | 792     | 272    | 204    | 409    |
| 29    | 977    | 3,510   | 1,880   | 1,120  | -----  | 1,340   | 974    | 1,290  | 760     | 268    | 205    | 372    |
| 30    | 770    | 2,780   | 1,690   | 1,340  | -----  | 1,260   | 959    | 1,100  | 721     | 252    | 201    | 339    |
| 31    | 669    | -----   | 1,540   | 1,340  | -----  | 1,180   | -----  | 1,170  | -----   | 222    | 197    | -----  |
| TOTAL | 14,062 | 85,416  | 102,279 | 27,619 | 32,960 | 74,049  | 29,435 | 37,807 | 124,814 | 11,320 | 8,556  | 14,757 |
| MEAN  | 454    | 2,847   | 3,299   | 891    | 1,177  | 2,389   | 981    | 1,220  | 4,160   | 365    | 276    | 492    |
| MAX   | 1,580  | 32,000  | 16,900  | 1,410  | 2,440  | 13,400  | 2,430  | 2,750  | 28,200  | 675    | 449    | 1,200  |
| MIN   | 202    | 204     | 989     | 615    | 556    | 792     | 626    | 583    | 721     | 222    | 197    | 277    |
| CFSM  | .52    | 3.26    | 3.78    | 1.02   | 1.35   | 2.74    | 1.13   | 1.40   | 4.77    | .42    | .32    | .56    |
| IN.   | .60    | 3.64    | 4.36    | 1.18   | 1.41   | 3.16    | 1.26   | 1.61   | 5.32    | .48    | .37    | .63    |
| AC-FT | 27,890 | 169,400 | 202,900 | 54,780 | 65,380 | 146,900 | 58,380 | 74,990 | 247,600 | 22,450 | 16,970 | 29,270 |

CAL YR 1973 TOTAL 717,669 MEAN 1,966 MAX 32,000 MIN 137 CFSM 2.25 IN 30.62 AC-FT 1,423,000  
WTR YR 1974 TOTAL 563,074 MEAN 1,543 MAX 32,000 MIN 197 CFSM 1.77 IN 24.02 AC-FT 1,117,000

PEAK DISCHARGE (BASE, 9,000 FT<sup>3</sup>/S)

| DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|------|------|-------|-----------|
| 11-25 | 0845 | 21.76 | 36,000    | 3-11 | 2230 | 16.71 | 19,300    |
| 12-4  | 2400 | 18.25 | 24,000    | 6-9  | 0600 | 22.32 | 40,000    |

## 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

| Station no.        | Station name                      | Location                                                                                                                                                                                                                                        | Drainage area (sq mi) | Period of record               | Annual maximum Gage Date | maximum height (feet) | Dis-charge (ft <sup>3</sup> /s) |
|--------------------|-----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|--------------------------------|--------------------------|-----------------------|---------------------------------|
| Fox River basin    |                                   |                                                                                                                                                                                                                                                 |                       |                                |                          |                       |                                 |
| 05495100           | Big Branch Tributary near Wayland | Lat 40°18'52", long 91°34'34", in NW¼SE¼ sec.29, T.64 N., R.6 W., Clark County, at culvert under U.S. Highway 61 and 5.6 mi (9.0 km) south of Wayland.                                                                                          | 0.70 (1.81)           | 1955-65<br>1966-69f<br>1970-74 | 5-30-74                  | 9.56                  | 430                             |
| Fabius River basin |                                   |                                                                                                                                                                                                                                                 |                       |                                |                          |                       |                                 |
| 05497500           | Middle Fabius River near Baring   | Lat 40°19'55", long 92°12'50", in NW¼NW¼ sec.26, T.64 N., R.12 W., Scotland County, at bridge on State Highway 15, 1 mi (1.6 km) downstream from confluence of North and South Forks of Middle Fabius River, and 6 mi (9.7 km) north of Baring. | 185 (479)             | 1931-60†<br>1961-74            | 10-6-73                  | 23.08                 | 6,950                           |
| 05497700           | Bridge Creek Branch near Baring   | Lat 40°15'30", long 92°13'00", in NE¼NE¼ sec.22, T.63 N., R.12 W., Knox County, at culvert under State Highway 15 and about 1 mi (1.6 km) northwest of Baring.                                                                                  | 2.38 (6.16)           | 1955-60<br>1961-63f<br>1964-74 | 5-18-74                  | 13.54                 | 500                             |
| South River basin  |                                   |                                                                                                                                                                                                                                                 |                       |                                |                          |                       |                                 |
| 05501200           | Nichols Branch near Palmyra       | Lat 39°44'39", long 91°31'52", in SE¼SE¼ sec.11, T.57 N., R.6 W., Marion County, at culvert on county road 4 mi (6.4 km) south of Palmyra.                                                                                                      | 2.58 (6.68)           | 1955-74                        | 5-30-74                  | 19.13                 | 540                             |
| Salt River basin   |                                   |                                                                                                                                                                                                                                                 |                       |                                |                          |                       |                                 |
| 05502700           | Easdale Branch near Shelbyville   | Lat 39°48'17", long 92°00'27", in SE¼SW¼ sec.22, T.58 N., R.10 W., Shelby County, at culvert under Missouri State Highway 168, 1.8 mi (2.9 km) east of Shelbyville.                                                                             | 0.71 (1.84)           | 1958-69<br>1970-71f<br>1972-74 | 7-4-74                   | 4.97                  | 220                             |
| 05504700           | Bean Creek near Mexico            | Lat 39°15'30", long 91°49'50", in NW¼SW¼ sec.29, T.52 N., R.8 W., Audrain County, at culvert under County Road J, 6.5 mi (10.5 km) north of Mexico.                                                                                             | 3.02 (7.82)           | 1960-74                        | 5-30-74                  | 14.00                 | 2,500                           |
| 05506000           | Youngs Creek near Mexico          | Lat 39°18'39", long 91°56'51", in NW¼SW¼ sec.5, T.52 N., R.9 W., Audrain County, on downstream side of bridge on State Highway 15, 6 mi (9.7 km) upstream from mouth and 11 mi (17.7 km) north of Mexico.                                       | 67.4 (175)            | 1931-69†<br>1970-74            | 5-30-74                  | 15.36                 | 5,360                           |
| Kings Lake basin   |                                   |                                                                                                                                                                                                                                                 |                       |                                |                          |                       |                                 |
| 05513600           | Camp Creek near Elsberry          | Lat 39°06'56", long 90°46'23", in SW portion of Survey 1724, T.50 N., R.2 E., Lincoln County, at culvert on State Highway 79, 3.6 mi (5.8 km) south of Elsberry.                                                                                | 1.50 (3.88)           | 1955-74                        | 5-30-74                  | 3.43                  | 475                             |
| 05513650           | Hurricane Creek near Elsberry     | Lat 39°06'29", long 90°46'13", in SW portion of Survey 1724, T.50 N., R.2 E., Lincoln County, at culvert on State Highway 79, 4.1 mi (6.6 km) south of Elsberry.                                                                                | 3.6 (7.92)            | 1955-74                        | 5-10-74                  | 7.46                  | 910                             |
| Cuivre River basin |                                   |                                                                                                                                                                                                                                                 |                       |                                |                          |                       |                                 |
| 05513700           | Mams Slough Creek near Wellsville | Lat 39°09'45", long 91°39'40", in NW¼NW¼ sec.35, T.51 N., R.7 W., Audrain County, at bridge on U.S. Highway 54, 8 mi (12.8 km) north-west of Wellsville.                                                                                        | 5.08 (13.2)           | 1955-57<br>1961-74             | 5-30-74                  | 15.31                 | 1,850                           |

Explanation of symbols and footnotes are at the end of list.



## DISCHARGE AT PARTIAL-RECORD STATIONS

Annual maximum discharge at crest-stage partial-record stations--Continued

| Station no.                        | Station name                            | Location                                                                                                                                                                                                                                           | Drainage area (sq mi) | Period of record               | Annual Date | maximum Gage height (feet) | Dis-charge (ft <sup>3</sup> /s) |
|------------------------------------|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|--------------------------------|-------------|----------------------------|---------------------------------|
| Cuivre River basin--Continued      |                                         |                                                                                                                                                                                                                                                    |                       |                                |             |                            |                                 |
| 05514200                           | Reid Branch near Bowling Green          | Lat 39°15'15", long 91°02'50", in SE¼ west part of Survey No. 1685, T.52 N., R.1 W., Pike County, upstream from culvert on U.S. Highway 61, 3.9 mi (6.3 km) south of Cyrene and 10 mi (16.1 km) south of Bowling Green.                            | 0.54 (1.40)           | 1955-74                        | 5-30-74     | 5.25                       | 215                             |
| Little Tarkio Creek basin          |                                         |                                                                                                                                                                                                                                                    |                       |                                |             |                            |                                 |
| 06815550                           | Staples Branch near Burlington Junction | Lat 40°26'15", long 95°12'05", in SW¼SE¼ sec.17, T.65 N., R.38 W., Atchison County, at culvert under U.S. Highway 136, about 7.3 mi (11.7 km) west of Burlington Junction.                                                                         | 0.49 (1.27)           | 1959-65<br>1966-71f<br>1972-74 | 10-10-73    | 12.17                      | 125                             |
| Platte River (Iowa-Missouri) basin |                                         |                                                                                                                                                                                                                                                    |                       |                                |             |                            |                                 |
| 06820000                           | White Cloud Creek near Maryville        | Lat 40°23'22", long 94°54'33", in NW¼NW¼ sec.1, T.64 N., R.36 W., Nodaway County, at bridge on U.S. Highway 71, 4 mi (6.4 km) upstream from Big Slough and 4.5 mi (7.2 km) northwest of Maryville.                                                 | 6.06 (15.7)           | 1948-70†<br>1971-74            | 10-10-73    | 14.58                      | 7,200                           |
| 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., Nodaway County, at culvert on U.S. Highway 71, 3 mi (4.8 km) southeast of Wilcox.                                                                                     | 1.30 (3.37)           | 1950-74                        | 10-10-73    | 7.35                       | 1,280                           |
| 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 (45.7 m) east of U.S. Highway 169, and 1 mi (1.6 km) south of Nashua.                                                               | 0.55 (1.42)           | 1959-65<br>1966-74f            | 5-18-74     | 18.84                      | 1,250                           |
| Crooked River basin                |                                         |                                                                                                                                                                                                                                                    |                       |                                |             |                            |                                 |
| 06895000                           | Crooked River near Richmond             | Lat 39°19'58", long 93°58'46", in NW¼NW¼ sec.7, T.52 N., R.27 W., Ray County, at bridge on State Highway 13, 4.0 mi (6.4 km) north of Richmond, 8.5 mi (13.7 km) upstream from West Fork Crooked River, and 24.5 mi (39.4 km) upstream from mouth. | 159 (412)             | 1948-70†<br>1971-74            | 5-17-74     | 25.57                      | 6,750                           |
| Grand River basin                  |                                         |                                                                                                                                                                                                                                                    |                       |                                |             |                            |                                 |
| 06896170                           | Grand River near Stanberry              | Lat 40°14'30", long 94°29'12", in SE¼ sec.22, T.63 N., R.32 W., Gentry County, on downstream side of bridge on U.S. Highways 136 and 169, 2.8 mi (4.5 km) northeast of Stanberry.                                                                  |                       | 1965-66<br>1967-68f<br>1969-74 | 10-12-73    | 16.35                      | 14,800                          |
| 06896180                           | DeMoss Branch near Stanberry            | Lat 40°13'35", long 94°33'35", in NE¼SE¼ sec.36, T.63 N., R.33 W., Gentry County, at culvert on U.S. Highway 136, 0.8 mi (1.3 km) west of Stanberry.                                                                                               | 0.38 (0.98)           | 1955-59<br>1960-64f<br>1965-74 | 10-11-73    | 15.63                      | 142                             |
| 06896190                           | Middle Fork Grand River near Albany     | Lat 40°14'27", long 94°24'10", in SW¼SE¼ sec.21, T.63 N., R.31 W., Gentry County, on downstream side of bridge on U.S. Highway 136, 3 mi (4.8 km) west of Albany.                                                                                  |                       | 1965-66<br>1967-68f<br>1969-74 | 10-12-73    | 17.05                      | 9,300                           |
| 06896400                           | East Fork Grand River at Albany         | Lat 40°14'55", long 94°21'37", in NW¼ sec.23, T.63 N., R.31 W., Gentry County, on downstream side of bridge on U.S. Highway 136, 0.8 mi (1.3 km) west of Albany.                                                                                   |                       | 1965-66<br>1967-68f<br>1969-74 | 10-11-73    | 19.26                      | 9,300                           |

## Annual maximum discharge at crest-stage partial-record stations--Continued

| Station no.                  | Station name                             | Location                                                                                                                                                                                                                                  | Drainage area (sq mi) | Period of record               | Annual Date | maximum Gage height (feet) | Dis-charge (ft <sup>3</sup> /s) |
|------------------------------|------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|--------------------------------|-------------|----------------------------|---------------------------------|
| Grand River basin--Continued |                                          |                                                                                                                                                                                                                                           |                       |                                |             |                            |                                 |
| 06896700                     | O'Neill Branch at Osborn                 | Lat 39°45'25", long 94°20'35", in SW¼NE¼ sec.14, T.57 N., R.31 W., DeKalb County, under U.S. Highway 36, 1 mi (1.6 km) northeast of Osborn and 5.5 mi (8.8 km) northwest of Cameron.                                                      | 0.80 (2.07)           | 1955-62<br>1963-66f<br>1967-74 | 10-11-73    | 15.87                      | 250                             |
| 06897200                     | Simpson Branch near Bethany              | Lat 40°15'55", long 93°58'55", in SE¼SW¼ sec.7, T.63 N., R.27 W., Harrison County, at bridge on U.S. Highway 136, 2.3 mi (3.7 km) east of Bethany.                                                                                        | 4.72 (12.2)           | 1955-70<br>1971-72f<br>1973-74 | 10-11-73    | 12.01                      | 2,700                           |
| 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 U.S. Highway 36, 0.2 mi (0.3 km) west of Utica.                                                                                   | 1.44 (3.73)           | 1958<br>1960-74                | 5-30-74     | 12.33                      | 580                             |
| 06898200                     | Thompson River near Trenton              | Lat 40°08'50", long 93°42'05", on line between SW¼ sec.22 and NW¼ sec. 27, T.62 N., R.25 W., Grundy County, 4.5 mi (7.2 km) upstream from Weldon River, 6.5 mi (10.4 km) northwest of Trenton, and 1.5 mi (2.4 km) east of Brimson.       |                       | 1961-74                        | 10-11-73    | 27.04                      | 27,000                          |
| 06898500                     | Weldon River near Mercer                 | Lat 40°32'56", long 93°36'10", in SW¼ sec.3, T.66 N., R.24 W., Mercer County, at county highway bridge, 4.2 mi (6.7 km) north-west of Mercer, and 5 mi (8.0 km) upstream from Little River.                                               | 246 (637)             | 1939-59†<br>1961-74            | 10-11-73    | 19.35                      | 16,000                          |
| 06898700                     | Weldon River below Mercer                | Lat 40°29'20", long 90°35'10", in SE¼SE¼ sec.27, T.66 N., R.24 W., Mercer County, about 0.8 mi (1.3 km) below Little River, and 3 mi (4.8 km) southwest of Mercer.                                                                        | 427 (1106)            | 1963-74                        | 10-11-73    | 16.01                      | 17,000                          |
| 06899100                     | Weldon River near Trenton                | Lat 40°08'05", long 93°38'15", in SE¼ sec.30, T.62 N., R.24 W., Grundy County, at bridge on County Highway A, 2 mi (3.2 km) northwest of Trenton.                                                                                         | 494 (1280)            | 1961-74                        | 10-11-73    | 20.79                      | 22,000                          |
| 06899600                     | West Fork Leakey Branch near Chillicothe | Lat 39°53'00", long 93°38'00", in NE¼SE¼ sec.36, T.59 N., R.24 W., Livingston County, at culvert under U.S. Highway 65, 6 mi (9.6 km) north of Chillicothe.                                                                               | 0.21 (0.54)           | 1955-71<br>1972-74f            | 6-6-74      | 10.52                      | 300                             |
| 06901300                     | Moffet Branch near Reger                 | Lat 40°07'53", long 93°14'30", in NW¼ sec.34, T.62 N., R.21 W., Sullivan County, at culvert under State Highway 6, 2.5 mi (4.0 km) west of Reger, and 3.8 mi (6.1 km) east of Humphreys.                                                  | 0.13 (0.34)           | 1955-63<br>1964-66f<br>1967-74 | 6-9-74      | 5.48                       | 215                             |
| 06902800                     | Onion Branch at St. Catherine            | Lat 39°47'46", long 92°59'17", in NE¼SE¼ sec.35, T.58 N., R.19 W., Linn County, at culvert under State Highway 11, 0.3 mi (0.5 km) northeast of St. Catherine and 5 mi (8.0 km) northeast of Brookfield.                                  | 1.04 (2.69)           | 1955-61<br>1962-66f<br>1967-74 | 10-11-73    | 16.03                      | 335                             |
| 06902900                     | East Yellow Creek near Brookfield        | Lat 39°45'22", long 91°58'58", in SW¼ sec.12, T.57 N., R.19 W., Linn County, on downstream side of bridge on State Highway 5 and U.S. Highway 36, 2.3 mi (3.7 km) southeast of St. Catherine and 4.5 mi (7.2 km) southeast of Brookfield. |                       | 1965-74                        | 10-11-73    | 11.60                      | 5,500                           |
| Chariton River basin         |                                          |                                                                                                                                                                                                                                           |                       |                                |             |                            |                                 |
| 06904300                     | Shoal Creek near Hartford                | Lat 40°29'00", long 92°46'20", in NE¼NE¼ sec.35, T.66 N., R.17 W., Putnam County, at bridge on U.S. Highway 136, 3 mi (4.8 km) north-east of Hartford.                                                                                    | 155 (401)             | 1963-74                        | 7-4-74      | 22.70                      | 8,100                           |

## DISCHARGE AT PARTIAL-RECORD STATIONS

Annual maximum discharge at crest-stage partial-record stations--Continued

| Station no.                     | Station name                                     | Location                                                                                                                                                                                                                                              | <sup>g</sup> Drainage<br>area<br>(sq mi) | Period<br>of<br>record         | Annual<br>Date | maximum<br>Gage<br>height<br>(feet) | Dis-<br>charge<br>(ft <sup>3</sup> /s) |
|---------------------------------|--------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|--------------------------------|----------------|-------------------------------------|----------------------------------------|
| Chariton River basin--Continued |                                                  |                                                                                                                                                                                                                                                       |                                          |                                |                |                                     |                                        |
| 06904700                        | Strop Branch near<br>Novinger                    | Lat 40°13'05", long 92°42'55", in<br>NE¼SW¼ sec.32, T.63 N., R.16 W.,<br>Adair County, at culvert on<br>county road about 1 mi (1.6 km)<br>southwest of Novinger.                                                                                     | 0.96<br>(2.49)                           | 1955-71<br>1972-74f            | 5-18-74        | 15.84                               | 1,150                                  |
| 06905000                        | Chariton River at<br>Elmer                       | Lat 39°57'08", long 92°39'54",<br>in E¼ sec.3, T.59 N., R.16 W.,<br>Macon County, at bridge on<br>County Road J, 0.8 mi (1.3 km)<br>southwest of Elmer.                                                                                               | 1,660<br>(4300)                          | 1921-30†<br>1961-74            | 10-4-73        | 25.78                               | 19,500                                 |
| 06905700                        | Puzzle Creek near<br>Salisbury                   | Lat 39°26'30", long 92°47'30", in<br>SW¼NW¼ sec.35, T.54 N., R.17 W.,<br>Chariton County, at culvert on<br>State Highway 129, 0.8 mi (1.3 km)<br>north of Salisbury.                                                                                  | 0.80<br>(2.07)                           | 1955-74                        | 2-18-74        | 5.18                                | 65                                     |
| Lamine River basin              |                                                  |                                                                                                                                                                                                                                                       |                                          |                                |                |                                     |                                        |
| 06907200                        | Shaver Creek Trib-<br>utary near<br>Clifton City | Lat 38°45'29", long 93°04'25", in<br>NE¼SW¼ sec.13, T.46 N., R.20 W.,<br>Pettis County, at culvert under<br>State Highway 135, about 2 mi<br>(3.2 km) southwest of Clifton<br>City and 9.5 mi (15.2 km) north-<br>east of Sedalia.                    | 1.65<br>(4.27)                           | 1955-61<br>1962-63f<br>1964-74 | 10-4-74        | 11.70                               | 1,230                                  |
| 06908300                        | Trent Branch near<br>Waverly                     | Lat 39°12'06", long 93°34'46", in<br>SE¼NE¼ sec.19, T.51 N., R.24 W.,<br>Lafayette County, at culvert on<br>U.S. Highway 24, 3.8 mi (6.1 km)<br>west of Waverly.                                                                                      | 0.97<br>(2.57)                           | 1955-59<br>1960-62f<br>1963-74 | 5-18-74        | 12.29                               | 162                                    |
| 06908500                        | Shiloh Branch near<br>Marshall                   | Lat 39°07'00", long 93°05'50", in<br>NW¼ sec.15, T.50 N., R.20 W.,<br>Saline County, at culvert on<br>State Highway 41, in front of<br>Shiloh Church, 5.5 mi (8.8 km)<br>east of Marshall.                                                            | 2.87<br>(7.43)                           | 1952-65†<br>1966-74            | +              | +                                   | +                                      |
| Bonne Femme Creek basin         |                                                  |                                                                                                                                                                                                                                                       |                                          |                                |                |                                     |                                        |
| 06909400                        | Cottonwood Creek<br>Tributary at<br>Estill       | Lat 39°02'55", long 92°44'38", in<br>NW¼SW¼NE¼ sec.17, T.49 N.,<br>R.16 W., Howard County, at<br>culvert under State Highway 5,<br>0.2 mi (0.03 km) north of Estill<br>and 2 mi (3.2 km) north of New<br>Franklin.                                    | 0.30<br>(0.78)                           | 1958-74                        | 8-22-74        | 7.70                                | 97                                     |
| Moniteau Creek basin            |                                                  |                                                                                                                                                                                                                                                       |                                          |                                |                |                                     |                                        |
| 06909500                        | Moniteau Creek<br>near Fayette                   | Lat 39°07'15", long 92°33'40", in<br>SE¼SE¼ sec.14, T.50 N., R.15 W.,<br>Howard County, at "Buoy" bridge,<br>1 mi (1.6 km) downstream from<br>Hungry Mother Creek, 7 mi (11.2<br>km) east of Fayette and 15 mi<br>(24 km) upstream from mouth.        | 81<br>(210)                              | 1948-60<br>1962-69†<br>1970-74 | 12-4-73        | 18.30                               | 2,840                                  |
| Petite Saline Creek basin       |                                                  |                                                                                                                                                                                                                                                       |                                          |                                |                |                                     |                                        |
| 06909700                        | Petite Saline<br>Creek Tributary<br>near Bellair | Lat 38°50'34", long 92°50'31", in<br>SW¼NE¼ sec.13, T.47 N., R.18 W.,<br>Cooper County, at culvert under<br>State Highway 5, at junction of<br>highways 5 and F, 0.5 mi (0.8 km)<br>north of Bellair and 10.5 mi<br>(16.9 km) southwest of Boonville. | 0.49<br>(1.27)                           | 1955-64<br>1965-69f<br>1970-74 | 6-6-74         | 14.21                               | 210                                    |
| Perche Creek basin              |                                                  |                                                                                                                                                                                                                                                       |                                          |                                |                |                                     |                                        |
| 06910200                        | Cow Branch near<br>Columbia                      | Lat 39°00'10", long 92°19'25", in<br>NW¼ sec.30, T.49 N., R.12 W.,<br>Boone County, at culvert under<br>U.S. Highway 63, 2.7 mi (4.3 km)<br>north of Columbia.                                                                                        | 1.01<br>(2.62)                           | 1955-74                        | 5-30-74        | 12.49                               | 515                                    |
| Bonne Femme Creek basin         |                                                  |                                                                                                                                                                                                                                                       |                                          |                                |                |                                     |                                        |
| 06910250                        | Traxler Branch<br>near Columbia                  | Lat 38°51'15", long 92°19'45", in<br>NE¼SE¼ sec.13, T.47 N., R.13 W.,<br>Boone County, at culvert under<br>County Road N about 5.5 mi (8.8<br>km) south of Columbia.                                                                                  | 0.55<br>(1.42)                           | 1958-63f<br>1964-74            | 5-30-74        | 13.48                               | 510                                    |

## Annual maximum discharge at crest-stage partial-record stations--Continued

| Station no.          | Station name                                                | Location                                                                                                                                                                                                                                                                                                           | Drainage area<br>(sq mi) | Period<br>of<br>record      | Annual<br>Date | maximum<br>Gage<br>height<br>(feet) | Dis-<br>charge<br>(ft <sup>3</sup> /s) |
|----------------------|-------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-----------------------------|----------------|-------------------------------------|----------------------------------------|
| Baldwin Branch basin |                                                             |                                                                                                                                                                                                                                                                                                                    |                          |                             |                |                                     |                                        |
| 06910400             | Baldwin Branch<br>near Jefferson<br>City                    | Lat 38°39'35", long 92°13'25", in<br>SE¼SE¼ sec.24, T.45 N., R.12 W.,<br>Boone County, at culvert on U.S.<br>Highway 63, 5.4 mi (8.7 km)<br>northwest of Jefferson City.                                                                                                                                           | 0.60<br>(1.55)           | 1958-74                     | -              | a                                   | +                                      |
| Grays Creek basin    |                                                             |                                                                                                                                                                                                                                                                                                                    |                          |                             |                |                                     |                                        |
| 06910430             | Dickerson Creek<br>Tributary near<br>Jefferson City         | Lat 38°34'55", long 92°16'43", in<br>SW¼NW¼ sec. 8, T.44 N., R.12 W.,<br>Cole County, on left bank up-<br>stream from culvert under U.S.<br>Highway 50, 0.25 mi (0.3 km) up-<br>stream from mouth, and 1.9 mi<br>(3.1 km) west of Jefferson City.                                                                  | 0.10<br>(0.26)           | 1970-74                     | 5-30-74        | 9.56                                | 142                                    |
| Wears Creek basin    |                                                             |                                                                                                                                                                                                                                                                                                                    |                          |                             |                |                                     |                                        |
| 06910455             | Wears Creek at<br>Jefferson City                            | Lat 38°33'57", long 92°13'22", in<br>SE¼NE¼ sec.15, T.44 N., R.12 W.,<br>Cole County, on left abutment<br>of former foot bridge, 50 ft<br>(15 m) upstream from Frog Hollow,<br>0.8 mi (1.3 km) south of Jeffer-<br>son City and 3 mi (4.8 km) up-<br>stream from mouth.                                            | 4.77<br>(12.4)           | 1970-74                     | 5-30-74        | 8.64                                | 2,540                                  |
| Moreau River basin   |                                                             |                                                                                                                                                                                                                                                                                                                    |                          |                             |                |                                     |                                        |
| 06910700             | Hazel Branch Tribu-<br>tary near Wards-<br>ville            | Lat 38°28'15", long 92°12'35", in<br>NE¼SE¼ sec.14, T.43 N., R.12 W.,<br>Cole County, at culvert on county<br>road 2.5 mi (4.0 km) southwest of<br>of Wardsville.                                                                                                                                                  | 0.13<br>(0.34)           | 1957-74                     | 5-30-74        | 9.84                                | 69                                     |
| Osage River basin    |                                                             |                                                                                                                                                                                                                                                                                                                    |                          |                             |                |                                     |                                        |
| 06918200             | North Fork Panther<br>Creek Tributary<br>near Appleton City | Lat 38°11'38", long 94°04'53", in<br>SW¼NW¼ sec.2, T.39 N., R.29 W.,<br>Bates County, at culvert under<br>State Highway 52, 0.25 mi (0.3 km)<br>south of Hudson, 3 mi (4.8 km)<br>west of Appleton City, and 18 mi<br>(29.0 km) southeast of Butler.                                                               | 0.08<br>(0.21)           | 1955-74                     | 5-14-74        | 4.49                                | 53                                     |
| 06918300             | West Fork Clear<br>Creek Tributary<br>near Nevada           | Lat 37°51'43", long 94°13'51", in<br>SW¼SW¼ sec.27, T.36 N., R.30 W.,<br>Vernon County, at culvert under<br>U.S. Highway 54, 0.2 mi (0.3 km)<br>east of County Road C and 7.5 mi<br>(12.1 km) northeast of Nevada.                                                                                                 | 0.51<br>(1.32)           | 1955-74                     | 6-7-74         | 6.38                                | 185                                    |
| 06918400             | Pickereel Creek Trib-<br>utary near<br>Republic             | Lat 37°07'09", long 93°31'28", in<br>NW¼SE¼ sec.23, T.28 N., R.24 W.,<br>Greene County, at culvert under<br>State Highway 174, 2.0 mi (3.2<br>km) west of Republic.                                                                                                                                                | 0.57<br>(1.48)           | 1957-61<br>1962f<br>1963-74 | 10-12-73       | 7.66                                | 126                                    |
| 06918750             | Franca Branch near<br>Brighton                              | Lat 37°29'57", long 93°21'00", in<br>SE¼NW¼SE¼ sec.16, T.32 N.,<br>R.22 W., Polk County, at culvert<br>under State Highway 13, 3 mi<br>(4.9 km) north of Brighton, and 8.7<br>mi (14.0 km) southeast of Bolivar.                                                                                                   | 0.59<br>(3.96)           | 1955-74                     | 7-4-74         | 14.07                               | 240                                    |
| 06919200             | Sac River Tributary<br>near Caplinger<br>Mills              | Lat 37°48'22", long 93°51'00", in<br>NE¼NE¼ sec.13, T.35 N., R.27 W.,<br>Cedar County, at culvert under<br>State Highway 39, 6.2 mi (10 km)<br>south of junction of U.S. Highway<br>54 and State Highway 39, 2.5 mi<br>(4.0 km) west of Caplinger Mills<br>and 10.5 mi (16.9 km) southeast<br>of Eldorado Springs. | 0.14<br>(0.36)           | 1955-62<br>1963-74          | 3-11-74        | 6.20                                | 51                                     |
| 06920800             | Big Muddy Creek at<br>Lowry City                            | Lat 38°09'29", long 93°43'22", in<br>SE¼NE¼ sec.12, T.39 N., R.26 W.,<br>St. Clair County, at culvert<br>under State Highway 13, 1 mi (1.6<br>km) north of Lowry City.                                                                                                                                             | 0.31<br>(0.93)           | 1955-74                     | 3-11-74        | 7.80                                | 135                                    |

## DISCHARGE AT PARTIAL-RECORD STATIONS

Annual maximum discharge at crest-stage partial-record stations--Continued

| Station no.                  | Station name                              | Location                                                                                                                                                                                                                             | Drainage area (sq mi) | Period of record               | Annual Date | maximum Gage height (feet) | Dis-charge (ft <sup>3</sup> /s) |
|------------------------------|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|--------------------------------|-------------|----------------------------|---------------------------------|
| Osage River basin--Continued |                                           |                                                                                                                                                                                                                                      |                       |                                |             |                            |                                 |
| 06921100                     | Olinger Creek near Buffalo                | Lat 37°40'47", long 93°06'10", in NW¼SW¼ sec.11, T.34 N., R.20 W., Dallas County, at culvert under U.S. Highway 65 about 0.2 mi (0.3 km) north of County Highway 2 and 2.5 mi (4.0 km) north of Buffalo.                             | 1.96<br>(5.08)        | 1957-63<br>1964f<br>1966-74    | 11-24-73    | 8.55                       | 440                             |
| 06921400                     | Ferguson Branch at Nemo                   | Lat 37°52'50", long 93°15'30", in NE¼SE¼ sec.8, T.36 N., R.21 W., Hickory County, at culvert under County Road D, 0.5 mi (0.8 km) northeast of Nemo.                                                                                 | 0.18<br>(0.47)        | 1957-74                        | -           | a                          | +                               |
| 06921800                     | Granddaddy Creek near Urich               | Lat 38°21'49", long 94°00'47", in NW¼NW¼ sec.10, T.41 N., R.28 W., Henry County, at culvert under State Highway K, 0.3 mi (0.5 km) north of junction of State Highway K and State Highway 18, and 6.5 mi (10.5 km) south of Urich.   | 0.92<br>(2.38)        | 1958-74                        | 3-11-74     | 7.31                       | 190                             |
| 06922600                     | Little Turkey Creek Tributary near Warsaw | Lat 38°10'30", long 93°17'30", in NW¼SW¼ sec.1, T.39 N., R.22 W., Benton County, at culvert on State Highway 7, 1.5 mi (2.4 km) east of junction of State Highway 7 and U.S. Highway 65, and 5 mi (8.0 km) southeast of Warsaw.      | 0.18<br>(0.47)        | 1959-69<br>1970-74f            | 6-7-74      | 10.38                      | 100                             |
| 06922700                     | Chub Creek near Lincoln                   | Lat 38°26'12", long 93°18'07", in NW¼ sec.12, T.42 N., R.22 W., Benton County, at culvert on U.S. Highway 65, 3.4 mi (5.5 km) north of Lincoln.                                                                                      | 2.86<br>(7.48)        | 1958-63<br>1964-70f<br>1971-74 | 10-12-73    | 20.24                      | 800                             |
| 06923000                     | Niangua Branch at Marshfield              | Lat 37°20'50", long 92°54'45", in SE¼NE¼ sec.4, T.30 N., R.18 W., Webster County, at concrete culvert under county road at Marshfield.                                                                                               | 0.82<br>(2.12)        | 1950-57f<br>1958f<br>1960-74   | 11-24-73    | 4.08                       | 155                             |
| 06925300                     | Prairie Branch near Decaturville          | Lat 37°52'30", long 92°42'30", in SE¼NE¼ sec.8, T.36 N., R.16 W., Laclede County, at bridge on State Highway 5, 2.4 mi (3.9 km) south of Decaturville.                                                                               | 1.48<br>(3.83)        | 1955-69<br>1970-72f<br>1973-74 | 6-6-74      | 8.41                       | 105                             |
| 06925450                     | Little Gravois Creek near Versailles      | Lat 38°23'58", long 92°49'30", in NE¼SW¼ sec.17, T.42 N., R.17 W., Morgan County, at bridge on County Highway TT, and 2.5 mi (4.0 km) south of Versailles.                                                                           | 4.74<br>(12.3)        | 1955-74                        | 8-28-74     | 14.03                      | 2,050                           |
| 06926150                     | Jack Buster Creek at Eugene               | Lat 38°21'10", long 92°24'00", in NW¼NE¼ sec.31, T.42 N., R.13 W., Cole County, at culvert on State Highway 17 at Eugene.                                                                                                            | 0.17<br>(0.44)        | 1961-74                        | 8-28-74     | 5.08                       | 40                              |
| 06926200                     | Van Cleve Branch near Meta                | Lat 38°13'35", long 92°09'40", in SE¼NE¼ sec.8, T.40 N., R.11 W., Maries County, 20 ft (6.1 m) upstream from culvert under State Highway 133, 7 mi (11.3 km) south of Meta.                                                          | 0.75<br>(1.94)        | 1957-72f<br>1973-74            | 8-28-74     | 5.13                       | 420                             |
| 06926800                     | Long Branch near Vienna                   | Lat 38°11'00", long 92°05'05", in SW¼NW¼ sec.30, T.40 N., R.10 W., Maries County, at culvert on State Highway 42, 7.5 mi (12.1 km) west of Vienna.                                                                                   | 0.32<br>(0.83)        | 1958-74                        | 6-6-74      | 10.10                      | 370                             |
| 06927000                     | Maries River at Westphalia                | Lat 38°25'55", long 91°59'23", in NE¼ sec.35, T.43 N., R.10 W., Osage County, at bridge on U.S. Highway 63, 0.8 mi (1.3 km) southeast of Westphalia, 1.2 mi (1.9 km) downstream from Little Maries Creek, and at mile 9.9 (15.8 km). | 257<br>(666)          | 1947-70f<br>1971-74            | 11-24-73    | 13.58                      | 11,200                          |



## Annual maximum discharge at crest-stage partial-record stations--Continued

| Station no.               | Station name                                     | Location                                                                                                                                                                                                                                       | Drainage area<br>(sq mi) | Period<br>of<br>Record                  | Annual<br>Date | maximum<br>Gage<br>height<br>(feet) | Dis-<br>charge<br>(ft <sup>3</sup> /s) |
|---------------------------|--------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-----------------------------------------|----------------|-------------------------------------|----------------------------------------|
| Auxvasse Creek basin      |                                                  |                                                                                                                                                                                                                                                |                          |                                         |                |                                     |                                        |
| 06927100                  | Doane Branch near<br>Kingdom City                | Lat 38°56'20", long 91°49'40", in<br>NE¼ sec.17, T.48 N., R.8 W.,<br>Callaway County, at culvert on<br>access road to Interstate<br>Highway 70, 0.9 mi (1.5 km) east<br>of Auxvasse Creek and about 6<br>mi (9.7 km) east of Kingdom City.     | 0.54<br>(1.40)           | 1955-59<br>1960-62f<br>1963<br>1965-74  | 5-31-74        | 12.71                               | 160                                    |
| Gasconade River basin     |                                                  |                                                                                                                                                                                                                                                |                          |                                         |                |                                     |                                        |
| 06927600                  | Wheeler Branch near<br>Mountain Grove            | Lat 37°06'52", long 92°16'37", in<br>SW¼NE¼ sec.17, T.28 N., R.12 W.,<br>Wright County, on County Road D,<br>0.8 mi (1.3 km) southwest of<br>Mountain Grove.                                                                                   | 1.34<br>(3.47)           | 1955-74                                 | 6-6-74         | 6.40                                | 1,000                                  |
| 06929000                  | Coyle Branch at<br>Houston                       | Lat 37°19'25", long 91°57'12", in<br>NW¼NW¼ sec.8, T.30 N., R.9 W.,<br>Texas County, at double culvert<br>on U.S. Highway 63, at east edge<br>of Houston.                                                                                      | 1.10<br>(2.85)           | 1949-55†<br>1959-74                     | 8-28-74        | 7.43                                | 1,020                                  |
| 06930750                  | Prewett Hollow near<br>Dixon                     | Lat 37°57'25", long 92°04'50", in<br>SW¼SE¼ sec.1, T.37 N., R.11 W.,<br>Pulaski County, at culvert on<br>County Road D, 2 mi southeast<br>of Dixon.                                                                                            | 0.46<br>(1.19)           | 1960-64<br>1966f<br>1967-71<br>1972-74f | 8-28-74        | 10.68                               | 130                                    |
| 06931000                  | Beaver Creek near<br>Rolla                       | Lat 37°52'45", long 91°47'45", in<br>SW¼SE¼ sec.34, T.37 N., R.8 W.,<br>Phelps County, at bridge on U.S.<br>Highway 63, 5 mi (8.0 km) south<br>of Rolla.                                                                                       | 13.7<br>(35.5)           | 1949-58†<br>1960-74                     | 11-24-74       | 5.95                                | 5,100                                  |
| 06931600                  | Paulsell Branch<br>near Rolla                    | Lat 37°55'15", long 91°49'40", in<br>NW¼NE¼ sec.20, T.37 N., R.8 W.,<br>Phelps County, at culvert on St.<br>Louis-San Francisco RR, 0.8 mi<br>(1.3 km) above confluence with<br>Little Beaver Creek and 3.5 mi<br>(5.6 km) southwest of Rolla. | 2.33<br>(6.03)           | 1949-74                                 | 11-24-73       | 2.16                                | 940                                    |
| 06933700                  | Penzer Hollow near<br>Rolla                      | Lat 38°00'40", long 91°50'05", in<br>NE¼NW¼ sec.20, T.38 N., R.8 W.,<br>Phelps County, at culvert on<br>County Highway E, 5.0 mi (8.0 km)<br>north of Rolla.                                                                                   | 0.27<br>(0.70)           | 1956-64<br>1966f<br>1967-74             | 11-24-73       | 15.82                               | 84                                     |
| Loutre River basin        |                                                  |                                                                                                                                                                                                                                                |                          |                                         |                |                                     |                                        |
| 06934600                  | Rumbo Branch at<br>Danville                      | Lat 38°55'00", long 91°32'03", in<br>SW¼NE¼ sec.24, T.48 N., R.6 W.,<br>Montgomery County, at culvert on<br>State Highway 161, 0.5 mi (0.8 km)<br>north of Danville.                                                                           | 1.40<br>(3.63)           | 1954-58†<br>1959-74                     | 5-31-74        | 6.02                                | 370                                    |
| Little Berger Creek basin |                                                  |                                                                                                                                                                                                                                                |                          |                                         |                |                                     |                                        |
| 06934750                  | Little Berger Creek<br>Tributary near<br>Hermann | Lat 38°40'10", long 91°22'25", in<br>NW¼NE¼ sec.9, T.45 N., R.4 W.,<br>Gasconade County, at culvert on<br>State Highway 100, 4 mi (6.4 km)<br>southeast of Hermann.                                                                            | 0.25<br>(0.65)           | 1955-70<br>1971-74f                     | 6-6-74         | 14.68                               | 83                                     |
| Bonhomme Creek basin      |                                                  |                                                                                                                                                                                                                                                |                          |                                         |                |                                     |                                        |
| 06935800                  | Shotwell Creek near<br>Ellisville                | Lat 38°37'05", long 90°35'00", in<br>NW¼NW¼ sec.28, T.45 N., R.4 E.,<br>St. Louis County, at culvert on<br>State Highway 340, 1.8 mi (2.9<br>km) north of Ellisville.                                                                          | 0.81<br>(2.10)           | 1960-62<br>1963-74f                     | 9-28-74        | <b>7.96</b>                         | 491                                    |
| Meramec River basin       |                                                  |                                                                                                                                                                                                                                                |                          |                                         |                |                                     |                                        |
| 07011200                  | Love Creek near<br>Salem                         | Lat 37°38'10", long 91°33'35", in<br>W¼NE¼ sec.23, T.34 N., R.6 W.,<br>Dent County, at culvert under<br>State Highways 32 and 72, 0.5<br>mi (0.8 km) west of Salem.                                                                            | 0.89<br>(2.13)           | 1955-59<br>1960-63†<br>1964-74          | 4-21-74        | 5.29                                | 160                                    |

## DISCHARGE AT PARTIAL-RECORD STATIONS

Annual maximum discharge at crest-stage partial-record stations--Continued

| Station no.                       | Station name                                   | Location                                                                                                                                                                                                     | Drainage area<br>(sq mi) | Period of<br>record            | Annual<br>Date | maximum<br>Gage<br>height<br>(feet) | Dis-<br>charge<br>(ft <sup>3</sup> /s) |
|-----------------------------------|------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|--------------------------------|----------------|-------------------------------------|----------------------------------------|
| Meramec River basin--Continued    |                                                |                                                                                                                                                                                                              |                          |                                |                |                                     |                                        |
| 07011300                          | Ragan Branch near<br>Rolla                     | Lat 37°49'05", long 91°41'45", in<br>NE¼NE¼ sec.28, T.36 N., R.7 W.,<br>Phelps County, at bridge on<br>State Highway 72, 3 mi (4.8 km)<br>northwest of Lake Spring and 9<br>mi (14.5 km) southeast of Rolla. | 6.58<br>(17.0)           | 1949-74                        | 8-28-74        | 2.80                                | 340                                    |
| 07012000                          | Behmke Branch near<br>Rolla                    | Lat 37°56'05", long 91°42'35", in<br>NE¼NE¼ sec.17, T.37 N., R.7 W.,<br>Phelps County, 300 ft (91.4 m)<br>upstream from county highway<br>bridge and 3.5 mi (5.6 km) south-<br>east of Rolla.                | 1.05<br>(2.72)           | 1945-49†<br>1960-74            | 6-8-74         | 2.53                                | 540                                    |
| 07015700                          | Lanes Fork near<br>Vichy                       | Lat 38°06'15", long 91°42'45", in<br>SW¼NE¼ sec.17, T.39 N., R.7 W.,<br>Maries County, at bridge on<br>State Highway 68, 2.5 mi (4.0 km)<br>east of Vichy.                                                   | 24.1<br>(62.4)           | 1944-45<br>1948-74             | 11-24-73       | 7.55                                | 3,520                                  |
| 07015800                          | Langenberg Branch<br>near Rosebud              | Lat 38°23'03", long 91°25'41", in<br>SE¼NE¼ sec.13, T.42 N., R.5 W.,<br>Gasconade County, at culvert<br>under State Highway 28, 1.7 mi<br>west of Rosebud.                                                   | 0.64<br>(1.66)           | 1960-64<br>1966-70f<br>1971-74 | 11-24-73       | 8.47                                | 79                                     |
| 07017700                          | Fountain Farm<br>Branch near<br>Potosi         | Lat 37°58'20", long 90°43'40", in<br>SE¼NE¼ sec.32, T.38 N., R.3 E.,<br>Washington County, at culvert<br>under County Highway E, about 4 mi<br>(6.4 km) northeast of Potosi.                                 | 2.16<br>(5.59)           | 1957-74                        | 5-21-74        | 13.02                               | 500                                    |
| Plattin Creek basin               |                                                |                                                                                                                                                                                                              |                          |                                |                |                                     |                                        |
| 07019820                          | Murphy Branch near<br>Crystal City             | Lat 38°11'12", long 90°23'46", in<br>NW portion of Missouri Survey No.<br>1995, T.40 N., R.6 E., Jefferson<br>County, at culvert under U.S.<br>Highway 61, and 2.5 mi (4.0 km)<br>southwest of Crystal City. | 0.45<br>(1.14)           | 1955-60<br>1961-63f<br>1964-74 | 5-21-74        | 5.57                                | 88                                     |
| Apple Creek basin                 |                                                |                                                                                                                                                                                                              |                          |                                |                |                                     |                                        |
| 07020700                          | Hoehs Branch near<br>Uniontown                 | Lat 37°37'50", long 89°43'50", in<br>SW¼SE¼ sec.20, T.34 N., R.12 E.,<br>Perry County, on bridge on U.S.<br>Highway 61, 1.2 mi (1.9 km)<br>north of Uniontown.                                               | 1.66<br>(4.03)           | 1955-74                        | 11-26-73       | 12.55                               | 1,300                                  |
| Headwater diversion channel basin |                                                |                                                                                                                                                                                                              |                          |                                |                |                                     |                                        |
| 07021200                          | Sunnybrook Creek at<br>Lutesville              | Lat 37°17'05", long 89°58'55", in<br>NW¼SE¼ sec.7, T.30 N., R.10 E.,<br>Bollinger County, on bridge<br>under State Highway 51, 0.5 mi<br>(0.8 km) south of Lutesville.                                       | 0.52<br>(1.35)           | 1955-74                        | 11-26-73       | 2.52                                | 240                                    |
| St. Francis River basin           |                                                |                                                                                                                                                                                                              |                          |                                |                |                                     |                                        |
| 07033000                          | Wolf Creek near<br>Farmington                  | Lat 37°45'45", long 90°23'15", in<br>SE¼ sec.5, T.35 N., R.6 E. St.<br>Francois County, at bridge on<br>County Highway 00, 1.5 mi (0.8<br>km) southeast of Farmington.                                       | 40.3<br>(104)            | 1940†<br>1955-74               | 11-24-73       | 14.78                               | 2,800                                  |
| 07038000                          | Clark Creek at<br>Patterson                    | Lat 37°11'25", long 90°32'20", in<br>NE¼ sec.18, T.29 N., R.5 E.,<br>Wayne County, at bridge on State<br>Highway 34, 0.6 mi (1.0 km) east<br>of Patterson.                                                   | 37.5<br>(97.1)           | 1940†<br>1955-74               | 11-24-73       | 11.29                               | 8,000                                  |
| 07040110                          | Delaware Creek<br>Tributary near<br>Bloomfield | Lat 36°51'35", long 89°56'10", in<br>NW¼NE¼ sec.35, T.26 N., R.10 E.,<br>Stoddard County, at culvert under<br>State Highway 25, 1.8 mi (2.9 km)<br>southwest of Bloomfield.                                  | 0.38<br>(0.98)           | 1955-71<br>1972-74f            | 5-15-74        | 15.69                               | 300                                    |
| White River basin                 |                                                |                                                                                                                                                                                                              |                          |                                |                |                                     |                                        |
| 07050800                          | Maple Grove Branch<br>near Ozark               | Lat 37°04'20", long 93°13'05", in<br>SW¼NE¼ sec.3, T.27 N., R.21 W.,<br>Christian County, at culvert<br>under County Highway NN, 3.4 mi<br>(5.5 km) north of Ozark.                                          | 0.64<br>(1.66)           | 1957-65<br>1966-71f<br>1972-74 | 3-10-74        | 5.46                                | 122                                    |

## Annual maximum discharge at crest-stage partial-record stations--Continued

| Station no.                  | Station name                                   | Location                                                                                                                                                                    | Drainage area<br>(sq mi) | Period<br>of<br>record                    | Annual<br>Date | maximum<br>Gage<br>height<br>(feet) | Dis-<br>charge<br>(ft <sup>3</sup> /s) |
|------------------------------|------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-------------------------------------------|----------------|-------------------------------------|----------------------------------------|
| White River basin--Continued |                                                |                                                                                                                                                                             |                          |                                           |                |                                     |                                        |
| 07052700                     | Brawley Hollow near<br>Cassville               | Lat 36°38'50", long 93°54'15", in<br>NE¼SE¼ sec.1, T.22 N., R.28 W.,<br>Barry County, at culvert under<br>State Highway 37, 3.1 mi (5.0 km)<br>southwest of Cassville.      | 2.61<br>(6.76)           | 1960-66<br>1967-74f                       | 6-6-74         | 18.49                               | 850                                    |
| 07053950                     | Ingenthron Hollow<br>near Forsyth              | Lat 36°43'52", long 93°07'30", in<br>SW¼NE¼ sec.17, T.24 N., R.20 W.,<br>Taney County, at culvert under<br>County Road H, 2 mi (3.2 km)<br>north of Forsyth.                | 0.65<br>(1.68)           | 1957-62<br>1963-66f<br>1967-74            | 6-6-74         | 13.43                               | 580                                    |
| 07054100                     | Cedar Hollow at<br>Bradleyville                | Lat 36°46'45", long 92°55'25", in<br>NE¼SW¼ sec.10, T.24 N., R.18 W.,<br>Taney County, at culvert under<br>State Highway 76, 0.8 mi (1.3 km)<br>southwest of Bradleyville.  | 0.83<br>(2.15)           | 1957-74                                   | 6-6-74         | 5.80                                | 260                                    |
| 07054200                     | Yandell Branch near<br>Kirbyville              | Lat 36°36'36", long 93°05'47", in<br>SW¼ sec.27, T.23 N., R.20 W.,<br>Taney County, at culvert on<br>County Road K, 2.8 mi (4.5 km)<br>southeast of Kirbyville.             | 0.33<br>(0.85)           | 1955-66<br>1967-74f                       | 1-26-74        | 16.36                               | 158                                    |
| 07054300                     | Gray Branch at<br>Lutie                        | Lat 36°35'05", long 92°42'30", in<br>NE¼SW¼ sec.15, T.22 N., R.16 W.,<br>Ozark County, at culvert under<br>U.S. Highway 160, 1.7 mi (2.7 km)<br>west of Lutie.              | 0.23<br>(0.60)           | 1955-59<br>1960-62f<br>1963-71<br>1973-74 | 11-24-73       | 11.81                               | 131                                    |
| 07061800                     | Brawley Hollow near<br>Centerville             | Lat 37°20'59", long 90°58'14", in<br>SE¼NW¼ sec.29, T.31 N., R.1 E.,<br>Reynolds County, at culvert under<br>State Highway 21, about 6 mi (9.6<br>km) south of Centerville. | 1.00<br>(2.59)           | 1955-74                                   | 11-24-73       | 3.66                                | +                                      |
| 07063200                     | Pike Creek Tributary<br>near Poplar Bluff      | Lat 36°47'02", long 90°45'41", in<br>SW¼SW¼ sec.28, T.25 N., R.6 E.,<br>Butler County, at culvert under<br>U.S. Highway 67, 2 mi (3.2 km)<br>northwest of Poplar Bluff.     | 0.28<br>(0.72)           | 1955-59<br>1960-63f<br>1964-69<br>1973-74 | 11-24-73       | 7.11                                | 140                                    |
| 07066800                     | Sycamore Creek near<br>Winona                  | Lat 37°02'45", long 91°19'30", in<br>S¼SW¼ sec.31, T.28 N., R.3 W.,<br>Shannon County, at culvert under<br>State Highway 19, about 3 mi<br>(4.8 km) north of Winona.        | 0.88<br>(2.28)           | 1955-64<br>1966-71f<br>1972-74            | 11-24-73       | 4.97                                | 180                                    |
| 07068200                     | North Prong Little<br>Black River at<br>Hunter | Lat 36°53'25", long 90°50'30", in<br>NE¼SE¼ sec.21, T.26 N., R.2 E.,<br>Carter County, at culvert under<br>State Highway 21, at Hunter.                                     | 1.23<br>(3.18)           | 1958-64<br>1966-71f<br>1972-74            | 11-24-73       | 13.66                               | 395                                    |
| 07068500                     | Little Black River<br>near Fairdealing         | Lat 36°39'40", long 90°34'25", in<br>NW¼NW¼ sec.7, T.23 N., R.5 E.,<br>Ripley County, at bridge on U.S.<br>Highway 160, 2.5 mi (4.0 km)<br>east of Fairdealing.             | 187<br>(484)             | 1940-42†<br>1955-74                       | 11-24-73       | 21.00                               | 15,000                                 |
| 07069100                     | Adams Branch near<br>West Plains               | Lat 36°41'35", long 91°48'06", in<br>SE¼NW¼ sec.1, T.23 N., R.8 W.,<br>Howell County, at culvert under<br>U.S. Highway 63, 4 mi (6.4 km)<br>southeast of West Plains.       | 2.27<br>(5.88)           | 1955-70<br>1971-74f                       | 11-24-73       | 5.63                                | 430                                    |
| 07070200                     | Burnham Branch near<br>Willow Springs          | Lat 36°56'00", long 91°56'00", in<br>NW¼NE¼ sec.16, T.26 N., R.9 W.,<br>Howell County, at culvert under<br>U.S. Highway 63, 4.5 mi (7.2 km)<br>southeast of Willow Springs. | 1.27<br>(3.29)           | 1955-72<br>1973-74f                       | 11-24-73       | 15.45                               | 532                                    |
| 07071800                     | Williams Spring<br>Branch near Alton           | Lat 36°40'35", long 91°20'10", in<br>SE¼SW¼ sec.6, T.23 N., R.3 W.,<br>Oregon County, on bridge on U.S.<br>Highway 160 and 4 mi (6.4 km)<br>east of Alton.                  | 4.24<br>(11.0)           | 1954-74                                   | 6-8-74         | 12.53                               | 220                                    |
| Arkansas River basin         |                                                |                                                                                                                                                                             |                          |                                           |                |                                     |                                        |
| 07185600                     | South Fork Stahl<br>Creek near<br>Miller       | Lat 37°11'15", long 93°50'25", in<br>NE¼NE¼ sec.35, T.29 N., R.27 W.,<br>Lawrence County, at culvert on<br>State Highway 39, 2 mi (3.2 km)<br>south of Miller.              | 0.94<br>(2.43)           | 1951-70<br>1971-74f                       | 6-6-74         | 6.44                                | 600                                    |

## DISCHARGE AT PARTIAL-RECORD STATIONS

Annual maximum discharge at crest-stage partial-record stations--Continued

| Station no.                     | Station name                           | Location                                                                                                                                                       | Drainage<br>area<br>(sq mi) | Period<br>of<br>record         | Annual<br>Date | maximum<br>Gage<br>height<br>(feet) | Dis-<br>charge<br>(ft <sup>3</sup> /s) |
|---------------------------------|----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|--------------------------------|----------------|-------------------------------------|----------------------------------------|
| Arkansas River basin--Continued |                                        |                                                                                                                                                                |                             |                                |                |                                     |                                        |
| 07185900                        | O'Possum Creek at<br>Jasper            | Lat 37°19'20", long 94°18'09", in<br>NE¼NE¼ sec.26, T.30 N., R.31 W.,<br>Jasper County, on wingwall of<br>bridge on U.S. Highway 71, just<br>south of Jasper.  | 9.67<br>(25.0)              | 1955-70<br>1971-74f            | 6-6-74         | 15.19                               | 2,500                                  |
| 07186950                        | North Fork Carver<br>Branch at Diamond | Lat 36°59'45", long 94°19'50", in<br>SW¼SW¼ sec.4, T.26 N., R.31 W.,<br>Newton County, at culvert under<br>County Road V, 0.8 mi (1.3 km)<br>west of Diamond.  | 0.33<br>(0.85)              | 1955-60<br>1961-66f<br>1967-74 | 6-6-74         | 8.07                                | 102                                    |
| 07188500                        | Lost Creek at<br>Seneca                | Lat 36°50'28", long 94°36'30", in<br>SE¼SE¼ sec.35, T.25 N., R.34 W.,<br>Newton County, at Seneca Street<br>bridge, 2 blocks east of Main<br>Street in Seneca. | 42.0<br>(109)               | 1948-59‡<br>1960-74            | 6-8-74         | 7.71                                | 4,520                                  |

+ Not determined.

‡ Operated as a continuous-record gaging station.

a Peak stage did not reach bottom of gage.

b Revised.

e Estimated.

f Discharge measurements, daily gage-height, and rainfall records available.

g Figures of drainage area in parentheses are in square kilometres (km<sup>2</sup>).

## Annual maximum flood data in St. Louis County

The following table contains the annual maximum gage height and discharge at gaging stations on streams located in St. Louis County. These stations are in one of two categories: Continuous-record gaging station or continuous-flood hydrograph gaging station. The continuous-record station is equipped with an automatic digital recorder which provides continuous record of gage height on the stream and a continuous flood hydrograph station provides continuous gage-height record above a selected gage height on the stream. In either category the gaging station may be attached to a synchronous continuous-record precipitation station (identified by footnotes in the table). The annual maximum discharge is shown for those stations where adequate stage-discharge relations are available. Information on lower floods has been recorded but is not published herein. The years given in the period of record column represents complete water years for which annual maximum has been determined.

| Station no.           | Station name                                   | Location                                                                                                                                                                                                                                                                | Drainage<br>area<br>(sq mi) | Period<br>of<br>record | Annual maximum<br>Date        | Gage<br>height<br>(feet) | Dis-<br>charge<br>(ft <sup>3</sup> /s) |
|-----------------------|------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|------------------------|-------------------------------|--------------------------|----------------------------------------|
| MISSOURI RIVER BASIN  |                                                |                                                                                                                                                                                                                                                                         |                             |                        |                               |                          |                                        |
| Wildhorse Creek basin |                                                |                                                                                                                                                                                                                                                                         |                             |                        |                               |                          |                                        |
| 06935705              | Wildhorse Creek near<br>Babler State Park      | Lat 38°35'03", long 90°43'09", in<br>NE¼SE¼ sec. 6, T.44 N., R.3 E.,<br>St. Louis County, at triple bar-<br>rel culvert under State Highway T,<br>2.0 mi (3.2 km) west of Junction<br>of State Highway 100 and T, and<br>1.9 mi (3.1 km) south of Babler<br>State Park. | 2.34<br>(6.06)              | 1972-74f               | 4-21-72<br>6-4-73<br>1-20-74  | 2.88<br>3.63<br>2.94     | +<br>+<br>+                            |
| 06935725              | Wildhorse Creek at<br>Babler State Park        | Lat 38°37'55", long 90°42'16", in<br>sec.20, T.45 N., R.3 E., St. Louis<br>County, at county bridge on Wild-<br>horse Creek Road, 4.4 mi (7.1 km)<br>northwest of junction of State<br>Highway 100 and T, and at north-<br>west edge of Babler State Park.              | 9.80<br>(25.38)             | 1972-74h               | 4-21-72<br>6-4-73<br>1-20-74  | +<br>5.34<br>9.74        | +<br>1,070<br>3,270                    |
| Bonhomme Creek basin  |                                                |                                                                                                                                                                                                                                                                         |                             |                        |                               |                          |                                        |
| 06935755              | Bonhomme Creek at<br>Babler State Park         | Lat 38°36'35", long 90°40'20", in<br>NE¼SW¼ sec.27, T.45 N., R.3 E.,<br>St. Louis County, at county<br>bridge on Rieger Road, 0.8 mi<br>(1.3 km) south of entrance to<br>Babler State Park and 2.4 mi<br>(3.9 km) north of Pond.                                        | 4.61<br>(11.94)             | 1972-74h               | 4-21-72<br>7-23-73<br>8-13-74 | 5.88<br>8.64<br>7.23     | 502<br>2,640<br>1,280                  |
| 06935770              | Bonhomme Creek<br>near Clarkson<br>Valley      | Lat 38°39'28", long 90°37'10", in<br>NE¼SW¼ sec.8, T.45 N., R.4 E., at<br>bridge on State Highway CC, 0.7 mi<br>(1.1 km) southeast of Spirit of<br>St. Louis Airport and 1.5 mi (2.4<br>km) northwest of Clarkson Valley.                                               | 11.59<br>(30.02)            | 1972-74f               | 4-21-72<br>6-5-73<br>1-20-74  | 10.38<br>16.36<br>16.59  | 507<br>2,230<br>2,340                  |
| 06935800              | Shotwell Creek<br>near Ellisville              | Lat 38°37'05", long 90°35'00", in<br>NW¼NW¼ sec.28, T.45 N., R.4 E.,<br>St. Louis County, at culvert on<br>State Highway 340, 1.8 mi (2.9 km)<br>north of Ellisville.                                                                                                   | 0.81<br>(2.10)              | 1974f                  | 9-28-74                       | 7.96                     | 491                                    |
| 06935830              | Caulks Creek<br>at Clarkson<br>Valley          | Lat 38°39'17", long 90°35'42", in<br>NE¼SW¼ sec.8, T.45 N., R.4 E.,<br>St. Louis County, at bridge on<br>State Highway CC, 0.5 mi (0.8 km)<br>north of Clarkson Valley and 1.2 mi<br>(1.9 km) southwest of Chesterfield.                                                | 17.06<br>(44.18)            | 1972-74h               | 4-21-72<br>7-23-73<br>8-13-74 | 12.36<br>18.40<br>15.81  | 952<br>3,580<br>1,770                  |
| Creve Coeur basin     |                                                |                                                                                                                                                                                                                                                                         |                             |                        |                               |                          |                                        |
| 06935880              | Smith Creek near<br>Creve Coeur                | Lat 38°39'39", long 90°28'46", in<br>NW¼NE¼ sec.8, T.45 N., R.5 E., St.<br>Louis County, at county bridge on<br>Mason Road, 1.6 mi (2.6 km) west of<br>Creve Coeur.                                                                                                     | 4.44<br>(11.50)             | 1972-74h               | 4-15-72<br>6-18-73<br>9-28-74 | 7.50<br>8.41<br>7.74     | 460<br>551<br>484                      |
| 06935890              | Creve Coeur Creek<br>near Creve Coeur          | Lat 38°40'56", long 90°29'21", in<br>NE¼SE¼ sec.31, T.46 N., R.5 E.,<br>St. Louis County, 300 ft (90 m)<br>downstream from State Highway 340,<br>1.1 mi (1.8 km) west of Creve Coeur.                                                                                   | 22.01<br>(57.01)            | 1972-74f               | +<br>+<br>+                   | 10.16<br>+<br>11.07      | 964<br>+<br>1,330                      |
| 06935915              | Fee Fee Creek<br>tributary near<br>Creve Coeur | Lat 38°41'53", long 90°25'34", in<br>NE¼SW¼ sec.26, T.46 N., R.5 E.,<br>St. Louis County, at county bridge<br>on Lackland Road, 1.7 mi (2.7 km)<br>north of Creve Coeur.                                                                                                | 2.18<br>(5.65)              | 1972-74f               | 9-26-72<br>6-18-73<br>9-28-74 | 12.77<br>14.83<br>13.35  | 801<br>1,420<br>975                    |

Explanation of symbols and footnotes are at the end of list.



## DISCHARGE AT PARTIAL-RECORD STATIONS

## Annual maximum flood data in St. Louis County--Continued

| Station no.                     | Station name                                            | Location                                                                                                                                                                                                                                                                                                                                      | Drainage area (sq mi) | Period of record    | Annual maximum Date                                            | Gage height (feet)                                 | Dis-charge (ft <sup>3</sup> /s) |
|---------------------------------|---------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|---------------------|----------------------------------------------------------------|----------------------------------------------------|---------------------------------|
| MISSOURI RIVER BASIN--Continued |                                                         |                                                                                                                                                                                                                                                                                                                                               |                       |                     |                                                                |                                                    |                                 |
| Creve Coeur basin--Continued    |                                                         |                                                                                                                                                                                                                                                                                                                                               |                       |                     |                                                                |                                                    |                                 |
| 06935955                        | Fee Fee Creek near Bridgeton                            | Lat 38°43'40", long 90°26'53", in NW¼SW¼ sec.15, T.46 N., R.5 E., St. Louis County, at county bridge on McKelvey Road, 1.1 mi (1.8 km) west of Bridgeton.                                                                                                                                                                                     | 11.76 (30.46)         | 1972-74h            | 4-20-72<br>6-18-73<br>+                                        | 12.58<br>15.42<br>14.97                            | 860<br>1,650<br>1,440           |
| Cowmire Creek basin             |                                                         |                                                                                                                                                                                                                                                                                                                                               |                       |                     |                                                                |                                                    |                                 |
| 06935980                        | Cowmire Creek at Bridgeton                              | Lat 39°45'50", long 90°25'58", in NE¼ sec.3, T.46 N., R.5 E., St. Louis County, on private property of F.F. Kirchner, Inc. (12901 St. Charles Rock Road), in Bridgeton.                                                                                                                                                                       | 3.70 (9.58)           | 1972-74f            | 9-7-72<br>7-23-73<br>5-30-74                                   | 10.40<br>10.38<br>11.42                            | 865<br>862<br>1,060             |
| Coldwater Creek basin           |                                                         |                                                                                                                                                                                                                                                                                                                                               |                       |                     |                                                                |                                                    |                                 |
| 06936135                        | Coldwater Creek at Lynn Town Dr. at Breckenridge Hills  | Lat 38°43'26", long 90°22'11", T.46 N., R.6 E., St. Louis County, at downstream side of culvert under Lynn Town Drive in Breckenridge Hills.                                                                                                                                                                                                  | 2.71 (7.02)           | 1968-73d            | 7-11-69<br>4-23-70<br>6-11-71<br>9-7-72<br>6-18-73             | 11.83<br>13.97<br>10.96<br>11.45<br>11.76          | +<br>+<br>+<br>+<br>+           |
| 06936185                        | Coldwater Creek at Lambert Field at Bridgeton           | Lat 38°44'54", long 90°22'46", St. Louis County, at downstream side of bridge on service road on north side of Interstate 70, and southwest corner of Lambert St. Louis International Airport, in Bridgeton.                                                                                                                                  | 7.47 (19.35)          | 1968-74             | 7-11-69<br>4-23-70<br>3-14-71<br>9-7-72<br>6-18-73<br>5-31-74  | 12.46<br>16.92<br>9.26<br>11.67<br>12.61<br>10.25  | +<br>+<br>+<br>+<br>+<br>+      |
| 06936235                        | Coldwater Creek at Brown Road at Hazelwood              | Lat 38°45'35", long 90°31'38", T.46 N., R.6 E., St. Louis County, at downstream side of bridge on Brown Road at northeast corner of Lambert St. Louis International Airport, in Hazelwood.                                                                                                                                                    | 12.3 (31.9)           | 1968-73d            | 6-27-69<br>4-23-70<br>3-14-71<br>9-7-72<br>6-18-73             | 14.03<br>15.03<br>9.00<br>13.71<br>12.91           | +<br>+<br>+<br>+<br>+           |
| 06936380                        | Paddock Creek at Lindbergh Boulevard at Florissant      | Lat 38°48'04", long 90°18'50", T.47 N., R.6 E., St. Louis County, at culvert under Lindbergh Blvd. (State Highway 140), 0.5 mi (0.8 km) northeast of intersection of Florissant Road and Lindbergh, 1 mi (1.6 km) southwest of intersection of New Halls Ferry Road and Lindbergh and 0.5 mi (0.8 km) northeast of city limits of Florissant. | 2.64 (6.84)           | 1972-74             | 9-7-72<br>7-23-73<br>9-28-74                                   | 12.95<br>13.38<br>8.68                             | +<br>+<br>+                     |
| 06936460                        | Coldwater Creek at Old Halls Ferry Road near Florissant | Lat 38°48'25", long 90°16'45", T.47 N., R.6 E., St. Louis County, at downstream side of bridge on Old Halls Ferry Road, 0.5 mi (0.8 km) south of intersection of Old Halls Ferry Road and Lindbergh, 0.2 mi (0.3 km) northeast of city limits of Florissant.                                                                                  | 38.9 (100.8)          | 1969-74             | 6-28-69<br>4-30-70<br>3-15-71<br>9-7-72<br>7-23-73<br>5-30-74  | 15.73<br>18.03<br>12.13<br>20.12<br>18.40<br>19.32 | +<br>+<br>+<br>+<br>+<br>+      |
| 06936500                        | Coldwater Creek at U.S. Highway 67 near St. Louis       | Lat 38°48'50", long 90°13'50", in sec.16, T.47 N., R.7 E., St. Louis County, on downstream side of bridge on U.S. Highway 67, 1.8 mi (2.9 km) southeast of Lewis Bridge, 3.5 mi (5.6 km) south of West Alton, and 6.0 mi (9.7 km) north of St. Louis.                                                                                         | 43.6 (112.9)          | 1959-65<br>1969-73d | 6-28-69<br>4-23-70<br>2-4-71<br>9-8-72<br>7-23-73              | 12.16<br>13.51<br>9.41<br>14.99<br>13.26           | +<br>+<br>+<br>+<br>+           |
| MISSISSIPPI RIVER BASIN         |                                                         |                                                                                                                                                                                                                                                                                                                                               |                       |                     |                                                                |                                                    |                                 |
| Watkins Creek basin             |                                                         |                                                                                                                                                                                                                                                                                                                                               |                       |                     |                                                                |                                                    |                                 |
| 07002000                        | Watkins Creek at Coal Bank Road at St. Louis            | Lat 38°46'20", long 90°11'15", T.47 N., R.7 E., St. Louis County, at downstream side of bridge on Coal Bank Road, 0.4 mi (0.6 km) northwest of intersection of Columbia Bottom Road and Interstate Highway 270, 0.2 mi (0.3 km) west of Columbia Bottom Road, and 0.1 mi (0.2 km) west of city limit of St. Louis.                            | 6.17 (15.98)          | 1968-74             | 7-11-69<br>4-23-70<br>5-23-71<br>4-21-72<br>7-23-73<br>5-30-74 | c<br>11.81<br>7.19<br>10.28<br>c<br>c              | +<br>+<br>+<br>+<br>+<br>+      |

## Annual maximum flood data in St. Louis County--Continued

| Station no.                        | Station name                                                             | Location                                                                                                                                                                                                                                                                                                                                              | Drainage<br>area<br>(sq mi) | Period<br>of<br>record | Annual maximum<br>Date                                         | Gage<br>height<br>(feet)                           | Dis-<br>charge<br>(ft <sup>3</sup> /s) |
|------------------------------------|--------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|------------------------|----------------------------------------------------------------|----------------------------------------------------|----------------------------------------|
| MISSISSIPPI RIVER BASIN--Continued |                                                                          |                                                                                                                                                                                                                                                                                                                                                       |                             |                        |                                                                |                                                    |                                        |
| Maline Creek basin                 |                                                                          |                                                                                                                                                                                                                                                                                                                                                       |                             |                        |                                                                |                                                    |                                        |
| 07004100                           | Maline Creek at<br>Bermuda Avenue<br>at Ferguson                         | Lat 38°44'19", long 90°17'46",<br>T.46 N., R.6 E., St. Louis<br>County, at downstream side of<br>bridge on Bermuda Avenue, 0.1 mi<br>(0.2 km) east of city limits of<br>Ferguson and Norfork and Western<br>Trestle, and 0.4 mi (0.6 km) east<br>of State Highway N (Florissant<br>Road).                                                             | 9.16<br>(23.72)             | 1968-74                | 7-9-69<br>4-23-70<br>6-11-71<br>4-21-72<br>7-23-73<br>9-28-74  | 15.09<br>16.53<br>9.20<br>11.09<br>9.94<br>9.82    | +<br>+<br>+<br>+<br>+<br>+             |
| 07004150                           | Maline Creek at<br>Glenn Owen Drive<br>near Ferguson                     | Lat 38°44'24", long 90°16'03",<br>T.46 N., R.7 E., St. Louis Coun-<br>ty, at upstream side of bridge<br>on Glenn Owen Drive, 0.6 mi (1.0<br>km) east of Florissant Avenue,<br>0.75 mi (1.2 km) south of Cham-<br>bers Road, and 1.6 mi (2.6 km)<br>east of city limits of Ferguson.                                                                   | 12.6<br>(32.63)             | 1968-73d               | 6-28-69<br>4-23-70<br>1971<br>1-17-72<br>7-23-73               | 13.12<br>15.12<br>a<br>11.41<br>11.72              | +<br>+<br>+<br>+<br>+                  |
| 07004580                           | Dellwood Creek at<br>Green Valley Drive<br>near Florissant               | Lat 38°45'08", long 90°15'46", SE¼<br>SE¼ sec.6, T.46 N., R.7 E., St.<br>Louis County, at downstream side<br>of bridge on Green Valley Drive,<br>0.4 mi (0.6 km) west of Halls Ferry<br>Road, 1.2 mi (1.9 km) south of<br>Interstate Highway 270, 1 mi (1.6<br>km) east of Florissant Avenue and<br>about 3.8 mi (6.1 km) southeast of<br>Florissant. | 1.93<br>(5.00)              | 1968-73d               | 7-10-69<br>6-24-70<br>5-23-71<br>4-23-72<br>7-23-73            | 12.66<br>14.97<br>5.65<br>8.94<br>13.31            | +<br>+<br>+<br>+<br>+                  |
| 07004650                           | Black Jack Creek at<br>Chambers Road at<br>Maline Acres                  | Lat 38°44'59", long 90°15'07",<br>T.46 N., R.7 E., St. Louis<br>County, at downstream side of<br>bridge on Chambers Road, 0.1 mi<br>(0.2 km) east of Halls Ferry Road,<br>1.5 mi (2.4 km) south of Interstate<br>270, at northwest corner of Maline<br>Acres.                                                                                         | 6.95<br>(18.00)             | 1968-73d               | 7-10-69<br>6-24-70<br>3-15-71<br>9-7-72<br>7-23-73             | 451.85<br>451.09<br>442.01<br>446.00<br>452.19     | +<br>+<br>+<br>+<br>+                  |
| 07005000                           | Maline Creek at<br>Bellefontaine<br>Road at Bellefon-<br>taine Neighbors | Lat 38°44'12", long 90°13'35", in<br>sec.9, T.46 N., R.7 E., St. Louis<br>County, on downstream side of<br>bridge on Bellefontaine Road, 0.8<br>mi (1.3 km) east of U.S. Highway<br>67, 2.5 mi (4.0 km) south of In-<br>terstate 270, and 0.6 mi (1.0 km)<br>north of city limits of St. Louis.                                                       | 24.1<br>(62.4)              | 1968-74                | 7-10-69<br>6-24-70<br>6-11-71<br>4-21-72<br>7-23-73<br>5-30-74 | 17.87<br>19.13<br>12.01<br>14.45<br>19.00<br>15.19 | +<br>+<br>+<br>+<br>+<br>+             |
| River Des Peres basin              |                                                                          |                                                                                                                                                                                                                                                                                                                                                       |                             |                        |                                                                |                                                    |                                        |
| 07010016                           | River Des Peres at<br>Hafner Place at<br>University City                 | Lat 38°40'27", long 90°20'44", in NW¼<br>NE¼ sec.4., T.45 N., R.6 E., St.<br>Louis County, on downstream side<br>of bridge on Hafner Place in Uni-<br>versity City, 1 block north of<br>Olive Boulevard, and 1 mi (1.6 km)<br>east of the Innerbelt Expressway<br>(State Highway 740).                                                                | 5.64<br>(14.61)             | 1969-74                | 7-10-69<br>6-24-70<br>6-11-71<br>4-15-72<br>6-4-73<br>8-27-74  | 12.14<br>13.02<br>10.10<br>8.88<br>13.28<br>8.27   | +<br>+<br>+<br>+<br>+<br>+             |
| 07010026                           | River Des Peres at<br>Pennsylvania Ave.<br>at University City            | Lat 38°39'45", long 90°18'57",<br>T.45 N., R.6 E., St. Louis Coun-<br>ty, on downstream side of bridge<br>on Pennsylvania Avenue in Uni-<br>versity City, at southeast<br>corner of Heman Park, and 0.3 mi<br>(0.5 km) south of Olive Street<br>Road.                                                                                                 | 9.65<br>(24.99)             | 1969-74                | 7-10-69<br>6-24-70<br>6-11-71<br>4-15-72<br>6-4-73<br>2-11-74  | 10.65<br>11.36<br>9.31<br>8.84<br>11.87<br>13.67   | +<br>+<br>+<br>+<br>+<br>+             |
| 07010044                           | Deer Creek at War-<br>son Road at Ladue                                  | Lat 38°38'14", long 90°23'45",<br>T.45 N., R.5 E., St. Louis<br>County, on downstream side of<br>bridge on Warson Road in Ladue,<br>0.1 mi (0.2 km) north of U.S.<br>Highway 40 and intersection of<br>Conway Road and Warson Road,<br>and at southeast corner of Wat-<br>kins High School campus.                                                    | 8.59<br>(22.25)             | 1969-74                | 7-10-69<br>4-23-70<br>6-11-71<br>4-15-72<br>6-5-73<br>9-28-74  | 8.6<br>11.42<br>7.39<br>7.74<br>11.79<br>7.56      | +<br>+<br>+<br>+<br>+<br>+             |

## DISCHARGE AT PARTIAL-RECORD STATIONS

Annual maximum flood data in St. Louis County--Continued

| Station no.                        | Station name                                                        | Location                                                                                                                                                                                                                                                                                                                              | Drainage<br>area<br>(sq mi) | Period<br>of<br>record | Annual<br>Date                                                 | maximum<br>Gage<br>height<br>(feet)                      | Dis-<br>charge<br>(ft <sup>3</sup> /s)         |
|------------------------------------|---------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|------------------------|----------------------------------------------------------------|----------------------------------------------------------|------------------------------------------------|
| MISSISSIPPI RIVER BASIN--Continued |                                                                     |                                                                                                                                                                                                                                                                                                                                       |                             |                        |                                                                |                                                          |                                                |
| River Des Peres basin--Continued   |                                                                     |                                                                                                                                                                                                                                                                                                                                       |                             |                        |                                                                |                                                          |                                                |
| 07010057                           | Two Mile Creek at<br>Geyer Road at<br>Frontenac                     | Lat 38°36'43", long 90°24'55", NE¼<br>NE¼ sec.26, T.45 N., R.5 E., St.<br>Louis County, on downstream side<br>of bridge on Geyer Road in south-<br>east section of Frontenac at city<br>limits, 1.1 mi (1.8 km) north of<br>Manchester Road (State Highway<br>100), and 0.5 mi (0.8 km) west of<br>Lindbergh Blvd. (U.S. Highway 61). | 4.18<br>(10.83)             | 1969-73d               | 7-10-69<br>4-23-70<br>6-11-71<br>4-15-72<br>6-5-73             | 10.01<br>11.64<br>8.44<br>9.82<br>9.94                   | +<br>+<br>+<br>+<br>+                          |
| 07010061                           | Two Mile Creek at<br>Trent Drive at<br>Ladue                        | Lat 38°37'14", long 90°23'05",<br>T.45 N., R.6 E., St. Louis<br>County, on downstream side of<br>bridge on Trent Drive (Private)<br>in Old Warson Country Club in<br>Ladue, 0.6 mi (1.0 km) east of<br>Warson Road, and 1.2 mi (1.9 km)<br>north of Manchester Road (State<br>Highway 100).                                           | 6.42<br>(16.63)             | 1969-74                | 7-11-69<br>4-23-70<br>10-13-70<br>4-15-72<br>6-4-73<br>3-28-74 | 7.04<br>7.45<br>5.75<br>6.15<br>7.41<br>5.46             | +<br>+<br>+<br>+<br>+<br>+                     |
| 07001086                           | Deer Creek at<br>Big Bend Blvd.<br>at Maplewood                     | Lat 38°36'03", long 90°19'33",<br>T.45 N., R.6 E., St. Louis<br>County, on downstream side of<br>bridge on Big Bend Blvd., 0.9 mi<br>(1.4 km) south of intersection of<br>Big Bend Blvd. and Manchester<br>Road (State Highway 100), and<br>0.4 mi (0.6 km) west of city<br>limits of St. Louis in Maplewood.                         | 36.5<br>(94.5)              | 1969-74                | 7-11-69<br>4-24-70<br>2-4-71<br>4-15-72<br>6-4-73<br>2-21-74   | 11.76<br>16.74<br>9.64<br>12.05<br>16.38<br>10.56        | +<br>+<br>+<br>+<br>+<br>+                     |
| Gravois Creek basin                |                                                                     |                                                                                                                                                                                                                                                                                                                                       |                             |                        |                                                                |                                                          |                                                |
| 07010115                           | Gravois Creek at<br>Ligget and Hut-<br>chins Blvds. at<br>Crestwood | Lat 38°33'53", long 90°22'26", NW¼<br>SW¼ sec.8, T.44 N., R.6 E., St.<br>Louis County, on downstream side<br>of bridge on Ligget Boulevard, 0.3<br>mi (0.5 km) north of Watson Road<br>(U.S. Highways 66 and 50), and<br>0.1 mi (0.2 km) north of Missouri<br>Pacific Railroad tracks in Crest-<br>wood.                              | 2.12<br>(5.49)              | 1969-74d               | 7-11-69<br>6-24-70<br>10-13-70<br>4-28-71<br>6-4-72<br>3-28-73 | 528.63<br>528.83<br>527.91<br>531.94<br>528.33<br>527.64 | +<br>+<br>+<br>+<br>+<br>+                     |
| 07010155                           | Gravois Creek at<br>Tesson Ferry Road<br>at Sappington              | Lat 38°32'03", long 90°20'32",<br>T.44 N., R.6 E., St. Louis<br>County, on downstream side of<br>bridge on Tesson Ferry Road, 1.2<br>mi (1.9 km) northeast of Lind-<br>bergh (U.S. Highway 50 Bypass and<br>61), and 1.3 mi (2.1 km) south-<br>west of Gravois Road (State High-<br>way 30) in Sappington.                            | 12.1<br>(31.3)              | 1969-74                | 7-2-69<br>4-19-70<br>2-4-71<br>4-15-72<br>6-5-73<br>5-31-74    | 15.76<br>12.53<br>9.81<br>11.44<br>11.69<br>11.14        | c<br>2,230<br>1,070<br>1,980<br>2,060<br>1,860 |
| 07010185                           | Gravois Creek at<br>Bayless Road at<br>Bella Villa                  | Lat 38°32'46", long 90°17'19",<br>T.44 N., R.6 E., St. Louis Coun-<br>ty, on upstream side of bridge<br>on Bayless Road, and 0.1 mi (0.2<br>km) east of Interstate Highway 55<br>in Bella Villa.                                                                                                                                      | 22.3<br>(57.8)              | 1969-74                | 7-2-69<br>4-24-70<br>2-4-71<br>4-15-72<br>6-5-74               | 13.77<br>14.90<br>9.13j<br>11.23j<br>12.93               | 2,690<br>2,770<br>1,510<br>1,687<br>1,840      |
| MERAMEC BASIN                      |                                                                     |                                                                                                                                                                                                                                                                                                                                       |                             |                        |                                                                |                                                          |                                                |
| Fox Creek basin                    |                                                                     |                                                                                                                                                                                                                                                                                                                                       |                             |                        |                                                                |                                                          |                                                |
| 07017115                           | Fox Creek<br>at Allenton                                            | Lat 38°29'59", long 90°41'20", in<br>NW¼SW¼ sec.4, T.43 N., R.3 E.,<br>St. Louis County, at bridge on<br>U.S. Highway Business Route 66,<br>0.8 mi (1.3 km) west of Allenton.                                                                                                                                                         | 15.08<br>(39.06)            | 1972-74f               | 4-21-72<br>6-5-73<br>1-20-74                                   | 5.96<br>7.30<br>7.64                                     | 984<br>1,680<br>1,880                          |
| Forby Creek basin                  |                                                                     |                                                                                                                                                                                                                                                                                                                                       |                             |                        |                                                                |                                                          |                                                |
| 07019035                           | Forby Creek<br>at Eureka                                            | Lat 38°30'45", long 90°37'25", in<br>SW¼NW¼ sec.31, T.44 N., R.4 E.,<br>St. Louis County, at bridge on<br>State Highway 109, 0.1 mi (0.2<br>km) north of Eureka.                                                                                                                                                                      | 3.14<br>(8.13)              | 1972-74f               | 4-15-72<br>7-23-73<br>5-31-74                                  | 8.38<br>9.46<br>7.28                                     | 600<br>850<br>390                              |

## Annual maximum flood data in St. Louis County--Continued

| Station no.              | Station name                                   | Location                                                                                                                                                                          | Drainage<br>area<br>(sq mi) | Period<br>of<br>record | Annual<br>Date                | maximum<br>Gage<br>height<br>(feet) | Dis-<br>charge<br>(ft <sup>3</sup> /s) |
|--------------------------|------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|------------------------|-------------------------------|-------------------------------------|----------------------------------------|
| MERAMEC BASIN--Continued |                                                |                                                                                                                                                                                   |                             |                        |                               |                                     |                                        |
| Hamilton Creek basin     |                                                |                                                                                                                                                                                   |                             |                        |                               |                                     |                                        |
| 07019050                 | Hamilton Creek<br>near Eureka                  | Lat 38°32'47", long 90°37'47", in<br>NW¼NE¼ sec.24, T.44 N., R.3 E.,<br>St. Louis County, at bridge on<br>State Highway 109, 2.3 mi (3.7<br>km) north of Eureka.                  | 9.85<br>(25.51)             | 1972-74h               | 4-21-72<br>7-23-73<br>1-20-74 | 3.48<br>4.47<br>3.22                | 790<br>1,430<br>660                    |
| Kiefer Creek basin       |                                                |                                                                                                                                                                                   |                             |                        |                               |                                     |                                        |
| 07019070                 | Kiefer Creek<br>near Ballwin                   | Lat 38°33'24", long 90°33'13", in<br>NW¼NE¼ sec.15, T.44 N., R.4 E.,<br>St. Louis County, at county<br>bridge on New Ballwin Road, 1.8<br>mi (2.9 km) south of Ballwin.           | 3.85<br>(9.97)              | 1972-74f               | 4-15-72<br>7-23-73<br>8-13-74 | 3.58<br>4.87<br>4.06                | +<br>+<br>+                            |
| Fishpot Creek basin      |                                                |                                                                                                                                                                                   |                             |                        |                               |                                     |                                        |
| 07019100                 | Fishpot Creek<br>at Ballwin                    | Lat 38°35'30", long 90°33'09", in<br>SE¼SE¼ sec.34, T.45 N., R.4 E.,<br>St. Louis County, at county<br>bridge on Old Ballwin Road, in<br>Ballwin.                                 | 2.40<br>(6.22)              | 1972-74h               | +<br>7-23-73<br>3-28-74       | 4.37<br>6.04<br>4.68                | 502<br>920<br>580                      |
| 07019117                 | Fishpot Creek<br>tributary near<br>Valley Park | Lat 38°33'35", long 90°31'35", in<br>NW¼NW¼ sec.13, T.44 N., R.4 E.,<br>St. Louis County, at county<br>bridge on Sulphur Springs Road,<br>2.0 mi (3.2 km) west of Valley<br>Park. | 2.40<br>(6.22)              | 1972-74h               | +<br>6-18-73<br>8-13-74       | 9.12<br>9.85<br>9.73                | +<br>+<br>+                            |
| 07019120                 | Fishpot Creek<br>at Valley Park                | Lat 38°33'07", long 90°30'41", in<br>NE¼SE¼ sec.13, T.44 N., R.4 E.,<br>St. Louis County, at county<br>bridge on Hanna Road, 0.7 mi (1.1<br>km) west of Valley Park.              | 10.01<br>(25.93)            | 1972f<br>1973-74f      | 4-15-72<br>7-23-73<br>8-13-74 | 7.90<br>9.06<br>8.30                | 1,300<br>1,580<br>1,400                |
| Grand Glaize Creek basin |                                                |                                                                                                                                                                                   |                             |                        |                               |                                     |                                        |
| 07019145                 | Grand Glaize<br>Creek at<br>Manchester         | Lat 38°35'26", long 90°30'32", in<br>SW¼SW¼ sec.31, T.45 N., R.5 E.,<br>St. Louis County, at bridge on<br>State Highway 141, in Manchester.                                       | 3.89<br>(10.08)             | 1972-74f               | 4-15-72<br>7-23-73<br>3-28-74 | 9.04<br>10.44<br>8.48               | 1,160<br>1,650<br>968                  |
| 07019180                 | Grand Glaize<br>Creek at<br>Kirkwood           | Lat 38°34'30", long 90°28'14", in<br>NW¼NW¼ sec.9, T.44 N., R.5 E.,<br>St. Louis County, at county<br>bridge on Dougherty Ferry Road,<br>1.0 mi (1.6 km) west of Kirkwood.        | 19.80<br>(52.28)            | 1972-74h               | 4-15-72<br>6-5-73<br>2-22-74  | 12.69<br>15.07<br>14.38             | 1,310<br>1,990<br>1,750                |
| Mattese Creek basin      |                                                |                                                                                                                                                                                   |                             |                        |                               |                                     |                                        |
| 07019320                 | Mattese Creek<br>near Oakville                 | Lat 38°28'28", long 90°19'40", in<br>NE¼SE¼ sec.10, T.43 N., R.6 E.,<br>St. Louis County, at county<br>bridge on Yaeger Road, 1.3 mi<br>(2.1 km) west of Oakville.                | 9.01<br>(23.34)             | 1972-74f               | 4-15-72<br>+<br>3-28-74       | 14.44<br>+<br>14.40                 | 1,740<br>+<br>1,730                    |

+ Not determined

c Gage recording backwater

d Discontinued

f Discharge measurements, daily gage height, and rainfall records available.

g Figures of drainage area in parenthesis are in square kilometres (km<sup>2</sup>)

h Discharge measurements and daily gage height available.

j Gage located upstream 1000 ft





## PART 2. WATER QUALITY RECORDS

## WATER QUALITY RECORDS

## DES MOINES RIVER BASIN

05490600 DES MOINES RIVER AT ST. FRANCISVILLE, MO.  
(National Stream Quality Accounting Network Station)

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

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE  | DIS-<br>CHARGE<br>(CFS) | DIS-<br>SOLVED<br>SILICA<br>(SiO <sub>2</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>IRON<br>(FE)<br>(UG/L) | DIS-<br>SOLVED<br>MAN-<br>GANESE<br>(MN)<br>(UG/L) | DIS-<br>SOLVED<br>CAL-<br>CIUM<br>(CA)<br>(MG/L) | DIS-<br>SOLVED<br>MAG-<br>NE-<br>SIUM<br>(MG) | DIS-<br>SOLVED<br>SODIUM<br>(NA)<br>(MG/L) | DIS-<br>SOLVED<br>PO-<br>TAS-<br>SIUM<br>(K)<br>(MG/L) | BICAR-<br>BONATE<br>(HCO <sub>3</sub> )<br>(MG/L) | CAR-<br>BONATE<br>(CO <sub>3</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>SULFATE<br>(SO <sub>4</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>CHLO-<br>RIDE<br>(CL)<br>(MG/L) |
|-------|-------------------------|-----------------------------------------------------------|------------------------------------------|----------------------------------------------------|--------------------------------------------------|-----------------------------------------------|--------------------------------------------|--------------------------------------------------------|---------------------------------------------------|------------------------------------------------|-----------------------------------------------------------|---------------------------------------------------|
| OCT.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 02... | 25800                   | 11                                                        | 300                                      | 8                                                  | 45                                               | 14                                            | 7.9                                        | 4.9                                                    | 160                                               | 0                                              | 47                                                        | 8.8                                               |
| NOV.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 06... | 18300                   | 21                                                        | 450                                      | 50                                                 | 94                                               | 28                                            | 8.9                                        | 3.3                                                    | 316                                               | 0                                              | 50                                                        | 14                                                |
| DEC.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 04... | 18000                   | 22                                                        | 220                                      | 20                                                 | 98                                               | 29                                            | 10                                         | 3.0                                                    | 324                                               | 0                                              | 60                                                        | 19                                                |
| JAN.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 07... | 6000                    | 21                                                        | 80                                       | 50                                                 | 97                                               | 29                                            | 14                                         | 3.0                                                    | 324                                               | 0                                              | 71                                                        | 20                                                |
| FEB.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 05... | 13500                   | 13                                                        | 60                                       | 0                                                  | 64                                               | 19                                            | 10                                         | 3.5                                                    | 208                                               | 0                                              | 51                                                        | 11                                                |
| MAR.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 04... | 14600                   | 15                                                        | 120                                      | 40                                                 | 75                                               | 22                                            | 11                                         | 3.3                                                    | 252                                               | 0                                              | 58                                                        | 16                                                |
| APR.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 01... | 9450                    | 16                                                        | 80                                       | 0                                                  | 94                                               | 28                                            | 13                                         | 2.2                                                    | 300                                               | 4                                              | 89                                                        | 17                                                |
| MAY   |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 06... | 18800                   | 11                                                        | 40                                       | 220                                                | 56                                               | 17                                            | 7.4                                        | 3.9                                                    | 176                                               | 0                                              | 44                                                        | 10                                                |
| JUNE  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 04... | 20700                   | 13                                                        | 50                                       | 20                                                 | 63                                               | 17                                            | 6.6                                        | 2.8                                                    | 192                                               | 0                                              | 49                                                        | 11                                                |
| JULY  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 15... | 18500                   | 12                                                        | 20                                       | 10                                                 | 75                                               | 22                                            | 7.7                                        | 2.4                                                    | 232                                               | 4                                              | 48                                                        | 13                                                |
| AUG.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 06... | 9150                    | 13                                                        | 10                                       | 10                                                 | 74                                               | 28                                            | 12                                         | 2.8                                                    | 256                                               | 0                                              | 66                                                        | 18                                                |
| SEP.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 09... | 1710                    | 3.0                                                       | 10                                       | 80                                                 | 48                                               | 27                                            | 17                                         | 3.4                                                    | 144                                               | 8                                              | 93                                                        | 21                                                |

| DATE  | PH<br>(UNITS) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | SUS-<br>PENDE<br>SEDI-<br>MENT<br>(MG/L) | TEMPER-<br>ATURE<br>(DEG C) | CHEM-<br>ICAL<br>OXYGEN<br>DEMAND<br>(LOW<br>LEVEL)<br>(MG/L) | TOTAL<br>ORGANIC<br>CARBON<br>(C)<br>(MG/L) | DIS-<br>SOLVED<br>OXYGEN<br>(MG/L) | PER-<br>CENT<br>SATUR-<br>ATION | IMME-<br>DIATE<br>COLI-<br>FORM<br>(COL.<br>PER<br>100 ML) | FECAL<br>COLI-<br>FORM<br>(COL.<br>PER<br>100 ML) | STREP-<br>TOCOCCI<br>(COL-<br>ONIES<br>PER<br>100 ML) |
|-------|---------------|----------------------------------------------|------------------------------------------|-----------------------------|---------------------------------------------------------------|---------------------------------------------|------------------------------------|---------------------------------|------------------------------------------------------------|---------------------------------------------------|-------------------------------------------------------|
| OCT.  |               |                                              |                                          |                             |                                                               |                                             |                                    |                                 |                                                            |                                                   |                                                       |
| 02... | 7.9           | 90                                           | 1255                                     | 18.0                        | 51                                                            | --                                          | 6.8                                | 71                              | 116000                                                     | 13500                                             | 20000                                                 |
| NOV.  |               |                                              |                                          |                             |                                                               |                                             |                                    |                                 |                                                            |                                                   |                                                       |
| 06... | 8.3           | 10                                           | 301                                      | 8.5                         | --                                                            | 4.8                                         | 10.8                               | 92                              | 400                                                        | 210                                               | 30                                                    |
| DEC.  |               |                                              |                                          |                             |                                                               |                                             |                                    |                                 |                                                            |                                                   |                                                       |
| 04... | 8.3           | 8                                            | 237                                      | 6.5                         | 18                                                            | --                                          | 11.6                               | 94                              | 2300                                                       | 800                                               | 1200                                                  |
| JAN.  |               |                                              |                                          |                             |                                                               |                                             |                                    |                                 |                                                            |                                                   |                                                       |
| 07... | 8.0           | 10                                           | --                                       | .0                          | 4                                                             | --                                          | 12.8                               | 88                              | 100                                                        | 10                                                | 60                                                    |
| FEB.  |               |                                              |                                          |                             |                                                               |                                             |                                    |                                 |                                                            |                                                   |                                                       |
| 05... | 7.9           | 30                                           | --                                       | .0                          | --                                                            | 7.8                                         | 12.4                               | 85                              | 1250                                                       | 220                                               | 760                                                   |
| MAR.  |               |                                              |                                          |                             |                                                               |                                             |                                    |                                 |                                                            |                                                   |                                                       |
| 04... | 8.1           | 20                                           | 289                                      | 6.0                         | 15                                                            | --                                          | 9.2                                | 74                              | 780                                                        | 75                                                | 100                                                   |
| APR.  |               |                                              |                                          |                             |                                                               |                                             |                                    |                                 |                                                            |                                                   |                                                       |
| 01... | 8.4           | 8                                            | 308                                      | 9.0                         | 16                                                            | --                                          | 9.4                                | 81                              | --                                                         | 550                                               | 1600                                                  |
| MAY   |               |                                              |                                          |                             |                                                               |                                             |                                    |                                 |                                                            |                                                   |                                                       |
| 06... | 8.1           | 30                                           | 312                                      | 17.5                        | --                                                            | 6.8                                         | 8.4                                | 88                              | --                                                         | 180                                               | 100                                                   |
| JUNE  |               |                                              |                                          |                             |                                                               |                                             |                                    |                                 |                                                            |                                                   |                                                       |
| 04... | 8.2           | 30                                           | 96                                       | 21.0                        | 31                                                            | --                                          | 7.0                                | 78                              | --                                                         | 620                                               | 350                                                   |
| JULY  |               |                                              |                                          |                             |                                                               |                                             |                                    |                                 |                                                            |                                                   |                                                       |
| 15... | 8.4           | 7                                            | 94                                       | 27.5                        | 15                                                            | --                                          | 8.2                                | 102                             | --                                                         | 360                                               | 280                                                   |
| AUG.  |               |                                              |                                          |                             |                                                               |                                             |                                    |                                 |                                                            |                                                   |                                                       |
| 06... | 8.3           | 10                                           | 132                                      | 22.5                        | 22                                                            | --                                          | 7.6                                | 86                              | --                                                         | 190                                               | 50                                                    |
| SEP.  |               |                                              |                                          |                             |                                                               |                                             |                                    |                                 |                                                            |                                                   |                                                       |
| 09... | 8.6           | --                                           | 34                                       | 24.0                        | --                                                            | 11                                          | 10.2                               | 120                             | --                                                         | 60                                                | 30                                                    |

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

PERIOD OF RECORD.--Chemical analyses: August 1967 to September 1974.

EXTREMES, 1973-74.--Water temperatures: Maximum, 29.0°C July 20, 21; minimum, freezing point on many days during winter months.

REMARKS.--Recorder inoperative on many days during the year.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE          | DIS-<br>SOLVED<br>FLUO-<br>RIDE<br>(F)<br>(MG/L) | TOTAL<br>NITRATE<br>(N)<br>(MG/L) | AMMONIA<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | ORGANIC<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | DIS-<br>SOL-<br>VED-<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | TOTAL<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(RESI-<br>DUE AT<br>180 C)<br>(MG/L) | HARD-<br>NESS<br>(CA,MG)<br>(MG/L) | NON-<br>CAR-<br>BONATE<br>HARD-<br>NESS<br>(MG/L) | ALKA-<br>LINIT<br>AS<br>CACO3<br>(MG/L) | SPE-<br>CIFIC<br>CON-<br>DUCT-<br>ANCE<br>(MICRO-<br>MHOS) |
|---------------|--------------------------------------------------|-----------------------------------|-------------------------------------------|-------------------------------------------|----------------------------------------------------------|-------------------------------------------|------------------------------------------------------------------|------------------------------------|---------------------------------------------------|-----------------------------------------|------------------------------------------------------------|
| OCT.<br>02... | .3                                               | 2.3                               | .24                                       | .96                                       | .10                                                      | .46                                       | 250                                                              | 170                                | 39                                                | 131                                     | 382                                                        |
| NOV.<br>06... | .2                                               | --                                | .04                                       | 1.5                                       | --                                                       | .21                                       | 412                                                              | 350                                | 91                                                | 259                                     | 655                                                        |
| DEC.<br>04... | .3                                               | 8.9                               | .08                                       | .80                                       | .15                                                      | .23                                       | 393                                                              | 360                                | 98                                                | 266                                     | 725                                                        |
| JAN.<br>07... | .4                                               | 6.8                               | .20                                       | .35                                       | .13                                                      | .15                                       | 460                                                              | 360                                | 96                                                | 266                                     | 721                                                        |
| FEB.<br>05... | .7                                               | --                                | .07                                       | .70                                       | --                                                       | .24                                       | 296                                                              | 240                                | 67                                                | 171                                     | 515                                                        |
| MAR.<br>04... | .4                                               | 5.0                               | .07                                       | .55                                       | .12                                                      | .24                                       | 349                                                              | 280                                | 71                                                | 207                                     | 550                                                        |
| APR.<br>01... | .5                                               | 2.8                               | .21                                       | 1.1                                       | .09                                                      | .26                                       | 447                                                              | 350                                | 97                                                | 253                                     | 680                                                        |
| MAY<br>06...  | .3                                               | --                                | .06                                       | 1.9                                       | --                                                       | .15                                       | 185                                                              | 210                                | 65                                                | 144                                     | 430                                                        |
| JUNE<br>04... | .4                                               | 7.4                               | .09                                       | 1.4                                       | --                                                       | .11                                       | 282                                                              | 230                                | 70                                                | 157                                     | 460                                                        |
| JULY<br>15... | .4                                               | .03                               | .07                                       | 1.1                                       | .09                                                      | .10                                       | 333                                                              | 280                                | 81                                                | 197                                     | 565                                                        |
| AUG.<br>06... | .4                                               | 5.2                               | .03                                       | 1.2                                       | .09                                                      | .15                                       | 372                                                              | 300                                | 90                                                | 210                                     | 625                                                        |
| SEP.<br>09... | .4                                               | --                                | --                                        | --                                        | --                                                       | .11                                       | 312                                                              | 230                                | 99                                                | 131                                     | 510                                                        |

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

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE          | DIS-<br>SOLVED<br>CAD-<br>MIUM<br>(CD)<br>(UG/L) | DIS-<br>SOLVED<br>CHRO-<br>MIUM<br>(CR)<br>(UG/L) | DIS-<br>SOLVED<br>COBALT<br>(CO)<br>(UG/L) | DIS-<br>SOLVED<br>COPPER<br>(CU)<br>(UG/L) | DIS-<br>SOLVED<br>LEAD<br>(PB)<br>(UG/L) | DIS-<br>SOLVED<br>MERCURY<br>(HG)<br>(UG/L) | DIS-<br>SOLVED<br>SELE-<br>NIUM<br>(SE)<br>(UG/L) | DIS-<br>SOLVED<br>ZINC<br>(ZN)<br>(UG/L) | DIS-<br>SOLVED<br>ARSENIC<br>(AS)<br>(UG/L) | TOTAL<br>CAD-<br>MIUM<br>(CD)<br>(UG/L) |
|---------------|--------------------------------------------------|---------------------------------------------------|--------------------------------------------|--------------------------------------------|------------------------------------------|---------------------------------------------|---------------------------------------------------|------------------------------------------|---------------------------------------------|-----------------------------------------|
| NOV.<br>06... | 1                                                | 0                                                 | 0                                          | 5                                          | 2                                        | .0                                          | 4                                                 | 60                                       | 6                                           | <10                                     |
| FEB.<br>05... | 0                                                | 0                                                 | 1                                          | 9                                          | 3                                        | .0                                          | 4                                                 | 10                                       | 2                                           | <10                                     |
| MAY<br>06...  | 0                                                | 20                                                | 0                                          | 5                                          | 0                                        | .0                                          | 2                                                 | 20                                       | 1                                           | <10                                     |
| SEP.<br>09... | <1                                               | 0                                                 | 0                                          | 4                                          | 2                                        | .5                                          | 1                                                 | 10                                       | 0                                           | <10                                     |

| DATE          | TOTAL<br>CHRO-<br>MIUM<br>(CR)<br>(UG/L) | TOTAL<br>COBALT<br>(CO)<br>(UG/L) | TOTAL<br>COPPER<br>(CU)<br>(UG/L) | TOTAL<br>IRON<br>(FE)<br>(UG/L) | TOTAL<br>LEAD<br>(PB)<br>(UG/L) | TOTAL<br>MAN-<br>GANESE<br>(MN)<br>(UG/L) | TOTAL<br>MERCURY<br>(HG)<br>(UG/L) | TOTAL<br>SELE-<br>NIUM<br>(SE)<br>(UG/L) | TOTAL<br>ZINC<br>(ZN)<br>(UG/L) | TOTAL<br>ARSENIC<br>(AS)<br>(UG/L) |
|---------------|------------------------------------------|-----------------------------------|-----------------------------------|---------------------------------|---------------------------------|-------------------------------------------|------------------------------------|------------------------------------------|---------------------------------|------------------------------------|
| NOV.<br>06... | 0                                        | 50                                | 10                                | 1500                            | <100                            | 150                                       | .0                                 | 4                                        | 220                             | 6                                  |
| FEB.<br>05... | 0                                        | <50                               | 10                                | 2900                            | <100                            | 160                                       | .2                                 | 3                                        | 40                              | 6                                  |
| MAY<br>06...  | 60                                       | <50                               | 10                                | 3700                            | 100                             | 210                                       | .0                                 | 0                                        | 70                              | 5                                  |
| SEP.<br>09... | 0                                        | <50                               | <10                               | 390                             | 100                             | 100                                       | 1.0                                | 1                                        | 30                              | 1                                  |

05490600 Des Moines River at St. Francisville, Mo.--Continued

PHYTOPLANKTON, CODOMINANT GENERA, JUNE 1973 TO SEPTEMBER 1974

| Date         | Total Cells | Organism      | Percent | Organism    | Percent | Organism       | Percent | Organism    | Percent |
|--------------|-------------|---------------|---------|-------------|---------|----------------|---------|-------------|---------|
| June 5, 1973 | 200         | Asterionella  | 29      | Scenedesmus | 21      | Nitzschia      | 18      |             |         |
| July 11      | 4,600       | Oocystis      | 48      |             |         |                |         |             |         |
| Aug. 7       | 2,900       | Chlamydomonas | 31      | Melosira    | 20      | Ankistrodesmus | 18      | Scenedesmus | 16      |
| Sept. 5      | 5,900       | Cyclotella    | 74      |             |         |                |         |             |         |
| Oct. 2       | 2,100       | Oscillatoria  | 39      | Scenedesmus | 31      |                |         |             |         |
| Nov. 6       | 4,800       | Scenedesmus   | 25      | Cyclotella  | 18      | Anacystis      | 15      |             |         |
| Dec. 4       | 2,000       | Aphamzomenon  | 51      | Synedra     | 20      |                |         |             |         |
| Jan. 7, 1974 | 1,300       | Lyngbya       | 31      | Cyclotella  | 28      | Oscillatoria   | 15      |             |         |
| March 4      | 830         | Lyngbya       | 63      | Cyclotella  | 17      |                |         |             |         |
| April 1      | 12,000      | Cyclotella    | 87      |             |         |                |         |             |         |
| May 6        | 4,100       | Sphaerocystis | 53      | Scenedesmus | 26      |                |         |             |         |
| June 4       | 2,100       | Cyucigenia    | 35      | Cyclotella  | 30      | Scenedesmus    | 22      |             |         |
| July 15      | 6,900       | Cyclotella    | 84      |             |         |                |         |             |         |
| Aug. 6       | 6,100       | Cyclotella    | 77      |             |         |                |         |             |         |
| Sept. 9      | 57,000      | Cyclotella    | 52      | Scenedesmus | 21      |                |         |             |         |

## PERIPHYTON, JUNE 1972 TO SEPTEMBER 1974

| Date         | Dry weight<br>grams/m | Ash weight<br>grams/m | Chlorophyll a<br>grams/m <sup>2</sup> | Chlorophyll b<br>grams/m <sup>2</sup> | Pigment ratio |
|--------------|-----------------------|-----------------------|---------------------------------------|---------------------------------------|---------------|
| June 5, 1973 | 4.6                   | 3.8                   |                                       |                                       |               |
| July 11      | 16                    | 9                     |                                       |                                       |               |
| Oct. 2       | 46                    | 26                    |                                       |                                       |               |
| Dec. 4       | 1.4                   | 0.7                   |                                       |                                       |               |
| Sept. 9,     | 17                    | 14                    | 0.5                                   | 0.2                                   | 6.2           |



## DES MOINES RIVER BASIN

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

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C) , WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCTOBER |     | NOVEMBER |     | DECEMBER |     | JANUARY |     | FEBRUARY |     | MARCH |     |
|-------|---------|-----|----------|-----|----------|-----|---------|-----|----------|-----|-------|-----|
|       | MAX     | MIN | MAX      | MIN | MAX      | MIN | MAX     | MIN | MAX      | MIN | MAX   | MIN |
| 1     | 409     | 366 | 650      | 636 | 762      | 744 | ---     | --- | ---      | --- | ---   | --- |
| 2     | 394     | 362 | 658      | 646 | 770      | 751 | ---     | --- | ---      | --- | ---   | --- |
| 3     | 406     | 364 | 693      | 658 | 783      | 772 | ---     | --- | ---      | --- | ---   | --- |
| 4     | 374     | 331 | 693      | 680 | 781      | 725 | ---     | --- | ---      | --- | ---   | --- |
| 5     | 382     | 365 | 692      | 680 | ---      | --- | ---     | --- | ---      | --- | ---   | --- |
| 6     | 370     | 360 | 690      | 667 | ---      | --- | ---     | --- | ---      | --- | ---   | --- |
| 7     | 490     | 371 | 718      | 688 | ---      | --- | ---     | --- | ---      | --- | ---   | --- |
| 8     | 503     | 483 | 700      | 688 | ---      | --- | ---     | --- | ---      | --- | ---   | --- |
| 9     | 524     | 497 | 725      | 698 | ---      | --- | ---     | --- | ---      | --- | ---   | --- |
| 10    | 535     | 525 | 722      | 708 | ---      | --- | ---     | --- | ---      | --- | ---   | --- |
| 11    | 540     | 462 | 720      | 712 | ---      | --- | ---     | --- | ---      | --- | ---   | --- |
| 12    | 516     | 422 | 712      | 705 | ---      | --- | ---     | --- | ---      | --- | ---   | --- |
| 13    | 465     | 443 | 734      | 710 | ---      | --- | ---     | --- | ---      | --- | ---   | --- |
| 14    | 483     | 465 | 758      | 735 | ---      | --- | ---     | --- | ---      | --- | ---   | --- |
| 15    | 512     | 483 | 777      | 758 | ---      | --- | ---     | --- | ---      | --- | ---   | --- |
| 16    | 542     | 519 | 779      | 777 | ---      | --- | ---     | --- | ---      | --- | ---   | --- |
| 17    | 572     | 544 | 783      | 777 | ---      | --- | ---     | --- | ---      | --- | ---   | --- |
| 18    | 603     | 573 | 785      | 781 | ---      | --- | ---     | --- | ---      | --- | ---   | --- |
| 19    | 643     | 604 | 794      | 768 | ---      | --- | ---     | --- | ---      | --- | ---   | --- |
| 20    | 679     | 443 | 766      | 697 | ---      | --- | ---     | --- | ---      | --- | ---   | --- |
| 21    | 471     | 458 | 775      | 715 | ---      | --- | ---     | --- | ---      | --- | ---   | --- |
| 22    | 479     | 464 | 772      | 685 | ---      | --- | ---     | --- | ---      | --- | ---   | --- |
| 23    | 516     | 480 | 794      | 703 | ---      | --- | ---     | --- | ---      | --- | ---   | --- |
| 24    | 531     | 516 | 794      | 785 | ---      | --- | ---     | --- | ---      | --- | ---   | --- |
| 25    | 534     | 527 | 794      | 789 | ---      | --- | ---     | --- | ---      | --- | ---   | --- |
| 26    | 592     | 535 | 789      | 751 | ---      | --- | ---     | --- | ---      | --- | ---   | --- |
| 27    | 595     | 541 | 732      | 641 | ---      | --- | ---     | --- | ---      | --- | ---   | --- |
| 28    | 564     | 555 | 734      | 670 | ---      | --- | ---     | --- | ---      | --- | ---   | --- |
| 29    | 585     | 560 | 734      | 727 | ---      | --- | ---     | --- | ---      | --- | ---   | --- |
| 30    | 632     | 588 | 749      | 735 | ---      | --- | ---     | --- | ---      | --- | ---   | --- |
| 31    | 643     | 630 | ---      | --- | ---      | --- | ---     | --- | ---      | --- | ---   | --- |
| MONTH | 679     | 331 | 794      | 636 | ---      | --- | ---     | --- | ---      | --- | ---   | --- |

| DAY   | APRIL |     | MAY |     | JUNE |     | JULY |     | AUGUST |     | SEPTEMBER |     |
|-------|-------|-----|-----|-----|------|-----|------|-----|--------|-----|-----------|-----|
|       | MAX   | MIN | MAX | MIN | MAX  | MIN | MAX  | MIN | MAX    | MIN | MAX       | MIN |
| 1     | 676   | 660 | 620 | 576 | ---  | --- | 486  | 471 | 611    | 605 | 645       | 632 |
| 2     | 678   | 665 | 591 | 389 | ---  | --- | 493  | 487 | 610    | 602 | 655       | 634 |
| 3     | 678   | 676 | 389 | 376 | ---  | --- | 498  | 483 | 611    | 606 | 649       | 618 |
| 4     | 678   | 612 | 396 | 377 | 465  | 461 | 481  | 403 | 613    | 608 | 636       | 617 |
| 5     | 655   | 613 | 423 | 395 | 475  | 456 | 422  | 376 | 620    | 611 | 643       | 602 |
| 6     | 659   | 598 | 425 | 421 | 497  | 478 | 460  | 423 | 628    | 616 | 613       | 448 |
| 7     | 640   | 600 | --- | --- | 502  | 440 | 506  | 461 | 630    | 618 | 564       | 491 |
| 8     | 674   | 633 | --- | --- | 434  | 384 | 516  | 506 | 626    | 618 | 522       | 486 |
| 9     | 674   | 652 | --- | --- | 439  | 396 | 553  | 517 | 620    | 602 | 514       | 483 |
| 10    | 659   | 647 | --- | --- | 422  | 354 | 562  | 545 | 611    | 457 | ---       | --- |
| 11    | 659   | 588 | --- | --- | 380  | 346 | 562  | 547 | 588    | 461 | ---       | --- |
| 12    | 723   | 600 | --- | --- | 424  | 347 | 559  | 553 | 626    | 590 | ---       | --- |
| 13    | 723   | 588 | --- | --- | 508  | 430 | 581  | 559 | 635    | 604 | ---       | --- |
| 14    | 632   | 568 | --- | --- | 522  | 507 | 579  | 566 | 625    | 570 | ---       | --- |
| 15    | 652   | 633 | --- | --- | 531  | 521 | 569  | 554 | 609    | 507 | ---       | --- |
| 16    | 654   | 643 | --- | --- | 533  | 523 | 562  | 559 | 633    | 573 | ---       | --- |
| 17    | 670   | 652 | --- | --- | 525  | 505 | 564  | 558 | 648    | 633 | ---       | --- |
| 18    | 693   | 670 | --- | --- | 549  | 505 | 564  | 561 | 648    | 638 | ---       | --- |
| 19    | 706   | 693 | --- | --- | 552  | 541 | 567  | 562 | 657    | 638 | ---       | --- |
| 20    | 721   | 706 | --- | --- | 554  | 548 | 587  | 568 | 653    | 618 | ---       | --- |
| 21    | 721   | 714 | --- | --- | 552  | 506 | 585  | 580 | 631    | 573 | ---       | --- |
| 22    | 725   | 721 | --- | --- | 531  | 514 | 603  | 583 | 591    | 472 | ---       | --- |
| 23    | 721   | 615 | --- | --- | 527  | 504 | 628  | 603 | 588    | 551 | ---       | --- |
| 24    | 654   | 606 | --- | --- | 510  | 493 | 621  | 599 | 588    | 521 | ---       | --- |
| 25    | 638   | 490 | --- | --- | 489  | 481 | 602  | 566 | 604    | 507 | ---       | --- |
| 26    | 516   | 473 | --- | --- | 483  | 477 | 618  | 599 | 561    | 498 | ---       | --- |
| 27    | 569   | 524 | --- | --- | 481  | 476 | 616  | 605 | 593    | 506 | ---       | --- |
| 28    | 603   | 570 | --- | --- | 482  | 475 | 606  | 585 | 617    | 565 | ---       | --- |
| 29    | 613   | 557 | --- | --- | 478  | 475 | 608  | 575 | 592    | 535 | ---       | --- |
| 30    | 652   | 618 | --- | --- | 475  | 470 | 620  | 610 | 635    | 559 | ---       | --- |
| 31    | ---   | --- | --- | --- | ---  | --- | 620  | 611 | 655    | 623 | ---       | --- |
| MONTH | 725   | 473 | --- | --- | 554  | 346 | 628  | 376 | 657    | 457 | ---       | --- |

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

TEMPERATURE (DEG. C) OF WATER , WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCTOBER |      | NOVEMBER |      | DECEMBER |     | JANUARY |     | FEBRUARY |     | MARCH |     |
|-------|---------|------|----------|------|----------|-----|---------|-----|----------|-----|-------|-----|
|       | MAX     | MIN  | MAX      | MIN  | MAX      | MIN | MAX     | MIN | MAX      | MIN | MAX   | MIN |
| 1     | 19.5    | 18.5 | 13.0     | 12.5 | 6.5      | 6.0 | ---     | --- | 0.5      | 0.5 | 4.5   | 4.0 |
| 2     | 19.0    | 18.5 | 12.5     | 12.0 | 7.0      | 6.0 | ---     | --- | 0.5      | 0.5 | 5.0   | 3.0 |
| 3     | 19.0    | 18.5 | 12.0     | 11.5 | 7.0      | 6.5 | ---     | --- | 0.5      | 0.0 | 7.0   | 5.0 |
| 4     | 19.0    | 18.0 | 11.5     | 10.5 | 7.0      | 6.0 | ---     | --- | 0.0      | 0.0 | 7.0   | 6.0 |
| 5     | 18.0    | 17.0 | 10.5     | 9.5  | 6.0      | 4.0 | ---     | --- | 0.0      | 0.0 | 6.0   | 5.5 |
| 6     | 17.0    | 16.5 | 9.5      | 8.5  | 4.0      | 2.5 | ---     | --- | 0.5      | 0.0 | 7.0   | 5.0 |
| 7     | 17.5    | 16.0 | 9.0      | 8.5  | 2.5      | 1.5 | 0.5     | 0.0 | 0.5      | 0.0 | 9.0   | 7.0 |
| 8     | 18.5    | 17.5 | 9.0      | 7.5  | 1.5      | 1.0 | 0.5     | 0.0 | 0.5      | 0.5 | 9.5   | 8.5 |
| 9     | 19.0    | 18.5 | 7.5      | 6.5  | 1.5      | 1.0 | 0.5     | 0.5 | 0.5      | 0.5 | 10.0  | 9.5 |
| 10    | 19.0    | 18.5 | 6.5      | 6.0  | 0.5      | 0.5 | 0.5     | 0.5 | 1.0      | 0.5 | 9.5   | 8.5 |
| 11    | 19.0    | 18.5 | 6.0      | 5.5  | 0.5      | 0.5 | 0.5     | 0.5 | 1.5      | 0.5 | 8.5   | 7.5 |
| 12    | 18.5    | 18.0 | 7.5      | 5.5  | 1.5      | 0.5 | 0.5     | 0.5 | 3.0      | 1.0 | 8.0   | 7.5 |
| 13    | 18.5    | 17.5 | 8.0      | 7.0  | 1.5      | 1.0 | 0.5     | 0.5 | 3.0      | 2.0 | 8.0   | 8.0 |
| 14    | 18.0    | 17.0 | 9.0      | 7.5  | 1.5      | 1.0 | 1.0     | 0.5 | 2.0      | 1.5 | 8.0   | 8.0 |
| 15    | 18.5    | 17.0 | 9.0      | 8.0  | 1.0      | 0.5 | 1.0     | 0.5 | 1.5      | 1.0 | 8.0   | 7.0 |
| 16    | 17.5    | 16.5 | 8.0      | 7.0  | 0.5      | 0.5 | 1.0     | 1.0 | 3.0      | 1.0 | 8.0   | 7.5 |
| 17    | 16.0    | 15.5 | 8.0      | 6.5  | 0.5      | 0.5 | 1.0     | 1.0 | 4.0      | 2.0 | 8.0   | 7.5 |
| 18    | 16.5    | 15.5 | 8.5      | 7.5  | 0.5      | 0.5 | 1.0     | 1.0 | 4.0      | 3.5 | 8.0   | 7.5 |
| 19    | 16.5    | 15.5 | 8.0      | 7.0  | 0.5      | 0.5 | 1.0     | 1.0 | 4.5      | 3.5 | 8.0   | 7.5 |
| 20    | 16.5    | 15.5 | 10.0     | 8.0  | 0.5      | 0.5 | 1.0     | 0.0 | 4.5      | 3.5 | 8.0   | 7.5 |
| 21    | 16.0    | 15.5 | 10.0     | 8.0  | 0.5      | 0.5 | 0.5     | 0.0 | 4.5      | 3.5 | 7.5   | 6.5 |
| 22    | 16.0    | 15.5 | 8.5      | 7.5  | 0.5      | 0.5 | 0.5     | 0.0 | 3.5      | 3.0 | 6.5   | 5.0 |
| 23    | 16.5    | 15.5 | 8.0      | 7.5  | 0.5      | 0.5 | 0.5     | 0.5 | 3.0      | 2.0 | 5.0   | 3.5 |
| 24    | 16.5    | 15.5 | 8.5      | 7.5  | 1.0      | 0.5 | 0.5     | 0.5 | 1.5      | 0.5 | 4.0   | 2.5 |
| 25    | 16.0    | 15.5 | 8.5      | 7.5  | 1.0      | 0.5 | 0.5     | 0.5 | 1.0      | 0.5 | 4.5   | 2.5 |
| 26    | 15.5    | 15.0 | 8.0      | 7.5  | 1.0      | 0.5 | 0.5     | 0.0 | 2.0      | 0.5 | 6.5   | 4.0 |
| 27    | 15.0    | 14.5 | 8.0      | 7.5  | ---      | --- | 0.5     | 0.0 | 3.5      | 2.0 | 7.5   | 6.0 |
| 28    | 14.5    | 13.5 | 7.5      | 6.5  | ---      | --- | 0.5     | 0.5 | 5.0      | 3.5 | 8.5   | 7.0 |
| 29    | 13.5    | 13.0 | 6.5      | 6.0  | ---      | --- | 0.5     | 0.5 | ---      | --- | 8.5   | 7.0 |
| 30    | 13.5    | 13.0 | 6.5      | 6.0  | ---      | --- | 2.0     | 1.0 | ---      | --- | 7.5   | 6.5 |
| 31    | 13.5    | 13.0 | ---      | ---  | ---      | --- | 2.0     | 1.0 | ---      | --- | 8.5   | 7.0 |
| MONTH | 19.5    | 13.0 | 13.0     | 5.5  | 7.0      | 0.5 | 2.0     | 0.0 | 5.0      | 0.0 | 10.0  | 2.5 |

| DAY   | APRIL |      | MAY  |      | JUNE |      | JULY |      | AUGUST |      | SEPTEMBER |      |
|-------|-------|------|------|------|------|------|------|------|--------|------|-----------|------|
|       | MAX   | MIN  | MAX  | MIN  | MAX  | MIN  | MAX  | MIN  | MAX    | MIN  | MAX       | MIN  |
| 1     | 9.0   | 8.5  | 17.5 | 16.0 | ---  | ---  | 24.0 | 23.0 | 26.0   | 24.5 | 22.5      | 20.0 |
| 2     | 10.5  | 8.0  | 17.5 | 17.0 | ---  | ---  | 25.0 | 23.5 | 24.5   | 23.5 | 20.0      | 16.5 |
| 3     | 12.0  | 10.5 | 18.0 | 17.0 | ---  | ---  | 25.5 | 24.5 | 24.0   | 22.5 | 18.0      | 15.0 |
| 4     | 11.5  | 9.0  | 17.5 | 16.5 | 21.0 | 21.0 | 24.5 | 23.5 | 22.5   | 21.5 | 20.0      | 15.5 |
| 5     | 9.0   | 8.0  | 17.5 | 16.5 | 21.0 | 21.0 | 24.5 | 23.0 | 23.5   | 21.5 | 20.0      | 17.0 |
| 6     | 9.5   | 8.0  | 17.5 | 16.5 | 21.0 | 21.0 | 25.0 | 24.0 | 23.0   | 22.0 | 21.5      | 17.0 |
| 7     | 10.5  | 9.0  | ---  | ---  | 21.0 | 19.5 | 26.0 | 24.5 | 22.5   | 21.5 | 22.5      | 19.5 |
| 8     | 10.0  | 8.5  | ---  | ---  | 19.5 | 19.0 | 26.5 | 25.0 | 23.0   | 21.5 | 24.5      | 20.5 |
| 9     | 10.0  | 8.0  | ---  | ---  | 20.5 | 19.5 | 27.0 | 26.0 | 22.5   | 22.0 | 25.0      | 22.0 |
| 10    | 10.0  | 9.0  | ---  | ---  | 20.0 | 19.0 | 27.0 | 26.0 | 23.0   | 22.0 | 25.0      | 23.0 |
| 11    | 9.5   | 9.5  | ---  | ---  | 20.5 | 19.5 | 26.5 | 25.5 | 25.0   | 22.0 | 24.5      | 23.0 |
| 12    | 9.5   | 9.0  | ---  | ---  | 21.5 | 19.5 | 27.0 | 25.5 | 26.0   | 23.5 | 24.5      | 20.5 |
| 13    | 10.5  | 9.5  | ---  | ---  | 22.5 | 20.5 | 27.0 | 26.0 | 25.5   | 24.0 | 20.5      | 17.5 |
| 14    | 11.0  | 10.0 | ---  | ---  | 23.0 | 21.0 | 28.0 | 26.5 | 25.0   | 23.5 | 20.5      | 16.5 |
| 15    | 10.5  | 9.0  | ---  | ---  | 23.0 | 22.0 | 28.0 | 26.5 | 25.5   | 23.5 | 22.0      | 17.5 |
| 16    | 10.5  | 10.0 | ---  | ---  | 22.0 | 20.5 | 27.0 | 26.0 | 25.0   | 24.0 | 23.5      | 19.5 |
| 17    | 11.5  | 10.5 | ---  | ---  | 21.5 | 19.5 | 27.0 | 26.0 | 25.5   | 23.5 | 24.5      | 20.0 |
| 18    | 12.0  | 11.0 | ---  | ---  | 22.5 | 20.5 | 28.0 | 26.0 | 26.0   | 23.5 | ---       | ---  |
| 19    | 12.5  | 12.0 | ---  | ---  | 23.5 | 22.0 | 28.5 | 26.5 | 25.5   | 24.0 | ---       | ---  |
| 20    | 13.5  | 12.0 | ---  | ---  | 24.5 | 23.0 | 29.0 | 27.0 | 27.0   | 24.5 | ---       | ---  |
| 21    | 15.0  | 13.5 | ---  | ---  | 23.0 | 22.5 | 29.0 | 27.0 | 28.0   | 24.5 | ---       | ---  |
| 22    | 15.0  | 14.0 | ---  | ---  | 23.0 | 22.0 | 28.5 | 27.0 | 27.0   | 24.0 | ---       | ---  |
| 23    | 14.0  | 13.0 | ---  | ---  | 22.0 | 21.0 | 28.5 | 26.5 | 26.5   | 24.0 | ---       | ---  |
| 24    | 14.0  | 12.5 | ---  | ---  | 22.5 | 21.0 | 28.5 | 26.5 | 26.0   | 23.0 | ---       | ---  |
| 25    | 14.0  | 13.0 | ---  | ---  | 22.5 | 21.0 | 27.5 | 26.5 | 25.5   | 23.0 | ---       | ---  |
| 26    | 15.0  | 13.5 | ---  | ---  | 23.0 | 21.5 | 28.0 | 26.0 | 27.0   | 23.5 | ---       | ---  |
| 27    | 15.0  | 14.5 | ---  | ---  | 23.5 | 22.5 | 27.5 | 26.5 | 26.0   | 25.0 | ---       | ---  |
| 28    | 16.0  | 15.0 | ---  | ---  | 23.5 | 22.5 | 27.5 | 25.5 | 25.0   | 22.5 | ---       | ---  |
| 29    | 16.0  | 15.5 | ---  | ---  | 23.5 | 22.5 | 27.0 | 25.5 | 24.5   | 20.5 | ---       | ---  |
| 30    | 17.0  | 16.0 | ---  | ---  | 24.0 | 22.0 | 27.0 | 25.0 | 24.0   | 22.0 | ---       | ---  |
| 31    | ---   | ---  | ---  | ---  | ---  | ---  | 26.5 | 25.0 | 24.0   | 22.5 | ---       | ---  |
| MONTH | 17.0  | 8.0  | ---  | ---  | 24.5 | 19.0 | 29.0 | 23.0 | 28.0   | 20.5 | ---       | ---  |

## 05495150 MISSISSIPPI RIVER AT CANTON, MO.

LOCATION.--Lat 40°07'51", long 91°30'49", Lewis County, multi-parameter digital recorder at raw-water inlet of City of Canton Water Treatment Plant in Canton.

PERIOD OF RECORD.--Chemical analyses: May 1969 to September 1974 (multi-parameter recorder discontinued June 1974).

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE       | DIS-SOLVED SILICA (SiO <sub>2</sub> ) (MG/L) | DIS-SOLVED IRON (FE) (UG/L) | DIS-SOLVED MANGANESE (MN) (UG/L) | DIS-SOLVED CALCIUM (CA) (MG/L) | DIS-SOLVED MAGNESIUM (MG) (MG/L) | DIS-SOLVED SODIUM (NA) (MG/L) | DIS-SOLVED POTASSIUM (K) (MG/L) | BICARBONATE (HCO <sub>3</sub> ) (MG/L) | CARBONATE (CO <sub>3</sub> ) (MG/L) | DIS-SOLVED SULFATE (SO <sub>4</sub> ) (MG/L) | DIS-SOLVED CHLORIDE (CL) (MG/L) |
|------------|----------------------------------------------|-----------------------------|----------------------------------|--------------------------------|----------------------------------|-------------------------------|---------------------------------|----------------------------------------|-------------------------------------|----------------------------------------------|---------------------------------|
| OCT. 01... | 9.0                                          | 270                         | 16                               | 37                             | 12                               | 7.6                           | 4.6                             | 144                                    | 0                                   | 34                                           | 8.1                             |
| NOV. 05... | 16                                           | 130                         | 60                               | 75                             | 23                               | 9.3                           | 3.2                             | 276                                    | 0                                   | 42                                           | 13                              |
| DEC. 03... | 16                                           | 160                         | 50                               | 76                             | 23                               | 8.8                           | 2.9                             | 268                                    | 0                                   | 45                                           | 16                              |
| JAN. 07... | 16                                           | 110                         | 60                               | 70                             | 24                               | 11                            | 2.7                             | 248                                    | 0                                   | 42                                           | 17                              |
| FEB. 04... | 11                                           | 110                         | 50                               | 48                             | 15                               | 8.8                           | 4.2                             | 164                                    | 0                                   | 36                                           | 11                              |
| MAR. 05... | 13                                           | 80                          | 40                               | 60                             | 19                               | 9.5                           | 3.4                             | 220                                    | 0                                   | 44                                           | 15                              |
| APR. 02... | 12                                           | 80                          | 0                                | 66                             | 21                               | 10                            | 2.7                             | 232                                    | 0                                   | 47                                           | 15                              |
| MAY 06...  | 8.1                                          | 50                          | 10                               | 49                             | 15                               | 7.0                           | 3.0                             | 172                                    | 0                                   | 39                                           | 10                              |
| JUNE 04... | 10                                           | 40                          | 30                               | 48                             | 15                               | 6.3                           | 2.8                             | 164                                    | 0                                   | 31                                           | 9.0                             |
| JULY 15... | 11                                           | 20                          | 10                               | 61                             | 22                               | 7.3                           | 2.5                             | 224                                    | 0                                   | 41                                           | 12                              |
| AUG. 06... | 8.2                                          | 10                          | 0                                | 59                             | 24                               | 8.6                           | 2.4                             | 228                                    | 0                                   | 43                                           | 14                              |
| SEP. 09... | 2.9                                          | 20                          | 0                                | 46                             | 20                               | 10                            | 2.5                             | 208                                    | 0                                   | 38                                           | 14                              |

| DATE       | NON-CARBONATE HARDNESS (MG/L) | ALKALINITY AS CaCO <sub>3</sub> (MG/L) | SPECIFIC CONDUCTANCE (MICROMHOS) | PH (UNITS) | COLOR (PLATINUM-COBALT UNITS) | TEMPERATURE (DEG C) | CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L) | DIS-SOLVED OXYGEN (MG/L) | PERCENT SATURATION | FECAL COLIFORM (COL. PER 100 ML) | STREPTOCOCCI (COLONIES PER 100 ML) |
|------------|-------------------------------|----------------------------------------|----------------------------------|------------|-------------------------------|---------------------|-------------------------------------------|--------------------------|--------------------|----------------------------------|------------------------------------|
| OCT. 01... | 22                            | 118                                    | 338                              | 7.6        | 100                           | 20.0                | 57                                        | 5.0                      | 54                 | 8200                             | 16000                              |
| NOV. 05... | 56                            | 226                                    | 579                              | 8.3        | 30                            | 10.0                | 28                                        | 9.4                      | 83                 | 950                              | 120                                |
| DEC. 03... | 65                            | 220                                    | 580                              | 8.3        | 20                            | 6.0                 | 31                                        | 9.7                      | 78                 | 160                              | 520                                |
| JAN. 07... | 70                            | 203                                    | 575                              | 7.5        | 20                            | .0                  | 12                                        | 11.0                     | 75                 | 170                              | 500                                |
| FEB. 04... | 47                            | 135                                    | 400                              | 7.7        | 50                            | .0                  | 34                                        | 10.8                     | 74                 | 400                              | 1100                               |
| MAR. 05... | 48                            | 180                                    | 480                              | 7.6        | 30                            | 6.0                 | 26                                        | 9.0                      | 73                 | 560                              | 1000                               |
| APR. 02... | 61                            | 190                                    | 495                              | 8.0        | 40                            | 7.5                 | 26                                        | 8.6                      | 72                 | 1600                             | 700                                |
| MAY 06...  | 43                            | 141                                    | 320                              | 8.0        | 40                            | 17.0                | 26                                        | 7.5                      | 77                 | 300                              | 200                                |
| JUNE 04... | 47                            | 135                                    | 385                              | 7.8        | 30                            | 21.0                | 49                                        | 5.7                      | 63                 | 3000                             | 2900                               |
| JULY 15... | 59                            | 184                                    | 510                              | 8.2        | 20                            | 28.5                | 17                                        | 5.7                      | 73                 | 700                              | 100                                |
| AUG. 06... | 59                            | 187                                    | 515                              | 8.2        | 20                            | 23.0                | 19                                        | 6.6                      | 76                 | 5400                             | 940                                |
| SEP. 09... | 29                            | 171                                    | 418                              | 8.3        | 20                            | 21.5                | 24                                        | 7.1                      | 80                 | 2600                             | 260                                |

## 05495150 MISSISSIPPI RIVER AT CANTON, MO.--Continued

EXTREMES, May 1969 to June 1974.--Specific conductance: Maximum, 737 micromhos Dec. 20, 1972; minimum, 184 micromhos Sept. 23, 1970.

PH: Maximum, 9.0 Dec. 19, 20, 21, 23, 1969; minimum, 7.2 Jan. 15 to 25, 1970.

Water temperatures: Maximum, 29.0°C July 25, 1970, Aug. 20, 21, 1972; minimum: freezing point on many days during winter months.

REMARKS.--No discharge records available. Recorder inoperative on many days during the year.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE  | DIS-<br>SOLVED<br>FLUO-<br>RIDE<br>(F)<br>(MG/L) | TOTAL<br>NITRATE<br>(N)<br>(MG/L) | AMMONIA<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | ORGANIC<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | DIS-<br>SOL-<br>VED-<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | TOTAL<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(RESI-<br>DUE AT<br>180 C)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(TONS<br>PER<br>AC-FT) | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | PERCENT<br>SODIUM | HARD-<br>NESS<br>(CA,MG)<br>(MG/L) |
|-------|--------------------------------------------------|-----------------------------------|-------------------------------------------|-------------------------------------------|----------------------------------------------------------|-------------------------------------------|------------------------------------------------------------------|----------------------------------------------------|-----------------------------------------|-------------------|------------------------------------|
| OCT.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                         |                   |                                    |
| 01... | .2                                               | 1.4                               | .28                                       | 1.1                                       | .11                                                      | .53                                       | 216                                                              | .29                                                | .3                                      | 10                | 140                                |
| NOV.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                         |                   |                                    |
| 05... | .2                                               | 4.6                               | .09                                       | 1.0                                       | .16                                                      | .28                                       | 355                                                              | .48                                                | .2                                      | 7                 | 280                                |
| DEC.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                         |                   |                                    |
| 03... | .2                                               | 5.6                               | .09                                       | 1.0                                       | .14                                                      | .24                                       | 354                                                              | .48                                                | .2                                      | 6                 | 280                                |
| JAN.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                         |                   |                                    |
| 07... | .2                                               | 3.8                               | .26                                       | .74                                       | .14                                                      | .27                                       | 339                                                              | .46                                                | .3                                      | 8                 | 270                                |
| FEB.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                         |                   |                                    |
| 04... | .4                                               | 3.2                               | .25                                       | 1.3                                       | .06                                                      | .35                                       | 230                                                              | .31                                                | .3                                      | 9                 | 180                                |
| MAR.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                         |                   |                                    |
| 05... | .4                                               | 3.7                               | .67                                       | .63                                       | .15                                                      | .34                                       | 295                                                              | .40                                                | .3                                      | 8                 | 230                                |
| APR.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                         |                   |                                    |
| 02... | .3                                               | 3.7                               | .12                                       | 1.2                                       | .08                                                      | .29                                       | 314                                                              | .43                                                | .3                                      | 8                 | 250                                |
| MAY   |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                         |                   |                                    |
| 06... | .5                                               | 2.5                               | .14                                       | 1.5                                       | .09                                                      | .31                                       | 242                                                              | .33                                                | .2                                      | 8                 | 180                                |
| JUNE  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                         |                   |                                    |
| 04... | .3                                               | 5.5                               | .23                                       | 1.7                                       | --                                                       | 1.6                                       | 232                                                              | .32                                                | .2                                      | 7                 | 180                                |
| JULY  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                         |                   |                                    |
| 15... | .3                                               | 4.3                               | .11                                       | 1.2                                       | .12                                                      | .21                                       | 295                                                              | .40                                                | .2                                      | 6                 | 240                                |
| AUG.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                         |                   |                                    |
| 06... | .3                                               | 2.7                               | .11                                       | .89                                       | .11                                                      | .23                                       | 292                                                              | .40                                                | .2                                      | 7                 | 250                                |
| SEP.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                         |                   |                                    |
| 09... | .2                                               | .00                               | .08                                       | 1.0                                       | .08                                                      | .21                                       | 251                                                              | .34                                                | .3                                      | 10                | 200                                |

05495150 MISSISSIPPI RIVER AT CANTON, MO.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C) , WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

|       | OCTOBER |     | NOVEMBER |     | DECEMBER |     | JANUARY |     | FEBRUARY |     | MARCH |     |
|-------|---------|-----|----------|-----|----------|-----|---------|-----|----------|-----|-------|-----|
| DAY   | MAX     | MIN | MAX      | MIN | MAX      | MIN | MAX     | MIN | MAX      | MIN | MAX   | MIN |
| 1     | ---     | --- | ---      | --- | 578      | 550 | 579     | 538 | 402      | 377 | 488   | 479 |
| 2     | ---     | --- | ---      | --- | 582      | 559 | 544     | 531 | 373      | 360 | 495   | 483 |
| 3     | ---     | --- | ---      | --- | 595      | 564 | 552     | 540 | 380      | 361 | 510   | 494 |
| 4     | ---     | --- | ---      | --- | 593      | 576 | 560     | 545 | 408      | 381 | 509   | 499 |
| 5     | ---     | --- | ---      | --- | 591      | 519 | 562     | 551 | 425      | 402 | 507   | 475 |
| 6     | ---     | --- | 582      | 569 | 531      | 521 | 570     | 558 | 422      | 413 | 478   | 453 |
| 7     | ---     | --- | 579      | 561 | 529      | 506 | 578     | 564 | 440      | 422 | 466   | 451 |
| 8     | ---     | --- | 576      | 566 | 557      | 503 | 575     | 557 | 447      | 438 | 477   | 462 |
| 9     | ---     | --- | 566      | 552 | 549      | 515 | 557     | 544 | 452      | 441 | 467   | 428 |
| 10    | ---     | --- | 568      | 527 | 515      | 494 | 560     | 549 | 463      | 450 | 450   | 434 |
| 11    | ---     | --- | 557      | 530 | 510      | 495 | 570     | 561 | 474      | 463 | 462   | 446 |
| 12    | ---     | --- | 549      | 515 | 514      | 506 | 572     | 568 | 483      | 468 | 464   | 405 |
| 13    | ---     | --- | 542      | 528 | 534      | 512 | 587     | 570 | 501      | 480 | 426   | 400 |
| 14    | ---     | --- | 539      | 527 | 555      | 533 | 588     | 577 | 514      | 487 | 429   | 396 |
| 15    | ---     | --- | 535      | 514 | 574      | 548 | 586     | 568 | 527      | 511 | 453   | 433 |
| 16    | ---     | --- | 521      | 491 | 587      | 564 | 585     | 568 | 542      | 524 | 474   | 451 |
| 17    | ---     | --- | 514      | 482 | 598      | 583 | 596     | 581 | 555      | 538 | 492   | 467 |
| 18    | ---     | --- | 506      | 488 | 607      | 584 | 599     | 587 | 561      | 550 | 495   | 461 |
| 19    | ---     | --- | 498      | 486 | 622      | 599 | 598     | 583 | 563      | 553 | 513   | 484 |
| 20    | ---     | --- | 496      | 482 | 618      | 609 | 590     | 560 | 565      | 549 | 522   | 498 |
| 21    | ---     | --- | 503      | 485 | 619      | 592 | 556     | 530 | 559      | 550 | 533   | 510 |
| 22    | ---     | --- | 506      | 476 | 597      | 569 | 535     | 498 | 557      | 540 | 532   | 516 |
| 23    | ---     | --- | 509      | 481 | 606      | 578 | 500     | 478 | 537      | 515 | 534   | 523 |
| 24    | ---     | --- | 548      | 495 | 604      | 569 | 478     | 446 | 527      | 514 | 527   | 510 |
| 25    | ---     | --- | 570      | 544 | 609      | 571 | 470     | 437 | 519      | 490 | 523   | 500 |
| 26    | ---     | --- | 582      | 564 | 605      | 525 | 469     | 427 | 490      | 478 | 532   | 510 |
| 27    | ---     | --- | 576      | 553 | 524      | 488 | 421     | 365 | 484      | 476 | 533   | 521 |
| 28    | ---     | --- | 562      | 543 | 518      | 490 | 375     | 301 | 482      | 475 | 540   | 522 |
| 29    | ---     | --- | 567      | 542 | 539      | 511 | 323     | 299 | ---      | --- | 546   | 529 |
| 30    | ---     | --- | 563      | 540 | 573      | 544 | 372     | 334 | ---      | --- | 547   | 534 |
| 31    | ---     | --- | ---      | --- | 586      | 565 | 400     | 357 | ---      | --- | 536   | 494 |
| MONTH | ---     | --- | 582      | 476 | 622      | 488 | 599     | 299 | 565      | 360 | 547   | 396 |

|       | APRIL |     | MAY |     | JUNE |     | JULY |     | AUGUST |     | SEPTEMBER |     |
|-------|-------|-----|-----|-----|------|-----|------|-----|--------|-----|-----------|-----|
| DAY   | MAX   | MIN | MAX | MIN | MAX  | MIN | MAX  | MIN | MAX    | MIN | MAX       | MIN |
| 1     | 514   | 502 | 483 | 442 | 316  | 306 | ---  | --- | ---    | --- | ---       | --- |
| 2     | 524   | 495 | 465 | 426 | 342  | 327 | ---  | --- | ---    | --- | ---       | --- |
| 3     | 508   | 492 | 412 | 322 | 374  | 339 | ---  | --- | ---    | --- | ---       | --- |
| 4     | 514   | 499 | 313 | 318 | 404  | 382 | ---  | --- | ---    | --- | ---       | --- |
| 5     | 517   | 497 | 315 | 299 | 419  | 396 | ---  | --- | ---    | --- | ---       | --- |
| 6     | 519   | 503 | 330 | 307 | 448  | 422 | ---  | --- | ---    | --- | ---       | --- |
| 7     | 529   | 495 | 333 | 322 | 470  | 440 | ---  | --- | ---    | --- | ---       | --- |
| 8     | 528   | 495 | 353 | 333 | 469  | 402 | ---  | --- | ---    | --- | ---       | --- |
| 9     | 528   | 514 | 368 | 350 | 413  | 360 | ---  | --- | ---    | --- | ---       | --- |
| 10    | 517   | 502 | 376 | 360 | 405  | 352 | ---  | --- | ---    | --- | ---       | --- |
| 11    | 510   | 493 | 382 | 373 | 395  | 367 | ---  | --- | ---    | --- | ---       | --- |
| 12    | 507   | 481 | 390 | 362 | 398  | 374 | ---  | --- | ---    | --- | ---       | --- |
| 13    | 503   | 493 | 376 | 344 | 413  | 385 | ---  | --- | ---    | --- | ---       | --- |
| 14    | 498   | 450 | 375 | 363 | 441  | 409 | ---  | --- | ---    | --- | ---       | --- |
| 15    | 502   | 481 | 377 | 364 | 431  | 410 | ---  | --- | ---    | --- | ---       | --- |
| 16    | 511   | 480 | 386 | 360 | 447  | 419 | ---  | --- | ---    | --- | ---       | --- |
| 17    | 476   | 461 | 401 | 362 | 444  | 412 | ---  | --- | ---    | --- | ---       | --- |
| 18    | 479   | 472 | 373 | 289 | 433  | 410 | ---  | --- | ---    | --- | ---       | --- |
| 19    | 478   | 448 | 285 | 254 | 454  | 422 | ---  | --- | ---    | --- | ---       | --- |
| 20    | 477   | 464 | 254 | 149 | 484  | 452 | ---  | --- | ---    | --- | ---       | --- |
| 21    | 488   | 466 | 195 | 136 | 493  | 474 | ---  | --- | ---    | --- | ---       | --- |
| 22    | 491   | 471 | 201 | 145 | ---  | --- | ---  | --- | ---    | --- | ---       | --- |
| 23    | 516   | 474 | 242 | 200 | ---  | --- | ---  | --- | ---    | --- | ---       | --- |
| 24    | 497   | 466 | 268 | 232 | ---  | --- | ---  | --- | ---    | --- | ---       | --- |
| 25    | 502   | 483 | 290 | 268 | ---  | --- | ---  | --- | ---    | --- | ---       | --- |
| 26    | 491   | 428 | 302 | 289 | ---  | --- | ---  | --- | ---    | --- | ---       | --- |
| 27    | 441   | 425 | 307 | 301 | ---  | --- | ---  | --- | ---    | --- | ---       | --- |
| 28    | 466   | 445 | 330 | 316 | ---  | --- | ---  | --- | ---    | --- | ---       | --- |
| 29    | 481   | 462 | 340 | 316 | ---  | --- | ---  | --- | ---    | --- | ---       | --- |
| 30    | 478   | 462 | 330 | 309 | ---  | --- | ---  | --- | ---    | --- | ---       | --- |
| 31    | ---   | --- | 332 | 294 | ---  | --- | ---  | --- | ---    | --- | ---       | --- |
| MONTH | 529   | 425 | 483 | 136 | ---  | --- | ---  | --- | ---    | --- | ---       | --- |



PH (UNITS) , WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

|       | APRIL |     | MAY |     | JUNE |     | JULY |     | AUGUST |     | SEPTEMBER |     |
|-------|-------|-----|-----|-----|------|-----|------|-----|--------|-----|-----------|-----|
| DAY   | MAX   | MIN | MAX | MIN | MAX  | MIN | MAX  | MIN | MAX    | MIN | MAX       | MIN |
| 1     | 8.1   | 7.8 | 8.0 | 7.8 | 7.8  | 7.7 | ---  | --- | ---    | --- | ---       | --- |
| 2     | 8.0   | 7.9 | 8.0 | 7.8 | 7.8  | 7.5 | ---  | --- | ---    | --- | ---       | --- |
| 3     | 8.1   | 8.0 | 8.0 | 7.8 | 7.8  | 7.6 | ---  | --- | ---    | --- | ---       | --- |
| 4     | 8.2   | 8.1 | 8.0 | 7.8 | 7.9  | 7.6 | ---  | --- | ---    | --- | ---       | --- |
| 5     | 8.2   | 8.1 | 8.0 | 7.9 | 7.9  | 7.8 | ---  | --- | ---    | --- | ---       | --- |
| 6     | 8.3   | 8.2 | 8.1 | 8.0 | 7.9  | 7.8 | ---  | --- | ---    | --- | ---       | --- |
| 7     | 8.2   | 8.1 | 8.1 | 8.0 | 8.0  | 7.9 | ---  | --- | ---    | --- | ---       | --- |
| 8     | 8.2   | 8.1 | 8.2 | 8.1 | 8.0  | 7.8 | ---  | --- | ---    | --- | ---       | --- |
| 9     | 8.2   | 8.2 | 8.3 | 8.2 | 7.9  | 7.6 | ---  | --- | ---    | --- | ---       | --- |
| 10    | 8.2   | 8.1 | 8.4 | 8.3 | 8.0  | 7.8 | ---  | --- | ---    | --- | ---       | --- |
| 11    | 8.2   | 8.1 | 8.4 | 8.3 | 7.9  | 7.8 | ---  | --- | ---    | --- | ---       | --- |
| 12    | 8.1   | 8.0 | 8.4 | 8.2 | 7.9  | 7.7 | ---  | --- | ---    | --- | ---       | --- |
| 13    | 8.1   | 8.0 | 8.3 | 8.1 | 7.9  | 7.7 | ---  | --- | ---    | --- | ---       | --- |
| 14    | 8.0   | 7.9 | 8.4 | 8.2 | 8.0  | 7.8 | ---  | --- | ---    | --- | ---       | --- |
| 15    | 8.0   | 8.0 | 8.4 | 8.2 | 8.1  | 8.0 | ---  | --- | ---    | --- | ---       | --- |
| 16    | 8.0   | 7.8 | 8.4 | 8.1 | 8.1  | 8.0 | ---  | --- | ---    | --- | ---       | --- |
| 17    | 7.9   | 7.8 | 8.1 | 7.9 | 8.1  | 7.9 | ---  | --- | ---    | --- | ---       | --- |
| 18    | 7.9   | 7.8 | 8.1 | 7.6 | 8.1  | 7.9 | ---  | --- | ---    | --- | ---       | --- |
| 19    | 8.0   | 7.9 | 7.6 | 6.9 | 8.2  | 8.0 | ---  | --- | ---    | --- | ---       | --- |
| 20    | 8.0   | 7.9 | 7.0 | 6.3 | 8.2  | 8.1 | ---  | --- | ---    | --- | ---       | --- |
| 21    | 8.0   | 7.9 | 7.3 | 6.7 | 8.3  | 8.1 | ---  | --- | ---    | --- | ---       | --- |
| 22    | 8.0   | 8.0 | 7.5 | 7.2 | 8.3  | 8.1 | ---  | --- | ---    | --- | ---       | --- |
| 23    | 8.0   | 8.0 | 7.5 | 7.3 | 8.2  | 8.0 | ---  | --- | ---    | --- | ---       | --- |
| 24    | 8.0   | 7.9 | 7.6 | 7.2 | ---  | --- | ---  | --- | ---    | --- | ---       | --- |
| 25    | 8.0   | 7.8 | 7.6 | 7.4 | ---  | --- | ---  | --- | ---    | --- | ---       | --- |
| 26    | 8.0   | 7.8 | 7.7 | 7.5 | ---  | --- | ---  | --- | ---    | --- | ---       | --- |
| 27    | 8.0   | 7.9 | 7.7 | 7.6 | ---  | --- | ---  | --- | ---    | --- | ---       | --- |
| 28    | 8.0   | 7.8 | 7.7 | 7.6 | ---  | --- | ---  | --- | ---    | --- | ---       | --- |
| 29    | 8.0   | 7.8 | 7.7 | 7.5 | ---  | --- | ---  | --- | ---    | --- | ---       | --- |
| 30    | 8.0   | 7.7 | 7.7 | 7.3 | ---  | --- | ---  | --- | ---    | --- | ---       | --- |
| 31    | ---   | --- | 7.7 | 7.4 | ---  | --- | ---  | --- | ---    | --- | ---       | --- |
| MONTH | 8.3   | 7.7 | 8.4 | 6.3 | ---  | --- | ---  | --- | ---    | --- | ---       | --- |

05495150 MISSISSIPPI RIVER AT CANTON, MO.--Continued

DISSOLVED OXYGEN (DO), IN MILLIGRAMS PER LITER , WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

|       | OCTOBER |     | NOVEMBER |     | DECEMBER |     | JANUARY |      | FEBRUARY |      | MARCH |      |
|-------|---------|-----|----------|-----|----------|-----|---------|------|----------|------|-------|------|
| DAY   | MAX     | MIN | MAX      | MIN | MAX      | MIN | MAX     | MIN  | MAX      | MIN  | MAX   | MIN  |
| 1     | ---     | --- | ---      | --- | ---      | --- | ---     | ---  | 11.0     | 10.7 | 10.2  | 9.8  |
| 2     | ---     | --- | ---      | --- | ---      | --- | ---     | ---  | 11.1     | 10.7 | 10.0  | 9.7  |
| 3     | ---     | --- | ---      | --- | ---      | --- | ---     | ---  | 11.0     | 10.2 | 9.8   | 9.5  |
| 4     | ---     | --- | ---      | --- | ---      | --- | ---     | ---  | 11.0     | 10.7 | 9.5   | 9.2  |
| 5     | ---     | --- | ---      | --- | ---      | --- | ---     | ---  | 11.1     | 10.6 | 9.3   | 8.9  |
| 6     | ---     | --- | ---      | --- | ---      | --- | ---     | ---  | 11.0     | 10.7 | 9.2   | 8.7  |
| 7     | ---     | --- | ---      | --- | ---      | --- | ---     | ---  | 11.0     | 10.3 | 9.2   | 8.9  |
| 8     | ---     | --- | ---      | --- | ---      | --- | ---     | ---  | 10.9     | 10.7 | 9.0   | 8.6  |
| 9     | ---     | --- | ---      | --- | ---      | --- | ---     | ---  | 10.8     | 10.0 | 8.8   | 8.4  |
| 10    | ---     | --- | ---      | --- | ---      | --- | ---     | ---  | 10.7     | 10.3 | 8.6   | 8.4  |
| 11    | ---     | --- | ---      | --- | ---      | --- | ---     | ---  | 10.6     | 10.2 | 8.6   | 8.3  |
| 12    | ---     | --- | ---      | --- | ---      | --- | ---     | ---  | 10.6     | 10.4 | 8.9   | 8.7  |
| 13    | ---     | --- | ---      | --- | ---      | --- | ---     | ---  | 10.5     | 10.3 | 9.0   | 8.6  |
| 14    | ---     | --- | ---      | --- | ---      | --- | ---     | ---  | 10.7     | 10.4 | 9.1   | 8.8  |
| 15    | ---     | --- | ---      | --- | ---      | --- | ---     | ---  | 10.7     | 10.4 | 9.0   | 8.8  |
| 16    | ---     | --- | ---      | --- | ---      | --- | 10.3    | 9.7  | 10.7     | 10.5 | 9.4   | 9.0  |
| 17    | ---     | --- | ---      | --- | ---      | --- | 10.3    | 10.1 | 10.6     | 10.4 | 9.5   | 9.1  |
| 18    | ---     | --- | ---      | --- | ---      | --- | 10.4    | 10.1 | 10.4     | 10.2 | 9.5   | 9.1  |
| 19    | ---     | --- | ---      | --- | ---      | --- | 10.3    | 9.4  | 10.4     | 10.2 | 9.5   | 9.1  |
| 20    | ---     | --- | ---      | --- | ---      | --- | 10.3    | 9.8  | 10.4     | 10.2 | 9.5   | 9.3  |
| 21    | ---     | --- | ---      | --- | ---      | --- | 10.3    | 10.1 | 10.3     | 10.1 | 10.1  | 9.3  |
| 22    | ---     | --- | ---      | --- | ---      | --- | 10.5    | 10.2 | 10.5     | 10.1 | 9.8   | 9.4  |
| 23    | ---     | --- | ---      | --- | ---      | --- | 10.5    | 10.2 | 10.6     | 10.3 | 9.9   | 9.5  |
| 24    | ---     | --- | ---      | --- | ---      | --- | 10.5    | 9.9  | 10.9     | 10.5 | 10.1  | 9.8  |
| 25    | ---     | --- | ---      | --- | ---      | --- | 10.4    | 9.9  | 11.0     | 10.8 | 10.2  | 10.0 |
| 26    | ---     | --- | ---      | --- | ---      | --- | 10.0    | 9.7  | 11.0     | 10.7 | 10.2  | 9.9  |
| 27    | ---     | --- | ---      | --- | ---      | --- | 10.1    | 9.7  | 10.8     | 10.1 | 10.0  | 9.8  |
| 28    | ---     | --- | ---      | --- | ---      | --- | ---     | ---  | 10.5     | 10.1 | 9.8   | 9.5  |
| 29    | ---     | --- | ---      | --- | ---      | --- | ---     | ---  | ---      | ---  | 9.6   | 9.3  |
| 30    | ---     | --- | ---      | --- | ---      | --- | 10.9    | 9.5  | ---      | ---  | 9.5   | 9.0  |
| 31    | ---     | --- | ---      | --- | ---      | --- | 11.1    | 10.2 | ---      | ---  | 9.2   | 8.8  |
| MONTH | ---     | --- | ---      | --- | ---      | --- | ---     | ---  | 11.1     | 10.0 | 10.2  | 8.3  |

[illegible]

TEMPERATURE (DEG. C) OF WATER , WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

|       |     |     |     |     |     |     |     |     |     |     |     |     |
|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| MONTH | --- | --- | 9.5 | 5.5 | --- | --- | 1.0 | 0.0 | 2.5 | 0.0 | 9.5 | 1.5 |
|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

|       |      |     |      |      |     |     |     |     |     |     |     |     |
|-------|------|-----|------|------|-----|-----|-----|-----|-----|-----|-----|-----|
| MONTH | 16.5 | 7.5 | 20.0 | 13.5 | --- | --- | --- | --- | --- | --- | --- | --- |
|-------|------|-----|------|------|-----|-----|-----|-----|-----|-----|-----|-----|

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, at highway bridge on dual U.S. Highways 24 and 61, 0.5 mi (0.8 km) north of Palmyra, and 7 mi (11.3 km) upstream from mouth.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE          | DIS-CHARGE<br>(CFS) | DIS-SOLVED<br>SILICA<br>(SI02)<br>(MG/L) | DIS-SOLVED<br>IRON<br>(FE)<br>(UG/L) | DIS-SOLVED<br>MAN-<br>GANESE<br>(MN)<br>(UG/L) | DIS-SOLVED<br>CAL-<br>CIUM<br>(CA)<br>(MG/L) | DIS-SOLVED<br>MAG-<br>NE-<br>SIUM<br>(MG) | DIS-SOLVED<br>SODIUM<br>(NA)<br>(MG/L) | DIS-SOLVED<br>PO-<br>TAS-<br>SIUM<br>(K)<br>(MG/L) | BICAR-<br>BONATE<br>(HCO3)<br>(MG/L) | CAR-<br>BONATE<br>(CO3)<br>(MG/L) | DIS-SOLVED<br>SULFATE<br>(SO4)<br>(MG/L) | DIS-SOLVED<br>CHLO-<br>RIDE<br>(CL)<br>(MG/L) |
|---------------|---------------------|------------------------------------------|--------------------------------------|------------------------------------------------|----------------------------------------------|-------------------------------------------|----------------------------------------|----------------------------------------------------|--------------------------------------|-----------------------------------|------------------------------------------|-----------------------------------------------|
| OCT.<br>01... | 1330                | 9.8                                      | 270                                  | 16                                             | 23                                           | 4.1                                       | 3.6                                    | 5.9                                                | 76                                   | 0                                 | 17                                       | 4.0                                           |
| DEC.<br>03... | 89                  | 11                                       | 250                                  | 540                                            | 56                                           | 11                                        | 9.5                                    | 5.3                                                | 161                                  | 0                                 | 50                                       | 13                                            |
| FEB.<br>04... | 148                 | 12                                       | 80                                   | 440                                            | 60                                           | 11                                        | 10                                     | 2.9                                                | 184                                  | 0                                 | 49                                       | 7.9                                           |
| APR.<br>02... | 111                 | 8.1                                      | 100                                  | 290                                            | 55                                           | 11                                        | 11                                     | 3.0                                                | 164                                  | 0                                 | 58                                       | 6.9                                           |
| JUNE<br>05... | 231                 | 10                                       | 20                                   | 160                                            | 55                                           | 9.8                                       | 7.5                                    | 3.5                                                | 172                                  | 0                                 | 38                                       | 6.8                                           |
| AUG.<br>07... | 19                  | 9.7                                      | 10                                   | 160                                            | 70                                           | 12                                        | 12                                     | 3.3                                                | 234                                  | 0                                 | 40                                       | 11                                            |

| DATE          | NON-CAR-<br>BONATE<br>HARD-<br>NESS<br>(MG/L) | ALKA-<br>LINITY<br>AS<br>CACO3<br>(MG/L) | SPE-<br>CIFIC<br>CON-<br>DUCT-<br>ANCE<br>(MICRO-<br>MHOS) | PH<br>(UNITS) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | CHEM-<br>ICAL<br>OXYGEN<br>DEMAND<br>(LOW<br>LEVEL)<br>(MG/L) | DIS-<br>SOLVED<br>OXYGEN<br>(MG/L) | PER-<br>CENT<br>SATUR-<br>ATION | FECAL<br>COLI-<br>FORM<br>(COL.<br>PER<br>100 ML) | STREP-<br>TOCOCCI<br>(COL-<br>ONIES<br>PER<br>100 ML) |
|---------------|-----------------------------------------------|------------------------------------------|------------------------------------------------------------|---------------|----------------------------------------------|-----------------------------|---------------------------------------------------------------|------------------------------------|---------------------------------|---------------------------------------------------|-------------------------------------------------------|
| OCT.<br>01... | 12                                            | 62                                       | 183                                                        | 7.5           | 100                                          | 18.5                        | 66                                                            | 6.4                                | 67                              | 44000                                             | 43000                                                 |
| DEC.<br>03... | 53                                            | 132                                      | 397                                                        | 7.8           | 30                                           | 9.5                         | 20                                                            | 10.0                               | 87                              | 440                                               | 700                                                   |
| FEB.<br>04... | 44                                            | 151                                      | 465                                                        | 7.8           | 20                                           | .5                          | 10                                                            | 11.7                               | 81                              | 560                                               | 500                                                   |
| APR.<br>02... | 48                                            | 135                                      | 405                                                        | 7.8           | 50                                           | 12.0                        | 24                                                            | 8.4                                | 78                              | 2400                                              | 1400                                                  |
| JUNE<br>05... | 37                                            | 141                                      | 373                                                        | 7.6           | 30                                           | 20.0                        | 38                                                            | 6.7                                | 73                              | 31000                                             | 33000                                                 |
| AUG.<br>07... | 32                                            | 192                                      | 480                                                        | 8.0           | 7                                            | 21.5                        | 20                                                            | 7.5                                | 84                              | 530                                               | 120                                                   |

05501000 NORTH RIVER AT PALMYRA, MO.--Continued

DRAINAGE AREA.--373 mi<sup>2</sup> (966 km<sup>2</sup>).

PERIOD OF RECORD: Chemical analyses: August 1972 to September 1974.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE  | DIS-<br>SOLVED<br>FLUO-<br>RIDE<br>(F)<br>(MG/L) | TOTAL<br>NITRATE<br>(N)<br>(MG/L) | AMMONIA<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | ORGANIC<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | DIS-<br>SOL-<br>VED-<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | TOTAL<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(RESI-<br>DUE AT<br>180 C)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(TONS<br>PER<br>AC-FT) | DIS-<br>SOLVED<br>SOLIDS<br>(TONS<br>PER<br>DAY) | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | PERCENT<br>SODIUM | HARD-<br>NESS<br>(CA,MG)<br>(MG/L) |
|-------|--------------------------------------------------|-----------------------------------|-------------------------------------------|-------------------------------------------|----------------------------------------------------------|-------------------------------------------|------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------|-----------------------------------------|-------------------|------------------------------------|
| OCT.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
|       |                                                  |                                   |                                           |                                           |                                                          |                                           | A                                                                |                                                    |                                                  |                                         |                   |                                    |
| 03... | .2                                               | .92                               | .16                                       | .81                                       | .07                                                      | .17                                       | 260                                                              | .35                                                | 62.5                                             | .3                                      | 10                | 190                                |
| FEB.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 04... | .3                                               | 1.2                               | .13                                       | .34                                       | .03                                                      | .07                                       | 261                                                              | .36                                                | 104                                              | .3                                      | 10                | 200                                |
| APR.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 02... | .3                                               | .68                               | .32                                       | .65                                       | .01                                                      | .17                                       | 254                                                              | .35                                                | 76.1                                             | .4                                      | 11                | 180                                |
| JUNE  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 05... | .1                                               | 1.1                               | .14                                       | 1.9                                       | --                                                       | .10                                       | 236                                                              | .32                                                | 147                                              | .2                                      | 8                 | 180                                |
| AUG.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 07... | .2                                               | .05                               | .17                                       | .34                                       | .04                                                      | .15                                       | 278                                                              | .38                                                | 14.3                                             | .3                                      | 10                | 220                                |



05508000 SALT RIVER NEAR NEW LONDON, MO.

LOCATION.--Lat 39°36'44", long 91°24'30", NE¼NW¼ sec.36, T.56 N., R.5 W., Ralls County, at gaging station on left bank 180 ft (54.9 m) upstream from upstream bridge on dual U.S. Highway 61, 2 mi (3.2 km) north of New London, 8 mi (12.9 km) upstream from Spencer Creek and at mile 35.5 (57.1 km).

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE  | DIS-CHARGE<br>(CFS) | DIS-SOLVED<br>SILICA<br>(SiO <sub>2</sub> )<br>(MG/L) | DIS-SOLVED<br>IRON<br>(FE)<br>(UG/L) | DIS-SOLVED<br>MAN-<br>GANESE<br>(MN)<br>(UG/L) | DIS-SOLVED<br>CAL-<br>CIUM<br>(CA)<br>(MG/L) | DIS-SOLVED<br>MAG-<br>NE-<br>SIUM<br>(MG) | DIS-SOLVED<br>SODIUM<br>(NA)<br>(MG/L) | DIS-SOLVED<br>PO-<br>TAS-<br>SIUM<br>(K)<br>(MG/L) | BICAR-<br>BONATE<br>(HCO <sub>3</sub> )<br>(MG/L) | CAR-<br>BONATE<br>(CO <sub>3</sub> )<br>(MG/L) | DIS-SOLVED<br>SULFATE<br>(SO <sub>4</sub> )<br>(MG/L) | DIS-SOLVED<br>CHLO-<br>RIDE<br>(CL)<br>(MG/L) |
|-------|---------------------|-------------------------------------------------------|--------------------------------------|------------------------------------------------|----------------------------------------------|-------------------------------------------|----------------------------------------|----------------------------------------------------|---------------------------------------------------|------------------------------------------------|-------------------------------------------------------|-----------------------------------------------|
| OCT.  |                     |                                                       |                                      |                                                |                                              |                                           |                                        |                                                    |                                                   |                                                |                                                       |                                               |
| 01... | 7540                | 7.6                                                   | 230                                  | 8                                              | 17                                           | 3.5                                       | 5.0                                    | 5.0                                                | 52                                                | 0                                              | 17                                                    | 3.7                                           |
| NOV.  |                     |                                                       |                                      |                                                |                                              |                                           |                                        |                                                    |                                                   |                                                |                                                       |                                               |
| 06... | 190                 | 11                                                    | 130                                  | 300                                            | 59                                           | 10                                        | 14                                     | 5.2                                                | 172                                               | 0                                              | 54                                                    | 12                                            |
| DEC.  |                     |                                                       |                                      |                                                |                                              |                                           |                                        |                                                    |                                                   |                                                |                                                       |                                               |
| 04... | 9470                | 8.0                                                   | 430                                  | 170                                            | 31                                           | 5.5                                       | 5.6                                    | 5.2                                                | 84                                                | 0                                              | 29                                                    | 6.9                                           |
| JAN.  |                     |                                                       |                                      |                                                |                                              |                                           |                                        |                                                    |                                                   |                                                |                                                       |                                               |
| 07... | 400                 | 14                                                    | 90                                   | 460                                            | 61                                           | 12                                        | 31                                     | 4.8                                                | 166                                               | 0                                              | 64                                                    | 45                                            |
| FEB.  |                     |                                                       |                                      |                                                |                                              |                                           |                                        |                                                    |                                                   |                                                |                                                       |                                               |
| 04... | 1920                | 11                                                    | 170                                  | 180                                            | 40                                           | 7.3                                       | 9.8                                    | 3.5                                                | 112                                               | 0                                              | 43                                                    | 7.6                                           |
| MAR.  |                     |                                                       |                                      |                                                |                                              |                                           |                                        |                                                    |                                                   |                                                |                                                       |                                               |
| 05... | 3340                | 9.1                                                   | 120                                  | 140                                            | 41                                           | 7.4                                       | 10                                     | 3.1                                                | 112                                               | 0                                              | 48                                                    | 8.6                                           |
| APR.  |                     |                                                       |                                      |                                                |                                              |                                           |                                        |                                                    |                                                   |                                                |                                                       |                                               |
| 02... | 585                 | 8.4                                                   | 80                                   | 290                                            | 62                                           | 12                                        | 17                                     | 2.8                                                | 170                                               | 0                                              | 75                                                    | 10                                            |
| MAY   |                     |                                                       |                                      |                                                |                                              |                                           |                                        |                                                    |                                                   |                                                |                                                       |                                               |
| 07... | 681                 | 9.2                                                   | 80                                   | 130                                            | 46                                           | 8.9                                       | 11                                     | 3.9                                                | 132                                               | 0                                              | 49                                                    | 9.0                                           |
| JUNE  |                     |                                                       |                                      |                                                |                                              |                                           |                                        |                                                    |                                                   |                                                |                                                       |                                               |
| 05... | 1860                | 8.0                                                   | 60                                   | 30                                             | 33                                           | 5.1                                       | 5.9                                    | 3.4                                                | 98                                                | 0                                              | 22                                                    | 5.3                                           |
| JULY  |                     |                                                       |                                      |                                                |                                              |                                           |                                        |                                                    |                                                   |                                                |                                                       |                                               |
| 16... | 209                 | 8.9                                                   | 40                                   | 30                                             | 35                                           | 6.4                                       | 9.0                                    | 4.1                                                | 112                                               | 0                                              | 30                                                    | 9.4                                           |
| AUG.  |                     |                                                       |                                      |                                                |                                              |                                           |                                        |                                                    |                                                   |                                                |                                                       |                                               |
| 07... | 47                  | 7.5                                                   | 0                                    | 110                                            | 54                                           | 8.9                                       | 16                                     | 4.0                                                | 184                                               | 0                                              | 30                                                    | 18                                            |
| SEP.  |                     |                                                       |                                      |                                                |                                              |                                           |                                        |                                                    |                                                   |                                                |                                                       |                                               |
| 10... | 133                 | 6.3                                                   | 80                                   | 80                                             | 32                                           | 5.3                                       | 13                                     | 4.7                                                | 98                                                | 0                                              | 31                                                    | 12                                            |

| DATE  | NON-CAR-<br>BONATE<br>HARD-<br>NESS<br>(MG/L) | ALKA-<br>LINITY<br>AS<br>CaCO <sub>3</sub><br>(MG/L) | SPE-<br>CIFIC<br>CON-<br>DUCT-<br>ANCE<br>(MICRO-<br>MHOS) | PH<br>(UNITS) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | CHEM-<br>ICAL<br>OXYGEN<br>DEMAND<br>(LOW<br>LEVEL)<br>(MG/L) | DIS-<br>SOLVED<br>OXYGEN<br>(MG/L) | PER-<br>CENT<br>SATUR-<br>ATION | FECAL<br>COLI-<br>FORM<br>(COL.<br>PER<br>100 ML) | STREP-<br>TOCOCCI<br>(COL-<br>ONIES<br>PER<br>100 ML) |
|-------|-----------------------------------------------|------------------------------------------------------|------------------------------------------------------------|---------------|----------------------------------------------|-----------------------------|---------------------------------------------------------------|------------------------------------|---------------------------------|---------------------------------------------------|-------------------------------------------------------|
| OCT.  |                                               |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 01... | 14                                            | 43                                                   | 153                                                        | 7.4           | 100                                          | 20.0                        | 56                                                            | 6.2                                | 67                              | 5800                                              | 5400                                                  |
| NOV.  |                                               |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 06... | 47                                            | 141                                                  | 430                                                        | 8.0           | 10                                           | 7.0                         | 24                                                            | 12.4                               | 102                             | 70                                                | 40                                                    |
| DEC.  |                                               |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 04... | 31                                            | 69                                                   | 235                                                        | 7.6           | 100                                          | 9.5                         | 65                                                            | 8.4                                | 73                              | 9000                                              | 40000                                                 |
| JAN.  |                                               |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 07... | 66                                            | 136                                                  | 600                                                        | 7.3           | 20                                           | .0                          | 12                                                            | 11.2                               | 77                              | 45                                                | 130                                                   |
| FEB.  |                                               |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 04... | 38                                            | 92                                                   | 334                                                        | 7.6           | 70                                           | 1.5                         | 20                                                            | 11.4                               | 81                              | 140                                               | 520                                                   |
| MAR.  |                                               |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 05... | 41                                            | 92                                                   | 320                                                        | 7.6           | 80                                           | 10.0                        | 22                                                            | 9.6                                | 85                              | 140                                               | 60                                                    |
| APR.  |                                               |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 02... | 65                                            | 139                                                  | 445                                                        | 8.3           | 30                                           | 13.0                        | 20                                                            | 10.2                               | 96                              | 25                                                | 20                                                    |
| MAY   |                                               |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 07... | 43                                            | 108                                                  | 358                                                        | 7.8           | 50                                           | 16.0                        | 30                                                            | 8.4                                | 85                              | 500                                               | 200                                                   |
| JUNE  |                                               |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 05... | 23                                            | 80                                                   | 236                                                        | 7.4           | 100                                          | 20.5                        | 75                                                            | 5.8                                | 64                              | 40000                                             | 39000                                                 |
| JULY  |                                               |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 16... | 22                                            | 92                                                   | 278                                                        | 7.9           | 70                                           | 27.0                        | 29                                                            | 6.1                                | 76                              | 100                                               | 50                                                    |
| AUG.  |                                               |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 07... | 21                                            | 151                                                  | 430                                                        | 8.0           | 10                                           | 22.0                        | 23                                                            | 7.2                                | 82                              | 40                                                | 120                                                   |
| SEP.  |                                               |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 10... | 20                                            | 80                                                   | 273                                                        | 7.6           | 70                                           | 21.0                        | 26                                                            | 7.7                                | 86                              | 300                                               | 200                                                   |

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

DRAINAGE AREA.--2,480 mi<sup>2</sup> (6,423 km<sup>2</sup>).

PERIOD OF RECORD.--Chemical analyses: August 1967 to September 1974.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE  | DIS-<br>SOLVED<br>FLUO-<br>RIDE<br>(F)<br>(MG/L) | TOTAL<br>NITRATE<br>(N)<br>(MG/L) | AMMONIA<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | ORGANIC<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | DIS-<br>SOL-<br>VED-<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | TOTAL<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(RESI-<br>DUE AT<br>180 C)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(TONS<br>PER<br>AC-FT) | DIS-<br>SOLVED<br>SOLIDS<br>(TONS<br>PER<br>DAY) | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | PERCENT<br>SODIUM | HARD-<br>NESS<br>(CA,MG)<br>(MG/L) |
|-------|--------------------------------------------------|-----------------------------------|-------------------------------------------|-------------------------------------------|----------------------------------------------------------|-------------------------------------------|------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------|-----------------------------------------|-------------------|------------------------------------|
| OCT.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 01... | .2                                               | .23                               | .39                                       | 1.3                                       | .15                                                      | .33                                       | 124                                                              | .17                                                | 2520                                             | .3                                      | 15                | 57                                 |
| NOV.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 06... | .0                                               | .19                               | .16                                       | .72                                       | .09                                                      | .10                                       | 258                                                              | .35                                                | 132                                              | .4                                      | 14                | 190                                |
| DEC.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 04... | .2                                               | .84                               | .24                                       | 3.1                                       | .07                                                      | .47                                       | 149                                                              | .20                                                | 3810                                             | .2                                      | 10                | 100                                |
| JAN.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 07... | .2                                               | 1.9                               | .19                                       | .67                                       | .02                                                      | .13                                       | 325                                                              | .44                                                | 351                                              | 1.0                                     | 25                | 200                                |
| FEB.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 04... | .4                                               | 1.4                               | .19                                       | .52                                       | .02                                                      | .16                                       | 197                                                              | .27                                                | 1020                                             | .4                                      | 14                | 130                                |
| MAR.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 05... | .3                                               | 1.2                               | .16                                       | .36                                       | .02                                                      | .13                                       | 198                                                              | .27                                                | 1790                                             | .4                                      | 14                | 130                                |
| APR.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 02... | .2                                               | .06                               | .21                                       | .89                                       | .00                                                      | .07                                       | 288                                                              | .39                                                | 455                                              | .5                                      | 15                | 200                                |
| MAY   |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 07... | .6                                               | .97                               | .09                                       | 1.3                                       | .04                                                      | .16                                       | 236                                                              | .32                                                | 434                                              | .4                                      | 13                | 150                                |
| JUNE  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 05... | .2                                               | 1.5                               | .08                                       | 1.9                                       | --                                                       | 1.2                                       | 145                                                              | .20                                                | 728                                              | .3                                      | 11                | 100                                |
| JULY  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 16... | .2                                               | 1.1                               | .11                                       | 1.7                                       | .02                                                      | .17                                       | 158                                                              | .21                                                | 89.2                                             | .4                                      | 14                | 110                                |
| AUG.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 07... | .2                                               | .01                               | .08                                       | .85                                       | .02                                                      | .11                                       | 239                                                              | .33                                                | 30.3                                             | .5                                      | 16                | 170                                |
| SEP.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 10... | .3                                               | .73                               | .09                                       | 1.0                                       | .02                                                      | .22                                       | 165                                                              | .22                                                | 59.3                                             | .6                                      | 21                | 100                                |

05514500 CUIVRE RIVER NEAR TROY, MO.

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

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE          | DIS-<br>CHARGE<br>(CFS) | DIS-<br>SOLVED<br>SILICA<br>(SiO <sub>2</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>IRON<br>(FE)<br>(UG/L) | DIS-<br>SOLVED<br>MAN-<br>GANESE<br>(MN)<br>(UG/L) | DIS-<br>SOLVED<br>CAL-<br>CIUM<br>(CA)<br>(MG/L) | DIS-<br>SOLVED<br>MAG-<br>NE-<br>SIUM<br>(MG) | DIS-<br>SOLVED<br>SODIUM<br>(NA)<br>(MG/L) | DIS-<br>SOLVED<br>PO-<br>TAS-<br>SIUM<br>(K)<br>(MG/L) | BICAR-<br>BONATE<br>(HCO <sub>3</sub> )<br>(MG/L) | CAR-<br>BONATE<br>(CO <sub>3</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>SULFATE<br>(SO <sub>4</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>CHLO-<br>RIDE<br>(CL)<br>(MG/L) |
|---------------|-------------------------|-----------------------------------------------------------|------------------------------------------|----------------------------------------------------|--------------------------------------------------|-----------------------------------------------|--------------------------------------------|--------------------------------------------------------|---------------------------------------------------|------------------------------------------------|-----------------------------------------------------------|---------------------------------------------------|
| NOV.<br>05... | 87                      | 9.3                                                       | 250                                      | 230                                                | 36                                               | 6.4                                           | 5.7                                        | 7.1                                                    | 116                                               | 0                                              | 20                                                        | 9.8                                               |
| JAN.<br>08... | 144                     | 14                                                        | 120                                      | 450                                                | 63                                               | 11                                            | 8.9                                        | 3.3                                                    | 192                                               | 0                                              | 39                                                        | 10                                                |
| MAR.<br>05... | 347                     | 9.8                                                       | 100                                      | 190                                                | 48                                               | 7.6                                           | 6.9                                        | 2.8                                                    | 148                                               | 0                                              | 29                                                        | 7.6                                               |
| MAY<br>07...  | 240                     | 9.3                                                       | 110                                      | 250                                                | 48                                               | 7.7                                           | 6.8                                        | 3.4                                                    | 156                                               | 0                                              | 28                                                        | 6.8                                               |
| JULY<br>16... | 114                     | 9.6                                                       | 40                                       | 490                                                | 59                                               | 10                                            | 7.7                                        | 3.5                                                    | 216                                               | 0                                              | 29                                                        | 8.3                                               |
| SEP.<br>10... | 37                      | 8.5                                                       | 60                                       | 450                                                | 33                                               | 6.1                                           | 4.7                                        | 4.0                                                    | 112                                               | 0                                              | 15                                                        | 6.6                                               |

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE          | NON-<br>CAR-<br>BONATE<br>HARD-<br>NESS<br>(MG/L) | ALKA-<br>LINITY<br>AS<br>CaCO <sub>3</sub><br>(MG/L) | SPE-<br>CIFIC<br>CON-<br>DUCT-<br>ANCE<br>(MICRO-<br>MHOS) | PH<br>(UNITS) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | CHEM-<br>ICAL<br>OXYGEN<br>DEMAND<br>(LOW<br>LEVEL)<br>(MG/L) | DIS-<br>SOLVED<br>OXYGEN<br>(MG/L) | PER-<br>CENT<br>SATUR-<br>ATION | FECAL<br>COLI-<br>FORM<br>(COL.<br>PER<br>100 ML) | STREP-<br>TOCOCCI<br>(COL-<br>ONIES<br>PER<br>100 ML) |
|---------------|---------------------------------------------------|------------------------------------------------------|------------------------------------------------------------|---------------|----------------------------------------------|-----------------------------|---------------------------------------------------------------|------------------------------------|---------------------------------|---------------------------------------------------|-------------------------------------------------------|
| NOV.<br>05... | 21                                                | 95                                                   | 283                                                        | 7.4           | 80                                           | 8.5                         | 37                                                            | 8.3                                | 71                              | 1000                                              | 100                                                   |
| JAN.<br>08... | 45                                                | 157                                                  | 440                                                        | 7.3           | 10                                           | 0                           | 8                                                             | 12.6                               | 86                              | 45                                                | 90                                                    |
| MAR.<br>05... | 30                                                | 121                                                  | 335                                                        | 7.5           | 20                                           | 13.0                        | 12                                                            | 9.2                                | 87                              | 60                                                | 20                                                    |
| MAY<br>07...  | 24                                                | 128                                                  | 343                                                        | 7.7           | 40                                           | 15.5                        | 18                                                            | 8.5                                | 85                              | 840                                               | 340                                                   |
| JULY<br>16... | 11                                                | 177                                                  | 430                                                        | 7.9           | 7                                            | 26.0                        | 25                                                            | 6.9                                | 84                              | 200                                               | 210                                                   |
| SEP.<br>10... | 18                                                | 92                                                   | 248                                                        | 7.4           | 50                                           | 19.5                        | 19                                                            | 7.2                                | 77                              | 1400                                              | 550                                                   |

05514500 CUIVRE RIVER NEAR TROY, MO.--Continued

DRAINAGE AREA.--903 mi<sup>2</sup> (2,339 km<sup>2</sup>).

PERIOD OF RECORD.--Chemical analyses: July 1972 to September 1974.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE          | DIS-<br>SOLVED<br>FLUO-<br>RIDE<br>(F)<br>(MG/L) | TOTAL<br>NITRATE<br>(N)<br>(MG/L) | AMMONIA<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | ORGANIC<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | DIS-<br>SOL-<br>VED-<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | TOTAL<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(RESI-<br>DUE AT<br>180 C)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(TONS<br>PER<br>AC-FT) | DIS-<br>SOLVED<br>SOLIDS<br>(TONS<br>PER<br>DAY) | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | PERCENT<br>SODIUM | HARD-<br>NESS<br>(CA,MG)<br>(MG/L) |
|---------------|--------------------------------------------------|-----------------------------------|-------------------------------------------|-------------------------------------------|----------------------------------------------------------|-------------------------------------------|------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------|-----------------------------------------|-------------------|------------------------------------|
| NOV.<br>05... | .2                                               | 1.6                               | .00                                       | 1.2                                       | .18                                                      | .26                                       | 181                                                              | .25                                                | 42.5                                             | .2                                      | 9                 | 120                                |
| JAN.<br>08... | .1                                               | 2.0                               | .11                                       | .43                                       | .01                                                      | .08                                       | 263                                                              | .36                                                | 102                                              | .3                                      | 9                 | 200                                |
| MAR.<br>05... | .3                                               | 1.8                               | .16                                       | .27                                       | .01                                                      | .07                                       | 197                                                              | .27                                                | 185                                              | .2                                      | 9                 | 150                                |
| MAY<br>07...  | .3                                               | 1.4                               | .09                                       | .91                                       | .04                                                      | .12                                       | 210                                                              | .29                                                | 136                                              | .2                                      | 9                 | 150                                |
| JULY<br>16... | .2                                               | .15                               | .08                                       | 1.2                                       | .01                                                      | .09                                       | 224                                                              | .30                                                | 68.9                                             | .2                                      | 8                 | 190                                |
| SEP.<br>10... | .2                                               | .88                               | .15                                       | .18                                       | .02                                                      | .14                                       | 141                                                              | .19                                                | 14.1                                             | .2                                      | 8                 | 110                                |

06817800 NODAWAY RIVER NEAR OREGON, MO.

LOCATION.--Lat 39°58'19", long 94°59'46", Holt County, at bridge on U.S. Highway 59, 7 mi (11.3 km) east of Oregon.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE  | DIS-<br>CHARGE<br>(CFS) | DIS-<br>SOLVED<br>SILICA<br>(SiO <sub>2</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>IRON<br>(FE)<br>(UG/L) | DIS-<br>SOLVED<br>MAN-<br>GANESE<br>(MN)<br>(UG/L) | DIS-<br>SOLVED<br>CAL-<br>CIUM<br>(CA)<br>(MG/L) | DIS-<br>SOLVED<br>MAG-<br>NE-<br>SIUM<br>(MG) | DIS-<br>SOLVED<br>SODIUM<br>(NA)<br>(MG/L) | DIS-<br>SOLVED<br>PO-<br>TAS-<br>SIUM<br>(K)<br>(MG/L) | BICAR-<br>BONATE<br>(HCO <sub>3</sub> )<br>(MG/L) | CAR-<br>BONATE<br>(CO <sub>3</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>SULFATE<br>(SO <sub>4</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>CHLO-<br>RIDE<br>(CL)<br>(MG/L) |
|-------|-------------------------|-----------------------------------------------------------|------------------------------------------|----------------------------------------------------|--------------------------------------------------|-----------------------------------------------|--------------------------------------------|--------------------------------------------------------|---------------------------------------------------|------------------------------------------------|-----------------------------------------------------------|---------------------------------------------------|
| OCT.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 10... | 1600                    | 20                                                        | 10                                       | 340                                                | 53                                               | 14                                            | 11                                         | 4.4                                                    | 204                                               | 0                                              | 36                                                        | 6.9                                               |
| NOV.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 14... | 800                     | 16                                                        | 130                                      | 92                                                 | 63                                               | 15                                            | 13                                         | 2.6                                                    | 228                                               | 0                                              | 40                                                        | 7.9                                               |
| DEC.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 11... | 2750                    | 18                                                        | 70                                       | 70                                                 | 53                                               | 14                                            | 12                                         | 2.7                                                    | 202                                               | 0                                              | 36                                                        | 7.7                                               |
| JAN.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 22... | 4000                    | 12                                                        | 350                                      | 40                                                 | 34                                               | 8.1                                           | 6.8                                        | 3.8                                                    | 124                                               | 0                                              | 21                                                        | 5.7                                               |
| FEB.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 12... | 1500                    | 17                                                        | 80                                       | 70                                                 | 54                                               | 14                                            | 12                                         | 2.1                                                    | 192                                               | 0                                              | 38                                                        | 8.0                                               |
| MAR.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 12... | 1950                    | 15                                                        | 60                                       | 0                                                  | 51                                               | 13                                            | 11                                         | 2.8                                                    | 178                                               | 0                                              | 32                                                        | 7.9                                               |
| APR.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 09... | 800                     | 13                                                        | 10                                       | 30                                                 | 55                                               | 14                                            | 12                                         | 2.1                                                    | 200                                               | 0                                              | 39                                                        | 6.9                                               |
| MAY   |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 21... | 2800                    | 12                                                        | 60                                       | 0                                                  | 36                                               | 8.6                                           | 7.8                                        | 3.6                                                    | 140                                               | 0                                              | 25                                                        | 5.9                                               |
| JUNE  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 18... | 1500                    | 17                                                        | 10                                       | 30                                                 | 57                                               | 14                                            | 11                                         | 2.4                                                    | 200                                               | 0                                              | 38                                                        | 7.5                                               |
| JULY  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 23... | 250                     | 14                                                        | 20                                       | 140                                                | 56                                               | 17                                            | 13                                         | 2.9                                                    | 224                                               | 0                                              | 40                                                        | 8.8                                               |
| AUG.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 21... | 150                     | 7.7                                                       | 30                                       | 40                                                 | 47                                               | 13                                            | 11                                         | 4.6                                                    | 168                                               | 4                                              | 41                                                        | 8.5                                               |
| SEP.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 17... | 100                     | 7.5                                                       | 20                                       | 220                                                | 60                                               | 17                                            | 13                                         | 3.6                                                    | 240                                               | 0                                              | 45                                                        | 10                                                |

| DATE  | NON-<br>CAR-<br>BONATE<br>HARD-<br>NESS<br>(MG/L) | ALKA-<br>LINITY<br>AS<br>CACO <sub>3</sub><br>(MG/L) | SPE-<br>CIFIC<br>CON-<br>DUCT-<br>ANCE<br>(MICRO-<br>MHOS) | PH<br>(UNITS) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | CHEM-<br>ICAL<br>OXYGEN<br>DEMAND<br>(LOW<br>LEVEL)<br>(MG/L) | DIS-<br>SOLVED<br>OXYGEN<br>(MG/L) | PER-<br>CENT<br>SATUR-<br>ATION | FECAL<br>COLI-<br>FORM<br>(COL.<br>PER<br>100 ML) | STREP-<br>TOCOCCI<br>(COL-<br>ONIES<br>PER<br>100 ML) |
|-------|---------------------------------------------------|------------------------------------------------------|------------------------------------------------------------|---------------|----------------------------------------------|-----------------------------|---------------------------------------------------------------|------------------------------------|---------------------------------|---------------------------------------------------|-------------------------------------------------------|
| OCT.  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 10... | 23                                                | 167                                                  | 383                                                        | 8.0           | 20                                           | 19.5                        | 41                                                            | 7.0                                | 75                              | 76000                                             | 90000                                                 |
| NOV.  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 14... | 32                                                | 187                                                  | 465                                                        | 7.9           | 4                                            | 10.0                        | 13                                                            | 9.5                                | 84                              | 450                                               | 1000                                                  |
| DEC.  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 11... | 24                                                | 166                                                  | 430                                                        | 7.7           | 5                                            | 1.0                         | 19                                                            | 7.3                                | 51                              | 1900                                              | 900                                                   |
| JAN.  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 22... | 17                                                | 102                                                  | 292                                                        | 7.7           | 80                                           | .0                          | 62                                                            | 9.4                                | 64                              | 6000                                              | 14000                                                 |
| FEB.  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 12... | 35                                                | 157                                                  | 411                                                        | 7.7           | 10                                           | 1.0                         | 18                                                            | 11.2                               | 79                              | 100                                               | 400                                                   |
| MAR.  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 12... | 35                                                | 146                                                  | 378                                                        | 7.7           | 20                                           | 7.0                         | 34                                                            | 7.7                                | 64                              | 2400                                              | 400                                                   |
| APR.  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 09... | 31                                                | 164                                                  | 417                                                        | 8.0           | 40                                           | 9.5                         | 18                                                            | 8.5                                | 74                              | 600                                               | 550                                                   |
| MAY   |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 21... | 10                                                | 115                                                  | 280                                                        | 7.6           | 40                                           | 22.0                        | 250                                                           | 5.9                                | 67                              | 32000                                             | 18000                                                 |
| JUNE  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 18... | 36                                                | 164                                                  | 425                                                        | 8.0           | 10                                           | 21.0                        | 36                                                            | 7.1                                | 79                              | 1600                                              | 1300                                                  |
| JULY  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 23... | 26                                                | 184                                                  | 445                                                        | 7.9           | 8                                            | 25.0                        | 26                                                            | 7.5                                | 90                              | 580                                               | 340                                                   |
| AUG.  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 21... | 26                                                | 144                                                  | 380                                                        | 8.5           | 7                                            | 25.0                        | 36                                                            | 6.5                                | 78                              | 850                                               | 1300                                                  |
| SEP.  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 17... | 23                                                | 197                                                  | 455                                                        | 8.1           | 10                                           | 19.5                        | 25                                                            | 8.1                                | 87                              | 3100                                              | 1800                                                  |



06817800 NODAWAY RIVER NEAR OREGON, MO.--Continued

PERIOD OF RECORD.--Chemical analyses: November 1968 to September 1974.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE  | DIS-<br>SOLVED<br>FLUO-<br>RIDE<br>(F)<br>(MG/L) | TOTAL<br>NITRATE<br>(N)<br>(MG/L) | AMMONIA<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | ORGANIC<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | DIS-<br>SOL-<br>VED-<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | TOTAL<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(RESI-<br>DUE AT<br>180 C)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(TONS<br>PER<br>AC-FT) | DIS-<br>SOLVED<br>SOLIDS<br>(TONS<br>PER<br>DAY) | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | PERCENT<br>SODIUM | HARD-<br>NESS<br>(CA,MG)<br>(MG/L) |
|-------|--------------------------------------------------|-----------------------------------|-------------------------------------------|-------------------------------------------|----------------------------------------------------------|-------------------------------------------|------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------|-----------------------------------------|-------------------|------------------------------------|
| OCT.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 10... | .4                                               | 2.1                               | .07                                       | 1.9                                       | .16                                                      | 1.1                                       | 284                                                              | .39                                                | 1230                                             | .3                                      | 11                | 190                                |
| NOV.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 14... | .3                                               | 2.4                               | .02                                       | .55                                       | .09                                                      | .21                                       | 277                                                              | .38                                                | 598                                              | .4                                      | 11                | 220                                |
| DEC.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 11... | .3                                               | 2.6                               | .44                                       | .46                                       | .08                                                      | .31                                       | 266                                                              | .36                                                | 1980                                             | .4                                      | 12                | 190                                |
| JAN.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 22... | .3                                               | 2.1                               | .50                                       | 3.3                                       | .07                                                      | .82                                       | 162                                                              | .22                                                | 1750                                             | .3                                      | 11                | 120                                |
| FEB.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 12... | .4                                               | 3.3                               | .07                                       | .69                                       | .06                                                      | .08                                       | 257                                                              | .35                                                | 1040                                             | .4                                      | 12                | 190                                |
| MAR.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 12... | .2                                               | 2.7                               | .13                                       | .87                                       | .09                                                      | .44                                       | 230                                                              | .31                                                | 1210                                             | .4                                      | 12                | 180                                |
| APR.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 09... | .4                                               | 2.6                               | .26                                       | .59                                       | .10                                                      | .32                                       | 252                                                              | .34                                                | 544                                              | .4                                      | 12                | 200                                |
| MAY   |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 21... | .4                                               | 3.4                               | 1.2                                       | 4.8                                       | .11                                                      | 3.6                                       | 189                                                              | .26                                                | 1430                                             | .3                                      | 12                | 130                                |
| JUNE  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 18... | .4                                               | 3.6                               | .05                                       | 1.4                                       | --                                                       | .46                                       | 260                                                              | .35                                                | 1050                                             | .3                                      | 11                | 200                                |
| JULY  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 23... | .3                                               | .48                               | .11                                       | .46                                       | .07                                                      | .27                                       | 267                                                              | .36                                                | 180                                              | .4                                      | 12                | 210                                |
| AUG.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 21... | .4                                               | .02                               | .13                                       | 1.7                                       | .07                                                      | .37                                       | 231                                                              | .31                                                | 93.6                                             | .4                                      | 12                | 170                                |
| SEP.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 17... | .3                                               | .12                               | .06                                       | 1.2                                       | .06                                                      | .30                                       | 277                                                              | .38                                                | 74.8                                             | .4                                      | 11                | 220                                |

06818000 MISSOURI RIVER AT ST. JOSEPH, MO.

LOCATION.--Lat 39°48'14", long 94°52'34", Buchanan County, at raw-water intake of St. Joseph Water Company water treatment plant at mile 449.1 (722.6 km).

DRAINAGE AREA.--424,300 mi<sup>2</sup> (1,098,937 km<sup>2</sup>), approximately (at gaging station).

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE  | DIS-<br>CHARGE<br>(CFS) | DIS-<br>SOLVED<br>SILICA<br>(SiO <sub>2</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>IRON<br>(FE)<br>(UG/L) | DIS-<br>SOLVED<br>MAN-<br>GANESE<br>(MN)<br>(UG/L) | DIS-<br>SOLVED<br>CAL-<br>CIUM<br>(CA)<br>(MG/L) | DIS-<br>SOLVED<br>MAG-<br>NE-<br>SIUM<br>(MG) | DIS-<br>SOLVED<br>SODIUM<br>(NA)<br>(MG/L) | DIS-<br>SOLVED<br>PO-<br>TAS-<br>SIUM<br>(K)<br>(MG/L) | BICAR-<br>BONATE<br>(HCO <sub>3</sub> )<br>(MG/L) | CAR-<br>BONATE<br>(CO <sub>3</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>SULFATE<br>(SO <sub>4</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>CHLO-<br>RIDE<br>(CL)<br>(MG/L) |
|-------|-------------------------|-----------------------------------------------------------|------------------------------------------|----------------------------------------------------|--------------------------------------------------|-----------------------------------------------|--------------------------------------------|--------------------------------------------------------|---------------------------------------------------|------------------------------------------------|-----------------------------------------------------------|---------------------------------------------------|
| OCT.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 10... | 70700                   | 18                                                        | 30                                       | 70                                                 | 66                                               | 21                                            | 55                                         | 6.4                                                    | 232                                               | 0                                              | 160                                                       | 16                                                |
| NOV.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 14... | 46300                   | 15                                                        | 140                                      | 20                                                 | 67                                               | 22                                            | 58                                         | 6.0                                                    | 234                                               | 0                                              | 160                                                       | 16                                                |
| DEC.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 11... | 38800                   | 18                                                        | 100                                      | 50                                                 | 73                                               | 23                                            | 55                                         | 5.2                                                    | 256                                               | 0                                              | 150                                                       | 21                                                |
| JAN.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 23... | 42000                   | 15                                                        | 240                                      | 50                                                 | 56                                               | 16                                            | 42                                         | 5.7                                                    | 198                                               | 0                                              | 110                                                       | 18                                                |
| FEB.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 12... | 37400                   | 19                                                        | 100                                      | 20                                                 | 71                                               | 20                                            | 50                                         | 6.5                                                    | 240                                               | 0                                              | 140                                                       | 20                                                |
| MAR.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 11... | 43900                   | 18                                                        | 170                                      | 25                                                 | 65                                               | 19                                            | 46                                         | 6.2                                                    | 230                                               | 0                                              | 110                                                       | 19                                                |
| APR.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 08... | 51000                   | 13                                                        | 60                                       | 360                                                | 64                                               | 21                                            | 57                                         | 5.7                                                    | 222                                               | 0                                              | 160                                                       | 16                                                |
| MAY   |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 21... | 89200                   | 9.4                                                       | 50                                       | 0                                                  | 47                                               | 13                                            | 30                                         | 6.2                                                    | 176                                               | 0                                              | 87                                                        | 14                                                |
| JUNE  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 17... | 48000                   | 13                                                        | 20                                       | 0                                                  | 63                                               | 21                                            | 52                                         | 5.6                                                    | 216                                               | 0                                              | 150                                                       | 17                                                |
| JULY  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 22... | 39000                   | 7.1                                                       | 20                                       | 30                                                 | 59                                               | 21                                            | 66                                         | 5.3                                                    | 200                                               | 0                                              | 190                                                       | 16                                                |
| AUG.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 20... | 42200                   | 8.3                                                       | 50                                       | 10                                                 | 60                                               | 20                                            | 63                                         | 6.7                                                    | 196                                               | 0                                              | 180                                                       | 17                                                |
| SEP.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 17... | 37600                   | 8.8                                                       | 10                                       | 0                                                  | 58                                               | 22                                            | 66                                         | 5.6                                                    | 204                                               | 0                                              | 180                                                       | 16                                                |

| DATE  | NON-<br>CAR-<br>BONATE<br>HARD-<br>NESS<br>(MG/L) | ALKA-<br>LINITY<br>AS<br>CACO <sub>3</sub><br>(MG/L) | SPE-<br>CIFIC<br>CON-<br>DUCT-<br>ANCE<br>(MICRO-<br>MHOS) | PH<br>(UNITS) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | CHEM-<br>ICAL<br>OXYGEN<br>DEMAND<br>(LOW<br>LEVEL)<br>(MG/L) | DIS-<br>SOLVED<br>OXYGEN<br>(MG/L) | PER-<br>CENT<br>SATUR-<br>ATION | FECAL<br>COLI-<br>FORM<br>(COL.<br>PER<br>100 ML) | STREP-<br>TOCOCCI<br>(COL-<br>ONIES<br>PER<br>100 ML) |
|-------|---------------------------------------------------|------------------------------------------------------|------------------------------------------------------------|---------------|----------------------------------------------|-----------------------------|---------------------------------------------------------------|------------------------------------|---------------------------------|---------------------------------------------------|-------------------------------------------------------|
| OCT.  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 10... | 60                                                | 190                                                  | 680                                                        | 8.1           | 7                                            | 18.5                        | 15                                                            | 6.4                                | 67                              | 3800                                              | 3800                                                  |
| NOV.  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 14... | 66                                                | 192                                                  | 750                                                        | 8.1           | 5                                            | 8.0                         | 20                                                            | 9.6                                | 81                              | 3800                                              | 2200                                                  |
| DEC.  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 11... | 67                                                | 210                                                  | 725                                                        | 8.0           | 6                                            | 1.5                         | 15                                                            | 11.5                               | 82                              | 4200                                              | 1400                                                  |
| JAN.  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 23... | 48                                                | 162                                                  | 625                                                        | 7.8           | 10                                           | .0                          | 32                                                            | 10.0                               | 68                              | 2000                                              | 14000                                                 |
| FEB.  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 12... | 63                                                | 197                                                  | 714                                                        | 8.0           | 10                                           | 3.0                         | 20                                                            | 11.0                               | 81                              | 1200                                              | 800                                                   |
| MAR.  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 11... | 52                                                | 189                                                  | 675                                                        | 8.1           | 7                                            | 8.5                         | 24                                                            | 8.0                                | 68                              | 5800                                              | 16000                                                 |
| APR.  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 08... | 64                                                | 182                                                  | 755                                                        | 8.2           | 3                                            | 8.5                         | 18                                                            | 8.5                                | 73                              | 2100                                              | 650                                                   |
| MAY   |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 21... | 27                                                | 144                                                  | 490                                                        | 7.6           | 20                                           | 19.0                        | 640                                                           | 3.6                                | 38                              | 78000                                             | 60000                                                 |
| JUNE  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 17... | 67                                                | 177                                                  | 680                                                        | 8.1           | 8                                            | 23.0                        | 2                                                             | 6.1                                | 70                              | 4800                                              | 500                                                   |
| JULY  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 22... | 70                                                | 164                                                  | 750                                                        | 8.2           | 3                                            | 29.0                        | 28                                                            | 6.6                                | 86                              | 500                                               | 20                                                    |
| AUG.  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 20... | 71                                                | 161                                                  | 740                                                        | 8.1           | 6                                            | 26.0                        | 25                                                            | 6.0                                | 73                              | 5600                                              | 1400                                                  |
| SEP.  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 17... | 73                                                | 167                                                  | 730                                                        | 8.3           | 10                                           | 18.0                        | 13                                                            | 7.6                                | 79                              | 4200                                              | 450                                                   |

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

PERIOD OF RECORD.--Chemical analyses: October 1969 to September 1974.

REMARKS.--Records of discharge are given for gaging station Missouri River at St. Joseph 0.9 mi (1.4 km) downstream.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE  | DIS-<br>SOLVED<br>FLUO-<br>RIDE<br>(F)<br>(MG/L) | TOTAL<br>NITRATE<br>(N)<br>(MG/L) | AMMONIA<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | ORGANIC<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | DIS-<br>SOL-<br>VED-<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | TOTAL<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(RESI-<br>DUE AT<br>180 C)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(TONS<br>PER<br>AC-FT) | DIS-<br>SOLVED<br>SOLIDS<br>(TONS<br>PER<br>DAY) | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | PERCENT<br>SODIUM | HARD-<br>NESS<br>(CA,MG)<br>(MG/L) |
|-------|--------------------------------------------------|-----------------------------------|-------------------------------------------|-------------------------------------------|----------------------------------------------------------|-------------------------------------------|------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------|-----------------------------------------|-------------------|------------------------------------|
| OCT.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 10... | .7                                               | 1.1                               | .03                                       | .25                                       | .05                                                      | .25                                       | 462                                                              | .63                                                | 88200                                            | 1.5                                     | 32                | 250                                |
| NOV.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 14... | .3                                               | 1.1                               | .06                                       | .43                                       | .11                                                      | .19                                       | 467                                                              | .64                                                | 58400                                            | 1.6                                     | 32                | 260                                |
| DEC.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 11... | .5                                               | 1.8                               | .43                                       | .67                                       | .09                                                      | .22                                       | 479                                                              | .65                                                | 50200                                            | 1.4                                     | 30                | 280                                |
| JAN.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 23... | .5                                               | 1.9                               | .42                                       | 1.1                                       | .11                                                      | .30                                       | 370                                                              | .50                                                | 42000                                            | 1.3                                     | 30                | 210                                |
| FEB.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 12... | .5                                               | 1.6                               | .15                                       | .59                                       | .11                                                      | .25                                       | 457                                                              | .62                                                | 46100                                            | 1.4                                     | 29                | 260                                |
| MAR.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 11... | .6                                               | 1.7                               | .09                                       | .83                                       | .11                                                      | .35                                       | 420                                                              | .57                                                | 49800                                            | 1.3                                     | 29                | 240                                |
| APR.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 08... | .5                                               | 1.1                               | .12                                       | .63                                       | .10                                                      | .32                                       | 464                                                              | .63                                                | 63900                                            | 1.6                                     | 33                | 250                                |
| MAY   |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 21... | .5                                               | 2.4                               | .76                                       | 15                                        | .11                                                      | 2.3                                       | 309                                                              | .42                                                | 74400                                            | 1.0                                     | 27                | 170                                |
| JUNE  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 17... | .5                                               | 1.4                               | .05                                       | 1.5                                       | --                                                       | .35                                       | 448                                                              | .61                                                | 58100                                            | 1.5                                     | 31                | 240                                |
| JULY  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 22... | .5                                               | .14                               | .05                                       | .60                                       | .08                                                      | .22                                       | 482                                                              | .66                                                | 50800                                            | 1.9                                     | 37                | 230                                |
| AUG.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 20... | .5                                               | .57                               | .05                                       | .50                                       | .09                                                      | .32                                       | 463                                                              | .63                                                | 52800                                            | 1.8                                     | 36                | 230                                |
| SEP.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 17... | .5                                               | .34                               | .05                                       | .72                                       | .11                                                      | .25                                       | 480                                                              | .65                                                | 48700                                            | 1.9                                     | 37                | 240                                |

06821200 PLATTE RIVER AT PLATTE CITY, MO.

LOCATION.--Lat 39°22'10", long 94°47'10", Platte County, at bridge on State Highway 92 in Platte City.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE  | DIS-<br>CHARGE<br>(CFS) | DIS-<br>SOLVED<br>SILICA<br>(SiO <sub>2</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>IRON<br>(FE)<br>(UG/L) | DIS-<br>SOLVED<br>MAN-<br>GANESE<br>(MN)<br>(UG/L) | DIS-<br>SOLVED<br>CAL-<br>CIUM<br>(CA)<br>(MG/L) | DIS-<br>SOLVED<br>MAG-<br>NE-<br>SIUM<br>(MG) | DIS-<br>SOLVED<br>SODIUM<br>(NA)<br>(MG/L) | DIS-<br>SOLVED<br>PO-<br>TAS-<br>SIUM<br>(K)<br>(MG/L) | BICAR-<br>BONATE<br>(HCO <sub>3</sub> )<br>(MG/L) | CAR-<br>BONATE<br>(CO <sub>3</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>SULFATE<br>(SO <sub>4</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>CHLO-<br>RIDE<br>(CL)<br>(MG/L) |
|-------|-------------------------|-----------------------------------------------------------|------------------------------------------|----------------------------------------------------|--------------------------------------------------|-----------------------------------------------|--------------------------------------------|--------------------------------------------------------|---------------------------------------------------|------------------------------------------------|-----------------------------------------------------------|---------------------------------------------------|
| OCT.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 09... | 1600                    | 19                                                        | 80                                       | 120                                                | 56                                               | 11                                            | 11                                         | 5.7                                                    | 196                                               | 0                                              | 34                                                        | 8.1                                               |
| NOV.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 13... | 700                     | 15                                                        | 190                                      | 370                                                | 71                                               | 14                                            | 14                                         | 3.9                                                    | 266                                               | 0                                              | 46                                                        | 9.2                                               |
| DEC.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 10... | 1600                    | 15                                                        | 80                                       | 280                                                | 51                                               | 11                                            | 11                                         | 4.1                                                    | 184                                               | 0                                              | 34                                                        | 9.2                                               |
| JAN.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 23... | 17400                   | 9.8                                                       | 520                                      | 160                                                | 31                                               | 6.6                                           | 7.9                                        | 4.4                                                    | 102                                               | 0                                              | 25                                                        | 8.5                                               |
| FEB.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 12... | 810                     | 18                                                        | 60                                       | 330                                                | 70                                               | 14                                            | 14                                         | 3.0                                                    | 242                                               | 0                                              | 45                                                        | 11                                                |
| MAR.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 11... | 3200                    | 11                                                        | 170                                      | 0                                                  | 41                                               | 9.2                                           | 10                                         | 3.9                                                    | 148                                               | 0                                              | 28                                                        | 10                                                |
| APR.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 08... | 500                     | 3.2                                                       | 70                                       | 50                                                 | 64                                               | 15                                            | 16                                         | 2.4                                                    | 223                                               | 2                                              | 50                                                        | 9.9                                               |
| MAY   |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 20... | 25000                   | 6.8                                                       | 290                                      | 20                                                 | 18                                               | 3.5                                           | 3.7                                        | 3.5                                                    | 68                                                | 0                                              | 11                                                        | 3.9                                               |
| JUNE  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 17... | 2050                    | 13                                                        | 80                                       | 40                                                 | 44                                               | 9.1                                           | 9.1                                        | 3.6                                                    | 152                                               | 0                                              | 28                                                        | 7.0                                               |
| JULY  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 22... | 200                     | 11                                                        | 20                                       | 530                                                | 76                                               | 16                                            | 16                                         | 3.9                                                    | 286                                               | 0                                              | 43                                                        | 10                                                |
| AUG.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 20... | 100                     | 9.5                                                       | 30                                       | 220                                                | 60                                               | 13                                            | 15                                         | 4.4                                                    | 236                                               | 0                                              | 40                                                        | 12                                                |
| SEP.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 16... | 150                     | 8.3                                                       | 30                                       | 60                                                 | 49                                               | 9.7                                           | 12                                         | 4.3                                                    | 172                                               | 0                                              | 31                                                        | 10                                                |

| DATE  | NON-<br>CAR-<br>BONATE<br>HARD-<br>NESS<br>(MG/L) | ALKA-<br>LINITY<br>AS<br>CACO <sub>3</sub><br>(MG/L) | SPE-<br>CIFIC<br>CON-<br>DUCT-<br>ANCE<br>(MICRO-<br>MHOS) | PH<br>(UNITS) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | CHEM-<br>ICAL<br>OXYGEN<br>DEMAND<br>(LOW<br>LEVEL)<br>(MG/L) | DIS-<br>SOLVED<br>OXYGEN<br>(MG/L) | PER-<br>CENT<br>SATUR-<br>ATION | FECAL<br>COLI-<br>FORM<br>(COL.<br>PER<br>100 ML) | STREP-<br>TOCOCCI<br>(COL-<br>ONIES<br>PER<br>100 ML) |
|-------|---------------------------------------------------|------------------------------------------------------|------------------------------------------------------------|---------------|----------------------------------------------|-----------------------------|---------------------------------------------------------------|------------------------------------|---------------------------------|---------------------------------------------------|-------------------------------------------------------|
| OCT.  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 09... | 29                                                | 161                                                  | 385                                                        | 7.7           | 30                                           | 20.0                        | 26                                                            | 2.1                                | 23                              | 5200                                              | 5900                                                  |
| NOV.  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 13... | 17                                                | 218                                                  | 550                                                        | 8.1           | 8                                            | 9.0                         | 17                                                            | 9.2                                | 79                              | 170                                               | 80                                                    |
| DEC.  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 10... | 22                                                | 151                                                  | 390                                                        | 7.6           | 20                                           | 1.5                         | 38                                                            | 10.1                               | 72                              | 8000                                              | 31000                                                 |
| JAN.  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 23... | 21                                                | 84                                                   | 257                                                        | 7.3           | 90                                           | .0                          | 64                                                            | 10.5                               | 72                              | 4200                                              | 14000                                                 |
| FEB.  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 12... | 34                                                | 198                                                  | 490                                                        | 7.7           | 10                                           | 1.5                         | 25                                                            | 11.2                               | 80                              | 150                                               | 350                                                   |
| MAR.  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 11... | 19                                                | 121                                                  | 321                                                        | 7.8           | 100                                          | 11.0                        | 160                                                           | 7.8                                | 71                              | 20000                                             | 60000                                                 |
| APR.  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 08... | 35                                                | 186                                                  | 475                                                        | 8.4           | 6                                            | 12.0                        | 21                                                            | 10.4                               | 96                              | 60                                                | 40                                                    |
| MAY   |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 20... | 4                                                 | 56                                                   | 149                                                        | 7.3           | 200                                          | 21.0                        | 150                                                           | 5.3                                | 59                              | 18000                                             | 6200                                                  |
| JUNE  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 17... | 23                                                | 125                                                  | 342                                                        | 7.6           | 30                                           | 22.0                        | 42                                                            | 5.7                                | 65                              | 4600                                              | 3350                                                  |
| JULY  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 22... | 21                                                | 235                                                  | 540                                                        | 7.8           | 60                                           | 30.0                        | 27                                                            | 5.9                                | 28                              | 150                                               | 250                                                   |
| AUG.  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 20... | 10                                                | 194                                                  | 462                                                        | 8.0           | 7                                            | 27.0                        | 25                                                            | 5.8                                | 72                              | 300                                               | 300                                                   |
| SEP.  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 16... | 19                                                | 141                                                  | 360                                                        | 7.8           | 10                                           | 19.5                        | 39                                                            | 6.3                                | 68                              | 1800                                              | 3900                                                  |

06821200 PLATTE RIVER AT PLATTE CITY, MO.--Continued

PERIOD OF RECORD.--Chemical analyses: August 1967 to September 1974.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE          | DIS-<br>SOLVED<br>FLUO-<br>RIDE<br>(F)<br>(MG/L) | TOTAL<br>NITRATE<br>(N)<br>(MG/L) | AMMONIA<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | ORGANIC<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | DIS-<br>SOL-<br>VED-<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | TOTAL<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(RESI-<br>DUE AT<br>180 C)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(TONS<br>PER<br>AC-FT) | DIS-<br>SOLVED<br>SOLIDS<br>(TONS<br>PER<br>DAY) | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | PERCENT<br>SODIUM | HARD-<br>NESS<br>(CA,MG)<br>(MG/L) |
|---------------|--------------------------------------------------|-----------------------------------|-------------------------------------------|-------------------------------------------|----------------------------------------------------------|-------------------------------------------|------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------|-----------------------------------------|-------------------|------------------------------------|
| OCT.<br>09... | .5                                               | 1.3                               | .11                                       | 1.2                                       | .11                                                      | .34                                       | 272                                                              | .37                                                | 1180                                             | .4                                      | 11                | 190                                |
| NOV.<br>13... | .2                                               | 1.1                               | .01                                       | .43                                       | .06                                                      | .56                                       | 309                                                              | .42                                                | 584                                              | .4                                      | 11                | 240                                |
| DEC.<br>10... | .3                                               | 2.1                               | .68                                       | .82                                       | .11                                                      | .50                                       | 246                                                              | .33                                                | 1060                                             | .4                                      | 12                | 170                                |
| JAN.<br>23... | .4                                               | 2.2                               | .64                                       | 1.8                                       | .06                                                      | .60                                       | 163                                                              | .22                                                | 7660                                             | .3                                      | 14                | 100                                |
| FEB.<br>12... | .3                                               | 3.9                               | .15                                       | .68                                       | .05                                                      | .24                                       | 304                                                              | .41                                                | 665                                              | .4                                      | 11                | 230                                |
| MAR.<br>11... | .3                                               | 1.9                               | .30                                       | 4.3                                       | .09                                                      | 1.1                                       | 216                                                              | .29                                                | 1870                                             | .4                                      | 13                | 140                                |
| APR.<br>08... | .4                                               | .02                               | .12                                       | 1.1                                       | .00                                                      | .24                                       | 279                                                              | .38                                                | 377                                              | .5                                      | 13                | 220                                |
| MAY<br>20...  | .3                                               | 2.6                               | 2.4                                       | 3.4                                       | .08                                                      | .77                                       | 113                                                              | .15                                                | 7630                                             | .2                                      | 11                | 59                                 |
| JUNE<br>17... | .3                                               | 2.9                               | .26                                       | 3.0                                       | --                                                       | .82                                       | 207                                                              | .28                                                | 1150                                             | .3                                      | 12                | 150                                |
| JULY<br>22... | .3                                               | .00                               | .18                                       | 1.0                                       | .07                                                      | .28                                       | 326                                                              | .44                                                | 176                                              | .4                                      | 12                | 260                                |
| AUG.<br>20... | .4                                               | .19                               | .08                                       | 1.5                                       | .08                                                      | .18                                       | 278                                                              | .38                                                | 75.1                                             | .5                                      | 14                | 200                                |
| SEP.<br>16... | .3                                               | .91                               | .05                                       | 1.7                                       | .11                                                      | .56                                       | 221                                                              | .30                                                | 89.5                                             | .4                                      | 13                | 160                                |



06894100 MISSOURI RIVER AT SIBLEY, MO.

LOCATION.--Lat 39°10'46", long 94°11'03", in NE&NW¼ sec.2, T.50 N., R.30 W., Jackson County, at Missouri Public Service Company steam generating plant at Sibley.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE  | DIS-<br>CHARGE<br>(CFS) | DIS-<br>SOLVED<br>SILICA<br>(SiO2)<br>(MG/L) | DIS-<br>SOLVED<br>IRON<br>(FE)<br>(UG/L) | DIS-<br>SOLVED<br>MAN-<br>GANESE<br>(MN)<br>(UG/L) | DIS-<br>SOLVED<br>CAL-<br>CIUM<br>(CA)<br>(MG/L) | DIS-<br>SOLVED<br>MAG-<br>NE-<br>SIUM<br>(MG) | DIS-<br>SOLVED<br>SODIUM<br>(NA)<br>(MG/L) | DIS-<br>SOLVED<br>PO-<br>TAS-<br>SIUM<br>(K)<br>(MG/L) | BICAR-<br>BONATE<br>(HCO3)<br>(MG/L) | CAR-<br>BONATE<br>(CO3)<br>(MG/L) | DIS-<br>SOLVED<br>SULFATE<br>(SO4)<br>(MG/L) | DIS-<br>SOLVED<br>CHLO-<br>RIDE<br>(CL)<br>(MG/L) |
|-------|-------------------------|----------------------------------------------|------------------------------------------|----------------------------------------------------|--------------------------------------------------|-----------------------------------------------|--------------------------------------------|--------------------------------------------------------|--------------------------------------|-----------------------------------|----------------------------------------------|---------------------------------------------------|
| OCT.  |                         |                                              |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                      |                                   |                                              |                                                   |
| 09... | 82600                   | 16                                           | 90                                       | 80                                                 | 64                                               | 16                                            | 42                                         | 6.9                                                    | 220                                  | 0                                 | 120                                          | 19                                                |
| NOV.  |                         |                                              |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                      |                                   |                                              |                                                   |
| 13... | 88700                   | 13                                           | 160                                      | 0                                                  | 57                                               | 16                                            | 42                                         | 7.0                                                    | 180                                  | 0                                 | 110                                          | 23                                                |
| DEC.  |                         |                                              |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                      |                                   |                                              |                                                   |
| 10... | 60800                   | 15                                           | 40                                       | 70                                                 | 73                                               | 18                                            | 46                                         | 5.7                                                    | 244                                  | 0                                 | 120                                          | 33                                                |
| JAN.  |                         |                                              |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                      |                                   |                                              |                                                   |
| 23... | 73900                   | 13                                           | 280                                      | 30                                                 | 64                                               | 15                                            | 44                                         | 5.2                                                    | 206                                  | 0                                 | 93                                           | 39                                                |
| FEB.  |                         |                                              |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                      |                                   |                                              |                                                   |
| 11... | 58400                   | 18                                           | 120                                      | 20                                                 | 77                                               | 19                                            | 47                                         | 7.3                                                    | 254                                  | 0                                 | 130                                          | 38                                                |
| MAR.  |                         |                                              |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                      |                                   |                                              |                                                   |
| 11... | 60000                   | 15                                           | 170                                      | 38                                                 | 70                                               | 17                                            | 45                                         | 5.7                                                    | 222                                  | 0                                 | 91                                           | 35                                                |
| APR.  |                         |                                              |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                      |                                   |                                              |                                                   |
| 08... | 59000                   | 12                                           | 60                                       | 20                                                 | 67                                               | 20                                            | 60                                         | 5.5                                                    | 222                                  | 0                                 | 160                                          | 35                                                |
| MAY   |                         |                                              |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                      |                                   |                                              |                                                   |
| 20... | 160000                  | 8.7                                          | 200                                      | 60                                                 | 43                                               | 9.9                                           | 23                                         | 4.7                                                    | 150                                  | 0                                 | 70                                           | 11                                                |
| JUNE  |                         |                                              |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                      |                                   |                                              |                                                   |
| 17... | 65100                   | 12                                           | 30                                       | 0                                                  | 71                                               | 18                                            | 44                                         | 5.2                                                    | 238                                  | 0                                 | 120                                          | 22                                                |
| JULY  |                         |                                              |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                      |                                   |                                              |                                                   |
| 22... | 42000                   | 6.4                                          | 20                                       | 10                                                 | 54                                               | 22                                            | 77                                         | 5.6                                                    | 184                                  | 0                                 | 190                                          | 33                                                |
| AUG.  |                         |                                              |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                      |                                   |                                              |                                                   |
| 20... | 45000                   | 8.0                                          | 70                                       | 10                                                 | 55                                               | 20                                            | 70                                         | 7.3                                                    | 174                                  | 0                                 | 170                                          | 39                                                |
| SEP.  |                         |                                              |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                      |                                   |                                              |                                                   |
| 16... | 42000                   | 8.8                                          | 10                                       | 20                                                 | 61                                               | 22                                            | 66                                         | 6.1                                                    | 212                                  | 0                                 | 180                                          | 28                                                |

| DATE  | NON-<br>CAR-<br>BONATE<br>HARD-<br>NESS<br>(MG/L) | ALKA-<br>LINITY<br>AS<br>CaCO3<br>(MG/L) | SPE-<br>CIFIC<br>CON-<br>DUCT-<br>ANCE<br>(MICRO-<br>MHOS) | PH<br>(UNITS) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | CHEM-<br>ICAL<br>OXYGEN<br>DEMAND<br>(LOW<br>LEVEL)<br>(MG/L) | DIS-<br>SOLVED<br>OXYGEN<br>(MG/L) | PER-<br>CENT<br>SATUR-<br>ATION | FECAL<br>COLI-<br>FORM<br>(COL.<br>PER<br>100 ML) | STREP-<br>TOCOCCI<br>(COL-<br>ONIES<br>PER<br>100 ML) |
|-------|---------------------------------------------------|------------------------------------------|------------------------------------------------------------|---------------|----------------------------------------------|-----------------------------|---------------------------------------------------------------|------------------------------------|---------------------------------|---------------------------------------------------|-------------------------------------------------------|
| OCT.  |                                                   |                                          |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 09... | 50                                                | 180                                      | 600                                                        | 8.0           | 20                                           | 21.0                        | 26                                                            | 5.8                                | 64                              | 16000                                             | 83000                                                 |
| NOV.  |                                                   |                                          |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 13... | 61                                                | 148                                      | 610                                                        | 8.1           | 20                                           | 11.5                        | 26                                                            | 9.0                                | 98                              | 7200                                              | 4000                                                  |
| DEC.  |                                                   |                                          |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 10... | 56                                                | 200                                      | 700                                                        | 8.0           | 9                                            | 2.0                         | 28                                                            | 9.0                                | 65                              | 12000                                             | 78000                                                 |
| JAN.  |                                                   |                                          |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 23... | 53                                                | 169                                      | 680                                                        | 7.9           | 40                                           | .0                          | 36                                                            | 10.4                               | 71                              | 6000                                              | 8800                                                  |
| FEB.  |                                                   |                                          |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 11... | 62                                                | 208                                      | 585                                                        | 7.9           | 20                                           | 3.5                         | 23                                                            | 10.3                               | 77                              | 9200                                              | 22000                                                 |
| MAR.  |                                                   |                                          |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 11... | 63                                                | 182                                      | 780                                                        | 8.0           | 20                                           | 10.5                        | 39                                                            | 7.2                                | 64                              | 12000                                             | 94000                                                 |
| APR.  |                                                   |                                          |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 08... | 68                                                | 182                                      | 760                                                        | 8.1           | 5                                            | 9.0                         | 18                                                            | 8.6                                | 74                              | 5500                                              | 2100                                                  |
| MAY   |                                                   |                                          |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 20... | 25                                                | 123                                      | 412                                                        | 7.6           | 30                                           | 20.5                        | 190                                                           | 4.6                                | 51                              | 32000                                             | 48000                                                 |
| JUNE  |                                                   |                                          |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 17... | 56                                                | 195                                      | 650                                                        | 8.0           | 20                                           | 23.0                        | 10                                                            | 6.0                                | 69                              | 29500                                             | 2400                                                  |
| JULY  |                                                   |                                          |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 22... | 75                                                | 151                                      | 825                                                        | 8.1           | 5                                            | 29.0                        | 22                                                            | 4.7                                | 61                              | 8200                                              | 1300                                                  |
| AUG.  |                                                   |                                          |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 20... | 77                                                | 143                                      | 760                                                        | 7.9           | 20                                           | 26.0                        | 33                                                            | 5.0                                | 61                              | 37500                                             | 4300                                                  |
| SEP.  |                                                   |                                          |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 16... | 66                                                | 174                                      | 780                                                        | 8.1           | 5                                            | 20.0                        | 20                                                            | 6.2                                | 67                              | 13000                                             | 2500                                                  |

06894100 MISSOURI RIVER AT SIBLEY, MO.--Continued

PERIOD OF RECORD.--Chemical analyses: June 1972 to September 1974.

REMARKS.--Records of discharge are given for gaging station at Kansas City, Mo.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE  | DIS-<br>SOLVED<br>FLUO-<br>RIDE<br>(F)<br>(MG/L) | TOTAL<br>NITRATE<br>(N)<br>(MG/L) | AMMONIA<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | ORGANIC<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | DIS-<br>SOL-<br>VED-<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | TOTAL<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(RESI-<br>DUE AT<br>180 C)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(TONS<br>PER<br>AC-FT) | DIS-<br>SOLVED<br>SOLIDS<br>(TONS<br>PER<br>DAY) | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | PERCENT<br>SODIUM | HARD-<br>NESS<br>(CA+MG)<br>(MG/L) |
|-------|--------------------------------------------------|-----------------------------------|-------------------------------------------|-------------------------------------------|----------------------------------------------------------|-------------------------------------------|------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------|-----------------------------------------|-------------------|------------------------------------|
| OCT.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 09... | .6                                               | 1.2                               | .05                                       | 1.2                                       | .11                                                      | .35                                       | 400                                                              | .54                                                | 89200                                            | 1.2                                     | 28                | 230                                |
| NOV.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 13... | .3                                               | 1.1                               | .08                                       | .76                                       | .14                                                      | .43                                       | 369                                                              | .50                                                | 88400                                            | 1.3                                     | 30                | 210                                |
| DEC.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 10... | .3                                               | 1.6                               | .21                                       | 1.1                                       | .10                                                      | .32                                       | 435                                                              | .59                                                | 71400                                            | 1.3                                     | 28                | 260                                |
| JAN.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 23... | .5                                               | 1.8                               | .40                                       | 1.4                                       | .11                                                      | .49                                       | 394                                                              | .54                                                | 78600                                            | 1.3                                     | 30                | 220                                |
| FEB.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 11... | .4                                               | 1.6                               | .22                                       | .62                                       | .13                                                      | .38                                       | 486                                                              | .66                                                | 76600                                            | 1.2                                     | 27                | 270                                |
| MAR.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 11... | .2                                               | 1.6                               | .25                                       | 1.2                                       | .24                                                      | .46                                       | 409                                                              | .56                                                | 66300                                            | 1.3                                     | 28                | 240                                |
| APR.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 08... | .5                                               | .96                               | .22                                       | .88                                       | .12                                                      | .33                                       | 481                                                              | .65                                                | 76600                                            | 1.7                                     | 34                | 250                                |
| MAY   |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 20... | .5                                               | 2.3                               | 1.0                                       | 9.0                                       | .07                                                      | 1.5                                       | 264                                                              | .36                                                | 114000                                           | .8                                      | 25                | 150                                |
| JUNE  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 17... | .4                                               | 1.5                               | .03                                       | 1.6                                       | --                                                       | .44                                       | 410                                                              | .56                                                | 72100                                            | 1.2                                     | 27                | 250                                |
| JULY  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 22... | .5                                               | .21                               | .29                                       | .35                                       | .13                                                      | .25                                       | 515                                                              | .70                                                | 58400                                            | 2.2                                     | 42                | 230                                |
| AUG.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 20... | .5                                               | .75                               | .07                                       | 1.5                                       | .15                                                      | .38                                       | 481                                                              | .65                                                | 58400                                            | 2.1                                     | 40                | 220                                |
| SEP.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 16... | .5                                               | .49                               | .13                                       | .87                                       | .19                                                      | .39                                       | 469                                                              | .64                                                | 53200                                            | 1.8                                     | 36                | 240                                |

06899620 THOMPSON RIVER NEAR CHILLICOTHE, MO.

LOCATION.--Lat 39°49'50", long 93°36'25", Livingston County, at bridge on State Highway 170, 4 mi (6.4 km) northwest of Chillicothe.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE  | DIS-<br>CHARGE<br>(CFS) | DIS-<br>SOLVED<br>SILICA<br>(SiO <sub>2</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>IRON<br>(FE)<br>(UG/L) | DIS-<br>SOLVED<br>MAN-<br>GANESE<br>(MN)<br>(UG/L) | DIS-<br>SOLVED<br>CAL-<br>CIUM<br>(CA)<br>(MG/L) | DIS-<br>SOLVED<br>MAG-<br>NE-<br>SIUM<br>(MG) | DIS-<br>SOLVED<br>SODIUM<br>(NA)<br>(MG/L) | DIS-<br>SOLVED<br>PO-<br>TAS-<br>SIUM<br>(K)<br>(MG/L) | BICAR-<br>BONATE<br>(HCO <sub>3</sub> )<br>(MG/L) | CAR-<br>BONATE<br>(CO <sub>3</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>SULFATE<br>(SO <sub>4</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>CHLO-<br>RIDE<br>(CL)<br>(MG/L) |
|-------|-------------------------|-----------------------------------------------------------|------------------------------------------|----------------------------------------------------|--------------------------------------------------|-----------------------------------------------|--------------------------------------------|--------------------------------------------------------|---------------------------------------------------|------------------------------------------------|-----------------------------------------------------------|---------------------------------------------------|
| OCT.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 10... | 1350                    | 17                                                        | 40                                       | 110                                                | 65                                               | 14                                            | 12                                         | 5.1                                                    | 248                                               | 0                                              | 40                                                        | 6.3                                               |
| NOV.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 14... | 900                     | 13                                                        | 130                                      | 130                                                | 73                                               | 16                                            | 14                                         | 4.0                                                    | 252                                               | 0                                              | 44                                                        | 6.8                                               |
| DEC.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 11... | 1500                    | 13                                                        | 80                                       | 100                                                | 59                                               | 13                                            | 11                                         | 4.3                                                    | 216                                               | 0                                              | 40                                                        | 6.5                                               |
| JAN.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 22... | 8000                    | 8.2                                                       | 970                                      | 130                                                | 27                                               | 5.5                                           | 5.3                                        | 3.8                                                    | 88                                                | 0                                              | 20                                                        | 5.7                                               |
| FEB.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 13... | 1100                    | 15                                                        | 90                                       | 90                                                 | 75                                               | 15                                            | 13                                         | 3.1                                                    | 260                                               | 0                                              | 48                                                        | 7.4                                               |
| MAR.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 12... | 2100                    | 11                                                        | 120                                      | 13                                                 | 51                                               | 11                                            | 10                                         | 3.6                                                    | 194                                               | 0                                              | 39                                                        | 7.8                                               |
| APR.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 09... | 900                     | 10                                                        | 40                                       | 40                                                 | 63                                               | 13                                            | 13                                         | 2.6                                                    | 224                                               | 0                                              | 47                                                        | 7.5                                               |
| MAY   |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 21... | 5000                    | 10                                                        | 80                                       | 10                                                 | 37                                               | 7.1                                           | 6.7                                        | 3.8                                                    | 132                                               | 0                                              | 24                                                        | 5.5                                               |
| JUNE  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 18... | 1400                    | 13                                                        | 30                                       | 20                                                 | 63                                               | 13                                            | 9.6                                        | 3.4                                                    | 228                                               | 0                                              | 35                                                        | 5.6                                               |
| JULY  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 23... | 230                     | 14                                                        | 20                                       | 70                                                 | 70                                               | 15                                            | 13                                         | 3.9                                                    | 268                                               | 0                                              | 41                                                        | 6.4                                               |
| AUG.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 21... | 170                     | 10                                                        | 30                                       | 100                                                | 58                                               | 12                                            | 15                                         | 4.2                                                    | 214                                               | 0                                              | 45                                                        | 11                                                |
| SEP.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 17... | 160                     | 8.0                                                       | 20                                       | 90                                                 | 46                                               | 8.9                                           | 8.5                                        | 4.3                                                    | 158                                               | 0                                              | 32                                                        | 6.1                                               |

| DATE  | NOM-<br>CAR-<br>BONATE<br>HARD-<br>NESS<br>(MG/L) | ALKA-<br>LINITAS<br>AS<br>CaCO <sub>3</sub><br>(MG/L) | SPE-<br>CIFIC<br>CON-<br>DUCT-<br>ANCE<br>(MICRO-<br>MHOS) | PH<br>(UNITS) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | CHEM-<br>ICAL<br>OXYGEN<br>DEMAND<br>(LOW<br>LEVEL)<br>(MG/L) | DIS-<br>SOLVED<br>OXYGEN<br>(MG/L) | PER-<br>CENT<br>SATUR-<br>ATION | FECAL<br>COLI-<br>FORM<br>(COL.<br>PER<br>100 ML) | STREP-<br>TOCOCCI<br>(COL-<br>ONIES<br>PER<br>100 ML) |
|-------|---------------------------------------------------|-------------------------------------------------------|------------------------------------------------------------|---------------|----------------------------------------------|-----------------------------|---------------------------------------------------------------|------------------------------------|---------------------------------|---------------------------------------------------|-------------------------------------------------------|
| OCT.  |                                                   |                                                       |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 10... | 17                                                | 203                                                   | 442                                                        | 8.1           | 20                                           | 20.0                        | 20                                                            | 5.0                                | 54                              | 950                                               | 700                                                   |
| NOV.  |                                                   |                                                       |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 14... | 43                                                | 207                                                   | 517                                                        | 8.2           | 5                                            | 11.5                        | 17                                                            | 9.4                                | 86                              | 35                                                | 70                                                    |
| DEC.  |                                                   |                                                       |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 11... | 24                                                | 177                                                   | 450                                                        | 7.8           | 20                                           | 1.0                         | 19                                                            | 11.2                               | 79                              | 840                                               | 2200                                                  |
| JAN.  |                                                   |                                                       |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 22... | 18                                                | 72                                                    | 220                                                        | 7.6           | 200                                          | .0                          | 74                                                            | 9.9                                | 68                              | 6000                                              | 9000                                                  |
| FEB.  |                                                   |                                                       |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 13... | 36                                                | 213                                                   | 510                                                        | 7.9           | 20                                           | 4.0                         | 24                                                            | 9.9                                | 76                              | --                                                | 460                                                   |
| MAR.  |                                                   |                                                       |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 12... | 14                                                | 159                                                   | 380                                                        | 7.9           | 50                                           | 7.0                         | 58                                                            | 7.6                                | 63                              | 2100                                              | 600                                                   |
| APR.  |                                                   |                                                       |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 09... | 27                                                | 184                                                   | 465                                                        | 8.1           | 20                                           | 10.0                        | 29                                                            | 8.8                                | 78                              | 300                                               | 450                                                   |
| MAY   |                                                   |                                                       |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 21... | 13                                                | 108                                                   | 276                                                        | 7.7           | 50                                           | 22.0                        | 180                                                           | 6.1                                | 69                              | 14000                                             | 15000                                                 |
| JUNE  |                                                   |                                                       |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 18... | 24                                                | 187                                                   | 440                                                        | 7.9           | 20                                           | 22.0                        | 2                                                             | 7.0                                | 80                              | 820                                               | 850                                                   |
| JULY  |                                                   |                                                       |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 23... | 17                                                | 220                                                   | 490                                                        | 8.1           | 8                                            | 29.0                        | 16                                                            | 6.1                                | 79                              | 50                                                | 70                                                    |
| AUG.  |                                                   |                                                       |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 21... | 19                                                | 176                                                   | 428                                                        | 8.2           | 8                                            | 28.0                        | 30                                                            | 7.8                                | 99                              | 700                                               | 490                                                   |
| SEP.  |                                                   |                                                       |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 17... | 20                                                | 130                                                   | 355                                                        | 8.1           | 20                                           | 21.5                        | 25                                                            | 7.8                                | 88                              | 1700                                              | 900                                                   |

06899620 THOMPSON RIVER NEAR CHILLICOTHE, MO.--Continued

PERIOD OF RECORD.--Chemical analyses: November 1968 to September 1974.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE          | DIS-<br>SOLVED<br>FLUO-<br>RIDE<br>(F)<br>(MG/L) | TOTAL<br>NITRATE<br>(N)<br>(MG/L) | AMMONIA<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | ORGANIC<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | DIS-<br>SOL-<br>VED-<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | TOTAL<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(RESI-<br>DUE AT<br>180 C)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(TONS<br>PER<br>AC-FT) | DIS-<br>SOLVED<br>SOLIDS<br>(TONS<br>PER<br>DAY) | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | PERCENT<br>SODIUM | HARD-<br>NESS<br>(CA+MG)<br>(MG/L) |
|---------------|--------------------------------------------------|-----------------------------------|-------------------------------------------|-------------------------------------------|----------------------------------------------------------|-------------------------------------------|------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------|-----------------------------------------|-------------------|------------------------------------|
| OCT.<br>10... | .4                                               | .51                               | .03                                       | .31                                       | .09                                                      | .25                                       | 294                                                              | .40                                                | 1070                                             | .4                                      | 10                | 220                                |
| NOV.<br>14... | .1                                               | .24                               | .03                                       | .26                                       | .06                                                      | .83                                       | 309                                                              | .42                                                | 751                                              | .4                                      | 11                | 250                                |
| DEC.<br>11... | .4                                               | 1.3                               | .30                                       | .55                                       | .05                                                      | .22                                       | --                                                               | .35                                                | 1030                                             | .3                                      | 10                | 200                                |
| JAN.<br>22... | .8                                               | 2.0                               | .39                                       | 2.2                                       | .04                                                      | .87                                       | 148                                                              | .20                                                | 3200                                             | .2                                      | 11                | 90                                 |
| FEB.<br>13... | .3                                               | 1.3                               | .19                                       | .42                                       | .06                                                      | .19                                       | 313                                                              | .43                                                | 930                                              | .4                                      | 10                | 250                                |
| MAR.<br>12... | .3                                               | 1.3                               | .12                                       | 1.8                                       | .05                                                      | .54                                       | 227                                                              | .31                                                | 1290                                             | .3                                      | 11                | 170                                |
| APR.<br>09... | .4                                               | .87                               | .21                                       | .75                                       | .06                                                      | .36                                       | 269                                                              | .37                                                | 654                                              | .4                                      | 12                | 210                                |
| MAY<br>21...  | .3                                               | 2.6                               | 1.8                                       | 3.9                                       | .07                                                      | 1.1                                       | 186                                                              | .25                                                | 2510                                             | .3                                      | 10                | 120                                |
| JUNE<br>18... | .4                                               | .00                               | .03                                       | 1.2                                       | --                                                       | .33                                       | 273                                                              | .37                                                | 1030                                             | .3                                      | 9                 | 210                                |
| JULY<br>23... | .3                                               | .03                               | .11                                       | .31                                       | .09                                                      | .33                                       | 300                                                              | .41                                                | 186                                              | .4                                      | 10                | 240                                |
| AUG.<br>21... | .3                                               | .02                               | .10                                       | .85                                       | .00                                                      | .17                                       | --                                                               | .36                                                | 120                                              | .5                                      | 14                | 190                                |
| SEP.<br>17... | .3                                               | .01                               | .07                                       | 1.1                                       | .09                                                      | .26                                       | 202                                                              | .27                                                | 87.3                                             | .3                                      | 11                | 150                                |

06902000 GRAND RIVER NEAR SUMNER, MO.  
(National Stream Quality Accounting Network Station)

LOCATION.--Lat 39°38'25", long 93°16'25", NE¼ sec.29, T.56 N., R.21 W., Chariton County, at gaging station near right bank on downstream side of pier on State Highway 139, 240 ft (73.2 m) downstream from Chicago Burlington and Quincy Railroad bridge, 2 mi (3.2 km) southwest of Sumner, 2.5 mi (4.0 km) downstream from Locust Creek and at mile 41.0 (66.0 km).

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE  | DIS-<br>CHARGE<br>(CFS) | DIS-<br>SOLVED<br>SILICA<br>(SiO2)<br>(MG/L) | DIS-<br>SOLVED<br>IRON<br>(FE)<br>(UG/L) | DIS-<br>SOLVED<br>MAN-<br>GANESE<br>(MN)<br>(UG/L) | DIS-<br>SOLVED<br>CAL-<br>CIUM<br>(CA)<br>(MG/L) | DIS-<br>SOLVED<br>MAG-<br>NE-<br>SIUM<br>(MG) | DIS-<br>SOLVED<br>SODIUM<br>(NA)<br>(MG/L) | DIS-<br>SOLVED<br>PO-<br>TAS-<br>SIUM<br>(K)<br>(MG/L) | BICAR-<br>BONATE<br>(HCO3)<br>(MG/L) | CAR-<br>BONATE<br>(CO3)<br>(MG/L) | DIS-<br>SOLVED<br>SULFATE<br>(SO4)<br>(MG/L) | DIS-<br>SOLVED<br>CHLO-<br>RIDE<br>(CL)<br>(MG/L) |
|-------|-------------------------|----------------------------------------------|------------------------------------------|----------------------------------------------------|--------------------------------------------------|-----------------------------------------------|--------------------------------------------|--------------------------------------------------------|--------------------------------------|-----------------------------------|----------------------------------------------|---------------------------------------------------|
| OCT.  |                         |                                              |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                      |                                   |                                              |                                                   |
| 10... | 4500                    | 16                                           | 40                                       | 100                                                | 57                                               | 10                                            | 9.4                                        | 5.4                                                    | 192                                  | 0                                 | 34                                           | 7.5                                               |
| NOV.  |                         |                                              |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                      |                                   |                                              |                                                   |
| 14... | 1110                    | 14                                           | 130                                      | 200                                                | 78                                               | 15                                            | 14                                         | 4.3                                                    | 286                                  | 0                                 | 46                                           | 6.3                                               |
| DEC.  |                         |                                              |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                      |                                   |                                              |                                                   |
| 11... | 4400                    | 12                                           | 100                                      | 110                                                | 55                                               | 11                                            | 9.7                                        | 4.2                                                    | 196                                  | 0                                 | 38                                           | 6.4                                               |
| JAN.  |                         |                                              |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                      |                                   |                                              |                                                   |
| 22... | 38000                   | 8.2                                          | 550                                      | 110                                                | 27                                               | 5.3                                           | 5.3                                        | 3.7                                                    | 84                                   | 0                                 | 20                                           | 5.4                                               |
| FEB.  |                         |                                              |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                      |                                   |                                              |                                                   |
| 12... | 2690                    | 15                                           | 30                                       | 200                                                | 74                                               | 15                                            | 13                                         | 3.4                                                    | 260                                  | 0                                 | 43                                           | 7.5                                               |
| MAR.  |                         |                                              |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                      |                                   |                                              |                                                   |
| 12... | 4680                    | 10                                           | 240                                      | 38                                                 | 49                                               | 9.9                                           | 10                                         | 3.5                                                    | 170                                  | 0                                 | 40                                           | 7.9                                               |
| APR.  |                         |                                              |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                      |                                   |                                              |                                                   |
| 09... | 1950                    | 8.5                                          | 30                                       | 40                                                 | 70                                               | 14                                            | 14                                         | 2.8                                                    | 242                                  | 0                                 | 50                                           | 7.0                                               |
| MAY   |                         |                                              |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                      |                                   |                                              |                                                   |
| 21... | 32000                   | .2                                           | 110                                      | 0                                                  | 25                                               | 2.8                                           | 4.2                                        | 3.9                                                    | 92                                   | 0                                 | 16                                           | 3.4                                               |
| JUNE  |                         |                                              |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                      |                                   |                                              |                                                   |
| 18... | 4100                    | 11                                           | 20                                       | 30                                                 | 53                                               | 9.4                                           | 8.3                                        | 3.4                                                    | 180                                  | 0                                 | 28                                           | 4.7                                               |
| JULY  |                         |                                              |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                      |                                   |                                              |                                                   |
| 23... | 491                     | 14                                           | 30                                       | 120                                                | 72                                               | 14                                            | 13                                         | 4.2                                                    | 274                                  | 0                                 | 41                                           | 7.0                                               |
| AUG.  |                         |                                              |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                      |                                   |                                              |                                                   |
| 21... | 574                     | 7.1                                          | 20                                       | 50                                                 | 49                                               | 8.9                                           | 9.3                                        | 4.0                                                    | 180                                  | 0                                 | 30                                           | 7.6                                               |
| SEP.  |                         |                                              |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                      |                                   |                                              |                                                   |
| 17... | 524                     | 7.7                                          | 5600                                     | 40                                                 | 34                                               | 5.8                                           | 6.3                                        | 3.5                                                    | 120                                  | 0                                 | 22                                           | 4.3                                               |

| DATE  | PH<br>(UNITS) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | SUS-<br>PENDE<br>SEDI-<br>MENT<br>(MG/L) | TEMPER-<br>ATURE<br>(DEG C) | CHEM-<br>ICAL<br>OXYGEN<br>DEMAND<br>(LOW<br>LEVEL)<br>(MG/L) | TOTAL<br>ORGANIC<br>CARBON<br>(C)<br>(MG/L) | DIS-<br>SOLVED<br>OXYGEN<br>(MG/L) | PER-<br>CENT<br>SATUR-<br>ATION | IMME-<br>DIATE<br>COLI-<br>FORM<br>(COL.<br>PER<br>100 ML) | FECAL<br>COLI-<br>FORM<br>(COL.<br>PER<br>100 ML) | STREP-<br>TOCOCCI<br>(COL-<br>ONIES<br>PER<br>100 ML) |
|-------|---------------|----------------------------------------------|------------------------------------------|-----------------------------|---------------------------------------------------------------|---------------------------------------------|------------------------------------|---------------------------------|------------------------------------------------------------|---------------------------------------------------|-------------------------------------------------------|
| OCT.  |               |                                              |                                          |                             |                                                               |                                             |                                    |                                 |                                                            |                                                   |                                                       |
| 10... | 7.8           | 30                                           | --                                       | 20.5                        | 29                                                            | --                                          | 3.8                                | 42                              | --                                                         | 16000                                             | 1900                                                  |
| NOV.  |               |                                              |                                          |                             |                                                               |                                             |                                    |                                 |                                                            |                                                   |                                                       |
| 14... | 8.0           | 5                                            | --                                       | 11.5                        | 19                                                            | --                                          | 9.8                                | 90                              | --                                                         | 600                                               | 60                                                    |
| DEC.  |               |                                              |                                          |                             |                                                               |                                             |                                    |                                 |                                                            |                                                   |                                                       |
| 11... | 7.6           | 20                                           | --                                       | 1.0                         | 31                                                            | --                                          | 10.8                               | 76                              | --                                                         | 2400                                              | 4600                                                  |
| JAN.  |               |                                              |                                          |                             |                                                               |                                             |                                    |                                 |                                                            |                                                   |                                                       |
| 22... | 7.5           | 200                                          | 3490                                     | .0                          | 100                                                           | --                                          | 9.5                                | 65                              | 27000                                                      | 8000                                              | 16000                                                 |
| FEB.  |               |                                              |                                          |                             |                                                               |                                             |                                    |                                 |                                                            |                                                   |                                                       |
| 12... | 7.9           | 8                                            | 196                                      | 4.5                         | --                                                            | 5.4                                         | 11.2                               | 86                              | 1950                                                       | 1100                                              | 440                                                   |
| MAR.  |               |                                              |                                          |                             |                                                               |                                             |                                    |                                 |                                                            |                                                   |                                                       |
| 12... | 7.8           | 70                                           | 13                                       | 9.5                         | 80                                                            | --                                          | 7.3                                | 63                              | 5500                                                       | 1800                                              | 6600                                                  |
| APR.  |               |                                              |                                          |                             |                                                               |                                             |                                    |                                 |                                                            |                                                   |                                                       |
| 09... | 8.1           | 20                                           | 159                                      | 12.0                        | 23                                                            | --                                          | 8.7                                | 81                              | --                                                         | 450                                               | 450                                                   |
| MAY   |               |                                              |                                          |                             |                                                               |                                             |                                    |                                 |                                                            |                                                   |                                                       |
| 21... | 7.6           | 20                                           | 1350                                     | 23.0                        | --                                                            | 35                                          | 4.6                                | 53                              | --                                                         | 7000                                              | 6500                                                  |
| JUNE  |               |                                              |                                          |                             |                                                               |                                             |                                    |                                 |                                                            |                                                   |                                                       |
| 18... | 7.8           | 30                                           | 891                                      | 22.5                        | 57                                                            | --                                          | 6.4                                | 73                              | --                                                         | 3500                                              | 1680                                                  |
| JULY  |               |                                              |                                          |                             |                                                               |                                             |                                    |                                 |                                                            |                                                   |                                                       |
| 23... | 7.9           | 10                                           | 162                                      | 30.0                        | 29                                                            | --                                          | 6.6                                | 87                              | --                                                         | 30                                                | 50                                                    |
| AUG.  |               |                                              |                                          |                             |                                                               |                                             |                                    |                                 |                                                            |                                                   |                                                       |
| 21... | 8.3           | 20                                           | 124                                      | 28.5                        | 23                                                            | --                                          | 10.4                               | 133                             | --                                                         | 450                                               | 230                                                   |
| SEP.  |               |                                              |                                          |                             |                                                               |                                             |                                    |                                 |                                                            |                                                   |                                                       |
| 17... | 7.8           | --                                           | 444                                      | 22.0                        | --                                                            | --                                          | 6.9                                | 78                              | --                                                         | 2700                                              | 1600                                                  |



06902000 GRAND RIVER NEAR SUMNER, MO.--Continued

DRAINAGE AREA.--6,880 mi<sup>2</sup> (17,819 km<sup>2</sup>), approximately.

PERIOD OF RECORD.--Chemical analyses: August 1962 to June 1963; August 1967 to September 1974.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE  | DIS-<br>SOLVED<br>FLUO-<br>RIDE<br>(F)<br>(MG/L) | TOTAL<br>NITRATE<br>(N)<br>(MG/L) | AMMONIA<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | ORGANIC<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | DIS-<br>SOL-<br>VED-<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | TOTAL<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(RESI-<br>DUE AT<br>180 C)<br>(MG/L) | HARD-<br>NESS<br>(CA,MG)<br>(MG/L) | NON-<br>CAR-<br>BONATE<br>HARD-<br>NESS<br>(MG/L) | ALKA-<br>LINIT-<br>AS<br>CACO3<br>(MG/L) | SPE-<br>CIFIC<br>CON-<br>DUCT-<br>ANCE<br>(MICRO-<br>MHOS) |
|-------|--------------------------------------------------|-----------------------------------|-------------------------------------------|-------------------------------------------|----------------------------------------------------------|-------------------------------------------|------------------------------------------------------------------|------------------------------------|---------------------------------------------------|------------------------------------------|------------------------------------------------------------|
| OCT.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                    |                                                   |                                          |                                                            |
| 10... | .3                                               | .47                               | .09                                       | 1.0                                       | .11                                                      | .23                                       | 234                                                              | 180                                | 22                                                | 157                                      | 375                                                        |
| NOV.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                    |                                                   |                                          |                                                            |
| 14... | .1                                               | .16                               | .01                                       | .34                                       | .04                                                      | .34                                       | 301                                                              | 260                                | 22                                                | 235                                      | 550                                                        |
| DEC.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                    |                                                   |                                          |                                                            |
| 11... | .2                                               | 1.1                               | .22                                       | .88                                       | .04                                                      | .02                                       | 249                                                              | 180                                | 22                                                | 161                                      | 380                                                        |
| JAN.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                    |                                                   |                                          |                                                            |
| 22... | .7                                               | 2.1                               | .37                                       | 3.4                                       | .03                                                      | 1.4                                       | 140                                                              | 89                                 | 20                                                | 69                                       | 217                                                        |
| FEB.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                    |                                                   |                                          |                                                            |
| 12... | .2                                               | 1.2                               | .17                                       | .59                                       | --                                                       | .09                                       | 314                                                              | 250                                | 33                                                | 213                                      | 520                                                        |
| MAR.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                    |                                                   |                                          |                                                            |
| 12... | .3                                               | 1.2                               | .26                                       | 2.4                                       | .05                                                      | .68                                       | 221                                                              | 160                                | 24                                                | 139                                      | 355                                                        |
| APR.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                    |                                                   |                                          |                                                            |
| 09... | .6                                               | .36                               | .30                                       | .65                                       | .05                                                      | .27                                       | 295                                                              | 230                                | 34                                                | 198                                      | 495                                                        |
| MAY   |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                    |                                                   |                                          |                                                            |
| 21... | .3                                               | --                                | .36                                       | 3.7                                       | --                                                       | .73                                       | 130                                                              | 74                                 | 0                                                 | 75                                       | 203                                                        |
| JUNE  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                    |                                                   |                                          |                                                            |
| 18... | .3                                               | 1.2                               | .03                                       | 1.7                                       | --                                                       | .54                                       | 225                                                              | 170                                | 23                                                | 148                                      | 370                                                        |
| JULY  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                    |                                                   |                                          |                                                            |
| 23... | .2                                               | .01                               | .10                                       | .80                                       | .07                                                      | .22                                       | 299                                                              | 240                                | 13                                                | 225                                      | 510                                                        |
| AUG.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                    |                                                   |                                          |                                                            |
| 21... | .3                                               | .07                               | .06                                       | 1.4                                       | .04                                                      | .14                                       | 210                                                              | 160                                | 11                                                | 148                                      | 354                                                        |
| SEP.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                    |                                                   |                                          |                                                            |
| 17... | .3                                               | --                                | --                                        | --                                        | --                                                       | .41                                       | 153                                                              | 110                                | 12                                                | 98                                       | 253                                                        |

| DATE  | DIS-<br>SOLVED<br>CAD-<br>MIUM<br>(CD)<br>(UG/L) | DIS-<br>SOLVED<br>CHRO-<br>MIUM<br>(CR)<br>(UG/L) | DIS-<br>SOLVED<br>COBALT<br>(CO)<br>(UG/L) | DIS-<br>SOLVED<br>COPPER<br>(CU)<br>(UG/L) | DIS-<br>SOLVED<br>LEAD<br>(PB)<br>(UG/L) | DIS-<br>SOLVED<br>MERCURY<br>(HG)<br>(UG/L) | DIS-<br>SOLVED<br>SELE-<br>NIUM<br>(SE)<br>(UG/L) | DIS-<br>SOLVED<br>ZINC<br>(ZN)<br>(UG/L) | DIS-<br>SOLVED<br>ARSENIC<br>(AS)<br>(UG/L) | TOTAL<br>CAD-<br>MIUM<br>(CD)<br>(UG/L) |
|-------|--------------------------------------------------|---------------------------------------------------|--------------------------------------------|--------------------------------------------|------------------------------------------|---------------------------------------------|---------------------------------------------------|------------------------------------------|---------------------------------------------|-----------------------------------------|
| FEB.  |                                                  |                                                   |                                            |                                            |                                          |                                             |                                                   |                                          |                                             |                                         |
| 12... | 2                                                | 0                                                 | 0                                          | 4                                          | 14                                       | .4                                          | 3                                                 | 10                                       | 0                                           | <10                                     |
| MAY   |                                                  |                                                   |                                            |                                            |                                          |                                             |                                                   |                                          |                                             |                                         |
| 21... | 1                                                | 0                                                 | 0                                          | 7                                          | 2                                        | .0                                          | 0                                                 | 20                                       | 1                                           | <10                                     |
| SEP.  |                                                  |                                                   |                                            |                                            |                                          |                                             |                                                   |                                          |                                             |                                         |
| 17... | 0                                                | 0                                                 | 0                                          | 3                                          | 3                                        | .5                                          | 0                                                 | 0                                        | 1                                           | <10                                     |

| DATE  | TOTAL<br>CHRO-<br>MIUM<br>(CR)<br>(UG/L) | TOTAL<br>COBALT<br>(CO)<br>(UG/L) | TOTAL<br>COPPER<br>(CU)<br>(UG/L) | TOTAL<br>IRON<br>(FE)<br>(UG/L) | TOTAL<br>LEAD<br>(PB)<br>(UG/L) | TOTAL<br>MAN-<br>GANESE<br>(MN)<br>(UG/L) | TOTAL<br>MERCURY<br>(HG)<br>(UG/L) | TOTAL<br>SELE-<br>NIUM<br>(SE)<br>(UG/L) | TOTAL<br>ZINC<br>(ZN)<br>(UG/L) | TOTAL<br>ARSENIC<br>(AS)<br>(UG/L) |
|-------|------------------------------------------|-----------------------------------|-----------------------------------|---------------------------------|---------------------------------|-------------------------------------------|------------------------------------|------------------------------------------|---------------------------------|------------------------------------|
| FEB.  |                                          |                                   |                                   |                                 |                                 |                                           |                                    |                                          |                                 |                                    |
| 12... | 0                                        | <50                               | 30                                | 3700                            | <100                            | 250                                       | .3                                 | 3                                        | 50                              | 0                                  |
| MAY   |                                          |                                   |                                   |                                 |                                 |                                           |                                    |                                          |                                 |                                    |
| 21... | 20                                       | <50                               | 100                               | 22000                           | <100                            | 950                                       | .1                                 | 2                                        | 120                             | 15                                 |
| SEP.  |                                          |                                   |                                   |                                 |                                 |                                           |                                    |                                          |                                 |                                    |
| 17... | 0                                        | <50                               | 10                                | 11000                           | <100                            | 600                                       | .1                                 | 0                                        | 160                             | 11                                 |

## GRAND RIVER BASIN

06902000 GRAND RIVER NEAR SUMNER, MO.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C) , WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974  
(ONCE-DAILY)

| DAY   | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1     | --- | --- | --- | --- | --- | 414 | 520 | 272 | 224 | 490 | 500 | 438 |
| 2     | --- | --- | --- | --- | --- | 411 | 517 | 322 | 223 | 460 | 485 | 410 |
| 3     | --- | --- | --- | --- | --- | 378 | 517 | 360 | 238 | 460 | 495 | 380 |
| 4     | --- | --- | --- | --- | --- | 364 | 518 | 393 | --- | 420 | 392 | 387 |
| 5     | --- | --- | --- | --- | --- | 332 | 517 | 422 | 318 | 200 | 445 | 407 |
| 6     | --- | --- | --- | --- | --- | 317 | 520 | 450 | 360 | 195 | 440 | 437 |
| 7     | --- | --- | --- | --- | --- | 335 | 503 | 475 | 300 | 144 | 485 | 448 |
| 8     | --- | --- | --- | --- | --- | 375 | 490 | 500 | 245 | 236 | 475 | 460 |
| 9     | --- | --- | --- | --- | --- | --- | 490 | 505 | 194 | 285 | 465 | 475 |
| 10    | --- | --- | --- | --- | --- | --- | 480 | 495 | 186 | 364 | 480 | 479 |
| 11    | --- | --- | --- | --- | --- | --- | 485 | 495 | 230 | 388 | --- | 475 |
| 12    | --- | --- | --- | --- | 520 | 364 | 495 | 505 | 165 | 405 | 410 | 470 |
| 13    | --- | --- | --- | --- | 518 | 382 | 495 | 500 | 193 | 435 | 400 | 482 |
| 14    | --- | --- | --- | --- | 495 | 420 | 470 | 498 | 280 | 440 | 278 | --- |
| 15    | --- | --- | --- | --- | 486 | 422 | 500 | 337 | 275 | 450 | 198 | 226 |
| 16    | --- | --- | --- | --- | 483 | 408 | 495 | --- | 300 | 460 | 287 | 223 |
| 17    | --- | --- | --- | --- | 479 | 445 | 465 | --- | 338 | 470 | 278 | 243 |
| 18    | --- | --- | --- | --- | 451 | 458 | 480 | 242 | 360 | --- | 335 | 283 |
| 19    | --- | --- | --- | --- | 441 | 482 | 495 | 232 | 380 | 480 | 332 | 318 |
| 20    | --- | --- | --- | --- | 449 | 505 | 480 | 220 | 392 | 495 | 340 | 350 |
| 21    | --- | --- | --- | --- | 457 | --- | 500 | 218 | 420 | 500 | 360 | 358 |
| 22    | --- | --- | --- | --- | 417 | 500 | 303 | 240 | 428 | 510 | 368 | 370 |
| 23    | --- | --- | --- | 230 | 306 | 505 | 275 | 216 | --- | 490 | 234 | 388 |
| 24    | --- | --- | --- | 237 | 308 | 520 | 280 | 230 | 448 | 475 | 193 | 400 |
| 25    | --- | --- | --- | 264 | 341 | 530 | 300 | 330 | 458 | 475 | 252 | 420 |
| 26    | --- | --- | --- | 290 | 348 | 530 | 315 | 332 | 445 | 445 | 308 | 427 |
| 27    | --- | --- | --- | 271 | 365 | 535 | 355 | 368 | 445 | 425 | 374 | 435 |
| 28    | --- | --- | --- | 225 | 412 | 537 | 405 | 397 | 435 | 440 | 412 | 438 |
| 29    | --- | --- | --- | 223 | --- | 535 | 300 | 438 | 450 | 505 | --- | 443 |
| 30    | --- | --- | --- | 243 | --- | 525 | 282 | 420 | 455 | 490 | 356 | 443 |
| 31    | --- | --- | --- | 292 | --- | 520 | --- | 320 | --- | 465 | 392 | --- |
| MONTH | --- | --- | --- | --- | --- | 446 | 442 | 370 | 328 | 417 | 371 | 397 |

TEMPERATURE (DEG. C) OF WATER , WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974  
(ONCE-DAILY)

| DAY   | OCT | NOV | DEC | JAN | FEB | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|-------|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|
| 1     | --- | --- | --- | --- | --- | 7.0  | 12.0 | 17.0 | 19.5 | 25.0 | 25.0 | 20.0 |
| 2     | --- | --- | --- | --- | --- | 7.0  | 13.0 | 18.0 | 20.0 | 25.0 | 25.0 | 18.0 |
| 3     | --- | --- | --- | --- | --- | 10.0 | 15.0 | 18.5 | 21.0 | 26.0 | 22.5 | 15.5 |
| 4     | --- | --- | --- | --- | --- | 10.0 | 12.0 | 18.0 | ---  | 25.0 | 22.0 | 19.5 |
| 5     | --- | --- | --- | --- | --- | 7.0  | 9.0  | 18.0 | 22.5 | 24.5 | 21.5 | 16.0 |
| 6     | --- | --- | --- | --- | --- | 12.0 | 9.0  | 17.0 | 23.0 | 25.0 | 22.0 | 17.0 |
| 7     | --- | --- | --- | --- | --- | 15.0 | 11.0 | 17.0 | 22.0 | 24.0 | 21.0 | 18.0 |
| 8     | --- | --- | --- | --- | --- | 12.5 | 11.0 | 16.0 | 19.0 | 27.0 | 21.0 | 20.0 |
| 9     | --- | --- | --- | --- | --- | ---  | 11.0 | 15.0 | 19.0 | 28.0 | 23.0 | 21.0 |
| 10    | --- | --- | --- | --- | --- | ---  | 11.0 | 15.0 | 18.5 | 29.0 | 23.5 | 22.0 |
| 11    | --- | --- | --- | --- | --- | ---  | 11.0 | 16.0 | 18.0 | 30.0 | ---  | 22.0 |
| 12    | --- | --- | --- | --- | --- | 9.0  | 12.0 | 17.0 | 19.0 | 29.0 | 26.0 | 23.0 |
| 13    | --- | --- | --- | --- | 5.0 | 7.0  | 14.0 | 18.0 | 20.0 | 29.0 | 26.0 | 18.0 |
| 14    | --- | --- | --- | --- | 5.0 | 5.0  | 12.0 | 19.0 | ---  | 30.0 | 26.0 | ---  |
| 15    | --- | --- | --- | --- | 5.0 | 6.0  | 10.0 | 17.0 | ---  | 30.0 | 26.0 | 18.0 |
| 16    | --- | --- | --- | --- | 5.0 | 6.0  | 14.0 | ---  | ---  | 28.0 | 26.0 | 18.0 |
| 17    | --- | --- | --- | --- | 5.5 | 6.0  | 12.0 | ---  | ---  | 28.0 | 25.0 | 19.0 |
| 18    | --- | --- | --- | --- | 7.0 | 6.0  | 14.0 | 19.0 | ---  | ---  | 25.0 | 24.0 |
| 19    | --- | --- | --- | --- | 7.0 | 6.0  | 16.0 | 20.0 | 24.0 | 29.0 | 23.0 | 22.0 |
| 20    | --- | --- | --- | --- | 5.0 | ---  | 18.0 | 22.0 | 26.0 | 29.0 | 28.0 | 21.0 |
| 21    | --- | --- | --- | --- | 8.0 | ---  | 17.0 | 23.0 | 28.0 | 29.5 | 26.0 | 19.0 |
| 22    | --- | --- | --- | --- | 5.0 | 5.0  | 14.0 | 23.0 | 27.0 | 30.0 | 26.0 | 16.0 |
| 23    | --- | --- | --- | --- | 3.0 | 5.0  | 15.0 | 21.0 | ---  | 27.0 | 23.0 | 15.5 |
| 24    | --- | --- | --- | --- | 2.0 | 4.0  | 15.0 | 21.0 | 23.0 | 27.0 | 22.5 | 15.5 |
| 25    | --- | --- | --- | 3.0 | 5.0 | 2.0  | 15.0 | 18.0 | 22.0 | 27.0 | 24.0 | 15.5 |
| 26    | --- | --- | --- | 3.0 | 2.0 | 4.0  | 17.0 | 19.0 | 22.0 | 25.0 | 25.0 | 16.0 |
| 27    | --- | --- | --- | 3.0 | 4.0 | 7.0  | 17.0 | 18.0 | 23.0 | 27.0 | 26.0 | 21.0 |
| 28    | --- | --- | --- | 3.0 | 8.0 | 11.0 | 19.0 | 19.0 | 24.0 | 26.0 | 22.0 | 19.0 |
| 29    | --- | --- | --- | 4.0 | --- | 12.0 | 18.0 | 21.0 | 25.0 | 24.0 | ---  | 15.0 |
| 30    | --- | --- | --- | 4.0 | --- | 9.0  | 16.0 | 22.0 | 24.0 | 24.0 | 20.5 | 14.0 |
| 31    | --- | --- | --- | 4.0 | --- | 12.0 | ---  | 21.0 | ---  | 24.0 | 21.5 | ---  |
| MONTH | --- | --- | --- | --- | --- | 8.0  | 13.5 | 18.5 | ---  | 27.0 | 24.0 | 18.5 |

06902000 Grand River near Sumner, Mo.--Continued

## PHYTOPLANKTON, CODOMINANT GENERA, JANUARY 1974 TO SEPTEMBER 1974

| Date          | Total Cells | Organism     | Percent | Organism     | Percent | Organism | Percent | Organism | Percent |
|---------------|-------------|--------------|---------|--------------|---------|----------|---------|----------|---------|
| Jan. 22, 1974 | 430         | Navicula     | 50      | Cymatopleura | 25      | Synedra  | 25      |          |         |
| July 23       | 65,000      | Oscillatoria | 38      | Cyclotella   | 16      |          |         |          |         |
| Sept. 17      | 7,000       | Cyclotella   | 35      | Scenedesmus  | 20      |          |         |          |         |

## PERIPHYTON, SEPTEMBER 1974

| Date      | Dry weight<br>grams/m | Ash weight<br>grams/m | Chlorophyll a<br>grams/m <sup>2</sup> | Chlorophyll b<br>grams/m <sup>2</sup> | Pigment ratio |
|-----------|-----------------------|-----------------------|---------------------------------------|---------------------------------------|---------------|
| Sept. 17, | 15                    | 11                    | 1.0                                   | 0.7                                   | 4.6           |

06905500 CHARITON RIVER NEAR PRAIRIE HILL, MO.

LOCATION.--Lat 39°32'25", long 92°47'23", NW¼SW¼ sec.26, T.55 N., R.17 W., Chariton County, at gaging station on right bank on downstream side of bridge on State Highway 129, 3.2 mi (5.1 km) northwest of Prairie Hill, 13.5 mi (21.7 km) upstream from Puzzle Creek, and at mile 19.6 (31.5 km).

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE  | DIS-<br>CHARGE<br>(CFS) | DIS-<br>SOLVED<br>SILICA<br>(SiO <sub>2</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>IRON<br>(FE)<br>(UG/L) | DIS-<br>SOLVED<br>MAN-<br>GANESE<br>(MN)<br>(UG/L) | DIS-<br>SOLVED<br>CAL-<br>CIUM<br>(CA)<br>(MG/L) | DIS-<br>SOLVED<br>MAG-<br>NE-<br>SIUM<br>(MG) | DIS-<br>SOLVED<br>SODIUM<br>(NA)<br>(MG/L) | DIS-<br>SOLVED<br>PO-<br>TAS-<br>SIUM<br>(K)<br>(MG/L) | BICAR-<br>BONATE<br>(HCO <sub>3</sub> )<br>(MG/L) | CAR-<br>BONATE<br>(CO <sub>3</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>SULFATE<br>(SO <sub>4</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>CHLO-<br>RIDE<br>(CL)<br>(MG/L) |
|-------|-------------------------|-----------------------------------------------------------|------------------------------------------|----------------------------------------------------|--------------------------------------------------|-----------------------------------------------|--------------------------------------------|--------------------------------------------------------|---------------------------------------------------|------------------------------------------------|-----------------------------------------------------------|---------------------------------------------------|
| OCT.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 11... | 6300                    | 12                                                        | 90                                       | 80                                                 | 46                                               | 9.4                                           | 7.3                                        | 4.6                                                    | 146                                               | 0                                              | 46                                                        | 2.9                                               |
| NOV.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 15... | 1320                    | 4.8                                                       | 150                                      | 10                                                 | 38                                               | 7.9                                           | 7.8                                        | 5.1                                                    | 120                                               | 0                                              | 34                                                        | 4.3                                               |
| DEC.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 12... | 1500                    | 6.4                                                       | 80                                       | 60                                                 | 40                                               | 8.8                                           | 7.7                                        | 4.5                                                    | 120                                               | 0                                              | 42                                                        | 5.4                                               |
| JAN.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 21... | 6000                    | 7.9                                                       | 400                                      | 130                                                | 30                                               | 6.8                                           | 5.8                                        | 3.0                                                    | 76                                                | 0                                              | 43                                                        | 3.6                                               |
| FEB.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 13... | 1450                    | 7.9                                                       | 80                                       | 0                                                  | 41                                               | 9.5                                           | 8.8                                        | 5.3                                                    | 132                                               | 0                                              | 41                                                        | 5.6                                               |
| MAR.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 13... | 4800                    | 8.2                                                       | 260                                      | 50                                                 | 40                                               | 9.0                                           | 7.6                                        | 3.5                                                    | 116                                               | 0                                              | 44                                                        | 5.1                                               |
| APR.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 10... | 450                     | 7.4                                                       | 20                                       | 20                                                 | 65                                               | 15                                            | 14                                         | 3.4                                                    | 188                                               | 0                                              | 94                                                        | 5.6                                               |
| MAY   |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 21... | 6000                    | 9.2                                                       | 150                                      | 0                                                  | 36                                               | 6.6                                           | 6.3                                        | 3.3                                                    | 102                                               | 0                                              | 47                                                        | 4.0                                               |
| JUNE  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 19... | 1180                    | 8.5                                                       | 30                                       | 0                                                  | 41                                               | 8.2                                           | 6.6                                        | 3.4                                                    | 122                                               | 0                                              | 49                                                        | 4.2                                               |
| JULY  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 24... | 1430                    | 4.5                                                       | 40                                       | 0                                                  | 38                                               | 8.2                                           | 8.0                                        | 4.5                                                    | 112                                               | 0                                              | 39                                                        | 5.2                                               |
| AUG.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 22... | 360                     | 6.2                                                       | 120                                      | 520                                                | 24                                               | 4.7                                           | 5.4                                        | 3.8                                                    | 80                                                | 0                                              | 26                                                        | 4.1                                               |
| SEP.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 18... | 182                     | 7.2                                                       | 30                                       | 0                                                  | 40                                               | 9.9                                           | 10                                         | 4.3                                                    | 132                                               | 0                                              | 55                                                        | 5.8                                               |

| DATE  | NON-<br>CAR-<br>BONATE<br>HARD-<br>NESS<br>(MG/L) | ALKA-<br>LINITY<br>AS<br>CaCO <sub>3</sub><br>(MG/L) | SPE-<br>CIFIC<br>CON-<br>DUCT-<br>ANCE<br>(MICRO-<br>MHOS) | PH<br>(UNITS) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | CHEM-<br>ICAL<br>OXYGEN<br>DEMAND<br>(LOW<br>LEVEL)<br>(MG/L) | DIS-<br>SOLVED<br>OXYGEN<br>(MG/L) | PER-<br>CENT<br>SATUR-<br>ATION | FECAL<br>COLI-<br>FORM<br>(COL.<br>PER<br>100 ML) | STREP-<br>TOCOCCI<br>(COL-<br>ONIES<br>PER<br>100 ML) |
|-------|---------------------------------------------------|------------------------------------------------------|------------------------------------------------------------|---------------|----------------------------------------------|-----------------------------|---------------------------------------------------------------|------------------------------------|---------------------------------|---------------------------------------------------|-------------------------------------------------------|
| OCT.  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 11... | 30                                                | 120                                                  | 320                                                        | 7.5           | 50                                           | 20.0                        | 44                                                            | 6.2                                | 69                              | 8600                                              | 3400                                                  |
| NOV.  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 15... | 29                                                | 98                                                   | 288                                                        | 7.9           | 30                                           | 11.5                        | 20                                                            | 7.8                                | 72                              | 25                                                | 170                                                   |
| DEC.  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 12... | 38                                                | 98                                                   | 312                                                        | 7.7           | 50                                           | 2.0                         | 20                                                            | 11.6                               | 84                              | 280                                               | 760                                                   |
| JAN.  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 21... | 41                                                | 62                                                   | 263                                                        | 7.3           | 100                                          | .0                          | 55                                                            | 9.4                                | 64                              | 1900                                              | 7600                                                  |
| FEB.  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 13... | 33                                                | 108                                                  | 240                                                        | 7.9           | 50                                           | 4.0                         | 19                                                            | 10.1                               | 77                              | --                                                | 300                                                   |
| MAR.  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 13... | 45                                                | 95                                                   | 310                                                        | 7.5           | 100                                          | 6.5                         | 51                                                            | 9.2                                | 75                              | 4600                                              | 1700                                                  |
| APR.  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 10... | 70                                                | 154                                                  | 465                                                        | 8.1           | 10                                           | 10.5                        | 20                                                            | 8.5                                | 76                              | 80                                                | 200                                                   |
| MAY   |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 21... | 33                                                | 84                                                   | 270                                                        | 7.4           | 80                                           | 21.5                        | 94                                                            | 5.6                                | 63                              | 7600                                              | 4600                                                  |
| JUNE  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 19... | 36                                                | 100                                                  | 310                                                        | 7.7           | 40                                           | 22.5                        | 59                                                            | 6.9                                | 78                              | 2400                                              | 2500                                                  |
| JULY  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 24... | 37                                                | 92                                                   | 283                                                        | 7.9           | 50                                           | 26.0                        | 19                                                            | 6.4                                | 78                              | 80                                                | 220                                                   |
| AUG.  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 22... | 14                                                | 66                                                   | 200                                                        | 7.4           | 100                                          | 23.0                        | 51                                                            | 4.7                                | 54                              | 1300                                              | 3200                                                  |
| SEP.  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 18... | 32                                                | 108                                                  | 338                                                        | 8.0           | 20                                           | 19.0                        | 21                                                            | 7.7                                | 82                              | 600                                               | 580                                                   |

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

DRAINAGE AREA.--1,870 mi<sup>2</sup> (4,843 km<sup>2</sup>).

PERIOD OF RECORD.--Chemical analyses: August 1962 to June 1963; August 1967 to September 1974.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE  | DIS-<br>SOLVED<br>FLUO-<br>RIDE<br>(F)<br>(MG/L) | TOTAL<br>NITRATE<br>(N)<br>(MG/L) | AMMONIA<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | ORGANIC<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | DIS-<br>SOL-<br>VED-<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | TOTAL<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(RESI-<br>DUE AT<br>180 C)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(TONS<br>PER<br>AC-FT) | DIS-<br>SOLVED<br>SOLIDS<br>(TONS<br>PER<br>DAY) | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | PERCENT<br>SODIUM | HARD-<br>NESS<br>(CA,MG)<br>(MG/L) |
|-------|--------------------------------------------------|-----------------------------------|-------------------------------------------|-------------------------------------------|----------------------------------------------------------|-------------------------------------------|------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------|-----------------------------------------|-------------------|------------------------------------|
| OCT.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 11... | .5                                               | .22                               | .19                                       | 1.7                                       | .04                                                      | .39                                       | 244                                                              | .33                                                | 4150                                             | .3                                      | 9                 | 150                                |
| NOV.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 15... | .3                                               | .65                               | .06                                       | .70                                       | .04                                                      | .21                                       | 173                                                              | .24                                                | 617                                              | .3                                      | 11                | 130                                |
| DEC.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 12... | .2                                               | .77                               | .08                                       | .73                                       | .02                                                      | .21                                       | 191                                                              | .26                                                | 774                                              | .3                                      | 11                | 140                                |
| JAN.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 21... | .7                                               | .99                               | .50                                       | 1.4                                       | .02                                                      | .55                                       | 154                                                              | .21                                                | 2490                                             | .2                                      | 11                | 100                                |
| FEB.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 13... | .2                                               | .84                               | .07                                       | .44                                       | .03                                                      | .14                                       | 208                                                              | .28                                                | 814                                              | .3                                      | 11                | 140                                |
| MAR.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 13... | .4                                               | .65                               | .28                                       | 1.6                                       | .03                                                      | .51                                       | 196                                                              | .27                                                | 2540                                             | .3                                      | 10                | 140                                |
| APR.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 10... | .5                                               | .39                               | .23                                       | .77                                       | .02                                                      | .16                                       | 302                                                              | .41                                                | 367                                              | .4                                      | 12                | 220                                |
| MAY   |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 21... | .4                                               | 2.1                               | .98                                       | 1.9                                       | .08                                                      | .71                                       | 183                                                              | .25                                                | 2970                                             | .3                                      | 10                | 120                                |
| JUNE  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 19... | .4                                               | .80                               | .06                                       | 1.9                                       | --                                                       | .45                                       | 199                                                              | .27                                                | 634                                              | .2                                      | 9                 | 140                                |
| JULY  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 24... | .2                                               | 1.1                               | .05                                       | 1.1                                       | .05                                                      | .30                                       | 173                                                              | .24                                                | 668                                              | .3                                      | 11                | 130                                |
| AUG.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 22... | .3                                               | .91                               | .34                                       | 1.7                                       | .06                                                      | .48                                       | 120                                                              | .16                                                | 117                                              | .3                                      | 12                | 79                                 |
| SEP.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 18... | .2                                               | .45                               | .11                                       | .89                                       | .08                                                      | .24                                       | 210                                                              | .29                                                | 103                                              | .4                                      | 13                | 140                                |



## LITTLE CHARITON RIVER BASIN

06906200 EAST FORK CHARITON RIVER NEAR MACON, MO.

LOCATION.--Lat 39°44'57", long 92°31'05", NW¼NW¼NW¼ sec.18, T.57 N., R.14 W., Macon County, at gaging station at bridge on U.S. Highway 36, 2 mi (3.2 km) downstream from Long Branch, and 3 mi (4.8 km) west of Macon.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE  | DIS-<br>CHARGE<br>(CFS) | DIS-<br>SOLVED<br>SILICA<br>(SiO <sub>2</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>IRON<br>(FE)<br>(UG/L) | DIS-<br>SOLVED<br>MAN-<br>GANESE<br>(MN)<br>(UG/L) | DIS-<br>SOLVED<br>CAL-<br>CIUM<br>(CA)<br>(MG/L) | DIS-<br>SOLVED<br>MAG-<br>NE-<br>SIUM<br>(MG) | DIS-<br>SOLVED<br>SODIUM<br>(NA)<br>(MG/L) | DIS-<br>SOLVED<br>PO-<br>TAS-<br>SIUM<br>(K)<br>(MG/L) | BICAR-<br>BONATE<br>(HCO <sub>3</sub> )<br>(MG/L) | CAR-<br>BONATE<br>(CO <sub>3</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>SULFATE<br>(SO <sub>4</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>CHLO-<br>RIDE<br>(CL)<br>(MG/L) |
|-------|-------------------------|-----------------------------------------------------------|------------------------------------------|----------------------------------------------------|--------------------------------------------------|-----------------------------------------------|--------------------------------------------|--------------------------------------------------------|---------------------------------------------------|------------------------------------------------|-----------------------------------------------------------|---------------------------------------------------|
| OCT.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 10... | 70                      | 14                                                        | 170                                      | 190                                                | 37                                               | 8.1                                           | 11                                         | 4.1                                                    | 132                                               | 0                                              | 39                                                        | 4.2                                               |
| NOV.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 14... | 12                      | 13                                                        | 950                                      | 270                                                | 62                                               | 15                                            | 20                                         | 4.4                                                    | 218                                               | 0                                              | 72                                                        | 6.9                                               |
| DEC.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 11... | 42                      | 12                                                        | 130                                      | 480                                                | 45                                               | 9.6                                           | 12                                         | 3.8                                                    | 128                                               | 0                                              | 55                                                        | 8.0                                               |
| JAN.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 21... | 740                     | 7.7                                                       | 370                                      | 180                                                | 21                                               | 4.8                                           | 5.8                                        | 3.1                                                    | 44                                                | 0                                              | 29                                                        | 6.8                                               |
| FEB.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 13... | 22                      | 12                                                        | 90                                       | 620                                                | 59                                               | 13                                            | 19                                         | 2.4                                                    | 170                                               | 0                                              | 83                                                        | 8.8                                               |
| MAR.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 12... | 520                     | 7.9                                                       | 290                                      | 50                                                 | 23                                               | 4.9                                           | 7.4                                        | 3.0                                                    | 66                                                | 0                                              | 29                                                        | 5.4                                               |
| APR.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 09... | 16                      | 8.3                                                       | 50                                       | 210                                                | 62                                               | 15                                            | 26                                         | 2.6                                                    | 204                                               | 0                                              | 91                                                        | 6.4                                               |
| MAY   |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 14... | 414                     | 8.2                                                       | 10                                       | 210                                                | 30                                               | 6.6                                           | 9.4                                        | 2.1                                                    | 92                                                | 0                                              | 41                                                        | 2.8                                               |
| JUNE  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 18... | 25                      | 7.5                                                       | 40                                       | 30                                                 | 25                                               | 5.4                                           | 9.1                                        | 3.0                                                    | 88                                                | 0                                              | 28                                                        | 5.0                                               |
| JULY  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 23... | .06                     | 9.6                                                       | 30                                       | 150                                                | 38                                               | 8.1                                           | 11                                         | 4.3                                                    | 118                                               | 0                                              | 43                                                        | 5.3                                               |
| AUG.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 21... | 10                      | 6.3                                                       | 60                                       | 60                                                 | 28                                               | 5.5                                           | 6.0                                        | 3.8                                                    | 96                                                | 0                                              | 29                                                        | 3.6                                               |
| SEP.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 17... | .00                     | 4.6                                                       | 50                                       | 160                                                | 33                                               | 7.0                                           | 11                                         | 4.1                                                    | 112                                               | 0                                              | 34                                                        | 7.7                                               |

| DATE  | NON-<br>CAR-<br>BONATE<br>HARD-<br>NESS<br>(MG/L) | ALKA-<br>LINITY<br>AS<br>CACO <sub>3</sub><br>(MG/L) | SPE-<br>CIFIC<br>CON-<br>DUCT-<br>ANCE<br>(MICRO-<br>MHOS) | PH<br>(UNITS) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | CHEM-<br>ICAL<br>OXYGEN<br>DEMAND<br>(LOW<br>LEVEL)<br>(MG/L) | DIS-<br>SOLVED<br>OXYGEN<br>(MG/L) | PER-<br>CENT<br>SATUR-<br>ATION | FECAL<br>COL I-<br>FORM<br>(COL.<br>PER<br>100 ML) | STREP-<br>TOCOCCI<br>(COL-<br>ONIES<br>PER<br>100 ML) |
|-------|---------------------------------------------------|------------------------------------------------------|------------------------------------------------------------|---------------|----------------------------------------------|-----------------------------|---------------------------------------------------------------|------------------------------------|---------------------------------|----------------------------------------------------|-------------------------------------------------------|
| OCT.  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                    |                                                       |
| 10... | 22                                                | 108                                                  | 288                                                        | 7.6           | 30                                           | 21.0                        | 23                                                            | 6.1                                | 68                              | 100                                                | 900                                                   |
| NOV.  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                    |                                                       |
| 14... | 38                                                | 179                                                  | 520                                                        | 7.8           | 10                                           | 10.5                        | 27                                                            | 8.8                                | 79                              | 60                                                 | 220                                                   |
| DEC.  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                    |                                                       |
| 11... | 47                                                | 105                                                  | 348                                                        | 7.4           | 60                                           | 1.0                         | 26                                                            | 10.8                               | 76                              | 300                                                | 1700                                                  |
| JAN.  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                    |                                                       |
| 21... | 36                                                | 36                                                   | 195                                                        | 7.2           | 100                                          | .0                          | 37                                                            | 9.3                                | 64                              | 1600                                               | 7800                                                  |
| FEB.  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                    |                                                       |
| 13... | 61                                                | 139                                                  | 455                                                        | 7.8           | 20                                           | 2.0                         | 12                                                            | 10.5                               | 76                              | --                                                 | 40                                                    |
| MAR.  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                    |                                                       |
| 12... | 23                                                | 54                                                   | 185                                                        | 7.4           | 200                                          | 8.5                         | 85                                                            | 7.3                                | 62                              | 27000                                              | 16000                                                 |
| APR.  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                    |                                                       |
| 09... | 49                                                | 167                                                  | 508                                                        | 8.1           | 20                                           | 13.5                        | 15                                                            | 8.7                                | 83                              | 20                                                 | 10                                                    |
| MAY   |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                    |                                                       |
| 14... | 27                                                | 75                                                   | 252                                                        | 7.5           | 80                                           | 15.5                        | 68                                                            | 8.1                                | 81                              | 8000                                               | 21000                                                 |
| JUNE  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                    |                                                       |
| 18... | 12                                                | 72                                                   | 230                                                        | 7.6           | 100                                          | 20.0                        | 48                                                            | 7.2                                | 78                              | 1730                                               | 1250                                                  |
| JULY  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                    |                                                       |
| 23... | 31                                                | 97                                                   | 295                                                        | 7.6           | 20                                           | 29.5                        | 30                                                            | 6.2                                | 81                              | 820                                                | 230                                                   |
| AUG.  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                    |                                                       |
| 21... | 14                                                | 79                                                   | 228                                                        | 7.9           | 70                                           | 27.0                        | 30                                                            | 2.9                                | 36                              | 400                                                | 480                                                   |
| SEP.  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                    |                                                       |
| 17... | 18                                                | 92                                                   | 282                                                        | 7.7           | 20                                           | 21.5                        | 26                                                            | 7.6                                | 85                              | 240                                                | 180                                                   |

06906200 EAST FORK CHARITON RIVER NEAR MACON, MO.--Continued

DRAINAGE AREA.--112 mi<sup>2</sup> (290 km<sup>2</sup>).

PERIOD OF RECORD.--Chemical analyses: October 1971 to September 1974 (discontinued).

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE          | DIS-<br>SOLVED<br>FLUO-<br>RIDE<br>(F)<br>(MG/L) | TOTAL<br>NITRATE<br>(N)<br>(MG/L) | AMMONIA<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | ORGANIC<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | DIS-<br>SOL-<br>VED-<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | TOTAL<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(RESI-<br>DUE AT<br>180 C)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(TONS<br>PER<br>AC-FT) | DIS-<br>SOLVED<br>SOLIDS<br>(TONS<br>PER<br>DAY) | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | PERCENT<br>SODIUM | HARD-<br>NESS<br>(CA,MG)<br>(MG/L) |
|---------------|--------------------------------------------------|-----------------------------------|-------------------------------------------|-------------------------------------------|----------------------------------------------------------|-------------------------------------------|------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------|-----------------------------------------|-------------------|------------------------------------|
| OCT.<br>10... | .3                                               | .24                               | .06                                       | .24                                       | .00                                                      | .11                                       | 199                                                              | .27                                                | 37.6                                             | .4                                      | 15                | 130                                |
| NOV.<br>14... | .2                                               | .01                               | .02                                       | .53                                       | .04                                                      | .14                                       | 314                                                              | .43                                                | 10.2                                             | .6                                      | 16                | 220                                |
| DEC.<br>11... | .2                                               | .96                               | .22                                       | .71                                       | .02                                                      | .13                                       | 217                                                              | .30                                                | 24.6                                             | .4                                      | 14                | 150                                |
| JAN.<br>21... | 1.0                                              | 2.5                               | .34                                       | 1.5                                       | .02                                                      | .25                                       | 124                                                              | .17                                                | 248                                              | .3                                      | 14                | 72                                 |
| FEB.<br>13... | .2                                               | 1.1                               | .15                                       | .30                                       | .01                                                      | .02                                       | 287                                                              | .39                                                | 17.0                                             | .6                                      | 17                | 200                                |
| MAR.<br>12... | .2                                               | .82                               | .42                                       | 2.4                                       | .03                                                      | .40                                       | 137                                                              | .19                                                | 192                                              | .4                                      | 17                | 78                                 |
| APR.<br>09... | .4                                               | .00                               | .12                                       | .71                                       | .02                                                      | .11                                       | 318                                                              | .43                                                | 13.7                                             | .8                                      | 20                | 220                                |
| MAY<br>14...  | .3                                               | .49                               | 1.0                                       | .40                                       | .06                                                      | .39                                       | 163                                                              | .22                                                | 182                                              | .4                                      | 16                | 100                                |
| JUNE<br>18... | .3                                               | 1.5                               | .08                                       | 1.5                                       | --                                                       | .27                                       | 141                                                              | .19                                                | 9.52                                             | .4                                      | 18                | 85                                 |
| JULY<br>23... | .2                                               | .13                               | .42                                       | .78                                       | .03                                                      | .14                                       | 185                                                              | .25                                                | .03                                              | .4                                      | 15                | 130                                |
| AUG.<br>21... | .2                                               | .22                               | .10                                       | .72                                       | .02                                                      | .11                                       | 137                                                              | .19                                                | 3.70                                             | .3                                      | 12                | 93                                 |
| SEP.<br>17... | .3                                               | .07                               | .12                                       | .88                                       | .03                                                      | .11                                       | 173                                                              | .24                                                | .00                                              | .5                                      | 17                | 110                                |

## LITTLE CHARITON RIVER BASIN

06906300 EAST FORK CHARITON RIVER NEAR HUNTSVILLE, MO.

LOCATION.--Lat 39°27'19", long 92°34'09", NE¼NW¼NW¼ sec.26, T.54 N., R.15 W., Randolph County, at gaging station at bridge on County Highway C, 1 mi (1.6 km) downstream from Sugar Creek, and 1.5 mi (2.4 km) northwest of Huntsville.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE  | DIS-<br>CHARGE<br>(CFS) | DIS-<br>SOLVED<br>SILICA<br>(SiO <sub>2</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>IRON<br>(FE)<br>(UG/L) | DIS-<br>SOLVED<br>MAN-<br>GANESE<br>(MN)<br>(UG/L) | DIS-<br>SOLVED<br>CAL-<br>CIUM<br>(CA)<br>(MG/L) | DIS-<br>SOLVED<br>MAG-<br>NE-<br>SIUM<br>(MG) | DIS-<br>SOLVED<br>SODIUM<br>(NA)<br>(MG/L) | DIS-<br>SOLVED<br>PO-<br>TAS-<br>SIUM<br>(K)<br>(MG/L) | BICAR-<br>BONATE<br>(HCO <sub>3</sub> )<br>(MG/L) | CAR-<br>BONATE<br>(CO <sub>3</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>SULFATE<br>(SO <sub>4</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>CHLO-<br>RIDE<br>(CL)<br>(MG/L) |
|-------|-------------------------|-----------------------------------------------------------|------------------------------------------|----------------------------------------------------|--------------------------------------------------|-----------------------------------------------|--------------------------------------------|--------------------------------------------------------|---------------------------------------------------|------------------------------------------------|-----------------------------------------------------------|---------------------------------------------------|
| OCT.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 11... | 126                     | 13                                                        | 80                                       | 1100                                               | 80                                               | 31                                            | 19                                         | 4.4                                                    | 124                                               | 0                                              | 250                                                       | 4.0                                               |
| NOV.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 15... | 21                      | 8.9                                                       | 310                                      | 2000                                               | 190                                              | 96                                            | 69                                         | 6.8                                                    | 180                                               | 0                                              | 800                                                       | 11                                                |
| DEC.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 12... | 73                      | 9.5                                                       | 110                                      | 1900                                               | 99                                               | 41                                            | 21                                         | 4.5                                                    | 116                                               | 0                                              | 340                                                       | 9.0                                               |
| JAN.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 21... | 1070                    | 7.1                                                       | 440                                      | 430                                                | 35                                               | 12                                            | 7.8                                        | 3.3                                                    | 51                                                | 0                                              | 93                                                        | 4.7                                               |
| FEB.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 13... | 63                      | 9.4                                                       | 2500                                     | 3500                                               | 150                                              | 75                                            | 32                                         | 4.1                                                    | 136                                               | 0                                              | 620                                                       | 9.0                                               |
| MAR.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 13... | 576                     | 8.7                                                       | 280                                      | 210                                                | 39                                               | 12                                            | 12                                         | 3.1                                                    | 82                                                | 0                                              | 80                                                        | 6.4                                               |
| APR.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 10... | 55                      | 6.6                                                       | 50                                       | 1700                                               | 150                                              | 69                                            | 58                                         | 4.0                                                    | 174                                               | 0                                              | 640                                                       | 9.0                                               |
| MAY   |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 22... | 3250                    | 7.6                                                       | 110                                      | 0                                                  | 24                                               | 4.5                                           | 4.2                                        | 3.0                                                    | 44                                                | 0                                              | 39                                                        | 2.8                                               |
| JUNE  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 19... | 61                      | 8.5                                                       | 20                                       | 820                                                | 69                                               | 28                                            | 20                                         | 3.4                                                    | 108                                               | 0                                              | 220                                                       | 7.8                                               |
| JULY  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 24... | 6.0                     | 9.5                                                       | 30                                       | 1900                                               | 95                                               | 33                                            | 42                                         | 5.8                                                    | 112                                               | 0                                              | 330                                                       | 15                                                |
| AUG.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 22... | 200                     | 5.3                                                       | 1900                                     | 2200                                               | 57                                               | 25                                            | 8.1                                        | 4.6                                                    | 6                                                 | 0                                              | 240                                                       | 3.2                                               |
| SEP.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 18... | 4.8                     | 5.8                                                       | 80                                       | 2500                                               | 110                                              | 59                                            | 38                                         | 5.7                                                    | 100                                               | 0                                              | 500                                                       | 10                                                |

| DATE  | NON-<br>CAR-<br>BONATE<br>HARD-<br>NESS<br>(MG/L) | ALKA-<br>LINIT-<br>Y AS<br>CACO <sub>3</sub><br>(MG/L) | SPE-<br>CIFIC<br>CON-<br>DUCT-<br>ANCE<br>(MICRO-<br>MHOS) | PH<br>(UNITS) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | CHEM-<br>ICAL<br>OXYGEN<br>DEMAND<br>(LOW<br>LEVEL)<br>(MG/L) | DIS-<br>SOLVED<br>OXYGEN<br>(MG/L) | PER-<br>CENT<br>SATUR-<br>ATION | FECAL<br>COLI-<br>FORM<br>(COL.<br>PER<br>100 ML) | STREP-<br>TOCOCCI<br>(COL-<br>ONIES<br>PER<br>100 ML) |
|-------|---------------------------------------------------|--------------------------------------------------------|------------------------------------------------------------|---------------|----------------------------------------------|-----------------------------|---------------------------------------------------------------|------------------------------------|---------------------------------|---------------------------------------------------|-------------------------------------------------------|
| OCT.  |                                                   |                                                        |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 11... | 230                                               | 102                                                    | 690                                                        | 7.4           | 30                                           | 20.5                        | 18                                                            | 5.4                                | 60                              | 250                                               | 920                                                   |
| NOV.  |                                                   |                                                        |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 15... | 720                                               | 148                                                    | 1730                                                       | 7.2           | 6                                            | 12.0                        | 24                                                            | 5.3                                | 49                              | 80                                                | 290                                                   |
| DEC.  |                                                   |                                                        |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 12... | 320                                               | 95                                                     | 900                                                        | 7.2           | 20                                           | 1.5                         | 18                                                            | 11.4                               | 81                              | 250                                               | 270                                                   |
| JAN.  |                                                   |                                                        |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 21... | 95                                                | 42                                                     | 350                                                        | 7.3           | 100                                          | 1.0                         | 29                                                            | 9.4                                | 66                              | 1300                                              | 6500                                                  |
| FEB.  |                                                   |                                                        |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 13... | 570                                               | 112                                                    | 1300                                                       | 7.3           | 8                                            | 4.0                         | 7                                                             | 9.8                                | 75                              | --                                                | 30                                                    |
| MAR.  |                                                   |                                                        |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 13... | 80                                                | 67                                                     | 360                                                        | 7.4           | 100                                          | 8.5                         | 60                                                            | 8.7                                | 74                              | 4500                                              | 1000                                                  |
| APR.  |                                                   |                                                        |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 10... | 520                                               | 143                                                    | 1400                                                       | 7.6           | 20                                           | 11.0                        | 11                                                            | 8.2                                | 75                              | 60                                                | 50                                                    |
| MAY   |                                                   |                                                        |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 22... | 42                                                | 36                                                     | 177                                                        | 7.0           | 100                                          | 22.0                        | 42                                                            | 5.0                                | 57                              | 600                                               | 4000                                                  |
| JUNE  |                                                   |                                                        |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 19... | 200                                               | 89                                                     | 645                                                        | 7.4           | 8                                            | 22.0                        | 41                                                            | 5.9                                | 67                              | 640                                               | 460                                                   |
| JULY  |                                                   |                                                        |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 24... | 280                                               | 92                                                     | 890                                                        | 7.3           | 50                                           | 27.0                        | 26                                                            | 6.1                                | 76                              | 40                                                | 50                                                    |
| AUG.  |                                                   |                                                        |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 22... | 240                                               | 5                                                      | 560                                                        | 5.6           | 6                                            | 22.0                        | 44                                                            | 5.8                                | 66                              | 7200                                              | 28000                                                 |
| SEP.  |                                                   |                                                        |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 18... | 440                                               | 82                                                     | 1070                                                       | 7.2           | 10                                           | 18.5                        | 19                                                            | 7.3                                | 77                              | 280                                               | 150                                                   |

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

DRAINAGE AREA.--220 mi<sup>2</sup> (570 km<sup>2</sup>).

PERIOD OF RECORD.--Chemical analyses: September 1963 to September 1968, October 1973 to September 1974.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE          | DIS-<br>SOLVED<br>FLUO-<br>RIDE<br>(F)<br>(MG/L) | TOTAL<br>NITRATE<br>(N)<br>(MG/L) | AMMONIA<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | ORGANIC<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | DIS-<br>SOL-<br>VED-<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | TOTAL<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(RESI-<br>DUE AT<br>180 C)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(TONS<br>PER<br>AC-FT) | DIS-<br>SOLVED<br>SOLIDS<br>(TONS<br>PER<br>DAY) | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | PERCENT<br>SODIUM | HARD-<br>NESS<br>(CA, MG)<br>(MG/L) |
|---------------|--------------------------------------------------|-----------------------------------|-------------------------------------------|-------------------------------------------|----------------------------------------------------------|-------------------------------------------|------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------|-----------------------------------------|-------------------|-------------------------------------|
| OCT.<br>11... | .3                                               | .22                               | .13                                       | .71                                       | .00                                                      | .08                                       | 498                                                              | .68                                                | 169                                              | .5                                      | 11                | 330                                 |
| NOV.<br>15... | .4                                               | .02                               | .05                                       | .45                                       | .03                                                      | .10                                       | 1410                                                             | 1.92                                               | 79.9                                             | 1.0                                     | 15                | 870                                 |
| DEC.<br>12... | .2                                               | .76                               | .19                                       | .57                                       | .02                                                      | .08                                       | 616                                                              | .84                                                | 121                                              | .4                                      | 10                | 420                                 |
| JAN.<br>21... | .5                                               | 1.0                               | .77                                       | .73                                       | .09                                                      | .39                                       | 213                                                              | .29                                                | 615                                              | .3                                      | 11                | 140                                 |
| FEB.<br>13... | .4                                               | .58                               | .20                                       | .21                                       | .05                                                      | .08                                       | 1030                                                             | 1.40                                               | 175                                              | .5                                      | 9                 | 680                                 |
| MAR.<br>13... | .4                                               | .66                               | .38                                       | 1.7                                       | .02                                                      | .39                                       | 236                                                              | .32                                                | 367                                              | .4                                      | 15                | 150                                 |
| APR.<br>10... | .6                                               | .01                               | .17                                       | .56                                       | .02                                                      | .06                                       | 1080                                                             | 1.47                                               | 160                                              | 1.0                                     | 16                | 660                                 |
| MAY<br>22...  | .4                                               | 1.5                               | .38                                       | 1.0                                       | .04                                                      | .27                                       | 129                                                              | .18                                                | 1130                                             | .2                                      | 10                | 78                                  |
| JUNE<br>19... | .4                                               | 1.7                               | .04                                       | 1.3                                       | .01                                                      | .14                                       | 439                                                              | .60                                                | 72.3                                             | .5                                      | 13                | 290                                 |
| JULY<br>24... | .3                                               | .24                               | .29                                       | 1.1                                       | .02                                                      | .13                                       | 636                                                              | .87                                                | 10.3                                             | .9                                      | 19                | 370                                 |
| AUG.<br>22... | .5                                               | 1.1                               | .20                                       | .80                                       | .01                                                      | .14                                       | 389                                                              | .53                                                | 210                                              | .2                                      | 7                 | 250                                 |
| SEP.<br>18... | .5                                               | .03                               | .17                                       | .70                                       | .04                                                      | .09                                       | --                                                               | 1.06                                               | 10.1                                             | .7                                      | 14                | 520                                 |

06910410 CEDAR CREEK NEAR COLUMBIA, MO.

LOCATION.--Lat 38°54'40", long 92°09'30", Boone County, at left downstream side of bridge on County Highway WW, 3 mi (4.8 km) downstream from gaging station, and 9.3 mi (15 km) east of Columbia.

DRAINAGE AREA.--52.1 mi<sup>2</sup> (135 km<sup>2</sup>).

PERIOD OF RECORD.--Chemical analyses: July 1964 to September 1974.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE  | DIS-<br>CHARGE<br>(CFS) | DIS-<br>SOLVED<br>SILICA<br>(SiO <sub>2</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>IRON<br>(FE)<br>(UG/L) | DIS-<br>SOLVED<br>MAN-<br>GANESE<br>(MN)<br>(UG/L) | DIS-<br>SOLVED<br>CAL-<br>CIUM<br>(CA)<br>(MG/L) | DIS-<br>SOLVED<br>MAG-<br>NE-<br>SIUM<br>(MG) | DIS-<br>SOLVED<br>SODIUM<br>(NA)<br>(MG/L) | DIS-<br>SOLVED<br>PO-<br>TAS-<br>SIUM<br>(K)<br>(MG/L) | BICAR-<br>BONATE<br>(HCO <sub>3</sub> )<br>(MG/L) | CAR-<br>BONATE<br>(CO <sub>3</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>SULFATE<br>(SO <sub>4</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>CHLO-<br>RIDE<br>(CL)<br>(MG/L) |
|-------|-------------------------|-----------------------------------------------------------|------------------------------------------|----------------------------------------------------|--------------------------------------------------|-----------------------------------------------|--------------------------------------------|--------------------------------------------------------|---------------------------------------------------|------------------------------------------------|-----------------------------------------------------------|---------------------------------------------------|
| OCT.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 11... | 3.4                     | 17                                                        | 50                                       | 4800                                               | 87                                               | 31                                            | 10                                         | 5.9                                                    | 6                                                 | 0                                              | 350                                                       | 6.3                                               |
| NOV.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 15... | 4.4                     | 16                                                        | 220                                      | 6400                                               | 110                                              | 42                                            | 14                                         | 5.7                                                    | 24                                                | 0                                              | 450                                                       | 8.6                                               |
| DEC.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 12... | 10                      | 14                                                        | 17000                                    | 4300                                               | 80                                               | 29                                            | 11                                         | 3.9                                                    | 28                                                | 0                                              | 300                                                       | 6.0                                               |
| JAN.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 23... | 188                     | 8.8                                                       | 1100                                     | 1000                                               | 32                                               | 9.0                                           | 6.8                                        | 3.4                                                    | 28                                                | 0                                              | 97                                                        | 5.7                                               |
| FEB.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 14... | 14                      | 12                                                        | 7600                                     | 4600                                               | 78                                               | 32                                            | 13                                         | 3.0                                                    | 12                                                | 0                                              | 350                                                       | 6.8                                               |
| MAR.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 13... | 30                      | 10                                                        | 2300                                     | 2400                                               | 51                                               | 18                                            | 8.0                                        | 3.7                                                    | 22                                                | 0                                              | 170                                                       | 5.9                                               |
| APR.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 10... | 10                      | 8.8                                                       | 860                                      | 2800                                               | 74                                               | 30                                            | 14                                         | 3.1                                                    | 22                                                | 0                                              | 290                                                       | 5.5                                               |
| MAY   |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 20... | 48                      | 11                                                        | 80                                       | 1600                                               | 48                                               | 14                                            | 6.7                                        | 3.5                                                    | 24                                                | 0                                              | 160                                                       | 4.5                                               |
| JUNE  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 19... | 4.7                     | 12                                                        | 20                                       | 3200                                               | 75                                               | 25                                            | 10                                         | 3.2                                                    | 24                                                | 0                                              | 280                                                       | 5.2                                               |
| JULY  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 24... | .60                     | 14                                                        | 130                                      | 12000                                              | 190                                              | 73                                            | 18                                         | 6.2                                                    | 0                                                 | 0                                              | 760                                                       | 8.8                                               |
| AUG.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 22... | 510                     | 5.3                                                       | 1800                                     | 3900                                               | 72                                               | 25                                            | 4.1                                        | 7.3                                                    | 2                                                 | 0                                              | 290                                                       | 3.3                                               |
| SEP.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 18... | .25                     | 11                                                        | 50                                       | 6500                                               | 100                                              | 37                                            | 11                                         | 5.7                                                    | 0                                                 | 0                                              | 410                                                       | 7.8                                               |

| DATE  | NON-<br>CAR-<br>BONATE<br>HARD-<br>NESS<br>(MG/L) | ALKA-<br>LINIT<br>AS<br>CACO <sub>3</sub><br>(MG/L) | SPE-<br>CIFIC<br>CON-<br>DUCT-<br>ANCE<br>(MICRO-<br>MHOS) | PH<br>(UNITS) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | CHEM-<br>ICAL<br>OXYGEN<br>DEMAND<br>(LOW<br>LEVEL)<br>(MG/L) | DIS-<br>SOLVED<br>OXYGEN<br>(MG/L) | PER-<br>CENT<br>SATUR-<br>ATION | FECAL<br>COLI-<br>FORM<br>(COL.<br>PER<br>100 ML) | STREP-<br>TOCOCCI<br>(COL-<br>ONIES<br>PER<br>100 ML) |
|-------|---------------------------------------------------|-----------------------------------------------------|------------------------------------------------------------|---------------|----------------------------------------------|-----------------------------|---------------------------------------------------------------|------------------------------------|---------------------------------|---------------------------------------------------|-------------------------------------------------------|
| OCT.  |                                                   |                                                     |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 11... | 350                                               | 5                                                   | 700                                                        | 6.1           | 3                                            | 21.0                        | 11                                                            | 5.5                                | 61                              | 14                                                | 8                                                     |
| NOV.  |                                                   |                                                     |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 15... | 430                                               | 20                                                  | 950                                                        | 6.4           | 4                                            | 11.0                        | 11                                                            | 6.9                                | 62                              | 12                                                | 70                                                    |
| DEC.  |                                                   |                                                     |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 12... | 300                                               | 23                                                  | 695                                                        | 6.6           | 7                                            | 3.5                         | 9                                                             | 11.0                               | 83                              | 2                                                 | 6                                                     |
| JAN.  |                                                   |                                                     |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 23... | 94                                                | 23                                                  | 305                                                        | 6.6           | 100                                          | 3.0                         | 38                                                            | 11.0                               | 81                              | 1200                                              | 7400                                                  |
| FEB.  |                                                   |                                                     |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 14... | 320                                               | 10                                                  | 691                                                        | 6.4           | 20                                           | 5.0                         | 12                                                            | 10.5                               | 82                              | --                                                | 4                                                     |
| MAR.  |                                                   |                                                     |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 13... | 180                                               | 18                                                  | 480                                                        | 6.6           | 50                                           | 8.0                         | 21                                                            | 9.0                                | 76                              | 2300                                              | 700                                                   |
| APR.  |                                                   |                                                     |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 10... | 290                                               | 18                                                  | 710                                                        | 6.7           | 20                                           | 11.0                        | 14                                                            | 8.4                                | 76                              | 6                                                 | 8                                                     |
| MAY   |                                                   |                                                     |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 20... | 160                                               | 20                                                  | 425                                                        | 6.8           | 30                                           | 21.5                        | 18                                                            | 6.7                                | 75                              | 1400                                              | 4300                                                  |
| JUNE  |                                                   |                                                     |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 19... | 270                                               | 20                                                  | 645                                                        | 6.8           | 7                                            | 22.0                        | 24                                                            | 7.4                                | 84                              | 680                                               | 600                                                   |
| JULY  |                                                   |                                                     |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 24... | 780                                               | 0                                                   | 1380                                                       | 4.5           | 1                                            | 23.5                        | 17                                                            | 6.9                                | 89                              | 2                                                 | 4                                                     |
| AUG.  |                                                   |                                                     |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 22... | 280                                               | 2                                                   | 655                                                        | 4.6           | 3                                            | 22.0                        | 44                                                            | 5.9                                | 67                              | 11500                                             | 86000                                                 |
| SEP.  |                                                   |                                                     |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 18... | 400                                               | 0                                                   | 900                                                        | 4.5           | 0                                            | 16.0                        | 4                                                             | 7.5                                | 76                              | 14                                                | 36                                                    |



06910410 CEDAR CREEK NEAR COLUMBIA, MO.--Continued

EXTREMES, 1973-74.--Specific conductance: Maximum, 1,700 micromhos Aug. 22; minimum, 75 micromhos Oct. 13.

EXTREMES, 1964-74.--Specific conductance: Maximum, 5,140 micromhos Nov. 12, 1964; minimum 60 micromhos Aug. 2, 1968.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE          | DIS-<br>SOLVED<br>FLUO-<br>RIDE<br>(F)<br>(MG/L) | TOTAL<br>NITRATE<br>(N)<br>(MG/L) | AMMONIA<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | ORGANIC<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | DIS-<br>SOL-<br>VED-<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | TOTAL<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(RESI-<br>DUE AT<br>180 C)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(TONS<br>PER<br>AC-FT) | DIS-<br>SOLVED<br>SOLIDS<br>(TONS<br>PER<br>DAY) | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | PERCENT<br>SODIUM | HARD-<br>NESS<br>(CA,MG)<br>(MG/L) |
|---------------|--------------------------------------------------|-----------------------------------|-------------------------------------------|-------------------------------------------|----------------------------------------------------------|-------------------------------------------|------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------|-----------------------------------------|-------------------|------------------------------------|
| OCT.<br>11... | .5                                               | .38                               | .24                                       | .15                                       | .01                                                      | .02                                       | 552                                                              | .75                                                | 5.07                                             | .2                                      | 6                 | 350                                |
| NOV.<br>15... | .2                                               | .27                               | .05                                       | .26                                       | .02                                                      | .05                                       | 729                                                              | .99                                                | 8.66                                             | .3                                      | 6                 | 450                                |
| DEC.<br>12... | .4                                               | .54                               | .36                                       | .06                                       | .01                                                      | .03                                       | 491                                                              | .67                                                | 13.3                                             | .3                                      | 7                 | 320                                |
| JAN.<br>23... | .3                                               | .85                               | .24                                       | 1.2                                       | .00                                                      | .32                                       | 192                                                              | .26                                                | 97.5                                             | .3                                      | 11                | 120                                |
| FEB.<br>14... | .5                                               | .60                               | .20                                       | .22                                       | .00                                                      | .01                                       | 510                                                              | .69                                                | 19.3                                             | .3                                      | 8                 | 330                                |
| MAR.<br>13... | 1.3                                              | .62                               | .06                                       | .59                                       | .01                                                      | .07                                       | 319                                                              | .43                                                | 25.8                                             | .2                                      | 8                 | 200                                |
| APR.<br>10... | .3                                               | .30                               | .17                                       | .26                                       | .01                                                      | .09                                       | 481                                                              | .65                                                | 13.0                                             | .3                                      | 9                 | 310                                |
| MAY<br>20...  | .3                                               | 1.6                               | .46                                       | .84                                       | .01                                                      | .14                                       | 286                                                              | .39                                                | 37.1                                             | .2                                      | 7                 | 180                                |
| JUNE<br>19... | .3                                               | .54                               | .15                                       | .46                                       | --                                                       | .04                                       | 460                                                              | .63                                                | 5.84                                             | .3                                      | 7                 | 290                                |
| JULY<br>24... | 1.1                                              | .41                               | .23                                       | .12                                       | --                                                       | .03                                       | --                                                               | 1.47                                               | 1.75                                             | .3                                      | 5                 | 780                                |
| AUG.<br>22... | .6                                               | .80                               | .47                                       | .83                                       | .01                                                      | .33                                       | 471                                                              | .64                                                | 649                                              | .1                                      | 3                 | 280                                |
| SEP.<br>18... | .5                                               | 1.9                               | .16                                       | .28                                       | .06                                                      | .02                                       | 676                                                              | .92                                                | .46                                              | .2                                      | 6                 | 400                                |

## CEDAR CREEK BASIN

06910410 CEDAR CREEK NEAR COLUMBIA, MO.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C) , WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

|       | OCTOBER |     | NOVEMBER |      | DECEMBER |     | JANUARY |     | FEBRUARY |     | MARCH |     |
|-------|---------|-----|----------|------|----------|-----|---------|-----|----------|-----|-------|-----|
| DAY   | MAX     | MIN | MAX      | MIN  | MAX      | MIN | MAX     | MIN | MAX      | MIN | MAX   | MIN |
| 1     | 410     | 360 | 910      | 640  | 180      | 170 | 515     | 485 | 190      | 170 | 455   | 395 |
| 2     | 380     | 360 | 790      | 680  | 190      | 180 | 555     | 515 | 200      | 190 | 540   | 455 |
| 3     | 415     | 380 | 710      | 680  | 200      | 190 | 600     | 555 | 220      | 200 | 600   | 540 |
| 4     | 440     | 410 | 750      | 720  | 195      | 115 | 640     | 600 | 235      | 220 | 630   | 600 |
| 5     | 455     | 440 | 760      | 750  | 300      | 185 | 670     | 640 | 255      | 235 | 650   | 630 |
| 6     | 490     | 455 | 770      | 760  | 375      | 300 | 680     | 670 | 270      | 255 | 680   | 650 |
| 7     | 530     | 490 | 780      | 770  | 440      | 375 | 700     | 680 | 290      | 270 | 710   | 680 |
| 8     | 570     | 530 | 790      | 780  | 500      | 440 | 700     | 700 | 310      | 290 | 730   | 710 |
| 9     | 610     | 570 | 810      | 790  | 540      | 500 | 730     | 700 | 320      | 310 | 730   | 550 |
| 10    | 660     | 610 | 830      | 810  | 590      | 540 | 745     | 730 | 340      | 320 | 550   | 150 |
| 11    | 700     | 660 | 850      | 830  | 650      | 590 | 745     | 745 | 360      | 340 | 350   | 150 |
| 12    | 720     | 105 | 870      | 850  | 700      | 650 | 745     | 745 | 380      | 360 | 400   | 300 |
| 13    | 250     | 75  | 890      | 870  | 710      | 700 | 745     | 730 | 410      | 380 | 490   | 400 |
| 14    | 440     | 250 | 930      | 890  | 740      | 710 | 730     | 730 | 450      | 410 | 545   | 490 |
| 15    | 495     | 440 | 1000     | 930  | 740      | 710 | 730     | 690 | 460      | 430 | 660   | 545 |
| 16    | 550     | 495 | 1040     | 1000 | 710      | 700 | 690     | 280 | 490      | 460 | 670   | 500 |
| 17    | 600     | 550 | 1040     | 1000 | 740      | 710 | 320     | 165 | 510      | 490 | 520   | 500 |
| 18    | 625     | 600 | 1100     | 1040 | 740      | 730 | 165     | 85  | 520      | 240 | 570   | 520 |
| 19    | 650     | 625 | 1190     | 1100 | 730      | 700 | 260     | 155 | 260      | 190 | 620   | 570 |
| 20    | 700     | 650 | 1200     | 330  | 710      | 700 | 290     | 240 | 375      | 260 | 650   | 620 |
| 21    | 720     | 700 | 1280     | 500  | 740      | 710 | 290     | 240 | 445      | 290 | 680   | 650 |
| 22    | 740     | 720 | 500      | 470  | 740      | 740 | 300     | 150 | 290      | 230 | 710   | 680 |
| 23    | 760     | 740 | 500      | 470  | 750      | 510 | 315     | 195 | 370      | 275 | 740   | 710 |
| 24    | 790     | 760 | 570      | 250  | 555      | 220 | 370     | 315 | 415      | 370 | 730   | 710 |
| 25    | 810     | 790 | 345      | 140  | 265      | 215 | 420     | 370 | 500      | 415 | 750   | 690 |
| 26    | 850     | 810 | 140      | 140  | 330      | 265 | 450     | 80  | 570      | 450 | 800   | 690 |
| 27    | 1080    | 850 | 150      | 140  | 380      | 330 | 160     | 80  | 570      | 290 | 800   | 670 |
| 28    | 1230    | 930 | 155      | 150  | 420      | 380 | 130     | 110 | 395      | 360 | 750   | 650 |
| 29    | 930     | 720 | 160      | 155  | 480      | 420 | 115     | 110 | ---      | --- | 650   | 650 |
| 30    | 720     | 690 | 170      | 160  | 490      | 465 | 145     | 115 | ---      | --- | 700   | 650 |
| 31    | 690     | 640 | ---      | ---  | 490      | 485 | 170     | 145 | ---      | --- | 730   | 700 |
| MONTH | 1230    | 75  | 1280     | 140  | 750      | 115 | 745     | 80  | 570      | 170 | 800   | 150 |

06910410 CEDAR CREEK NEAR COLUMBIA, MO.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C) , WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

|       | APRIL |     | MAY  |     | JUNE |     | JULY |      | AUGUST |      | SEPTEMBER |     |
|-------|-------|-----|------|-----|------|-----|------|------|--------|------|-----------|-----|
| DAY   | MAX   | MIN | MAX  | MIN | MAX  | MIN | MAX  | MIN  | MAX    | MIN  | MAX       | MIN |
| 1     | 730   | 720 | 430  | 370 | 365  | 255 | 880  | 850  | 1400   | 1400 | 1250      | 430 |
| 2     | 720   | 720 | 600  | 375 | 420  | 365 | 900  | 850  | 1400   | 1400 | 580       | 520 |
| 3     | 720   | 720 | 500  | 375 | 580  | 420 | 900  | 870  | 1400   | 1400 | 660       | 580 |
| 4     | 740   | 720 | 500  | 475 | 970  | 580 | 1080 | 850  | 1400   | 1400 | 780       | 660 |
| 5     | 750   | 740 | 505  | 480 | 1050 | 970 | 1200 | 1080 | 1400   | 1400 | 790       | 745 |
| 6     | 760   | 750 | 590  | 505 | 1120 | 170 | 1200 | 1200 | 1400   | 1400 | 750       | 745 |
| 7     | 770   | 760 | 640  | 590 | 260  | 115 | 1220 | 1200 | 1400   | 1370 | 745       | 745 |
| 8     | 900   | 650 | 650  | 630 | 310  | 200 | 1300 | 1220 | 1380   | 1370 | 745       | 745 |
| 9     | 750   | 570 | 680  | 630 | 230  | 145 | 1390 | 1300 | 1380   | 1380 | 750       | 745 |
| 10    | 750   | 710 | 720  | 670 | 360  | 230 | 1410 | 1390 | 1380   | 1300 | 790       | 750 |
| 11    | 900   | 710 | 780  | 670 | 440  | 360 | 1480 | 1400 | 1320   | 1300 | 810       | 790 |
| 12    | 940   | 690 | 820  | 590 | 530  | 440 | 1500 | 1480 | 1350   | 1320 | 830       | 810 |
| 13    | 800   | 85  | 630  | 590 | 560  | 530 | 1510 | 1500 | 1380   | 1350 | 850       | 830 |
| 14    | 370   | 140 | 630  | 120 | 620  | 170 | 1510 | 1510 | 1400   | 1380 | 860       | 850 |
| 15    | 440   | 340 | 340  | 210 | 620  | 180 | 1520 | 1510 | 1400   | 1400 | 865       | 860 |
| 16    | 460   | 150 | 440  | 340 | 485  | 465 | 1520 | 1520 | 1410   | 1400 | 870       | 865 |
| 17    | 390   | 340 | 500  | 170 | 540  | 485 | 1530 | 1520 | 1420   | 1410 | 890       | 870 |
| 18    | 460   | 390 | 250  | 130 | 610  | 540 | 1540 | 1530 | 1460   | 1420 | 900       | 890 |
| 19    | 500   | 460 | 360  | 250 | 660  | 610 | 1540 | 1530 | 1480   | 1460 | 900       | 880 |
| 20    | 550   | 500 | 440  | 360 | 700  | 660 | 1530 | 1520 | 1490   | 1480 | 900       | 890 |
| 21    | 590   | 550 | 500  | 440 | 750  | 700 | 1520 | 1500 | 1500   | 1490 | 960       | 890 |
| 22    | 700   | 590 | 730  | 370 | 750  | 750 | 1500 | 1480 | 1700   | 440  | 900       | 880 |
| 23    | 760   | 560 | 400  | 380 | 770  | 740 | 1480 | 1450 | 520    | 435  | 900       | 890 |
| 24    | 630   | 560 | 480  | 400 | 790  | 750 | 1450 | 1400 | 580    | 520  | 900       | 890 |
| 25    | 680   | 630 | 540  | 480 | 830  | 770 | 1400 | 1390 | 630    | 580  | 900       | 900 |
| 26    | 750   | 680 | 590  | 540 | 890  | 820 | 1390 | 1380 | 670    | 630  | 900       | 900 |
| 27    | 760   | 750 | 640  | 590 | 860  | 830 | 1380 | 1380 | 700    | 530  | 900       | 900 |
| 28    | 810   | 750 | 700  | 640 | 870  | 850 | 1390 | 1380 | 1360   | 600  | 910       | 890 |
| 29    | 800   | 250 | 860  | 700 | 870  | 840 | 1400 | 1390 | 700    | 425  | 930       | 900 |
| 30    | 370   | 290 | 1200 | 90  | 880  | 850 | 1420 | 1400 | 650    | 540  | 980       | 930 |
| 31    | ---   | --- | 255  | 110 | ---  | --- | 1410 | 1400 | 670    | 425  | ---       | --- |
| MONTH | 940   | 85  | 1200 | 90  | 1120 | 115 | 1540 | 850  | 1700   | 425  | 1250      | 430 |

06916650 MARAIS DES CYGNES RIVER NEAR WORLAND, MO.

LOCATION.--Lat 38°13'07", long 94°36'45", in NW¼ sec.6, T.39 N., R.33 W., Bates County, at county road bridge on Kansas-Missouri State line and 2.2 mi (3.6 km) northwest of Worland.

DRAINAGE AREA.--3,230 mi<sup>2</sup> (8,366 km<sup>2</sup>).

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE          | DIS-<br>CHARGE<br>(CFS) | DIS-<br>SOLVED<br>SILICA<br>(SiO <sub>2</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>IRON<br>(FE)<br>(UG/L) | DIS-<br>SOLVED<br>MAN-<br>GANESE<br>(MN)<br>(UG/L) | DIS-<br>SOLVED<br>CAL-<br>CIUM<br>(CA)<br>(MG/L) | DIS-<br>SOLVED<br>MAG-<br>NE-<br>SIUM<br>(MG) | DIS-<br>SOLVED<br>SODIUM<br>(NA)<br>(MG/L) | DIS-<br>SOLVED<br>PO-<br>TAS-<br>SIUM<br>(K)<br>(MG/L) | BICAR-<br>BONATE<br>(HCO <sub>3</sub> )<br>(MG/L) | CAR-<br>BONATE<br>(CO <sub>3</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>SULFATE<br>(SO <sub>4</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>CHLO-<br>RIDE<br>(CL)<br>(MG/L) |
|---------------|-------------------------|-----------------------------------------------------------|------------------------------------------|----------------------------------------------------|--------------------------------------------------|-----------------------------------------------|--------------------------------------------|--------------------------------------------------------|---------------------------------------------------|------------------------------------------------|-----------------------------------------------------------|---------------------------------------------------|
| OCT.<br>03... | 27100                   | 13                                                        | 80                                       | 60                                                 | 32                                               | 3.8                                           | 5.1                                        | 4.8                                                    | 106                                               | 0                                              | 16                                                        | 3.3                                               |
| DEC.<br>04... | 4670                    | 9.2                                                       | 80                                       | 110                                                | 64                                               | 7.1                                           | 8.9                                        | 3.3                                                    | 196                                               | 0                                              | 34                                                        | 6.7                                               |
| FEB.<br>05... | 3510                    | 9.2                                                       | 80                                       | 40                                                 | 69                                               | 9.0                                           | 11                                         | 3.0                                                    | 212                                               | 0                                              | 42                                                        | 7.0                                               |
| APR.<br>16... | 1800                    | 7.9                                                       | 150                                      | 10                                                 | 75                                               | 9.3                                           | 14                                         | 2.4                                                    | 242                                               | 0                                              | 46                                                        | 10                                                |
| JUNE<br>11... | 12200                   | .7                                                        | 110                                      | 0                                                  | 31                                               | 3.6                                           | 5.6                                        | 2.9                                                    | 92                                                | 0                                              | 15                                                        | 3.5                                               |
| AUG.<br>06... | 53                      | 7.9                                                       | 20                                       | 30                                                 | 69                                               | 9.9                                           | 18                                         | 3.6                                                    | 228                                               | 0                                              | 49                                                        | 12                                                |

| DATE          | NON-<br>CAR-<br>BONATE<br>HARD-<br>NESS<br>(MG/L) | ALKA-<br>LINIT<br>AS<br>CaCO <sub>3</sub><br>(MG/L) | SPE-<br>CIFIC<br>CON-<br>DUCT-<br>ANCE<br>(MICRO-<br>MHOS) | PH<br>(UNITS) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | CHEM-<br>ICAL<br>OXYGEN<br>DEMAND<br>(LOW<br>LEVEL)<br>(MG/L) | DIS-<br>SOLVED<br>OXYGEN<br>(MG/L) | PER-<br>CENT<br>SATUR-<br>ATION | FECAL<br>COLI-<br>FORM<br>(COL.<br>PER<br>100 ML) | STREP-<br>TOCOCCI<br>(COL-<br>ONIES<br>PER<br>100 ML) |
|---------------|---------------------------------------------------|-----------------------------------------------------|------------------------------------------------------------|---------------|----------------------------------------------|-----------------------------|---------------------------------------------------------------|------------------------------------|---------------------------------|---------------------------------------------------|-------------------------------------------------------|
| OCT.<br>03... | 9                                                 | 87                                                  | 210                                                        | 7.4           | 100                                          | 20.0                        | 25                                                            | 3.6                                | 39                              | 75                                                | 9200                                                  |
| DEC.<br>04... | 28                                                | 161                                                 | 384                                                        | 7.8           | 20                                           | 8.5                         | 31                                                            | 8.1                                | 72                              | 4800                                              | 2500                                                  |
| FEB.<br>05... | 35                                                | 174                                                 | 430                                                        | 8.1           | 30                                           | 4.0                         | 13                                                            | 12.0                               | 92                              | 440                                               | 100                                                   |
| APR.<br>16... | 27                                                | 198                                                 | 470                                                        | 8.0           | 8                                            | 14.0                        | 18                                                            | 8.7                                | 84                              | 30                                                | 10                                                    |
| JUNE<br>11... | 17                                                | 75                                                  | 210                                                        | 7.7           | 70                                           | 19.0                        | 3                                                             | 5.2                                | 55                              | 14000                                             | 13000                                                 |
| AUG.<br>06... | 26                                                | 187                                                 | 475                                                        | 8.0           | 7                                            | 24.0                        | 14                                                            | 5.2                                | 61                              | 40                                                | 360                                                   |

06916650 MARAIS DES CYGNES RIVER NEAR WORLAND, MO.--Continued

PERIOD OF RECORD.--Chemical analyses: August 1962 to June 1963; October 1972 to September 1974.

REMARKS.--Records of discharge are given for gaging station near Kansas-Missouri State line, 6.8 mi (10.9 km) upstream.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE  | DIS-<br>SOLVED<br>FLUO-<br>RIDE<br>(F)<br>(MG/L) | TOTAL<br>NITRATE<br>(N)<br>(MG/L) | AMMONIA<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | ORGANIC<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | DIS-<br>SOL-<br>VED-<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | TOTAL<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(RESI-<br>DUE AT<br>180 C)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(TONS<br>PER<br>AC-FT) | DIS-<br>SOLVED<br>SOLIDS<br>(TONS<br>PER<br>DAY) | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | PERCENT<br>SODIUM | HARD-<br>NESS<br>(CA+MG)<br>(MG/L) |
|-------|--------------------------------------------------|-----------------------------------|-------------------------------------------|-------------------------------------------|----------------------------------------------------------|-------------------------------------------|------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------|-----------------------------------------|-------------------|------------------------------------|
| OCT.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 03... | .2                                               | .18                               | .12                                       | .87                                       | .13                                                      | .23                                       | 150                                                              | .20                                                | 11000                                            | .2                                      | 10                | 96                                 |
| DEC.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 04... | .2                                               | .70                               | .12                                       | 1.5                                       | .06                                                      | .26                                       | 238                                                              | .32                                                | 3000                                             | .3                                      | 9                 | 190                                |
| FEB.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 05... | .2                                               | 1.1                               | .08                                       | .57                                       | .05                                                      | .10                                       | 258                                                              | .35                                                | 2450                                             | .3                                      | 10                | 210                                |
| APR.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 16... | .3                                               | .75                               | .12                                       | .61                                       | .08                                                      | .14                                       | 291                                                              | .40                                                | 1410                                             | .4                                      | 12                | 230                                |
| JUNE  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 11... | .3                                               | .02                               | .08                                       | 4.2                                       | --                                                       | .67                                       | 138                                                              | .19                                                | 4550                                             | .3                                      | 11                | 92                                 |
| AUG.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 06... | .3                                               | .18                               | .10                                       | .54                                       | .07                                                      | .10                                       | 280                                                              | .38                                                | 40.1                                             | .5                                      | 15                | 210                                |



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, temperature recorder at gaging station on right bank 150 ft (46 m) upstream from Jefferson Bridge on County Highway D and 5 mi (8.0 km) southwest of Polk.

DRAINAGE AREA.--276 mi<sup>2</sup> (715 km<sup>2</sup>).

## TEMPERATURE (DEG. C) OF WATER , WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

|       | OCTOBER |      | NOVEMBER |      | DECEMBER |      | JANUARY |     | FEBRUARY |     | MARCH |      |
|-------|---------|------|----------|------|----------|------|---------|-----|----------|-----|-------|------|
| DAY   | MAX     | MIN  | MAX      | MIN  | MAX      | MIN  | MAX     | MIN | MAX      | MIN | MAX   | MIN  |
| 1     | 20.5    | 19.5 | 14.0     | 12.0 | 11.0     | 9.5  | ---     | --- | 9.0      | 7.0 | 12.5  | 10.0 |
| 2     | 21.5    | 19.5 | 13.5     | 12.5 | 12.0     | 10.0 | ---     | --- | 8.5      | 7.0 | 14.5  | 11.5 |
| 3     | 23.0    | 20.5 | 12.5     | 12.0 | 12.5     | 11.0 | 2.0     | 1.5 | 7.5      | 6.5 | 16.0  | 14.0 |
| 4     | 22.0    | 20.0 | 12.5     | 11.5 | 13.0     | 10.0 | 2.0     | 1.5 | 7.5      | 6.0 | 16.5  | 15.0 |
| 5     | 19.5    | 17.5 | 11.5     | 10.5 | 10.0     | 8.5  | 1.5     | 1.5 | 8.5      | 6.5 | 15.5  | 13.0 |
| 6     | 18.5    | 17.5 | 10.0     | 9.0  | 8.5      | 6.5  | 2.0     | 1.5 | 8.5      | 6.5 | 16.5  | 13.5 |
| 7     | 20.5    | 18.0 | 10.0     | 9.5  | 6.5      | 6.0  | 1.5     | 1.5 | 6.5      | 5.0 | 17.5  | 15.0 |
| 8     | 22.0    | 19.5 | 10.5     | 10.0 | 6.5      | 6.0  | 1.5     | 1.0 | 5.0      | 3.5 | 18.0  | 17.0 |
| 9     | 23.0    | 20.5 | 10.0     | 9.0  | 7.0      | 6.5  | 1.0     | 1.0 | 4.0      | 3.5 | 18.0  | 16.5 |
| 10    | 24.0    | 21.5 | 9.0      | 8.0  | 6.5      | 6.0  | 1.0     | 1.0 | 5.0      | 2.5 | 17.0  | 12.5 |
| 11    | 23.0    | 21.5 | 9.0      | 8.0  | 6.5      | 5.5  | 1.0     | 1.0 | 6.0      | 3.5 | 14.0  | 11.5 |
| 12    | 21.0    | 20.0 | 11.0     | 8.5  | 7.0      | 6.0  | 1.0     | 1.0 | 7.5      | 5.0 | 13.5  | 11.0 |
| 13    | 20.0    | 19.0 | 12.0     | 10.5 | 7.5      | 7.0  | 1.0     | 1.0 | 8.5      | 6.0 | 11.0  | 10.0 |
| 14    | 20.0    | 18.0 | 14.5     | 12.0 | 7.0      | 6.5  | 1.5     | 1.0 | 8.0      | 7.0 | 10.5  | 9.5  |
| 15    | 19.5    | 17.5 | 14.5     | 13.0 | 5.5      | 5.0  | 2.0     | 1.0 | 7.0      | 3.0 | 10.5  | 10.0 |
| 16    | 18.5    | 17.0 | 12.5     | 11.5 | 5.0      | 4.0  | 5.0     | 1.5 | 8.0      | 6.5 | 10.0  | 9.0  |
| 17    | 16.5    | 15.0 | 11.5     | 10.5 | 4.0      | 4.0  | 8.0     | 5.0 | 8.5      | 6.5 | 10.0  | 8.5  |
| 18    | 17.0    | 14.5 | 13.5     | 11.0 | 4.5      | 4.0  | 10.0    | 8.0 | 8.5      | 8.0 | 12.5  | 9.5  |
| 19    | 17.5    | 15.0 | 13.0     | 12.0 | 4.5      | 3.5  | 9.5     | 9.0 | 8.0      | 7.0 | 12.5  | 11.0 |
| 20    | 18.0    | 15.5 | 14.0     | 13.0 | 3.5      | 2.5  | 9.0     | 8.5 | 8.5      | 7.0 | 11.0  | 8.5  |
| 21    | 18.5    | 15.5 | 13.0     | 11.5 | 2.5      | 2.0  | 8.5     | 8.0 | 9.5      | 8.5 | 8.5   | 7.0  |
| 22    | 18.5    | 16.0 | 13.0     | 11.0 | 3.0      | 2.0  | 8.5     | 8.0 | 9.0      | 7.5 | 7.5   | 6.5  |
| 23    | 19.0    | 16.0 | 13.5     | 12.0 | ---      | ---  | 8.0     | 7.0 | 8.0      | 6.5 | 7.0   | 5.0  |
| 24    | 18.5    | 16.0 | 14.0     | 13.0 | ---      | ---  | 7.5     | 6.0 | 7.5      | 5.0 | 6.0   | 3.0  |
| 25    | 19.0    | 16.0 | 13.0     | 12.5 | ---      | ---  | 7.0     | 5.5 | 5.5      | 4.0 | 7.0   | 5.0  |
| 26    | 18.0    | 15.0 | 12.5     | 11.5 | ---      | ---  | 7.5     | 6.0 | 6.5      | 4.0 | 9.0   | 5.5  |
| 27    | 16.5    | 15.0 | 12.0     | 11.5 | ---      | ---  | 7.5     | 6.5 | 9.0      | 6.0 | 12.5  | 9.0  |
| 28    | 15.0    | 13.0 | 11.5     | 10.0 | ---      | ---  | 6.5     | 5.5 | 11.0     | 8.5 | 14.0  | 12.5 |
| 29    | 13.5    | 12.5 | 10.0     | 9.0  | ---      | ---  | 7.0     | 5.5 | ---      | --- | 15.5  | 13.0 |
| 30    | 12.5    | 11.5 | 10.5     | 9.5  | ---      | ---  | 8.0     | 6.0 | ---      | --- | 15.5  | 13.5 |
| 31    | 14.0    | 12.5 | ---      | ---  | ---      | ---  | 8.5     | 7.5 | ---      | --- | 16.5  | 13.5 |
| MONTH | 24.0    | 11.5 | 14.5     | 8.0  | ---      | ---  | 10.0    | 1.0 | 11.0     | 2.5 | 18.0  | 3.0  |

06921070 POMME DE TERRE RIVER NEAR POLK, MO.--Continued

PERIOD OF RECORD.--Water temperature: June 1970 to June 1974 (discontinued).

EXTREMES, June 1970 to June 1974.--Water temperature: Maximum, 32.5°C July 2, Aug. 2, 3, 4, 5, 1970; minimum, freezing point Feb. 4, 1972.

REMARKS.--Temperature recorder inoperative December 23, 1973 to Jan. 2, 1974.

## TEMPERATURE (DEG. C) OF WATER , WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | APRIL |      | MAY  |      | JUNE |      | JULY |     | AUGUST |     | SEPTEMBER |     |
|-------|-------|------|------|------|------|------|------|-----|--------|-----|-----------|-----|
|       | MAX   | MIN  | MAX  | MIN  | MAX  | MIN  | MAX  | MIN | MAX    | MIN | MAX       | MIN |
| 1     | 17.0  | 15.5 | 17.5 | 16.0 | 23.0 | 20.5 | ---  | --- | ---    | --- | ---       | --- |
| 2     | 17.0  | 14.5 | 17.0 | 16.0 | 24.0 | 19.5 | ---  | --- | ---    | --- | ---       | --- |
| 3     | 17.5  | 15.0 | 17.5 | 16.0 | 23.0 | 20.5 | ---  | --- | ---    | --- | ---       | --- |
| 4     | 15.0  | 11.5 | 18.0 | 16.5 | 22.0 | 20.5 | ---  | --- | ---    | --- | ---       | --- |
| 5     | 12.5  | 10.0 | 20.0 | 17.0 | 21.0 | 20.0 | ---  | --- | ---    | --- | ---       | --- |
| 6     | 13.5  | 10.0 | 20.5 | 17.0 | 20.5 | 19.5 | ---  | --- | ---    | --- | ---       | --- |
| 7     | 13.0  | 12.0 | 20.5 | 17.5 | 19.0 | 18.0 | ---  | --- | ---    | --- | ---       | --- |
| 8     | 12.5  | 11.5 | 21.5 | 18.5 | 19.5 | 18.0 | ---  | --- | ---    | --- | ---       | --- |
| 9     | 14.0  | 10.5 | 20.0 | 18.0 | 20.5 | 19.0 | ---  | --- | ---    | --- | ---       | --- |
| 10    | 13.0  | 12.0 | 20.5 | 17.5 | 20.5 | 18.0 | ---  | --- | ---    | --- | ---       | --- |
| 11    | 13.0  | 12.5 | 21.5 | 19.0 | 20.0 | 18.0 | ---  | --- | ---    | --- | ---       | --- |
| 12    | 16.0  | 12.5 | 21.5 | 17.5 | 20.0 | 17.0 | ---  | --- | ---    | --- | ---       | --- |
| 13    | 18.5  | 14.0 | 22.5 | 18.5 | 21.0 | 18.0 | ---  | --- | ---    | --- | ---       | --- |
| 14    | 17.5  | 14.5 | 21.5 | 16.5 | 23.0 | 19.5 | ---  | --- | ---    | --- | ---       | --- |
| 15    | 15.5  | 12.5 | 17.0 | 15.0 | 24.0 | 21.5 | ---  | --- | ---    | --- | ---       | --- |
| 16    | 14.5  | 13.5 | 20.5 | 17.0 | 23.5 | 20.5 | ---  | --- | ---    | --- | ---       | --- |
| 17    | 15.5  | 12.0 | 21.0 | 20.5 | 22.5 | 20.0 | ---  | --- | ---    | --- | ---       | --- |
| 18    | 16.5  | 14.0 | 21.0 | 20.0 | 24.0 | 20.5 | ---  | --- | ---    | --- | ---       | --- |
| 19    | 18.0  | 14.5 | 24.0 | 20.5 | 23.5 | 22.5 | ---  | --- | ---    | --- | ---       | --- |
| 20    | 19.5  | 16.5 | 25.5 | 22.5 | 26.0 | 22.0 | ---  | --- | ---    | --- | ---       | --- |
| 21    | 20.5  | 17.5 | 24.5 | 23.0 | 27.0 | 24.5 | ---  | --- | ---    | --- | ---       | --- |
| 22    | 20.5  | 18.0 | 25.0 | 21.5 | 27.0 | 25.0 | ---  | --- | ---    | --- | ---       | --- |
| 23    | 20.0  | 16.5 | 23.5 | 21.0 | 25.5 | 23.0 | ---  | --- | ---    | --- | ---       | --- |
| 24    | 19.0  | 15.5 | 22.0 | 20.5 | 23.5 | 20.5 | ---  | --- | ---    | --- | ---       | --- |
| 25    | 20.0  | 16.0 | 21.0 | 18.0 | 22.0 | 19.5 | ---  | --- | ---    | --- | ---       | --- |
| 26    | 20.0  | 17.0 | 18.0 | 17.5 | ---  | ---  | ---  | --- | ---    | --- | ---       | --- |
| 27    | 21.0  | 18.0 | 20.5 | 16.5 | ---  | ---  | ---  | --- | ---    | --- | ---       | --- |
| 28    | 21.0  | 20.0 | 22.5 | 19.0 | ---  | ---  | ---  | --- | ---    | --- | ---       | --- |
| 29    | 20.5  | 20.0 | 23.0 | 21.0 | ---  | ---  | ---  | --- | ---    | --- | ---       | --- |
| 30    | 20.0  | 17.5 | 25.5 | 22.0 | ---  | ---  | ---  | --- | ---    | --- | ---       | --- |
| 31    | ---   | ---  | 25.0 | 22.0 | ---  | ---  | ---  | --- | ---    | --- | ---       | --- |
| MONTH | 21.0  | 10.0 | 25.5 | 15.0 | 27.0 | 17.0 | ---  | --- | ---    | --- | ---       | --- |



06921500 POMME DE TERRE RIVER AT HERMITAGE, MO.--Continued

PERIOD OF RECORD.--Water temperature: March 1970 to September 1974.

EXTREMES, March 1970 to September 1974.--Water temperatures: Maximum, 31.5°C Aug. 2, 3, 4, 1970; minimum, 0.5°C Feb. 6, 7, 1971.

REMARKS.--Temperature recorder inoperative on many days during the year.

TEMPERATURE (DEG. C) OF WATER , WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

|       | APRIL |      | MAY  |      | JUNE |      | JULY |      | AUGUST |      | SEPTEMBER |      |
|-------|-------|------|------|------|------|------|------|------|--------|------|-----------|------|
| DAY   | MAX   | MIN  | MAX  | MIN  | MAX  | MIN  | MAX  | MIN  | MAX    | MIN  | MAX       | MIN  |
| 1     | 11.0  | 10.5 | 18.5 | 17.5 | 16.5 | 14.0 | 27.0 | 25.0 | 28.0   | 26.0 | 24.0      | 20.5 |
| 2     | 11.5  | 10.5 | 18.0 | 17.5 | 17.0 | 14.0 | 28.0 | 26.0 | 27.5   | 26.5 | 21.0      | 18.0 |
| 3     | 13.0  | 11.0 | 19.5 | 17.5 | 16.0 | 14.0 | 28.5 | 26.5 | 27.0   | 25.5 | 19.5      | 17.0 |
| 4     | 11.5  | 11.0 | 19.5 | 18.0 | 15.5 | 14.5 | 28.5 | 26.5 | 25.5   | 23.5 | 19.0      | 17.0 |
| 5     | 13.0  | 10.5 | 20.5 | 19.0 | 16.5 | 14.5 | 27.5 | 25.5 | 25.0   | 23.5 | ---       | ---  |
| 6     | 13.5  | 10.0 | 20.5 | 19.0 | 19.0 | 15.0 | 28.0 | 25.5 | 24.5   | 24.0 | ---       | ---  |
| 7     | 12.0  | 11.0 | 20.5 | 19.5 | 19.0 | 18.0 | 29.5 | 26.0 | 24.5   | 23.0 | ---       | ---  |
| 8     | 12.5  | 11.0 | 21.0 | 19.0 | 20.0 | 18.0 | 30.0 | 27.0 | 25.5   | 24.0 | ---       | ---  |
| 9     | 13.5  | 10.0 | 20.5 | 17.5 | 20.5 | 19.5 | 30.0 | 27.0 | 25.5   | 24.5 | ---       | ---  |
| 10    | 12.0  | 11.0 | 20.0 | 17.5 | 21.0 | 18.5 | 30.5 | 27.0 | 26.0   | 24.0 | ---       | ---  |
| 11    | 11.5  | 11.0 | 21.0 | 20.0 | 20.5 | 18.5 | 30.0 | 27.0 | 27.0   | 25.0 | ---       | ---  |
| 12    | 14.0  | 11.0 | 21.0 | 19.5 | 18.5 | 16.0 | 30.0 | 27.0 | 26.5   | 26.0 | ---       | ---  |
| 13    | ---   | ---  | 22.5 | 20.0 | 17.5 | 16.0 | 30.5 | 27.0 | 27.0   | 26.0 | ---       | ---  |
| 14    | ---   | ---  | 22.0 | 16.0 | 17.5 | 16.0 | 31.0 | 27.5 | 27.0   | 25.5 | ---       | ---  |
| 15    | ---   | ---  | 19.0 | 15.0 | 17.5 | 16.5 | 30.5 | 28.0 | 27.5   | 26.0 | ---       | ---  |
| 16    | ---   | ---  | 23.5 | 18.5 | 17.5 | 16.0 | 29.5 | 26.5 | 27.0   | 26.0 | ---       | ---  |
| 17    | ---   | ---  | 23.5 | 18.5 | 18.0 | 16.5 | 29.0 | 26.0 | 28.0   | 26.5 | ---       | ---  |
| 18    | ---   | ---  | 21.0 | 18.0 | 18.5 | 17.0 | 30.5 | 27.0 | 27.5   | 26.0 | 21.5      | 18.5 |
| 19    | ---   | ---  | 24.0 | 19.5 | 18.0 | 17.5 | 30.5 | 27.5 | 26.5   | 24.0 | 22.5      | 21.0 |
| 20    | ---   | ---  | 25.0 | 22.5 | 20.0 | 17.5 | 31.0 | 27.5 | 26.5   | 23.5 | 22.5      | 21.0 |
| 21    | ---   | ---  | 25.0 | 23.0 | 24.0 | 19.5 | 31.0 | 27.5 | 28.0   | 26.0 | 22.5      | 21.0 |
| 22    | ---   | ---  | 24.5 | 22.0 | 26.5 | 24.0 | 31.0 | 28.0 | 28.0   | 26.5 | 21.5      | 19.0 |
| 23    | ---   | ---  | 24.5 | 21.0 | 26.5 | 23.5 | 30.5 | 27.5 | 26.5   | 25.5 | 20.5      | 18.0 |
| 24    | ---   | ---  | 22.5 | 21.0 | 24.5 | 21.5 | 29.0 | 26.0 | 26.5   | 25.0 | 19.0      | 18.0 |
| 25    | ---   | ---  | 22.0 | 19.0 | 23.5 | 20.5 | 28.0 | 26.0 | 27.0   | 25.5 | 20.0      | 17.5 |
| 26    | ---   | ---  | 19.0 | 18.5 | 23.5 | 20.5 | 27.5 | 25.5 | 28.0   | 26.0 | 20.5      | 18.5 |
| 27    | ---   | ---  | 21.0 | 17.5 | 24.5 | 21.0 | 29.5 | 26.5 | 27.5   | 26.5 | 21.0      | 19.5 |
| 28    | ---   | ---  | 23.5 | 21.0 | 25.5 | 22.5 | 30.5 | 27.5 | 26.5   | 24.5 | 21.0      | 18.0 |
| 29    | ---   | ---  | 24.5 | 23.5 | 25.5 | 23.5 | 29.5 | 27.0 | 24.5   | 23.5 | 19.0      | 16.5 |
| 30    | ---   | ---  | 26.5 | 24.0 | 26.0 | 24.5 | 27.0 | 25.5 | 24.5   | 23.5 | 19.5      | 17.5 |
| 31    | ---   | ---  | 26.5 | 15.0 | ---  | ---  | 27.0 | 25.0 | 25.0   | 24.0 | ---       | ---  |
| MONTH | ---   | ---  | 26.5 | 15.0 | 26.5 | 14.0 | 31.0 | 25.0 | 28.0   | 23.0 | ---       | ---  |

06922500 OSAGE RIVER AT WARSAW, MO.

LOCATION.--Lat 38°14'40", long 92°23'10", in NE¼SW¼ sec.17, T.40 N., R.22 W., Benton County, temperature recorder at Union Electric Co. gaging station on left bank, 30 ft (9.2 m) downstream from bridge on State Highway 7 at Warsaw.

DRAINAGE AREA.--11,500 mi<sup>2</sup> (29,800 km<sup>2</sup>).

PERIOD OF RECORD.--Water temperatures: May 1969 to September 1974.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974  
(CONTINUOUS ETHYL-ALCOHOL-ACTUATED THERMOGRAPH)

|       | OCTOBER |      | NOVEMBER |      | DECEMBER |      | JANUARY |     | FEBRUARY |     | MARCH |      |
|-------|---------|------|----------|------|----------|------|---------|-----|----------|-----|-------|------|
| DAY   | MAX     | MIN  | MAX      | MIN  | MAX      | MIN  | MAX     | MIN | MAX      | MIN | MAX   | MIN  |
| 1     | 22.0    | 22.0 | 19.5     | 19.5 | 15.5     | 15.5 | ---     | --- | 5.0      | 5.0 | 7.0   | 6.5  |
| 2     | 22.0    | 21.5 | 19.5     | 19.0 | 15.5     | 15.5 | ---     | --- | 5.5      | 5.0 | 7.0   | 7.0  |
| 3     | 21.5    | 21.5 | 19.0     | 19.0 | 15.5     | 15.5 | ---     | --- | 5.5      | 5.5 | 7.0   | 7.0  |
| 4     | 21.5    | 21.5 | 19.0     | 19.0 | 15.5     | 15.0 | ---     | --- | 6.0      | 5.5 | 8.0   | 7.0  |
| 5     | 21.5    | 21.5 | 19.0     | 18.5 | 15.0     | 15.0 | ---     | --- | 6.0      | 6.0 | 8.5   | 8.0  |
| 6     | 21.5    | 21.5 | 18.5     | 18.5 | 15.0     | 14.5 | ---     | --- | 6.0      | 6.0 | 8.5   | 8.0  |
| 7     | 22.0    | 22.0 | 18.5     | 18.5 | 14.5     | 14.0 | ---     | --- | 6.0      | 6.0 | 8.5   | 8.5  |
| 8     | 22.0    | 22.0 | 18.5     | 18.0 | 14.0     | 13.5 | ---     | --- | 6.0      | 6.0 | 9.0   | 8.5  |
| 9     | 22.0    | 22.0 | 18.0     | 18.0 | 13.5     | 12.5 | ---     | --- | 6.0      | 6.0 | 9.5   | 9.0  |
| 10    | 22.0    | 22.0 | 18.0     | 17.5 | 12.5     | 12.0 | ---     | --- | 6.5      | 6.0 | 11.5  | 9.5  |
| 11    | 22.0    | 22.0 | 17.5     | 17.0 | 12.0     | 12.0 | ---     | --- | 6.0      | 6.0 | 11.5  | 11.0 |
| 12    | 22.0    | 22.0 | 17.0     | 16.5 | 12.5     | 12.0 | ---     | --- | 6.0      | 6.0 | 11.0  | 11.0 |
| 13    | 22.0    | 22.0 | 16.5     | 16.5 | 13.0     | 12.5 | ---     | --- | 6.0      | 6.0 | 11.0  | 11.0 |
| 14    | 22.0    | 22.0 | 16.5     | 16.5 | 13.0     | 13.0 | ---     | --- | 6.0      | 6.0 | 11.0  | 10.5 |
| 15    | 22.0    | 21.5 | 16.5     | 16.5 | 13.0     | 13.0 | ---     | --- | 6.0      | 6.0 | 10.5  | 10.5 |
| 16    | 21.5    | 21.5 | 16.5     | 16.5 | 13.0     | 13.0 | 5.5     | 5.5 | 6.5      | 6.0 | 10.5  | 10.5 |
| 17    | 21.5    | 21.5 | 16.5     | 16.5 | 13.0     | 13.0 | 6.0     | 1.0 | 6.5      | 6.5 | 10.5  | 10.0 |
| 18    | 21.5    | 21.0 | 16.5     | 16.5 | 13.0     | 13.0 | 1.5     | 0.5 | 6.5      | 6.5 | 10.5  | 10.5 |
| 19    | 21.0    | 21.0 | 16.5     | 16.5 | 13.0     | 12.0 | 3.5     | 1.5 | 6.5      | 6.0 | 10.5  | 10.5 |
| 20    | 21.0    | 21.0 | 16.5     | 16.5 | 12.5     | 12.0 | 3.5     | 3.5 | 6.5      | 6.0 | 10.5  | 10.5 |
| 21    | 21.0    | 20.5 | 16.5     | 15.5 | 12.0     | 12.0 | 3.5     | 3.5 | 6.5      | 6.0 | 10.5  | 10.5 |
| 22    | 20.5    | 20.5 | 15.0     | 14.5 | 12.5     | 12.0 | 3.5     | 3.0 | 7.0      | 6.5 | 10.5  | 10.5 |
| 23    | 20.5    | 20.5 | 15.5     | 15.0 | 12.5     | 12.0 | 3.5     | 3.5 | 7.0      | 6.5 | 10.5  | 10.5 |
| 24    | 20.5    | 20.5 | 15.5     | 15.5 | 12.0     | 10.5 | 3.5     | 3.5 | 7.0      | 7.0 | 10.5  | 10.0 |
| 25    | 20.5    | 20.5 | 15.5     | 15.5 | 10.5     | 10.0 | 4.0     | 3.5 | 7.0      | 7.0 | 10.0  | 10.0 |
| 26    | 20.5    | 20.5 | 15.5     | 15.5 | 10.0     | 10.0 | 4.0     | 4.0 | 7.0      | 7.0 | 10.0  | 10.0 |
| 27    | 20.5    | 20.5 | 15.5     | 15.5 | 10.0     | 10.0 | 4.0     | 4.0 | 7.0      | 6.5 | 10.0  | 10.0 |
| 28    | 20.5    | 20.5 | 15.5     | 15.5 | 10.5     | 10.0 | 4.5     | 4.0 | 6.5      | 6.5 | 10.0  | 10.0 |
| 29    | 20.5    | 20.0 | 15.5     | 15.5 | ---      | ---  | 4.5     | 4.5 | ---      | --- | 10.0  | 10.0 |
| 30    | 20.0    | 19.5 | 15.5     | 15.5 | ---      | ---  | 4.5     | 4.5 | ---      | --- | 10.5  | 10.0 |
| 31    | 19.5    | 19.5 | ---      | ---  | ---      | ---  | 5.0     | 4.5 | ---      | --- | 11.0  | 10.5 |
| MONTH | 22.0    | 19.5 | 19.5     | 14.5 | 15.5     | 10.0 | ---     | --- | 7.0      | 5.0 | 11.5  | 6.5  |

06922500 OSAGE RIVER AT WARSAW, MO.--Continued

EXTREMES, 1973-74.--Water temperatures: Maximum 29.5°C July 16, 17.

EXTREMES, May 1969-74.--Water temperatures: Maximum 32.0°C July 13, 1971; minimum, 0.5°C Jan. 7, 1971, Jan 18, 1974.

REMARKS.--Temperature recorder inoperative Dec. 29 to Jan 15, Sept. 20-30.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974  
(CONTINUOUS ETHYL-ALCOHOL-ACTUATED THERMOGRAPH)

|       | APRIL |      | MAY  |      | JUNE |      | JULY |      | AUGUST |      | SEPTEMBER |      |
|-------|-------|------|------|------|------|------|------|------|--------|------|-----------|------|
| DAY   | MAX   | MIN  | MAX  | MIN  | MAX  | MIN  | MAX  | MIN  | MAX    | MIN  | MAX       | MIN  |
| 1     | 12.0  | 11.0 | 18.5 | 18.5 | 25.0 | 25.0 | 26.5 | 26.5 | 29.0   | 29.0 | 27.0      | 26.5 |
| 2     | 13.0  | 12.0 | 19.0 | 18.5 | 25.5 | 25.0 | 26.5 | 26.5 | 29.0   | 29.0 | 26.5      | 26.0 |
| 3     | 13.0  | 13.0 | 19.0 | 19.0 | 26.0 | 25.5 | 26.5 | 26.5 | 29.0   | 29.0 | 26.0      | 25.5 |
| 4     | 13.0  | 13.0 | 19.5 | 19.0 | 26.0 | 26.0 | 27.0 | 26.5 | 29.0   | 29.0 | 25.5      | 25.0 |
| 5     | 13.0  | 13.0 | 19.5 | 19.5 | 26.0 | 26.0 | 27.5 | 27.0 | 29.0   | 29.0 | 25.0      | 24.5 |
| 6     | 13.0  | 13.0 | 19.5 | 19.5 | 26.0 | 26.0 | 28.0 | 27.5 | 29.0   | 28.5 | 24.5      | 24.5 |
| 7     | 13.0  | 13.0 | 19.5 | 19.5 | 27.0 | 26.0 | 28.0 | 28.0 | 28.5   | 28.5 | 24.5      | 24.0 |
| 8     | 13.5  | 13.0 | 19.5 | 19.5 | 26.5 | 25.5 | 28.5 | 28.0 | 28.5   | 28.0 | 24.0      | 24.0 |
| 9     | 13.5  | 13.5 | 20.0 | 19.5 | 25.5 | 25.5 | 28.5 | 28.0 | 28.0   | 28.0 | 24.0      | 24.0 |
| 10    | 13.5  | 13.5 | 20.0 | 20.0 | 25.5 | 25.5 | 28.0 | 28.0 | 28.0   | 28.0 | 24.0      | 24.0 |
| 11    | 13.5  | 13.5 | 20.5 | 20.0 | 25.5 | 25.5 | 28.5 | 28.0 | 28.0   | 28.0 | 24.0      | 24.0 |
| 12    | 13.5  | 13.5 | 20.5 | 20.5 | 25.5 | 25.5 | 29.0 | 28.5 | 28.0   | 28.0 | 24.0      | 24.0 |
| 13    | 14.5  | 13.5 | 20.5 | 20.5 | 25.5 | 25.5 | 29.0 | 29.0 | 28.0   | 28.0 | 24.0      | 24.0 |
| 14    | 14.5  | 14.5 | 23.0 | 20.5 | 25.5 | 25.5 | 29.0 | 29.0 | 28.0   | 28.0 | 24.0      | 24.0 |
| 15    | 15.0  | 14.5 | 22.5 | 22.0 | 25.5 | 25.0 | 29.0 | 29.0 | 28.0   | 28.0 | 24.0      | 24.0 |
| 16    | 15.0  | 15.0 | 22.0 | 21.5 | 25.0 | 25.0 | 29.5 | 29.0 | 28.0   | 28.0 | 24.0      | 24.0 |
| 17    | 15.5  | 15.0 | 21.5 | 21.5 | 25.0 | 24.5 | 29.5 | 29.0 | 28.0   | 28.0 | 24.0      | 24.0 |
| 18    | 15.5  | 15.5 | 22.0 | 21.5 | 24.5 | 24.5 | 29.0 | 29.0 | 28.0   | 28.0 | 24.0      | 23.5 |
| 19    | 15.5  | 15.5 | 22.0 | 22.0 | 24.5 | 24.5 | 29.5 | 29.0 | 28.0   | 28.0 | 23.5      | 23.5 |
| 20    | 15.5  | 15.5 | 22.0 | 22.0 | 24.5 | 24.5 | 29.0 | 29.0 | 28.0   | 28.0 | ---       | ---  |
| 21    | 15.5  | 15.5 | 22.5 | 22.0 | 25.0 | 24.5 | 29.0 | 29.0 | 28.0   | 28.0 | ---       | ---  |
| 22    | 16.0  | 15.5 | 23.0 | 22.5 | 25.5 | 25.0 | 29.0 | 29.0 | 28.0   | 28.0 | ---       | ---  |
| 23    | 16.5  | 16.0 | 23.0 | 23.0 | 25.5 | 25.5 | 29.0 | 29.0 | 28.0   | 28.0 | ---       | ---  |
| 24    | 17.0  | 16.5 | 23.5 | 23.0 | 26.0 | 25.5 | 29.0 | 29.0 | 28.0   | 28.0 | ---       | ---  |
| 25    | 18.0  | 17.0 | 23.5 | 23.5 | 26.0 | 26.0 | 29.0 | 29.0 | 28.0   | 28.0 | ---       | ---  |
| 26    | 18.0  | 18.0 | 23.5 | 23.5 | 26.5 | 26.0 | 29.0 | 29.0 | 28.0   | 28.0 | ---       | ---  |
| 27    | 18.0  | 18.0 | 23.5 | 23.5 | 26.5 | 26.5 | 29.0 | 29.0 | 28.0   | 28.0 | ---       | ---  |
| 28    | 18.5  | 18.0 | 23.5 | 23.5 | 26.5 | 26.5 | 29.0 | 29.0 | 28.0   | 28.0 | ---       | ---  |
| 29    | 18.5  | 18.5 | 24.0 | 23.5 | 26.5 | 26.5 | 29.0 | 29.0 | 28.0   | 28.0 | ---       | ---  |
| 30    | 18.5  | 18.0 | 24.5 | 24.0 | 26.5 | 26.5 | 29.0 | 29.0 | 28.0   | 27.5 | ---       | ---  |
| 31    | ---   | ---  | 25.0 | 24.5 | ---  | ---  | 29.0 | 29.0 | 27.5   | 27.0 | ---       | ---  |
| MONTH | 18.5  | 11.0 | 25.0 | 18.5 | 27.0 | 24.5 | 29.5 | 26.5 | 29.0   | 27.0 | ---       | ---  |



LOCATION.--Lat 38°42'36", long 91°26'21", Gasconade County, at gaging station at bridge on State Highway 19 at Hermann and at mile 97.9 (157.5 km).

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

[illegible]

DRAINAGE AREA.--528,200 mi<sup>2</sup> (1,368,038 km<sup>2</sup>), approximately.

PERIOD OF RECORD.--Chemical analyses: July 1969 to September 1974.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

[illegible]

06934500 MISSOURI RIVER AT HERMANN, MO.--Continued

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE  | PH<br>(UNITS) | SUS-<br>PENDE<br>D SEDI-<br>MENT<br>(MG/L) | TEMPER-<br>ATURE<br>(DEG C) | TOTAL<br>ORGANIC<br>CARBON<br>(C)<br>(MG/L) | DIS-<br>SOLVED<br>OXYGEN<br>(MG/L) | PER-<br>CENT<br>SATUR-<br>ATION | IMME-<br>DIATE<br>COLI-<br>FORM<br>(COL.<br>PER<br>100 ML) | FECAL<br>COLI-<br>FORM<br>(COL.<br>PER<br>100 ML) | STREP-<br>TOCOCCI<br>(COL-<br>ONIES<br>PER<br>100 ML) |
|-------|---------------|--------------------------------------------|-----------------------------|---------------------------------------------|------------------------------------|---------------------------------|------------------------------------------------------------|---------------------------------------------------|-------------------------------------------------------|
| OCT.  |               |                                            |                             |                                             |                                    |                                 |                                                            |                                                   |                                                       |
| 11... | 7.9           | 704                                        | 20.5                        | --                                          | 6.4                                | 71                              | 31000                                                      | 1400                                              | 550                                                   |
| NOV.  |               |                                            |                             |                                             |                                    |                                 |                                                            |                                                   |                                                       |
| 09... | 8.1           | 554                                        | 9.5                         | 8.6                                         | 8.4                                | 73                              | 45000                                                      | 2800                                              | 300                                                   |
| DEC.  |               |                                            |                             |                                             |                                    |                                 |                                                            |                                                   |                                                       |
| 17... | 8.0           | 476                                        | 3.5                         | --                                          | 8.7                                | 65                              | 102000                                                     | 5800                                              | 1250                                                  |
| JAN.  |               |                                            |                             |                                             |                                    |                                 |                                                            |                                                   |                                                       |
| 14... | 7.7           | --                                         | 1.0                         | --                                          | 11.4                               | 80                              | 1100                                                       | 300                                               | 380                                                   |
| 29... | 7.7           | --                                         | 2.0                         | --                                          | 9.6                                | 70                              | --                                                         | 2000                                              | --                                                    |
| FEB.  |               |                                            |                             |                                             |                                    |                                 |                                                            |                                                   |                                                       |
| 11... | 8.0           | 1190                                       | 1.5                         | 8.1                                         | 10.3                               | 74                              | 10500                                                      | 480                                               | 750                                                   |
| 26... | 8.1           | --                                         | 3.0                         | --                                          | 10.0                               | 74                              | --                                                         | 820                                               | --                                                    |
| MAR.  |               |                                            |                             |                                             |                                    |                                 |                                                            |                                                   |                                                       |
| 12... | 7.9           | 926                                        | 10.0                        | --                                          | 7.6                                | 67                              | --                                                         | 5500                                              | 10500                                                 |
| 26... | 7.9           | --                                         | 12.0                        | --                                          | 9.6                                | 99                              | --                                                         | 500                                               | --                                                    |
| APR.  |               |                                            |                             |                                             |                                    |                                 |                                                            |                                                   |                                                       |
| 08... | 8.0           | --                                         | 10.5                        | --                                          | 9.2                                | 82                              | --                                                         | 150                                               | --                                                    |
| 22... | 8.2           | 213                                        | 15.5                        | --                                          | 6.7                                | 67                              | --                                                         | 700                                               | 200                                                   |
| MAY   |               |                                            |                             |                                             |                                    |                                 |                                                            |                                                   |                                                       |
| 08... | 8.2           | --                                         | 18.0                        | --                                          | 4.5                                | 47                              | --                                                         | 1200                                              | --                                                    |
| 20... | 7.7           | 3930                                       | 20.5                        | 78                                          | 3.8                                | 42                              | --                                                         | 1900                                              | 7500                                                  |
| JUNE  |               |                                            |                             |                                             |                                    |                                 |                                                            |                                                   |                                                       |
| 05... | 7.9           | --                                         | 22.0                        | --                                          | 5.2                                | 59                              | --                                                         | 3100                                              | --                                                    |
| 18... | 7.9           | 1070                                       | 23.0                        | --                                          | 6.4                                | 74                              | --                                                         | 2400                                              | 1100                                                  |
| JULY  |               |                                            |                             |                                             |                                    |                                 |                                                            |                                                   |                                                       |
| 01... | 8.1           | --                                         | 26.0                        | --                                          | 7.3                                | 89                              | --                                                         | 620                                               | --                                                    |
| 15... | 8.1           | 135                                        | 29.0                        | 4.2                                         | 6.3                                | 82                              | --                                                         | 250                                               | 30                                                    |
| AUG.  |               |                                            |                             |                                             |                                    |                                 |                                                            |                                                   |                                                       |
| 02... | 8.3           | --                                         | 27.0                        | --                                          | 7.0                                | 88                              | --                                                         | 300                                               | --                                                    |
| 13... | 8.3           | 243                                        | 26.0                        | 7.7                                         | 7.4                                | 90                              | --                                                         | 880                                               | 300                                                   |
| 29... | 8.1           | --                                         | 24.0                        | --                                          | 5.5                                | 65                              | --                                                         | 24000                                             | --                                                    |
| SEP.  |               |                                            |                             |                                             |                                    |                                 |                                                            |                                                   |                                                       |
| 12... | 8.2           | 256                                        | 22.5                        | --                                          | 6.9                                | 78                              | --                                                         | 460                                               | 320                                                   |
| 27... | 8.4           | --                                         | 19.0                        | --                                          | 7.5                                | 80                              | --                                                         | 920                                               | --                                                    |

| DATE  | DIS-<br>SOLVED<br>CAD-<br>MIUM<br>(CD)<br>(UG/L) | DIS-<br>SOLVED<br>CHRO-<br>MIUM<br>(CR)<br>(UG/L) | DIS-<br>SOLVED<br>COBALT<br>(CO)<br>(UG/L) | DIS-<br>SOLVED<br>COPPER<br>(CU)<br>(UG/L) | DIS-<br>SOLVED<br>LEAD<br>(PB)<br>(UG/L) | DIS-<br>SOLVED<br>MERCURY<br>(HG)<br>(UG/L) | DIS-<br>SOLVED<br>SELE-<br>NIUM<br>(SE)<br>(UG/L) | DIS-<br>SOLVED<br>ZINC<br>(ZN)<br>(UG/L) | DIS-<br>SOLVED<br>ARSENIC<br>(AS)<br>(UG/L) | TOTAL<br>CAD-<br>MIUM<br>(CD)<br>(UG/L) |
|-------|--------------------------------------------------|---------------------------------------------------|--------------------------------------------|--------------------------------------------|------------------------------------------|---------------------------------------------|---------------------------------------------------|------------------------------------------|---------------------------------------------|-----------------------------------------|
| NOV.  |                                                  |                                                   |                                            |                                            |                                          |                                             |                                                   |                                          |                                             |                                         |
| 09... | 1                                                | 0                                                 | 0                                          | 7                                          | 2                                        | .0                                          | 5                                                 | 30                                       | 0                                           | <10                                     |
| FEB.  |                                                  |                                                   |                                            |                                            |                                          |                                             |                                                   |                                          |                                             |                                         |
| 11... | 1                                                | 0                                                 | 2                                          | 8                                          | 2                                        | .1                                          | 3                                                 | 10                                       | 1                                           | <10                                     |
| MAY   |                                                  |                                                   |                                            |                                            |                                          |                                             |                                                   |                                          |                                             |                                         |
| 20... | 1                                                | 0                                                 | 0                                          | 5                                          | 3                                        | .1                                          | 2                                                 | 10                                       | 1                                           | 10                                      |
| JULY  |                                                  |                                                   |                                            |                                            |                                          |                                             |                                                   |                                          |                                             |                                         |
| 15... | 1                                                | 0                                                 | 0                                          | 4                                          | 4                                        | .0                                          | 2                                                 | 10                                       | 4                                           | <10                                     |
| AUG.  |                                                  |                                                   |                                            |                                            |                                          |                                             |                                                   |                                          |                                             |                                         |
| 13... | <1                                               | 0                                                 | 0                                          | 2                                          | 3                                        | .0                                          | 1                                                 | 0                                        | 2                                           | 10                                      |

| DATE  | TOTAL<br>CHRO-<br>MIUM<br>(CR)<br>(UG/L) | TOTAL<br>COBALT<br>(CO)<br>(UG/L) | TOTAL<br>COPPER<br>(CU)<br>(UG/L) | TOTAL<br>IRON<br>(FE)<br>(UG/L) | TOTAL<br>LEAD<br>(PB)<br>(UG/L) | TOTAL<br>MAN-<br>GANESE<br>(MN)<br>(UG/L) | TOTAL<br>MERCURY<br>(HG)<br>(UG/L) | TOTAL<br>SELE-<br>NIUM<br>(SE)<br>(UG/L) | TOTAL<br>ZINC<br>(ZN)<br>(UG/L) | TOTAL<br>ARSENIC<br>(AS)<br>(UG/L) |
|-------|------------------------------------------|-----------------------------------|-----------------------------------|---------------------------------|---------------------------------|-------------------------------------------|------------------------------------|------------------------------------------|---------------------------------|------------------------------------|
| NOV.  |                                          |                                   |                                   |                                 |                                 |                                           |                                    |                                          |                                 |                                    |
| 09... | 0                                        | <50                               | 30                                | 6300                            | <100                            | 270                                       | .0                                 | 2                                        | 30                              | 7                                  |
| FEB.  |                                          |                                   |                                   |                                 |                                 |                                           |                                    |                                          |                                 |                                    |
| 11... | 0                                        | <50                               | 20                                | 3200                            | <100                            | 140                                       | .1                                 | 3                                        | 40                              | 20                                 |
| MAY   |                                          |                                   |                                   |                                 |                                 |                                           |                                    |                                          |                                 |                                    |
| 20... | 50                                       | 50                                | 200                               | 54000                           | 100                             | 3300                                      | .3                                 | 2                                        | 270                             | 48                                 |
| JULY  |                                          |                                   |                                   |                                 |                                 |                                           |                                    |                                          |                                 |                                    |
| 15... | 0                                        | <50                               | 20                                | 2500                            | <100                            | 190                                       | .0                                 | 1                                        | 90                              | 5                                  |
| AUG.  |                                          |                                   |                                   |                                 |                                 |                                           |                                    |                                          |                                 |                                    |
| 13... | 0                                        | <50                               | <10                               | 990                             | <100                            | 160                                       | .1                                 | 0                                        | 40                              | 3                                  |

06934500 Missouri River at Hermann, Mo.--Continued

## PHYTOPLANKTON, CODOMINANT GENERA, JANUARY 1973 TO SEPTEMBER 1974

| Date             | Total Cells | Organism       | Percent | Organism       | Percent | Organism        | Percent | Organism    | Percent |
|------------------|-------------|----------------|---------|----------------|---------|-----------------|---------|-------------|---------|
| Jan. 29<br>1973  | 54          | Nitzschia      | 40      | Cyclotella     | 20      | Cocconeis       | 20      | Navicula    | 20      |
| Feb. 26          | 1,100       | Anabaena       | 84      |                |         |                 |         |             |         |
| March 26         | 4,600       | Anabaena       | 58      |                |         |                 |         |             |         |
| April 16         | 3,800       | Cyclotella     | 44      | Anabaena       | 21      |                 |         |             |         |
| May 29           | 250         | Oscillatoria   | 35      | Scenedesmus    | 30      |                 |         |             |         |
| June 18          | 2,400       | Oscillatoria   | 31      | Scenedesmus    | 26      | Cyclotella      | 19      |             |         |
| July 23          | 4,300       | Scenedesmus    | 40      | Pediastrum     | 30      | Oscillatoria    | 20      |             |         |
| Aug. 20          | 1,600       | Gomphosphaeria | 25      | Anabaena       | 15      | Scenedesmus     | 15      |             |         |
| Sept. 20         | 2,800       | Scenedesmus    | 72      |                |         |                 |         |             |         |
| Oct. 11          | 1,000       | Oscillatoria   | 44      | Scenedesmus    | 16      |                 |         |             |         |
| Nov. 9           | 870         | Scenedesmus    | 37      | Cyclotella     | 24      | Dictyosphaerium | 19      | Actinastrum | 16      |
| Dec. 17          | 500         | Fragilaria     | 50      | Oscillatoria   | 30      |                 |         |             |         |
| Jan. 14,<br>1974 | 210         | Scenedesmus    | 32      | Ankistrodesmus | 23      | Melosira        | 18      |             |         |
| March 12         | 390         | Cyclotella     | 59      | Navicula       | 18      |                 |         |             |         |
| April 22         | 3,900       | Cyclotella     | 36      | Scenedesmus    | 27      |                 |         |             |         |
| May 20           | 1,100       | Navicula       | 19      | Synedra        | 19      | Melosira        | 19      |             |         |
| June 18          | 2,900       | Cyclotella     | 54      | Navicula       | 23      |                 |         |             |         |
| Aug. 13          | 15,000      | Cyclotella     | 52      | Scenedesmus    | 16      |                 |         |             |         |
| Sept. 12         | 14,000      | Cyclotella     | 56      | Scenedesmus    | 16      |                 |         |             |         |

## PERIPHYTON, FEBRUARY 1973 TO AUGUST 1974

| Date             | Dry weight<br>grams/m | Ash weight<br>grams/m | Chlorophyll a<br>grams/m <sup>2</sup> | Chlorophyll b<br>grams/m <sup>2</sup> | Pigment ratio |
|------------------|-----------------------|-----------------------|---------------------------------------|---------------------------------------|---------------|
| Feb. 26,<br>1973 | 0.4                   | 0.4                   |                                       |                                       |               |
| Aug. 23          | 0.8                   | 0                     |                                       |                                       |               |
| Aug. 13<br>1974  | 2.3                   | 1.5                   | 3.6                                   | 0.8                                   | 0.2           |

## MISSOURI RIVER BASIN

06935840 MISSOURI RIVER NEAR ST. LOUIS, MO.

LOCATION.--Lat 38°40'54", long 90°32'43", St. Louis County, multi-parameter digital recorder at raw-water inlet at the City of St. Louis Howard Bend water treatment plant near St. Louis, and at mile 36.6 (58.9 km).

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE          | DIS-<br>CHARGE<br>(CFS) | DIS-<br>SOLVED<br>SILICA<br>(SiO <sub>2</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>IRON<br>(FE)<br>(UG/L) | DIS-<br>SOLVED<br>MAN-<br>GANESE<br>(MN)<br>(UG/L) | DIS-<br>SOLVED<br>CAL-<br>CIUM<br>(CA)<br>(MG/L) | DIS-<br>SOLVED<br>MAG-<br>NE-<br>SIUM<br>(MG)<br>(MG/L) | DIS-<br>SOLVED<br>SODIUM<br>(NA)<br>(MG/L) | DIS-<br>SOLVED<br>PO-<br>TAS-<br>SIUM<br>(K)<br>(MG/L) | BICAR-<br>BONATE<br>(HCO <sub>3</sub> )<br>(MG/L) | CAR-<br>BONATE<br>(CO <sub>3</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>SULFATE<br>(SO <sub>4</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>CHLO-<br>RIDE<br>(CL)<br>(MG/L) |
|---------------|-------------------------|-----------------------------------------------------------|------------------------------------------|----------------------------------------------------|--------------------------------------------------|---------------------------------------------------------|--------------------------------------------|--------------------------------------------------------|---------------------------------------------------|------------------------------------------------|-----------------------------------------------------------|---------------------------------------------------|
| OCT.<br>02... | 250000                  | 10                                                        | 250                                      | 24                                                 | 35                                               | 8.2                                                     | 15                                         | 5.1                                                    | 140                                               | 0                                              | 38                                                        | 8.5                                               |
| NOV.<br>07... | 123000                  | 13                                                        | 130                                      | 10                                                 | 57                                               | 14                                                      | 35                                         | 6.6                                                    | 204                                               | 0                                              | 95                                                        | 21                                                |
| DEC.<br>05... | 171000                  | 12                                                        | 320                                      | 0                                                  | 50                                               | 13                                                      | 24                                         | 5.7                                                    | 172                                               | 0                                              | 60                                                        | 15                                                |
| JAN.<br>08... | 53200                   | 17                                                        | 80                                       | 80                                                 | 72                                               | 19                                                      | 41                                         | 5.6                                                    | 240                                               | 0                                              | 110                                                       | 25                                                |
| FEB.<br>05... | 135000                  | 13                                                        | 120                                      | 38                                                 | 58                                               | 15                                                      | 27                                         | 4.8                                                    | 192                                               | 0                                              | 76                                                        | 18                                                |
| MAR.<br>05... | 80000                   | 14                                                        | 60                                       | 40                                                 | 66                                               | 17                                                      | 39                                         | 5.7                                                    | 216                                               | 0                                              | 120                                                       | 29                                                |
| APR.<br>02... | 88300                   | 11                                                        | 40                                       | 10                                                 | 58                                               | 17                                                      | 39                                         | 4.4                                                    | 200                                               | 0                                              | 100                                                       | 19                                                |
| MAY<br>07...  | 92000                   | 10                                                        | 60                                       | 0                                                  | 52                                               | 15                                                      | 31                                         | 4.6                                                    | 182                                               | 0                                              | 88                                                        | 16                                                |
| JUNE<br>05... | 121000                  | 9.6                                                       | 50                                       | 10                                                 | 50                                               | 14                                                      | 28                                         | 4.8                                                    | 168                                               | 0                                              | 89                                                        | 15                                                |
| JULY<br>16... | 57000                   | 7.6                                                       | 40                                       | 20                                                 | 59                                               | 19                                                      | 50                                         | 5.0                                                    | 204                                               | 0                                              | 140                                                       | 23                                                |

| DATE          | NON-<br>CAR-<br>BONATE<br>HARD-<br>NESS<br>(MG/L) | ALKA-<br>LINITY<br>AS<br>CaCO <sub>3</sub><br>(MG/L) | SPE-<br>CIFIC<br>CON-<br>DUCT-<br>ANCE<br>(MICRO-<br>MHOS) | PH<br>(UNITS) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | CHEM-<br>ICAL<br>OXYGEN<br>DEMAND<br>(LOW<br>LEVEL)<br>(MG/L) | DIS-<br>SOLVED<br>OXYGEN<br>(MG/L) | PER-<br>CENT<br>SATUR-<br>ATION | FECAL<br>COLI-<br>FORM<br>(COL.<br>PER<br>100 ML) | STREP-<br>TOCOCCI<br>(COL-<br>ONIES<br>PER<br>100 ML) |
|---------------|---------------------------------------------------|------------------------------------------------------|------------------------------------------------------------|---------------|----------------------------------------------|-----------------------------|---------------------------------------------------------------|------------------------------------|---------------------------------|---------------------------------------------------|-------------------------------------------------------|
| OCT.<br>02... | 6                                                 | 115                                                  | 325                                                        | 7.5           | 90                                           | 20.0                        | 74                                                            | 5.0                                | 54                              | 6200                                              | 8500                                                  |
| NOV.<br>07... | 33                                                | 167                                                  | 560                                                        | 8.1           | 10                                           | 10.5                        | 27                                                            | 9.6                                | 86                              | 1200                                              | 240                                                   |
| DEC.<br>05... | 37                                                | 141                                                  | 460                                                        | 7.9           | 30                                           | 9.0                         | 33                                                            | 9.0                                | 78                              | 2800                                              | 11000                                                 |
| JAN.<br>08... | 61                                                | 197                                                  | 695                                                        | 7.6           | 20                                           | .0                          | 15                                                            | 12.4                               | 85                              | 1200                                              | 1000                                                  |
| FEB.<br>05... | 49                                                | 157                                                  | 545                                                        | 8.0           | 20                                           | 2.5                         | 24                                                            | 11.4                               | 84                              | 640                                               | 1900                                                  |
| MAR.<br>05... | 58                                                | 177                                                  | 655                                                        | 7.9           | 8                                            | 10.0                        | 19                                                            | 9.2                                | 81                              | 200                                               | 200                                                   |
| APR.<br>02... | 51                                                | 164                                                  | 580                                                        | 7.9           | 60                                           | 12.5                        | 13                                                            | 8.6                                | 80                              | 250                                               | 40                                                    |
| MAY<br>07...  | 42                                                | 149                                                  | 545                                                        | 7.6           | 30                                           | 17.5                        | 45                                                            | 8.0                                | 83                              | 1300                                              | 1000                                                  |
| JUNE<br>05... | 45                                                | 138                                                  | 480                                                        | 7.8           | 40                                           | 22.5                        | 70                                                            | 6.1                                | 69                              | 2150                                              | 1150                                                  |
| JULY<br>16... | 58                                                | 167                                                  | 675                                                        | 8.2           | 2                                            | 29.5                        | 14                                                            | 7.4                                | 96                              | 75                                                | 120                                                   |

06935840 MISSOURI RIVER NEAR ST. LOUIS, MO.--Continued

PERIOD OF RECORD.--Chemical analyses: May 1969 to July 1974 (discontinued).

REMARKS.--Records of discharge are given for gaging station at Hermann, Mo. Recorder inoperative during the year.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE          | DIS-<br>SOLVED<br>FLUO-<br>RIDE<br>(F)<br>(MG/L) | TOTAL<br>NITRATE<br>(N)<br>(MG/L) | AMMONIA<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | ORGANIC<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | DIS-<br>SOL-<br>VED-<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | TOTAL<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(RESI-<br>DUE AT<br>180 C)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(TONS<br>PER<br>AC-FT) | DIS-<br>SOLVED<br>SOLIDS<br>(TONS<br>PER<br>DAY) | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | PERCENT<br>SODIUM | HARD-<br>NESS<br>(CA,MG)<br>(MG/L) |
|---------------|--------------------------------------------------|-----------------------------------|-------------------------------------------|-------------------------------------------|----------------------------------------------------------|-------------------------------------------|------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------|-----------------------------------------|-------------------|------------------------------------|
| OCT.<br>02... | .2                                               | .95                               | .23                                       | 1.7                                       | .09                                                      | .89                                       | 220                                                              | .30                                                | 149000                                           | .6                                      | 20                | 120                                |
| NOV.<br>07... | .1                                               | 1.2                               | .04                                       | .96                                       | .13                                                      | .34                                       | 346                                                              | .47                                                | 115000                                           | 1.1                                     | 27                | 200                                |
| DEC.<br>05... | .1                                               | 1.3                               | .18                                       | 1.1                                       | .10                                                      | .44                                       | 276                                                              | .38                                                | 127000                                           | .8                                      | 22                | 180                                |
| JAN.<br>08... | .3                                               | 1.4                               | .20                                       | .62                                       | .11                                                      | .23                                       | 412                                                              | .56                                                | 59200                                            | 1.1                                     | 25                | 260                                |
| FEB.<br>05... | .5                                               | 1.7                               | .05                                       | .74                                       | .05                                                      | .28                                       | 324                                                              | .44                                                | 118000                                           | .8                                      | 22                | 210                                |
| MAR.<br>05... | .3                                               | 1.5                               | .13                                       | .28                                       | .10                                                      | .23                                       | 400                                                              | .54                                                | 86400                                            | 1.1                                     | 26                | 230                                |
| APR.<br>02... | .4                                               | .10                               | .16                                       | .46                                       | .06                                                      | .20                                       | 369                                                              | .50                                                | 88000                                            | 1.2                                     | 28                | 210                                |
| MAY<br>07...  | .6                                               | .86                               | .06                                       | 1.7                                       | .10                                                      | .48                                       | 330                                                              | .45                                                | 82000                                            | 1.0                                     | 25                | 190                                |
| JUNE<br>05... | .3                                               | .02                               | .06                                       | 4.9                                       | --                                                       | .28                                       | 310                                                              | .42                                                | 101000                                           | .9                                      | 24                | 180                                |
| JULY<br>16... | .4                                               | .36                               | .07                                       | .68                                       | .10                                                      | .16                                       | 398                                                              | .54                                                | 61300                                            | 1.4                                     | 32                | 230                                |





07010000 MISSISSIPPI RIVER AT ST. LOUIS, MO.--Continued

PARTICLE SIZE, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE          | TEMPER-<br>ATURE<br>(DEG C) | DIS-<br>CHARGE<br>(CFS) | SUS-<br>PENDE<br>SEDI-<br>MENT<br>(MG/L) | SUS-<br>PENDE<br>SEDI-<br>MENT<br>DIS-<br>CHARGE<br>(T/DAY) | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.062 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.125 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.250 MM |
|---------------|-----------------------------|-------------------------|------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|
| MAR.<br>04... | 11.0                        | 265000                  | 281                                      | 201000                                                      | 1                                                           | 5                                                           | 61                                                          |
| JULY<br>17... | 28.0                        | 201000                  | 193                                      | 105000                                                      | 1                                                           | 1                                                           | 6                                                           |

| DATE          | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.500 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>1.00 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>2.00 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>4.00 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>8.00 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>16.0 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>32.0 MM |
|---------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|
| MAR.<br>04... | 76                                                          | 65                                                          | 91                                                          | 94                                                          | 100                                                         | --                                                          | --                                                          |
| JULY<br>17... | 38                                                          | 87                                                          | 81                                                          | 88                                                          | 92                                                          | 96                                                          | 85                                                          |

07010000 MISSISSIPPI RIVER AT ST. LOUIS, MO.--Continued

## SUSPENDED--SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCTOBER                    |                                      |                                     | NOVEMBER                   |                                      |                                     | DECEMBER                   |                                      |                                     |
|-------|----------------------------|--------------------------------------|-------------------------------------|----------------------------|--------------------------------------|-------------------------------------|----------------------------|--------------------------------------|-------------------------------------|
|       | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCEN-<br>TRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCEN-<br>TRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCEN-<br>TRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) |
| 1     | 361000                     | 983                                  | 958000                              | 245000                     | 280                                  | 185000                              | 290000                     | 258                                  | 202000                              |
| 2     | 387000                     | 1600                                 | 1670000                             | 246000                     | 267                                  | 177000                              | 270000                     | 262                                  | 191000                              |
| 3     | 400000                     | 1260                                 | 1360000                             | 239000                     | 254                                  | 164000                              | 254000                     | 292                                  | 200000                              |
| 4     | 417000                     | 1050                                 | 1180000                             | 233000                     | 232                                  | 146000                              | 255000                     | 308                                  | 212000                              |
| 5     | 432000                     | 887                                  | 1030000                             | 225000                     | 228                                  | 139000                              | 302000                     | 300                                  | 245000                              |
| 6     | 443000                     | 809                                  | 968000                              | 211000                     | 246                                  | 140000                              | 372000                     | 319                                  | 320000                              |
| 7     | 447000                     | 970                                  | 1170000                             | 205000                     | 254                                  | 141000                              | 408000                     | 552                                  | 608000                              |
| 8     | 435000                     | 737                                  | 866000                              | 212000                     | 238                                  | 136000                              | 417000                     | 635                                  | 715000                              |
| 9     | 394000                     | 704                                  | 749000                              | 213000                     | 238                                  | 137000                              | 382000                     | 708                                  | 730000                              |
| 10    | 318000                     | 612                                  | 525000                              | 202000                     | 219                                  | 119000                              | 329000                     | 719                                  | 639000                              |
| 11    | 269000                     | 551                                  | 400000                              | 196000                     | 237                                  | 125000                              | 282000                     | 716                                  | 545000                              |
| 12    | 251000                     | 445                                  | 302000                              | 190000                     | 202                                  | 104000                              | 251000                     | 447                                  | 303000                              |
| 13    | 271000                     | 289                                  | 211000                              | 185000                     | 200                                  | 99900                               | 237000                     | 356                                  | 228000                              |
| 14    | 373000                     | 239                                  | 241000                              | 179000                     | 257                                  | 124000                              | 224000                     | 298                                  | 180000                              |
| 15    | 390000                     | 477                                  | 502000                              | 184000                     | 222                                  | 110000                              | 220000                     | 240                                  | 143000                              |
| 16    | 383000                     | 924                                  | 956000                              | 179000                     | 272                                  | 131000                              | 204000                     | 216                                  | 119000                              |
| 17    | 386000                     | 890                                  | 928000                              | 176000                     | 277                                  | 132000                              | 187000                     | 217                                  | 110000                              |
| 18    | 399000                     | 962                                  | 1040000                             | 178000                     | 244                                  | 117000                              | 168000                     | 220                                  | 99800                               |
| 19    | 409000                     | 990                                  | 1090000                             | 171000                     | 240                                  | 111000                              | 168000                     | 184                                  | 83500                               |
| 20    | 405000                     | 536                                  | 586000                              | 164000                     | 235                                  | 104000                              | 157000                     | 156                                  | 66100                               |
| 21    | 397000                     | 654                                  | 701000                              | 179000                     | 235                                  | 114000                              | 133000                     | 162                                  | 58200                               |
| 22    | 390000                     | 675                                  | 711000                              | 185000                     | 253                                  | 126000                              | 133000                     | 158                                  | 56700                               |
| 23    | 369000                     | 519                                  | 517000                              | 210000                     | 221                                  | 125000                              | 149000                     | 190                                  | 76400                               |
| 24    | 333000                     | 428                                  | 385000                              | 241000                     | 245                                  | 159000                              | 160000                     | 142                                  | 61300                               |
| 25    | 299000                     | 405                                  | 327000                              | 261000                     | 366                                  | 258000                              | 187000                     | 137                                  | 69200                               |
| 26    | 279000                     | 379                                  | 286000                              | 278000                     | 914                                  | 686000                              | 257000                     | 185                                  | 128000                              |
| 27    | 266000                     | 496                                  | 356000                              | 291000                     | 716                                  | 563000                              | 280000                     | 386                                  | 292000                              |
| 28    | 262000                     | 339                                  | 240000                              | 299000                     | 458                                  | 370000                              | 292000                     | 365                                  | 288000                              |
| 29    | 260000                     | 331                                  | 232000                              | 312000                     | 347                                  | 292000                              | 292000                     | 323                                  | 255000                              |
| 30    | 246000                     | 283                                  | 188000                              | 305000                     | 322                                  | 265000                              | 274000                     | 430                                  | 318000                              |
| 31    | 245000                     | 281                                  | 186000                              | --                         | --                                   | --                                  | 253000                     | 444                                  | 303000                              |
| TOTAL | 916000                     | --                                   | 20861000                            | 6594000                    | --                                   | 5599900                             | 7787000                    | --                                   | 7845200                             |
| DAY   | JANUARY                    |                                      |                                     | FEBRUARY                   |                                      |                                     | MARCH                      |                                      |                                     |
|       | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCEN-<br>TRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCEN-<br>TRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCEN-<br>TRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) |
| 1     | 215000                     | 512                                  | 297000                              | 468000                     | 934                                  | 1180000                             | 279000                     | 435                                  | 328000                              |
| 2     | 200000                     | 459                                  | 248000                              | 451000                     | 858                                  | 1040000                             | 270000                     | 402                                  | 293000                              |
| 3     | 190000                     | 387                                  | 199000                              | 427000                     | 807                                  | 930000                              | 266000                     | 341                                  | 245000                              |
| 4     | 175000                     | 372                                  | 176000                              | 407000                     | 624                                  | 686000                              | 265000                     | 281                                  | 201000                              |
| 5     | 160000                     | 338                                  | 146000                              | 384000                     | 624                                  | 647000                              | 264000                     | 258                                  | 184000                              |
| 6     | 155000                     | 277                                  | 116000                              | 358000                     | 570                                  | 551000                              | 275000                     | 277                                  | 206000                              |
| 7     | 150000                     | 209                                  | 84600                               | 326000                     | 479                                  | 422000                              | 294000                     | 264                                  | 210000                              |
| 8     | 145000                     | 174                                  | 68100                               | 287000                     | 504                                  | 391000                              | 313000                     | 327                                  | 276000                              |
| 9     | 141000                     | 181                                  | 68900                               | 269000                     | 478                                  | 347000                              | 319000                     | 523                                  | 450000                              |
| 10    | 146000                     | 127                                  | 50100                               | 260000                     | 387                                  | 272000                              | 319000                     | 493                                  | 425000                              |
| 11    | 140000                     | 205                                  | 77500                               | 248000                     | 340                                  | 228000                              | 329000                     | 398                                  | 354000                              |
| 12    | 123000                     | 136                                  | 45200                               | 230000                     | 1310                                 | 814000                              | 390000                     | 483                                  | 509000                              |
| 13    | 120000                     | 131                                  | 42400                               | 229000                     | 1140                                 | 705000                              | 437000                     | 682                                  | 805000                              |
| 14    | 126000                     | 133                                  | 45200                               | 231000                     | 1120                                 | 699000                              | 462000                     | 774                                  | 965000                              |
| 15    | 130000                     | 130                                  | 45600                               | 229000                     | 690                                  | 427000                              | 466000                     | 896                                  | 1130000                             |
| 16    | 132000                     | 128                                  | 45600                               | 225000                     | 674                                  | 409000                              | 458000                     | 1050                                 | 1300000                             |
| 17    | 134000                     | 134                                  | 48500                               | 217000                     | 441                                  | 258000                              | 443000                     | 720                                  | 861000                              |
| 18    | 160000                     | 151                                  | 65200                               | 211000                     | 265                                  | 151000                              | 424000                     | 538                                  | 616000                              |
| 19    | 212000                     | 304                                  | 174000                              | 218000                     | 262                                  | 154000                              | 409000                     | 478                                  | 528000                              |
| 20    | 264000                     | 448                                  | 319000                              | 249000                     | 266                                  | 179000                              | 391000                     | 433                                  | 457000                              |
| 21    | 330000                     | 756                                  | 674000                              | 290000                     | 491                                  | 384000                              | 371000                     | 416                                  | 417000                              |
| 22    | 368000                     | 779                                  | 774000                              | 311000                     | 876                                  | 736000                              | 342000                     | 380                                  | 351000                              |
| 23    | 395000                     | 808                                  | 862000                              | 323000                     | 671                                  | 585000                              | 316000                     | 364                                  | 311000                              |
| 24    | 408000                     | 814                                  | 897000                              | 338000                     | 496                                  | 453000                              | 301000                     | 285                                  | 232000                              |
| 25    | 399000                     | 944                                  | 1020000                             | 342000                     | 389                                  | 359000                              | 291000                     | 268                                  | 211000                              |
| 26    | 381000                     | 858                                  | 883000                              | 322000                     | 502                                  | 436000                              | 276000                     | 287                                  | 214000                              |
| 27    | 396000                     | 816                                  | 872000                              | 302000                     | 715                                  | 583000                              | 265000                     | 281                                  | 201000                              |
| 28    | 454000                     | 792                                  | 971000                              | 287000                     | 631                                  | 489000                              | 258000                     | 292                                  | 203000                              |
| 29    | 482000                     | 873                                  | 1140000                             | --                         | --                                   | --                                  | 251000                     | 304                                  | 206000                              |
| 30    | 482000                     | 972                                  | 1260000                             | --                         | --                                   | --                                  | 247000                     | 334                                  | 223000                              |
| 31    | 477000                     | 898                                  | 1160000                             | --                         | --                                   | --                                  | 248000                     | 283                                  | 189000                              |
| TOTAL | 7790000                    | --                                   | 12874900                            | 8439000                    | --                                   | 14515000                            | 239000                     | --                                   | 13101000                            |

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

|                                                    |           |
|----------------------------------------------------|-----------|
| TOTAL DISCHARGE FOR YEAR (CFS-DAYS)                | 100132500 |
| TOTAL SUSPENDED-SEDIMENT DISCHARGE FOR YEAR (TONS) | 160377800 |

07014500 MERAMEC RIVER NEAR SULLIVAN, MO.

LOCATION.--Lat 38°09'30", long 91°06'30", SE¼NE¼ sec.35, T.40 N., R.2 W., Franklin County, at gaging station on right bank at Sappington Bridge, 3.8 mi (6.1 km) downstream from Brazil Creek, 4 mi (6.4 km) southeast of Sullivan, and at mile 113.2 (182.1 km).

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE          | DIS-<br>CHARGE<br>(CFS) | DIS-<br>SOLVED<br>SILICA<br>(SiO <sub>2</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>IRON<br>(FE)<br>(UG/L) | DIS-<br>SOLVED<br>MAN-<br>GANESE<br>(MN)<br>(UG/L) | DIS-<br>SOLVED<br>CAL-<br>CIUM<br>(CA)<br>(MG/L) | DIS-<br>SOLVED<br>MAG-<br>NESIUM<br>(MG) | DIS-<br>SOLVED<br>SODIUM<br>(NA)<br>(MG/L) | DIS-<br>SOLVED<br>PO-<br>TAS-<br>SIUM<br>(K)<br>(MG/L) | BICAR-<br>BONATE<br>(HCO <sub>3</sub> )<br>(MG/L) | CAR-<br>BONATE<br>(CO <sub>3</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>SULFATE<br>(SO <sub>4</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>CHLO-<br>RIDE<br>(CL)<br>(MG/L) |
|---------------|-------------------------|-----------------------------------------------------------|------------------------------------------|----------------------------------------------------|--------------------------------------------------|------------------------------------------|--------------------------------------------|--------------------------------------------------------|---------------------------------------------------|------------------------------------------------|-----------------------------------------------------------|---------------------------------------------------|
| OCT.<br>04... | 370                     | 7.9                                                       | 70                                       | 16                                                 | 37                                               | 22                                       | 3.3                                        | 1.3                                                    | 224                                               | 0                                              | 8.2                                                       | 3.4                                               |
| NOV.<br>08... | 754                     | 8.7                                                       | 150                                      | 30                                                 | 37                                               | 20                                       | 2.7                                        | 1.4                                                    | 200                                               | 0                                              | 10                                                        | 2.7                                               |
| DEC.<br>06... | 5200                    | 8.5                                                       | 290                                      | 10                                                 | 19                                               | 9.6                                      | 1.8                                        | 1.8                                                    | 92                                                | 0                                              | 7.9                                                       | 2.0                                               |
| JAN.<br>14... | 860                     | 7.7                                                       | 70                                       | 10                                                 | 34                                               | 19                                       | 2.8                                        | 1.1                                                    | 179                                               | 0                                              | 10                                                        | 3.3                                               |
| FEB.<br>06... | 1500                    | 7.8                                                       | 70                                       | 0                                                  | 28                                               | 16                                       | 3.8                                        | 1.1                                                    | 148                                               | 0                                              | 9.5                                                       | 3.1                                               |
| MAR.<br>06... | 1640                    | 6.7                                                       | 70                                       | 30                                                 | 33                                               | 16                                       | 2.9                                        | 1.2                                                    | 160                                               | 0                                              | 11                                                        | 2.7                                               |
| APR.<br>03... | 2170                    | 5.8                                                       | 80                                       | 0                                                  | 27                                               | 15                                       | 2.8                                        | 1.2                                                    | 150                                               | 0                                              | 9.5                                                       | 3.2                                               |
| MAY<br>08...  | 1770                    | 6.2                                                       | 40                                       | 0                                                  | 29                                               | 16                                       | 2.7                                        | 1.1                                                    | 162                                               | 0                                              | 8.9                                                       | 2.2                                               |
| JUNE<br>06... | 1250                    | 4.9                                                       | 40                                       | 10                                                 | 33                                               | 18                                       | 2.8                                        | 1.3                                                    | 186                                               | 0                                              | 8.1                                                       | 2.4                                               |
| JULY<br>17... | 500                     | 9.5                                                       | 20                                       | 20                                                 | 36                                               | 22                                       | 2.7                                        | 1.2                                                    | 216                                               | 0                                              | 9.2                                                       | 2.4                                               |
| AUG.<br>08... | 363                     | 8.1                                                       | 0                                        | 10                                                 | 38                                               | 23                                       | 1.2                                        | 1.1                                                    | 216                                               | 0                                              | 7.3                                                       | 3.2                                               |
| SEP.<br>11... | 552                     | 6.7                                                       | 20                                       | 20                                                 | 38                                               | 23                                       | 3.5                                        | 1.3                                                    | 220                                               | 0                                              | 9.7                                                       | 5.1                                               |

| DATE          | NON-<br>CAR-<br>BONATE<br>HARD-<br>NESS<br>(MG/L) | ALKA-<br>LINIT-<br>AS<br>CaCO <sub>3</sub><br>(MG/L) | SPE-<br>CIFIC<br>CON-<br>DUCT-<br>ANCE<br>(MICRO-<br>MHOS) | PH<br>(UNITS) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | CHEM-<br>ICAL<br>OXYGEN<br>DEMAND<br>(LOW<br>LEVEL)<br>(MG/L) | DIS-<br>SOLVED<br>OXYGEN<br>(MG/L) | PER-<br>CENT<br>SATUR-<br>ATION | FECAL<br>COLI-<br>FORM<br>(COL.<br>PER<br>100 ML) | STREP-<br>TOCOCCI<br>(COL-<br>ONIES<br>PER<br>100 ML) |
|---------------|---------------------------------------------------|------------------------------------------------------|------------------------------------------------------------|---------------|----------------------------------------------|-----------------------------|---------------------------------------------------------------|------------------------------------|---------------------------------|---------------------------------------------------|-------------------------------------------------------|
| OCT.<br>04... | 0                                                 | 184                                                  | 367                                                        | 7.7           | 3                                            | 20.0                        | 2                                                             | 6.8                                | 74                              | 72                                                | 290                                                   |
| NOV.<br>08... | 11                                                | 164                                                  | 329                                                        | 8.0           | 3                                            | 10.0                        | 6                                                             | 10.2                               | 90                              | 34                                                | 76                                                    |
| DEC.<br>06... | 12                                                | 75                                                   | 155                                                        | 7.8           | 40                                           | 8.5                         | 11                                                            | 9.6                                | 82                              | 1900                                              | 3800                                                  |
| JAN.<br>14... | 16                                                | 147                                                  | 323                                                        | 7.8           | 5                                            | 3.0                         | 9                                                             | 11.8                               | 87                              | 2                                                 | 10                                                    |
| FEB.<br>06... | 14                                                | 121                                                  | 263                                                        | 8.1           | 8                                            | 7.5                         | 2                                                             | 9.1                                | 76                              | 8                                                 | 12                                                    |
| MAR.<br>06... | 17                                                | 131                                                  | 265                                                        | 8.2           | 3                                            | 14.0                        | 6                                                             | 9.4                                | 90                              | 16                                                | 18                                                    |
| APR.<br>03... | 6                                                 | 123                                                  | 255                                                        | 8.1           | 2                                            | 15.5                        | 4                                                             | 9.6                                | 96                              | 12                                                | 28                                                    |
| MAY<br>08...  | 5                                                 | 133                                                  | 273                                                        | 8.1           | 3                                            | 17.0                        | 4                                                             | 10.0                               | 103                             | 6                                                 | 16                                                    |
| JUNE<br>06... | 4                                                 | 153                                                  | 298                                                        | 8.2           | 5                                            | 20.0                        | 12                                                            | 9.6                                | 104                             | --                                                | 400                                                   |
| JULY<br>17... | 3                                                 | 177                                                  | 354                                                        | 8.2           | 2                                            | 24.5                        | 2                                                             | 7.4                                | 88                              | 14                                                | 72                                                    |
| AUG.<br>08... | 12                                                | 177                                                  | 365                                                        | 8.1           | 1                                            | 21.5                        | 3                                                             | 7.6                                | 85                              | 8                                                 | 38                                                    |
| SEP.<br>11... | 10                                                | 180                                                  | 355                                                        | 8.2           | 2                                            | 20.0                        | 2                                                             | 7.4                                | 80                              | 78                                                | 180                                                   |

07014500 MERAMEC RIVER NEAR SULLIVAN, MO.--Continued

DRAINAGE AREA.--1,475 mi<sup>2</sup> (3,820 km<sup>2</sup>).

PERIOD OF RECORD.--Chemical analyses: August 1963 to September 1974.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE  | DIS-<br>SOLVED<br>FLUO-<br>RIDE<br>(F)<br>(MG/L) | TOTAL<br>NITRATE<br>(N)<br>(MG/L) | AMMONIA<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | ORGANIC<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | DIS-<br>SOL-<br>VED-<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | TOTAL<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(RESI-<br>DUE AT<br>180 C)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(TONS<br>PER<br>AC-FT) | DIS-<br>SOLVED<br>SOLIDS<br>(TONS<br>PER<br>DAY) | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | PERCENT<br>SODIUM | HARD-<br>NESS<br>(CA,MG)<br>(MG/L) |
|-------|--------------------------------------------------|-----------------------------------|-------------------------------------------|-------------------------------------------|----------------------------------------------------------|-------------------------------------------|------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------|-----------------------------------------|-------------------|------------------------------------|
| OCT.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 04... | .1                                               | .10                               | .12                                       | .25                                       | .03                                                      | .06                                       | 206                                                              | .28                                                | 206                                              | .1                                      | 4                 | 180                                |
| NOV.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 08... | .0                                               | .38                               | .02                                       | .21                                       | .07                                                      | .06                                       | 176                                                              | .24                                                | 358                                              | .1                                      | 3                 | 170                                |
| DEC.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 06... | .0                                               | .32                               | .07                                       | .48                                       | .04                                                      | .10                                       | 109                                                              | .15                                                | 1530                                             | .1                                      | 4                 | 87                                 |
| JAN.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 14... | .0                                               | .37                               | .03                                       | .09                                       | .02                                                      | .02                                       | 168                                                              | .23                                                | 390                                              | .1                                      | 4                 | 160                                |
| FEB.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 06... | .2                                               | .45                               | .09                                       | .17                                       | .00                                                      | .01                                       | 141                                                              | .19                                                | 571                                              | .1                                      | 6                 | 140                                |
| MAR.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 06... | .1                                               | .27                               | .08                                       | .07                                       | .01                                                      | .02                                       | 150                                                              | .20                                                | 664                                              | .1                                      | 4                 | 150                                |
| APR.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 03... | .1                                               | .22                               | .07                                       | .12                                       | .00                                                      | .02                                       | 139                                                              | .19                                                | 814                                              | .1                                      | 4                 | 130                                |
| MAY   |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 08... | .2                                               | .07                               | .03                                       | .26                                       | .02                                                      | .02                                       | 152                                                              | .21                                                | 726                                              | .1                                      | 4                 | 140                                |
| JUNE  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 06... | .0                                               | .19                               | .90                                       | .00                                       | --                                                       | .78                                       | 154                                                              | .21                                                | 520                                              | .1                                      | 4                 | 160                                |
| JULY  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 17... | .1                                               | .35                               | .06                                       | .16                                       | .01                                                      | .01                                       | 173                                                              | .24                                                | 234                                              | .1                                      | 3                 | 180                                |
| AUG.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 08... | .1                                               | .24                               | .06                                       | .03                                       | .02                                                      | .02                                       | 186                                                              | .25                                                | 182                                              | .0                                      | 1                 | 190                                |
| SEP.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 11... | .1                                               | .17                               | .08                                       | .13                                       | .01                                                      | .01                                       | 190                                                              | .26                                                | 283                                              | .1                                      | 4                 | 190                                |



07016400 BOURBEUSE RIVER ABOVE UNION, MO.

LOCATION.--Lat 38°25'55", long 91°01'11", Franklin County, at bridge on county road, 5 mi (8.0 km) upstream from gaging station, and 0.5 mi (0.8 km) south of Union.

DRAINAGE AREA.--808 mi<sup>2</sup> (2,092 km<sup>2</sup>), including Flat Creek (at gaging station).

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE  | DIS-<br>CHARGE<br>(CFS) | DIS-<br>SOLVED<br>SILICA<br>(SiO <sub>2</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>IRON<br>(FE)<br>(UG/L) | DIS-<br>SOLVED<br>MAN-<br>GANESE<br>(MN)<br>(UG/L) | DIS-<br>SOLVED<br>CAL-<br>CIUM<br>(CA)<br>(MG/L) | DIS-<br>SOLVED<br>MAG-<br>NE-<br>SIUM<br>(MG) | DIS-<br>SOLVED<br>SODIUM<br>(NA)<br>(MG/L) | DIS-<br>SOLVED<br>PO-<br>TAS-<br>SIUM<br>(K)<br>(MG/L) | BICAR-<br>BONATE<br>(HCO <sub>3</sub> )<br>(MG/L) | CAR-<br>BONATE<br>(CO <sub>3</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>SULFATE<br>(SO <sub>4</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>CHLO-<br>RIDE<br>(CL)<br>(MG/L) |
|-------|-------------------------|-----------------------------------------------------------|------------------------------------------|----------------------------------------------------|--------------------------------------------------|-----------------------------------------------|--------------------------------------------|--------------------------------------------------------|---------------------------------------------------|------------------------------------------------|-----------------------------------------------------------|---------------------------------------------------|
| OCT.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 03... | 230                     | 6.0                                                       | 80                                       | 16                                                 | 28                                               | 17                                            | 6.2                                        | 2.4                                                    | 164                                               | 0                                              | 16                                                        | 6.3                                               |
| NOV.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 07... | 144                     | 6.8                                                       | 170                                      | 20                                                 | 28                                               | 16                                            | 5.4                                        | 3.0                                                    | 132                                               | 0                                              | 21                                                        | 6.2                                               |
| DEC.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 05... | 4740                    | 7.9                                                       | 350                                      | 20                                                 | 11                                               | 6.4                                           | 3.5                                        | 2.9                                                    | 53                                                | 0                                              | 14                                                        | 3.6                                               |
| JAN.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 14... | 255                     | 9.8                                                       | 120                                      | 60                                                 | 25                                               | 14                                            | 4.8                                        | 1.4                                                    | 112                                               | 0                                              | 26                                                        | 5.4                                               |
| FEB.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 06... | 470                     | 9.6                                                       | 170                                      | 25                                                 | 17                                               | 10                                            | 4.0                                        | 1.4                                                    | 80                                                | 0                                              | 20                                                        | 4.0                                               |
| MAR.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 06... | 440                     | 7.8                                                       | 120                                      | 30                                                 | 19                                               | 11                                            | 4.4                                        | 1.7                                                    | 80                                                | 0                                              | 21                                                        | 3.6                                               |
| APR.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 03... | 419                     | 5.2                                                       | 90                                       | 20                                                 | 17                                               | 11                                            | 4.2                                        | 1.5                                                    | 84                                                | 0                                              | 21                                                        | 4.1                                               |
| MAY   |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 08... | 320                     | 3.5                                                       | 60                                       | 10                                                 | 20                                               | 12                                            | 4.8                                        | 1.5                                                    | 100                                               | 0                                              | 22                                                        | 3.4                                               |
| JUNE  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 06... | 268                     | 7.9                                                       | 80                                       | 70                                                 | 19                                               | 11                                            | 3.3                                        | 2.0                                                    | 92                                                | 0                                              | 14                                                        | 2.7                                               |
| JULY  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 17... | 58                      | 7.6                                                       | 20                                       | 70                                                 | 29                                               | 17                                            | 4.6                                        | 1.8                                                    | 160                                               | 0                                              | 18                                                        | 3.4                                               |
| AUG.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 07... | 32                      | 8.4                                                       | 10                                       | 70                                                 | 33                                               | 19                                            | 4.6                                        | 1.5                                                    | 184                                               | 0                                              | 13                                                        | 3.8                                               |
| SEP.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 10... | 95                      | 7.6                                                       | 50                                       | 20                                                 | 29                                               | 17                                            | 5.0                                        | 2.1                                                    | 156                                               | 0                                              | 20                                                        | 4.9                                               |

| DATE  | NON-<br>CAR-<br>BONATE<br>HARD-<br>NESS<br>(MG/L) | ALKA-<br>LINITY<br>AS<br>CaCO <sub>3</sub><br>(MG/L) | SPE-<br>CIFIC<br>CON-<br>DUCT-<br>ANCE<br>(MICRO-<br>MHOS) | PH<br>(UNITS) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | CHEM-<br>ICAL<br>OXYGEN<br>DEMAND<br>(LOW<br>LEVEL)<br>(MG/L) | DIS-<br>SOLVED<br>OXYGEN<br>(MG/L) | PER-<br>CENT<br>SATUR-<br>ATION | FECAL<br>COLI-<br>FORM<br>(COL.<br>PER<br>100 ML) | STREP-<br>TOCOCCI<br>(COL-<br>ONIES<br>PER<br>100 ML) |
|-------|---------------------------------------------------|------------------------------------------------------|------------------------------------------------------------|---------------|----------------------------------------------|-----------------------------|---------------------------------------------------------------|------------------------------------|---------------------------------|---------------------------------------------------|-------------------------------------------------------|
| OCT.  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 03... | 5                                                 | 135                                                  | 310                                                        | 7.9           | 10                                           | 20.0                        | 85                                                            | 7.8                                | 85                              | 40                                                | 340                                                   |
| NOV.  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 07... | 28                                                | 108                                                  | 287                                                        | 7.7           | 10                                           | 8.5                         | 16                                                            | 10.9                               | 93                              | 14                                                | 34                                                    |
| DEC.  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 05... | 10                                                | 43                                                   | 134                                                        | 7.4           | 80                                           | 10.0                        | 39                                                            | 8.6                                | 76                              | 5200                                              | 16000                                                 |
| JAN.  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 14... | 28                                                | 92                                                   | 274                                                        | 7.3           | 20                                           | .0                          | 8                                                             | 12.2                               | 84                              | <10                                               | 10                                                    |
| FEB.  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 06... | 18                                                | 66                                                   | 200                                                        | 7.8           | 30                                           | 5.5                         | 5                                                             | 9.7                                | 77                              | 24                                                | 14                                                    |
| MAR.  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 06... | 27                                                | 66                                                   | 200                                                        | 7.9           | 20                                           | 13.5                        | 8                                                             | 9.2                                | 88                              | 16                                                | 12                                                    |
| APR.  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 03... | 19                                                | 69                                                   | 185                                                        | 7.6           | 30                                           | 16.0                        | 12                                                            | 8.8                                | 89                              | 16                                                | 24                                                    |
| MAY   |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 08... | 17                                                | 82                                                   | 217                                                        | 7.9           | 8                                            | 17.5                        | 12                                                            | 8.6                                | 90                              | 16                                                | 28                                                    |
| JUNE  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 06... | 17                                                | 75                                                   | 180                                                        | 7.6           | 50                                           | 21.0                        | 6                                                             | 7.2                                | 80                              | --                                                | 300                                                   |
| JULY  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 17... | 11                                                | 131                                                  | 293                                                        | 7.9           | 4                                            | 26.5                        | 7                                                             | 5.2                                | 64                              | 16                                                | 56                                                    |
| AUG.  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 07... | 10                                                | 151                                                  | 325                                                        | 8.2           | 5                                            | 23.0                        | 7                                                             | 8.1                                | 93                              | 6                                                 | 34                                                    |
| SEP.  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 10... | 12                                                | 128                                                  | 304                                                        | 8.0           | 7                                            | 20.0                        | 9                                                             | 7.9                                | 86                              | 200                                               | 68                                                    |

07016400 BOURBEUSE RIVER ABOVE UNION, MO.--Continued

PERIOD OF RECORD.--Chemical analyses: August 1963 to September 1974.

REMARKS.--Records of discharge are given for gaging station at Union. No appreciable inflow between sampling point and gaging station.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE  | DIS-<br>SOLVED<br>FLUO-<br>RIDE<br>(F)<br>(MG/L) | TOTAL<br>NITRATE<br>(N)<br>(MG/L) | AMMONIA<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | ORGANIC<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | DIS-<br>SOL-<br>VED-<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | TOTAL<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(RESI-<br>DUE AT<br>180 C)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(TONS<br>PER<br>AC-FT) | DIS-<br>SOLVED<br>SOLIDS<br>(TONS<br>PER<br>DAY) | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | PERCENT<br>SODIUM | HARD-<br>NESS<br>(CA,MG)<br>(MG/L) |
|-------|--------------------------------------------------|-----------------------------------|-------------------------------------------|-------------------------------------------|----------------------------------------------------------|-------------------------------------------|------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------|-----------------------------------------|-------------------|------------------------------------|
| OCT.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 03... | .1                                               | .02                               | .19                                       | .16                                       | .03                                                      | .06                                       | 174                                                              | .24                                                | 108                                              | .2                                      | 9                 | 140                                |
| NOV.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 07... | .1                                               | .07                               | .04                                       | .33                                       | .07                                                      | .08                                       | 157                                                              | .21                                                | 61.0                                             | .2                                      | 8                 | 140                                |
| DEC.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 05... | .0                                               | .35                               | .20                                       | 1.3                                       | .07                                                      | .22                                       | 94                                                               | .13                                                | 1200                                             | .2                                      | 12                | 54                                 |
| JAN.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 14... | .1                                               | .60                               | .10                                       | .22                                       | .03                                                      | .04                                       | 147                                                              | .20                                                | 101                                              | .2                                      | 8                 | 120                                |
| FEB.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 06... | .3                                               | .63                               | .25                                       | .15                                       | .01                                                      | .05                                       | 114                                                              | .16                                                | 145                                              | .2                                      | 9                 | 84                                 |
| MAR.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 06... | .1                                               | .25                               | .11                                       | .19                                       | .00                                                      | .02                                       | 117                                                              | .16                                                | 139                                              | .2                                      | 9                 | 93                                 |
| APR.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 03... | .1                                               | .32                               | .17                                       | .10                                       | .00                                                      | .06                                       | 115                                                              | .16                                                | 130                                              | .2                                      | 9                 | 88                                 |
| MAY   |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 08... | .3                                               | .00                               | .02                                       | .40                                       | .02                                                      | .03                                       | 128                                                              | .17                                                | 111                                              | .2                                      | 9                 | 99                                 |
| JUNE  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 06... | .1                                               | .41                               | .13                                       | .97                                       | --                                                       | .56                                       | 114                                                              | .16                                                | 82.5                                             | .2                                      | 7                 | 93                                 |
| JULY  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 17... | .1                                               | .00                               | .00                                       | .34                                       | .01                                                      | .01                                       | 147                                                              | .20                                                | 23.0                                             | .2                                      | 6                 | 140                                |
| AUG.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 07... | .1                                               | .01                               | .08                                       | .64                                       | .01                                                      | .03                                       | 169                                                              | .23                                                | 14.6                                             | .2                                      | 6                 | 160                                |
| SEP.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 10... | .1                                               | .00                               | .06                                       | .40                                       | .00                                                      | .05                                       | 167                                                              | .23                                                | 42.8                                             | .2                                      | 7                 | 140                                |

## MERAMEC RIVER BASIN

07018000 BIG RIVER NEAR DE SOTO, MO.

LOCATION.--Lat 38°07'20", long 90°40'30", SW¼NW¼ sec.11, T.39 N., R.3 E., Jefferson County, at gaging station near right bank on downstream side of pier of Mammoth Bridge, 300 ft (91.4 m) upstream from Mammoth Creek, 1.5 mi (2.4 km) downstream from Mineral Fork, 6.5 mi (10.5 km) west of De Soto, and at mile 59.2 (95.3 km).

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE  | DIS-<br>CHARGE<br>(CFS) | DIS-<br>SOLVED<br>SILICA<br>(SiO <sub>2</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>IRON<br>(FE)<br>(UG/L) | DIS-<br>SOLVED<br>MAN-<br>GANESE<br>(MN)<br>(UG/L) | DIS-<br>SOLVED<br>CAL-<br>CIUM<br>(CA)<br>(MG/L) | DIS-<br>SOLVED<br>MAG-<br>NE-<br>SIUM<br>(MG) | DIS-<br>SOLVED<br>SODIUM<br>(NA)<br>(MG/L) | DIS-<br>SOLVED<br>PO-<br>TAS-<br>SIUM<br>(K)<br>(MG/L) | BICAR-<br>BONATE<br>(HCO <sub>3</sub> )<br>(MG/L) | CAR-<br>BONATE<br>(CO <sub>3</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>SULFATE<br>(SO <sub>4</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>CHLO-<br>RIDE<br>(CL)<br>(MG/L) |
|-------|-------------------------|-----------------------------------------------------------|------------------------------------------|----------------------------------------------------|--------------------------------------------------|-----------------------------------------------|--------------------------------------------|--------------------------------------------------------|---------------------------------------------------|------------------------------------------------|-----------------------------------------------------------|---------------------------------------------------|
| OCT.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 03... | 180                     | 8.3                                                       | 70                                       | 40                                                 | 49                                               | 30                                            | 5.2                                        | 1.5                                                    | 288                                               | 0                                              | 17                                                        | 5.2                                               |
| NOV.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 07... | 324                     | 7.9                                                       | 140                                      | 70                                                 | 45                                               | 25                                            | 4.1                                        | 1.9                                                    | 244                                               | 0                                              | 22                                                        | 4.8                                               |
| DEC.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 05... | 3290                    | 7.7                                                       | 370                                      | 0                                                  | 22                                               | 11                                            | 2.3                                        | 2.4                                                    | 108                                               | 0                                              | 13                                                        | 2.2                                               |
| JAN.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 14... | 420                     | 7.9                                                       | 10                                       | 20                                                 | 51                                               | 25                                            | 4.1                                        | 1.3                                                    | 238                                               | 0                                              | 23                                                        | 6.9                                               |
| FEB.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 06... | 550                     | 6.3                                                       | 70                                       | 25                                                 | 43                                               | 23                                            | 5.0                                        | 1.2                                                    | 218                                               | 0                                              | 20                                                        | 4.0                                               |
| MAR.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 06... | 960                     | 6.3                                                       | 80                                       | 30                                                 | 37                                               | 19                                            | 3.8                                        | 1.9                                                    | 180                                               | 0                                              | 23                                                        | 4.8                                               |
| APR.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 03... | 898                     | 5.1                                                       | 60                                       | 20                                                 | 39                                               | 21                                            | 3.7                                        | 1.2                                                    | 200                                               | 0                                              | 19                                                        | 3.0                                               |
| MAY   |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 08... | 640                     | 5.4                                                       | 50                                       | 40                                                 | 41                                               | 23                                            | 3.7                                        | 1.2                                                    | 224                                               | 0                                              | 17                                                        | 2.5                                               |
| JUNE  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 06... | 470                     | 6.4                                                       | 40                                       | 30                                                 | 42                                               | 24                                            | 3.6                                        | 1.4                                                    | 240                                               | 0                                              | 14                                                        | 3.0                                               |
| JULY  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 17... | 150                     | 9.2                                                       | 20                                       | 20                                                 | 50                                               | 30                                            | 4.2                                        | 1.5                                                    | 288                                               | 0                                              | 20                                                        | 4.0                                               |
| AUG.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 08... | 110                     | 8.1                                                       | 0                                        | 30                                                 | 51                                               | --                                            | 4.2                                        | 1.2                                                    | 298                                               | 0                                              | 16                                                        | 4.1                                               |
| SEP.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 11... | 230                     | 7.1                                                       | 20                                       | 20                                                 | 45                                               | 27                                            | 4.4                                        | 1.6                                                    | 260                                               | 0                                              | 19                                                        | 4.4                                               |

| DATE  | NON-<br>CAR-<br>BONATE<br>HARD-<br>NESS<br>(MG/L) | ALKA-<br>LINITAS<br>CACO <sub>3</sub><br>(MG/L) | SPE-<br>CIFIC<br>CON-<br>DUCT-<br>ANCE<br>(MICRO-<br>MHOS) | PH<br>(UNITS) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | CHEM-<br>ICAL<br>OXYGEN<br>DEMAND<br>(LOW<br>LEVEL)<br>(MG/L) | DIS-<br>SOLVED<br>OXYGEN<br>(MG/L) | PER-<br>CENT<br>SATUR-<br>ATION | FECAL<br>COLI-<br>FORM<br>(COL.<br>PER<br>100 ML) | STREP-<br>TOCOCCI<br>(COL-<br>ONIES<br>PER<br>100 ML) |
|-------|---------------------------------------------------|-------------------------------------------------|------------------------------------------------------------|---------------|----------------------------------------------|-----------------------------|---------------------------------------------------------------|------------------------------------|---------------------------------|---------------------------------------------------|-------------------------------------------------------|
| OCT.  |                                                   |                                                 |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 03... | 14                                                | 236                                             | 475                                                        | 7.8           | 3                                            | 20.0                        | 4                                                             | 7.6                                | 83                              | 56                                                | 350                                                   |
| NOV.  |                                                   |                                                 |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 07... | 15                                                | 200                                             | 430                                                        | 8.1           | 5                                            | 9.0                         | 6                                                             | 11.1                               | 96                              | 66                                                | 84                                                    |
| DEC.  |                                                   |                                                 |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 05... | 12                                                | 89                                              | 205                                                        | 7.8           | 60                                           | 10.0                        | 51                                                            | 9.6                                | 85                              | 4900                                              | 12000                                                 |
| JAN.  |                                                   |                                                 |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 14... | 35                                                | 195                                             | 445                                                        | 8.2           | 5                                            | 1.0                         | 5                                                             | 11.8                               | 83                              | 12                                                | 160                                                   |
| FEB.  |                                                   |                                                 |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 06... | 23                                                | 179                                             | 390                                                        | 8.1           | 8                                            | 6.5                         | 4                                                             | 9.4                                | 76                              | 6                                                 | 16                                                    |
| MAR.  |                                                   |                                                 |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 06... | 23                                                | 148                                             | 330                                                        | 8.0           | 40                                           | 13.0                        | 15                                                            | 8.5                                | 80                              | 5500                                              | 3500                                                  |
| APR.  |                                                   |                                                 |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 03... | 20                                                | 164                                             | 348                                                        | 8.0           | 3                                            | 15.0                        | 6                                                             | 9.0                                | 89                              | 180                                               | 200                                                   |
| MAY   |                                                   |                                                 |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 08... | 13                                                | 184                                             | 375                                                        | 8.2           | 4                                            | 17.0                        | 9                                                             | 9.0                                | 93                              | 32                                                | 32                                                    |
| JUNE  |                                                   |                                                 |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 06... | 7                                                 | 197                                             | 395                                                        | 8.1           | 3                                            | 20.0                        | 8                                                             | 8.1                                | 88                              | --                                                | 200                                                   |
| JULY  |                                                   |                                                 |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 17... | 12                                                | 236                                             | 480                                                        | 8.1           | 2                                            | 23.5                        | 4                                                             | 6.3                                | 73                              | 34                                                | 44                                                    |
| AUG.  |                                                   |                                                 |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 08... | --                                                | 244                                             | 490                                                        | 8.1           | 2                                            | 21.0                        | 3                                                             | 6.8                                | 76                              | 82                                                | 88                                                    |
| SEP.  |                                                   |                                                 |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 11... | 7                                                 | 213                                             | 435                                                        | 8.2           | 2                                            | 21.0                        | 1                                                             | 6.8                                | 76                              | 100                                               | 300                                                   |

07018000 BIG RIVER NEAR DE SOTO, MO.--Continued

DRAINAGE AREA.--718 mi<sup>2</sup> (1,860 km<sup>2</sup>), including Mammoth Creek.

PERIOD OF RECORD.--Chemical analyses: August 1963 to September 1974.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE          | DIS-<br>SOLVED<br>FLUO-<br>RIDE<br>(F)<br>(MG/L) | TOTAL<br>NITRATE<br>(N)<br>(MG/L) | AMMONIA<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | ORGANIC<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | DIS-<br>SOL-<br>VED-<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | TOTAL<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(RESI-<br>DUE AT<br>180 C)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(TONS<br>PER<br>AC-FT) | DIS-<br>SOLVED<br>SOLIDS<br>(TONS<br>PER<br>DAY) | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | PERCENT<br>SODIUM | HARD-<br>NESS<br>(CA,MG)<br>(MG/L) |
|---------------|--------------------------------------------------|-----------------------------------|-------------------------------------------|-------------------------------------------|----------------------------------------------------------|-------------------------------------------|------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------|-----------------------------------------|-------------------|------------------------------------|
| OCT.<br>03... | .1                                               | .00                               | .11                                       | .25                                       | .03                                                      | .05                                       | 262                                                              | .36                                                | 127                                              | .1                                      | 4                 | 250                                |
| NOV.<br>07... | .1                                               | .37                               | .02                                       | .32                                       | .07                                                      | .05                                       | 227                                                              | .31                                                | 199                                              | .1                                      | 4                 | 220                                |
| DEC.<br>05... | .1                                               | .31                               | .06                                       | .80                                       | .05                                                      | .12                                       | 123                                                              | .17                                                | 1090                                             | .1                                      | 5                 | 100                                |
| JAN.<br>14... | .1                                               | .53                               | .09                                       | .24                                       | .03                                                      | .05                                       | 222                                                              | .30                                                | 252                                              | .1                                      | 4                 | 230                                |
| FEB.<br>06... | .3                                               | .42                               | .05                                       | .13                                       | .01                                                      | .02                                       | 210                                                              | .29                                                | 312                                              | .2                                      | 5                 | 200                                |
| MAR.<br>06... | .2                                               | .48                               | .10                                       | .29                                       | .00                                                      | .08                                       | 188                                                              | .26                                                | 487                                              | .1                                      | 5                 | 170                                |
| APR.<br>03... | .1                                               | .17                               | .15                                       | .14                                       | .03                                                      | .03                                       | 197                                                              | .27                                                | 478                                              | .1                                      | 4                 | 180                                |
| MAY<br>08...  | .2                                               | .07                               | .04                                       | .24                                       | .02                                                      | .02                                       | 208                                                              | .28                                                | 359                                              | .1                                      | 4                 | 200                                |
| JUNE<br>06... | .0                                               | .32                               | .04                                       | .66                                       | --                                                       | 3.0                                       | 214                                                              | .29                                                | 272                                              | .1                                      | 4                 | 200                                |
| JULY<br>17... | .1                                               | .00                               | .00                                       | .30                                       | .01                                                      | .01                                       | 248                                                              | .34                                                | 100                                              | .1                                      | 4                 | 250                                |
| AUG.<br>08... | .9                                               | .08                               | .02                                       | .24                                       | .01                                                      | .02                                       | 253                                                              | .34                                                | 75.1                                             | --                                      | 0                 | --                                 |
| SEP.<br>11... | .1                                               | .13                               | .13                                       | .00                                       | .02                                                      | .02                                       | 233                                                              | .32                                                | 145                                              | .1                                      | 4                 | 220                                |

07019280 MERAMEC RIVER AT PAULINA HILLS, MO.

LOCATION.--Lat 38°27'46", long 90°24'53", Jefferson County, at bridge on State Highway 21 at Paulina Hills, 0.3 mi (0.5 km) downstream from Saline Creek, and 10 mi (16 km) upstream from mouth.

DRAINAGE AREA.--3,950 mi<sup>2</sup> (10,230 km<sup>2</sup>), approximately.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE  | DIS-<br>CHARGE<br>(CFS) | DIS-<br>SOLVED<br>SILICA<br>(SiO <sub>2</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>IRON<br>(FE)<br>(UG/L) | DIS-<br>SOLVED<br>MAN-<br>GANESE<br>(MN)<br>(UG/L) | DIS-<br>SOLVED<br>CAL-<br>CIUM<br>(CA)<br>(MG/L) | DIS-<br>SOLVED<br>MAG-<br>NE-<br>SIUM<br>(MG)<br>(MG/L) | DIS-<br>SOLVED<br>SODIUM<br>(NA)<br>(MG/L) | DIS-<br>SOLVED<br>PO-<br>TAS-<br>SIUM<br>(K)<br>(MG/L) | BICAR-<br>BONATE<br>(HCO <sub>3</sub> )<br>(MG/L) | CAR-<br>BONATE<br>(CO <sub>3</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>SULFATE<br>(SO <sub>4</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>CHLO-<br>RIDE<br>(CL)<br>(MG/L) |
|-------|-------------------------|-----------------------------------------------------------|------------------------------------------|----------------------------------------------------|--------------------------------------------------|---------------------------------------------------------|--------------------------------------------|--------------------------------------------------------|---------------------------------------------------|------------------------------------------------|-----------------------------------------------------------|---------------------------------------------------|
| OCT.  |                         |                                                           |                                          |                                                    |                                                  |                                                         |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 03... | 825                     | 7.3                                                       | 80                                       | 8                                                  | 38                                               | 20                                                      | 10                                         | 2.1                                                    | 208                                               | 0                                              | 17                                                        | 12                                                |
| NOV.  |                         |                                                           |                                          |                                                    |                                                  |                                                         |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 07... | 1850                    | 8.3                                                       | 180                                      | 70                                                 | 34                                               | 16                                                      | 7.4                                        | 2.9                                                    | 168                                               | 0                                              | 19                                                        | 9.6                                               |
| DEC.  |                         |                                                           |                                          |                                                    |                                                  |                                                         |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 05... | 9570                    | 9.5                                                       | 230                                      | 30                                                 | 32                                               | 14                                                      | 5.4                                        | 2.5                                                    | 148                                               | 0                                              | 20                                                        | 5.2                                               |
| JAN.  |                         |                                                           |                                          |                                                    |                                                  |                                                         |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 09... | 2370                    | 9.9                                                       | 60                                       | 80                                                 | 37                                               | 18                                                      | 8.9                                        | 1.5                                                    | 176                                               | 0                                              | 21                                                        | 12                                                |
| FEB.  |                         |                                                           |                                          |                                                    |                                                  |                                                         |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 06... | 3540                    | 8.8                                                       | 70                                       | 38                                                 | 32                                               | 16                                                      | 5.8                                        | 1.6                                                    | 146                                               | 0                                              | 18                                                        | 8.0                                               |
| MAR.  |                         |                                                           |                                          |                                                    |                                                  |                                                         |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 06... | 3950                    | 8.6                                                       | 30                                       | 50                                                 | 38                                               | 16                                                      | 7.2                                        | 1.8                                                    | 168                                               | 0                                              | 21                                                        | 8.8                                               |
| APR.  |                         |                                                           |                                          |                                                    |                                                  |                                                         |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 03... | 4850                    | 7.9                                                       | 30                                       | 40                                                 | 35                                               | 15                                                      | 7.0                                        | 1.6                                                    | 160                                               | 0                                              | 24                                                        | 7.7                                               |
| MAY   |                         |                                                           |                                          |                                                    |                                                  |                                                         |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 07... | 4140                    | 6.7                                                       | 60                                       | 20                                                 | 32                                               | 16                                                      | 4.8                                        | 1.4                                                    | 160                                               | 0                                              | 17                                                        | 4.2                                               |
| JUNE  |                         |                                                           |                                          |                                                    |                                                  |                                                         |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 06... | 2530                    | 7.3                                                       | 30                                       | 0                                                  | 30                                               | 15                                                      | 5.4                                        | 2.2                                                    | 152                                               | 0                                              | 16                                                        | 5.5                                               |
| JULY  |                         |                                                           |                                          |                                                    |                                                  |                                                         |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 16... | 867                     | 8.8                                                       | 20                                       | 360                                                | 42                                               | 20                                                      | 10                                         | 1.8                                                    | 218                                               | 0                                              | 22                                                        | 13                                                |
| AUG.  |                         |                                                           |                                          |                                                    |                                                  |                                                         |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 07... | 258                     | 9.2                                                       | 10                                       | 60                                                 | 44                                               | 22                                                      | 10                                         | 2.1                                                    | 220                                               | 0                                              | 16                                                        | 14                                                |
| SEP.  |                         |                                                           |                                          |                                                    |                                                  |                                                         |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 10... | 1200                    | 9.0                                                       | 70                                       | 20                                                 | 38                                               | 19                                                      | 6.4                                        | 2.0                                                    | 206                                               | 0                                              | 17                                                        | 8.1                                               |

| DATE  | NON-<br>CAR-<br>BONATE<br>HARD-<br>NESS<br>(MG/L) | ALKA-<br>LINITY<br>AS<br>CaCO <sub>3</sub><br>(MG/L) | SPE-<br>CIFIC<br>CON-<br>DUCT-<br>ANCE<br>(MICRO-<br>MHQS) | PH<br>(UNITS) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | CHEM-<br>ICAL<br>OXYGEN<br>DEMAND<br>(LOW<br>LEVEL)<br>(MG/L) | DIS-<br>SOLVED<br>OXYGEN<br>(MG/L) | PER-<br>CENT<br>SATUR-<br>ATION | FECAL<br>COLI-<br>FORM<br>(COL.<br>PER<br>100 ML) | STREP-<br>TOCOCCI<br>(COL-<br>ONIES<br>PER<br>100 ML) |
|-------|---------------------------------------------------|------------------------------------------------------|------------------------------------------------------------|---------------|----------------------------------------------|-----------------------------|---------------------------------------------------------------|------------------------------------|---------------------------------|---------------------------------------------------|-------------------------------------------------------|
| OCT.  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 03... | 9                                                 | 171                                                  | 382                                                        | 7.9           | 4                                            | 22.5                        | 9                                                             | 7.0                                | 80                              | 240                                               | 1200                                                  |
| NOV.  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 07... | 13                                                | 138                                                  | 334                                                        | 7.7           | 10                                           | 9.5                         | 12                                                            | 9.8                                | 85                              | 120                                               | 70                                                    |
| DEC.  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 05... | 16                                                | 121                                                  | 292                                                        | 7.8           | 30                                           | 10.0                        | 18                                                            | 8.2                                | 73                              | 2100                                              | 12000                                                 |
| JAN.  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 09... | 22                                                | 144                                                  | 384                                                        | 7.5           | 10                                           | .0                          | 5                                                             | 12.6                               | 86                              | 54                                                | 46                                                    |
| FEB.  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 06... | 26                                                | 120                                                  | 307                                                        | 8.0           | 10                                           | 6.0                         | 6                                                             | 10.8                               | 87                              | 70                                                | 40                                                    |
| MAR.  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 06... | 23                                                | 138                                                  | 335                                                        | 7.8           | 5                                            | 13.5                        | 7                                                             | 8.5                                | 81                              | 500                                               | 25                                                    |
| APR.  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 03... | 18                                                | 131                                                  | 318                                                        | 7.7           | 20                                           | 15.0                        | 9                                                             | 8.9                                | 88                              | 270                                               | 185                                                   |
| MAY   |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 07... | 15                                                | 131                                                  | 292                                                        | 7.9           | 7                                            | 18.0                        | 8                                                             | 9.2                                | 96                              | 45                                                | 30                                                    |
| JUNE  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 06... | 12                                                | 125                                                  | 280                                                        | 7.8           | 30                                           | 22.0                        | 12                                                            | 7.2                                | 82                              | --                                                | 310                                                   |
| JULY  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 16... | 8                                                 | 179                                                  | 410                                                        | 7.8           | 3                                            | 29.0                        | 8                                                             | 5.5                                | 71                              | 15                                                | 10                                                    |
| AUG.  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 07... | 20                                                | 180                                                  | 420                                                        | 8.1           | 4                                            | 25.0                        | 10                                                            | 8.0                                | 96                              | 40                                                | 56                                                    |
| SEP.  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 10... | 1                                                 | 169                                                  | 378                                                        | 8.1           | 4                                            | 21.0                        | 11                                                            | 7.5                                | 83                              | 130                                               | 56                                                    |

07019280 MERAMEC RIVER AT PAULINA HILLS, MO.--Continued

PERIOD OF RECORD.--Chemical analyses: August 1963 to September 1974.

REMARKS.--Records of discharge are given for gaging station near Eureka, Mo.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE  | DIS-<br>SOLVED<br>FLUO-<br>RIDE<br>(F)<br>(MG/L) | TOTAL<br>NITRATE<br>(N)<br>(MG/L) | AMMONIA<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | ORGANIC<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | DIS-<br>SOL-<br>VED-<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | TOTAL<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(RESI-<br>DUE AT<br>180 C)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(TONS<br>PER<br>AC-F <sup>2</sup> ) | DIS-<br>SOLVED<br>SOLIDS<br>(TONS<br>PER<br>DAY) | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | PERCENT<br>SODIUM | HARD-<br>NESS<br>(CA,MG)<br>(MG/L) |
|-------|--------------------------------------------------|-----------------------------------|-------------------------------------------|-------------------------------------------|----------------------------------------------------------|-------------------------------------------|------------------------------------------------------------------|-----------------------------------------------------------------|--------------------------------------------------|-----------------------------------------|-------------------|------------------------------------|
| OCT.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                                 |                                                  |                                         |                   |                                    |
| 03... | .1                                               | .11                               | .08                                       | .39                                       | .07                                                      | .10                                       | 218                                                              | .30                                                             | 486                                              | .3                                      | 11                | 180                                |
| NOV.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                                 |                                                  |                                         |                   |                                    |
| 07... | .1                                               | .44                               | .06                                       | .33                                       | .09                                                      | .16                                       | 182                                                              | .25                                                             | 909                                              | .3                                      | 9                 | 150                                |
| DEC.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                                 |                                                  |                                         |                   |                                    |
| 05... | .1                                               | .54                               | .07                                       | .61                                       | .10                                                      | .18                                       | 171                                                              | .23                                                             | 4420                                             | .2                                      | 8                 | 140                                |
| JAN.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                                 |                                                  |                                         |                   |                                    |
| 09... | .1                                               | .66                               | .10                                       | .23                                       | .04                                                      | .06                                       | 205                                                              | .28                                                             | 1310                                             | .3                                      | 10                | 170                                |
| FEB.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                                 |                                                  |                                         |                   |                                    |
| 06... | .3                                               | .57                               | .12                                       | .17                                       | .02                                                      | .06                                       | 167                                                              | .23                                                             | 1600                                             | .2                                      | 8                 | 150                                |
| MAR.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                                 |                                                  |                                         |                   |                                    |
| 06... | .1                                               | .56                               | .10                                       | .12                                       | .04                                                      | .05                                       | 195                                                              | .27                                                             | 2080                                             | .2                                      | 9                 | 160                                |
| APR.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                                 |                                                  |                                         |                   |                                    |
| 03... | .2                                               | .04                               | .09                                       | .23                                       | .03                                                      | .06                                       | 180                                                              | .24                                                             | 2360                                             | .3                                      | 9                 | 150                                |
| MAY   |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                                 |                                                  |                                         |                   |                                    |
| 07... | .1                                               | .12                               | .02                                       | .31                                       | .03                                                      | .06                                       | 172                                                              | .23                                                             | 1920                                             | .2                                      | 7                 | 150                                |
| JUNE  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                                 |                                                  |                                         |                   |                                    |
| 06... | .1                                               | .23                               | .11                                       | .89                                       | --                                                       | .02                                       | 152                                                              | .21                                                             | 1040                                             | .2                                      | 8                 | 140                                |
| JULY  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                                 |                                                  |                                         |                   |                                    |
| 16... | .1                                               | .00                               | .07                                       | .52                                       | .03                                                      | .07                                       | 210                                                              | .29                                                             | 492                                              | .3                                      | 10                | 190                                |
| AUG.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                                 |                                                  |                                         |                   |                                    |
| 07... | .1                                               | .12                               | .11                                       | .69                                       | .08                                                      | .13                                       | 221                                                              | .30                                                             | 154                                              | .3                                      | 10                | 200                                |
| SEP.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                                 |                                                  |                                         |                   |                                    |
| 10... | .1                                               | .29                               | .17                                       | .39                                       | .06                                                      | .12                                       | 205                                                              | .28                                                             | 664                                              | .2                                      | 7                 | 170                                |



07020850 MISSISSIPPI RIVER AT CAPE GIRARDEAU, MO.

LOCATION.--Lat 37°19'49", long 89°29'39", Cape Girardeau County, multi-parameter digital recorder at raw-water intake of Missouri Utilities Company water treatment plant at river mile 54.3 (87.4 km).

PERIOD OF RECORD.--Chemical analyses: June 1969 to July 1974. (Discontinued)

Water Temperature: June 1969 to July 1974. (Discontinued)

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C) , WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

|       | OCTOBER |     | NOVEMBER |     | DECEMBER |     | JANUARY |     | FEBRUARY |     | MARCH |     |
|-------|---------|-----|----------|-----|----------|-----|---------|-----|----------|-----|-------|-----|
| DAY   | MAX     | MIN | MAX      | MIN | MAX      | MIN | MAX     | MIN | MAX      | MIN | MAX   | MIN |
| 1     | ---     | --- | ---      | --- | 429      | 415 | ---     | --- | 413      | 402 | ---   | --- |
| 2     | ---     | --- | 495      | 489 | 437      | 429 | ---     | --- | 427      | 402 | ---   | --- |
| 3     | ---     | --- | 495      | 489 | 445      | 437 | ---     | --- | 425      | 409 | ---   | --- |
| 4     | ---     | --- | 496      | 494 | 458      | 446 | ---     | --- | 438      | 425 | ---   | --- |
| 5     | ---     | --- | 498      | 496 | 473      | 459 | ---     | --- | 457      | 440 | ---   | --- |
| 6     | ---     | --- | 502      | 498 | 482      | 467 | ---     | --- | 474      | 458 | ---   | --- |
| 7     | ---     | --- | 509      | 501 | 487      | 444 | ---     | --- | 487      | 474 | ---   | --- |
| 8     | ---     | --- | 522      | 509 | 442      | 417 | ---     | --- | 490      | 486 | ---   | --- |
| 9     | ---     | --- | 533      | 523 | 427      | 410 | ---     | --- | 503      | 490 | ---   | --- |
| 10    | ---     | --- | 533      | 528 | 412      | 394 | ---     | --- | 523      | 504 | ---   | --- |
| 11    | ---     | --- | 533      | 531 | 412      | 400 | ---     | --- | 535      | 524 | ---   | --- |
| 12    | ---     | --- | 534      | 531 | 428      | 413 | ---     | --- | ---      | --- | ---   | --- |
| 13    | ---     | --- | 531      | 529 | 461      | 429 | ---     | --- | ---      | --- | ---   | --- |
| 14    | ---     | --- | 536      | 529 | 491      | 463 | ---     | --- | ---      | --- | ---   | --- |
| 15    | ---     | --- | 547      | 536 | 521      | 492 | ---     | --- | ---      | --- | ---   | --- |
| 16    | ---     | --- | 549      | 547 | 546      | 522 | ---     | --- | ---      | --- | ---   | --- |
| 17    | ---     | --- | 548      | 529 | 557      | 547 | 611     | 601 | ---      | --- | ---   | --- |
| 18    | ---     | --- | 540      | 527 | 563      | 557 | 625     | 601 | ---      | --- | ---   | --- |
| 19    | ---     | --- | 534      | 523 | 569      | 563 | 633     | 618 | ---      | --- | 441   | 434 |
| 20    | ---     | --- | 530      | 523 | 587      | 570 | 617     | 558 | ---      | --- | 450   | 441 |
| 21    | ---     | --- | 535      | 522 | 617      | 589 | 556     | 501 | ---      | --- | 455   | 448 |
| 22    | ---     | --- | 554      | 535 | 620      | 600 | 499     | 446 | ---      | --- | 461   | 456 |
| 23    | ---     | --- | 551      | 531 | 613      | 600 | 445     | 415 | ---      | --- | 470   | 461 |
| 24    | ---     | --- | 544      | 425 | ---      | --- | 416     | 413 | ---      | --- | 483   | 471 |
| 25    | ---     | --- | 485      | 436 | ---      | --- | 419     | 412 | ---      | --- | 490   | 483 |
| 26    | ---     | --- | 489      | 447 | ---      | --- | 421     | 409 | ---      | --- | 520   | 490 |
| 27    | ---     | --- | 447      | 433 | ---      | --- | 429     | 422 | ---      | --- | 528   | 520 |
| 28    | ---     | --- | 433      | 415 | ---      | --- | 437     | 429 | ---      | --- | 532   | 528 |
| 29    | ---     | --- | 419      | 414 | ---      | --- | 445     | 436 | ---      | --- | 535   | 532 |
| 30    | ---     | --- | 416      | 414 | ---      | --- | 443     | 429 | ---      | --- | 541   | 534 |
| 31    | ---     | --- | ---      | --- | ---      | --- | 428     | 410 | ---      | --- | 547   | 542 |
| MONTH | ---     | --- | 554      | 414 | ---      | --- | ---     | --- | ---      | --- | ---   | --- |

|       | APRIL |     | MAY |     | JUNE |     | JULY |     | AUGUST |     | SEPTEMBER |     |
|-------|-------|-----|-----|-----|------|-----|------|-----|--------|-----|-----------|-----|
| DAY   | MAX   | MIN | MAX | MIN | MAX  | MIN | MAX  | MIN | MAX    | MIN | MAX       | MIN |
| 1     | 554   | 546 | 472 | 465 | 418  | 414 | 405  | 392 | ---    | --- | ---       | --- |
| 2     | 556   | 552 | 482 | 478 | 424  | 411 | 393  | 391 | ---    | --- | ---       | --- |
| 3     | 571   | 543 | 502 | 483 | 420  | 383 | 394  | 391 | ---    | --- | ---       | --- |
| 4     | 553   | 541 | 504 | 502 | 382  | 365 | 402  | 394 | ---    | --- | ---       | --- |
| 5     | 563   | 553 | 499 | 492 | 372  | 366 | 416  | 402 | ---    | --- | ---       | --- |
| 6     | 563   | 560 | 486 | 483 | 386  | 371 | 433  | 417 | ---    | --- | ---       | --- |
| 7     | 562   | 560 | 479 | 463 | 398  | 386 | 445  | 433 | ---    | --- | ---       | --- |
| 8     | 562   | 560 | 451 | 445 | 406  | 396 | 450  | 446 | ---    | --- | ---       | --- |
| 9     | 560   | 556 | 455 | 445 | 419  | 407 | 472  | 449 | ---    | --- | ---       | --- |
| 10    | 558   | 555 | 476 | 455 | 418  | 398 | 478  | 466 | ---    | --- | ---       | --- |
| 11    | 564   | 557 | 493 | 476 | 413  | 388 | 465  | 458 | ---    | --- | ---       | --- |
| 12    | 571   | 563 | 501 | 493 | 439  | 403 | 477  | 462 | ---    | --- | ---       | --- |
| 13    | 563   | 552 | 505 | 501 | 405  | 402 | 490  | 478 | ---    | --- | ---       | --- |
| 14    | 554   | 539 | 510 | 505 | 406  | 404 | 507  | 490 | ---    | --- | ---       | --- |
| 15    | 533   | 514 | 506 | 450 | 409  | 399 | 523  | 508 | ---    | --- | ---       | --- |
| 16    | 516   | 513 | 505 | 473 | 398  | 387 | 596  | 523 | ---    | --- | ---       | --- |
| 17    | 523   | 518 | 524 | 507 | 392  | 388 | 555  | 542 | ---    | --- | ---       | --- |
| 18    | 517   | 509 | 522 | 453 | 400  | 392 | 556  | 554 | ---    | --- | ---       | --- |
| 19    | 521   | 508 | 456 | 453 | 410  | 400 | 559  | 555 | ---    | --- | ---       | --- |
| 20    | 514   | 506 | 455 | 449 | 424  | 410 | 567  | 559 | ---    | --- | ---       | --- |
| 21    | 505   | 496 | 452 | 439 | 438  | 425 | 579  | 567 | ---    | --- | ---       | --- |
| 22    | 496   | 481 | 438 | 380 | 449  | 439 | 594  | 580 | ---    | --- | ---       | --- |
| 23    | 489   | 483 | 378 | 341 | 465  | 449 | 603  | 594 | ---    | --- | ---       | --- |
| 24    | 494   | 490 | 340 | 315 | 474  | 466 | 601  | 593 | ---    | --- | ---       | --- |
| 25    | 497   | 488 | 321 | 312 | 481  | 478 | 596  | 588 | ---    | --- | ---       | --- |
| 26    | 510   | 489 | 330 | 319 | 482  | 479 | 619  | 596 | ---    | --- | ---       | --- |
| 27    | 526   | 511 | 337 | 331 | 479  | 469 | 621  | 615 | ---    | --- | ---       | --- |
| 28    | 520   | 495 | 351 | 337 | 469  | 456 | 615  | 612 | ---    | --- | ---       | --- |
| 29    | 493   | 471 | 377 | 352 | 459  | 428 | 611  | 605 | ---    | --- | ---       | --- |
| 30    | 471   | 464 | 408 | 378 | 427  | 406 | 603  | 600 | ---    | --- | ---       | --- |
| 31    | ---   | --- | 422 | 408 | ---  | --- | ---  | --- | ---    | --- | ---       | --- |
| MONTH | 571   | 464 | 524 | 312 | 482  | 365 | 621  | 391 | ---    | --- | ---       | --- |

07020850 MISSISSIPPI RIVER AT CAPE GIRARDEAU, MO.--Continued

REMARKS.--Records of discharge are given for gaging station near Thebes, Ill. Recorder inoperative on many days during the year.

PH (UNITS) , WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

|       | OCTOBER |     | NOVEMBER |     | DECEMBER |     | JANUARY |     | FEBRUARY |     | MARCH |     |
|-------|---------|-----|----------|-----|----------|-----|---------|-----|----------|-----|-------|-----|
| DAY   | MAX     | MIN | MAX      | MIN | MAX      | MIN | MAX     | MIN | MAX      | MIN | MAX   | MIN |
| 1     | ---     | --- | ---      | --- | ---      | --- | ---     | --- | ---      | --- | ---   | --- |
| 2     | ---     | --- | 8.0      | 8.0 | ---      | --- | ---     | --- | ---      | --- | ---   | --- |
| 3     | ---     | --- | 8.1      | 8.0 | ---      | --- | ---     | --- | ---      | --- | ---   | --- |
| 4     | ---     | --- | 8.1      | 8.0 | ---      | --- | ---     | --- | ---      | --- | ---   | --- |
| 5     | ---     | --- | 8.1      | 8.1 | ---      | --- | ---     | --- | ---      | --- | ---   | --- |
| 6     | ---     | --- | 8.2      | 8.1 | ---      | --- | ---     | --- | ---      | --- | ---   | --- |
| 7     | ---     | --- | 8.1      | 8.0 | ---      | --- | ---     | --- | ---      | --- | ---   | --- |
| 8     | ---     | --- | 8.1      | 8.1 | ---      | --- | ---     | --- | ---      | --- | ---   | --- |
| 9     | ---     | --- | 8.1      | 8.1 | ---      | --- | ---     | --- | ---      | --- | ---   | --- |
| 10    | ---     | --- | 8.2      | 8.1 | ---      | --- | ---     | --- | ---      | --- | ---   | --- |
| 11    | ---     | --- | 8.2      | 8.1 | 8.1      | 8.0 | ---     | --- | ---      | --- | ---   | --- |
| 12    | ---     | --- | 8.2      | 8.1 | 8.1      | 8.0 | ---     | --- | ---      | --- | ---   | --- |
| 13    | ---     | --- | 8.2      | 8.1 | 8.1      | 8.0 | ---     | --- | ---      | --- | ---   | --- |
| 14    | ---     | --- | 8.2      | 8.1 | 8.1      | 8.1 | ---     | --- | ---      | --- | ---   | --- |
| 15    | ---     | --- | ---      | --- | 8.2      | 8.1 | ---     | --- | ---      | --- | ---   | --- |
| 16    | ---     | --- | ---      | --- | 8.2      | 8.1 | ---     | --- | ---      | --- | ---   | --- |
| 17    | ---     | --- | ---      | --- | 8.2      | 8.2 | ---     | --- | ---      | --- | ---   | --- |
| 18    | ---     | --- | ---      | --- | 8.2      | 8.2 | ---     | --- | ---      | --- | ---   | --- |
| 19    | ---     | --- | ---      | --- | 8.3      | 8.2 | ---     | --- | ---      | --- | 7.9   | 7.8 |
| 20    | ---     | --- | ---      | --- | 8.3      | 8.2 | ---     | --- | ---      | --- | 8.0   | 7.8 |
| 21    | ---     | --- | ---      | --- | 8.4      | 8.3 | ---     | --- | ---      | --- | 8.1   | 8.0 |
| 22    | ---     | --- | ---      | --- | 8.3      | 8.2 | ---     | --- | ---      | --- | 8.0   | 7.9 |
| 23    | ---     | --- | ---      | --- | 8.3      | 8.2 | ---     | --- | ---      | --- | 8.0   | 7.9 |
| 24    | ---     | --- | ---      | --- | ---      | --- | ---     | --- | ---      | --- | 8.0   | 7.9 |
| 25    | ---     | --- | ---      | --- | ---      | --- | ---     | --- | ---      | --- | 7.9   | 7.9 |
| 26    | ---     | --- | ---      | --- | ---      | --- | ---     | --- | ---      | --- | 8.0   | 7.9 |
| 27    | ---     | --- | ---      | --- | ---      | --- | ---     | --- | ---      | --- | 8.0   | 7.9 |
| 28    | ---     | --- | ---      | --- | ---      | --- | ---     | --- | ---      | --- | 7.9   | 7.7 |
| 29    | ---     | --- | ---      | --- | ---      | --- | ---     | --- | ---      | --- | 8.1   | 7.7 |
| 30    | ---     | --- | ---      | --- | ---      | --- | ---     | --- | ---      | --- | 8.1   | 8.1 |
| 31    | ---     | --- | ---      | --- | ---      | --- | ---     | --- | ---      | --- | 8.2   | 8.1 |
| MONTH | ---     | --- | ---      | --- | ---      | --- | ---     | --- | ---      | --- | ---   | --- |

|       | APRIL |     | MAY |     | JUNE |     | JULY |     | AUGUST |     | SEPTEMBER |     |
|-------|-------|-----|-----|-----|------|-----|------|-----|--------|-----|-----------|-----|
| DAY   | MAX   | MIN | MAX | MIN | MAX  | MIN | MAX  | MIN | MAX    | MIN | MAX       | MIN |
| 1     | 8.2   | 8.1 | 8.0 | 7.9 | 7.8  | 7.7 | 7.9  | 7.8 | ---    | --- | ---       | --- |
| 2     | 8.2   | 8.1 | 7.9 | 7.9 | 7.8  | 7.7 | 7.9  | 7.8 | ---    | --- | ---       | --- |
| 3     | 8.2   | 8.1 | 8.0 | 7.9 | 7.7  | 7.7 | 7.9  | 7.8 | ---    | --- | ---       | --- |
| 4     | 8.2   | 8.1 | 8.0 | 7.9 | 7.7  | 7.6 | 8.0  | 7.9 | ---    | --- | ---       | --- |
| 5     | 8.2   | 8.1 | 8.0 | 7.9 | 7.7  | 7.6 | 8.0  | 7.8 | ---    | --- | ---       | --- |
| 6     | 8.2   | 8.1 | 7.9 | 7.9 | 7.7  | 7.6 | 8.0  | 7.8 | ---    | --- | ---       | --- |
| 7     | 8.2   | 8.1 | 7.9 | 7.9 | 7.7  | 7.6 | 8.0  | 7.9 | ---    | --- | ---       | --- |
| 8     | 8.2   | 8.1 | 8.0 | 7.9 | 7.7  | 7.7 | 8.0  | 7.9 | ---    | --- | ---       | --- |
| 9     | 8.2   | 8.1 | 7.9 | 7.9 | 7.8  | 7.7 | 8.0  | 7.9 | ---    | --- | ---       | --- |
| 10    | 8.2   | 8.1 | 8.0 | 7.9 | 7.8  | 7.7 | 8.0  | 7.8 | ---    | --- | ---       | --- |
| 11    | 8.3   | 8.2 | 8.0 | 7.9 | 7.8  | 7.7 | 7.8  | 7.8 | ---    | --- | ---       | --- |
| 12    | 8.3   | 8.2 | 8.0 | 7.9 | 7.8  | 7.7 | 7.9  | 7.8 | ---    | --- | ---       | --- |
| 13    | 8.2   | 8.2 | 8.1 | 8.0 | 7.8  | 7.7 | 8.0  | 7.8 | ---    | --- | ---       | --- |
| 14    | 8.2   | 8.2 | 8.1 | 8.0 | 7.8  | 7.7 | 8.0  | 7.9 | ---    | --- | ---       | --- |
| 15    | 8.2   | 8.1 | 8.1 | 7.9 | 7.7  | 7.7 | 8.1  | 8.0 | ---    | --- | ---       | --- |
| 16    | 8.1   | 8.0 | 8.0 | 7.9 | 7.7  | 7.6 | 8.1  | 7.9 | ---    | --- | ---       | --- |
| 17    | 8.1   | 8.0 | 8.1 | 8.0 | 7.8  | 7.7 | 8.1  | 8.0 | ---    | --- | ---       | --- |
| 18    | 8.1   | 8.0 | 8.0 | 7.8 | 7.9  | 7.7 | 8.2  | 8.0 | ---    | --- | ---       | --- |
| 19    | 8.1   | 8.0 | 7.9 | 7.8 | 7.9  | 7.8 | 8.2  | 8.0 | ---    | --- | ---       | --- |
| 20    | 8.1   | 8.1 | 7.9 | 7.8 | 7.9  | 7.7 | 8.1  | 8.0 | ---    | --- | ---       | --- |
| 21    | 8.1   | 8.0 | 7.9 | 7.8 | 7.9  | 7.8 | 8.2  | 8.0 | ---    | --- | ---       | --- |
| 22    | 8.1   | 8.0 | 7.8 | 7.7 | 7.9  | 7.9 | 8.1  | 8.0 | ---    | --- | ---       | --- |
| 23    | 8.1   | 8.0 | 7.8 | 7.7 | 7.9  | 7.8 | 8.1  | 8.0 | ---    | --- | ---       | --- |
| 24    | 8.1   | 8.0 | 7.7 | 7.7 | 7.9  | 7.8 | 8.1  | 8.0 | ---    | --- | ---       | --- |
| 25    | 8.0   | 7.9 | 7.7 | 7.6 | 8.0  | 7.9 | 8.2  | 8.0 | ---    | --- | ---       | --- |
| 26    | 8.1   | 7.9 | 7.7 | 7.6 | 8.0  | 7.8 | 8.2  | 8.1 | ---    | --- | ---       | --- |
| 27    | 8.1   | 8.1 | 7.7 | 7.6 | 7.9  | 7.9 | 8.2  | 8.0 | ---    | --- | ---       | --- |
| 28    | 8.1   | 8.0 | 7.8 | 7.7 | 7.9  | 7.8 | 8.3  | 8.1 | ---    | --- | ---       | --- |
| 29    | 8.0   | 8.0 | 7.8 | 7.7 | 7.9  | 7.8 | 8.3  | 8.1 | ---    | --- | ---       | --- |
| 30    | 8.0   | 8.0 | 7.8 | 7.7 | 7.9  | 7.8 | 8.2  | 8.0 | ---    | --- | ---       | --- |
| 31    | ---   | --- | 7.8 | 7.7 | ---  | --- | ---  | --- | ---    | --- | ---       | --- |
| MONTH | 8.3   | 7.9 | 8.1 | 7.6 | 8.0  | 7.6 | 8.3  | 7.8 | ---    | --- | ---       | --- |

## LOWER MISSISSIPPI RIVER BASIN

07020850 MISSISSIPPI RIVER AT CAPE GIRARDEAU, MO.--Continued

DISSOLVED OXYGEN (DO), IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

|       | OCTOBER |     | NOVEMBER |     | DECEMBER |      | JANUARY |     | FEBRUARY |     | MARCH |     |
|-------|---------|-----|----------|-----|----------|------|---------|-----|----------|-----|-------|-----|
| DAY   | MAX     | MIN | MAX      | MIN | MAX      | MIN  | MAX     | MIN | MAX      | MIN | MAX   | MIN |
| 1     | ---     | --- | 6.9      | 6.2 | ---      | ---  | ---     | --- | ---      | --- | ---   | --- |
| 2     | ---     | --- | 6.6      | 6.0 | ---      | ---  | ---     | --- | ---      | --- | ---   | --- |
| 3     | ---     | --- | 6.5      | 5.8 | ---      | ---  | ---     | --- | ---      | --- | ---   | --- |
| 4     | ---     | --- | 6.8      | 5.7 | ---      | ---  | ---     | --- | ---      | --- | ---   | --- |
| 5     | ---     | --- | 6.8      | 6.5 | ---      | ---  | ---     | --- | ---      | --- | ---   | --- |
| 6     | ---     | --- | 7.7      | 6.6 | ---      | ---  | ---     | --- | ---      | --- | ---   | --- |
| 7     | ---     | --- | 8.1      | 7.2 | ---      | ---  | ---     | --- | ---      | --- | ---   | --- |
| 8     | ---     | --- | 8.5      | 7.5 | ---      | ---  | ---     | --- | ---      | --- | ---   | --- |
| 9     | ---     | --- | 9.6      | 8.4 | ---      | ---  | ---     | --- | ---      | --- | ---   | --- |
| 10    | ---     | --- | 9.8      | 9.4 | ---      | ---  | ---     | --- | ---      | --- | ---   | --- |
| 11    | ---     | --- | 9.8      | 9.2 | 11.2     | 10.5 | ---     | --- | ---      | --- | ---   | --- |
| 12    | ---     | --- | 9.5      | 7.9 | 11.5     | 11.2 | ---     | --- | ---      | --- | ---   | --- |
| 13    | ---     | --- | 8.2      | 7.7 | 11.5     | 11.4 | ---     | --- | ---      | --- | ---   | --- |
| 14    | ---     | --- | 8.0      | 7.3 | 11.7     | 11.5 | ---     | --- | ---      | --- | ---   | --- |
| 15    | ---     | --- | 7.6      | 7.0 | 11.6     | 11.5 | ---     | --- | ---      | --- | ---   | --- |
| 16    | ---     | --- | ---      | --- | 11.9     | 11.5 | ---     | --- | ---      | --- | ---   | --- |
| 17    | ---     | --- | ---      | --- | 11.7     | 11.4 | 9.8     | 9.1 | ---      | --- | ---   | --- |
| 18    | ---     | --- | ---      | --- | 11.5     | 11.3 | 9.3     | 8.8 | ---      | --- | ---   | --- |
| 19    | ---     | --- | ---      | --- | 11.9     | 11.2 | 8.9     | 8.6 | ---      | --- | 9.1   | 8.8 |
| 20    | ---     | --- | ---      | --- | 12.4     | 11.8 | ---     | --- | ---      | --- | 8.9   | 8.7 |
| 21    | ---     | --- | ---      | --- | 13.1     | 12.2 | ---     | --- | ---      | --- | 9.1   | 8.6 |
| 22    | ---     | --- | ---      | --- | 13.1     | 12.6 | ---     | --- | ---      | --- | 9.1   | 8.7 |
| 23    | ---     | --- | ---      | --- | 12.8     | 12.3 | ---     | --- | ---      | --- | 8.9   | 8.6 |
| 24    | ---     | --- | ---      | --- | 12.5     | 12.3 | ---     | --- | ---      | --- | 9.0   | 8.5 |
| 25    | ---     | --- | ---      | --- | ---      | ---  | ---     | --- | ---      | --- | 9.1   | 8.5 |
| 26    | ---     | --- | ---      | --- | ---      | ---  | ---     | --- | ---      | --- | 8.7   | 8.6 |
| 27    | ---     | --- | ---      | --- | ---      | ---  | ---     | --- | ---      | --- | 8.7   | 8.6 |
| 28    | ---     | --- | ---      | --- | ---      | ---  | ---     | --- | ---      | --- | 9.1   | 8.5 |
| 29    | ---     | --- | ---      | --- | ---      | ---  | ---     | --- | ---      | --- | 8.5   | 8.2 |
| 30    | ---     | --- | ---      | --- | ---      | ---  | ---     | --- | ---      | --- | 8.9   | 8.1 |
| 31    | ---     | --- | ---      | --- | ---      | ---  | ---     | --- | ---      | --- | 8.2   | 8.1 |
| MONTH | ---     | --- | ---      | --- | ---      | ---  | ---     | --- | ---      | --- | ---   | --- |

|       | APRIL |     | MAY |     | JUNE |     | JULY |     | AUGUST |     | SEPTEMBER |     |
|-------|-------|-----|-----|-----|------|-----|------|-----|--------|-----|-----------|-----|
| DAY   | MAX   | MIN | MAX | MIN | MAX  | MIN | MAX  | MIN | MAX    | MIN | MAX       | MIN |
| 1     | 8.6   | 7.9 | 7.7 | 7.3 | 5.4  | 5.3 | 5.8  | 5.6 | ---    | --- | ---       | --- |
| 2     | 8.4   | 7.9 | 7.8 | 7.5 | 5.4  | 5.3 | 5.7  | 5.6 | ---    | --- | ---       | --- |
| 3     | 9.3   | 8.2 | 7.8 | 7.5 | 5.4  | 5.3 | 5.6  | 5.4 | ---    | --- | ---       | --- |
| 4     | 9.1   | 8.3 | 7.7 | 7.4 | 5.4  | 5.3 | 5.5  | 5.3 | ---    | --- | ---       | --- |
| 5     | 8.7   | 8.3 | 7.5 | 7.4 | 5.4  | 5.2 | 5.3  | 5.2 | ---    | --- | ---       | --- |
| 6     | ---   | --- | 7.5 | 7.3 | 5.3  | 4.9 | 5.2  | 5.1 | ---    | --- | ---       | --- |
| 7     | ---   | --- | 7.5 | 7.2 | 5.3  | 5.2 | 5.1  | 5.1 | ---    | --- | ---       | --- |
| 8     | ---   | --- | 7.6 | 7.5 | 5.2  | 5.1 | 5.1  | 5.0 | ---    | --- | ---       | --- |
| 9     | ---   | --- | 7.8 | 7.5 | 5.2  | 5.0 | 5.0  | 5.0 | ---    | --- | ---       | --- |
| 10    | ---   | --- | 7.9 | 7.7 | 5.2  | 5.0 | 5.0  | 4.8 | ---    | --- | ---       | --- |
| 11    | ---   | --- | 8.0 | 7.8 | 5.2  | 5.1 | 4.8  | 4.8 | ---    | --- | ---       | --- |
| 12    | ---   | --- | 8.0 | 7.8 | 5.2  | 5.1 | 4.8  | 4.7 | ---    | --- | ---       | --- |
| 13    | ---   | --- | 8.0 | 7.6 | 5.4  | 5.3 | 4.6  | 4.6 | ---    | --- | ---       | --- |
| 14    | ---   | --- | 7.8 | 7.6 | 5.4  | 5.3 | 4.6  | 4.5 | ---    | --- | ---       | --- |
| 15    | ---   | --- | 7.9 | 7.7 | 5.5  | 5.4 | 4.5  | 4.4 | ---    | --- | ---       | --- |
| 16    | ---   | --- | 8.0 | 7.7 | 5.6  | 5.5 | 4.5  | 4.4 | ---    | --- | ---       | --- |
| 17    | ---   | --- | 7.8 | 7.2 | 5.7  | 5.6 | 4.4  | 4.4 | ---    | --- | ---       | --- |
| 18    | ---   | --- | 7.2 | 7.1 | 5.8  | 5.7 | 4.5  | 4.4 | ---    | --- | ---       | --- |
| 19    | ---   | --- | 7.0 | 6.9 | 5.9  | 5.8 | 4.5  | 4.5 | ---    | --- | ---       | --- |
| 20    | ---   | --- | 6.8 | 6.7 | 5.9  | 5.7 | 4.5  | 4.5 | ---    | --- | ---       | --- |
| 21    | ---   | --- | 6.7 | 6.5 | 5.8  | 5.7 | 4.5  | 4.4 | ---    | --- | ---       | --- |
| 22    | ---   | --- | 6.4 | 6.3 | 5.7  | 5.5 | 4.4  | 4.4 | ---    | --- | ---       | --- |
| 23    | 8.0   | 7.7 | 6.2 | 6.0 | 5.6  | 5.5 | 4.5  | 4.4 | ---    | --- | ---       | --- |
| 24    | 7.8   | 7.3 | 6.1 | 6.0 | 5.7  | 5.6 | 4.4  | 4.4 | ---    | --- | ---       | --- |
| 25    | 7.7   | 7.4 | 6.0 | 5.9 | 5.8  | 4.8 | 4.3  | 4.3 | ---    | --- | ---       | --- |
| 26    | 7.8   | 7.3 | 5.9 | 5.8 | 5.9  | 5.7 | 4.2  | 4.2 | ---    | --- | ---       | --- |
| 27    | 7.7   | 7.4 | 5.9 | 5.7 | 6.0  | 5.8 | 4.1  | 4.1 | ---    | --- | ---       | --- |
| 28    | 7.8   | 7.6 | 5.8 | 5.7 | 5.9  | 5.8 | 4.1  | 4.0 | ---    | --- | ---       | --- |
| 29    | 7.7   | 7.4 | 5.8 | 5.6 | 5.8  | 5.7 | 4.0  | 3.9 | ---    | --- | ---       | --- |
| 30    | 7.6   | 7.3 | 5.7 | 5.5 | 5.8  | 5.7 | 3.9  | 3.7 | ---    | --- | ---       | --- |
| 31    | ---   | --- | 5.6 | 5.4 | ---  | --- | ---  | --- | ---    | --- | ---       | --- |
| MONTH | ---   | --- | 8.0 | 5.4 | 6.0  | 4.8 | 5.8  | 3.7 | ---    | --- | ---       | --- |

07020850 MISSISSIPPI RIVER AT CAPE GIRARDEAU, MO.--Continued

TEMPERATURE (DEG. C) OF WATER , WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

|       | OCTOBER |     | NOVEMBER |      | DECEMBER |     | JANUARY |     | FEBRUARY |     | MARCH |     |
|-------|---------|-----|----------|------|----------|-----|---------|-----|----------|-----|-------|-----|
| DAY   | MAX     | MIN | MAX      | MIN  | MAX      | MIN | MAX     | MIN | MAX      | MIN | MAX   | MIN |
| 1     | ---     | --- | ---      | ---  | 8.5      | 8.0 | ---     | --- | 4.0      | 3.0 | ---   | --- |
| 2     | ---     | --- | 14.5     | 14.0 | 8.5      | 8.0 | ---     | --- | 4.0      | 4.0 | ---   | --- |
| 3     | ---     | --- | 14.0     | 14.0 | 8.0      | 8.0 | ---     | --- | 4.0      | 3.0 | ---   | --- |
| 4     | ---     | --- | 14.0     | 13.5 | 8.5      | 8.0 | ---     | --- | 4.5      | 3.0 | ---   | --- |
| 5     | ---     | --- | 13.5     | 12.5 | 8.0      | 7.5 | ---     | --- | 5.0      | 4.0 | ---   | --- |
| 6     | ---     | --- | 12.5     | 12.0 | 7.5      | 5.5 | ---     | --- | 5.0      | 4.0 | ---   | --- |
| 7     | ---     | --- | 12.0     | 11.5 | 5.5      | 4.5 | ---     | --- | 4.0      | 3.5 | ---   | --- |
| 8     | ---     | --- | 11.5     | 11.0 | 4.0      | 3.5 | ---     | --- | 4.0      | 3.5 | ---   | --- |
| 9     | ---     | --- | 11.0     | 10.5 | ---      | --- | ---     | --- | 3.5      | 2.5 | ---   | --- |
| 10    | ---     | --- | 10.5     | 10.0 | ---      | --- | ---     | --- | 3.5      | 2.5 | ---   | --- |
| 11    | ---     | --- | 10.0     | 9.5  | 4.5      | 4.0 | ---     | --- | 3.5      | 2.5 | ---   | --- |
| 12    | ---     | --- | 9.5      | 9.5  | 4.0      | 3.5 | ---     | --- | ---      | --- | ---   | --- |
| 13    | ---     | --- | 10.0     | 9.5  | 4.0      | 3.5 | ---     | --- | ---      | --- | ---   | --- |
| 14    | ---     | --- | 10.5     | 10.0 | 4.0      | 3.5 | ---     | --- | ---      | --- | ---   | --- |
| 15    | ---     | --- | 11.0     | 10.5 | 3.5      | 3.5 | ---     | --- | ---      | --- | ---   | --- |
| 16    | ---     | --- | 11.0     | 10.5 | 3.5      | 3.0 | ---     | --- | ---      | --- | ---   | --- |
| 17    | ---     | --- | 11.0     | 10.5 | ---      | --- | 2.0     | 2.0 | ---      | --- | ---   | --- |
| 18    | ---     | --- | 11.0     | 10.5 | ---      | --- | 2.5     | 2.0 | ---      | --- | ---   | --- |
| 19    | ---     | --- | 11.5     | 10.5 | ---      | --- | 3.5     | 2.5 | ---      | --- | 8.5   | 8.0 |
| 20    | ---     | --- | 12.0     | 11.5 | ---      | --- | 4.5     | 3.5 | ---      | --- | 8.5   | 8.0 |
| 21    | ---     | --- | 12.0     | 11.5 | ---      | --- | 4.5     | 3.5 | ---      | --- | 8.0   | 7.5 |
| 22    | ---     | --- | 11.5     | 11.0 | ---      | --- | 5.5     | 3.5 | ---      | --- | 8.0   | 7.0 |
| 23    | ---     | --- | 12.0     | 10.5 | ---      | --- | 5.5     | 4.5 | ---      | --- | 7.5   | 6.5 |
| 24    | ---     | --- | ---      | ---  | ---      | --- | 4.5     | 4.0 | ---      | --- | 6.5   | 6.0 |
| 25    | ---     | --- | ---      | ---  | ---      | --- | 4.5     | 3.5 | ---      | --- | 6.0   | 5.5 |
| 26    | ---     | --- | ---      | ---  | ---      | --- | 4.5     | 3.0 | ---      | --- | 6.0   | 5.5 |
| 27    | ---     | --- | 11.5     | 10.5 | ---      | --- | 5.0     | 3.0 | ---      | --- | 6.0   | 5.5 |
| 28    | ---     | --- | 10.5     | 9.5  | ---      | --- | 4.5     | 3.5 | ---      | --- | 7.5   | 6.5 |
| 29    | ---     | --- | 9.5      | 8.5  | ---      | --- | 4.5     | 4.0 | ---      | --- | 8.0   | 7.5 |
| 30    | ---     | --- | 9.0      | 8.5  | ---      | --- | 4.0     | 3.5 | ---      | --- | 9.5   | 8.0 |
| 31    | ---     | --- | ---      | ---  | ---      | --- | 4.0     | 3.0 | ---      | --- | 10.0  | 9.0 |
| MONTH | ---     | --- | 14.5     | 8.5  | ---      | --- | ---     | --- | ---      | --- | ---   | --- |

|       | APRIL |      | MAY  |      | JUNE |      | JULY |      | AUGUST |     | SEPTEMBER |     |
|-------|-------|------|------|------|------|------|------|------|--------|-----|-----------|-----|
| DAY   | MAX   | MIN  | MAX  | MIN  | MAX  | MIN  | MAX  | MIN  | MAX    | MIN | MAX       | MIN |
| 1     | 10.5  | 9.5  | 17.5 | 17.5 | 21.0 | 20.5 | 24.0 | 23.0 | ---    | --- | ---       | --- |
| 2     | 10.5  | 10.0 | 17.5 | 17.0 | 20.5 | 20.0 | 24.5 | 23.5 | ---    | --- | ---       | --- |
| 3     | 11.5  | 10.5 | 18.0 | 17.5 | 21.5 | 20.5 | 25.5 | 24.5 | ---    | --- | ---       | --- |
| 4     | 11.5  | 11.0 | 18.0 | 17.5 | 22.0 | 20.5 | 26.0 | 25.0 | ---    | --- | ---       | --- |
| 5     | 11.0  | 10.5 | 18.5 | 17.5 | 21.5 | 21.0 | 26.5 | 25.5 | ---    | --- | ---       | --- |
| 6     | 10.5  | 10.0 | 18.5 | 18.0 | 22.5 | 21.5 | 26.5 | 26.0 | ---    | --- | ---       | --- |
| 7     | 10.0  | 10.0 | 18.5 | 18.0 | 22.0 | 21.5 | 27.0 | 26.0 | ---    | --- | ---       | --- |
| 8     | 10.0  | 9.5  | ---  | ---  | 22.0 | 21.5 | 27.0 | 26.5 | ---    | --- | ---       | --- |
| 9     | 10.0  | 9.5  | 18.0 | 18.0 | 23.0 | 22.0 | 27.5 | 27.0 | ---    | --- | ---       | --- |
| 10    | 10.0  | 9.5  | 18.5 | 18.0 | 23.0 | 22.0 | 28.0 | 27.5 | ---    | --- | ---       | --- |
| 11    | 11.0  | 10.0 | 18.5 | 18.0 | 22.5 | 21.5 | 28.5 | 28.0 | ---    | --- | ---       | --- |
| 12    | 12.0  | 10.5 | 18.0 | 17.5 | 22.5 | 21.5 | 29.0 | 28.0 | ---    | --- | ---       | --- |
| 13    | 13.0  | 12.0 | 18.0 | 17.5 | 22.5 | 21.5 | 29.5 | 29.0 | ---    | --- | ---       | --- |
| 14    | 13.5  | 12.5 | 18.0 | 17.5 | 22.0 | 21.5 | 30.0 | 29.0 | ---    | --- | ---       | --- |
| 15    | 13.0  | 12.5 | 18.0 | 17.0 | 22.5 | 21.5 | 30.5 | 29.5 | ---    | --- | ---       | --- |
| 16    | 13.0  | 12.5 | 19.0 | 18.0 | 22.5 | 21.5 | 31.0 | 30.0 | ---    | --- | ---       | --- |
| 17    | 12.5  | 12.0 | 19.5 | 18.5 | 22.5 | 21.5 | 30.5 | 30.0 | ---    | --- | ---       | --- |
| 18    | 13.0  | 12.5 | 20.0 | 19.5 | 22.5 | 22.0 | 30.5 | 30.0 | ---    | --- | ---       | --- |
| 19    | 13.5  | 12.5 | 20.5 | 20.0 | 23.0 | 22.5 | 30.0 | 29.5 | ---    | --- | ---       | --- |
| 20    | 14.0  | 13.0 | 20.5 | 20.0 | 24.0 | 22.5 | 30.5 | 29.5 | ---    | --- | ---       | --- |
| 21    | 14.5  | 14.5 | 21.0 | 20.5 | 24.5 | 23.5 | 31.0 | 30.0 | ---    | --- | ---       | --- |
| 22    | 15.5  | 15.0 | 21.0 | 21.0 | 25.0 | 24.5 | 30.5 | 30.0 | ---    | --- | ---       | --- |
| 23    | 16.0  | 15.5 | 22.0 | 20.5 | 24.5 | 24.0 | 30.0 | 30.0 | ---    | --- | ---       | --- |
| 24    | 16.5  | 15.5 | 22.0 | 21.5 | 24.0 | 24.0 | 30.0 | 29.5 | ---    | --- | ---       | --- |
| 25    | 16.5  | 16.0 | 22.0 | 21.5 | 23.5 | 23.0 | 30.0 | 29.5 | ---    | --- | ---       | --- |
| 26    | 16.5  | 16.0 | 21.5 | 21.5 | 23.0 | 22.0 | 30.0 | 29.5 | ---    | --- | ---       | --- |
| 27    | 17.0  | 16.5 | 22.0 | 21.0 | 23.0 | 22.5 | 30.0 | 29.0 | ---    | --- | ---       | --- |
| 28    | 17.5  | 16.5 | 22.0 | 21.0 | 23.0 | 22.5 | 29.5 | 29.5 | ---    | --- | ---       | --- |
| 29    | 18.0  | 17.0 | 21.5 | 21.0 | 23.5 | 23.0 | 29.5 | 29.0 | ---    | --- | ---       | --- |
| 30    | 18.0  | 17.0 | 22.0 | 20.5 | 23.5 | 23.0 | 29.5 | 28.5 | ---    | --- | ---       | --- |
| 31    | ---   | ---  | 21.5 | 21.0 | ---  | ---  | ---  | ---  | ---    | --- | ---       | --- |
| MONTH | 18.0  | 9.5  | 22.0 | 17.0 | 25.0 | 20.0 | 31.0 | 23.0 | ---    | --- | ---       | --- |

## HEADWATER DIVERSION CHANNEL BASIN

07021800 HEADWATER DIVERSION CHANNEL NEAR ALLENVILLE, MO.

LOCATION.--Lat 37°12'55", long 89°46'00", Cape Girardeau County, at bridge on county road at Allenville.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE  | DIS-<br>CHARGE<br>(CFS) | DIS-<br>SOLVED<br>SILICA<br>(SiO <sub>2</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>IRON<br>(FE)<br>(UG/L) | DIS-<br>SOLVED<br>MAN-<br>GANESE<br>(MN)<br>(UG/L) | DIS-<br>SOLVED<br>CAL-<br>CIUM<br>(CA)<br>(MG/L) | DIS-<br>SOLVED<br>MAG-<br>NE-<br>SIUM<br>(MG) | DIS-<br>SOLVED<br>SODIUM<br>(NA)<br>(MG/L) | DIS-<br>SOLVED<br>PO-<br>TAS-<br>SIUM<br>(K)<br>(MG/L) | BICAR-<br>BONATE<br>(HCO <sub>3</sub> )<br>(MG/L) | CAR-<br>BONATE<br>(CO <sub>3</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>SULFATE<br>(SO <sub>4</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>CHLO-<br>RIDE<br>(CL)<br>(MG/L) |
|-------|-------------------------|-----------------------------------------------------------|------------------------------------------|----------------------------------------------------|--------------------------------------------------|-----------------------------------------------|--------------------------------------------|--------------------------------------------------------|---------------------------------------------------|------------------------------------------------|-----------------------------------------------------------|---------------------------------------------------|
| OCT.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 16... | 500                     | 7.4                                                       | 80                                       | 50                                                 | 19                                               | 9.6                                           | 2.9                                        | 2.6                                                    | 104                                               | 0                                              | 6.6                                                       | 2.9                                               |
| NOV.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 13... | 230                     | 8.6                                                       | 280                                      | 270                                                | 28                                               | 14                                            | 3.0                                        | 1.4                                                    | 144                                               | 0                                              | 7.7                                                       | 2.4                                               |
| DEC.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 10... | 6800                    | 8.8                                                       | 250                                      | 80                                                 | 17                                               | 7.9                                           | 2.4                                        | 1.1                                                    | 80                                                | 0                                              | 8.9                                                       | 1.8                                               |
| JAN.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 16... | 1050                    | 7.0                                                       | 100                                      | 130                                                | 19                                               | 7.4                                           | 3.3                                        | 1.7                                                    | 84                                                | 0                                              | 12                                                        | 4.2                                               |
| FEB.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 12... | 2000                    | 7.4                                                       | 150                                      | 180                                                | 22                                               | 11                                            | 3.9                                        | 1.0                                                    | 112                                               | 0                                              | 8.9                                                       | 3.0                                               |
| MAR.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 26... | 1690                    | 7.3                                                       | 100                                      | 88                                                 | 17                                               | 8.6                                           | 2.8                                        | .9                                                     | 80                                                | 0                                              | 9.1                                                       | 2.1                                               |
| APR.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 23... | 5000                    | 7.7                                                       | 130                                      | 80                                                 | 11                                               | 4.9                                           | 2.4                                        | 1.6                                                    | 48                                                | 0                                              | 8.9                                                       | 2.4                                               |
| MAY   |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 29... | 715                     | 8.8                                                       | 80                                       | 100                                                | 22                                               | 11                                            | 2.8                                        | 1.1                                                    | 120                                               | 0                                              | 7.4                                                       | 2.3                                               |
| JUNE  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 24... | 510                     | 9.6                                                       | 110                                      | 200                                                | 23                                               | 11                                            | 2.5                                        | 1.3                                                    | 116                                               | 0                                              | 7.5                                                       | 2.5                                               |
| JULY  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 30... | 130                     | 13                                                        | 30                                       | 660                                                | 35                                               | 17                                            | 3.9                                        | 1.4                                                    | 188                                               | 0                                              | 7.0                                                       | 3.8                                               |
| AUG.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 26... | 110                     | 10                                                        | 30                                       | 380                                                | 29                                               | 14                                            | 3.0                                        | 1.5                                                    | 148                                               | 0                                              | 6.3                                                       | 2.8                                               |
| SEP.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 25... | 150                     | 9.8                                                       | 50                                       | 260                                                | 30                                               | 14                                            | 3.5                                        | 1.5                                                    | 160                                               | 0                                              | 8.4                                                       | 2.8                                               |

| DATE  | NON-<br>CAR-<br>BONATE<br>HARD-<br>NESS<br>(MG/L) | ALKA-<br>LINITY<br>AS<br>CACO <sub>3</sub><br>(MG/L) | SPE-<br>CIFIC<br>CON-<br>DUCT-<br>ANCE<br>(MICRO-<br>MHOS) | PH<br>(UNITS) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | CHEM-<br>ICAL<br>OXYGEN<br>DEMAND<br>(LOW<br>LEVEL)<br>(MG/L) | DIS-<br>SOLVED<br>OXYGEN<br>(MG/L) | PER-<br>CENT<br>SATUR-<br>ATION | FECAL<br>COLI-<br>FORM<br>(COL.<br>PER<br>100 ML) | STREP-<br>TOCOCCI<br>(COL-<br>ONIES<br>PER<br>100 ML) |
|-------|---------------------------------------------------|------------------------------------------------------|------------------------------------------------------------|---------------|----------------------------------------------|-----------------------------|---------------------------------------------------------------|------------------------------------|---------------------------------|---------------------------------------------------|-------------------------------------------------------|
| OCT.  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 16... | 2                                                 | 85                                                   | 170                                                        | 7.6           | 50                                           | 18.5                        | 16                                                            | 6.8                                | 72                              | 1900                                              | 830                                                   |
| NOV.  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 13... | 9                                                 | 118                                                  | 250                                                        | 7.8           | 5                                            | 10.0                        | 5                                                             | 9.7                                | 86                              | 80                                                | 25                                                    |
| DEC.  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 10... | 9                                                 | 66                                                   | 163                                                        | 7.8           | 20                                           | 6.0                         | 4                                                             | 10.2                               | 82                              | 84                                                | 1200                                                  |
| JAN.  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 16... | 9                                                 | 69                                                   | 177                                                        | 7.6           | 60                                           | 3.5                         | 20                                                            | 9.7                                | 73                              | 4000                                              | 17000                                                 |
| FEB.  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 12... | 8                                                 | 92                                                   | 222                                                        | 7.8           | 10                                           | 7.0                         | 4                                                             | 11.4                               | 94                              | 20                                                | 25                                                    |
| MAR.  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 26... | 12                                                | 66                                                   | 152                                                        | 7.7           | 5                                            | 6.5                         | 4                                                             | 9.8                                | 80                              | 110                                               | 170                                                   |
| APR.  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 23... | 8                                                 | 39                                                   | 100                                                        | 7.4           | 40                                           | 16.0                        | 14                                                            | 8.0                                | 81                              | 3100                                              | 3600                                                  |
| MAY   |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 29... | 2                                                 | 98                                                   | 218                                                        | 7.7           | 8                                            | 20.0                        | 2                                                             | 5.2                                | 57                              | 120                                               | 260                                                   |
| JUNE  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 24... | 8                                                 | 95                                                   | 217                                                        | 7.7           | 2                                            | 24.0                        | 2                                                             | 6.0                                | 71                              | 140                                               | 50                                                    |
| JULY  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 30... | 3                                                 | 154                                                  | 310                                                        | 7.8           | 3                                            | 26.5                        | 5                                                             | 6.2                                | 77                              | 40                                                | 32                                                    |
| AUG.  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 26... | 9                                                 | 121                                                  | 260                                                        | 7.7           | 3                                            | 26.0                        | 12                                                            | 9.8                                | 120                             | 400                                               | 210                                                   |
| SEP.  |                                                   |                                                      |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 25... | 0                                                 | 131                                                  | 267                                                        | 7.9           | 30                                           | 16.0                        | 5                                                             | 8.3                                | 84                              | 104                                               | 150                                                   |

07021800 HEADWATER DIVERSION CHANNEL NEAR ALLENVILLE, MO.--Continued

PERIOD OF RECORD.--Chemical analyses: July 1969 to September 1974.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE          | DIS-<br>SOLVED<br>FLUO-<br>RIDE<br>(F)<br>(MG/L) | TOTAL<br>NITRATE<br>(N)<br>(MG/L) | AMMONIA<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | ORGANIC<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | DIS-<br>SOL-<br>VED-<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | TOTAL<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(RESI-<br>DUE AT<br>180 C)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(TONS<br>PER<br>AC-FT) | DIS-<br>SOLVED<br>SOLIDS<br>(TONS<br>PER<br>DAY) | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | PERCENT<br>SODIUM | HARD-<br>NESS<br>(CA,MG)<br>(MG/L) |
|---------------|--------------------------------------------------|-----------------------------------|-------------------------------------------|-------------------------------------------|----------------------------------------------------------|-------------------------------------------|------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------|-----------------------------------------|-------------------|------------------------------------|
| OCT.<br>16... | .1                                               | .33                               | .21                                       | .26                                       | .00                                                      | .35                                       | 108                                                              | .15                                                | 146                                              | .1                                      | 7                 | 87                                 |
| NOV.<br>13... | .1                                               | .07                               | .05                                       | .19                                       | 4.0                                                      | 4.3                                       | 136                                                              | .19                                                | 84.5                                             | .1                                      | 5                 | 130                                |
| DEC.<br>10... | .0                                               | .38                               | .06                                       | .21                                       | .01                                                      | .04                                       | 93                                                               | .13                                                | 1710                                             | .1                                      | 6                 | 75                                 |
| JAN.<br>16... | .0                                               | .62                               | .24                                       | .57                                       | .02                                                      | .15                                       | 93                                                               | .13                                                | 264                                              | .2                                      | 8                 | 78                                 |
| FEB.<br>12... | .0                                               | .45                               | .21                                       | .00                                       | .01                                                      | .03                                       | 1420                                                             | 1.93                                               | 7670                                             | .2                                      | 8                 | 100                                |
| MAR.<br>26... | .1                                               | .33                               | .08                                       | .10                                       | .01                                                      | .03                                       | 89                                                               | .12                                                | 406                                              | .1                                      | 7                 | 78                                 |
| APR.<br>23... | .7                                               | .25                               | .07                                       | .84                                       | .05                                                      | .11                                       | 74                                                               | .10                                                | 999                                              | .2                                      | 10                | 48                                 |
| MAY<br>29...  | .0                                               | .31                               | .08                                       | .49                                       | .02                                                      | .04                                       | 110                                                              | .15                                                | 212                                              | .1                                      | 6                 | 100                                |
| JUNE<br>24... | .1                                               | .14                               | .01                                       | .21                                       | --                                                       | .05                                       | 113                                                              | .15                                                | 156                                              | .1                                      | 5                 | 100                                |
| JULY<br>30... | .1                                               | .09                               | .07                                       | .56                                       | .02                                                      | .09                                       | 178                                                              | .24                                                | 62.5                                             | .1                                      | 5                 | 160                                |
| AUG.<br>26... | .1                                               | .10                               | .09                                       | .27                                       | .04                                                      | .08                                       | 141                                                              | .19                                                | 41.9                                             | .1                                      | 5                 | 130                                |
| SEP.<br>25... | .1                                               | .11                               | .16                                       | .15                                       | .04                                                      | .04                                       | 144                                                              | .20                                                | 58.3                                             | .1                                      | 5                 | 130                                |



## MISSISSIPPI RIVER MAIN STEM

07022000 MISSISSIPPI RIVER AT THEBES, ILL.  
(National Stream Quality Accounting Network Station)

LOCATION.--Lat 37°13'00", long 89°27'50", in NW¼ sec.17, T.15 S., R. 3 W., Alexander County, at gaging station on downstream side of railroad bridge at Thebes, 5 mi (8.0 km) downstream from Headwater Diversion Channel, and at mile 43.7 (70.3 km) above Ohio River.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE  | DIS-<br>CHARGE<br>(CFS) | DIS-<br>SOLVED<br>SILICA<br>(SiO <sub>2</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>IRON<br>(FE)<br>(UG/L) | DIS-<br>SOLVED<br>MAN-<br>GANESE<br>(MN)<br>(UG/L) | DIS-<br>SOLVED<br>CAL-<br>CIUM<br>(CA)<br>(MG/L) | DIS-<br>SOLVED<br>MAG-<br>NE-<br>SIUM<br>(MG) | DIS-<br>SOLVED<br>SODIUM<br>(NA)<br>(MG/L) | DIS-<br>SOLVED<br>PO-<br>TAS-<br>SIUM<br>(K)<br>(MG/L) | BICAR-<br>BONATE<br>(HCO <sub>3</sub> )<br>(MG/L) | CAR-<br>BONATE<br>(CO <sub>3</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>SULFATE<br>(SO <sub>4</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>CHLO-<br>RIDE<br>(CL)<br>(MG/L) |
|-------|-------------------------|-----------------------------------------------------------|------------------------------------------|----------------------------------------------------|--------------------------------------------------|-----------------------------------------------|--------------------------------------------|--------------------------------------------------------|---------------------------------------------------|------------------------------------------------|-----------------------------------------------------------|---------------------------------------------------|
| OCT.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 16... | 378000                  | 11                                                        | 10                                       | 20                                                 | 50                                               | 15                                            | 20                                         | 4.7                                                    | 190                                               | 0                                              | 59                                                        | 15                                                |
| NOV.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 14... | 192000                  | 12                                                        | 40                                       | 10                                                 | 58                                               | 18                                            | 25                                         | 5.0                                                    | 210                                               | 0                                              | 84                                                        | 19                                                |
| DEC.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 11... | 374000                  | 9.6                                                       | 210                                      | 40                                                 | 43                                               | 13                                            | 14                                         | 3.7                                                    | 160                                               | 0                                              | 43                                                        | 14                                                |
| JAN.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 17... | 188000                  | 13                                                        | 50                                       | 60                                                 | 64                                               | 21                                            | 23                                         | 3.9                                                    | 240                                               | 0                                              | 61                                                        | 26                                                |
| FEB.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 13... | 260000                  | 11                                                        | 70                                       | 40                                                 | 56                                               | 19                                            | 19                                         | 3.8                                                    | 188                                               | 0                                              | 54                                                        | 22                                                |
| MAR.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 27... | 319000                  | 10                                                        | 40                                       | 13                                                 | 54                                               | 18                                            | 18                                         | 3.1                                                    | 194                                               | 0                                              | 57                                                        | 17                                                |
| APR.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 24... | 338000                  | 8.7                                                       | 80                                       | 40                                                 | 52                                               | 19                                            | 18                                         | 3.2                                                    | 184                                               | 0                                              | 62                                                        | 16                                                |
| MAY   |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 30... | 498000                  | .2                                                        | 20                                       | 0                                                  | 44                                               | 15                                            | 12                                         | 3.5                                                    | 158                                               | 0                                              | 43                                                        | 14                                                |
| JUNE  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 25... | 381000                  | 8.9                                                       | 30                                       | 0                                                  | 52                                               | 17                                            | 14                                         | 3.3                                                    | 196                                               | 0                                              | 46                                                        | 14                                                |
| JULY  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 31... | 144000                  | 6.2                                                       | 20                                       | 10                                                 | 60                                               | 23                                            | 29                                         | 3.7                                                    | 226                                               | 0                                              | 89                                                        | 22                                                |
| AUG.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 27... | 132000                  | 6.3                                                       | 1500                                     | 240                                                | 53                                               | 20                                            | 31                                         | 4.4                                                    | 188                                               | 0                                              | 83                                                        | 20                                                |
| SEP.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 24... | 108000                  | 9.9                                                       | 160                                      | 0                                                  | 53                                               | 20                                            | 33                                         | 4.1                                                    | 206                                               | 0                                              | 90                                                        | 18                                                |

| DATE  | PH<br>(UNITS) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | SUS-<br>PENDE<br>SEDI-<br>MENT<br>(MG/L) | TEMPER-<br>ATURE<br>(DEG C) | CHEM-<br>ICAL<br>OXYGEN<br>DEMAND<br>(LOW<br>LEVEL)<br>(MG/L) | TOTAL<br>ORGANIC<br>CARBON<br>(C)<br>(MG/L) | DIS-<br>SOLVED<br>OXYGEN<br>(MG/L) | PER-<br>CENT<br>SATUR-<br>ATION | IMME-<br>DIATE<br>COLI-<br>FORM<br>(COL.<br>PER<br>100 ML) | FECAL<br>COLI-<br>FORM<br>(COL.<br>PER<br>100 ML) | STREP-<br>TOCOCCI<br>(COL-<br>ONIES<br>PER<br>100 ML) |
|-------|---------------|----------------------------------------------|------------------------------------------|-----------------------------|---------------------------------------------------------------|---------------------------------------------|------------------------------------|---------------------------------|------------------------------------------------------------|---------------------------------------------------|-------------------------------------------------------|
| OCT.  |               |                                              |                                          |                             |                                                               |                                             |                                    |                                 |                                                            |                                                   |                                                       |
| 16... | 8.0           | 20                                           | 1095                                     | 19.0                        | 42                                                            | --                                          | 6.0                                | 64                              | 32000                                                      | 7300                                              | 1500                                                  |
| NOV.  |               |                                              |                                          |                             |                                                               |                                             |                                    |                                 |                                                            |                                                   |                                                       |
| 14... | 8.1           | 30                                           | --                                       | 10.5                        | --                                                            | .4                                          | 8.0                                | 71                              | 29000                                                      | 1800                                              | 120                                                   |
| DEC.  |               |                                              |                                          |                             |                                                               |                                             |                                    |                                 |                                                            |                                                   |                                                       |
| 11... | 8.1           | 90                                           | --                                       | 4.5                         | 40                                                            | --                                          | 10.6                               | 82                              | 4500                                                       | 2200                                              | 13000                                                 |
| JAN.  |               |                                              |                                          |                             |                                                               |                                             |                                    |                                 |                                                            |                                                   |                                                       |
| 17... | 7.8           | 20                                           | --                                       | 1.5                         | 22                                                            | --                                          | 9.8                                | 70                              | 42000                                                      | 1300                                              | 1100                                                  |
| FEB.  |               |                                              |                                          |                             |                                                               |                                             |                                    |                                 |                                                            |                                                   |                                                       |
| 13... | 7.9           | 30                                           | --                                       | 3.0                         | --                                                            | 7.7                                         | 11.4                               | 84                              | 13000                                                      | 650                                               | 1200                                                  |
| MAR.  |               |                                              |                                          |                             |                                                               |                                             |                                    |                                 |                                                            |                                                   |                                                       |
| 27... | 8.0           | 30                                           | --                                       | 6.0                         | 24                                                            | --                                          | 9.2                                | 74                              | --                                                         | 480                                               | 300                                                   |
| APR.  |               |                                              |                                          |                             |                                                               |                                             |                                    |                                 |                                                            |                                                   |                                                       |
| 24... | 8.0           | 30                                           | 342                                      | 14.5                        | 26                                                            | --                                          | 7.8                                | 76                              | --                                                         | 1000                                              | 450                                                   |
| MAY   |               |                                              |                                          |                             |                                                               |                                             |                                    |                                 |                                                            |                                                   |                                                       |
| 30... | 7.8           | 10                                           | 712                                      | 21.0                        | --                                                            | 16                                          | 5.6                                | 62                              | --                                                         | 2000                                              | 300                                                   |
| JUNE  |               |                                              |                                          |                             |                                                               |                                             |                                    |                                 |                                                            |                                                   |                                                       |
| 25... | 8.0           | 20                                           | 332                                      | 23.0                        | 8                                                             | --                                          | 5.7                                | 66                              | --                                                         | 3100                                              | 1400                                                  |
| JULY  |               |                                              |                                          |                             |                                                               |                                             |                                    |                                 |                                                            |                                                   |                                                       |
| 31... | 8.1           | 10                                           | 99                                       | 28.0                        | 21                                                            | --                                          | 6.0                                | 76                              | --                                                         | 950                                               | 20                                                    |
| AUG.  |               |                                              |                                          |                             |                                                               |                                             |                                    |                                 |                                                            |                                                   |                                                       |
| 27... | 8.0           | 10                                           | 256                                      | 26.5                        | --                                                            | 8.0                                         | 5.9                                | 73                              | --                                                         | 2200                                              | 540                                                   |
| SEP.  |               |                                              |                                          |                             |                                                               |                                             |                                    |                                 |                                                            |                                                   |                                                       |
| 24... | 8.1           | 40                                           | 42                                       | 19.5                        | 2                                                             | --                                          | 8.2                                | 88                              | --                                                         | 8200                                              | 60                                                    |

07022000 MISSISSIPPI RIVER AT THEBES, ILL.--Continued

DRAINAGE AREA.--717,200 mi<sup>2</sup> (1,858,000 km<sup>2</sup>), approximately.

PERIOD OF RECORD.--Chemical analyses: January 1973 to September 1974.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE          | DIS-<br>SOLVED<br>FLUO-<br>RIDE<br>(F)<br>(MG/L) | TOTAL<br>NITRATE<br>(N)<br>(MG/L) | AMMONIA<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | ORGANIC<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | DIS-<br>SOL-<br>VED-<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | TOTAL<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(RESI-<br>DUE AT<br>180 C)<br>(MG/L) | HARD-<br>NESS<br>(CA,MG)<br>(MG/L) | NON-<br>CAR-<br>BONATE<br>HARD-<br>NESS<br>(MG/L) | ALKA-<br>LITY<br>AS<br>CACO3<br>(MG/L) | SPE-<br>CIFIC<br>CON-<br>DUCT-<br>ANCE<br>(MICRO-<br>MHOS) |
|---------------|--------------------------------------------------|-----------------------------------|-------------------------------------------|-------------------------------------------|----------------------------------------------------------|-------------------------------------------|------------------------------------------------------------------|------------------------------------|---------------------------------------------------|----------------------------------------|------------------------------------------------------------|
| OCT.<br>16... | .3                                               | 1.9                               | .05                                       | 1.8                                       | .00                                                      | .70                                       | 276                                                              | 190                                | 31                                                | 156                                    | 425                                                        |
| NOV.<br>14... | .4                                               | --                                | .02                                       | .80                                       | --                                                       | .35                                       | 328                                                              | 220                                | 45                                                | 174                                    | 505                                                        |
| DEC.<br>11... | .2                                               | 1.8                               | .15                                       | .95                                       | .09                                                      | .51                                       | 231                                                              | 160                                | 30                                                | 131                                    | 390                                                        |
| JAN.<br>17... | .3                                               | 2.4                               | .33                                       | .77                                       | .10                                                      | .24                                       | 344                                                              | 250                                | 49                                                | 197                                    | 610                                                        |
| FEB.<br>13... | .3                                               | --                                | .29                                       | .81                                       | --                                                       | .15                                       | 308                                                              | 220                                | 64                                                | 154                                    | 520                                                        |
| MAR.<br>27... | .4                                               | 2.7                               | .21                                       | .55                                       | .14                                                      | .23                                       | 299                                                              | 210                                | 50                                                | 159                                    | 518                                                        |
| APR.<br>24... | .9                                               | 3.5                               | .05                                       | 1.6                                       | .12                                                      | .34                                       | 294                                                              | 210                                | 57                                                | 151                                    | 485                                                        |
| MAY<br>30...  | .2                                               | --                                | .09                                       | 1.8                                       | --                                                       | .53                                       | 230                                                              | 170                                | 42                                                | 130                                    | 400                                                        |
| JUNE<br>25... | .3                                               | 2.9                               | .02                                       | 1.6                                       | .12                                                      | .41                                       | 274                                                              | 200                                | 39                                                | 161                                    | 470                                                        |
| JULY<br>31... | .4                                               | 2.2                               | .05                                       | 1.1                                       | .13                                                      | .23                                       | 366                                                              | 240                                | 59                                                | 185                                    | 595                                                        |
| AUG.<br>27... | .3                                               | --                                | .05                                       | 1.0                                       | --                                                       | .26                                       | --                                                               | 210                                | 60                                                | 154                                    | 530                                                        |
| SEP.<br>24... | .1                                               | .72                               | .03                                       | .61                                       | .11                                                      | .15                                       | 364                                                              | 210                                | 46                                                | 169                                    | 560                                                        |

## MISSISSIPPI RIVER MAIN STEM

07022000 MISSISSIPPI RIVER AT THEBES, ILL.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE       | DIS-SOLVED<br>CADMIUM<br>(CD)<br>(UG/L) | DIS-SOLVED<br>CHROMIUM<br>(CR)<br>(UG/L) | DIS-SOLVED<br>COBALT<br>(CO)<br>(UG/L) | DIS-SOLVED<br>COPPER<br>(CU)<br>(UG/L) | DIS-SOLVED<br>LEAD<br>(PB)<br>(UG/L) | DIS-SOLVED<br>MERCURY<br>(HG)<br>(UG/L) | DIS-SOLVED<br>SELENIUM<br>(SE)<br>(UG/L) | DIS-SOLVED<br>ZINC<br>(ZN)<br>(UG/L) | DIS-SOLVED<br>ARSENIC<br>(AS)<br>(UG/L) | TOTAL<br>CADMIUM<br>(CD)<br>(UG/L) |
|------------|-----------------------------------------|------------------------------------------|----------------------------------------|----------------------------------------|--------------------------------------|-----------------------------------------|------------------------------------------|--------------------------------------|-----------------------------------------|------------------------------------|
| NOV. 14... | 1                                       | 0                                        | 0                                      | 10                                     | 3                                    | .0                                      | 4                                        | 50                                   | 2                                       | <10                                |
| FEB. 13... | 1                                       | 0                                        | 1                                      | 12                                     | 7                                    | .0                                      | 2                                        | 10                                   | 0                                       | <10                                |
| MAY 30...  | 1                                       | 0                                        | 0                                      | 8                                      | 7                                    | .2                                      | 0                                        | 20                                   | 1                                       | <10                                |
| AUG. 27... | --                                      | --                                       | --                                     | --                                     | --                                   | .5                                      | 1                                        | 20                                   | 3                                       | <10                                |

| DATE       | TOTAL<br>CHROMIUM<br>(CR)<br>(UG/L) | TOTAL<br>COBALT<br>(CO)<br>(UG/L) | TOTAL<br>COPPER<br>(CU)<br>(UG/L) | TOTAL<br>IRON<br>(FE)<br>(UG/L) | TOTAL<br>LEAD<br>(PB)<br>(UG/L) | TOTAL<br>MANGANESE<br>(MN)<br>(UG/L) | TOTAL<br>MERCURY<br>(HG)<br>(UG/L) | TOTAL<br>SELENIUM<br>(SE)<br>(UG/L) | TOTAL<br>ZINC<br>(ZN)<br>(UG/L) | TOTAL<br>ARSENIC<br>(AS)<br>(UG/L) |
|------------|-------------------------------------|-----------------------------------|-----------------------------------|---------------------------------|---------------------------------|--------------------------------------|------------------------------------|-------------------------------------|---------------------------------|------------------------------------|
| NOV. 14... | 0                                   | 50                                | 40                                | 4700                            | <100                            | 260                                  | .2                                 | 2                                   | 70                              | 3                                  |
| FEB. 13... | 0                                   | <50                               | 20                                | 4600                            | <100                            | 180                                  | .0                                 | 3                                   | 50                              | 21                                 |
| MAY 30...  | 0                                   | <50                               | 30                                | 14000                           | <100                            | 690                                  | .2                                 | 9                                   | 90                              | 14                                 |
| AUG. 27... | 0                                   | <50                               | 30                                | 3500                            | <100                            | 240                                  | .1                                 | 2                                   | 50                              | 4                                  |

| DATE       | DIS-SOLVED<br>NATURAL<br>URANIUM<br>(U)<br>(UG/L) | DIS-SOLVED<br>RA-226<br>(RADON<br>METHOD)<br>(PC/L) | DIS-SOLVED<br>GROSS<br>ALPHA<br>AS<br>U-NAT.<br>(UG/L) | DIS-SOLVED<br>GROSS<br>BETA<br>AS SR90<br>/Y90<br>(PC/L) | DIS-SOLVED<br>GROSS<br>BETA<br>AS<br>CS-137<br>(PC/L) | SUS-PENDED<br>GROSS<br>ALPHA<br>AS<br>U-NAT.<br>(UG/L) | SUS-PENDED<br>GROSS<br>BETA<br>AS SR90<br>/Y90<br>(PC/L) | SUS-PENDED<br>GROSS<br>BETA<br>AS<br>CS-137<br>(PC/L) | TOTAL<br>FILT-<br>RABLE<br>RESIDUE<br>(MG/L) | TOTAL<br>NON-<br>FILT-<br>RABLE<br>RESIDUE<br>(MG/L) |
|------------|---------------------------------------------------|-----------------------------------------------------|--------------------------------------------------------|----------------------------------------------------------|-------------------------------------------------------|--------------------------------------------------------|----------------------------------------------------------|-------------------------------------------------------|----------------------------------------------|------------------------------------------------------|
| OCT. 16... | 1.8                                               | .09                                                 | 12                                                     | 7.4                                                      | 9.1                                                   | 46                                                     | 26                                                       | 32                                                    | 320                                          | 740                                                  |
| NOV. 14... | 2.7                                               | .07                                                 | 4.8                                                    | 6.2                                                      | 7.5                                                   | 5.5                                                    | 6.4                                                      | 7.3                                                   | 350                                          | 140                                                  |
| DEC. 11... | 1.3                                               | .10                                                 | 5.9                                                    | 5.0                                                      | 6.3                                                   | 42                                                     | 17                                                       | 20                                                    | 240                                          | 560                                                  |
| FEB. 13... | 2.0                                               | .08                                                 | <3.5                                                   | 4.5                                                      | 5.5                                                   | 9.5                                                    | 6.0                                                      | 7.4                                                   | 320                                          | 180                                                  |
| MAR. 27... | 2.0                                               | .06                                                 | 5.6                                                    | 3.4                                                      | 4.3                                                   | 5.3                                                    | 5.1                                                      | 6.0                                                   | 340                                          | 100                                                  |
| APR. 24... | 1.9                                               | .07                                                 | 13                                                     | 6.1                                                      | 7.6                                                   | 9.8                                                    | 10                                                       | 13                                                    | 310                                          | 240                                                  |
| MAY 30...  | 1.3                                               | .08                                                 | 4.9                                                    | 7.6                                                      | 9.4                                                   | 32                                                     | 18                                                       | 23                                                    | 250                                          | 600                                                  |
| JUNE 25... | 2.0                                               | .08                                                 | 3.4                                                    | 2.6                                                      | 3.2                                                   | 23                                                     | 10                                                       | 12                                                    | 210                                          | 300                                                  |
| JULY 31... | 2.5                                               | .11                                                 | 10                                                     | 6.6                                                      | 7.9                                                   | 2.7                                                    | 2.4                                                      | 2.8                                                   | 390                                          | 46                                                   |
| AUG. 27... | 2.2                                               | .07                                                 | 7.6                                                    | 6.4                                                      | 7.9                                                   | 12                                                     | 5.5                                                      | 6.9                                                   | 350                                          | 150                                                  |

07022000 Mississippi River at Thebes, Ill.--Continued

PHYTOPLANKTON, CODOMINANT GENERA, FEBRUARY 1973 TO SEPTEMBER 1974

| Date             | Total Cells | Organism     | Percent | Organism     | Percent | Organism    | Percent | Organism | Percent |
|------------------|-------------|--------------|---------|--------------|---------|-------------|---------|----------|---------|
| Feb. 21<br>1973  | 1,600       | Anabaena     | 74      |              |         |             |         |          |         |
| March 23         | 2,100       | Anabaena     | 40      | Cyclotella   | 21      | Navicula    | 21      |          |         |
| April 19         | 990         | Cyclotella   | 34      | Asterionella | 19      |             |         |          |         |
| May 23           | 5,100       | Actinastrum  | 39      | Asterionella | 19      | Ulothrix    | 21      |          |         |
| June 21          | 16          | Melosira     | 53      | Cyclotella   | 23      | Actinastrum | 23      |          |         |
| July 18          | 8,400       | Lyngbya      | 35      | Oscillatoria | 19      | Amacystis   | 16      |          |         |
| Aug. 14          | 220         | Oscillatoria | 40      | Melosira     | 20      |             |         |          |         |
| Sept. 12         | 1,800       | Oscillatoria | 52      | Cyclotella   | 18      |             |         |          |         |
| Oct. 16          | 39          | Melosira     | 73      | Cyclotella   | 27      |             |         |          |         |
| Nov. 14          | 160         | Melosira     | 43      | Cyclotella   | 33      |             |         |          |         |
| Dec. 11          | 16          | Melosira     | 67      |              |         |             |         |          |         |
| Jan. 17,<br>1974 | 410         | Cyclotella   | 85      |              |         |             |         |          |         |
| March 27         | 4,200       | Cyclotella   | 54      | Melosira     | 29      |             |         |          |         |
| April 24         | 2,900       | Cyclotella   | 31      | Scenedesmus  | 23      |             |         |          |         |
| May 30           | 8,300       | Oscillatoria | 48      | Melosira     | 18      |             |         |          |         |
| June 25          | 7,600       | Oscillatoria | 70      |              |         |             |         |          |         |
| July 31          | 20,000      | Cyclotella   | 48      |              |         |             |         |          |         |
| Aug. 27          | 4,200       | Cyclotella   | 58      |              |         |             |         |          |         |
| Sept. 24         | 15,000      | Cyclotella   | 41      | Scenedesmus  | 24      |             |         |          |         |

## PERIPHYTON, JULY 1973 TO JUNE 1974

| Date             | Dry weight<br>grams/m | Ash weight<br>grams/m | Chlorophyll a<br>grams/m <sup>2</sup> | Chlorophyll b<br>grams/m <sup>2</sup> | Pigment ratio |
|------------------|-----------------------|-----------------------|---------------------------------------|---------------------------------------|---------------|
| July 17,<br>1973 | 0.8                   | 0                     |                                       |                                       |               |
| Dec. 11          | 1.4                   | 0.7                   |                                       |                                       |               |
| Feb. 20,<br>1974 | 0.77                  | 0                     |                                       |                                       |               |
| March 26         | 61                    | 58                    |                                       |                                       |               |
| June 24          | 17                    | 12                    | 7.7                                   | 6.0                                   | 0.6           |

07040100 ST. FRANCIS RIVER AT ST. FRANCIS, ARK.

LOCATION.--Lat 36°27'20", long 90°08'13", Clay County, at gaging station at bridge on U.S. Highway 62 at St. Francis.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE          | DIS-<br>CHARGE<br>(CFS) | DIS-<br>SOLVED<br>SILICA<br>(SiO <sub>2</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>IRON<br>(FE)<br>(UG/L) | DIS-<br>SOLVED<br>MAN-<br>GANESE<br>(MN)<br>(UG/L) | DIS-<br>SOLVED<br>CAL-<br>CIUM<br>(CA)<br>(MG/L) | DIS-<br>SOLVED<br>MAG-<br>NE-<br>SIUM<br>(MG)<br>(MG/L) | DIS-<br>SOLVED<br>SODIUM<br>(NA)<br>(MG/L) | DIS-<br>SOLVED<br>PO-<br>TAS-<br>SIUM<br>(K)<br>(MG/L) | BICAR-<br>BONATE<br>(HCO <sub>3</sub> )<br>(MG/L) | CAR-<br>BONATE<br>(CO <sub>3</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>SULFATE<br>(SO <sub>4</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>CHLO-<br>RIDE<br>(CL)<br>(MG/L) |
|---------------|-------------------------|-----------------------------------------------------------|------------------------------------------|----------------------------------------------------|--------------------------------------------------|---------------------------------------------------------|--------------------------------------------|--------------------------------------------------------|---------------------------------------------------|------------------------------------------------|-----------------------------------------------------------|---------------------------------------------------|
| OCT.<br>15... | 655                     | 9.2                                                       | 10                                       | 70                                                 | 27                                               | 13                                                      | 4.3                                        | 1.7                                                    | 158                                               | 0                                              | 12                                                        | 3.2                                               |
| DEC.<br>10... | 1080                    | 6.3                                                       | 250                                      | 80                                                 | 9.5                                              | 4.7                                                     | 2.1                                        | 1.9                                                    | 42                                                | 0                                              | 7.9                                                       | 1.8                                               |
| FEB.<br>12... | 2280                    | 7.2                                                       | 90                                       | 50                                                 | 15                                               | 8.1                                                     | 3.6                                        | 1.3                                                    | 72                                                | 0                                              | 13                                                        | 3.4                                               |
| APR.<br>23... | 3520                    | 5.9                                                       | 130                                      | 10                                                 | 12                                               | 5.8                                                     | 3.2                                        | 1.8                                                    | 56                                                | 0                                              | 10                                                        | 3.0                                               |
| JUNE<br>24... | 3150                    | 7.3                                                       | 40                                       | 20                                                 | 16                                               | 8.8                                                     | 2.4                                        | 1.3                                                    | 80                                                | 0                                              | 12                                                        | 2.2                                               |
| AUG.<br>26... | 469                     | 10                                                        | 50                                       | 130                                                | 24                                               | 10                                                      | 5.6                                        | 2.3                                                    | 112                                               | 0                                              | 14                                                        | 5.1                                               |

| DATE          | NON-<br>CAR-<br>BONATE<br>HARD-<br>NESS<br>(MG/L) | ALKA-<br>LINITY<br>AS<br>CaCO <sub>3</sub><br>(MG/L) | SPE-<br>CIFIC<br>CON-<br>DUCT-<br>ANCE<br>(MICRO-<br>MHOS) | PH<br>(UNITS) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | CHEM-<br>ICAL<br>OXYGEN<br>DEMAND<br>(LOW<br>LEVEL)<br>(MG/L) | DIS-<br>SOLVED<br>OXYGEN<br>(MG/L) | PER-<br>CENT<br>SATUR-<br>ATION | FECAL<br>COLI-<br>FORM<br>(COL.<br>PER<br>100 ML) | STREP-<br>TOCOCCI<br>(COL-<br>ONIES<br>PER<br>100 ML) |
|---------------|---------------------------------------------------|------------------------------------------------------|------------------------------------------------------------|---------------|----------------------------------------------|-----------------------------|---------------------------------------------------------------|------------------------------------|---------------------------------|---------------------------------------------------|-------------------------------------------------------|
| OCT.<br>15... | 0                                                 | 130                                                  | 245                                                        | 7.8           | 7                                            | 22.0                        | 15                                                            | 7.4                                | 84                              | 180                                               | 1000                                                  |
| DEC.<br>10... | 9                                                 | 34                                                   | 101                                                        | 7.4           | 80                                           | 8.5                         | 17                                                            | 8.8                                | 75                              | 200                                               | 720                                                   |
| FEB.<br>12... | 12                                                | 59                                                   | 163                                                        | 7.6           | 20                                           | 6.5                         | 1                                                             | 10.3                               | 84                              | <10                                               | 30                                                    |
| APR.<br>23... | 8                                                 | 46                                                   | 126                                                        | 7.4           | 70                                           | 17.5                        | 25                                                            | 7.7                                | 80                              | 6800                                              | 7800                                                  |
| JUNE<br>24... | 11                                                | 66                                                   | 156                                                        | 7.8           | 5                                            | 24.0                        | 7                                                             | 7.0                                | 82                              | 60                                                | 80                                                    |
| AUG.<br>26... | 9                                                 | 92                                                   | 213                                                        | 7.7           | 40                                           | 27.0                        | 24                                                            | 6.8                                | 85                              | 300                                               | 1200                                                  |

07040100 ST. FRANCIS RIVER AT ST. FRANCIS, ARK.--Continued

PERIOD OF RECORD.--Chemical analyses: July 1969 to September 1974.

REMARKS.--Discharge obtained from rating curves furnished by Memphis District, Corps of Engineers.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE          | DIS-<br>SOLVED<br>FLUO-<br>RIDE<br>(F)<br>(MG/L) | TOTAL<br>NITRATE<br>(N)<br>(MG/L) | AMMONIA<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | ORGANIC<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | DIS-<br>SOL-<br>VED-<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | TOTAL<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(RESI-<br>DUE AT<br>180 C)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(TONS<br>PER<br>AC-FT) | DIS-<br>SOLVED<br>SOLIDS<br>(TONS<br>PER<br>DAY) | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | PERCENT<br>SODIUM | HARD-<br>NESS<br>(CA,MG)<br>(MG/L) |
|---------------|--------------------------------------------------|-----------------------------------|-------------------------------------------|-------------------------------------------|----------------------------------------------------------|-------------------------------------------|------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------|-----------------------------------------|-------------------|------------------------------------|
| OCT.<br>15... | .1                                               | .44                               | .10                                       | .28                                       | .00                                                      | .08                                       | 139                                                              | .19                                                | 246                                              | .2                                      | 7                 | 120                                |
| DEC.<br>10... | .0                                               | .14                               | .14                                       | .49                                       | .02                                                      | .14                                       | 67                                                               | .09                                                | 195                                              | .1                                      | 9                 | 43                                 |
| FEB.<br>12... | .1                                               | .24                               | .05                                       | .25                                       | .02                                                      | .07                                       | 93                                                               | .13                                                | 573                                              | .2                                      | 10                | 71                                 |
| APR.<br>23... | .7                                               | .19                               | .30                                       | 1.1                                       | .05                                                      | .16                                       | 80                                                               | .11                                                | 760                                              | .2                                      | 11                | 54                                 |
| JUNE<br>24... | .1                                               | .00                               | .02                                       | .52                                       | --                                                       | .09                                       | 90                                                               | .12                                                | 765                                              | .1                                      | 6                 | 76                                 |
| AUG.<br>26... | .1                                               | .01                               | .17                                       | 1.1                                       | .03                                                      | .26                                       | 124                                                              | .17                                                | 157                                              | .2                                      | 10                | 100                                |



07050750 JAMES RIVER NEAR NIXA, MO.

LOCATION.--Lat 37°06'13", long 93°15'49", in SE¼NE¼ sec.30, T.28 N., R.21 W., Greene County, temperature recorder at gaging station on left bank, 0.5 mi (0.8 km) downstream from Springfield Utilities Dam, and 4.5 mi (7.2 km) northeast of Nixa.

DRAINAGE AREA.--273 mi<sup>2</sup> (707 km<sup>2</sup>).

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974  
(CONTINUOUS ETHYL-ALCOHOL-ACTUATED THERMOGRAPH)

|       | OCTOBER |      | NOVEMBER |      | DECEMBER |      | JANUARY |      | FEBRUARY |      | MARCH |      |
|-------|---------|------|----------|------|----------|------|---------|------|----------|------|-------|------|
| DAY   | MAX     | MIN  | MAX      | MIN  | MAX      | MIN  | MAX     | MIN  | MAX      | MIN  | MAX   | MIN  |
| 1     | 27.0    | 23.5 | 19.5     | 18.5 | 13.5     | 13.0 | 8.0     | 6.5  | 10.5     | 10.0 | 13.5  | 13.0 |
| 2     | 31.0    | 23.5 | 19.5     | 18.5 | 14.0     | 13.5 | 7.0     | 6.5  | 10.5     | 10.0 | 14.5  | 13.5 |
| 3     | 32.0    | 24.5 | 19.5     | 19.0 | 15.5     | 13.5 | 8.5     | 7.0  | 10.0     | 9.5  | 15.5  | 14.5 |
| 4     | 26.0    | 24.0 | 19.5     | 18.5 | 14.5     | 11.5 | 9.0     | 8.0  | 11.0     | 10.0 | 16.5  | 15.5 |
| 5     | 29.0    | 21.5 | 19.5     | 18.0 | 11.5     | 11.0 | 9.5     | 8.5  | 11.5     | 10.0 | 18.5  | 16.0 |
| 6     | 23.5    | 21.0 | 19.0     | 18.5 | 11.0     | 10.5 | 9.5     | 9.0  | 11.0     | 10.5 | 18.0  | 16.5 |
| 7     | 28.5    | 23.0 | 18.0     | 18.0 | 10.5     | 10.5 | 11.0    | 8.5  | 10.5     | 10.0 | 19.0  | 17.0 |
| 8     | 30.5    | 23.0 | 18.5     | 18.0 | 10.5     | 10.0 | 11.0    | 10.0 | 10.0     | 9.5  | 19.5  | 18.5 |
| 9     | 31.5    | 23.5 | 19.5     | 18.0 | 10.5     | 10.0 | 11.0    | 9.5  | 9.5      | 9.0  | 20.5  | 19.5 |
| 10    | 29.5    | 24.0 | 18.5     | 17.0 | 11.0     | 10.5 | 10.5    | 9.5  | 10.0     | 9.0  | 20.5  | 13.5 |
| 11    | 24.5    | 22.0 | 17.0     | 16.5 | 11.5     | 10.5 | 10.0    | 9.5  | 10.5     | 9.5  | 13.5  | 13.0 |
| 12    | 25.5    | 24.0 | 19.0     | 16.5 | 13.0     | 11.5 | 10.5    | 9.5  | 11.0     | 10.0 | 13.5  | 12.0 |
| 13    | 26.5    | 25.0 | 18.0     | 17.0 | 12.0     | 11.5 | 10.5    | 9.5  | 13.0     | 11.0 | 12.0  | 11.5 |
| 14    | 25.0    | 21.5 | 20.0     | 18.5 | 13.0     | 12.0 | 10.5    | 9.5  | 13.0     | 12.0 | 13.0  | 12.0 |
| 15    | 23.0    | 21.0 | 20.0     | 19.0 | 12.0     | 11.5 | 10.5    | 10.0 | 13.0     | 12.0 | 13.0  | 13.0 |
| 16    | 23.5    | 21.5 | 21.5     | 18.0 | 12.0     | 11.0 | 10.5    | 8.0  | 12.0     | 11.5 | 13.0  | 11.5 |
| 17    | 22.0    | 20.5 | 19.0     | 18.0 | 12.0     | 11.0 | 9.5     | 9.0  | 12.0     | 11.5 | 12.0  | 11.5 |
| 18    | 23.0    | 20.0 | 20.0     | 18.5 | 13.0     | 11.0 | 10.5    | 9.0  | 13.0     | 12.0 | 14.0  | 12.5 |
| 19    | 23.5    | 20.5 | 20.0     | 18.5 | 13.0     | 10.5 | 11.5    | 10.5 | 13.0     | 12.0 | 14.5  | 14.0 |
| 20    | 24.5    | 20.5 | 20.5     | 19.5 | 10.5     | 9.5  | 11.5    | 11.0 | 12.0     | 11.0 | 14.0  | 13.0 |
| 21    | 24.0    | 21.0 | 20.0     | 18.0 | 10.0     | 9.0  | 13.0    | 11.0 | 13.0     | 11.5 | 13.0  | 11.5 |
| 22    | 25.0    | 21.0 | 19.5     | 18.5 | 10.0     | 9.0  | 13.0    | 11.5 | 11.5     | 10.0 | 12.0  | 11.5 |
| 23    | 25.5    | 21.0 | 19.5     | 18.5 | 10.5     | 9.5  | 12.0    | 11.5 | 10.0     | 9.5  | 11.5  | 9.5  |
| 24    | 25.5    | 21.0 | 19.5     | 15.0 | 10.0     | 6.0  | 12.0    | 11.5 | 9.5      | 8.5  | 9.5   | 8.5  |
| 25    | 27.0    | 21.0 | 15.0     | 14.0 | 8.5      | 8.0  | 12.0    | 11.5 | 9.0      | 8.0  | 10.5  | 9.0  |
| 26    | 28.0    | 22.0 | 14.0     | 14.0 | 9.0      | 8.5  | 12.0    | 10.5 | 10.0     | 9.0  | 13.0  | 10.0 |
| 27    | 24.5    | 22.0 | 14.0     | 14.0 | 9.0      | 8.5  | 10.5    | 9.5  | 11.0     | 10.5 | 14.5  | 11.5 |
| 28    | 23.5    | 20.0 | 14.0     | 13.5 | 9.5      | 8.5  | 10.0    | 9.0  | 13.0     | 11.0 | 15.0  | 14.0 |
| 29    | 20.0    | 18.0 | 14.0     | 12.0 | 9.5      | 9.5  | 9.0     | 8.5  | ---      | ---  | 16.0  | 15.0 |
| 30    | 19.0    | 18.0 | 13.5     | 12.0 | 9.5      | 9.0  | 9.5     | 9.0  | ---      | ---  | 16.0  | 15.5 |
| 31    | 20.0    | 18.0 | ---      | ---  | 9.0      | 8.0  | 10.5    | 9.0  | ---      | ---  | 16.5  | 15.0 |
| MONTH | 32.0    | 18.0 | 21.5     | 12.0 | 15.5     | 6.0  | 13.0    | 6.5  | 13.0     | 8.0  | 20.5  | 8.5  |

07050750 JAMES RIVER NEAR NIXA, MO.--Continued

PERIOD OF RECORD.--Water temperatures: November 1966 to September 1974.

EXTREMES, 1973-74.--Water temperatures: Maximum, 35.0°C July 20, 21; minimum, 6.0°C Dec. 24.

EXTREMES, 1966-74.--Water temperatures: Maximum, 38.0°C Aug. 23, 1971, Aug. 21, 1973; minimum, 4°C Jan. 1, 2, 26, 1969.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974  
(CONTINUOUS ETHYL-ALCOHOL-ACTUATED THERMOGRAPH)

|       | APRIL |      | MAY  |      | JUNE |      | JULY |      | AUGUST |      | SEPTEMBER |      |
|-------|-------|------|------|------|------|------|------|------|--------|------|-----------|------|
| DAY   | MAX   | MIN  | MAX  | MIN  | MAX  | MIN  | MAX  | MIN  | MAX    | MIN  | MAX       | MIN  |
| 1     | 18.0  | 16.5 | 23.5 | 23.0 | 28.0 | 25.5 | 31.0 | 26.5 | 33.0   | 24.0 | 25.0      | 24.0 |
| 2     | 19.5  | 18.0 | 23.5 | 21.0 | 27.0 | 25.0 | 32.0 | 29.0 | 29.0   | 23.0 | 24.5      | 20.5 |
| 3     | 19.5  | 17.0 | 20.5 | 20.0 | 28.0 | 25.0 | 33.5 | 30.0 | 28.0   | 20.5 | 20.5      | 19.0 |
| 4     | 17.0  | 15.5 | 20.0 | 19.0 | 26.5 | 26.0 | 32.0 | 30.5 | 28.5   | 18.5 | 19.5      | 18.0 |
| 5     | 16.0  | 15.0 | 20.0 | 18.5 | 26.5 | 25.0 | 34.0 | 30.0 | 30.0   | 19.5 | 20.5      | 18.5 |
| 6     | 15.5  | 15.0 | 21.0 | 19.5 | 25.0 | 24.0 | 33.5 | 30.5 | 24.0   | 20.5 | 21.0      | 18.5 |
| 7     | 15.5  | 15.0 | 21.5 | 20.5 | 24.0 | 18.0 | 33.5 | 31.0 | 26.5   | 20.5 | 21.5      | 19.0 |
| 8     | 16.5  | 15.5 | 23.0 | 21.0 | 18.0 | 18.0 | 33.5 | 30.0 | 27.0   | 23.0 | 22.0      | 20.0 |
| 9     | 16.5  | 15.5 | 23.0 | 22.0 | 18.5 | 18.0 | 33.5 | 29.5 | 25.5   | 23.5 | 23.5      | 21.5 |
| 10    | 17.0  | 16.0 | 23.5 | 21.5 | 19.5 | 18.0 | 33.5 | 30.0 | 27.0   | 24.5 | 25.5      | 23.0 |
| 11    | 17.0  | 16.5 | 23.0 | 21.0 | 19.5 | 18.5 | 33.5 | 29.5 | 28.5   | 23.0 | 27.0      | 23.5 |
| 12    | 17.0  | 16.0 | 23.5 | 21.5 | 18.5 | 18.0 | 34.0 | 29.0 | 27.0   | 22.0 | 28.5      | 25.0 |
| 13    | 19.5  | 17.0 | 25.0 | 23.0 | 19.0 | 18.0 | 33.5 | 29.0 | 28.5   | 21.5 | 25.5      | 24.0 |
| 14    | 19.5  | 18.0 | 24.5 | 23.0 | 20.5 | 19.0 | 33.5 | 29.0 | 29.5   | 21.5 | 26.0      | 22.0 |
| 15    | 18.5  | 17.0 | 23.0 | 19.5 | 23.5 | 20.5 | 32.0 | 28.5 | 26.0   | 21.5 | 24.5      | 21.5 |
| 16    | 18.5  | 17.0 | 21.5 | 19.0 | 23.0 | 21.0 | 33.0 | 28.5 | 29.0   | 20.5 | 24.5      | 22.0 |
| 17    | 18.5  | 17.0 | 23.5 | 21.5 | 21.5 | 21.0 | 32.0 | 28.0 | 34.0   | 21.0 | 25.5      | 23.5 |
| 18    | 19.5  | 17.0 | 24.0 | 22.0 | 23.0 | 20.5 | 33.0 | 28.5 | 29.5   | 20.5 | 29.0      | 23.5 |
| 19    | 21.0  | 19.0 | 25.5 | 22.0 | 24.5 | 22.0 | 34.5 | 29.0 | 21.0   | 19.5 | 25.5      | 23.5 |
| 20    | 21.0  | 20.0 | 28.5 | 24.5 | 27.0 | 24.5 | 35.0 | 29.5 | 33.0   | 19.5 | 27.0      | 25.5 |
| 21    | 21.0  | 21.5 | 28.0 | 26.0 | 29.0 | 26.0 | 35.0 | 28.5 | 33.0   | 21.5 | 26.5      | 25.5 |
| 22    | 22.0  | 20.5 | 28.5 | 25.5 | 29.5 | 28.0 | 34.5 | 28.5 | 30.0   | 23.0 | 24.0      | 23.5 |
| 23    | 21.5  | 20.0 | 28.0 | 26.0 | 29.0 | 26.5 | 33.0 | 28.5 | 26.5   | 21.5 | 23.5      | 22.0 |
| 24    | 21.0  | 19.5 | 26.5 | 26.0 | 28.0 | 25.0 | 31.5 | 25.0 | 30.5   | 23.5 | 23.5      | 21.5 |
| 25    | 20.5  | 19.5 | 26.0 | 24.0 | 26.5 | 24.5 | 27.0 | 24.5 | 32.0   | 23.0 | 24.0      | 21.0 |
| 26    | 21.5  | 19.5 | 24.0 | 22.0 | 26.0 | 24.0 | 31.0 | 26.0 | 30.0   | 22.5 | 23.5      | 21.0 |
| 27    | 22.0  | 20.0 | 22.0 | 21.0 | 27.0 | 24.0 | 31.5 | 25.5 | 26.5   | 22.0 | 25.0      | 21.5 |
| 28    | 23.0  | 21.5 | 24.5 | 21.5 | 27.0 | 24.5 | 32.0 | 25.5 | 26.5   | 24.5 | 24.0      | 23.0 |
| 29    | 23.5  | 23.0 | 25.5 | 23.5 | 27.0 | 24.5 | 30.0 | 25.0 | 24.5   | 23.5 | 24.0      | 21.5 |
| 30    | 24.5  | 23.0 | 28.5 | 25.0 | 28.0 | 25.5 | 30.5 | 23.0 | 26.0   | 24.5 | 25.5      | 21.5 |
| 31    | ---   | ---  | 28.0 | 27.0 | ---  | ---  | 31.5 | 22.0 | 29.0   | 24.5 | ---       | ---  |
| MONTH | 24.5  | 15.0 | 28.5 | 18.5 | 29.5 | 18.0 | 35.0 | 22.0 | 34.0   | 18.5 | 29.0      | 18.0 |

07051600 JAMES RIVER NEAR WILSON CREEK, MO.

LOCATION.--Lat 37°04'35", long 93°22'15", Christian County, at Nelson Mill Bridge on county road 2.5 mi (4.0 km) southeast of Wilson Creek, and 2 mi (3.2 km) upstream from Wilson Creek.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE  | DIS-<br>CHARGE<br>(CFS) | DIS-<br>SOLVED<br>SILICA<br>(SI02)<br>(MG/L) | DIS-<br>SOLVED<br>IRON<br>(FE)<br>(UG/L) | DIS-<br>SOLVED<br>MAN-<br>GANESE<br>(MN)<br>(UG/L) | DIS-<br>SOLVED<br>CAL-<br>CIUM<br>(CA)<br>(MG/L) | DIS-<br>SOLVED<br>MAG-<br>NE-<br>SIUM<br>(MG) | DIS-<br>SOLVED<br>SODIUM<br>(NA)<br>(MG/L) | DIS-<br>SOLVED<br>PO-<br>TAS-<br>SIUM<br>(K)<br>(MG/L) | BICAR-<br>BONATE<br>(HCO3)<br>(MG/L) | CAR-<br>BONATE<br>(CO3)<br>(MG/L) | DIS-<br>SOLVED<br>SULFATE<br>(SO4)<br>(MG/L) | DIS-<br>SOLVED<br>CHLO-<br>RIDE<br>(CL)<br>(MG/L) |
|-------|-------------------------|----------------------------------------------|------------------------------------------|----------------------------------------------------|--------------------------------------------------|-----------------------------------------------|--------------------------------------------|--------------------------------------------------------|--------------------------------------|-----------------------------------|----------------------------------------------|---------------------------------------------------|
| OCT.  |                         |                                              |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                      |                                   |                                              |                                                   |
| 01... | 97                      | 8.4                                          | 30                                       | 80                                                 | 63                                               | 6.1                                           | 6.3                                        | 2.4                                                    | 204                                  | 0                                 | 11                                           | 9.2                                               |
| NOV.  |                         |                                              |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                      |                                   |                                              |                                                   |
| 05... | 177                     | 9.2                                          | 40                                       | 30                                                 | 61                                               | 7.0                                           | 4.4                                        | 2.3                                                    | 192                                  | 0                                 | 9.9                                          | 8.2                                               |
| DEC.  |                         |                                              |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                      |                                   |                                              |                                                   |
| 06... | 1080                    | 9.6                                          | 60                                       | 10                                                 | 44                                               | 4.9                                           | 3.0                                        | 1.8                                                    | 138                                  | 0                                 | 7.4                                          | 5.3                                               |
| 18... | 250                     | --                                           | --                                       | --                                                 | --                                               | --                                            | --                                         | --                                                     | --                                   | --                                | --                                           | --                                                |
| JAN.  |                         |                                              |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                      |                                   |                                              |                                                   |
| 07... | 276                     | 8.9                                          | 50                                       | 40                                                 | 54                                               | 6.7                                           | 4.7                                        | 1.4                                                    | 176                                  | 0                                 | 11                                           | 8.1                                               |
| 24... | 395                     | --                                           | --                                       | --                                                 | --                                               | --                                            | --                                         | --                                                     | 158                                  | 0                                 | --                                           | --                                                |
| FEB.  |                         |                                              |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                      |                                   |                                              |                                                   |
| 07... | 250                     | 7.1                                          | 70                                       | 0                                                  | 52                                               | 6.5                                           | 4.1                                        | 1.3                                                    | 180                                  | 0                                 | 9.4                                          | 7.9                                               |
| 21... | 350                     | --                                           | --                                       | --                                                 | --                                               | --                                            | --                                         | --                                                     | --                                   | --                                | --                                           | --                                                |
| MAR.  |                         |                                              |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                      |                                   |                                              |                                                   |
| 04... | 340                     | --                                           | --                                       | --                                                 | --                                               | --                                            | --                                         | --                                                     | --                                   | --                                | --                                           | --                                                |
| 19... | 760                     | 8.8                                          | 40                                       | 0                                                  | 46                                               | 5.4                                           | 3.2                                        | 1.3                                                    | 150                                  | 0                                 | 7.8                                          | 5.1                                               |
| APR.  |                         |                                              |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                      |                                   |                                              |                                                   |
| 02... | 737                     | --                                           | --                                       | --                                                 | --                                               | --                                            | --                                         | --                                                     | --                                   | --                                | --                                           | --                                                |
| 18... | 315                     | 6.3                                          | 40                                       | 0                                                  | 46                                               | 7.4                                           | 4.1                                        | 1.3                                                    | 156                                  | 0                                 | 9.3                                          | 6.5                                               |
| 30... | 345                     | --                                           | --                                       | --                                                 | --                                               | --                                            | --                                         | --                                                     | --                                   | --                                | --                                           | --                                                |
| MAY   |                         |                                              |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                      |                                   |                                              |                                                   |
| 15... | 960                     | 7.0                                          | 40                                       | 0                                                  | 44                                               | 6.7                                           | 3.4                                        | 1.5                                                    | 160                                  | 0                                 | 8.2                                          | 5.3                                               |
| 28... | 250                     | --                                           | --                                       | --                                                 | --                                               | --                                            | --                                         | --                                                     | --                                   | --                                | --                                           | --                                                |
| JUNE  |                         |                                              |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                      |                                   |                                              |                                                   |
| 12... | 1500                    | 11                                           | 20                                       | 0                                                  | 46                                               | 4.6                                           | 9.8                                        | 1.2                                                    | 164                                  | 0                                 | 6.4                                          | 4.9                                               |
| 25... | 260                     | --                                           | --                                       | --                                                 | --                                               | --                                            | --                                         | --                                                     | --                                   | --                                | --                                           | --                                                |
| JULY  |                         |                                              |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                      |                                   |                                              |                                                   |
| 10... | 100                     | 11                                           | 30                                       | 20                                                 | 57                                               | 8.7                                           | 4.5                                        | 1.5                                                    | 188                                  | 0                                 | 9.7                                          | 7.0                                               |
| 24... | 50                      | --                                           | --                                       | --                                                 | --                                               | --                                            | --                                         | --                                                     | 192                                  | 0                                 | --                                           | --                                                |
| AUG.  |                         |                                              |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                      |                                   |                                              |                                                   |
| 08... | 39                      | 10                                           | 10                                       | 10                                                 | 59                                               | 5.7                                           | 5.8                                        | 1.5                                                    | 188                                  | 0                                 | 12                                           | 8.1                                               |
| 21... | 30                      | --                                           | --                                       | --                                                 | --                                               | --                                            | --                                         | --                                                     | 210                                  | 0                                 | --                                           | --                                                |
| SEP.  |                         |                                              |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                      |                                   |                                              |                                                   |
| 03... | 400                     | 9.7                                          | 40                                       | 10                                                 | 49                                               | 6.3                                           | 4.3                                        | 2.3                                                    | 160                                  | 0                                 | 9.0                                          | 7.6                                               |
| 17... | 129                     | --                                           | --                                       | --                                                 | --                                               | --                                            | --                                         | --                                                     | 196                                  | 0                                 | --                                           | --                                                |

| DATE  | NON-<br>CAR-<br>BONATE<br>HARD-<br>NESS<br>(MG/L) | ALKA-<br>LINITY<br>AS<br>CACO3<br>(MG/L) | SPE-<br>CIFIC<br>CON-<br>DUCT-<br>ANCE<br>(MICRO-<br>MHOS) | PH<br>(UNITS) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | CHEM-<br>ICAL<br>OXYGEN<br>DEMAND<br>(LOW<br>LEVEL)<br>(MG/L) | DIS-<br>SOLVED<br>OXYGEN<br>(MG/L) | PER-<br>CENT<br>SATUR-<br>ATION | FECAL<br>COLI-<br>FORM<br>(COL.<br>PER<br>100 ML) | STREP-<br>TOCOCCI<br>(COL-<br>ONIES<br>PER<br>100 ML) |
|-------|---------------------------------------------------|------------------------------------------|------------------------------------------------------------|---------------|----------------------------------------------|-----------------------------|---------------------------------------------------------------|------------------------------------|---------------------------------|---------------------------------------------------|-------------------------------------------------------|
| OCT.  |                                                   |                                          |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 01... | 15                                                | 167                                      | 357                                                        | 7.7           | 2                                            | 19.5                        | 7                                                             | 6.5                                | 70                              | 300                                               | 540                                                   |
| NOV.  |                                                   |                                          |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 05... | 24                                                | 157                                      | 390                                                        | 7.8           | 5                                            | 14.0                        | 8                                                             | 8.6                                | 83                              | 810                                               | 80                                                    |
| DEC.  |                                                   |                                          |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 06... | 17                                                | 113                                      | 270                                                        | 7.6           | 10                                           | 10.0                        | 10                                                            | 8.6                                | 76                              | 280                                               | 2400                                                  |
| 18... | --                                                | --                                       | 320                                                        | 8.0           | --                                           | 12.0                        | --                                                            | 8.8                                | 81                              | 42                                                | --                                                    |
| JAN.  |                                                   |                                          |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 07... | 18                                                | 144                                      | 330                                                        | 8.0           | 5                                            | 6.0                         | 4                                                             | 8.2                                | 66                              | 10                                                | 5                                                     |
| 24... | --                                                | 130                                      | 308                                                        | 7.9           | --                                           | 11.0                        | --                                                            | 10.5                               | 96                              | 26                                                | --                                                    |
| FEB.  |                                                   |                                          |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 07... | 9                                                 | 148                                      | 310                                                        | 8.0           | 8                                            | 9.0                         | 3                                                             | 10.0                               | 86                              | 20                                                | 8                                                     |
| 21... | --                                                | --                                       | 320                                                        | 8.0           | --                                           | 12.0                        | --                                                            | 8.8                                | 81                              | 42                                                | --                                                    |
| MAR.  |                                                   |                                          |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 04... | --                                                | --                                       | 312                                                        | 8.2           | --                                           | 16.5                        | --                                                            | 9.0                                | 92                              | 36                                                | --                                                    |
| 19... | 14                                                | 123                                      | 278                                                        | 7.9           | 7                                            | 12.5                        | 6                                                             | 9.3                                | 87                              | 310                                               | 120                                                   |
| APR.  |                                                   |                                          |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 02... | --                                                | --                                       | 308                                                        | 8.1           | --                                           | 17.0                        | --                                                            | 9.8                                | 101                             | 32                                                | --                                                    |
| 18... | 17                                                | 128                                      | 292                                                        | 8.0           | 3                                            | 17.0                        | 3                                                             | 9.0                                | 93                              | 100                                               | 40                                                    |
| 30... | --                                                | --                                       | 285                                                        | 7.8           | --                                           | 20.0                        | --                                                            | 6.4                                | 70                              | 640                                               | --                                                    |
| MAY   |                                                   |                                          |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 15... | 6                                                 | 131                                      | 285                                                        | 7.8           | 1                                            | 20.0                        | 22                                                            | 7.6                                | 83                              | 1600                                              | 1400                                                  |
| 28... | --                                                | --                                       | 352                                                        | 7.5           | --                                           | 20.5                        | --                                                            | 7.2                                | 80                              | 250                                               | --                                                    |
| JUNE  |                                                   |                                          |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 12... | 0                                                 | 135                                      | 310                                                        | 7.8           | 3                                            | 17.5                        | 3                                                             | 7.6                                | 79                              | 330                                               | 520                                                   |
| 25... | --                                                | --                                       | 350                                                        | 7.8           | --                                           | 22.0                        | --                                                            | 7.6                                | 86                              | 42                                                | --                                                    |
| JULY  |                                                   |                                          |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 10... | 24                                                | 154                                      | 358                                                        | 7.8           | 2                                            | 25.5                        | 6                                                             | 5.4                                | 66                              | --                                                | 90                                                    |
| 24... | --                                                | 157                                      | 360                                                        | 7.8           | --                                           | 24.0                        | --                                                            | 8.4                                | 99                              | 170                                               | --                                                    |
| AUG.  |                                                   |                                          |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 08... | 17                                                | 154                                      | 355                                                        | 7.7           | 2                                            | 21.5                        | 9                                                             | 6.9                                | 78                              | 160                                               | 280                                                   |
| 21... | --                                                | 172                                      | 360                                                        | 7.7           | --                                           | 23.5                        | --                                                            | 5.0                                | 58                              | 180                                               | --                                                    |
| SEP.  |                                                   |                                          |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 03... | 19                                                | 131                                      | 300                                                        | 7.8           | 7                                            | 21.0                        | 15                                                            | 7.3                                | 81                              | 1100                                              | 3800                                                  |
| 17... | --                                                | 161                                      | 360                                                        | 7.8           | --                                           | 20.0                        | --                                                            | 7.4                                | 80                              | 200                                               | --                                                    |

PERIOD OF RECORD.--Chemical analyses: August 1967 to September 1974.

[illegible]

07052100 WILSON CREEK NEAR SPRINGFIELD, MO.

LOCATION.--Lat 37°10'06", long 93°22'14", in NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec.6 T.28 N., R.22 W., Greene County, multi-parameter recorder at gaging station on right bank just downstream from bridge on county road, 1 mi (1.6 km) upstream from Southwest Sewage Treatment Plant of Springfield and South Creek.

DRAINAGE AREA.--31.4 mi<sup>2</sup> (81.3 km<sup>2</sup>).

PERIOD OF RECORD.--October 1972 to September 1974.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C) , WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCTOBER |     | NOVEMBER |     | DECEMBER |     | JANUARY |     | FEBRUARY |     | MARCH |     |
|-------|---------|-----|----------|-----|----------|-----|---------|-----|----------|-----|-------|-----|
|       | MAX     | MIN | MAX      | MIN | MAX      | MIN | MAX     | MIN | MAX      | MIN | MAX   | MIN |
| 1     | 365     | 160 | ---      | --- | 638      | 604 | ---     | --- | 586      | 570 | 600   | 560 |
| 2     | 460     | 365 | ---      | --- | 620      | 608 | ---     | --- | 636      | 578 | ---   | --- |
| 3     | 520     | 460 | 720      | 630 | 624      | 570 | ---     | --- | 596      | 570 | ---   | --- |
| 4     | 525     | 220 | 670      | 640 | 590      | 100 | ---     | --- | 614      | 572 | ---   | --- |
| 5     | 440     | 280 | 670      | 640 | 560      | 420 | ---     | --- | 614      | 558 | 554   | 512 |
| 6     | 550     | 440 | 678      | 660 | 600      | 530 | ---     | --- | 668      | 598 | 598   | 506 |
| 7     | 540     | 490 | 678      | 664 | 600      | 560 | ---     | --- | 646      | 594 | 584   | 518 |
| 8     | 500     | 430 | 762      | 666 | 610      | 580 | ---     | --- | 640      | 574 | 588   | 552 |
| 9     | 570     | 430 | 766      | 732 | 600      | 590 | ---     | --- | 780      | 606 | 602   | 254 |
| 10    | 580     | 550 | 754      | 696 | 600      | 590 | ---     | --- | 740      | 662 | 252   | 142 |
| 11    | 566     | 220 | 714      | 702 | 630      | 590 | ---     | --- | 662      | 612 | 378   | 156 |
| 12    | 356     | 120 | 718      | 686 | 630      | 580 | ---     | --- | 624      | 564 | 448   | 370 |
| 13    | 384     | 98  | 744      | 676 | 615      | 595 | ---     | --- | 640      | 550 | 528   | 452 |
| 14    | 502     | 386 | 728      | 662 | 640      | 600 | ---     | --- | 646      | 606 | 542   | 526 |
| 15    | 544     | 504 | 780      | 662 | 630      | 590 | ---     | --- | 656      | 580 | 542   | 154 |
| 16    | 566     | 546 | 796      | 748 | 620      | 600 | ---     | --- | 602      | 572 | 538   | 362 |
| 17    | 580     | 554 | 826      | 788 | 622      | 608 | ---     | --- | ---      | --- | 522   | 496 |
| 18    | 580     | 554 | 788      | 724 | 618      | 600 | ---     | --- | ---      | --- | 546   | 522 |
| 19    | 588     | 554 | 770      | 712 | 608      | 202 | ---     | --- | 472      | 284 | 576   | 438 |
| 20    | 642     | 568 | 766      | 160 | 536      | 406 | ---     | --- | 520      | 482 | 528   | 448 |
| 21    | 612     | 578 | 466      | 288 | 634      | 560 | 574     | 550 | ---      | --- | 540   | 388 |
| 22    | 602     | 558 | 558      | 472 | ---      | --- | 600     | 578 | ---      | --- | 544   | 482 |
| 23    | 566     | 542 | 618      | 562 | ---      | --- | 646     | 590 | ---      | --- | 524   | 488 |
| 24    | 554     | 540 | 626      | 100 | ---      | --- | 608     | 570 | ---      | --- | 980   | 480 |
| 25    | 562     | 540 | 460      | 156 | ---      | --- | 632     | 576 | ---      | --- | 902   | 558 |
| 26    | 564     | 544 | 470      | 182 | ---      | --- | 640     | 222 | 600      | 570 | 574   | 548 |
| 27    | ---     | --- | 590      | 468 | ---      | --- | 504     | 320 | 620      | 550 | 572   | 532 |
| 28    | ---     | --- | 600      | 476 | ---      | --- | 530     | 254 | 640      | 560 | 580   | 546 |
| 29    | 630     | 610 | 650      | 566 | ---      | --- | 544     | 420 | ---      | --- | 556   | 526 |
| 30    | 680     | 630 | 634      | 592 | ---      | --- | 592     | 544 | ---      | --- | 566   | 506 |
| 31    | ---     | --- | ---      | --- | ---      | --- | 586     | 572 | ---      | --- | 618   | 508 |
| MONTH | 680     | 98  | 826      | 100 | ---      | --- | ---     | --- | ---      | --- | 980   | 142 |

| DAY   | APRIL |     | MAY |     | JUNE |     | JULY |     | AUGUST |     | SEPTEMBER |     |
|-------|-------|-----|-----|-----|------|-----|------|-----|--------|-----|-----------|-----|
|       | MAX   | MIN | MAX | MIN | MAX  | MIN | MAX  | MIN | MAX    | MIN | MAX       | MIN |
| 1     | 550   | 494 | 460 | 366 | 608  | 542 | ---  | --- | 576    | 538 | 568       | 100 |
| 2     | 538   | 500 | 522 | 178 | 670  | 602 | ---  | --- | 580    | 548 | 350       | 194 |
| 3     | 546   | 496 | 460 | 290 | 746  | 602 | ---  | --- | 550    | 280 | 540       | 364 |
| 4     | 570   | 530 | 534 | 418 | 670  | 152 | ---  | --- | 334    | 318 | 562       | 542 |
| 5     | 554   | 520 | 584 | 540 | 388  | 150 | ---  | --- | 392    | 336 | 660       | 554 |
| 6     | 564   | 528 | 582 | 568 | 466  | 190 | ---  | --- | 606    | 394 | 666       | 602 |
| 7     | 544   | 522 | 576 | 564 | 396  | 110 | ---  | --- | 606    | 280 | 606       | 588 |
| 8     | 518   | 262 | 656 | 576 | 428  | 204 | ---  | --- | 354    | 284 | 610       | 578 |
| 9     | 508   | 440 | 598 | 562 | 442  | 210 | ---  | --- | 436    | 184 | 596       | 568 |
| 10    | 558   | 516 | 598 | 542 | ---  | --- | ---  | --- | 374    | 282 | 598       | 570 |
| 11    | 724   | 216 | 564 | 544 | ---  | --- | ---  | --- | 478    | 380 | 582       | 242 |
| 12    | 478   | 320 | 562 | 548 | ---  | --- | ---  | --- | 510    | 474 | 474       | 360 |
| 13    | 536   | 486 | 620 | 560 | ---  | --- | ---  | --- | 558    | 500 | 554       | 370 |
| 14    | 556   | 532 | 576 | 96  | ---  | --- | ---  | --- | 584    | 556 | 454       | 398 |
| 15    | 580   | 536 | 478 | 218 | ---  | --- | ---  | --- | 556    | 506 | 514       | 456 |
| 16    | 574   | 460 | 548 | 480 | ---  | --- | ---  | --- | ---    | --- | 576       | 258 |
| 17    | 512   | 438 | 584 | 550 | ---  | --- | ---  | --- | ---    | --- | 432       | 320 |
| 18    | 574   | 516 | 572 | 558 | ---  | --- | ---  | --- | ---    | --- | 490       | 440 |
| 19    | 574   | 532 | 630 | 572 | ---  | --- | ---  | --- | 432    | 336 | 560       | 120 |
| 20    | ---   | --- | 584 | 556 | ---  | --- | ---  | --- | 508    | 436 | 490       | 180 |
| 21    | ---   | --- | 578 | 534 | ---  | --- | ---  | --- | 572    | 386 | 560       | 460 |
| 22    | 322   | 198 | 584 | 540 | ---  | --- | ---  | --- | 414    | 210 | 530       | 480 |
| 23    | 506   | 252 | 614 | 498 | ---  | --- | ---  | --- | 408    | 240 | 560       | 480 |
| 24    | 584   | 512 | 680 | 432 | ---  | --- | 638  | 554 | 452    | 408 | 620       | 560 |
| 25    | 610   | 560 | 514 | 156 | ---  | --- | 612  | 116 | 482    | 454 | 610       | 580 |
| 26    | 598   | 542 | 402 | 138 | ---  | --- | 380  | 222 | 528    | 480 | 610       | 570 |
| 27    | 572   | 502 | 528 | 404 | ---  | --- | 460  | 390 | 584    | 162 | 590       | 560 |
| 28    | 570   | 528 | 606 | 516 | ---  | --- | 500  | 466 | 366    | 178 | 710       | 570 |
| 29    | 638   | 544 | 616 | 594 | ---  | --- | 510  | 496 | 400    | 348 | 650       | 430 |
| 30    | 600   | 142 | 618 | 554 | ---  | --- | 560  | 520 | 488    | 404 | 530       | 480 |
| 31    | ---   | --- | 606 | 554 | ---  | --- | 590  | 562 | 572    | 494 | ---       | --- |
| MONTH | 724   | 142 | 680 | 96  | ---  | --- | ---  | --- | 606    | 162 | 710       | 100 |

07052100 WILSON CREEK NEAR SPRINGFIELD, MO.--Continued

EXTREMES, 1973-74.--Water temperature: Maximum, 29.0°C Aug. 22; minimum, freezing point on many days during December and January.

EXTREMES, 1972-74.--Water temperature: Maximum, 29.0°C Aug. 22, 1974: minimum freezing point on many days during December 1973 and January 1974.

REMARKS.--Recorder inoperative on many days during the year.

PH (UNITS) , WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

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

| DAY   | APRIL |     | MAY |     | JUNE |     | JULY |     | AUGUST |     | SEPTEMBER |     |
|-------|-------|-----|-----|-----|------|-----|------|-----|--------|-----|-----------|-----|
|       | MAX   | MIN | MAX | MIN | MAX  | MIN | MAX  | MIN | MAX    | MIN | MAX       | MIN |
| 1     | 8.3   | 7.4 | 7.9 | 7.4 | 8.2  | 7.8 | 8.2  | 8.0 | 8.1    | 8.0 | 8.3       | 7.6 |
| 2     | 8.5   | 7.5 | 7.6 | 7.3 | 8.2  | 7.9 | 8.2  | 7.9 | 8.2    | 8.0 | 7.8       | 7.5 |
| 3     | 8.5   | 7.7 | 7.4 | 7.3 | 8.0  | 7.4 | 8.1  | 7.9 | 8.0    | 7.5 | 8.0       | 7.7 |
| 4     | 8.3   | 7.7 | 7.9 | 7.4 | 8.1  | 7.6 | 8.1  | 7.5 | 7.9    | 7.6 | 8.1       | 7.9 |
| 5     | 8.4   | 7.8 | 8.1 | 7.7 | 7.9  | 7.7 | 7.8  | 7.5 | 8.0    | 7.7 | 8.2       | 8.1 |
| 6     | 8.3   | 7.8 | 8.1 | 7.7 | 8.1  | 7.7 | 7.9  | 7.7 | 8.0    | 7.5 | 8.3       | 8.2 |
| 7     | 8.3   | 8.0 | 8.2 | 7.7 | 8.0  | 7.4 | 8.0  | 7.8 | 8.0    | 7.8 | 8.3       | 8.1 |
| 8     | 8.0   | 7.3 | 8.2 | 7.8 | 7.9  | 7.5 | 8.1  | 7.9 | 7.9    | 7.7 | 8.3       | 8.1 |
| 9     | 8.3   | 7.6 | 8.2 | 7.9 | 7.9  | 7.6 | 8.2  | 7.9 | 7.8    | 7.5 | 8.2       | 8.1 |
| 10    | 8.3   | 7.7 | 8.2 | 7.7 | 8.0  | 7.8 | 8.2  | 8.0 | 7.8    | 7.5 | 8.2       | 8.0 |
| 11    | 8.1   | 7.5 | 8.3 | 7.8 | 7.9  | 7.4 | 8.4  | 8.1 | 7.9    | 7.6 | 8.1       | 7.5 |
| 12    | 8.2   | 7.5 | 8.3 | 7.9 | 8.0  | 7.5 | 8.4  | 8.1 | 8.0    | 7.8 | 8.1       | 7.8 |
| 13    | 8.4   | 7.6 | 8.3 | 7.9 | 8.1  | 7.9 | 8.4  | 8.1 | 8.1    | 7.9 | 8.1       | 7.8 |
| 14    | 8.3   | 7.7 | 8.2 | 7.5 | 8.3  | 8.0 | 8.5  | 8.2 | 8.1    | 7.9 | 8.1       | 7.8 |
| 15    | 8.4   | 7.8 | 8.0 | 7.5 | 8.3  | 8.0 | 8.4  | 8.1 | 8.1    | 8.0 | 8.3       | 8.0 |
| 16    | 8.2   | 7.7 | 8.3 | 8.0 | 8.4  | 8.2 | 8.3  | 8.1 | 8.1    | 8.0 | 8.2       | 7.7 |
| 17    | 8.5   | 7.6 | 8.3 | 8.1 | 8.4  | 8.1 | 8.2  | 8.0 | ---    | --- | 8.0       | 7.8 |
| 18    | 8.6   | 7.8 | 8.4 | 8.2 | 8.3  | 7.8 | 8.2  | 8.0 | ---    | --- | 8.3       | 8.0 |
| 19    | 8.7   | 7.9 | 8.4 | 8.1 | 8.2  | 7.9 | 8.3  | 8.0 | 7.9    | 7.6 | 8.2       | 8.1 |
| 20    | ---   | --- | 8.4 | 8.1 | 8.3  | 7.9 | 8.3  | 8.1 | 8.0    | 7.9 | ---       | --- |
| 21    | ---   | --- | 8.2 | 7.9 | 8.4  | 8.0 | 8.1  | 7.9 | 8.1    | 7.7 | ---       | --- |
| 22    | ---   | --- | 8.2 | 7.8 | 8.2  | 7.9 | ---  | --- | 7.8    | 7.4 | ---       | --- |
| 23    | 8.4   | 7.8 | 8.2 | 7.8 | 8.2  | 7.9 | 8.2  | 7.8 | 7.7    | 7.4 | 8.4       | 8.2 |
| 24    | 8.4   | 7.7 | 8.0 | 7.6 | 8.2  | 7.9 | 8.1  | 8.0 | 7.8    | 7.6 | 8.3       | 8.2 |
| 25    | 8.6   | 7.8 | 7.9 | 7.7 | 8.3  | 7.9 | 8.2  | 7.4 | 8.0    | 7.7 | 8.4       | 8.2 |
| 26    | 8.6   | 7.0 | 8.1 | 7.7 | 8.2  | 7.9 | 7.9  | 7.4 | 8.0    | 7.8 | 8.6       | 8.4 |
| 27    | 8.7   | 7.8 | 8.1 | 7.8 | 8.3  | 7.9 | 8.0  | 7.6 | 8.1    | 7.5 | 8.5       | 8.5 |
| 28    | 8.5   | 7.8 | 8.2 | 8.0 | 8.4  | 7.9 | 8.0  | 7.6 | ---    | --- | 8.5       | 8.1 |
| 29    | 8.1   | 7.7 | 8.2 | 7.9 | 8.2  | 7.9 | 7.9  | 7.7 | 7.9    | 7.7 | 8.2       | 8.0 |
| 30    | 7.7   | 7.4 | 8.2 | 8.0 | 8.2  | 7.9 | 8.2  | 7.7 | 8.1    | 7.8 | 8.2       | 8.1 |
| 31    | ---   | --- | 8.1 | 7.9 | ---  | --- | 8.3  | 8.1 | 8.2    | 8.0 | ---       | --- |
| MONTH | 8.7   | 7.0 | 8.4 | 7.3 | 8.4  | 7.4 | 8.5  | 7.4 | 8.2    | 7.4 | 8.6       | 7.5 |



07052100 WILSON CREEK NEAR SPRINGFIELD, MO.--Continued

DISSOLVED OXYGEN (DO), IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

|       | OCTOBER |     | NOVEMBER |     | DECEMBER |      | JANUARY |      | FEBRUARY |      | MARCH |     |
|-------|---------|-----|----------|-----|----------|------|---------|------|----------|------|-------|-----|
| DAY   | MAX     | MIN | MAX      | MIN | MAX      | MIN  | MAX     | MIN  | MAX      | MIN  | MAX   | MIN |
| 1     | 6.3     | 5.7 | ---      | --- | 9.5      | 8.4  | ---     | ---  | 11.0     | 7.9  | 11.4  | 7.2 |
| 2     | 6.6     | 6.0 | ---      | --- | 9.0      | 8.1  | ---     | ---  | 11.3     | 7.0  | ---   | --- |
| 3     | 6.6     | 5.7 | ---      | --- | 9.1      | 8.2  | ---     | ---  | 13.1     | 8.3  | ---   | --- |
| 4     | 6.9     | 5.7 | ---      | --- | 8.5      | 7.4  | ---     | ---  | 13.3     | 8.0  | ---   | --- |
| 5     | 7.4     | 6.2 | ---      | --- | 9.3      | 8.5  | ---     | ---  | 13.3     | 6.9  | ---   | --- |
| 6     | 7.8     | 6.3 | 10.0     | 9.2 | 10.3     | 9.3  | ---     | ---  | 10.9     | 6.8  | 19.3  | 8.9 |
| 7     | 7.0     | 5.8 | 9.6      | 8.5 | 10.9     | 9.4  | ---     | ---  | 14.5     | 9.3  | 14.6  | 5.8 |
| 8     | 6.1     | 5.4 | 8.9      | 7.3 | 10.2     | 8.9  | ---     | ---  | 15.2     | 10.2 | 12.5  | 4.9 |
| 9     | 5.9     | 5.0 | 10.4     | 8.1 | 10.6     | 8.9  | ---     | ---  | 14.9     | 10.0 | 13.3  | 4.8 |
| 10    | 6.1     | 4.8 | 11.0     | 9.4 | 11.0     | 9.7  | ---     | ---  | 14.4     | 9.2  | 10.4  | 5.5 |
| 11    | 7.0     | 4.5 | 11.0     | 9.4 | 10.4     | 8.9  | ---     | ---  | 14.1     | 8.5  | 9.5   | 6.9 |
| 12    | 7.2     | 6.1 | 10.5     | 8.9 | 9.8      | 8.3  | ---     | ---  | 15.0     | 8.0  | 8.9   | 6.1 |
| 13    | 9.8     | 6.5 | 8.8      | 7.0 | 10.2     | 8.3  | ---     | ---  | 16.3     | 8.1  | 9.6   | 8.3 |
| 14    | 7.4     | 6.4 | 8.8      | 5.8 | 11.2     | 9.0  | ---     | ---  | 13.9     | 7.5  | 10.0  | 9.0 |
| 15    | 8.1     | 6.4 | 8.1      | 4.9 | 9.8      | 8.0  | ---     | ---  | 15.5     | 8.8  | 9.9   | 9.0 |
| 16    | 8.0     | 6.6 | 10.1     | 6.2 | 12.1     | 8.6  | ---     | ---  | ---      | ---  | 10.3  | 9.1 |
| 17    | 8.6     | 7.7 | 10.3     | 7.7 | 12.9     | 7.9  | ---     | ---  | ---      | ---  | 10.2  | 8.7 |
| 18    | 8.1     | 7.1 | 10.0     | 7.4 | 10.4     | 7.2  | ---     | ---  | ---      | ---  | 9.5   | 7.6 |
| 19    | 7.3     | 5.9 | 8.1      | 6.4 | 10.1     | 6.0  | ---     | ---  | 11.2     | 8.5  | 9.1   | 7.8 |
| 20    | ---     | --- | 6.4      | 5.1 | 11.5     | 9.9  | ---     | ---  | ---      | ---  | 10.0  | 8.7 |
| 21    | ---     | --- | 8.2      | 6.1 | 11.5     | 10.7 | 13.1    | 9.3  | ---      | ---  | 11.5  | 9.6 |
| 22    | ---     | --- | 8.3      | 7.2 | ---      | ---  | 11.3    | 7.6  | ---      | ---  | 11.1  | 9.0 |
| 23    | ---     | --- | 8.7      | 6.6 | ---      | ---  | 16.9    | 9.8  | ---      | ---  | 12.5  | 9.1 |
| 24    | ---     | --- | 7.8      | 4.3 | ---      | ---  | 18.3    | 11.1 | ---      | ---  | 12.6  | 9.4 |
| 25    | ---     | --- | ---      | --- | ---      | ---  | 18.5    | 11.7 | ---      | ---  | 11.7  | 9.6 |
| 26    | ---     | --- | ---      | --- | ---      | ---  | 13.7    | 9.4  | 12.1     | 9.3  | 11.8  | 8.4 |
| 27    | ---     | --- | 8.3      | 7.6 | ---      | ---  | 11.5    | 9.1  | 12.0     | 8.7  | 12.8  | 7.9 |
| 28    | ---     | --- | 9.1      | 7.6 | ---      | ---  | 10.2    | 9.0  | 12.2     | 7.8  | 13.1  | 7.1 |
| 29    | ---     | --- | 9.7      | 8.4 | ---      | ---  | 10.5    | 8.8  | ---      | ---  | 14.1  | 7.2 |
| 30    | ---     | --- | 9.1      | 8.5 | ---      | ---  | 10.5    | 8.5  | ---      | ---  | 15.0  | 7.4 |
| 31    | ---     | --- | ---      | --- | ---      | ---  | 10.9    | 7.8  | ---      | ---  | 15.0  | 7.1 |
| MONTH | ---     | --- | ---      | --- | ---      | ---  | ---     | ---  | ---      | ---  | 19.3  | 4.8 |

|       | APRIL |     | MAY  |     | JUNE |     | JULY |     | AUGUST |     | SEPTEMBER |     |
|-------|-------|-----|------|-----|------|-----|------|-----|--------|-----|-----------|-----|
| DAY   | MAX   | MIN | MAX  | MIN | MAX  | MIN | MAX  | MIN | MAX    | MIN | MAX       | MIN |
| 1     | 15.3  | 6.0 | 8.3  | 5.0 | 9.4  | 6.9 | 8.2  | 5.6 | 7.1    | 5.8 | 7.4       | 6.4 |
| 2     | 15.2  | 6.6 | 6.9  | 5.6 | 9.1  | 6.0 | 7.3  | 5.1 | 7.5    | 5.7 | 7.8       | 7.1 |
| 3     | 15.3  | 6.0 | 6.5  | 5.4 | 6.0  | 0.2 | 7.1  | 4.9 | 6.2    | 4.0 | 8.6       | 7.9 |
| 4     | 14.1  | 6.9 | 8.1  | 5.5 | 7.1  | 4.2 | ---  | --- | 6.4    | 4.5 | 9.0       | 7.9 |
| 5     | 14.5  | 8.5 | 8.3  | 6.0 | 6.7  | 5.6 | ---  | --- | 6.3    | 4.8 | 9.0       | 7.8 |
| 6     | 13.8  | 8.0 | 8.9  | 5.9 | 6.5  | 5.9 | 6.1  | 4.5 | 7.7    | 5.4 | 9.0       | 7.7 |
| 7     | 12.7  | 9.5 | 10.0 | 5.8 | 7.0  | 6.5 | 6.1  | 4.7 | 6.9    | 5.3 | 8.9       | 7.4 |
| 8     | 10.1  | 6.7 | 10.1 | 6.1 | 7.2  | 6.2 | 6.2  | 4.7 | 6.4    | 5.1 | 9.1       | 7.3 |
| 9     | 11.7  | 7.2 | 9.5  | 6.1 | 6.8  | 4.6 | 6.3  | 4.7 | 6.2    | 5.6 | 8.8       | 7.2 |
| 10    | 11.1  | 6.2 | 9.8  | 5.9 | 8.0  | 4.3 | 6.2  | 4.8 | 6.5    | 5.5 | 8.6       | 6.9 |
| 11    | 9.4   | 6.4 | 10.0 | 5.8 | 8.8  | 5.6 | 6.7  | 4.8 | 6.2    | 5.0 | 6.7       | 5.8 |
| 12    | 9.9   | 6.4 | 10.2 | 6.0 | 7.4  | 6.5 | 6.3  | 4.9 | ---    | --- | 7.2       | 5.7 |
| 13    | 10.6  | 6.1 | 10.1 | 6.0 | 7.7  | 6.7 | 6.2  | 4.7 | ---    | --- | 7.8       | 6.4 |
| 14    | 11.7  | 5.6 | ---  | --- | 7.5  | 6.3 | 6.3  | 4.8 | 7.0    | 5.5 | 8.1       | 6.5 |
| 15    | 12.1  | 7.5 | ---  | --- | 7.5  | 5.9 | 6.8  | 3.9 | 6.9    | 5.4 | 8.7       | 6.8 |
| 16    | 10.7  | 6.9 | 7.4  | 6.1 | ---  | --- | 6.0  | 4.4 | 7.1    | 5.6 | 7.8       | 6.6 |
| 17    | 11.9  | 7.3 | 7.3  | 6.1 | ---  | --- | 5.6  | 4.5 | ---    | --- | 8.0       | 6.1 |
| 18    | 10.9  | 6.2 | 7.8  | 6.4 | 9.4  | 6.0 | 5.5  | 4.3 | ---    | --- | 8.3       | 6.7 |
| 19    | 10.0  | 6.3 | 8.1  | 6.3 | 9.9  | 6.6 | 6.4  | 4.2 | 6.4    | 5.1 | 7.7       | 6.2 |
| 20    | ---   | --- | 8.1  | 6.2 | 9.6  | 6.4 | 5.5  | 4.2 | 7.3    | 6.2 | 7.2       | 6.7 |
| 21    | ---   | --- | 7.4  | 6.1 | 9.4  | 6.0 | 5.6  | 2.3 | 6.7    | 5.1 | 8.1       | 7.0 |
| 22    | ---   | --- | 8.1  | 6.6 | 8.8  | 5.7 | ---  | --- | 6.3    | 3.3 | 8.4       | 6.8 |
| 23    | ---   | --- | 8.1  | 6.1 | 9.2  | 6.1 | 5.7  | 2.1 | 4.2    | 3.3 | ---       | --- |
| 24    | 13.0  | 7.3 | 7.5  | 5.2 | 10.1 | 6.5 | 5.9  | 3.9 | 3.4    | 2.6 | 9.2       | 7.2 |
| 25    | 13.7  | 6.7 | 7.7  | 6.4 | 10.3 | 7.1 | 5.6  | 4.2 | 3.3    | 2.5 | 9.3       | 7.6 |
| 26    | 14.4  | 6.1 | 7.4  | 6.8 | 10.4 | 7.0 | 4.7  | 4.1 | 6.5    | 2.3 | 9.3       | 7.7 |
| 27    | 15.2  | 5.6 | 7.9  | 6.7 | 10.3 | 6.8 | 5.2  | 3.9 | 7.1    | 4.9 | 9.3       | 7.6 |
| 28    | 14.0  | 4.7 | 8.1  | 6.5 | 10.2 | 6.8 | 4.8  | 4.0 | 6.4    | 5.4 | 8.7       | 7.6 |
| 29    | 9.1   | 4.7 | 8.1  | 6.5 | 9.9  | 6.5 | 5.2  | 3.9 | 6.5    | 5.5 | 9.4       | 7.7 |
| 30    | 6.3   | 5.0 | 8.4  | 6.5 | 8.8  | 5.9 | 6.5  | 4.2 | 7.4    | 6.5 | 9.3       | 8.0 |
| 31    | ---   | --- | 8.4  | 6.1 | ---  | --- | 6.9  | 5.6 | 7.4    | 6.4 | ---       | --- |
| MONTH | 15.3  | 4.7 | 10.2 | 5.0 | 10.4 | 0.2 | 8.2  | 2.1 | 7.7    | 2.3 | 9.4       | 5.7 |

TEMPERATURE (DEG. C) OF WATER , WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

|       |      |     |      |     |     |     |     |     |      |     |      |     |
|-------|------|-----|------|-----|-----|-----|-----|-----|------|-----|------|-----|
| MONTH | 22.5 | 9.0 | 16.0 | 6.0 | --- | --- | --- | --- | 15.5 | 2.0 | 20.0 | 2.5 |
|-------|------|-----|------|-----|-----|-----|-----|-----|------|-----|------|-----|

|      |      |     |
|------|------|-----|
| YEAR | 29.0 | 0.0 |
|------|------|-----|

07052160 WILSON CREEK NEAR BATTLEFIELD, MO.

LOCATION.--Lat 37°07'02", long 93°24'14", in SW¼NW¼ sec.24, T.28 N., R.23 W., Greene County, multi-parameter recorder at gaging station on left bank 300 ft (91 m) downstream from bridge on county road, 0.3 mi (0.5 km) upstream from McElhaney Branch, and 1.8 mi (2.9 km) west of Battlefield.

DRAINAGE AREA.--55.0 mi<sup>2</sup> (142 km<sup>2</sup>).

PERIOD OF RECORD.--November 1972 to September 1974.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C) , WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCTOBER |     | NOVEMBER |     | DECEMBER |     | JANUARY |     | FEBRUARY |     | MARCH     |     |
|-------|---------|-----|----------|-----|----------|-----|---------|-----|----------|-----|-----------|-----|
|       | MAX     | MIN | MAX      | MIN | MAX      | MIN | MAX     | MIN | MAX      | MIN | MAX       | MIN |
| 1     | 582     | 480 | 664      | 606 | 540      | 526 | ---     | --- | 554      | 520 | 614       | 574 |
| 2     | 610     | 540 | 696      | 638 | 538      | 516 | ---     | --- | 556      | 530 | 614       | 574 |
| 3     | 650     | 572 | 734      | 676 | 552      | 512 | ---     | --- | 554      | 536 | 604       | 560 |
| 4     | 720     | 520 | 736      | 690 | 526      | 222 | ---     | --- | 554      | 526 | 608       | 548 |
| 5     | 600     | 580 | 734      | 692 | 474      | 396 | ---     | --- | 578      | 540 | 610       | 562 |
| 6     | ---     | --- | 734      | 668 | 510      | 474 | ---     | --- | 590      | 556 | 664       | 592 |
| 7     | ---     | --- | 750      | 688 | 530      | 508 | 660     | 632 | 620      | 582 | 666       | 620 |
| 8     | ---     | --- | 772      | 710 | ---      | --- | 640     | 584 | 610      | 580 | 670       | 624 |
| 9     | ---     | --- | 796      | 728 | ---      | --- | 620     | 572 | 600      | 560 | 716       | 606 |
| 10    | 720     | 640 | 796      | 738 | ---      | --- | 638     | 612 | 620      | 580 | 654       | 276 |
| 11    | 775     | 550 | 782      | 724 | 562      | 538 | 632     | 584 | 620      | 590 | 394       | 232 |
| 12    | 680     | 560 | 780      | 720 | 578      | 548 | 616     | 580 | 634      | 592 | 410       | 386 |
| 13    | 640     | 240 | 778      | 720 | 580      | 544 | 616     | 566 | 630      | 586 | 442       | 412 |
| 14    | 480     | 420 | 790      | 732 | 584      | 572 | 678     | 544 | 628      | 580 | 466       | 442 |
| 15    | 515     | 480 | 836      | 756 | 600      | 570 | 706     | 590 | 652      | 596 | 484       | 298 |
| 16    | 555     | 500 | 888      | 806 | 600      | 550 | 595     | 517 | 672      | 614 | 406       | 366 |
| 17    | 580     | 530 | 894      | 826 | 596      | 560 | 521     | 493 | 684      | 622 | 422       | 400 |
| 18    | 605     | 560 | 866      | 808 | 606      | 562 | 585     | 505 | 760      | 596 | 442       | 420 |
| 19    | 620     | 565 | 856      | 816 | 660      | 446 | 580     | 550 | 614      | 462 | 464       | 436 |
| 20    | 620     | 580 | ---      | --- | 520      | 480 | 575     | 545 | 590      | 522 | 474       | 438 |
| 21    | 620     | 580 | 692      | 480 | 520      | 480 | 585     | 535 | 650      | 562 | 460       | 430 |
| 22    | 625     | 580 | 700      | 640 | 540      | 520 | 568     | 540 | 604      | 532 | 462       | 432 |
| 23    | 630     | 580 | 710      | 674 | 690      | 520 | 618     | 550 | 610      | 570 | 462       | 440 |
| 24    | 640     | 600 | 716      | 220 | 630      | 430 | 630     | 588 | 610      | 570 | 470       | 440 |
| 25    | 660     | 620 | 384      | 212 | 450      | 430 | 624     | 584 | 578      | 540 | 528       | 470 |
| 26    | 680     | 630 | 390      | 292 | 480      | 450 | 678     | 438 | 584      | 550 | 508       | 484 |
| 27    | 645     | 220 | 464      | 386 | ---      | --- | 506     | 488 | 610      | 554 | 530       | 494 |
| 28    | 475     | 435 | 472      | 442 | ---      | --- | 520     | 450 | 612      | 570 | 532       | 510 |
| 29    | 530     | 500 | 506      | 472 | ---      | --- | 506     | 468 | ---      | --- | 530       | 504 |
| 30    | 634     | 574 | 538      | 502 | ---      | --- | 516     | 500 | ---      | --- | 530       | 512 |
| 31    | 668     | 602 | ---      | --- | ---      | --- | 534     | 510 | ---      | --- | 524       | 506 |
| MONTH | 775     | 220 | 894      | 212 | ---      | --- | 706     | 438 | 760      | 462 | 716       | 232 |
| DAY   | APRIL   |     | MAY      |     | JUNE     |     | JULY    |     | AUGUST   |     | SEPTEMBER |     |
|       | MAX     | MIN | MAX      | MIN | MAX      | MIN | MAX     | MIN | MAX      | MIN | MAX       | MIN |
| 1     | 530     | 510 | 626      | 538 | 602      | 570 | 686     | 636 | 858      | 764 | 772       | 232 |
| 2     | 566     | 516 | 680      | 372 | 596      | 562 | 658     | 598 | 872      | 790 | 472       | 372 |
| 3     | 578     | 542 | 550      | 454 | 620      | 570 | 686     | 618 | 958      | 630 | 506       | 430 |
| 4     | 590     | 544 | 570      | 520 | 686      | 326 | 686     | 222 | 788      | 736 | 602       | 506 |
| 5     | 592     | 558 | 585      | 565 | 500      | 344 | 538     | 434 | 798      | 722 | 652       | 588 |
| 6     | 586     | 544 | 595      | 570 | 500      | 410 | 572     | 526 | 782      | 716 | 688       | 620 |
| 7     | 582     | 552 | 652      | 590 | 472      | 378 | 604     | 564 | 870      | 662 | 674       | 634 |
| 8     | 620     | 444 | 654      | 640 | 422      | 314 | 640     | 584 | 798      | 706 | 672       | 630 |
| 9     | 542     | 484 | 690      | 620 | 384      | 318 | 680     | 620 | 790      | 496 | 720       | 654 |
| 10    | 594     | 530 | 646      | 610 | 440      | 386 | 722     | 650 | 682      | 584 | 726       | 650 |
| 11    | 670     | 408 | 644      | 604 | 480      | 364 | 738     | 662 | 702      | 648 | 832       | 580 |
| 12    | 546     | 460 | 652      | 604 | 474      | 424 | 744     | 680 | 760      | 682 | 698       | 648 |
| 13    | 572     | 532 | 652      | 602 | 484      | 468 | 736     | 672 | 772      | 720 | 716       | 586 |
| 14    | 576     | 546 | 640      | 220 | 508      | 482 | 728     | 656 | 798      | 722 | 688       | 648 |
| 15    | 572     | 538 | 456      | 342 | 510      | 498 | 712     | 666 | 850      | 756 | 684       | 636 |
| 16    | 588     | 540 | 512      | 458 | 510      | 500 | 708     | 650 | 860      | 792 | 722       | 560 |
| 17    | 598     | 558 | 544      | 510 | 520      | 500 | 754     | 674 | ---      | --- | 664       | 610 |
| 18    | 644     | 580 | 550      | 526 | 542      | 520 | 766     | 702 | ---      | --- | 720       | 626 |
| 19    | 652     | 606 | 546      | 532 | 562      | 526 | 774     | 696 | 654      | 612 | 726       | 274 |
| 20    | 652     | 610 | 568      | 534 | 576      | 534 | 778     | 714 | 702      | 610 | 512       | 376 |
| 21    | 714     | 560 | 594      | 546 | 588      | 540 | 784     | 734 | 784      | 696 | 542       | 506 |
| 22    | 662     | 334 | 616      | 568 | 592      | 550 | 796     | 738 | 826      | 474 | 564       | 540 |
| 23    | 574     | 504 | 704      | 588 | 602      | 552 | 772     | 696 | 710      | 468 | 588       | 552 |
| 24    | 614     | 554 | 640      | 592 | 584      | 552 | 810     | 732 | 692      | 622 | 616       | 568 |
| 25    | 640     | 590 | 652      | 382 | 630      | 590 | 816     | 260 | 712      | 654 | 682       | 598 |
| 26    | 652     | 608 | 414      | 302 | 640      | 625 | 654     | 496 | 716      | 666 | 698       | 644 |
| 27    | 654     | 618 | 458      | 414 | 676      | 638 | 694     | 628 | 808      | 460 | 702       | 652 |
| 28    | 670     | 640 | 510      | 458 | 678      | 658 | 728     | 668 | 686      | 474 | 754       | 644 |
| 29    | 670     | 640 | 520      | 472 | 710      | 660 | 736     | 686 | 682      | 582 | 676       | 644 |
| 30    | 642     | 370 | 592      | 540 | 704      | 664 | 762     | 682 | 734      | 648 | 660       | 620 |
| 31    | ---     | --- | 612      | 562 | ---      | --- | 816     | 734 | 776      | 700 | ---       | --- |
| MONTH | 714     | 334 | 704      | 220 | 710      | 314 | 816     | 222 | 958      | 460 | 832       | 232 |

07052160 WILSON CREEK NEAR BATTLEFIELD, MO.--Continued

EXTREMES, 1973-74.--Water temperature: Maximum, 26.0°C, July 22.

Specific conductance: Maximum, 958 micromhos/cm at 25°C Aug. 3; minimum, 212 micromhos/cm at 25°C Nov. 25.

PH: Maximum, 8.4 May 14, minimum, 6.5 May 14.

Dissolved oxygen: Maximum, 11.0 mg/l March 9; minimum, 0.0 mg/l, on many days during the year.

REMARKS.--Recorder inoperative on many days during the year.

## PH (UNITS) , WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| OCTOBER |     |     | NOVEMBER |     | DECEMBER |     | JANUARY |     | FEBRUARY |     | MARCH |     |
|---------|-----|-----|----------|-----|----------|-----|---------|-----|----------|-----|-------|-----|
| DAY     | MAX | MIN | MAX      | MIN | MAX      | MIN | MAX     | MIN | MAX      | MIN | MAX   | MIN |
| 1       | 7.4 | 7.4 | 7.5      | 7.4 | 7.2      | 7.0 | ---     | --- | 7.3      | 7.2 | 7.7   | 7.5 |
| 2       | 7.4 | 7.3 | 7.4      | 7.2 | 7.3      | 7.1 | ---     | --- | 7.3      | 7.2 | 7.7   | 7.5 |
| 3       | 7.4 | 7.4 | 7.4      | 7.3 | 7.3      | 7.2 | ---     | --- | 7.3      | 7.2 | 7.6   | 7.5 |
| 4       | 7.5 | 7.3 | 7.5      | 7.4 | 7.5      | 7.0 | ---     | --- | 7.3      | 7.2 | 7.6   | 7.5 |
| 5       | 7.4 | 7.3 | 7.5      | 7.4 | 7.3      | 7.1 | ---     | --- | 7.4      | 7.2 | 7.6   | 7.5 |
| 6       | 7.4 | 7.3 | 7.6      | 7.4 | 7.4      | 7.3 | ---     | --- | 7.4      | 7.3 | 7.6   | 7.5 |
| 7       | 7.4 | 7.3 | 7.5      | 7.4 | 7.5      | 7.4 | 7.5     | 7.4 | 7.4      | 7.3 | 7.6   | 7.4 |
| 8       | 7.4 | 7.3 | 7.5      | 7.4 | ---      | --- | 7.6     | 7.5 | 7.5      | 7.4 | 7.5   | 7.4 |
| 9       | 7.5 | 7.4 | 7.4      | 7.2 | ---      | --- | 7.6     | 7.6 | 7.5      | 7.4 | 7.6   | 7.4 |
| 10      | 7.5 | 7.4 | 7.4      | 7.3 | ---      | --- | 7.6     | 7.5 | 7.5      | 7.4 | 7.6   | 7.0 |
| 11      | 7.5 | 7.4 | 7.4      | 7.4 | 7.3      | 7.3 | 7.6     | 7.6 | 7.5      | 7.5 | 7.5   | 7.2 |
| 12      | 7.5 | 7.3 | 7.5      | 7.3 | 7.4      | 7.3 | 7.5     | 7.5 | 7.5      | 7.4 | 7.3   | 7.2 |
| 13      | 7.5 | 7.4 | 7.4      | 7.3 | 7.4      | 7.4 | 7.5     | 7.5 | 7.5      | 7.3 | 7.3   | 7.1 |
| 14      | 7.5 | 7.5 | 7.5      | 7.3 | 7.4      | 7.4 | 7.6     | 7.5 | 7.5      | 7.5 | 7.4   | 7.2 |
| 15      | 7.5 | 7.3 | 7.5      | 7.4 | 7.5      | 7.5 | 7.6     | 7.5 | 7.5      | 7.4 | 7.5   | 7.3 |
| 16      | 7.4 | 7.3 | 7.5      | 7.3 | 7.5      | 7.4 | 7.5     | 7.5 | 7.5      | 7.4 | 7.4   | 7.3 |
| 17      | 7.3 | 7.3 | 7.7      | 7.6 | 7.5      | 7.4 | 7.5     | 7.4 | 7.5      | 7.4 | 7.5   | 7.3 |
| 18      | 7.4 | 7.3 | 7.8      | 7.7 | 7.5      | 7.4 | 7.5     | 7.3 | 7.6      | 7.4 | 7.5   | 7.4 |
| 19      | 7.4 | 7.3 | 7.7      | 7.7 | 7.8      | 7.6 | 7.4     | 7.4 | 7.5      | 7.4 | 7.6   | 7.5 |
| 20      | 7.4 | 7.3 | ---      | --- | 7.6      | 7.5 | 7.5     | 7.4 | 7.5      | 7.4 | 7.6   | 7.4 |
| 21      | 7.4 | 7.3 | 7.6      | 7.4 | 7.5      | 7.4 | 7.5     | 7.3 | 7.5      | 7.4 | 7.6   | 7.4 |
| 22      | 7.4 | 7.3 | 7.4      | 7.2 | 7.6      | 7.5 | 7.7     | 7.5 | 7.5      | 7.4 | 7.5   | 7.4 |
| 23      | 7.5 | 7.4 | 7.3      | 7.2 | 7.7      | 7.6 | 7.7     | 7.4 | 7.5      | 7.5 | 7.5   | 7.4 |
| 24      | 7.5 | 7.4 | 7.3      | 6.7 | 7.7      | 7.5 | 7.6     | 7.4 | 7.5      | 7.4 | 7.5   | 7.3 |
| 25      | 7.6 | 7.5 | 7.0      | 6.7 | 7.5      | 7.4 | 7.6     | 7.4 | 7.4      | 7.3 | 7.5   | 7.3 |
| 26      | 7.5 | 7.3 | 7.0      | 6.8 | 7.4      | 7.4 | 7.7     | 7.5 | 7.6      | 7.3 | 7.5   | 7.3 |
| 27      | 7.4 | 7.2 | 7.3      | 6.9 | 7.5      | 7.4 | 7.6     | 7.5 | 7.6      | 7.5 | 7.4   | 7.3 |
| 28      | 7.3 | 7.2 | 7.4      | 7.2 | ---      | --- | 7.5     | 7.3 | 7.7      | 7.6 | 7.5   | 7.4 |
| 29      | 7.3 | 7.2 | 7.4      | 7.3 | ---      | --- | 7.4     | 7.3 | ---      | --- | 7.4   | 7.4 |
| 30      | 7.5 | 7.3 | 7.4      | 7.0 | ---      | --- | 7.5     | 7.4 | ---      | --- | 7.4   | 7.3 |
| 31      | 7.6 | 7.5 | ---      | --- | ---      | --- | 7.4     | 7.3 | ---      | --- | 7.4   | 7.3 |
| MONTH   | 7.6 | 7.2 | 7.8      | 6.7 | ---      | --- | 7.7     | 7.3 | 7.7      | 7.2 | 7.7   | 7.0 |

| APRIL |     | MAY |     | JUNE |     | JULY |     | AUGUST |     | SEPTEMBER |     |     |
|-------|-----|-----|-----|------|-----|------|-----|--------|-----|-----------|-----|-----|
| DAY   | MAX | MIN | MAX | MIN  | MAX | MIN  | MAX | MIN    | MAX | MIN       | MAX | MIN |
| 1     | 7.4 | 7.3 | 7.5 | 7.2  | 7.2 | 7.1  | 7.6 | 7.4    | 7.7 | 7.4       | 8.0 | 7.4 |
| 2     | 7.5 | 7.3 | 7.5 | 7.4  | 7.3 | 7.2  | --- | ---    | 8.0 | 7.4       | 7.5 | 7.3 |
| 3     | 7.6 | 7.4 | 7.5 | 7.4  | 7.4 | 7.2  | --- | ---    | 8.2 | 7.3       | 7.4 | 7.3 |
| 4     | 7.5 | 7.3 | 7.5 | 7.5  | 7.6 | 7.3  | --- | ---    | 7.9 | 7.4       | 7.4 | 7.3 |
| 5     | 7.5 | 7.4 | 7.5 | 7.4  | 7.6 | 7.5  | --- | ---    | 7.8 | 7.3       | 7.5 | 7.3 |
| 6     | 7.4 | 7.3 | 7.4 | 7.4  | 7.6 | 7.3  | --- | ---    | 7.8 | 7.4       | 7.5 | 7.3 |
| 7     | 7.4 | 7.3 | 7.4 | 7.3  | 7.3 | 7.0  | --- | ---    | 7.6 | 7.2       | 7.5 | 7.3 |
| 8     | 7.5 | 7.2 | 7.4 | 7.4  | 7.4 | 7.1  | --- | ---    | 7.4 | 7.1       | 7.7 | 7.5 |
| 9     | 7.4 | 7.2 | 7.6 | 7.4  | 7.4 | 7.3  | --- | ---    | 7.4 | 7.1       | 7.7 | 7.4 |
| 10    | 7.6 | 7.2 | 7.6 | 7.4  | 7.4 | 7.3  | --- | ---    | 7.5 | 7.4       | 7.6 | 7.3 |
| 11    | 7.6 | 7.3 | 7.7 | 7.5  | 7.4 | 7.2  | --- | ---    | 7.7 | 7.4       | 7.5 | 7.1 |
| 12    | 7.5 | 7.3 | 7.7 | 7.6  | 7.5 | 7.0  | --- | ---    | 7.8 | 7.4       | 7.4 | 7.3 |
| 13    | 7.5 | 7.3 | 7.6 | 7.5  | 7.6 | 7.4  | --- | ---    | 7.8 | 7.3       | 7.5 | 7.4 |
| 14    | 7.4 | 7.2 | 8.4 | 6.5  | 7.6 | 7.5  | --- | ---    | 7.7 | 7.2       | 7.5 | 7.3 |
| 15    | 7.2 | 7.0 | 7.4 | 7.3  | 7.6 | 7.5  | --- | ---    | 7.7 | 7.3       | 7.6 | 7.4 |
| 16    | 7.1 | 7.0 | 7.4 | 7.3  | 7.5 | 7.4  | --- | ---    | 7.7 | 7.2       | 7.6 | 7.3 |
| 17    | 7.2 | 7.0 | 7.5 | 7.4  | 7.4 | 7.3  | --- | ---    | 7.8 | 7.3       | 7.4 | 7.3 |
| 18    | 7.5 | 6.9 | 7.5 | 7.4  | 7.5 | 7.2  | --- | ---    | --- | ---       | 7.4 | 7.2 |
| 19    | 7.5 | 7.3 | 7.5 | 7.4  | 7.4 | 7.2  | --- | ---    | 7.5 | 7.4       | 7.4 | 7.1 |
| 20    | 7.6 | 7.3 | 7.5 | 7.4  | 7.5 | 7.3  | --- | ---    | 7.4 | 7.2       | 7.2 | 6.9 |
| 21    | 7.7 | 7.4 | 7.5 | 7.4  | 7.9 | 7.5  | --- | ---    | 7.4 | 7.1       | 7.3 | 6.9 |
| 22    | 7.6 | 7.3 | 7.5 | 7.4  | 7.9 | 7.3  | --- | ---    | 7.3 | 7.2       | 7.3 | 7.2 |
| 23    | 7.5 | 7.3 | 7.5 | 7.3  | 7.4 | 7.1  | --- | ---    | 7.3 | 7.2       | 7.3 | 7.1 |
| 24    | 7.5 | 7.3 | 7.5 | 7.2  | 7.2 | 7.1  | 7.5 | 7.3    | 7.4 | 7.2       | 7.4 | 7.2 |
| 25    | 7.4 | 7.3 | 7.5 | 7.1  | 7.3 | 7.2  | 7.7 | 7.2    | 7.5 | 7.2       | 7.5 | 7.4 |
| 26    | 7.5 | 7.3 | 7.3 | 7.1  | 7.4 | 7.3  | 7.5 | 7.0    | 7.5 | 7.2       | 7.5 | 7.3 |
| 27    | 7.7 | 7.4 | 7.4 | 7.3  | 7.5 | 7.3  | 7.6 | 7.3    | 7.5 | 7.2       | 7.4 | 7.3 |
| 28    | 7.6 | 7.3 | 7.3 | 7.3  | 7.5 | 7.4  | 7.7 | 7.4    | 7.5 | 7.2       | 7.5 | 7.4 |
| 29    | 7.4 | 7.2 | 7.4 | 7.3  | 7.6 | 7.3  | 7.7 | 7.4    | 7.6 | 7.4       | 7.6 | 7.4 |
| 30    | 7.3 | 7.1 | 7.4 | 7.3  | 7.7 | 7.5  | 7.7 | 7.3    | 7.8 | 7.6       | 7.5 | 7.4 |
| 31    | --- | --- | 7.4 | 7.1  | --- | ---  | 7.7 | 7.4    | 7.9 | 7.7       | --- | --- |
| MONTH | 7.7 | 6.9 | 8.4 | 6.5  | 7.9 | 7.0  | --- | ---    | 8.2 | 7.1       | 8.0 | 6.9 |

07052160 WILSON CREEK NEAR BATTLEFIELD, MO.--Continued

DISSOLVED OXYGEN (DO), IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

|       | OCTOBER |     | NOVEMBER |     | DECEMBER |     | JANUARY |     | FEBRUARY |     | MARCH |     |
|-------|---------|-----|----------|-----|----------|-----|---------|-----|----------|-----|-------|-----|
| DAY   | MAX     | MIN | MAX      | MIN | MAX      | MIN | MAX     | MIN | MAX      | MIN | MAX   | MIN |
| 1     | 3.7     | 2.2 | 2.6      | 0.8 | 4.8      | 3.6 | ---     | --- | 2.7      | 0.9 | 2.4   | 0.0 |
| 2     | 3.6     | 1.7 | 3.6      | 0.9 | 4.0      | 2.8 | ---     | --- | 1.2      | 0.6 | 3.0   | 0.0 |
| 3     | 3.3     | 1.5 | 2.8      | 1.2 | 6.0      | 3.1 | ---     | --- | 1.2      | 0.5 | 5.8   | 0.0 |
| 4     | 3.4     | 1.5 | 2.5      | 1.2 | 9.1      | 4.9 | ---     | --- | 1.9      | 1.0 | 7.0   | 0.0 |
| 5     | 3.5     | 1.4 | 3.6      | 1.5 | 8.3      | 6.7 | ---     | --- | 1.9      | 0.8 | 9.5   | 0.2 |
| 6     | 2.8     | 1.2 | 4.9      | 2.0 | 7.2      | 6.7 | ---     | --- | 1.4      | 1.1 | 7.7   | 0.3 |
| 7     | 3.0     | 1.4 | 3.8      | 1.3 | 6.7      | 6.2 | 4.7     | 3.3 | 2.5      | 1.7 | 10.7  | 0.4 |
| 8     | 3.1     | 1.3 | 2.6      | 0.6 | ---      | --- | 4.6     | 2.7 | 4.6      | 2.6 | 8.8   | 0.7 |
| 9     | 3.2     | 1.1 | 3.0      | 0.5 | ---      | --- | 4.8     | 2.7 | 4.0      | 2.5 | 11.0  | 0.4 |
| 10    | 3.7     | 5.2 | 2.8      | 0.3 | 5.8      | 5.2 | 3.3     | 2.1 | 5.4      | 2.9 | ---   | --- |
| 11    | 3.0     | 0.2 | 2.7      | 0.6 | 5.4      | 4.2 | 3.7     | 2.0 | 7.0      | 3.6 | ---   | --- |
| 12    | 1.8     | 0.6 | 4.5      | 1.1 | 4.6      | 3.1 | 4.2     | 2.2 | 5.3      | 1.5 | ---   | --- |
| 13    | 4.6     | 1.0 | 4.2      | 1.7 | 4.4      | 3.1 | 4.4     | 2.3 | 4.5      | 0.5 | ---   | --- |
| 14    | 3.4     | 2.3 | 3.4      | 0.0 | 3.8      | 3.1 | 5.8     | 1.2 | 1.6      | 0.4 | 7.0   | 6.3 |
| 15    | 3.9     | 2.5 | 1.8      | 0.1 | 3.6      | 2.7 | 5.6     | 1.1 | 2.3      | 0.4 | 9.5   | 6.1 |
| 16    | 4.3     | 2.5 | 1.2      | 0.2 | 5.5      | 2.2 | 3.1     | 1.4 | 3.2      | 0.3 | 8.6   | 7.8 |
| 17    | 4.0     | 2.1 | 0.7      | 0.1 | 4.6      | 2.1 | 2.0     | 1.1 | 3.7      | 0.5 | 8.5   | 7.1 |
| 18    | 3.9     | 2.0 | 0.7      | 0.1 | 5.8      | 3.4 | 1.4     | 0.8 | 7.4      | 0.0 | 7.6   | 5.4 |
| 19    | 3.7     | 1.6 | 0.7      | 0.1 | 10.9     | 0.0 | 1.1     | 0.5 | 9.2      | 4.0 | 6.5   | 4.8 |
| 20    | 3.6     | 1.6 | ---      | --- | 8.7      | 6.8 | 1.5     | 0.7 | 4.6      | 1.4 | 7.6   | 5.6 |
| 21    | 3.8     | 1.6 | 3.2      | 0.6 | 7.3      | 4.6 | 3.1     | 1.9 | 5.0      | 0.7 | 8.0   | 5.6 |
| 22    | 3.8     | 1.5 | 1.8      | 0.4 | 5.1      | 3.0 | 2.9     | 0.7 | 2.9      | 0.6 | 5.6   | 4.2 |
| 23    | 4.9     | 1.6 | 1.1      | 0.4 | 6.0      | 0.8 | 3.4     | 0.7 | 2.0      | 0.4 | 6.7   | 4.2 |
| 24    | 4.4     | 1.4 | 9.1      | 0.6 | 5.6      | 3.7 | 3.3     | 1.7 | 4.0      | 0.7 | 6.8   | 5.1 |
| 25    | 4.0     | 1.4 | 9.6      | 7.7 | 5.6      | 5.0 | 3.4     | 1.4 | 7.9      | 3.1 | 6.3   | 5.6 |
| 26    | 3.2     | 1.0 | 8.5      | 7.3 | 5.9      | 5.0 | 4.6     | 1.1 | 5.3      | 1.0 | 5.7   | 3.4 |
| 27    | 5.2     | 1.4 | 7.3      | 6.9 | 5.0      | 3.8 | 5.1     | 1.7 | 3.5      | 0.3 | 4.7   | 3.2 |
| 28    | 5.1     | 3.8 | 6.9      | 6.2 | ---      | --- | 6.4     | 5.2 | 3.3      | 0.0 | 3.4   | 1.5 |
| 29    | 6.0     | 3.9 | 6.7      | 5.7 | ---      | --- | 5.1     | 3.8 | ---      | --- | 2.7   | 1.2 |
| 30    | 5.3     | 2.9 | 5.8      | 4.4 | ---      | --- | 4.5     | 3.4 | ---      | --- | 3.1   | 1.6 |
| 31    | 3.5     | 1.8 | ---      | --- | ---      | --- | 3.5     | 2.1 | ---      | --- | 4.4   | 2.2 |
| MONTH | 6.0     | 0.2 | 9.6      | 0.0 | 10.9     | 0.0 | 6.4     | 0.5 | 9.2      | 0.0 | 11.0  | 0.0 |

|       | APRIL |     | MAY |     | JUNE |     | JULY |     | AUGUST |     | SEPTEMBER |     |
|-------|-------|-----|-----|-----|------|-----|------|-----|--------|-----|-----------|-----|
| DAY   | MAX   | MIN | MAX | MIN | MAX  | MIN | MAX  | MIN | MAX    | MIN | MAX       | MIN |
| 1     | 5.3   | 2.4 | 3.4 | 1.9 | 3.3  | 1.4 | 5.0  | 0.3 | 5.1    | 0.2 | 7.7       | 0.2 |
| 2     | 4.9   | 2.2 | 4.7 | 1.9 | 3.9  | 1.6 | 5.1  | 0.3 | 4.5    | 0.2 | 8.4       | 5.7 |
| 3     | 4.1   | 1.2 | 2.8 | 1.8 | 3.5  | 0.2 | 4.5  | 0.2 | 4.7    | 0.0 | 5.7       | 4.2 |
| 4     | 3.2   | 1.1 | 2.0 | 1.8 | 2.3  | 0.0 | 5.3  | 0.2 | 4.4    | 0.4 | 4.4       | 2.3 |
| 5     | 2.4   | 0.8 | 2.0 | 1.7 | 2.3  | 0.0 | 3.7  | 1.0 | 5.1    | 0.4 | 3.4       | 1.4 |
| 6     | 2.1   | 0.7 | 2.8 | 1.9 | 1.4  | 0.0 | 1.4  | 0.3 | 3.1    | 0.4 | 2.3       | 0.6 |
| 7     | 1.6   | 0.7 | 3.6 | 0.5 | 3.7  | 1.9 | 1.4  | 0.2 | 4.5    | 0.4 | 1.0       | 0.1 |
| 8     | 2.7   | 0.7 | 1.6 | 0.2 | 2.8  | 0.6 | 2.0  | 0.3 | 3.6    | 0.5 | 0.7       | 0.0 |
| 9     | 2.3   | 0.9 | 2.9 | 0.6 | ---  | --- | 3.2  | 0.3 | 4.4    | 0.1 | 1.3       | 0.0 |
| 10    | 3.0   | 1.0 | 3.3 | 0.3 | ---  | --- | 2.8  | 0.1 | 2.3    | 0.2 | 1.8       | 0.1 |
| 11    | 5.8   | 1.5 | 0.6 | 0.0 | ---  | --- | 2.1  | 0.0 | 1.7    | 0.2 | 2.6       | 0.0 |
| 12    | ---   | --- | 3.3 | 0.0 | 5.0  | 4.1 | 1.2  | 0.0 | 3.1    | 0.3 | 0.6       | 0.1 |
| 13    | ---   | --- | 5.0 | 0.8 | 4.2  | 2.5 | 0.3  | 0.0 | 4.0    | 0.3 | 2.1       | 0.1 |
| 14    | ---   | --- | 7.2 | 0.2 | 2.9  | 1.8 | 1.0  | 0.0 | 5.8    | 0.3 | 1.6       | 0.2 |
| 15    | ---   | --- | 5.6 | 4.3 | 2.0  | 1.6 | 1.8  | 0.2 | 4.2    | 0.3 | 1.7       | 0.1 |
| 16    | ---   | --- | 4.2 | 2.1 | 2.7  | 1.8 | 1.9  | 0.1 | 4.8    | 0.2 | 4.4       | 0.1 |
| 17    | ---   | --- | 2.1 | 0.9 | 3.9  | 2.3 | 1.1  | 0.0 | 2.9    | 0.2 | 1.9       | 0.2 |
| 18    | 4.7   | 1.0 | --- | --- | 2.7  | 1.1 | 0.5  | 0.0 | 5.4    | 2.1 | 0.8       | 0.1 |
| 19    | 5.2   | 1.1 | --- | --- | 1.2  | 0.8 | 0.8  | 0.0 | 3.3    | 1.9 | 7.9       | 0.1 |
| 20    | 5.6   | 1.0 | --- | --- | 1.4  | 0.6 | 0.9  | 0.0 | 5.6    | 1.5 | 6.7       | 3.6 |
| 21    | 4.5   | 0.9 | 1.9 | 0.7 | 0.7  | 0.4 | 0.8  | 0.0 | 3.6    | 0.9 | 6.2       | 0.7 |
| 22    | 4.1   | 1.0 | 1.1 | 0.0 | 3.4  | 0.4 | 1.1  | 0.0 | 4.4    | 0.7 | 1.5       | 0.6 |
| 23    | 3.6   | 1.0 | 2.0 | 0.0 | 6.5  | 1.9 | 1.9  | 0.0 | 3.3    | 0.6 | 4.1       | 1.1 |
| 24    | 3.7   | 1.3 | 2.2 | 0.6 | 10.0 | 4.4 | 2.4  | 0.7 | 2.4    | 0.4 | 2.9       | 0.3 |
| 25    | 3.6   | 0.7 | 4.8 | 0.1 | 7.8  | 3.9 | 6.3  | 0.7 | 2.5    | 0.4 | 2.0       | 0.2 |
| 26    | 3.4   | 2.2 | 7.0 | 5.5 | 6.8  | 0.0 | 5.7  | 1.5 | 3.1    | 0.5 | 0.8       | 0.5 |
| 27    | 3.5   | 2.1 | 6.3 | 4.6 | 8.9  | 0.0 | 2.1  | 0.9 | 3.3    | 0.0 | 0.7       | 0.4 |
| 28    | 4.1   | 2.2 | 5.3 | 3.9 | 8.3  | 0.0 | 2.3  | 0.9 | 2.2    | 0.3 | 0.7       | 0.4 |
| 29    | 3.3   | 1.0 | 4.0 | 2.1 | 5.0  | 0.0 | 4.8  | 0.9 | 1.1    | 0.1 | 1.1       | 0.4 |
| 30    | 5.9   | 1.0 | 4.3 | 1.9 | 1.7  | 0.0 | 5.5  | 0.2 | 0.9    | 0.0 | 1.1       | 0.4 |
| 31    | ---   | --- | 2.9 | 1.4 | ---  | --- | 4.9  | 0.2 | 0.7    | 0.0 | ---       | --- |
| MONTH | 5.9   | 0.7 | 7.2 | 0.0 | 10.0 | 0.0 | 6.3  | 0.0 | 5.8    | 0.0 | 8.4       | 0.0 |



07052160 WILSON CREEK NEAR BATTLEFIELD, MO.--Continued

TEMPERATURE (DEG. C) OF WATER , WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCTOBER |      | NOVEMBER |      | DECEMBER |      | JANUARY |      | FEBRUARY |      | MARCH |      |
|-------|---------|------|----------|------|----------|------|---------|------|----------|------|-------|------|
|       | MAX     | MIN  | MAX      | MIN  | MAX      | MIN  | MAX     | MIN  | MAX      | MIN  | MAX   | MIN  |
| 1     | 21.0    | 19.0 | 17.0     | 15.0 | 15.5     | 13.5 | ---     | ---  | 14.0     | 12.0 | 16.5  | 13.5 |
| 2     | 22.0    | 19.0 | 16.5     | 15.5 | 15.5     | 14.0 | ---     | ---  | 13.0     | 12.0 | 17.5  | 14.0 |
| 3     | 22.5    | 20.0 | 16.0     | 15.5 | 15.5     | 14.5 | ---     | ---  | 13.0     | 11.0 | 18.0  | 15.5 |
| 4     | 21.5    | 19.5 | 16.0     | 15.0 | 15.5     | 13.0 | ---     | ---  | 13.0     | 11.0 | 18.5  | 15.5 |
| 5     | 20.5    | 18.0 | 15.5     | 14.0 | 13.5     | 13.0 | ---     | ---  | 13.5     | 11.5 | 17.0  | 14.0 |
| 6     | 20.0    | 18.5 | 14.5     | 13.5 | 13.5     | 12.5 | ---     | ---  | 13.0     | 11.5 | 18.5  | 15.0 |
| 7     | 21.0    | 19.0 | 15.5     | 14.5 | 13.5     | 12.0 | 10.5    | 9.5  | 11.0     | 10.5 | 19.0  | 16.0 |
| 8     | 22.0    | 19.5 | 15.5     | 15.0 | ---      | ---  | 10.5    | 10.0 | 11.5     | 10.0 | 18.0  | 16.5 |
| 9     | 22.5    | 20.0 | 15.0     | 14.0 | ---      | ---  | 10.0    | 8.5  | 11.0     | 10.0 | 19.5  | 16.5 |
| 10    | 22.5    | 20.5 | 14.5     | 12.5 | ---      | ---  | 10.0    | 9.0  | 12.5     | 10.0 | 19.0  | 14.0 |
| 11    | 22.0    | 20.5 | 14.0     | 13.0 | 13.5     | 11.5 | 9.5     | 8.0  | 13.5     | 10.0 | 15.5  | 13.5 |
| 12    | 21.0    | 20.0 | 16.5     | 14.0 | 14.0     | 12.0 | 9.5     | 7.5  | 14.0     | 10.5 | 14.5  | 13.5 |
| 13    | 20.5    | 18.5 | 17.0     | 15.0 | 13.0     | 12.0 | 10.5    | 8.5  | 14.5     | 11.0 | 14.0  | 13.0 |
| 14    | 19.5    | 17.0 | 18.5     | 17.0 | 12.5     | 12.0 | 11.0    | 8.0  | 12.5     | 12.5 | 14.0  | 13.0 |
| 15    | 19.5    | 17.0 | 17.5     | 15.5 | 13.0     | 11.5 | 12.0    | 8.0  | 12.0     | 11.5 | 14.0  | 12.0 |
| 16    | 18.5    | 16.5 | 16.5     | 14.0 | 11.5     | 10.0 | 12.5    | 10.0 | 13.0     | 11.5 | 14.0  | 12.0 |
| 17    | 18.0    | 15.0 | 15.5     | 14.0 | 10.5     | 10.0 | 13.5    | 11.0 | 14.0     | 10.0 | 14.0  | 12.0 |
| 18    | 19.0    | 15.5 | 17.0     | 15.0 | 11.5     | 10.0 | 14.5    | 13.0 | 13.0     | 11.5 | 15.5  | 13.0 |
| 19    | 19.0    | 16.0 | 16.5     | 15.5 | 11.5     | 8.0  | 13.5    | 13.0 | 12.5     | 10.0 | 15.0  | 13.0 |
| 20    | 19.5    | 16.0 | ---      | ---  | 9.5      | 8.0  | 13.5    | 12.5 | 13.5     | 11.0 | 14.0  | 12.0 |
| 21    | 19.5    | 16.0 | 15.0     | 12.5 | 10.0     | 8.0  | 13.5    | 12.0 | 13.5     | 11.5 | 13.0  | 10.0 |
| 22    | 19.5    | 16.5 | 16.5     | 14.0 | 11.5     | 9.0  | 13.0    | 12.0 | 12.5     | 10.5 | 13.0  | 10.0 |
| 23    | 19.5    | 16.5 | 17.0     | 14.5 | 12.5     | 10.0 | 13.0    | 11.5 | 13.0     | 10.5 | 13.0  | 10.5 |
| 24    | 19.5    | 16.5 | 16.5     | 14.0 | 12.5     | 10.0 | 13.0    | 11.0 | 12.0     | 10.0 | 12.0  | 9.5  |
| 25    | 19.5    | 17.0 | 15.0     | 13.5 | 12.5     | 12.0 | 13.0    | 10.5 | 12.5     | 9.0  | 12.5  | 10.5 |
| 26    | 19.5    | 16.0 | 14.5     | 13.0 | 12.5     | 12.0 | 12.5    | 10.5 | 13.5     | 10.0 | 15.0  | 11.5 |
| 27    | 18.5    | 15.5 | 15.0     | 14.0 | ---      | ---  | 12.5    | 10.5 | 14.5     | 11.5 | 16.5  | 13.0 |
| 28    | 15.5    | 14.5 | 14.5     | 13.5 | ---      | ---  | 12.0    | 10.5 | 16.0     | 13.0 | 16.0  | 14.5 |
| 29    | 15.5    | 14.5 | 15.0     | 13.5 | ---      | ---  | 13.0    | 11.0 | ---      | ---  | 17.0  | 14.5 |
| 30    | 16.5    | 15.5 | 15.5     | 14.0 | ---      | ---  | 13.5    | 11.5 | ---      | ---  | 17.0  | 14.5 |
| 31    | 16.5    | 15.5 | ---      | ---  | ---      | ---  | 14.0    | 12.0 | ---      | ---  | 17.5  | 14.5 |
| MONTH | 22.5    | 14.5 | 18.5     | 12.5 | ---      | ---  | 14.5    | 7.5  | 16.0     | 9.0  | 19.5  | 9.5  |

| DAY   | APRIL |      | MAY  |      | JUNE |      | JULY |      | AUGUST |      | SEPTEMBER |      |
|-------|-------|------|------|------|------|------|------|------|--------|------|-----------|------|
|       | MAX   | MIN  | MAX  | MIN  | MAX  | MIN  | MAX  | MIN  | MAX    | MIN  | MAX       | MIN  |
| 1     | 17.0  | 15.5 | 18.5 | 16.0 | 18.5 | 16.0 | 22.5 | 18.5 | 24.5   | 20.5 | 21.0      | 19.0 |
| 2     | 17.5  | 14.5 | 18.5 | 16.0 | 19.0 | 16.0 | 23.0 | 19.5 | 24.5   | 21.5 | 19.5      | 17.5 |
| 3     | 17.5  | 14.0 | 19.0 | 17.0 | 19.0 | 16.5 | 23.5 | 20.0 | 23.0   | 20.5 | 17.5      | 16.0 |
| 4     | 14.0  | 12.5 | 18.5 | 16.5 | 18.5 | 17.0 | 23.0 | 20.5 | 23.0   | 18.5 | 18.5      | 16.0 |
| 5     | 15.0  | 11.5 | 19.5 | 16.0 | 18.5 | 17.5 | 21.5 | 19.0 | 23.5   | 18.5 | 19.0      | 16.5 |
| 6     | 16.0  | 11.5 | 20.0 | 16.0 | 18.5 | 17.0 | 22.5 | 19.5 | 21.5   | 20.0 | 19.0      | 16.5 |
| 7     | 15.0  | 13.5 | 20.0 | 16.0 | 18.0 | 16.0 | 23.5 | 20.0 | 22.5   | 19.5 | 20.5      | 17.0 |
| 8     | 14.5  | 12.5 | 18.0 | 17.5 | 18.0 | 15.5 | 24.0 | 20.0 | 23.0   | 20.5 | 20.5      | 17.5 |
| 9     | 16.5  | 11.5 | 18.5 | 16.0 | 17.0 | 16.0 | 24.0 | 20.5 | 22.5   | 20.5 | 20.5      | 18.5 |
| 10    | 14.5  | 13.0 | 19.0 | 16.5 | 16.5 | 15.0 | 24.5 | 20.5 | 22.5   | 20.5 | 22.0      | 19.5 |
| 11    | 15.5  | 14.0 | 20.0 | 17.0 | 16.0 | 15.0 | 24.5 | 20.5 | 23.5   | 20.0 | 22.0      | 20.0 |
| 12    | 18.0  | 14.0 | 20.5 | 16.0 | 17.0 | 15.0 | 24.5 | 20.5 | 23.5   | 20.5 | 22.0      | 20.0 |
| 13    | 19.5  | 14.5 | 21.5 | 16.0 | 17.5 | 15.5 | 24.5 | 21.0 | 24.5   | 20.5 | 20.0      | 18.0 |
| 14    | 19.0  | 15.0 | 18.5 | 15.5 | 18.5 | 16.0 | 24.5 | 21.0 | 24.5   | 21.0 | 20.0      | 17.0 |
| 15    | 18.0  | 14.0 | 17.0 | 15.0 | 18.5 | 17.0 | 25.0 | 21.0 | 23.5   | 22.0 | 19.5      | 16.5 |
| 16    | 16.5  | 14.5 | 19.5 | 16.5 | 18.0 | 16.5 | 25.0 | 21.0 | 25.0   | 21.0 | 19.5      | 18.0 |
| 17    | 19.0  | 13.0 | 19.5 | 17.5 | 18.0 | 16.0 | 24.5 | 21.0 | 26.0   | 22.0 | 20.5      | 19.0 |
| 18    | 17.0  | 15.0 | 20.0 | 18.0 | 19.0 | 16.5 | 25.0 | 21.5 | 24.5   | 21.5 | 21.5      | 18.0 |
| 19    | 18.0  | 14.0 | 21.0 | 17.5 | 19.5 | 17.5 | 25.5 | 21.5 | 21.5   | 20.5 | 21.0      | 18.5 |
| 20    | 19.0  | 15.5 | 21.0 | 18.0 | 21.0 | 18.0 | 25.5 | 21.5 | 24.5   | 20.0 | 20.0      | 18.5 |
| 21    | 19.0  | 16.0 | 19.0 | 18.0 | 21.5 | 18.5 | 25.5 | 21.5 | 24.5   | 21.0 | 19.0      | 17.5 |
| 22    | 19.5  | 17.0 | 20.5 | 17.5 | 20.5 | 19.0 | 26.0 | 21.5 | 24.0   | 21.5 | 18.5      | 16.0 |
| 23    | 19.5  | 15.5 | 19.0 | 17.0 | 19.0 | 17.5 | 25.5 | 22.5 | 23.5   | 21.5 | 17.5      | 16.0 |
| 24    | 19.0  | 15.0 | 18.5 | 17.5 | 18.5 | 16.5 | 25.0 | 21.0 | 24.5   | 21.5 | 17.0      | 16.5 |
| 25    | 19.5  | 15.5 | 18.0 | 16.5 | 19.0 | 16.0 | 24.0 | 21.5 | 24.0   | 21.0 | 19.0      | 16.5 |
| 26    | 19.0  | 15.5 | 16.5 | 15.5 | 19.0 | 16.0 | 24.0 | 21.0 | 24.0   | 21.0 | 18.5      | 16.5 |
| 27    | 20.5  | 16.5 | 18.0 | 15.0 | 19.5 | 16.5 | 25.0 | 20.5 | 24.0   | 21.5 | 20.0      | 17.5 |
| 28    | 20.0  | 17.5 | 19.0 | 16.0 | 20.0 | 17.0 | 25.0 | 21.5 | 23.5   | 22.5 | 18.5      | 17.0 |
| 29    | 18.5  | 17.5 | 18.5 | 17.0 | 21.0 | 17.0 | 24.5 | 21.5 | 22.5   | 20.5 | 18.5      | 15.5 |
| 30    | 19.0  | 17.5 | 20.0 | 17.0 | 21.0 | 18.5 | 24.5 | 20.0 | 22.0   | 20.0 | 18.5      | 15.5 |
| 31    | ---   | ---  | 18.5 | 17.0 | ---  | ---  | 25.0 | 20.0 | 24.0   | 20.5 | ---       | ---  |
| MONTH | 20.5  | 11.5 | 21.5 | 15.0 | 21.5 | 15.0 | 26.0 | 18.5 | 26.0   | 18.5 | 22.0      | 15.5 |



07052250 JAMES RIVER NEAR BOAZ, MO.

LOCATION.--Lat 37°00'25", long 93°21'50", Christian County, multi-parameter recorder at gaging station on left bank, 150 ft (46 m) downstream from Frazier bridge, 0.2 mi (0.3 km) upstream from Turkey Hollow, and 2 mi (3.2 km) southeast of Boaz.

DRAINAGE AREA.--462 mi<sup>2</sup> (1,196 km<sup>2</sup>).

REMARKS.--Recorder inoperative on many days during the year.

PERIOD OF RECORD.--Chemical analyses: August 1967 to September 1974.

EXTREMES, 1973-74.--Water Temperature: Maximum, 30.0°C July 21, 22; minimum, 3.5°C Dec. 21, to Jan. 12.

Specific conductance: Maximum, 631 micromhos Aug. 4; minimum, 149 micromhos March 11.

Dissolved oxygen: Maximum, 12.9 mg/l February 11; minimum 0.0 mg/l July 19.

PH: Maximum, 8.4 March 2, 3; minimum 7.2 November 29.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE  | DIS-<br>CHARGE<br>(CFS) | DIS-<br>SOLVED<br>SILICA<br>(SiO <sub>2</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>IRON<br>(FE)<br>(UG/L) | DIS-<br>SOLVED<br>MAN-<br>GANESE<br>(MN)<br>(UG/L) | DIS-<br>SOLVED<br>CAL-<br>CIUM<br>(CA)<br>(MG/L) | DIS-<br>SOLVED<br>MAG-<br>NE-<br>SIUM<br>(MG) | DIS-<br>SOLVED<br>SODIUM<br>(NA)<br>(MG/L) | DIS-<br>SOLVED<br>PO-<br>TAS-<br>SIUM<br>(K)<br>(MG/L) | BICAR-<br>BONATE<br>(HCO <sub>3</sub> )<br>(MG/L) | CAR-<br>BONATE<br>(CO <sub>3</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>SULFATE<br>(SO <sub>4</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>CHLO-<br>RIDE<br>(CL)<br>(MG/L) |
|-------|-------------------------|-----------------------------------------------------------|------------------------------------------|----------------------------------------------------|--------------------------------------------------|-----------------------------------------------|--------------------------------------------|--------------------------------------------------------|---------------------------------------------------|------------------------------------------------|-----------------------------------------------------------|---------------------------------------------------|
| OCT.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 01... | 136                     | 10                                                        | 80                                       | 210                                                | 65                                               | 5.4                                           | 20                                         | 3.8                                                    | 208                                               | 0                                              | 17                                                        | 24                                                |
| NOV.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 05... | 257                     | 9.9                                                       | 50                                       | 70                                                 | 67                                               | 5.6                                           | 11                                         | 2.9                                                    | 210                                               | 0                                              | 13                                                        | 15                                                |
| DEC.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 07... | 1500                    | 10                                                        | 60                                       | 20                                                 | 57                                               | 4.4                                           | 5.2                                        | 2.1                                                    | 172                                               | 0                                              | 10                                                        | 9.0                                               |
| 18... | 379                     | --                                                        | --                                       | --                                                 | --                                               | --                                            | --                                         | --                                                     | 204                                               | 0                                              | --                                                        | --                                                |
| JAN.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 07... | 390                     | 9.0                                                       | 70                                       | 50                                                 | 67                                               | 5.8                                           | 10                                         | 2.1                                                    | 174                                               | 0                                              | 16                                                        | 15                                                |
| 24... | 436                     | --                                                        | --                                       | --                                                 | --                                               | --                                            | --                                         | --                                                     | 186                                               | 0                                              | --                                                        | --                                                |
| FEB.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 07... | 427                     | 7.5                                                       | 80                                       | 13                                                 | 61                                               | 5.3                                           | 8.8                                        | 1.9                                                    | 196                                               | 0                                              | 12                                                        | 13                                                |
| 21... | 580                     | --                                                        | --                                       | --                                                 | --                                               | --                                            | --                                         | --                                                     | --                                                | --                                             | --                                                        | --                                                |
| MAR.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 04... | 371                     | --                                                        | --                                       | --                                                 | --                                               | --                                            | --                                         | --                                                     | --                                                | --                                             | --                                                        | --                                                |
| 20... | 1250                    | 9.1                                                       | 20                                       | 29                                                 | 53                                               | 4.8                                           | 5.7                                        | 1.6                                                    | 174                                               | 0                                              | 9.4                                                       | 8.0                                               |
| APR.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 02... | 580                     | --                                                        | --                                       | --                                                 | --                                               | --                                            | --                                         | --                                                     | --                                                | --                                             | --                                                        | --                                                |
| 19... | 340                     | 6.1                                                       | 30                                       | 30                                                 | 56                                               | 6.3                                           | 9.0                                        | 1.8                                                    | 184                                               | 0                                              | 13                                                        | 13                                                |
| 30... | 404                     | --                                                        | --                                       | --                                                 | --                                               | --                                            | --                                         | --                                                     | --                                                | --                                             | --                                                        | --                                                |
| MAY   |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 16... | 1190                    | 8.0                                                       | 20                                       | 20                                                 | 52                                               | 5.8                                           | 5.2                                        | 1.9                                                    | 178                                               | 0                                              | 10                                                        | 7.4                                               |
| 28... | 545                     | --                                                        | --                                       | --                                                 | --                                               | --                                            | --                                         | --                                                     | --                                                | --                                             | --                                                        | --                                                |
| JUNE  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 13... | 1700                    | 11                                                        | 10                                       | 0                                                  | 60                                               | 4.8                                           | 5.1                                        | 1.3                                                    | 180                                               | 0                                              | 9.1                                                       | 6.8                                               |
| 25... | 328                     | --                                                        | --                                       | --                                                 | --                                               | --                                            | --                                         | --                                                     | --                                                | --                                             | --                                                        | --                                                |
| JULY  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 10... | 168                     | 11                                                        | 30                                       | 60                                                 | 68                                               | 5.2                                           | 12                                         | 2.6                                                    | 220                                               | 0                                              | 15                                                        | 17                                                |
| 24... | 104                     | --                                                        | --                                       | --                                                 | --                                               | --                                            | --                                         | --                                                     | 232                                               | 0                                              | --                                                        | --                                                |
| AUG.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 08... | 98                      | 11                                                        | 30                                       | 110                                                | 65                                               | 5.5                                           | 32                                         | 5.3                                                    | 236                                               | 0                                              | 22                                                        | 36                                                |
| 21... | 84                      | --                                                        | --                                       | --                                                 | --                                               | --                                            | --                                         | --                                                     | 180                                               | 0                                              | --                                                        | --                                                |
| SEP.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 03... | 608                     | 10                                                        | 60                                       | 50                                                 | 54                                               | 5.3                                           | 7.3                                        | 2.6                                                    | 172                                               | 0                                              | 13                                                        | 10                                                |
| 17... | 168                     | --                                                        | --                                       | --                                                 | --                                               | --                                            | --                                         | --                                                     | 216                                               | 0                                              | --                                                        | --                                                |

07052250 JAMES RIVER NEAR BOAZ, MO.--Continued

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE  | DIS-<br>SOLVED<br>FLUO-<br>RIDE<br>(F)<br>(MG/L) | TOTAL<br>NITRATE<br>(N)<br>(MG/L) | AMMONIA<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | ORGANIC<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | DIS-<br>SOL-<br>VED-<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | TOTAL<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(RESI-<br>DUE AT<br>180 C)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(TONS<br>PER<br>AC-FT) | DIS-<br>SOLVED<br>SOLIDS<br>(TONS<br>PER<br>DAY) | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | PERCENT<br>SODIUM | HARD-<br>NESS<br>(CA+MG)<br>(MG/L) |
|-------|--------------------------------------------------|-----------------------------------|-------------------------------------------|-------------------------------------------|----------------------------------------------------------|-------------------------------------------|------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------|-----------------------------------------|-------------------|------------------------------------|
| OCT.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 01... | .2                                               | 2.6                               | .42                                       | .78                                       | 1.3                                                      | 1.4                                       | 280                                                              | .38                                                | 103                                              | .6                                      | 19                | 180                                |
| NOV.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 05... | .1                                               | 2.4                               | .02                                       | .73                                       | .61                                                      | .69                                       | 236                                                              | .32                                                | 164                                              | .3                                      | 11                | 190                                |
| DEC.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 07... | .0                                               | 2.4                               | .24                                       | .45                                       | .13                                                      | .15                                       | 196                                                              | .27                                                | 794                                              | .2                                      | 6                 | 160                                |
| 18... | --                                               | --                                | --                                        | --                                        | --                                                       | --                                        | --                                                               | --                                                 | --                                               | --                                      | --                | --                                 |
| JAN.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 07... | .1                                               | 2.4                               | .54                                       | .35                                       | .52                                                      | .60                                       | 216                                                              | .29                                                | 227                                              | .3                                      | 10                | 190                                |
| 24... | --                                               | --                                | --                                        | --                                        | --                                                       | --                                        | --                                                               | --                                                 | --                                               | --                                      | --                | --                                 |
| FEB.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 07... | .2                                               | 2.5                               | .13                                       | .30                                       | .45                                                      | .52                                       | 219                                                              | .30                                                | 252                                              | .3                                      | 10                | 170                                |
| 21... | --                                               | --                                | --                                        | --                                        | --                                                       | --                                        | --                                                               | --                                                 | --                                               | --                                      | --                | --                                 |
| MAR.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 04... | --                                               | --                                | --                                        | --                                        | --                                                       | --                                        | --                                                               | --                                                 | --                                               | --                                      | --                | --                                 |
| 20... | .4                                               | 2.7                               | .18                                       | .33                                       | .19                                                      | .27                                       | 188                                                              | .26                                                | 635                                              | .2                                      | 7                 | 150                                |
| APR.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 02... | --                                               | --                                | --                                        | --                                        | --                                                       | --                                        | --                                                               | --                                                 | --                                               | --                                      | --                | --                                 |
| 19... | .4                                               | 1.7                               | .04                                       | .22                                       | .50                                                      | .56                                       | 194                                                              | .26                                                | 178                                              | .3                                      | 10                | 170                                |
| 30... | --                                               | --                                | --                                        | --                                        | --                                                       | --                                        | --                                                               | --                                                 | --                                               | --                                      | --                | --                                 |
| MAY   |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 16... | .0                                               | 1.6                               | .39                                       | .02                                       | .20                                                      | 3.0                                       | 186                                                              | .25                                                | 598                                              | .2                                      | 7                 | 150                                |
| 28... | --                                               | --                                | --                                        | --                                        | --                                                       | --                                        | --                                                               | --                                                 | --                                               | --                                      | --                | --                                 |
| JUNE  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 13... | .1                                               | .08                               | .40                                       | .30                                       | --                                                       | .18                                       | 202                                                              | .27                                                | 927                                              | .2                                      | 6                 | 170                                |
| 25... | --                                               | --                                | --                                        | --                                        | --                                                       | --                                        | --                                                               | --                                                 | --                                               | --                                      | --                | --                                 |
| JULY  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 10... | .1                                               | 2.9                               | .33                                       | .87                                       | .91                                                      | 1.0                                       | 237                                                              | .32                                                | 108                                              | .4                                      | 12                | 190                                |
| 24... | --                                               | --                                | --                                        | --                                        | --                                                       | --                                        | --                                                               | --                                                 | --                                               | --                                      | --                | --                                 |
| AUG.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 08... | .2                                               | 2.5                               | 4.0                                       | .70                                       | 2.0                                                      | 2.1                                       | 302                                                              | .41                                                | 79.9                                             | 1.0                                     | 27                | 190                                |
| 21... | --                                               | --                                | --                                        | --                                        | --                                                       | --                                        | --                                                               | --                                                 | --                                               | --                                      | --                | --                                 |
| SEP.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 03... | .1                                               | 2.1                               | .10                                       | .90                                       | .32                                                      | .47                                       | 191                                                              | .26                                                | 314                                              | .3                                      | 9                 | 160                                |
| 17... | --                                               | --                                | --                                        | --                                        | --                                                       | --                                        | --                                                               | --                                                 | --                                               | --                                      | --                | --                                 |

| DATE  | NON-<br>CAR-<br>BONATE<br>HARD-<br>NESS<br>(MG/L) | ALKA-<br>LINITY<br>AS<br>CACO3<br>(MG/L) | SPE-<br>CIFIC<br>CON-<br>DUCT-<br>ANCE<br>(MICRO-<br>MHOS) | PH<br>(UNITS) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | CHEM-<br>ICAL<br>OXYGEN<br>DEMAND<br>(LOW<br>LEVEL)<br>(MG/L) | DIS-<br>SOLVED<br>OXYGEN<br>(MG/L) | PER-<br>CENT<br>SATUR-<br>ATION | FECAL<br>COLI-<br>FORM<br>(COL.<br>PER<br>100 ML) | STREP-<br>TOCOCCI<br>(COL-<br>ONIES<br>PER<br>100 ML) |
|-------|---------------------------------------------------|------------------------------------------|------------------------------------------------------------|---------------|----------------------------------------------|-----------------------------|---------------------------------------------------------------|------------------------------------|---------------------------------|---------------------------------------------------|-------------------------------------------------------|
| OCT.  |                                                   |                                          |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 01... | 9                                                 | 171                                      | 455                                                        | 7.6           | 5                                            | 19.0                        | 14                                                            | 4.1                                | 44                              | 1600                                              | 780                                                   |
| NOV.  |                                                   |                                          |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 05... | 18                                                | 172                                      | 410                                                        | 7.6           | 5                                            | 12.5                        | 10                                                            | 6.9                                | 64                              | 1800                                              | 160                                                   |
| DEC.  |                                                   |                                          |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 07... | 19                                                | 141                                      | 315                                                        | 7.6           | 4                                            | 8.5                         | 9                                                             | 8.0                                | 68                              | 19000                                             | 2200                                                  |
| 18... | --                                                | 167                                      | 405                                                        | 7.8           | --                                           | 8.0                         | --                                                            | 9.2                                | 67                              | 3800                                              | --                                                    |
| JAN.  |                                                   |                                          |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 07... | 48                                                | 143                                      | 400                                                        | 7.8           | 5                                            | 6.0                         | 0                                                             | 7.6                                | 61                              | 12000                                             | 1300                                                  |
| 24... | --                                                | 153                                      | 370                                                        | 7.7           | --                                           | 10.0                        | --                                                            | 9.8                                | 87                              | 7000                                              | --                                                    |
| FEB.  |                                                   |                                          |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 07... | 13                                                | 161                                      | 380                                                        | 7.8           | 5                                            | 8.0                         | 6                                                             | 8.4                                | 71                              | --                                                | 2000                                                  |
| 21... | --                                                | --                                       | 370                                                        | 7.8           | --                                           | 11.0                        | --                                                            | 7.7                                | 70                              | 8500                                              | --                                                    |
| MAR.  |                                                   |                                          |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 04... | --                                                | --                                       | 375                                                        | 8.0           | --                                           | 16.5                        | --                                                            | 8.8                                | 90                              | 340                                               | --                                                    |
| 20... | 9                                                 | 143                                      | 327                                                        | 7.9           | 6                                            | 11.5                        | 5                                                             | 8.2                                | 75                              | 8700                                              | 1800                                                  |
| APR.  |                                                   |                                          |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 02... | --                                                | --                                       | 350                                                        | 7.9           | --                                           | 14.5                        | --                                                            | 8.2                                | 80                              | 2100                                              | --                                                    |
| 19... | 15                                                | 151                                      | 358                                                        | 7.7           | 2                                            | 15.0                        | 8                                                             | 6.5                                | 64                              | 2000                                              | 200                                                   |
| 30... | --                                                | --                                       | 340                                                        | 7.6           | --                                           | 19.0                        | --                                                            | 4.8                                | 51                              | 3600                                              | --                                                    |
| MAY   |                                                   |                                          |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 16... | 8                                                 | 146                                      | 325                                                        | 7.7           | 1                                            | 19.0                        | 17                                                            | 5.8                                | 62                              | 3200                                              | 720                                                   |
| 28... | --                                                | --                                       | 378                                                        | 7.7           | --                                           | 19.0                        | --                                                            | 6.2                                | 66                              | 2400                                              | --                                                    |
| JUNE  |                                                   |                                          |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 13... | 22                                                | 148                                      | 350                                                        | 7.7           | 3                                            | 16.5                        | 4                                                             | 6.1                                | 62                              | 8400                                              | 2000                                                  |
| 25... | --                                                | --                                       | 410                                                        | 7.8           | --                                           | 19.5                        | --                                                            | 7.0                                | 75                              | 132                                               | --                                                    |
| JULY  |                                                   |                                          |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 10... | 11                                                | 180                                      | 440                                                        | 7.6           | 3                                            | 24.5                        | 5                                                             | 2.9                                | 35                              | --                                                | 75                                                    |
| 24... | --                                                | 190                                      | 515                                                        | 7.6           | --                                           | 24.0                        | --                                                            | 4.5                                | 53                              | 110                                               | --                                                    |
| AUG.  |                                                   |                                          |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 08... | 0                                                 | 194                                      | 555                                                        | 7.5           | 7                                            | 22.0                        | 23                                                            | 2.3                                | 26                              | 380                                               | 300                                                   |
| 21... | --                                                | 148                                      | 485                                                        | 7.4           | --                                           | 23.5                        | --                                                            | 1.8                                | 21                              | 90                                                | --                                                    |
| SEP.  |                                                   |                                          |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 03... | 19                                                | 141                                      | 343                                                        | 7.6           | 4                                            | 19.0                        | 20                                                            | 5.5                                | 59                              | 7500                                              | 3200                                                  |
| 17... | --                                                | 177                                      | 550                                                        | 7.4           | --                                           | 19.5                        | --                                                            | 3.4                                | 37                              | 1600                                              | --                                                    |

## WHITE RIVER BASIN

07052250 JAMES RIVER NEAR BOAZ, MO.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C) , WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

|       | OCTOBER |     | NOVEMBER |     | DECEMBER |     | JANUARY |     | FEBRUARY |     | MARCH |     |
|-------|---------|-----|----------|-----|----------|-----|---------|-----|----------|-----|-------|-----|
| DAY   | MAX     | MIN | MAX      | MIN | MAX      | MIN | MAX     | MIN | MAX      | MIN | MAX   | MIN |
| 1     | ---     | --- | 419      | 403 | 346      | 338 | 383     | 374 | 355      | 344 | 375   | 361 |
| 2     | 427     | 410 | 413      | 405 | 354      | 346 | 387     | 379 | 363      | 351 | 379   | 366 |
| 3     | 444     | 427 | 419      | 408 | 359      | 326 | 394     | 384 | 372      | 359 | 379   | 368 |
| 4     | 451     | 428 | 430      | 416 | 350      | 234 | 400     | 389 | 356      | 338 | 377   | 368 |
| 5     | 516     | 458 | 438      | 427 | 327      | 298 | 404     | 390 | ---      | --- | 389   | 372 |
| 6     | 492     | 455 | 456      | 436 | 331      | 304 | 404     | 394 | ---      | --- | 389   | 378 |
| 7     | 481     | 461 | 460      | 450 | 344      | 333 | 416     | 402 | ---      | --- | 398   | 382 |
| 8     | 491     | 464 | 471      | 457 | 357      | 346 | 420     | 408 | ---      | --- | 403   | 391 |
| 9     | 474     | 461 | 479      | 470 | 363      | 357 | 424     | 407 | ---      | --- | 405   | 342 |
| 10    | 487     | 473 | 490      | 481 | 372      | 365 | 417     | 407 | ---      | --- | 374   | 194 |
| 11    | 486     | 469 | 495      | 489 | 379      | 371 | 423     | 415 | ---      | --- | 204   | 149 |
| 12    | 536     | 463 | 491      | 471 | 383      | 375 | 421     | 412 | 410      | 393 | 279   | 204 |
| 13    | 502     | 306 | 480      | 472 | 392      | 379 | 420     | 409 | 414      | 396 | 303   | 281 |
| 14    | 356     | 341 | 488      | 482 | 396      | 389 | 416     | 402 | 416      | 401 | 320   | 306 |
| 15    | 360     | 345 | 500      | 489 | 398      | 393 | 448     | 401 | 428      | 412 | 362   | 297 |
| 16    | 350     | 312 | 512      | 501 | 405      | 398 | 472     | 390 | 434      | 422 | 312   | 274 |
| 17    | 355     | 338 | 533      | 514 | 405      | 399 | 388     | 358 | 432      | 425 | 294   | 274 |
| 18    | 365     | 352 | 539      | 530 | 413      | 403 | 365     | 355 | 430      | 423 | 309   | 295 |
| 19    | 376     | 363 | 531      | 519 | 447      | 401 | 362     | 352 | 489      | 415 | 336   | 310 |
| 20    | 385     | 372 | 526      | 498 | 427      | 389 | 358     | 352 | 426      | 377 | 338   | 325 |
| 21    | 390     | 379 | 611      | 443 | 403      | 391 | 361     | 349 | 396      | 376 | 346   | 330 |
| 22    | 393     | 379 | 471      | 449 | 403      | 393 | 359     | 351 | 409      | 381 | 341   | 326 |
| 23    | 404     | 389 | 471      | 451 | 405      | 393 | 371     | 359 | 381      | 350 | 335   | 327 |
| 24    | 410     | 396 | 425      | 225 | 466      | 333 | 377     | 363 | 370      | 353 | 328   | 315 |
| 25    | 416     | 400 | 257      | 155 | 333      | 276 | 387     | 371 | 361      | 343 | 331   | 319 |
| 26    | 424     | 405 | 266      | 179 | 302      | 278 | 385     | 375 | 361      | 345 | 327   | 300 |
| 27    | 349     | 196 | 294      | 265 | 326      | 303 | ---     | --- | 365      | 349 | 324   | 297 |
| 28    | 341     | 316 | 313      | 296 | 337      | 328 | ---     | --- | 371      | 358 | 326   | 313 |
| 29    | 367     | 347 | 323      | 315 | 350      | 338 | 337     | 334 | ---      | --- | 337   | 323 |
| 30    | 396     | 377 | 337      | 324 | 359      | 351 | 345     | 332 | ---      | --- | 338   | 326 |
| 31    | 414     | 386 | ---      | --- | 373      | 360 | 345     | 337 | ---      | --- | 342   | 327 |
| MONTH | 536     | 196 | 611      | 155 | 466      | 234 | 472     | 332 | ---      | --- | 405   | 149 |

|       | APRIL |     | MAY |     | JUNE |     | JULY |     | AUGUST |     | SEPTEMBER |     |
|-------|-------|-----|-----|-----|------|-----|------|-----|--------|-----|-----------|-----|
| DAY   | MAX   | MIN | MAX | MIN | MAX  | MIN | MAX  | MIN | MAX    | MIN | MAX       | MIN |
| 1     | 342   | 332 | 344 | 324 | 424  | 415 | 433  | 427 | 507    | 490 | 451       | 276 |
| 2     | 351   | 337 | 386 | 325 | 424  | 413 | 435  | 430 | 521    | 500 | 342       | 278 |
| 3     | 359   | 345 | 336 | 310 | 423  | 413 | 438  | 429 | 551    | 521 | 344       | 334 |
| 4     | 376   | 361 | 315 | 300 | 433  | 420 | 488  | 298 | 631    | 553 | 352       | 340 |
| 5     | 385   | 368 | 308 | 294 | 507  | 368 | 395  | 359 | 560    | 505 | 372       | 344 |
| 6     | 385   | 368 | 316 | 304 | 397  | 305 | 412  | 389 | 523    | 508 | 394       | 371 |
| 7     | 378   | 369 | 333 | 318 | 302  | 206 | 423  | 412 | 535    | 520 | 410       | 389 |
| 8     | 418   | 372 | 347 | 333 | 284  | 212 | 432  | 424 | 566    | 534 | 418       | 404 |
| 9     | 380   | 357 | 360 | 344 | 295  | 255 | 449  | 433 | 565    | 499 | 423       | 412 |
| 10    | 372   | 359 | 378 | 356 | 300  | 246 | 454  | 444 | 576    | 487 | 453       | 424 |
| 11    | 384   | 373 | 369 | 360 | 345  | 302 | 470  | 455 | 481    | 459 | 468       | 433 |
| 12    | 454   | 363 | 375 | 362 | 341  | 323 | 478  | 465 | 477    | 391 | 517       | 447 |
| 13    | 363   | 345 | 378 | 370 | 355  | 339 | 481  | 473 | 449    | 366 | 472       | 449 |
| 14    | 362   | 344 | 374 | 264 | 362  | 348 | 484  | 467 | 495    | 453 | 502       | 471 |
| 15    | 363   | 351 | 310 | 260 | 369  | 363 | 483  | 464 | 505    | 488 | 470       | 465 |
| 16    | 367   | 354 | 322 | 311 | 375  | 370 | 480  | 459 | 517    | 500 | 467       | 451 |
| 17    | 370   | 358 | 332 | 319 | 382  | 373 | 474  | 459 | 541    | 499 | 510       | 449 |
| 18    | 370   | 360 | 342 | 334 | 385  | 373 | 480  | 454 | 608    | 529 | 453       | 444 |
| 19    | 375   | 364 | 353 | 344 | 383  | 377 | 492  | 465 | 547    | 428 | 460       | 443 |
| 20    | 377   | 364 | 360 | 353 | 388  | 380 | 505  | 489 | 469    | 447 | 508       | 321 |
| 21    | 389   | 368 | 377 | 363 | 392  | 382 | 501  | 482 | 485    | 469 | 410       | 400 |
| 22    | 421   | 316 | 390 | 376 | 395  | 384 | 496  | 484 | 510    | 475 | 411       | 403 |
| 23    | 325   | 301 | 400 | 382 | 397  | 388 | 497  | 481 | 547    | 484 | 416       | 406 |
| 24    | 308   | 291 | 427 | 393 | 397  | 392 | 514  | 490 | 528    | 439 | 430       | 414 |
| 25    | 312   | 294 | 417 | 374 | 418  | 394 | 504  | 465 | 479    | 457 | 437       | 426 |
| 26    | ---   | --- | 415 | 322 | 427  | 416 | 577  | 360 | 478    | 459 | 456       | 436 |
| 27    | ---   | --- | 362 | 339 | 430  | 422 | 436  | 388 | 483    | 442 | 463       | 452 |
| 28    | ---   | --- | 380 | 362 | 436  | 426 | 445  | 413 | 556    | 455 | 469       | 456 |
| 29    | 353   | 314 | 395 | 380 | 435  | 425 | 461  | 418 | 466    | 438 | 498       | 467 |
| 30    | 424   | 345 | 409 | 392 | 435  | 424 | 575  | 441 | 477    | 451 | 488       | 465 |
| 31    | ---   | --- | 416 | 400 | ---  | --- | 500  | 483 | 467    | 421 | ---       | --- |
| MONTH | 454   | 291 | 427 | 260 | 507  | 206 | 577  | 298 | 631    | 366 | 517       | 276 |

07052250 JAMES RIVER NEAR BOAZ, MO.--Continued

PH (UNITS) , WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCTOBER |     | NOVEMBER |     | DECEMBER |     | JANUARY |     | FEBRUARY |     | MARCH |     |
|-------|---------|-----|----------|-----|----------|-----|---------|-----|----------|-----|-------|-----|
|       | MAX     | MIN | MAX      | MIN | MAX      | MIN | MAX     | MIN | MAX      | MIN | MAX   | MIN |
| 1     | 7.7     | 7.6 | 7.7      | 7.6 | 7.7      | 7.4 | 7.9     | 7.8 | 8.0      | 7.7 | 8.3   | 7.6 |
| 2     | 7.6     | 7.5 | 7.8      | 7.6 | 7.7      | 7.5 | 7.9     | 7.8 | 8.0      | 7.7 | 8.4   | 7.9 |
| 3     | 7.7     | 7.4 | 7.8      | 7.6 | 7.7      | 7.6 | 7.9     | 7.8 | 8.2      | 7.8 | 8.4   | 7.9 |
| 4     | 7.6     | 7.4 | 7.7      | 7.6 | 7.7      | 7.5 | 7.9     | 7.8 | 8.2      | 7.8 | 8.1   | 7.8 |
| 5     | 7.6     | 7.5 | 7.9      | 7.6 | 7.8      | 7.6 | 7.9     | 7.7 | 8.3      | 7.8 | 8.2   | 7.7 |
| 6     | 7.6     | 7.5 | 7.8      | 7.5 | 7.7      | 7.6 | 7.9     | 7.7 | 8.0      | 7.8 | 8.0   | 7.7 |
| 7     | 7.6     | 7.4 | 7.6      | 7.5 | 7.8      | 7.6 | 8.0     | 7.8 | 8.1      | 7.8 | 8.1   | 7.6 |
| 8     | 7.6     | 7.4 | 7.6      | 7.5 | 7.7      | 7.6 | 7.9     | 7.6 | 8.2      | 7.8 | 7.9   | 7.7 |
| 9     | 7.6     | 7.5 | 7.6      | 7.4 | 7.7      | 7.6 | 8.0     | 7.8 | 8.1      | 7.8 | 7.9   | 7.6 |
| 10    | 7.6     | 7.5 | 7.5      | 7.4 | 7.8      | 7.7 | 7.9     | 7.8 | 8.3      | 7.8 | 7.7   | 7.5 |
| 11    | 7.7     | 7.6 | 7.5      | 7.4 | 7.8      | 7.5 | 8.2     | 7.8 | 8.3      | 7.8 | 7.7   | 7.5 |
| 12    | 7.7     | 7.5 | 7.7      | 7.3 | 7.6      | 7.5 | 8.2     | 7.9 | 8.3      | 7.8 | 7.7   | 7.5 |
| 13    | 7.7     | 7.3 | 7.7      | 7.6 | 7.6      | 7.5 | 8.2     | 7.8 | 8.3      | 7.7 | 7.7   | 7.7 |
| 14    | 7.7     | 7.4 | 7.6      | 7.5 | 7.7      | 7.6 | 8.1     | 7.8 | 7.9      | 7.6 | 7.8   | 7.7 |
| 15    | 7.7     | 7.5 | 7.6      | 7.5 | 7.6      | 7.6 | 8.0     | 7.7 | 7.9      | 7.7 | 7.8   | 7.7 |
| 16    | 7.7     | 7.6 | 7.6      | 7.4 | 7.7      | 7.6 | 7.9     | 7.6 | 8.2      | 7.7 | 7.9   | 7.8 |
| 17    | 7.8     | 7.7 | 7.6      | 7.4 | 7.8      | 7.7 | 7.9     | 7.7 | 8.3      | 7.8 | 7.9   | 7.8 |
| 18    | 7.8     | 7.7 | 7.5      | 7.4 | 7.7      | 7.6 | 7.9     | 7.6 | 7.8      | 7.7 | 7.9   | 7.6 |
| 19    | 7.8     | 7.6 | 7.5      | 7.4 | 7.7      | 7.6 | 7.9     | 7.8 | 7.9      | 7.6 | 7.9   | 7.7 |
| 20    | 7.8     | 7.7 | 7.7      | 7.4 | 7.8      | 7.7 | 8.0     | 7.8 | 8.1      | 7.6 | 8.0   | 7.9 |
| 21    | 7.8     | 7.6 | 7.7      | 7.5 | 7.8      | 7.7 | 8.1     | 7.8 | 7.8      | 7.7 | 8.0   | 8.0 |
| 22    | 7.8     | 7.6 | 7.6      | 7.5 | 7.8      | 7.7 | 7.9     | 7.7 | 8.1      | 7.7 | 8.0   | 7.9 |
| 23    | 7.7     | 7.6 | 7.6      | 7.5 | 7.7      | 7.6 | 8.0     | 7.7 | 8.1      | 7.8 | 8.1   | 7.9 |
| 24    | 7.7     | 7.5 | 7.6      | 7.5 | 7.7      | 7.5 | 7.9     | 7.7 | 8.2      | 7.8 | 8.1   | 8.0 |
| 25    | 7.6     | 7.5 | 7.7      | 7.4 | 7.7      | 7.5 | 8.0     | 7.7 | 8.2      | 7.9 | 8.0   | 7.9 |
| 26    | 7.6     | 7.5 | 7.7      | 7.5 | 7.6      | 7.5 | ---     | --- | 8.2      | 7.8 | 7.9   | 7.7 |
| 27    | 7.5     | 7.3 | 7.7      | 7.3 | 7.7      | 7.5 | ---     | --- | 8.1      | 7.7 | 7.8   | 7.7 |
| 28    | 7.6     | 7.3 | 7.4      | 7.3 | 7.7      | 7.6 | ---     | --- | 8.0      | 7.7 | 7.9   | 7.7 |
| 29    | 7.7     | 7.5 | 7.5      | 7.2 | 7.8      | 7.6 | 7.9     | 7.7 | ---      | --- | 7.9   | 7.7 |
| 30    | 7.8     | 7.6 | 7.5      | 7.3 | 7.8      | 7.7 | 7.9     | 7.7 | ---      | --- | 8.0   | 7.7 |
| 31    | 7.8     | 7.6 | ---      | --- | 7.9      | 7.8 | 7.9     | 7.7 | ---      | --- | 8.1   | 7.7 |
| MONTH | 7.8     | 7.3 | 7.9      | 7.2 | 7.9      | 7.4 | 8.2     | 7.6 | 8.3      | 7.6 | 8.4   | 7.5 |

| DAY   | APRIL |     | MAY |     | JUNE |     | JULY |     | AUGUST |     | SEPTEMBER |     |
|-------|-------|-----|-----|-----|------|-----|------|-----|--------|-----|-----------|-----|
|       | MAX   | MIN | MAX | MIN | MAX  | MIN | MAX  | MIN | MAX    | MIN | MAX       | MIN |
| 1     | 8.1   | 7.6 | 7.7 | 7.6 | 7.6  | 7.5 | 8.0  | 7.6 | 7.9    | 7.6 | 7.6       | 7.4 |
| 2     | 8.2   | 7.8 | 7.7 | 7.5 | 7.6  | 7.5 | 7.9  | 7.6 | 7.9    | 7.6 | 7.6       | 7.4 |
| 3     | 8.2   | 7.8 | 7.8 | 7.6 | 7.6  | 7.5 | 7.9  | 7.6 | 7.9    | 7.6 | 7.8       | 7.6 |
| 4     | 7.9   | 7.6 | 7.8 | 7.7 | 7.5  | 7.5 | 7.6  | 7.3 | 7.8    | 7.6 | 7.8       | 7.6 |
| 5     | 8.1   | 7.7 | 7.7 | 7.6 | 7.5  | 7.4 | 7.6  | 7.4 | 7.7    | 7.6 | 7.7       | 7.6 |
| 6     | 8.1   | 7.6 | 7.7 | 7.6 | 7.5  | 7.4 | 7.7  | 7.5 | 7.6    | 7.5 | 7.7       | 7.6 |
| 7     | 7.9   | 7.6 | 7.8 | 7.6 | 7.5  | 7.3 | 7.7  | 7.5 | 7.7    | 7.5 | 7.7       | 7.6 |
| 8     | 7.9   | 7.6 | 7.8 | 7.6 | 7.4  | 7.3 | 7.8  | 7.5 | 7.6    | 7.5 | 7.7       | 7.5 |
| 9     | 8.0   | 7.6 | 7.8 | 7.6 | 7.5  | 7.4 | 7.7  | 7.5 | 7.5    | 7.5 | 7.7       | 7.5 |
| 10    | 8.1   | 7.5 | 7.8 | 7.6 | 7.6  | 7.4 | 7.7  | 7.4 | 7.6    | 7.4 | 7.7       | 7.5 |
| 11    | 7.9   | 7.7 | 7.7 | 7.6 | 7.6  | 7.5 | 7.7  | 7.5 | 7.5    | 7.4 | 7.6       | 7.5 |
| 12    | 8.0   | 7.7 | 7.8 | 7.6 | 7.7  | 7.5 | 7.7  | 7.5 | 7.5    | 7.4 | 7.6       | 7.5 |
| 13    | 8.1   | 7.7 | 7.9 | 7.6 | 7.7  | 7.5 | 7.7  | 7.5 | 7.5    | 7.3 | 7.6       | 7.5 |
| 14    | 8.2   | 7.8 | 7.6 | 7.4 | 7.6  | 7.5 | 7.7  | 7.5 | 7.6    | 7.4 | 7.7       | 7.5 |
| 15    | 8.3   | 7.8 | 7.6 | 7.4 | 7.6  | 7.5 | 7.6  | 7.5 | 7.6    | 7.4 | 7.7       | 7.5 |
| 16    | 8.1   | 7.8 | 7.6 | 7.5 | 7.7  | 7.5 | 7.7  | 7.5 | 7.6    | 7.4 | 7.6       | 7.5 |
| 17    | 8.3   | 7.8 | 7.5 | 7.5 | 7.7  | 7.6 | 7.8  | 7.5 | 7.6    | 7.4 | 7.6       | 7.5 |
| 18    | 8.1   | 7.7 | 7.6 | 7.5 | 7.7  | 7.6 | 7.7  | 7.4 | 7.6    | 7.4 | 7.6       | 7.5 |
| 19    | 8.2   | 7.7 | 7.6 | 7.5 | 7.7  | 7.5 | 7.9  | 7.4 | 7.4    | 7.3 | 7.6       | 7.5 |
| 20    | 8.3   | 7.7 | 7.6 | 7.5 | 7.7  | 7.5 | 8.0  | 7.4 | 7.5    | 7.4 | 7.6       | 7.4 |
| 21    | 8.1   | 7.7 | 7.6 | 7.5 | 7.8  | 7.5 | 8.1  | 7.5 | 7.5    | 7.4 | 7.7       | 7.5 |
| 22    | 7.7   | 7.6 | 7.7 | 7.6 | 7.7  | 7.5 | 8.0  | 7.4 | 7.5    | 7.3 | 7.8       | 7.6 |
| 23    | 8.0   | 7.7 | 7.6 | 7.6 | 7.8  | 7.5 | 8.1  | 7.4 | 7.5    | 7.4 | 7.8       | 7.7 |
| 24    | 7.8   | 7.7 | 7.6 | 7.6 | 7.9  | 7.6 | 8.1  | 7.7 | 7.5    | 7.3 | 7.7       | 7.6 |
| 25    | 7.8   | 7.6 | 7.6 | 7.6 | 7.9  | 7.6 | 7.8  | 7.7 | 7.5    | 7.3 | 7.7       | 7.6 |
| 26    | 7.8   | 7.7 | 7.6 | 7.5 | 8.0  | 7.7 | 7.8  | 7.6 | 7.5    | 7.4 | 7.7       | 7.6 |
| 27    | 7.9   | 7.7 | 7.7 | 7.6 | 8.0  | 7.7 | 7.7  | 7.6 | 7.6    | 7.4 | 7.7       | 7.5 |
| 28    | 7.8   | 7.7 | 7.7 | 7.6 | 8.0  | 7.7 | 7.7  | 7.6 | 7.6    | 7.5 | 7.6       | 7.5 |
| 29    | 7.7   | 7.6 | 7.7 | 7.6 | 8.0  | 7.7 | 7.7  | 7.6 | 7.5    | 7.4 | 7.7       | 7.5 |
| 30    | 7.7   | 7.5 | 7.7 | 7.6 | 7.9  | 7.6 | 7.8  | 7.6 | 7.6    | 7.5 | 7.7       | 7.6 |
| 31    | ---   | --- | 7.7 | 7.4 | ---  | --- | 7.9  | 7.6 | 7.6    | 7.5 | ---       | --- |
| MONTH | 8.3   | 7.5 | 7.9 | 7.4 | 8.0  | 7.3 | 8.1  | 7.3 | 7.9    | 7.3 | 7.8       | 7.4 |

07052250 JAMES RIVER NEAR BOAZ, MO.--Continued

DISSOLVED OXYGEN (DO), IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

|       | OCTOBER |     | NOVEMBER |     | DECEMBER |      | JANUARY |     | FEBRUARY |     | MARCH |     |
|-------|---------|-----|----------|-----|----------|------|---------|-----|----------|-----|-------|-----|
| DAY   | MAX     | MIN | MAX      | MIN | MAX      | MIN  | MAX     | MIN | MAX      | MIN | MAX   | MIN |
| 1     | 4.7     | 2.9 | 6.8      | 6.1 | 8.5      | 8.0  | 10.7    | 9.8 | 9.8      | 5.4 | 9.6   | 6.3 |
| 2     | ---     | --- | 7.6      | 6.3 | 8.2      | 7.6  | 10.6    | 9.7 | 9.3      | 7.4 | 10.0  | 6.0 |
| 3     | ---     | --- | 7.2      | 6.6 | 7.9      | 7.6  | 10.7    | 9.5 | 10.8     | 7.8 | 9.8   | 5.7 |
| 4     | ---     | --- | 6.8      | 5.7 | 8.6      | 7.5  | 10.6    | 9.5 | 11.1     | 7.8 | 10.8  | 5.5 |
| 5     | ---     | --- | 7.6      | 5.4 | 9.1      | 8.7  | 10.6    | 8.9 | 11.3     | 7.6 | 10.1  | 5.7 |
| 6     | ---     | --- | 7.1      | 4.6 | 9.1      | 8.9  | 9.9     | 8.6 | 8.4      | 6.9 | 10.0  | 5.7 |
| 7     | ---     | --- | 7.1      | 6.0 | 9.3      | 8.7  | 10.0    | 8.8 | 10.6     | 7.4 | 10.5  | 5.4 |
| 8     | ---     | --- | 6.4      | 5.2 | 9.0      | 8.5  | 9.8     | 8.5 | 11.6     | 7.8 | 8.7   | 5.6 |
| 9     | ---     | --- | 7.0      | 5.2 | 8.7      | 8.3  | 9.7     | 8.0 | 11.0     | 7.8 | 9.1   | 5.0 |
| 10    | ---     | --- | 7.4      | 6.0 | 9.2      | 8.7  | 9.2     | 8.2 | 12.7     | 8.0 | 9.2   | 5.7 |
| 11    | ---     | --- | 7.1      | 5.8 | 9.1      | 8.5  | 11.1    | 8.3 | 12.9     | 8.0 | 9.6   | 9.3 |
| 12    | ---     | --- | 7.7      | 5.5 | 8.5      | 7.9  | 11.7    | 8.9 | 12.6     | 8.8 | 9.6   | 9.4 |
| 13    | ---     | --- | 6.6      | 5.0 | 8.2      | 7.7  | 11.7    | 8.8 | 12.7     | 7.0 | 9.5   | 8.8 |
| 14    | ---     | --- | 5.5      | 4.2 | 8.5      | 7.8  | 10.8    | 8.1 | 9.0      | 6.6 | 10.3  | 8.7 |
| 15    | ---     | --- | 5.0      | 3.5 | 8.3      | 7.6  | 10.7    | 7.3 | 9.3      | 6.3 | 8.9   | 8.3 |
| 16    | ---     | --- | 5.7      | 3.5 | 8.7      | 7.8  | 9.9     | 6.6 | 11.1     | 6.4 | 9.6   | 8.6 |
| 17    | ---     | --- | 6.6      | 4.7 | 8.9      | 7.9  | 9.8     | 7.6 | 12.2     | 7.1 | 9.1   | 8.5 |
| 18    | ---     | --- | 6.3      | 4.6 | 9.3      | 7.4  | 9.0     | 7.3 | 8.1      | 6.3 | 8.4   | 7.6 |
| 19    | ---     | --- | 5.2      | 3.9 | 8.6      | 7.3  | 8.2     | 7.2 | 8.9      | 5.4 | 7.5   | 7.1 |
| 20    | ---     | --- | 5.3      | 3.8 | 9.8      | 8.2  | 8.1     | 6.9 | 9.9      | 5.9 | 8.5   | 7.0 |
| 21    | ---     | --- | 4.8      | 3.4 | 9.9      | 8.9  | 9.3     | 7.2 | 8.3      | 6.9 | 9.0   | 8.3 |
| 22    | ---     | --- | 6.5      | 4.6 | 9.3      | 8.2  | 8.2     | 6.9 | 10.2     | 6.5 | 9.2   | 8.4 |
| 23    | ---     | --- | 6.7      | 4.2 | 8.5      | 7.4  | 10.0    | 7.3 | 10.6     | 7.9 | 9.6   | 8.5 |
| 24    | ---     | --- | 8.2      | 5.3 | 11.3     | 6.1  | 10.0    | 7.3 | 11.1     | 8.0 | 10.6  | 9.8 |
| 25    | ---     | --- | 8.8      | 8.2 | 11.9     | 10.8 | 10.3    | 7.3 | 12.0     | 9.1 | 10.7  | 9.8 |
| 26    | ---     | --- | 8.8      | 8.6 | 11.0     | 10.6 | 10.5    | 6.9 | 11.8     | 8.8 | 10.2  | 8.9 |
| 27    | ---     | --- | 8.9      | 8.4 | 11.1     | 10.5 | ---     | --- | 11.0     | 7.7 | 9.7   | 8.4 |
| 28    | ---     | --- | 8.9      | 8.5 | 10.3     | 9.6  | ---     | --- | 10.8     | 7.0 | 8.8   | 7.5 |
| 29    | ---     | --- | 8.9      | 8.4 | 9.9      | 9.2  | 9.5     | 8.6 | ---      | --- | 9.4   | 6.9 |
| 30    | 7.8     | 7.0 | 8.7      | 8.3 | 9.4      | 9.1  | 9.8     | 8.5 | ---      | --- | 9.8   | 7.0 |
| 31    | 7.0     | 6.2 | ---      | --- | 10.4     | 9.2  | 9.8     | 8.1 | ---      | --- | 9.7   | 6.5 |
| MONTH | ---     | --- | 8.9      | 3.4 | 11.9     | 6.1  | 11.7    | 6.6 | 12.9     | 5.4 | 10.8  | 5.0 |

|       | APRIL |     | MAY |     | JUNE |     | JULY |     | AUGUST |     | SEPTEMBER |     |
|-------|-------|-----|-----|-----|------|-----|------|-----|--------|-----|-----------|-----|
| DAY   | MAX   | MIN | MAX | MIN | MAX  | MIN | MAX  | MIN | MAX    | MIN | MAX       | MIN |
| 1     | 9.2   | 6.0 | 6.2 | 4.4 | 6.4  | 4.4 | 7.1  | 2.9 | 7.5    | 1.6 | 5.7       | 2.1 |
| 2     | 10.4  | 6.0 | 6.0 | 5.3 | 6.7  | 4.7 | 7.2  | 2.8 | 6.8    | 1.5 | 5.9       | 4.8 |
| 3     | 10.3  | 6.1 | 7.1 | 5.6 | 6.6  | 4.7 | 7.0  | 2.9 | 7.0    | 1.5 | 6.6       | 5.9 |
| 4     | 8.8   | 6.0 | 7.1 | 6.4 | 5.0  | 4.0 | 3.6  | 1.8 | 5.6    | 1.7 | 7.0       | 5.5 |
| 5     | 10.2  | 6.7 | 7.1 | 6.2 | 4.2  | 2.8 | 4.9  | 2.4 | 5.8    | 1.8 | 6.4       | 5.8 |
| 6     | 10.1  | 6.2 | 6.8 | 5.9 | 5.2  | 3.3 | 5.5  | 3.2 | 3.8    | 1.7 | 5.9       | 5.1 |
| 7     | 9.2   | 6.6 | 7.7 | 5.3 | 6.3  | 4.8 | 5.4  | 2.7 | 4.5    | 1.8 | 5.4       | 4.2 |
| 8     | 9.1   | 6.5 | 7.4 | 5.0 | 6.9  | 6.1 | 5.7  | 2.9 | 3.9    | 1.8 | 5.3       | 3.9 |
| 9     | 9.0   | 6.6 | 6.5 | 4.7 | 7.8  | 6.4 | 5.4  | 2.9 | 3.0    | 1.4 | 5.0       | 3.5 |
| 10    | 9.9   | 7.5 | 6.9 | 4.4 | 7.7  | 7.5 | 5.8  | 2.9 | 3.1    | 1.6 | 4.8       | 3.0 |
| 11    | 8.2   | 6.4 | 6.8 | 4.3 | 7.5  | 7.0 | 5.6  | 2.1 | 3.4    | 1.4 | 4.2       | 2.6 |
| 12    | 8.6   | 4.8 | 7.5 | 4.2 | 7.7  | 7.1 | 4.2  | 1.8 | 3.5    | 1.5 | 4.3       | 1.9 |
| 13    | 8.8   | 5.1 | 7.9 | 4.3 | 7.6  | 6.9 | 3.3  | 1.2 | 4.0    | 1.4 | 4.2       | 2.3 |
| 14    | 8.2   | 4.8 | 5.3 | 3.5 | 7.4  | 6.7 | 2.4  | 0.8 | 4.6    | 1.3 | 4.5       | 2.7 |
| 15    | 8.7   | 5.4 | 7.0 | 5.3 | 7.5  | 6.7 | 1.6  | 0.3 | 4.4    | 1.4 | 5.0       | 2.9 |
| 16    | 9.0   | 6.4 | 6.6 | 5.7 | 7.9  | 6.7 | 2.6  | 0.2 | 5.5    | 1.5 | 4.7       | 3.0 |
| 17    | 9.3   | 6.6 | 5.8 | 5.1 | 8.8  | 7.1 | 2.5  | 0.2 | 5.1    | 1.4 | 4.4       | 2.7 |
| 18    | 9.2   | 6.2 | 5.7 | 4.7 | 7.8  | 6.3 | 1.6  | 0.1 | 3.7    | 1.3 | 4.7       | 2.6 |
| 19    | 10.8  | 5.9 | 5.4 | 4.2 | 7.5  | 5.4 | 8.6  | 0.0 | 1.5    | 1.0 | 3.8       | 2.3 |
| 20    | 11.0  | 5.5 | 6.2 | 3.8 | 7.6  | 4.9 | 9.5  | 1.7 | 3.0    | 1.2 | 4.2       | 2.7 |
| 21    | 9.2   | 5.0 | 4.8 | 3.9 | 7.4  | 4.3 | 9.9  | 1.6 | 3.0    | 1.1 | 5.6       | 4.1 |
| 22    | 5.9   | 3.8 | 5.7 | 3.8 | 6.7  | 3.8 | 8.6  | 1.4 | 3.2    | 1.3 | 6.1       | 4.5 |
| 23    | 6.3   | 4.6 | 5.7 | 3.7 | 7.3  | 4.4 | 8.2  | 1.4 | 3.2    | 1.4 | 6.5       | 4.9 |
| 24    | 5.6   | 4.2 | 4.6 | 3.5 | 8.1  | 5.0 | 6.6  | 1.4 | 4.0    | 1.5 | 5.6       | 4.8 |
| 25    | 8.1   | 3.6 | 5.3 | 3.7 | 8.0  | 5.2 | 3.4  | 1.4 | 4.1    | 1.4 | 5.8       | 4.5 |
| 26    | 7.6   | 5.6 | 6.0 | 4.0 | 8.0  | 4.8 | 2.9  | 1.2 | 4.3    | 1.5 | 4.8       | 3.9 |
| 27    | 7.4   | 5.1 | 6.6 | 5.8 | 8.3  | 4.8 | 3.8  | 1.6 | 5.7    | 1.6 | 5.1       | 3.4 |
| 28    | 6.3   | 4.4 | 7.0 | 5.3 | 8.4  | 4.7 | 3.6  | 1.7 | 3.5    | 1.9 | 3.7       | 2.9 |
| 29    | 4.7   | 3.7 | 6.2 | 5.1 | 8.1  | 4.3 | 4.5  | 1.9 | 2.4    | 1.7 | 4.2       | 2.9 |
| 30    | 5.6   | 3.5 | 6.2 | 4.6 | 7.2  | 3.7 | 6.7  | 2.4 | 3.5    | 1.9 | 5.3       | 3.1 |
| 31    | ---   | --- | 5.1 | 4.3 | ---  | --- | 7.4  | 1.7 | 5.0    | 2.0 | ---       | --- |
| MONTH | 11.0  | 3.5 | 7.9 | 3.5 | 8.8  | 2.8 | 9.9  | 0.0 | 7.5    | 1.0 | 7.0       | 1.9 |

07052250 JAMES RIVER NEAR BOAZ, MO.--Continued

TEMPERATURE (DEG. C) OF WATER , WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCTOBER |      | NOVEMBER |      | DECEMBER |      | JANUARY |      | FEBRUARY |      | MARCH |      |
|-------|---------|------|----------|------|----------|------|---------|------|----------|------|-------|------|
|       | MAX     | MIN  | MAX      | MIN  | MAX      | MIN  | MAX     | MIN  | MAX      | MIN  | MAX   | MIN  |
| 1     | 20.0    | 18.0 | 15.0     | 13.5 | 13.5     | 11.5 | 5.5     | 4.0  | 12.0     | 10.0 | 14.0  | 12.0 |
| 2     | 21.0    | 18.0 | 14.5     | 14.0 | 13.5     | 12.5 | 5.0     | 4.0  | 11.5     | 9.5  | 16.0  | 13.0 |
| 3     | 22.0    | 19.0 | 14.0     | 13.5 | 14.5     | 13.0 | 5.0     | 4.5  | 10.5     | 9.0  | 17.5  | 15.0 |
| 4     | 22.0    | 19.0 | 14.0     | 13.0 | 14.0     | 12.0 | 5.5     | 4.0  | 10.0     | 9.0  | 17.5  | 15.5 |
| 5     | 19.0    | 17.0 | 13.0     | 11.5 | 12.0     | 11.0 | 6.5     | 4.5  | 11.5     | 9.0  | 15.5  | 13.5 |
| 6     | 18.5    | 17.0 | 11.0     | 10.5 | 10.5     | 9.5  | 7.0     | 6.0  | 11.5     | 9.0  | 17.5  | 14.5 |
| 7     | 19.5    | 18.0 | 12.0     | 11.0 | 10.0     | 9.0  | 6.0     | 5.0  | 9.0      | 7.5  | 19.0  | 16.5 |
| 8     | 21.5    | 19.0 | 13.0     | 12.0 | 10.0     | 9.0  | 7.0     | 6.0  | 8.5      | 7.0  | 18.0  | 17.5 |
| 9     | 22.0    | 20.5 | 12.0     | 11.0 | 10.5     | 9.5  | 7.0     | 5.5  | 7.5      | 7.5  | 19.0  | 17.0 |
| 10    | 22.5    | 21.0 | 11.0     | 10.0 | 9.0      | 8.5  | 6.0     | 5.5  | 9.0      | 6.5  | 18.0  | 14.0 |
| 11    | 22.0    | 20.5 | 10.5     | 9.5  | 10.0     | 8.5  | 5.5     | 4.5  | 9.5      | 7.5  | 14.0  | 12.5 |
| 12    | 20.5    | 19.5 | 12.5     | 10.0 | 11.0     | 9.5  | 5.0     | 3.5  | 11.0     | 8.5  | 13.5  | 12.0 |
| 13    | 19.5    | 18.0 | 14.0     | 11.5 | 11.0     | 9.5  | 6.5     | 4.5  | 11.5     | 9.5  | 12.0  | 11.5 |
| 14    | 22.0    | 18.0 | 16.0     | 14.0 | 9.5      | 9.0  | 8.5     | 6.5  | 11.0     | 10.5 | 12.0  | 11.0 |
| 15    | 20.5    | 19.0 | 16.0     | 14.5 | 10.0     | 9.5  | 9.0     | 7.5  | 10.5     | 9.5  | 12.0  | 11.5 |
| 16    | 19.0    | 16.5 | 14.0     | 12.0 | 9.0      | 7.0  | 10.0    | 8.0  | 11.0     | 9.5  | 11.5  | 10.5 |
| 17    | 17.0    | 15.0 | 12.5     | 11.0 | 7.5      | 6.5  | 10.5    | 9.0  | 11.5     | 8.5  | 12.0  | 10.0 |
| 18    | 17.5    | 14.5 | 13.5     | 11.5 | 8.5      | 7.0  | 11.5    | 10.5 | 11.0     | 10.5 | 14.0  | 11.0 |
| 19    | 18.0    | 15.5 | 14.5     | 13.0 | 8.5      | 6.0  | 11.5    | 11.0 | 11.5     | 10.0 | 13.5  | 12.0 |
| 20    | 18.0    | 15.5 | 15.0     | 14.0 | 5.5      | 4.5  | 11.5    | 11.0 | 12.0     | 9.5  | 12.0  | 11.0 |
| 21    | 18.5    | 15.5 | 14.0     | 12.0 | 5.0      | 3.5  | 11.5    | 10.5 | 12.0     | 11.5 | 11.5  | 9.5  |
| 22    | 18.0    | 15.5 | 13.5     | 11.5 | 7.0      | 5.0  | 12.0    | 11.0 | 11.0     | 9.5  | 11.0  | 9.0  |
| 23    | 18.0    | 15.5 | 15.0     | 13.0 | 9.0      | 7.0  | 11.0    | 9.5  | 10.5     | 9.0  | 11.0  | 8.0  |
| 24    | 18.0    | 15.5 | 15.0     | 14.5 | 10.5     | 9.0  | 10.5    | 9.5  | 10.5     | 7.5  | 9.0   | 7.0  |
| 25    | 18.0    | 15.5 | 15.0     | 12.5 | 8.5      | 7.5  | 10.0    | 8.5  | 8.5      | 6.0  | 9.0   | 7.5  |
| 26    | 17.0    | 14.5 | 14.0     | 12.5 | 9.0      | 8.5  | 12.5    | 9.5  | 9.5      | 6.5  | 12.0  | 8.5  |
| 27    | 15.5    | 15.0 | 13.5     | 13.0 | 9.5      | 8.5  | ---     | ---  | 11.0     | 9.0  | 14.0  | 10.5 |
| 28    | 16.0    | 14.5 | 13.0     | 12.0 | 9.5      | 8.5  | ---     | ---  | 13.5     | 10.5 | 14.5  | 13.0 |
| 29    | 15.5    | 14.5 | 13.0     | 11.5 | 9.5      | 8.5  | 10.0    | 9.0  | ---      | ---  | 16.0  | 13.5 |
| 30    | 15.0    | 13.5 | 13.0     | 11.5 | 8.5      | 7.5  | 10.5    | 8.5  | ---      | ---  | 16.5  | 14.0 |
| 31    | 15.5    | 14.5 | ---      | ---  | 7.5      | 5.0  | 11.0    | 9.5  | ---      | ---  | 17.5  | 14.5 |
| MONTH | 22.5    | 13.5 | 16.0     | 9.5  | 14.5     | 3.5  | 12.5    | 3.5  | 13.5     | 6.0  | 19.0  | 7.0  |

| DAY   | APRIL |      | MAY  |      | JUNE |      | JULY |      | AUGUST |      | SEPTEMBER |      |
|-------|-------|------|------|------|------|------|------|------|--------|------|-----------|------|
|       | MAX   | MIN  | MAX  | MIN  | MAX  | MIN  | MAX  | MIN  | MAX    | MIN  | MAX       | MIN  |
| 1     | 17.5  | 16.0 | 19.5 | 18.0 | 20.5 | 18.5 | 25.5 | 22.0 | 27.0   | 23.0 | 23.0      | 19.5 |
| 2     | 17.0  | 14.5 | 20.0 | 18.5 | 22.0 | 18.5 | 27.0 | 23.0 | 26.5   | 24.0 | 22.0      | 20.0 |
| 3     | 18.5  | 15.5 | 20.5 | 19.0 | 21.5 | 19.0 | 27.5 | 24.0 | 25.5   | 22.5 | 20.0      | 18.5 |
| 4     | 16.0  | 12.0 | 20.0 | 18.0 | 20.5 | 19.0 | 25.0 | 23.5 | 24.5   | 20.5 | 19.5      | 17.5 |
| 5     | 14.0  | 11.0 | 20.0 | 17.5 | 20.0 | 18.5 | 26.5 | 23.0 | 24.5   | 20.5 | 19.5      | 17.5 |
| 6     | 14.5  | 11.5 | 20.5 | 17.5 | 21.0 | 19.0 | 27.0 | 23.5 | 23.5   | 21.5 | 20.0      | 17.5 |
| 7     | 15.0  | 14.0 | 20.5 | 18.0 | 19.0 | 17.5 | 28.0 | 24.5 | 23.0   | 20.5 | 21.5      | 18.0 |
| 8     | 14.0  | 13.0 | 22.5 | 19.0 | 18.0 | 17.0 | 28.5 | 24.5 | 24.0   | 21.0 | 21.5      | 19.0 |
| 9     | 15.5  | 11.5 | 20.5 | 19.0 | 17.5 | 17.0 | 28.0 | 24.5 | 23.5   | 22.0 | 21.0      | 20.0 |
| 10    | 14.5  | 14.0 | 20.5 | 19.0 | 18.0 | 16.5 | 28.5 | 25.0 | 24.5   | 21.5 | 23.0      | 20.5 |
| 11    | 14.5  | 13.5 | 22.5 | 20.0 | 17.0 | 16.5 | 28.5 | 24.5 | 25.0   | 22.0 | 23.0      | 21.5 |
| 12    | 18.0  | 14.0 | 22.5 | 19.5 | 18.5 | 16.0 | 29.0 | 24.5 | 25.0   | 22.5 | 23.5      | 21.0 |
| 13    | 19.0  | 16.0 | 23.0 | 19.5 | 19.0 | 16.5 | 28.5 | 24.5 | 26.0   | 22.0 | 21.5      | 19.0 |
| 14    | 18.5  | 15.5 | 22.0 | 17.0 | 20.0 | 17.5 | 28.5 | 25.0 | 27.0   | 23.0 | 20.0      | 17.0 |
| 15    | 17.0  | 14.0 | 19.5 | 16.5 | 21.5 | 19.0 | 28.0 | 25.0 | 26.0   | 24.5 | 19.0      | 17.0 |
| 16    | 15.5  | 14.5 | 20.5 | 18.5 | 21.0 | 19.0 | 28.5 | 24.5 | 27.5   | 23.5 | 19.5      | 18.0 |
| 17    | 17.0  | 13.5 | 20.5 | 19.0 | 20.0 | 18.5 | 28.5 | 24.0 | 28.5   | 24.5 | 20.5      | 18.5 |
| 18    | 17.0  | 15.5 | 22.5 | 20.0 | 21.5 | 19.0 | 28.0 | 24.5 | 27.0   | 24.0 | 21.5      | 18.5 |
| 19    | 18.0  | 15.0 | 23.0 | 20.5 | 22.5 | 20.0 | 29.0 | 25.0 | 25.5   | 22.5 | 20.5      | 19.0 |
| 20    | 19.5  | 16.5 | 24.0 | 21.5 | 24.5 | 21.0 | 29.5 | 25.0 | 26.0   | 21.0 | 20.0      | 19.5 |
| 21    | 20.5  | 18.0 | 23.0 | 21.5 | 25.5 | 22.0 | 30.0 | 25.5 | 26.5   | 23.5 | 20.5      | 18.5 |
| 22    | 20.5  | 18.5 | 23.5 | 20.5 | 25.0 | 23.0 | 30.0 | 26.0 | 26.5   | 24.5 | 19.5      | 17.5 |
| 23    | 21.0  | 18.5 | 22.0 | 20.5 | 23.5 | 21.5 | 29.5 | 26.5 | 26.0   | 23.5 | 18.0      | 17.0 |
| 24    | 19.5  | 17.0 | 20.5 | 19.5 | 21.5 | 20.0 | 28.5 | 25.0 | 27.0   | 23.5 | 17.0      | 16.5 |
| 25    | 20.0  | 17.5 | 19.5 | 18.0 | 21.5 | 18.5 | 26.5 | 24.0 | 27.0   | 24.0 | 18.5      | 16.0 |
| 26    | 20.0  | 17.5 | 17.5 | 17.0 | 21.5 | 19.0 | 26.5 | 22.5 | 26.0   | 24.5 | 18.0      | 17.0 |
| 27    | 21.5  | 18.5 | 19.5 | 16.5 | 21.5 | 18.5 | 28.0 | 23.5 | 25.5   | 24.5 | 20.0      | 17.0 |
| 28    | 22.0  | 20.0 | 21.0 | 18.0 | 23.0 | 19.5 | 28.5 | 24.0 | 25.0   | 23.5 | 19.0      | 17.0 |
| 29    | 21.0  | 20.0 | 20.5 | 19.0 | 23.5 | 20.0 | 27.5 | 25.0 | 24.0   | 22.0 | 18.0      | 15.5 |
| 30    | 20.0  | 19.0 | 22.5 | 19.5 | 24.5 | 21.5 | 27.5 | 23.0 | 22.5   | 21.0 | 18.0      | 15.5 |
| 31    | ---   | ---  | 22.0 | 19.5 | ---  | ---  | 27.0 | 22.5 | 25.0   | 21.5 | ---       | ---  |
| MONTH | 22.0  | 11.0 | 24.0 | 16.5 | 25.5 | 16.0 | 30.0 | 22.0 | 28.5   | 20.5 | 23.5      | 15.5 |



## WHITE RIVER BASIN

07052340 FINLEY CREEK AT RIVERDALE, MO.

LOCATION.--Lat 36°59'10", long 93°17'40", Christian County, at bridge on U.S. Highway 160, 1 mile (1.6 km) southwest of Riverdale, and 0.2 mi (0.3 km) downstream from Hog Creek.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE          | DIS-<br>CHARGE<br>(CFS) | DIS-<br>SOLVED<br>SILICA<br>(SiO <sub>2</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>IRON<br>(FE)<br>(UG/L) | DIS-<br>SOLVED<br>MAN-<br>GANESE<br>(MN)<br>(UG/L) | DIS-<br>SOLVED<br>CAL-<br>CIUM<br>(CA)<br>(MG/L) | DIS-<br>SOLVED<br>MAG-<br>NE-<br>SIUM<br>(MG) | DIS-<br>SOLVED<br>SODIUM<br>(NA)<br>(MG/L) | DIS-<br>SOLVED<br>PO-<br>TAS-<br>SIUM<br>(K)<br>(MG/L) | BICAR-<br>BONATE<br>(HCO <sub>3</sub> )<br>(MG/L) | CAR-<br>BONATE<br>(CO <sub>3</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>SULFATE<br>(SO <sub>4</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>CHLO-<br>RIDE<br>(CL)<br>(MG/L) |
|---------------|-------------------------|-----------------------------------------------------------|------------------------------------------|----------------------------------------------------|--------------------------------------------------|-----------------------------------------------|--------------------------------------------|--------------------------------------------------------|---------------------------------------------------|------------------------------------------------|-----------------------------------------------------------|---------------------------------------------------|
| OCT.<br>01... | 62                      | 11                                                        | 40                                       | 110                                                | 59                                               | 6.5                                           | 5.2                                        | 2.2                                                    | 202                                               | 0                                              | 7.6                                                       | 7.1                                               |
| NOV.<br>05... | 170                     | 9.6                                                       | 50                                       | 20                                                 | 55                                               | 7.8                                           | 3.7                                        | 1.9                                                    | 190                                               | 0                                              | 7.2                                                       | 6.3                                               |
| DEC.<br>07... | 580                     | 9.8                                                       | 40                                       | 0                                                  | 45                                               | 5.9                                           | 2.8                                        | 1.6                                                    | 148                                               | 0                                              | 5.6                                                       | 4.9                                               |
| JAN.<br>09... | 200                     | 8.3                                                       | 40                                       | 30                                                 | 49                                               | 6.5                                           | 3.4                                        | 1.3                                                    | 168                                               | 0                                              | 7.4                                                       | 6.2                                               |
| FEB.<br>07... | 155                     | 7.2                                                       | 100                                      | 0                                                  | 53                                               | 6.3                                           | 3.7                                        | 1.3                                                    | 172                                               | 0                                              | 5.8                                                       | 6.8                                               |
| MAR.<br>20... | 540                     | 8.5                                                       | 40                                       | 7                                                  | 47                                               | 5.9                                           | 3.3                                        | 1.3                                                    | 156                                               | 0                                              | 5.2                                                       | 4.8                                               |
| APR.<br>19... | 217                     | 7.3                                                       | 30                                       | 10                                                 | 44                                               | 7.8                                           | 3.7                                        | 1.3                                                    | 162                                               | 0                                              | 5.6                                                       | 6.0                                               |
| MAY<br>16...  | 526                     | 8.3                                                       | 30                                       | 0                                                  | 42                                               | 7.8                                           | 3.0                                        | 1.5                                                    | 152                                               | 0                                              | 5.5                                                       | 4.7                                               |
| JUNE<br>13... | 600                     | 1.0                                                       | 20                                       | 0                                                  | 47                                               | 6.0                                           | 2.8                                        | 1.1                                                    | 158                                               | 0                                              | 5.6                                                       | 4.0                                               |
| JULY<br>10... | 81                      | 9.4                                                       | 50                                       | 10                                                 | 54                                               | 6.8                                           | 3.7                                        | 1.7                                                    | 186                                               | 0                                              | 6.5                                                       | 6.8                                               |
| AUG.<br>08... | 18                      | 10                                                        | 10                                       | 10                                                 | 59                                               | 6.4                                           | 5.0                                        | 1.5                                                    | 204                                               | 0                                              | 2.0                                                       | 7.7                                               |
| SEP.<br>03... | 345                     | 9.6                                                       | 40                                       | 0                                                  | 43                                               | 6.9                                           | 3.7                                        | 2.4                                                    | 144                                               | 0                                              | 7.3                                                       | 5.8                                               |

| DATE          | NON-<br>CAR-<br>BONATE<br>HARD-<br>NESS<br>(MG/L) | ALKA-<br>LINITY<br>AS<br>CACO <sub>3</sub><br>(MG/L) | SPE-<br>CIFIC<br>CON-<br>DUCT-<br>ANCE<br>(MICRO-<br>MHOS) | PH<br>(UNITS) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | CHEM-<br>ICAL<br>OXYGEN<br>DEMAND<br>(LOW<br>LEVEL)<br>(MG/L) | DIS-<br>SOLVED<br>OXYGEN<br>(MG/L) | PER-<br>CENT<br>SATUR-<br>ATION | FECAL<br>COLI-<br>FORM<br>(COL.<br>PER<br>100 ML) | STREP-<br>TOCOCCI<br>(COL-<br>ONIES<br>PER<br>100 ML) |
|---------------|---------------------------------------------------|------------------------------------------------------|------------------------------------------------------------|---------------|----------------------------------------------|-----------------------------|---------------------------------------------------------------|------------------------------------|---------------------------------|---------------------------------------------------|-------------------------------------------------------|
| OCT.<br>01... | 4                                                 | 166                                                  | 337                                                        | 7.8           | 2                                            | 19.0                        | 7                                                             | 7.1                                | 76                              | 500                                               | 850                                                   |
| NOV.<br>05... | 14                                                | 156                                                  | 332                                                        | 7.7           | 1                                            | 12.0                        | 6                                                             | 9.5                                | 88                              | 1900                                              | 240                                                   |
| DEC.<br>07... | 15                                                | 121                                                  | 285                                                        | 7.7           | 3                                            | 9.0                         | 6                                                             | 9.1                                | 78                              | 330                                               | 120                                                   |
| JAN.<br>09... | 11                                                | 138                                                  | 306                                                        | 7.9           | 5                                            | 5.0                         | 0                                                             | 10.7                               | 84                              | 1070                                              | 510                                                   |
| FEB.<br>07... | 17                                                | 141                                                  | 305                                                        | 7.9           | 3                                            | 7.5                         | 1                                                             | 10.6                               | 88                              | --                                                | 40                                                    |
| MAR.<br>20... | 14                                                | 128                                                  | 296                                                        | 7.8           | 4                                            | 10.0                        | 0                                                             | 9.8                                | 87                              | 260                                               | 100                                                   |
| APR.<br>19... | 9                                                 | 133                                                  | 282                                                        | 8.0           | 1                                            | 13.5                        | 11                                                            | 9.5                                | 90                              | 80                                                | 44                                                    |
| MAY<br>16...  | 12                                                | 125                                                  | 269                                                        | 8.0           | 2                                            | 17.5                        | 8                                                             | 8.1                                | 84                              | 1200                                              | 1000                                                  |
| JUNE<br>13... | 12                                                | 130                                                  | 294                                                        | 7.8           | 3                                            | 16.0                        | 3                                                             | 7.8                                | 79                              | 320                                               | 620                                                   |
| JULY<br>10... | 10                                                | 153                                                  | 335                                                        | 7.8           | 3                                            | 24.0                        | 5                                                             | 7.8                                | 92                              | --                                                | 110                                                   |
| AUG.<br>08... | 6                                                 | 167                                                  | 350                                                        | 7.9           | 3                                            | 22.0                        | 4                                                             | 7.5                                | 85                              | 54                                                | 110                                                   |
| SEP.<br>03... | 22                                                | 118                                                  | 280                                                        | 7.7           | 10                                           | 18.0                        | 6                                                             | 7.8                                | 81                              | 5700                                              | 7100                                                  |

07052340 FINLEY CREEK AT RIVERDALE, MO.--Continued

PERIOD OF RECORD.--Chemical analyses: August 1967 to September 1974.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE  | DIS-<br>SOLVED<br>FLUO-<br>RIDE<br>(F)<br>(MG/L) | TOTAL<br>NITRATE<br>(N)<br>(MG/L) | AMMONIA<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | ORGANIC<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | DIS-<br>SOL-<br>VED-<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | TOTAL<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(RESI-<br>DUE AT<br>180 C)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(TONS<br>PER<br>AC-FT) | DIS-<br>SOLVED<br>SOLIDS<br>(TONS<br>PER<br>DAY) | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | PERCENT<br>SODIUM | HARD-<br>NESS<br>(CA,MG)<br>(MG/L) |
|-------|--------------------------------------------------|-----------------------------------|-------------------------------------------|-------------------------------------------|----------------------------------------------------------|-------------------------------------------|------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------|-----------------------------------------|-------------------|------------------------------------|
| OCT.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 01... | .1                                               | .00                               | .05                                       | .32                                       | .09                                                      | .11                                       | 224                                                              | .3                                                 | 37.5                                             | .2                                      | 6                 | 170                                |
| NOV.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 05... | .0                                               | 1.8                               | .20                                       | .03                                       | .05                                                      | .07                                       | 192                                                              | .26                                                | 88.1                                             | .1                                      | 4                 | 170                                |
| DEC.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 07... | .0                                               | 2.1                               | .01                                       | .22                                       | .02                                                      | .04                                       | 162                                                              | .22                                                | 254                                              | .1                                      | 4                 | 140                                |
| JAN.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 09... | .0                                               | 2.1                               | .04                                       | .20                                       | .02                                                      | .04                                       | 167                                                              | .23                                                | 90.2                                             | .1                                      | 5                 | 150                                |
| FEB.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 07... | .1                                               | 2.3                               | .01                                       | .38                                       | .02                                                      | .14                                       | 172                                                              | .23                                                | 72.0                                             | .1                                      | 5                 | 160                                |
| MAR.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 20... | .4                                               | 2.1                               | .04                                       | .08                                       | .05                                                      | .07                                       | 162                                                              | .22                                                | 236                                              | .1                                      | 5                 | 140                                |
| APR.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 19... | .2                                               | 1.1                               | .01                                       | .30                                       | .03                                                      | .04                                       | 149                                                              | .20                                                | 87.3                                             | .1                                      | 5                 | 140                                |
| MAY   |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 16... | .0                                               | .93                               | .09                                       | .06                                       | .06                                                      | .06                                       | 149                                                              | .20                                                | 212                                              | .1                                      | 5                 | 140                                |
| JUNE  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 13... | .0                                               | 1.6                               | .02                                       | .29                                       | --                                                       | .00                                       | 173                                                              | .24                                                | 280                                              | .1                                      | 4                 | 140                                |
| JULY  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 10... | .1                                               | 1.3                               | .01                                       | .39                                       | .03                                                      | .04                                       | 174                                                              | .24                                                | 38.1                                             | .1                                      | 5                 | 160                                |
| AUG.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 08... | .1                                               | 1.5                               | .06                                       | .22                                       | .09                                                      | .09                                       | 196                                                              | .27                                                | 9.53                                             | .2                                      | 6                 | 170                                |
| SEP.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 03... | .1                                               | 1.5                               | .09                                       | .81                                       | .07                                                      | .11                                       | 167                                                              | .23                                                | 156                                              | .1                                      | 5                 | 140                                |

## WHITE RIVER BASIN

07063050 BLACK RIVER BELOW POPLAR BLUFF, MO.

LOCATION.--Lat 36°38'49", long 90°18'01", Butler County, at bridge on county road 1.5 mi (2.4 km) upstream from State Highway 53, and 10 mi (16.1 km) southeast of Poplar Bluff.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE          | DIS-<br>CHARGE<br>(CFS) | DIS-<br>SOLVED<br>SILICA<br>(SI02)<br>(MG/L) | DIS-<br>SOLVED<br>IRON<br>(FE)<br>(UG/L) | DIS-<br>SOLVED<br>MAN-<br>GANESE<br>(MN)<br>(UG/L) | DIS-<br>SOLVED<br>CAL-<br>CIUM<br>(CA)<br>(MG/L) | DIS-<br>SOLVED<br>MAG-<br>NE-<br>SIUM<br>(MG) | DIS-<br>SOLVED<br>SODIUM<br>(NA)<br>(MG/L) | DIS-<br>SOLVED<br>PO-<br>TAS-<br>SIUM<br>(K)<br>(MG/L) | BICAR-<br>BONATE<br>(HCO3)<br>(MG/L) | CAR-<br>BONATE<br>(CO3)<br>(MG/L) | DIS-<br>SOLVED<br>SULFATE<br>(SO4)<br>(MG/L) | DIS-<br>SOLVED<br>CHLO-<br>RIDE<br>(CL)<br>(MG/L) |
|---------------|-------------------------|----------------------------------------------|------------------------------------------|----------------------------------------------------|--------------------------------------------------|-----------------------------------------------|--------------------------------------------|--------------------------------------------------------|--------------------------------------|-----------------------------------|----------------------------------------------|---------------------------------------------------|
| NOV.<br>13... | 1860                    | 8.4                                          | 90                                       | 40                                                 | 23                                               | 12                                            | 3.9                                        | 1.5                                                    | 112                                  | 0                                 | 11                                           | 3.1                                               |
| JAN.<br>16... | 3250                    | 6.9                                          | 80                                       | 30                                                 | 14                                               | 7.7                                           | 2.3                                        | 1.3                                                    | 78                                   | 0                                 | 8.4                                          | 2.5                                               |
| MAR.<br>26... | 4580                    | 6.8                                          | 80                                       | 88                                                 | 18                                               | 8.7                                           | 2.6                                        | .9                                                     | 82                                   | 0                                 | 8.1                                          | 2.5                                               |
| MAY<br>29...  | 1860                    | 7.9                                          | 40                                       | 60                                                 | 20                                               | 11                                            | 2.4                                        | 1.0                                                    | 108                                  | 0                                 | 7.1                                          | 2.5                                               |
| JULY<br>30... | 480                     | 8.5                                          | 50                                       | 40                                                 | 28                                               | 16                                            | 2.8                                        | 1.1                                                    | 162                                  | 0                                 | 6.8                                          | 2.4                                               |
| SEP.<br>24... | 905                     | 21                                           | 40                                       | 20                                                 | 29                                               | 14                                            | 2.7                                        | 1.1                                                    | 154                                  | 0                                 | 8.3                                          | 2.5                                               |

| DATE          | NON-<br>CAR-<br>BONATE<br>HARD-<br>NESS<br>(MG/L) | ALKA-<br>LINITY<br>AS<br>CACO3<br>(MG/L) | SPE-<br>CIFIC<br>CON-<br>DUCT-<br>ANCE<br>(MICRO-<br>MHOS) | PH<br>(UNITS) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | CHEM-<br>ICAL<br>OXYGEN<br>DEMAND<br>(LOW<br>LEVEL)<br>(MG/L) | DIS-<br>SOLVED<br>OXYGEN<br>(MG/L) | PER-<br>CENT<br>SATUR-<br>ATION | FECAL<br>COLI-<br>FORM<br>(COL.<br>PER<br>100 ML) | STREP-<br>TOCOCCI<br>(COL-<br>ONIES<br>PER<br>100 ML) |
|---------------|---------------------------------------------------|------------------------------------------|------------------------------------------------------------|---------------|----------------------------------------------|-----------------------------|---------------------------------------------------------------|------------------------------------|---------------------------------|---------------------------------------------------|-------------------------------------------------------|
| NOV.<br>13... | 15                                                | 92                                       | 215                                                        | 7.9           | 4                                            | 13.0                        | 11                                                            | 10.0                               | 94                              | 75                                                | 90                                                    |
| JAN.<br>16... | 3                                                 | 64                                       | 146                                                        | 7.7           | 20                                           | 5.0                         | 7                                                             | 9.8                                | 77                              | 40                                                | 130                                                   |
| MAR.<br>26... | 14                                                | 67                                       | 128                                                        | 7.7           | 4                                            | 8.5                         | 3                                                             | 9.3                                | 79                              | 25                                                | 50                                                    |
| MAY<br>29...  | 7                                                 | 89                                       | 182                                                        | 7.8           | 20                                           | 21.0                        | 7                                                             | 6.0                                | 67                              | 190                                               | 150                                                   |
| JULY<br>30... | 3                                                 | 133                                      | 258                                                        | 8.0           | 1                                            | 26.0                        | 4                                                             | 6.3                                | 77                              | 94                                                | 78                                                    |
| SEP.<br>24... | 4                                                 | 126                                      | 254                                                        | 8.1           | 10                                           | 18.0                        | 2                                                             | 8.6                                | 90                              | 120                                               | 96                                                    |

07063050 BLACK RIVER BELOW POPLAR BLUFF, MO.--Continued

PERIOD OF RECORD.--Chemical analyses: July 1969 to September 1974.

REMARKS.--Records of discharge are given for gaging station Black River at Poplar Bluff.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE          | DIS-<br>SOLVED<br>FLUO-<br>RIDE<br>(F)<br>(MG/L) | TOTAL<br>NITRATE<br>(N)<br>(MG/L) | AMMONIA<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | ORGANIC<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | DIS-<br>SOL-<br>VED-<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | TOTAL<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(RESI-<br>DUE AT<br>180 C)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(TONS<br>PER<br>AC-FT) | DIS-<br>SOLVED<br>SOLIDS<br>(TONS<br>PER<br>DAY) | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | PERCENT<br>SODIUM | HARD-<br>NESS<br>(CA,MG)<br>(MG/L) |
|---------------|--------------------------------------------------|-----------------------------------|-------------------------------------------|-------------------------------------------|----------------------------------------------------------|-------------------------------------------|------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------|-----------------------------------------|-------------------|------------------------------------|
| NOV.<br>13... | .1                                               | .17                               | .06                                       | .16                                       | .49                                                      | .56                                       | 128                                                              | .17                                                | 643                                              | .2                                      | 7                 | 110                                |
| JAN.<br>16... | .0                                               | .11                               | .08                                       | .16                                       | .02                                                      | .04                                       | 74                                                               | .10                                                | 649                                              | .1                                      | 7                 | 67                                 |
| MAR.<br>26... | .1                                               | .15                               | .07                                       | .09                                       | .00                                                      | .02                                       | 76                                                               | .10                                                | 940                                              | .1                                      | 6                 | 81                                 |
| MAY<br>29...  | .0                                               | .00                               | .06                                       | .53                                       | .03                                                      | .05                                       | 97                                                               | .13                                                | 487                                              | .1                                      | 5                 | 95                                 |
| JULY<br>30... | .1                                               | .16                               | .01                                       | .15                                       | .02                                                      | .05                                       | 149                                                              | .20                                                | 193                                              | .1                                      | 4                 | 140                                |
| SEP.<br>24... | .6                                               | .14                               | .01                                       | .15                                       | .05                                                      | .04                                       | 138                                                              | .19                                                | 337                                              | .1                                      | 4                 | 130                                |

07063300 MAIN DITCH NEAR NEELYVILLE, MO.

LOCATION.--Lat 36°33'18", long 90°26'53", Butler County, at bridge on State Highway 142, 4 mi (6.4 km) east of Neelyville.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE          | DIS-<br>CHARGE<br>(CFS) | DIS-<br>SOLVED<br>SILICA<br>(SiO <sub>2</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>IRON<br>(FE)<br>(UG/L) | DIS-<br>SOLVED<br>MAN-<br>GANESE<br>(MN)<br>(UG/L) | DIS-<br>SOLVED<br>CAL-<br>CIUM<br>(CA)<br>(MG/L) | DIS-<br>SOLVED<br>MAG-<br>NE-<br>SIUM<br>(MG) | DIS-<br>SOLVED<br>SODIUM<br>(NA)<br>(MG/L) | DIS-<br>SOLVED<br>PO-<br>TAS-<br>SIUM<br>(K)<br>(MG/L) | BICAR-<br>BONATE<br>(HCO <sub>3</sub> )<br>(MG/L) | CAR-<br>BONATE<br>(CO <sub>3</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>SULFATE<br>(SO <sub>4</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>CHLO-<br>RIDE<br>(CL)<br>(MG/L) |
|---------------|-------------------------|-----------------------------------------------------------|------------------------------------------|----------------------------------------------------|--------------------------------------------------|-----------------------------------------------|--------------------------------------------|--------------------------------------------------------|---------------------------------------------------|------------------------------------------------|-----------------------------------------------------------|---------------------------------------------------|
| NOV.<br>13... | 2.5                     | 14                                                        | 70                                       | 530                                                | 32                                               | 13                                            | 31                                         | 7.4                                                    | 184                                               | 0                                              | 16                                                        | 25                                                |
| JAN.<br>16... | 295                     | 4.5                                                       | 220                                      | 220                                                | 7.6                                              | 3.2                                           | 3.5                                        | 2.8                                                    | 28                                                | 0                                              | 11                                                        | 5.2                                               |
| MAR.<br>26... | 16                      | 15                                                        | 410                                      | 1300                                               | 30                                               | 10                                            | 14                                         | 2.2                                                    | 152                                               | 0                                              | 10                                                        | 15                                                |
| MAY<br>29...  | 14                      | 20                                                        | 60                                       | 1800                                               | 37                                               | 13                                            | 13                                         | 2.4                                                    | 190                                               | 0                                              | 8.1                                                       | 11                                                |
| JULY<br>30... | 6.3                     | 11                                                        | 30                                       | 220                                                | 29                                               | 13                                            | 11                                         | 3.5                                                    | 156                                               | 2                                              | 6.5                                                       | 11                                                |
| SEP.<br>24... | 20                      | 9.2                                                       | 80                                       | 230                                                | 34                                               | 10                                            | 9.3                                        | 4.3                                                    | 148                                               | 0                                              | 5.5                                                       | 12                                                |

| DATE          | NON-<br>CAR-<br>BONATE<br>HARD-<br>NESS<br>(MG/L) | ALKA-<br>LINITY<br>AS<br>CaCO <sub>3</sub><br>(MG/L) | SPE-<br>CIFIC<br>CON-<br>DUCT-<br>ANCE<br>(MICRO-<br>MHOS) | PH<br>(UNITS) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | CHEM-<br>ICAL<br>OXYGEN<br>DEMAND<br>(LOW<br>LEVEL)<br>(MG/L) | DIS-<br>SOLVED<br>OXYGEN<br>(MG/L) | PER-<br>CENT<br>SATUR-<br>ATION | FECAL<br>COLI-<br>FORM<br>(COL.<br>PER<br>100 ML) | STREP-<br>TOCOCCI<br>(COL-<br>ONIES<br>PER<br>100 ML) |
|---------------|---------------------------------------------------|------------------------------------------------------|------------------------------------------------------------|---------------|----------------------------------------------|-----------------------------|---------------------------------------------------------------|------------------------------------|---------------------------------|---------------------------------------------------|-------------------------------------------------------|
| NOV.<br>13... | 0                                                 | 151                                                  | 410                                                        | 7.9           | 20                                           | 10.5                        | 40                                                            | 9.6                                | 86                              | 600                                               | 1400                                                  |
| JAN.<br>16... | 9                                                 | 23                                                   | 90                                                         | 6.9           | 100                                          | 4.0                         | 26                                                            | 9.2                                | 70                              | 4000                                              | 13000                                                 |
| MAR.<br>26... | 0                                                 | 125                                                  | 319                                                        | 7.3           | 7                                            | 9.0                         | 16                                                            | 5.4                                | 47                              | 180                                               | 250                                                   |
| MAY<br>29...  | 0                                                 | 156                                                  | 348                                                        | 7.5           | 20                                           | 20.5                        | 27                                                            | 5.8                                | 64                              | 640                                               | 900                                                   |
| JULY<br>30... | 0                                                 | 131                                                  | 285                                                        | 8.5           | 30                                           | 24.0                        | 0                                                             | 6.3                                | 74                              | 300                                               | 180                                                   |
| SEP.<br>24... | 9                                                 | 121                                                  | 280                                                        | 7.8           | 60                                           | 15.0                        | 20                                                            | 7.0                                | 69                              | 460                                               | 500                                                   |

07063300 MAIN DITCH NEAR NEELYVILLE, MO.--Continued

PERIOD OF RECORD.--Chemical analyses: July 1969 to September 1974.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE          | DIS-<br>SOLVED<br>FLUO-<br>RIDE<br>(F)<br>(MG/L) | TOTAL<br>NITRATE<br>(N)<br>(MG/L) | AMMONIA<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | ORGANIC<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | DIS-<br>SOL-<br>VED-<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | TOTAL<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(RESI-<br>DUE AT<br>180 C)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(TONS<br>PER<br>AC-FT) | DIS-<br>SOLVED<br>SOLIDS<br>(TONS<br>PER<br>DAY) | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | PERCENT<br>SODIUM | HARD-<br>NESS<br>(CA+MG)<br>(MG/L) |
|---------------|--------------------------------------------------|-----------------------------------|-------------------------------------------|-------------------------------------------|----------------------------------------------------------|-------------------------------------------|------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------|-----------------------------------------|-------------------|------------------------------------|
| NOV.<br>13... | .5                                               | .67                               | 1.6                                       | 1.8                                       | 2.3                                                      | 2.9                                       | 244                                                              | .33                                                | 1.65                                             | 1.2                                     | 32                | 130                                |
| JAN.<br>16... | .1                                               | .33                               | .55                                       | .65                                       | .16                                                      | .30                                       | 57                                                               | .08                                                | 45.4                                             | .3                                      | 18                | 32                                 |
| MAR.<br>26... | .2                                               | .57                               | .69                                       | .61                                       | .33                                                      | .92                                       | 164                                                              | .22                                                | 7.26                                             | .6                                      | 20                | 120                                |
| MAY<br>29...  | .2                                               | .51                               | .14                                       | .41                                       | .20                                                      | .69                                       | 192                                                              | .26                                                | 7.26                                             | .5                                      | 16                | 150                                |
| JULY<br>30... | .3                                               | .26                               | .25                                       | 1.8                                       | .15                                                      | .41                                       | 178                                                              | .24                                                | 3.03                                             | .4                                      | 16                | 130                                |
| SEP.<br>24... | .0                                               | .19                               | .21                                       | .89                                       | .24                                                      | .38                                       | 160                                                              | .22                                                | 8.64                                             | .4                                      | 13                | 130                                |



## 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, temperature recorder at gaging station on right bank 0.5 mi (0.8 km) upstream from U.S. Highway 160, 1 mi (1.6 km) west of Doniphan, 2.5 mi (4.0 km) upstream from Brian Creek, and at mile 51.3 (82.5 km).

DRAINAGE AREA.--2,038 mi<sup>2</sup> (5,278 km<sup>2</sup>).

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974  
(CONTINUOUS ETHYL ALCOHOL-ACTUATED THERMOGRAPH)

|       | OCTOBER |      | NOVEMBER |      | DECEMBER |      | JANUARY |      | FEBRUARY |      | MARCH |      |
|-------|---------|------|----------|------|----------|------|---------|------|----------|------|-------|------|
| DAY   | MAX     | MIN  | MAX      | MIN  | MAX      | MIN  | MAX     | MIN  | MAX      | MIN  | MAX   | MIN  |
| 1     | 19.0    | 18.5 | 12.0     | 12.0 | 11.0     | 11.0 | ---     | ---  | 9.5      | 9.0  | 12.0  | 11.5 |
| 2     | 19.0    | 18.5 | 12.0     | 12.0 | 11.0     | 11.0 | ---     | ---  | 10.5     | 9.5  | 13.0  | 12.0 |
| 3     | 19.5    | 18.5 | 12.0     | 12.0 | 11.5     | 11.0 | ---     | ---  | 10.0     | 10.0 | 14.5  | 13.0 |
| 4     | 19.5    | 19.0 | 13.0     | 12.0 | 11.5     | 11.5 | ---     | ---  | 10.0     | 9.5  | 14.5  | 14.5 |
| 5     | 19.0    | 18.0 | 12.0     | 12.0 | 11.5     | 10.5 | ---     | ---  | 9.5      | 9.0  | 14.5  | 14.5 |
| 6     | 18.0    | 17.0 | 12.0     | 11.5 | 10.5     | 10.0 | ---     | ---  | 9.0      | 9.0  | 14.5  | 14.0 |
| 7     | 17.0    | 17.0 | 11.5     | 11.0 | 10.0     | 9.0  | ---     | ---  | 9.5      | 8.5  | 15.5  | 14.5 |
| 8     | 18.0    | 17.0 | 11.5     | 11.0 | ---      | ---  | ---     | ---  | 8.5      | 8.0  | 16.0  | 15.5 |
| 9     | 18.5    | 18.0 | 11.5     | 11.5 | ---      | ---  | ---     | ---  | 8.0      | 7.0  | 16.0  | 16.0 |
| 10    | 18.5    | 18.5 | 11.5     | 10.5 | ---      | ---  | ---     | ---  | 8.0      | 7.0  | 16.0  | 15.5 |
| 11    | 19.0    | 18.0 | 10.5     | 10.0 | ---      | ---  | ---     | ---  | 8.5      | 8.5  | 14.5  | 13.5 |
| 12    | 19.0    | 19.0 | 10.5     | 10.0 | 9.0      | 9.0  | ---     | ---  | 9.0      | 8.5  | 13.5  | 13.0 |
| 13    | 18.5    | 18.0 | 12.0     | 10.5 | 9.0      | 9.0  | ---     | ---  | 10.0     | 9.0  | 13.0  | 11.5 |
| 14    | 18.0    | 17.0 | 13.5     | 12.0 | 9.0      | 9.0  | ---     | ---  | 10.0     | 10.0 | 11.5  | 11.0 |
| 15    | 17.0    | 16.5 | 14.5     | 13.5 | 9.0      | 9.0  | ---     | ---  | 10.0     | 10.0 | 11.0  | 11.0 |
| 16    | 16.5    | 16.0 | 14.5     | 13.5 | 9.0      | 9.0  | ---     | ---  | 10.0     | 9.5  | 11.0  | 11.0 |
| 17    | 16.0    | 15.0 | 13.5     | 12.0 | 9.0      | 8.5  | ---     | ---  | 9.5      | 9.0  | 11.0  | 11.0 |
| 18    | 15.0    | 14.5 | 12.0     | 12.0 | 8.5      | 8.0  | ---     | ---  | 9.5      | 9.5  | 12.0  | 11.0 |
| 19    | 15.0    | 14.5 | 12.0     | 12.0 | 8.0      | 8.0  | ---     | ---  | 10.0     | 10.0 | 12.0  | 12.0 |
| 20    | 15.5    | 15.0 | 13.0     | 12.0 | 8.0      | 6.5  | ---     | ---  | 10.0     | 9.5  | 12.0  | 12.0 |
| 21    | 15.5    | 15.5 | 13.0     | 12.0 | ---      | ---  | ---     | ---  | 9.5      | 9.5  | 12.0  | 11.0 |
| 22    | 15.5    | 15.0 | 12.0     | 11.5 | ---      | ---  | ---     | ---  | 9.5      | 9.5  | 11.0  | 10.0 |
| 23    | 15.0    | 15.0 | 13.0     | 12.0 | ---      | ---  | 10.0    | 10.0 | 9.5      | 9.0  | 10.0  | 9.5  |
| 24    | 15.5    | 15.0 | 14.0     | 13.0 | ---      | ---  | 10.0    | 10.0 | 9.0      | 9.0  | 9.5   | 9.0  |
| 25    | 15.5    | 15.5 | 14.0     | 13.5 | ---      | ---  | 10.0    | 9.0  | 9.0      | 8.5  | 9.0   | 9.0  |
| 26    | 15.5    | 15.0 | 13.5     | 12.0 | ---      | ---  | 9.0     | 9.0  | 9.0      | 9.0  | 10.0  | 9.0  |
| 27    | 15.5    | 14.5 | 12.0     | 12.0 | ---      | ---  | 9.0     | 9.0  | 10.0     | 9.0  | 11.0  | 10.0 |
| 28    | 14.5    | 13.5 | 12.0     | 12.0 | ---      | ---  | 9.0     | 9.0  | 11.5     | 10.0 | 13.0  | 11.0 |
| 29    | 13.5    | 12.0 | 12.0     | 11.0 | ---      | ---  | 9.0     | 9.0  | ---      | ---  | 14.0  | 13.0 |
| 30    | 12.0    | 12.0 | 11.0     | 11.0 | ---      | ---  | 9.0     | 9.0  | ---      | ---  | 14.0  | 14.0 |
| 31    | 12.0    | 12.0 | ---      | ---  | ---      | ---  | 9.0     | 9.0  | ---      | ---  | 14.0  | 13.5 |
| MONTH | 19.5    | 12.0 | 14.5     | 10.0 | ---      | ---  | ---     | ---  | 11.5     | 7.0  | 16.0  | 9.0  |

## 07068000 CURRENT RIVER AT DONIPHAN, MO.--Continued

PERIOD OF RECORD.--Water temperature: March 1965 to September 1974.

EXTREMES, 1973-74.--Water temperatures: Maximum, 23.5°C July 20, 21, Aug. 25, 26, 27; minimum, 6.5°C Dec. 20.

EXTREMES, 1965-74.--Water temperatures: Maximum 27°C on several days during summer months in 1967, 1968, 1969; minimum, 2.5°C Jan. 9, 10, 1970.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974  
(CONTINUOUS ETHYL-ALCOHOL-ACTUATED THERMOGRAPH)

|       | APRIL |      | MAY  |      | JUNE |      | JULY |      | AUGUST |      | SEPTEMBER |      |
|-------|-------|------|------|------|------|------|------|------|--------|------|-----------|------|
| DAY   | MAX   | MIN  | MAX  | MIN  | MAX  | MIN  | MAX  | MIN  | MAX    | MIN  | MAX       | MIN  |
| 1     | 14.5  | 13.5 | 16.0 | 15.0 | 19.0 | 18.5 | 20.5 | 20.0 | 22.0   | 21.5 | 21.0      | 20.5 |
| 2     | 14.5  | 14.5 | 15.0 | 14.5 | 18.5 | 18.0 | 21.5 | 20.5 | 22.0   | 21.0 | 21.0      | 19.5 |
| 3     | 15.0  | 14.5 | 15.0 | 15.0 | 18.5 | 18.0 | 22.0 | 21.0 | 22.0   | 21.5 | 19.5      | 19.0 |
| 4     | 14.5  | 12.0 | 15.0 | 14.5 | 18.5 | 18.5 | 22.0 | 21.5 | 22.0   | 20.0 | 19.0      | 18.5 |
| 5     | 12.0  | 11.5 | 15.0 | 14.5 | 18.5 | 18.5 | 22.0 | 21.5 | 21.0   | 20.0 | 18.5      | 18.0 |
| 6     | 11.5  | 11.0 | 15.0 | 15.0 | 18.5 | 18.0 | 22.0 | 21.5 | 21.0   | 20.0 | 19.0      | 18.5 |
| 7     | 11.5  | 11.5 | 15.0 | 15.0 | 18.0 | 18.0 | 22.0 | 21.5 | 21.5   | 20.0 | 19.5      | 19.0 |
| 8     | 11.5  | 11.0 | 16.0 | 15.5 | 18.0 | 18.0 | 22.0 | 21.5 | 21.0   | 20.5 | 19.5      | 19.5 |
| 9     | 11.0  | 10.5 | 16.0 | 15.5 | 18.0 | 18.0 | 22.0 | 22.0 | 21.0   | 20.5 | 19.5      | 19.5 |
| 10    | 13.0  | 11.0 | 15.5 | 15.0 | 18.0 | 18.0 | 22.0 | 22.0 | 21.0   | 20.5 | 20.5      | 19.5 |
| 11    | 13.0  | 13.0 | 15.0 | 14.5 | 18.0 | 18.0 | 22.0 | 21.5 | 22.0   | 21.0 | 20.5      | 20.5 |
| 12    | 15.5  | 13.0 | 15.0 | 14.5 | 18.0 | 17.0 | 22.0 | 22.0 | 22.0   | 21.0 | 20.5      | 20.0 |
| 13    | 15.5  | 15.5 | 15.5 | 15.0 | 17.0 | 17.0 | 23.0 | 21.5 | 22.0   | 21.0 | 20.5      | 19.0 |
| 14    | 16.0  | 15.5 | 15.5 | 15.5 | 18.0 | 17.0 | 23.0 | 21.0 | 22.0   | 20.5 | 19.0      | 18.5 |
| 15    | 16.0  | 15.0 | 15.5 | 15.0 | 18.0 | 18.0 | 23.0 | 22.0 | 22.0   | 21.5 | 18.5      | 18.0 |
| 16    | 15.0  | 14.0 | 15.5 | 15.0 | 18.0 | 18.0 | 23.0 | 22.0 | 21.5   | 21.0 | 18.5      | 18.5 |
| 17    | 14.0  | 13.0 | 16.0 | 15.5 | 18.0 | 18.0 | 22.0 | 21.5 | 22.0   | 21.0 | 19.0      | 18.5 |
| 18    | 14.5  | 13.5 | 16.5 | 16.0 | 18.0 | 18.0 | 22.0 | 21.5 | 22.0   | 21.5 | 20.0      | 18.5 |
| 19    | 15.0  | 14.0 | 17.0 | 16.5 | 18.5 | 18.0 | 23.0 | 22.0 | 22.0   | 21.0 | 20.0      | 19.5 |
| 20    | 15.5  | 15.0 | 18.5 | 17.0 | 20.0 | 18.5 | 23.5 | 23.0 | 22.0   | 21.0 | 19.5      | 19.5 |
| 21    | 15.5  | 15.5 | 18.5 | 18.5 | 21.0 | 20.0 | 23.5 | 22.0 | 23.0   | 21.5 | 19.5      | 19.0 |
| 22    | 15.5  | 15.0 | 18.5 | 18.0 | 21.0 | 21.0 | 23.0 | 22.0 | 23.0   | 21.5 | 19.0      | 18.0 |
| 23    | 15.0  | 14.5 | 19.0 | 19.0 | 21.0 | 20.0 | 22.0 | 22.0 | 22.0   | 21.5 | 18.0      | 16.5 |
| 24    | 14.5  | 14.0 | 18.0 | 18.0 | 20.0 | 18.5 | 23.0 | 21.5 | 22.0   | 21.5 | 16.5      | 16.5 |
| 25    | 14.0  | 13.5 | 18.0 | 17.0 | 18.0 | 18.0 | 22.0 | 21.5 | 23.5   | 22.0 | 16.5      | 16.0 |
| 26    | 14.5  | 14.0 | 17.0 | 16.5 | 18.5 | 18.0 | 22.0 | 21.5 | 23.5   | 23.0 | 16.0      | 16.0 |
| 27    | 15.0  | 14.5 | 16.5 | 16.0 | 18.5 | 18.0 | 22.0 | 21.5 | 23.5   | 23.0 | 16.0      | 16.0 |
| 28    | 16.0  | 15.0 | 18.0 | 16.5 | 19.0 | 18.5 | 22.0 | 22.0 | 23.0   | 22.0 | 16.0      | 16.0 |
| 29    | 16.0  | 16.0 | 18.5 | 18.0 | 20.0 | 19.0 | 23.0 | 22.0 | 22.0   | 21.5 | 16.0      | 15.5 |
| 30    | 16.0  | 16.0 | 19.0 | 18.5 | 20.0 | 19.5 | 22.0 | 21.5 | 21.5   | 21.0 | 16.0      | 15.5 |
| 31    | ---   | ---  | 19.0 | 19.0 | ---  | ---  | 22.0 | 21.5 | 21.0   | 21.0 | ---       | ---  |
| MONTH | 16.0  | 10.5 | 19.0 | 14.5 | 21.0 | 17.0 | 23.5 | 20.0 | 23.5   | 20.0 | 21.0      | 15.5 |

07068050 CURRENT RIVER NEAR DONIPHAN, MO.

LOCATION.--Lat 36°34'24", long 90°51'30", Ripley County, from right bank off County Highway A, 2.6 mi (4.2 km) south of junction of County Highway A and State Highway 21, 3.8 mi (6.1 km) southeast of Doniphan, and 5.2 mi (8.4 km) downstream from gage.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE          | DIS-<br>CHARGE<br>(CFS) | DIS-<br>SOLVED<br>SILICA<br>(SI02)<br>(MG/L) | DIS-<br>SOLVED<br>IRON<br>(FE)<br>(UG/L) | DIS-<br>SOLVED<br>MAN-<br>GANESE<br>(MN)<br>(UG/L) | DIS-<br>SOLVED<br>CAL-<br>CIUM<br>(CA)<br>(MG/L) | DIS-<br>SOLVED<br>MAG-<br>NE-<br>SIUM<br>(MG) | DIS-<br>SOLVED<br>SODIUM<br>(NA)<br>(MG/L) | DIS-<br>SOLVED<br>PO-<br>TAS-<br>SIUM<br>(K)<br>(MG/L) | BICAR-<br>BONATE<br>(HCO3)<br>(MG/L) | CAR-<br>BONATE<br>(CO3)<br>(MG/L) | DIS-<br>SOLVED<br>SULFATE<br>(SO4)<br>(MG/L) | DIS-<br>SOLVED<br>CHLO-<br>RIDE<br>(CL)<br>(MG/L) |
|---------------|-------------------------|----------------------------------------------|------------------------------------------|----------------------------------------------------|--------------------------------------------------|-----------------------------------------------|--------------------------------------------|--------------------------------------------------------|--------------------------------------|-----------------------------------|----------------------------------------------|---------------------------------------------------|
| NOV.<br>12... | 2440                    | 8.4                                          | 60                                       | 20                                                 | 34                                               | 18                                            | 1.9                                        | 1.0                                                    | 180                                  | 0                                 | 5.2                                          | 1.6                                               |
| JAN.<br>15... | 3470                    | 7.2                                          | 60                                       | 20                                                 | 30                                               | 17                                            | 2.1                                        | .8                                                     | 170                                  | 0                                 | 4.3                                          | 1.9                                               |
| MAR.<br>25... | 5830                    | 7.1                                          | 90                                       | 0                                                  | 27                                               | 15                                            | 2.4                                        | .8                                                     | 148                                  | 0                                 | 4.4                                          | 1.4                                               |
| MAY<br>28...  | 5200                    | 7.8                                          | 30                                       | 20                                                 | 29                                               | 16                                            | 1.5                                        | .8                                                     | 168                                  | 0                                 | 4.5                                          | 1.7                                               |
| JULY<br>29... | 2180                    | 8.6                                          | 20                                       | 10                                                 | 36                                               | 21                                            | 2.1                                        | .9                                                     | 208                                  | 0                                 | 3.7                                          | 3.0                                               |
| SEP.<br>23... | 2110                    | 15                                           | 10                                       | 0                                                  | 24                                               | 20                                            | 2.2                                        | .7                                                     | 212                                  | 0                                 | 4.0                                          | .3                                                |

| DATE          | NON-<br>CAR-<br>BONATE<br>HARD-<br>NESS<br>(MG/L) | ALKA-<br>LINITY<br>AS<br>CACO3<br>(MG/L) | SPE-<br>CIFIC<br>CON-<br>DUCT-<br>ANCE<br>(MICRO-<br>MHOS) | PH<br>(UNITS) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | CHEM-<br>ICAL<br>OXYGEN<br>DEMAND<br>(LOW<br>LEVEL)<br>(MG/L) | DIS-<br>SOLVED<br>OXYGEN<br>(MG/L) | PER-<br>CENT<br>SATUR-<br>ATION | FECAL<br>COLI-<br>FORM<br>(COL.<br>PER<br>100 ML) | STREP-<br>TOCOCCI<br>(COL-<br>ONIES<br>PER<br>100 ML) |
|---------------|---------------------------------------------------|------------------------------------------|------------------------------------------------------------|---------------|----------------------------------------------|-----------------------------|---------------------------------------------------------------|------------------------------------|---------------------------------|---------------------------------------------------|-------------------------------------------------------|
| NOV.<br>12... | 11                                                | 148                                      | 285                                                        | 8.1           | 4                                            | 12.0                        | 4                                                             | 9.8                                | 91                              | 7                                                 | 16                                                    |
| JAN.<br>15... | 5                                                 | 139                                      | 270                                                        | 7.9           | 10                                           | 8.5                         | 2                                                             | 11.2                               | 96                              | 5                                                 | 4                                                     |
| MAR.<br>25... | 8                                                 | 121                                      | 247                                                        | 8.0           | 2                                            | 8.0                         | 6                                                             | 9.5                                | 80                              | 2                                                 | 5                                                     |
| MAY<br>28...  | 0                                                 | 138                                      | 255                                                        | 8.1           | 3                                            | 18.5                        | 6                                                             | 8.1                                | 85                              | 25                                                | 27                                                    |
| JULY<br>29... | 6                                                 | 171                                      | 325                                                        | 8.2           | 1                                            | 24.0                        | 1                                                             | 7.9                                | 93                              | 2                                                 | 23                                                    |
| SEP.<br>23... | 0                                                 | 174                                      | 330                                                        | 8.3           | 3                                            | 15.5                        | 5                                                             | 10.8                               | 108                             | 3                                                 | 5                                                     |

07068050 CURRENT RIVER NEAR DONIPHAN, MO.--Continued

PERIOD OF RECORD.--Chemical analyses: July 1969 to September 1974.

REMARKS.--Records of discharge are given for gaging station, Current River at Doniphan, 5.2 mi (8.4 km) upstream.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE  | DIS-<br>SOLVED<br>FLUO-<br>RIDE<br>(F)<br>(MG/L) | TOTAL<br>NITRATE<br>(N)<br>(MG/L) | AMMONIA<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | ORGANIC<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | DIS-<br>SOL-<br>VED-<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | TOTAL<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(RESI-<br>DUE AT<br>180 C)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(TONS<br>PER<br>AC-FT) | DIS-<br>SOLVED<br>SOLIDS<br>(TONS<br>PER<br>DAY) | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | PERCENT<br>SODIUM | HARD-<br>NESS<br>(CA+MG)<br>(MG/L) |
|-------|--------------------------------------------------|-----------------------------------|-------------------------------------------|-------------------------------------------|----------------------------------------------------------|-------------------------------------------|------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------|-----------------------------------------|-------------------|------------------------------------|
| NOV.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 12... | .1                                               | .37                               | .01                                       | .12                                       | .02                                                      | .02                                       | 157                                                              | .21                                                | 1030                                             | .1                                      | 3                 | 160                                |
| JAN.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 15... | .0                                               | .24                               | .02                                       | .13                                       | .03                                                      | .03                                       | 153                                                              | .21                                                | 1430                                             | .1                                      | 3                 | 150                                |
| MAR.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 25... | .4                                               | .24                               | .03                                       | .02                                       | .01                                                      | .05                                       | 293                                                              | .40                                                | 4610                                             | .1                                      | 4                 | 130                                |
| MAY   |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 28... | .0                                               | .22                               | .00                                       | .61                                       | .01                                                      | .01                                       | 137                                                              | .19                                                | 1920                                             | .1                                      | 2                 | 140                                |
| JULY  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 29... | .0                                               | .00                               | .04                                       | .12                                       | .01                                                      | .02                                       | 178                                                              | .24                                                | 1050                                             | .1                                      | 3                 | 180                                |
| SEP.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 23... | .2                                               | .01                               | .02                                       | .05                                       | .04                                                      | .05                                       | 313                                                              | .43                                                | 1780                                             | .1                                      | 3                 | 140                                |

## WHITE RIVER BASIN

07068550 LITTLE BLACK RIVER NEAR NAYLOR, MO.

LOCATION.--Lat 36°31'46", long 90°42'24", Ripley County, at bridge on County Highway KK, 6 mi (9.6 km) southwest of Naylor.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE          | DIS-<br>CHARGE<br>(CFS) | DIS-<br>SOLVED<br>SILICA<br>(SI02)<br>(MG/L) | DIS-<br>SOLVED<br>IRON<br>(FE)<br>(UG/L) | DIS-<br>SOLVED<br>MAN-<br>GANESE<br>(MN)<br>(UG/L) | DIS-<br>SOLVED<br>CAL-<br>CIUM<br>(CA)<br>(MG/L) | DIS-<br>SOLVED<br>MAG-<br>NE-<br>SIUM<br>(MG)<br>(MG/L) | DIS-<br>SOLVED<br>SODIUM<br>(NA)<br>(MG/L) | DIS-<br>SOLVED<br>PO-<br>TAS-<br>SIUM<br>(K)<br>(MG/L) | BICAR-<br>BONATE<br>(HCO3)<br>(MG/L) | CAR-<br>BONATE<br>(CO3)<br>(MG/L) | DIS-<br>SOLVED<br>SULFATE<br>(SO4)<br>(MG/L) | DIS-<br>SOLVED<br>CHLO-<br>RIDE<br>(CL)<br>(MG/L) |
|---------------|-------------------------|----------------------------------------------|------------------------------------------|----------------------------------------------------|--------------------------------------------------|---------------------------------------------------------|--------------------------------------------|--------------------------------------------------------|--------------------------------------|-----------------------------------|----------------------------------------------|---------------------------------------------------|
| NOV.<br>13... | 85                      | 8.7                                          | 90                                       | 40                                                 | 28                                               | 15                                                      | 2.1                                        | 1.3                                                    | 150                                  | 0                                 | 4.5                                          | 2.0                                               |
| JAN.<br>15... | 243                     | 7.7                                          | 120                                      | 50                                                 | 13                                               | 6.9                                                     | 2.1                                        | .9                                                     | 60                                   | 0                                 | 5.9                                          | 2.4                                               |
| MAR.<br>25... | 191                     | 6.0                                          | 130                                      | 50                                                 | 15                                               | 7.2                                                     | 2.0                                        | .7                                                     | 72                                   | 0                                 | 4.7                                          | 1.8                                               |
| MAY<br>28...  | 219                     | 9.1                                          | 130                                      | --                                                 | 12                                               | 7.7                                                     | 2.0                                        | .9                                                     | 72                                   | 0                                 | 4.8                                          | 2.0                                               |
| JULY<br>29... | 48                      | 9.6                                          | 50                                       | 130                                                | 31                                               | 17                                                      | 2.7                                        | 1.2                                                    | 180                                  | 0                                 | 3.9                                          | 3.1                                               |
| SEP.<br>23... | 70                      | 9.0                                          | 70                                       | 50                                                 | 29                                               | 17                                                      | 2.3                                        | 1.1                                                    | 166                                  | 0                                 | 4.8                                          | 2.2                                               |

| DATE          | NON-<br>CAR-<br>BONATE<br>HARD-<br>NESS<br>(MG/L) | ALKA-<br>LINITY<br>AS<br>CAC03<br>(MG/L) | SPE-<br>CIFIC<br>CON-<br>DUCT-<br>ANCE<br>(MICRO-<br>MHOS) | PH<br>(UNITS) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | CHEM-<br>ICAL<br>OXYGEN<br>DEMAND<br>(LOW<br>LEVEL)<br>(MG/L) | DIS-<br>SOLVED<br>OXYGEN<br>(MG/L) | PER-<br>CENT<br>SATUR-<br>ATION | FECAL<br>COLI-<br>FORM<br>(COL.<br>PER<br>100 ML) | STREP-<br>TOCOCCI<br>(COL-<br>ONIES<br>PER<br>100 ML) |
|---------------|---------------------------------------------------|------------------------------------------|------------------------------------------------------------|---------------|----------------------------------------------|-----------------------------|---------------------------------------------------------------|------------------------------------|---------------------------------|---------------------------------------------------|-------------------------------------------------------|
| NOV.<br>13... | 9                                                 | 123                                      | 245                                                        | 7.7           | 5                                            | 10.0                        | 4                                                             | 8.5                                | 75                              | 92                                                | 100                                                   |
| JAN.<br>15... | 12                                                | 49                                       | 123                                                        | 7.5           | 20                                           | 4.5                         | 6                                                             | 11.6                               | 89                              | 46                                                | 550                                                   |
| MAR.<br>25... | 8                                                 | 59                                       | 136                                                        | 7.8           | 7                                            | 7.0                         | 3                                                             | 10.0                               | 83                              | 22                                                | 22                                                    |
| MAY<br>28...  | 3                                                 | 59                                       | 136                                                        | 7.5           | 20                                           | 19.5                        | 11                                                            | 6.0                                | 65                              | 290                                               | 180                                                   |
| JULY<br>29... | 0                                                 | 148                                      | 290                                                        | 7.8           | 3                                            | 27.0                        | 5                                                             | 4.9                                | 61                              | 230                                               | 240                                                   |
| SEP.<br>23... | 4                                                 | 136                                      | 280                                                        | 7.8           | 10                                           | 16.5                        | 9                                                             | 7.3                                | 74                              | 1000                                              | 340                                                   |

07068550 LITTLE BLACK RIVER NEAR NAYLOR, MO.--Continued

PERIOD OF RECORD.--Chemical analyses: July 1969 to September 1974.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE          | DIS-<br>SOLVED<br>FLUO-<br>RIDE<br>(F)<br>(MG/L) | TOTAL<br>NITRATE<br>(N)<br>(MG/L) | AMMONIA<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | ORGANIC<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | DIS-<br>SOL-<br>VED-<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | TOTAL<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(RESI-<br>DUE AT<br>180 C)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(TONS<br>PER<br>AC-FT) | DIS-<br>SOLVED<br>SOLIDS<br>(TONS<br>PER<br>DAY) | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | PERCENT<br>SODIUM | HARD-<br>NESS<br>(CA,MG)<br>(MG/L) |
|---------------|--------------------------------------------------|-----------------------------------|-------------------------------------------|-------------------------------------------|----------------------------------------------------------|-------------------------------------------|------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------|-----------------------------------------|-------------------|------------------------------------|
| NOV.<br>13... | .0                                               | .02                               | .13                                       | .08                                       | .02                                                      | .06                                       | 131                                                              | .18                                                | 30.2                                             | .1                                      | 3                 | 130                                |
| JAN.<br>15... | .0                                               | .16                               | .04                                       | .14                                       | .03                                                      | .04                                       | 82                                                               | .11                                                | 53.8                                             | .1                                      | 7                 | 61                                 |
| MAR.<br>25... | .1                                               | .05                               | .10                                       | .00                                       | .00                                                      | .01                                       | 72                                                               | .10                                                | 37.1                                             | .1                                      | 6                 | 67                                 |
| MAY<br>28...  | .0                                               | .16                               | .10                                       | .64                                       | .02                                                      | .06                                       | 77                                                               | .10                                                | 45.5                                             | .1                                      | 6                 | 62                                 |
| JULY<br>29... | .1                                               | .21                               | .13                                       | .52                                       | .02                                                      | .06                                       | 169                                                              | .23                                                | 21.9                                             | .1                                      | 4                 | 150                                |
| SEP.<br>23... | .1                                               | .01                               | .02                                       | .21                                       | .04                                                      | .05                                       | 142                                                              | .19                                                | 26.8                                             | .1                                      | 3                 | 140                                |



07068867 FOURCHE RIVER NEAR MIDDLEBROOK, ARK.

LOCATION.--Lat 36°28'50", long 90°56'01", Randolph County, at end of private road 0.9 mi (1.4 km) west of State Highway 115, 0.7 mi (1.1 km) south of Missouri-Arkansas State line, and 1.5 mi (2.4 km) north of Middlebrook.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE          | DIS-<br>CHARGE<br>(CFS) | DIS-<br>SOLVED<br>SILICA<br>(SiO <sub>2</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>IRON<br>(FE)<br>(UG/L) | DIS-<br>SOLVED<br>MAN-<br>GANESE<br>(MN)<br>(UG/L) | DIS-<br>SOLVED<br>CAL-<br>CIUM<br>(CA)<br>(MG/L) | DIS-<br>SOLVED<br>MAG-<br>NE-<br>SIUM<br>(MG) | DIS-<br>SOLVED<br>SODIUM<br>(NA)<br>(MG/L) | DIS-<br>SOLVED<br>PO-<br>TAS-<br>SIUM<br>(K)<br>(MG/L) | BICAR-<br>BONATE<br>(HCO <sub>3</sub> )<br>(MG/L) | CAR-<br>BONATE<br>(CO <sub>3</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>SULFATE<br>(SO <sub>4</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>CHLO-<br>RIDE<br>(CL)<br>(MG/L) |
|---------------|-------------------------|-----------------------------------------------------------|------------------------------------------|----------------------------------------------------|--------------------------------------------------|-----------------------------------------------|--------------------------------------------|--------------------------------------------------------|---------------------------------------------------|------------------------------------------------|-----------------------------------------------------------|---------------------------------------------------|
| NOV.<br>12... | 30                      | 7.6                                                       | 80                                       | 40                                                 | 49                                               | 28                                            | 2.2                                        | 1.4                                                    | 284                                               | 0                                              | 6.2                                                       | 2.2                                               |
| JAN.<br>15... | 183                     | 6.7                                                       | 60                                       | 20                                                 | 40                                               | 23                                            | 1.8                                        | .8                                                     | 228                                               | 0                                              | 5.4                                                       | 2.1                                               |
| MAR.<br>25... | 180                     | 6.4                                                       | 30                                       | 13                                                 | 41                                               | 25                                            | 1.9                                        | .7                                                     | 240                                               | 0                                              | 5.0                                                       | 1.8                                               |
| MAY<br>28...  | 136                     | 7.8                                                       | 50                                       | 40                                                 | 44                                               | 25                                            | 2.0                                        | .9                                                     | 260                                               | 0                                              | 5.3                                                       | 2.0                                               |
| JULY<br>29... | 20                      | 9.8                                                       | 20                                       | 180                                                | 50                                               | 29                                            | 2.5                                        | 1.1                                                    | 304                                               | 0                                              | 11                                                        | 2.4                                               |
| SEP.<br>23... | 30                      | 8.0                                                       | 80                                       | 40                                                 | 47                                               | 30                                            | 2.2                                        | 1.1                                                    | 280                                               | 0                                              | 5.7                                                       | 2.2                                               |

| DATE          | NON-<br>CAR-<br>BONATE<br>HARD-<br>NESS<br>(MG/L) | ALKA-<br>LINITY<br>AS<br>CaCO <sub>3</sub><br>(MG/L) | SPE-<br>CIFIC<br>CON-<br>DUCT-<br>ANCE<br>(MICRO-<br>MHOS) | PH<br>(UNITS) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | CHEM-<br>ICAL<br>OXYGEN<br>DEMAND<br>(LOW<br>LEVEL)<br>(MG/L) | DIS-<br>SOLVED<br>OXYGEN<br>(MG/L) | PER-<br>CENT<br>SATUR-<br>ATION | FECAL<br>COLI-<br>FORM<br>(COL.<br>PER<br>100 ML) | STREP-<br>TOCOCCI<br>(COL-<br>ONIES<br>PER<br>100 ML) |
|---------------|---------------------------------------------------|------------------------------------------------------|------------------------------------------------------------|---------------|----------------------------------------------|-----------------------------|---------------------------------------------------------------|------------------------------------|---------------------------------|---------------------------------------------------|-------------------------------------------------------|
| NOV.<br>12... | 5                                                 | 233                                                  | 418                                                        | 8.0           | 5                                            | 12.0                        | 9                                                             | 10.6                               | 98                              | 22                                                | 100                                                   |
| JAN.<br>15... | 8                                                 | 187                                                  | 350                                                        | 8.0           | 5                                            | 7.5                         | 2                                                             | 11.4                               | 95                              | 30                                                | 110                                                   |
| MAR.<br>25... | 8                                                 | 197                                                  | 375                                                        | 8.3           | 2                                            | 6.5                         | 3                                                             | 10.6                               | 86                              | 18                                                | 24                                                    |
| MAY<br>28...  | 0                                                 | 213                                                  | 384                                                        | 8.1           | 8                                            | 20.5                        | 11                                                            | 7.5                                | 83                              | 92                                                | 92                                                    |
| JULY<br>29... | 0                                                 | 249                                                  | 450                                                        | 8.1           | 2                                            | 26.5                        | 1                                                             | 6.5                                | 80                              | 120                                               | 180                                                   |
| SEP.<br>23... | 10                                                | 230                                                  | 428                                                        | 8.1           | 5                                            | 17.5                        | 2                                                             | 8.6                                | 90                              | 220                                               | 84                                                    |

07068867 FOURCHE RIVER NEAR MIDDLEBROOK, ARK.--Continued

PERIOD OF RECORD.--Chemical analyses: July 1969 to September 1974.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE          | DIS-<br>SOLVED<br>FLUO-<br>RIDE<br>(F)<br>(MG/L) | TOTAL<br>NITRATE<br>(N)<br>(MG/L) | AMMONIA<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | ORGANIC<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | DIS-<br>SOL-<br>VED-<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | TOTAL<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(RESI-<br>DUE AT<br>180 C)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(TONS<br>PER<br>AC-FT) | DIS-<br>SOLVED<br>SOLIDS<br>(TONS<br>PER<br>DAY) | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | PERCENT<br>SODIUM | HARD-<br>NESS<br>(CA,MG)<br>(MG/L) |
|---------------|--------------------------------------------------|-----------------------------------|-------------------------------------------|-------------------------------------------|----------------------------------------------------------|-------------------------------------------|------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------|-----------------------------------------|-------------------|------------------------------------|
| NOV.<br>12... | .0                                               | .05                               | .03                                       | .05                                       | .04                                                      | .03                                       | 229                                                              | .31                                                | 19.0                                             | .1                                      | 2                 | 240                                |
| JAN.<br>15... | .0                                               | .17                               | .03                                       | .19                                       | .03                                                      | .03                                       | 196                                                              | .27                                                | 96.8                                             | .1                                      | 2                 | 190                                |
| MAR.<br>25... | .1                                               | .13                               | .06                                       | .00                                       | .00                                                      | .00                                       | 191                                                              | .26                                                | 92.8                                             | .1                                      | 2                 | 210                                |
| MAY<br>28...  | .0                                               | .18                               | .07                                       | .49                                       | .01                                                      | .06                                       | 205                                                              | .28                                                | 75.3                                             | .1                                      | 2                 | 210                                |
| JULY<br>29... | .1                                               | .08                               | .05                                       | .11                                       | .02                                                      | .03                                       | 260                                                              | .35                                                | 14.0                                             | .1                                      | 2                 | 240                                |
| SEP.<br>23... | .1                                               | .13                               | .01                                       | .17                                       | .04                                                      | .03                                       | 225                                                              | .31                                                | 18.2                                             | .1                                      | 2                 | 240                                |

07069170 SPRING RIVER NEAR THAYER, MO.

LOCATION.--Lat 36°30'10", long 91°31'31", Oregon County, at bridge on county road, 0.6 mi (1.0 km) east of U.S. Highway 63, 0.2 mi (0.3 km) north of Missouri-Arkansas State line, and 1.1 mi (1.8 km) southeast of Thayer.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE          | DIS-<br>CHARGE<br>(CFS) | DIS-<br>SOLVED<br>SILICA<br>(SI02)<br>(MG/L) | DIS-<br>SOLVED<br>IRON<br>(FE)<br>(UG/L) | DIS-<br>SOLVED<br>MAN-<br>GANESE<br>(MN)<br>(UG/L) | DIS-<br>SOLVED<br>CAL-<br>CIUM<br>(CA)<br>(MG/L) | DIS-<br>SOLVED<br>MAG-<br>NE-<br>SIUM<br>(MG) | DIS-<br>SOLVED<br>SODIUM<br>(NA)<br>(MG/L) | DIS-<br>SOLVED<br>PO-<br>TAS-<br>SIUM<br>(K)<br>(MG/L) | BICAR-<br>BONATE<br>(HCO3)<br>(MG/L) | CAR-<br>BONATE<br>(CO3)<br>(MG/L) | DIS-<br>SOLVED<br>SULFATE<br>(SO4)<br>(MG/L) | DIS-<br>SOLVED<br>CHLO-<br>RIDE<br>(CL)<br>(MG/L) |
|---------------|-------------------------|----------------------------------------------|------------------------------------------|----------------------------------------------------|--------------------------------------------------|-----------------------------------------------|--------------------------------------------|--------------------------------------------------------|--------------------------------------|-----------------------------------|----------------------------------------------|---------------------------------------------------|
| NOV.<br>12... | 28                      | 8.7                                          | 60                                       | 30                                                 | 53                                               | 31                                            | 2.5                                        | 1.6                                                    | 306                                  | 0                                 | 5.4                                          | 2.3                                               |
| JAN.<br>15... | 131                     | 7.4                                          | 50                                       | 20                                                 | 51                                               | 26                                            | 2.0                                        | 1.3                                                    | 274                                  | 0                                 | 3.2                                          | 2.7                                               |
| MAR.<br>25... | 240                     | 7.1                                          | 30                                       | 0                                                  | 46                                               | 25                                            | 1.7                                        | 1.2                                                    | 252                                  | 0                                 | 3.3                                          | 2.1                                               |
| MAY<br>28...  | 231                     | 9.1                                          | 20                                       | 1900                                               | 47                                               | 25                                            | 3.7                                        | 1.3                                                    | 264                                  | 0                                 | 3.5                                          | 2.4                                               |
| JULY<br>29... | 92                      | 9.7                                          | 40                                       | 170                                                | 50                                               | 26                                            | 2.0                                        | 1.4                                                    | 250                                  | 0                                 | 14                                           | 3.3                                               |
| SEP.<br>23... | 52                      | 51                                           | 50                                       | 100                                                | 54                                               | 32                                            | 2.0                                        | 1.7                                                    | 308                                  | 0                                 | 11                                           | 2.3                                               |

| DATE          | NON-<br>CAR-<br>BONATE<br>HARD-<br>NESS<br>(MG/L) | ALKA-<br>LINITY<br>AS<br>CAC03<br>(MG/L) | SPE-<br>CIFIC<br>CON-<br>DUCT-<br>ANCE<br>(MICRO-<br>MHOS) | PH<br>(UNITS) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | CHEM-<br>ICAL<br>OXYGEN<br>DEMAND<br>(LOW<br>LEVEL)<br>(MG/L) | DIS-<br>SOLVED<br>OXYGEN<br>(MG/L) | PER-<br>CENT<br>SATUR-<br>ATION | FECAL<br>COLI-<br>FORM<br>(COL.<br>PER<br>100 ML) | STREP-<br>TOCOCCI<br>(COL-<br>ONIES<br>PER<br>100 ML) |
|---------------|---------------------------------------------------|------------------------------------------|------------------------------------------------------------|---------------|----------------------------------------------|-----------------------------|---------------------------------------------------------------|------------------------------------|---------------------------------|---------------------------------------------------|-------------------------------------------------------|
| NOV.<br>12... | 9                                                 | 251                                      | 460                                                        | 8.1           | 2                                            | 12.0                        | 2                                                             | 11.2                               | 104                             | 44                                                | 64                                                    |
| JAN.<br>15... | 10                                                | 225                                      | 417                                                        | 8.0           | 20                                           | 10.0                        | 5                                                             | 11.2                               | 99                              | 52                                                | 44                                                    |
| MAR.<br>25... | 11                                                | 207                                      | 418                                                        | 8.2           | 0                                            | 8.5                         | 6                                                             | 10.4                               | 89                              | 42                                                | 12                                                    |
| MAY<br>28...  | 4                                                 | 217                                      | 400                                                        | 8.1           | 3                                            | 18.0                        | 2                                                             | 8.4                                | 88                              | 160                                               | 130                                                   |
| JULY<br>29... | 27                                                | 205                                      | 435                                                        | 8.0           | 1                                            | 21.5                        | 4                                                             | 7.6                                | 85                              | 200                                               | 180                                                   |
| SEP.<br>23... | 17                                                | 253                                      | 478                                                        | 8.1           | 5                                            | 15.5                        | 0                                                             | 6.4                                | 64                              | 76                                                | 130                                                   |

07069170 SPRING RIVER NEAR THAYER, MO.--Continued.

PERIOD OF RECORD.--Chemical analyses: July 1969 to September 1974.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE          | DIS-<br>SOLVED<br>FLUO-<br>RIDE<br>(F)<br>(MG/L) | TOTAL<br>NITRATE<br>(N)<br>(MG/L) | AMMONIA<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | ORGANIC<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | DIS-<br>SOL-<br>VED-<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | TOTAL<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(RESI-<br>DUE AT<br>180 C)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(TONS<br>PER<br>AC-FT) | DIS-<br>SOLVED<br>SOLIDS<br>(TONS<br>PER<br>DAY) | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | PERCENT<br>SODIUM | HARD-<br>NESS<br>(CA,MG)<br>(MG/L) |
|---------------|--------------------------------------------------|-----------------------------------|-------------------------------------------|-------------------------------------------|----------------------------------------------------------|-------------------------------------------|------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------|-----------------------------------------|-------------------|------------------------------------|
| NOV.<br>12... | .1                                               | .30                               | .00                                       | .10                                       | .02                                                      | .03                                       | 211                                                              | .29                                                | 16.2                                             | .1                                      | 2                 | 260                                |
| JAN.<br>15... | .0                                               | .53                               | .02                                       | .07                                       | .01                                                      | .02                                       | 218                                                              | .30                                                | 77.1                                             | .1                                      | 2                 | 230                                |
| MAR.<br>25... | .1                                               | .49                               | .09                                       | .11                                       | .00                                                      | .01                                       | 211                                                              | .29                                                | 137                                              | .1                                      | 2                 | 220                                |
| MAY<br>28...  | .0                                               | .02                               | .05                                       | 1.8                                       | .03                                                      | .03                                       | 210                                                              | .29                                                | 131                                              | .1                                      | 4                 | 220                                |
| JULY<br>29... | .1                                               | .40                               | .05                                       | .14                                       | .02                                                      | .03                                       | 251                                                              | .34                                                | 62.3                                             | .1                                      | 2                 | 230                                |
| SEP.<br>23... | .3                                               | .39                               | .01                                       | .12                                       | .05                                                      | .04                                       | 254                                                              | .35                                                | 35.7                                             | .1                                      | 2                 | 270                                |

07071900 ELEVEN POINT RIVER BELOW BARDLEY, MO.

LOCATION.--Lat 36°33'00", long 91°11'35", Oregon County, at bridge on State Highway 142, 6.3 mi (10.1 km) west of Gatewood and 8.7 mi (14.0 km) downstream from gaging station.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE          | DIS-<br>CHARGE<br>(CFS) | DIS-<br>SOLVED<br>SILICA<br>( $\text{SiO}_2$ )<br>(MG/L) | DIS-<br>SOLVED<br>IRON<br>(FE)<br>(UG/L) | DIS-<br>SOLVED<br>MAN-<br>GANESE<br>(MN)<br>(UG/L) | DIS-<br>SOLVED<br>CAL-<br>CIUM<br>(CA)<br>(MG/L) | DIS-<br>SOLVED<br>MAG-<br>NE-<br>SIUM<br>(MG) | DIS-<br>SOLVED<br>SODIUM<br>(NA)<br>(MG/L) | DIS-<br>SOLVED<br>PO-<br>TAS-<br>SIUM<br>(K)<br>(MG/L) | BICAR-<br>BONATE<br>( $\text{HCO}_3$ )<br>(MG/L) | CAR-<br>BONATE<br>( $\text{CO}_3$ )<br>(MG/L) | DIS-<br>SOLVED<br>SULFATE<br>( $\text{SO}_4$ )<br>(MG/L) | DIS-<br>SOLVED<br>CHLO-<br>RIDE<br>(CL)<br>(MG/L) |
|---------------|-------------------------|----------------------------------------------------------|------------------------------------------|----------------------------------------------------|--------------------------------------------------|-----------------------------------------------|--------------------------------------------|--------------------------------------------------------|--------------------------------------------------|-----------------------------------------------|----------------------------------------------------------|---------------------------------------------------|
| NOV.<br>12... | 1000                    | 8.9                                                      | 80                                       | 30                                                 | 41                                               | 22                                            | 2.3                                        | 1.3                                                    | 220                                              | 0                                             | 4.3                                                      | 1.8                                               |
| JAN.<br>15... | 1130                    | 8.2                                                      | 50                                       | 10                                                 | 35                                               | 19                                            | 1.4                                        | 1.1                                                    | 192                                              | 0                                             | 3.4                                                      | 2.0                                               |
| MAR.<br>25... | 1560                    | 7.7                                                      | 30                                       | 0                                                  | 30                                               | 17                                            | 1.6                                        | 1.0                                                    | 168                                              | 0                                             | 3.0                                                      | 1.6                                               |
| MAY<br>28...  | 1730                    | 8.6                                                      | 30                                       | 20                                                 | 32                                               | 17                                            | 1.5                                        | 1.1                                                    | 180                                              | 0                                             | 3.4                                                      | 1.8                                               |
| JULY<br>29... | 1060                    | 8.9                                                      | 20                                       | 20                                                 | 40                                               | 23                                            | 1.9                                        | 1.1                                                    | 228                                              | 0                                             | 3.3                                                      | 2.8                                               |
| SEP.<br>23... | 920                     | 11                                                       | 30                                       | 50                                                 | 43                                               | 24                                            | 2.0                                        | 1.1                                                    | 242                                              | 0                                             | 7.3                                                      | 1.8                                               |

| DATE          | NON-<br>CAR-<br>BONATE<br>HARD-<br>NESS<br>(MG/L) | ALKA-<br>LINITY<br>AS<br>$\text{CaCO}_3$<br>(MG/L) | SPE-<br>CIFIC<br>CON-<br>DUCT-<br>ANCE<br>(MICRO-<br>MHOS) | PH<br>(UNITS) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | CHEM-<br>ICAL<br>OXYGEN<br>DEMAND<br>(LOW<br>LEVEL)<br>(MG/L) | DIS-<br>SOLVED<br>OXYGEN<br>(MG/L) | PER-<br>CENT<br>SATUR-<br>ATION | FECAL<br>COLI-<br>FORM<br>(COL.<br>PER<br>100 ML) | STREP-<br>TOCOCCI<br>(COL-<br>ONIES<br>PER<br>100 ML) |
|---------------|---------------------------------------------------|----------------------------------------------------|------------------------------------------------------------|---------------|----------------------------------------------|-----------------------------|---------------------------------------------------------------|------------------------------------|---------------------------------|---------------------------------------------------|-------------------------------------------------------|
| NOV.<br>12... | 13                                                | 180                                                | 348                                                        | 8.0           | 3                                            | 13.5                        | 3                                                             | 10.2                               | 97                              | 72                                                | 46                                                    |
| JAN.<br>15... | 8                                                 | 157                                                | 303                                                        | 7.8           | 10                                           | 11.0                        | 8                                                             | 10.6                               | 96                              | 2                                                 | 14                                                    |
| MAR.<br>25... | 7                                                 | 138                                                | 275                                                        | 7.9           | 2                                            | 9.5                         | 9                                                             | 9.1                                | 79                              | 40                                                | 16                                                    |
| MAY<br>28...  | 2                                                 | 148                                                | 288                                                        | 7.9           | 8                                            | 17.0                        | 6                                                             | 8.1                                | 84                              | 92                                                | 96                                                    |
| JULY<br>29... | 8                                                 | 187                                                | 375                                                        | 7.9           | 1                                            | 19.5                        | 0                                                             | 8.4                                | 90                              | 20                                                | 54                                                    |
| SEP.<br>23... | 11                                                | 198                                                | 378                                                        | 7.9           | 0                                            | 15.0                        | 4                                                             | 8.6                                | 85                              | 46                                                | 52                                                    |

07071900 ELEVEN POINT RIVER BELOW BARDLEY, MO.--Continued

PERIOD OF RECORD.--Chemical analyses: July 1969 to September 1974.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE          | DIS-<br>SOLVED<br>FLUO-<br>RIDE<br>(F)<br>(MG/L) | TOTAL<br>NITRATE<br>(N)<br>(MG/L) | AMMONIA<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | ORGANIC<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | DIS-<br>SOL-<br>VED-<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | TOTAL<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(RESI-<br>DUE AT<br>180 C)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(TONS<br>PER<br>AC-FT) | DIS-<br>SOLVED<br>SOLIDS<br>(TONS<br>PER<br>DAY) | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | PERCENT<br>SODIUM | HARD-<br>NESS<br>(CA,MG)<br>(MG/L) |
|---------------|--------------------------------------------------|-----------------------------------|-------------------------------------------|-------------------------------------------|----------------------------------------------------------|-------------------------------------------|------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------|-----------------------------------------|-------------------|------------------------------------|
| NOV.<br>12... | .0                                               | .61                               | .03                                       | .02                                       | .03                                                      | .03                                       | 189                                                              | .26                                                | 510                                              | .1                                      | 3                 | 190                                |
| JAN.<br>15... | .0                                               | .54                               | .07                                       | .00                                       | .03                                                      | .03                                       | 170                                                              | .23                                                | 519                                              | .0                                      | 2                 | 170                                |
| MAR.<br>25... | .1                                               | .48                               | .05                                       | .03                                       | .00                                                      | .01                                       | 147                                                              | .20                                                | 619                                              | .1                                      | 2                 | 150                                |
| MAY<br>28...  | .0                                               | .42                               | .06                                       | .58                                       | .02                                                      | .02                                       | 152                                                              | .21                                                | 710                                              | .1                                      | 2                 | 150                                |
| JULY<br>29... | .0                                               | .50                               | .01                                       | .08                                       | .01                                                      | .02                                       | 193                                                              | .26                                                | 552                                              | .1                                      | 2                 | 190                                |
| SEP.<br>23... | .1                                               | .00                               | .01                                       | .26                                       | .04                                                      | .03                                       | 203                                                              | .28                                                | 504                                              | .1                                      | 2                 | 210                                |



07186000 SPRING RIVER NEAR WACO, MO.

LOCATION.--Lat 37°14'45", long 94°33'55", on line between SE¼ sec.7, and NE¼ sec.18, T.29 N., R.33 W., Jasper County, at gaging station on left bank on downstream side of left pier of county highway bridge, 0.8 mi (1.3 km) downstream from Blackberry Creek, 1.5 mi (2.4 km) east of Waco, and 47.6 mi (76.6 km) upstream from mouth.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE          | DIS-<br>CHARGE<br>(CFS) | DIS-<br>SOLVED<br>SILICA<br>(SiO <sub>2</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>IRON<br>(FE)<br>(UG/L) | DIS-<br>SOLVED<br>MAN-<br>GANESE<br>(MN)<br>(UG/L) | DIS-<br>SOLVED<br>CHRO-<br>MIUM<br>(CR)<br>(UG/L) | DIS-<br>SOLVED<br>COPPER<br>(CU)<br>(UG/L) | DIS-<br>SOLVED<br>LEAD<br>(PB)<br>(UG/L) | DIS-<br>SOLVED<br>ZINC<br>(ZN)<br>(UG/L) | DIS-<br>SOLVED<br>CAL-<br>CIUM<br>(CA)<br>(MG/L) | DIS-<br>SOLVED<br>MAG-<br>NE-<br>SIUM<br>(MG)<br>(MG/L) |
|---------------|-------------------------|-----------------------------------------------------------|------------------------------------------|----------------------------------------------------|---------------------------------------------------|--------------------------------------------|------------------------------------------|------------------------------------------|--------------------------------------------------|---------------------------------------------------------|
| OCT.<br>04... | 598                     | 12                                                        | 50                                       | 70                                                 | 0                                                 | 5                                          | 1                                        | 70                                       | 50                                               | 3.2                                                     |
| DEC.<br>06... | 13200                   | 7.3                                                       | 60                                       | 30                                                 | 0                                                 | 10                                         | 5                                        | 0                                        | 19                                               | 1.9                                                     |
| FEB.<br>05... | 865                     | 6.3                                                       | 80                                       | 10                                                 | 0                                                 | 12                                         | 2                                        | 30                                       | 55                                               | 3.1                                                     |
| APR.<br>17... | 559                     | 3.5                                                       | 30                                       | 0                                                  | 0                                                 | 7                                          | 4                                        | 40                                       | 56                                               | 3.5                                                     |
| JUNE<br>10... | 5460                    | 10                                                        | 80                                       | 10                                                 | 0                                                 | 2                                          | 8                                        | 30                                       | 28                                               | 2.2                                                     |
| AUG.<br>05... | 158                     | 9.5                                                       | 10                                       | 20                                                 | 0                                                 | 4                                          | 1                                        | 20                                       | 58                                               | 3.3                                                     |

| DATE          | DIS-<br>SOL-<br>VED-<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | TOTAL<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(RESI-<br>DUE AT<br>180 C)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(TONS<br>PER<br>AC-FT) | DIS-<br>SOLVED<br>SOLIDS<br>(TONS<br>PER<br>DAY) | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | PERCENT<br>SODIUM | HARD-<br>NESS<br>(CA,MG)<br>(MG/L) | NON-<br>CAR-<br>BONATE<br>HARD-<br>NESS<br>(MG/L) | ALKA-<br>LITY<br>AS<br>CACO <sub>3</sub><br>(MG/L) |
|---------------|----------------------------------------------------------|-------------------------------------------|------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------|-----------------------------------------|-------------------|------------------------------------|---------------------------------------------------|----------------------------------------------------|
| OCT.<br>04... | .12                                                      | .18                                       | 179                                                              | .24                                                | 289                                              | .2                                      | 8                 | 140                                | 20                                                | 120                                                |
| DEC.<br>06... | .16                                                      | .28                                       | 93                                                               | .13                                                | 3310                                             | .1                                      | 8                 | 55                                 | 8                                                 | 48                                                 |
| FEB.<br>05... | .02                                                      | .06                                       | 177                                                              | .24                                                | 413                                              | .2                                      | 8                 | 150                                | 34                                                | 116                                                |
| APR.<br>17... | .04                                                      | .06                                       | 189                                                              | .26                                                | 285                                              | .2                                      | 8                 | 150                                | 25                                                | 123                                                |
| JUNE<br>10... | --                                                       | .20                                       | 125                                                              | .17                                                | 1840                                             | .2                                      | 9                 | 79                                 | 10                                                | 69                                                 |
| AUG.<br>05... | .12                                                      | .15                                       | 184                                                              | .25                                                | 78.5                                             | .2                                      | 8                 | 160                                | 14                                                | 144                                                |

07186000 SPRING RIVER NEAR WACO, MO.--Continued

DRAINAGE AREA.--1,164 mi<sup>2</sup> (3,015 km<sup>2</sup>).

PERIOD OF RECORD.--Chemical analyses: November 1965 to September 1974.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE          | DIS-<br>SOLVED<br>SODIUM<br>(NA)<br>(MG/L) | DIS-<br>SOLVED<br>PO-<br>TAS-<br>SIUM<br>(K)<br>(MG/L) | BICAR-<br>BONATE<br>(HCO <sub>3</sub> )<br>(MG/L) | CAR-<br>BONATE<br>(CO <sub>3</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>SULFATE<br>(SO <sub>4</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>CHLO-<br>RIDE<br>(CL)<br>(MG/L) | DIS-<br>SOLVED<br>FLUO-<br>RIDE<br>(F)<br>(MG/L) | TOTAL<br>NITRATE<br>(N)<br>(MG/L) | AMMONIA<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | ORGANIC<br>NITRO-<br>GEN<br>(N)<br>(MG/L) |
|---------------|--------------------------------------------|--------------------------------------------------------|---------------------------------------------------|------------------------------------------------|-----------------------------------------------------------|---------------------------------------------------|--------------------------------------------------|-----------------------------------|-------------------------------------------|-------------------------------------------|
| OCT.<br>04... | 5.8                                        | 2.5                                                    | 146                                               | 0                                              | 16                                                        | 6.3                                               | .1                                               | 1.9                               | .60                                       | .00                                       |
| DEC.<br>06... | 2.5                                        | 4.0                                                    | 58                                                | 0                                              | 8.0                                                       | 2.9                                               | .0                                               | .86                               | .19                                       | 1.0                                       |
| FEB.<br>05... | 6.3                                        | 1.6                                                    | 142                                               | 0                                              | 23                                                        | 8.4                                               | .2                                               | 2.3                               | .02                                       | .24                                       |
| APR.<br>17... | 6.4                                        | 1.2                                                    | 150                                               | 4                                              | 21                                                        | 7.7                                               | .1                                               | 1.7                               | .05                                       | .50                                       |
| JUNE<br>10... | 3.8                                        | 2.6                                                    | 84                                                | 0                                              | 13                                                        | 4.0                                               | .2                                               | .06                               | .10                                       | 1.3                                       |
| AUG.<br>05... | 6.0                                        | 1.5                                                    | 176                                               | 0                                              | 6.5                                                       | 9.1                                               | .1                                               | 1.9                               | .03                                       | .24                                       |

| DATE          | SPE-<br>CIFIC<br>CON-<br>DUCT-<br>ANCE<br>(MICRO-<br>MHOS) | PH<br>(UNITS) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | CHEM-<br>ICAL<br>OXYGEN<br>DEMAND<br>(LOW<br>LEVEL)<br>(MG/L) | DIS-<br>SOLVED<br>OXYGEN<br>(MG/L) | PER-<br>CENT<br>SATUR-<br>ATION | FECAL<br>COLI-<br>FORM<br>(COL.<br>PER<br>100 ML) | STREP-<br>TOCOCCI<br>(COL-<br>ONIES<br>PER<br>100 ML) |
|---------------|------------------------------------------------------------|---------------|----------------------------------------------|-----------------------------|---------------------------------------------------------------|------------------------------------|---------------------------------|---------------------------------------------------|-------------------------------------------------------|
| OCT.<br>04... | 290                                                        | 7.9           | 10                                           | 21.0                        | 9                                                             | 6.0                                | 67                              | 210                                               | 1800                                                  |
| DEC.<br>06... | 127                                                        | 7.3           | 90                                           | 6.5                         | 25                                                            | 8.8                                | 73                              | 7300                                              | 14000                                                 |
| FEB.<br>05... | 305                                                        | 7.9           | 20                                           | 7.0                         | 4                                                             | 10.3                               | 85                              | 140                                               | 56                                                    |
| APR.<br>17... | 320                                                        | 8.4           | 3                                            | 15.0                        | 3                                                             | 12.4                               | 123                             | 5                                                 | <5                                                    |
| JUNE<br>10... | 192                                                        | 7.6           | 60                                           | 19.5                        | 26                                                            | 5.9                                | 63                              | 750                                               | 1900                                                  |
| AUG.<br>05... | 340                                                        | 8.1           | 3                                            | 23.5                        | 3                                                             | 5.8                                | 67                              | 32                                                | 64                                                    |

LOCATION.--Lat 37°08'26", long 94°22'57", in NW¼NW¼NW¼ sec.24, T.28 N., R. 32 W., Jasper County, multi-parameter recorder on left bank at gaging station at bridge on County Road HH, 1.5 mi (2.4 km) downstream from Grove Creek, 3 mi (4.8 km) east of Cartersville and 17 mi (27.4 km) upstream from mouth.

PERIOD OF RECORD.--Chemical analyses: August 1962 to September 1974.

EXTREMES, 1973-74.--Specific conductance: Maximum, 480 micromhos Nov. 20, minimum, 84 micromhos Nov. 25.  
Dissolved oxygen: Maximum, 11.9 mg/l Jan. 12, minimum, 2.8 mg/l Aug. 12.  
Water temperature: Maximum, 28.0°C Aug. 17, minimum, 2.0°C Jan. 12.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

[illegible]

07186400 CENTER CREEK NEAR CARTERVILLE, MO.--Continued

EXTREMES, 1963-74.--Specific conductance: Maximum, 1,510 micromhos Apr. 5, 1964; minimum, 74 micromhos Sept. 8, 1970.

PH (1968-74): Maximum, 8.3 Jan. 14, 1972; minimum, 6.3 Apr. 15, 1972.

Dissolved oxygen (1968-74): Maximum, 14.6 mg/l Feb. 20, 1972; minimum, 1.7 mg/l July 18, 19, 1970.

Water temperatures (1968-74): Maximum, 31.5°C Aug. 3, 5, 1970; minimum, freezing point on several days in January 1970, 1972.

REMARKS.--Recorder inoperative during the year.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE  | DIS-<br>SOLVED<br>SODIUM<br>(NA)<br>(MG/L) | DIS-<br>SOLVED<br>PO-<br>TAS-<br>SIUM<br>(K)<br>(MG/L) | BICAR-<br>BONATE<br>(HCO3)<br>(MG/L) | CAR-<br>BONATE<br>(CO3)<br>(MG/L) | DIS-<br>SOLVED<br>SULFATE<br>(SO4)<br>(MG/L) | DIS-<br>SOLVED<br>CHLO-<br>RIDE<br>(CL)<br>(MG/L) | DIS-<br>SOLVED<br>FLUO-<br>RIDE<br>(F)<br>(MG/L) | TOTAL<br>NITRATE<br>(N)<br>(MG/L) | AMMONIA<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | ORGANIC<br>NITRO-<br>GEN<br>(N)<br>(MG/L) |
|-------|--------------------------------------------|--------------------------------------------------------|--------------------------------------|-----------------------------------|----------------------------------------------|---------------------------------------------------|--------------------------------------------------|-----------------------------------|-------------------------------------------|-------------------------------------------|
| OCT.  |                                            |                                                        |                                      |                                   |                                              |                                                   |                                                  |                                   |                                           |                                           |
| 05... | 7.3                                        | 1.7                                                    | 140                                  | 0                                 | 17                                           | 5.8                                               | .5                                               | 5.1                               | 1.1                                       | .20                                       |
| NOV.  |                                            |                                                        |                                      |                                   |                                              |                                                   |                                                  |                                   |                                           |                                           |
| 06... | --                                         | --                                                     | 148                                  | 0                                 | 17                                           | 6.5                                               | .4                                               | 4.1                               | .91                                       | .59                                       |
| DEC.  |                                            |                                                        |                                      |                                   |                                              |                                                   |                                                  |                                   |                                           |                                           |
| 06... | 3.6                                        | 2.2                                                    | 112                                  | 0                                 | 12                                           | 4.2                                               | .2                                               | 2.7                               | .28                                       | .41                                       |
| JAN.  |                                            |                                                        |                                      |                                   |                                              |                                                   |                                                  |                                   |                                           |                                           |
| 07... | 5.9                                        | 1.3                                                    | 140                                  | 0                                 | 12                                           | 7.1                                               | .3                                               | 4.0                               | .59                                       | .23                                       |
| 25... | --                                         | --                                                     | 136                                  | 0                                 | --                                           | --                                                | --                                               | --                                | --                                        | --                                        |
| FEB.  |                                            |                                                        |                                      |                                   |                                              |                                                   |                                                  |                                   |                                           |                                           |
| 04... | 4.6                                        | 1.2                                                    | 128                                  | 0                                 | 14                                           | 7.5                                               | .3                                               | 3.9                               | .04                                       | .28                                       |
| 19... | --                                         | --                                                     | --                                   | --                                | --                                           | --                                                | --                                               | --                                | --                                        | --                                        |
| MAR.  |                                            |                                                        |                                      |                                   |                                              |                                                   |                                                  |                                   |                                           |                                           |
| 05... | --                                         | --                                                     | --                                   | --                                | --                                           | --                                                | --                                               | --                                | --                                        | --                                        |
| 18... | 4.4                                        | 1.4                                                    | 118                                  | 0                                 | 13                                           | 6.4                                               | .3                                               | 3.4                               | .37                                       | .25                                       |
| APR.  |                                            |                                                        |                                      |                                   |                                              |                                                   |                                                  |                                   |                                           |                                           |
| 03... | --                                         | --                                                     | --                                   | --                                | --                                           | --                                                | --                                               | --                                | --                                        | --                                        |
| 16... | 6.1                                        | 1.2                                                    | 140                                  | 0                                 | 15                                           | 6.9                                               | .4                                               | 3.8                               | .65                                       | .75                                       |
| 30... | --                                         | --                                                     | --                                   | --                                | --                                           | --                                                | --                                               | --                                | --                                        | --                                        |
| MAY   |                                            |                                                        |                                      |                                   |                                              |                                                   |                                                  |                                   |                                           |                                           |
| 14... | 7.5                                        | 1.6                                                    | 142                                  | 0                                 | 29                                           | 9.1                                               | .7                                               | 15                                | 1.5                                       | .50                                       |
| 29... | --                                         | --                                                     | --                                   | --                                | --                                           | --                                                | --                                               | --                                | --                                        | --                                        |
| JUNE  |                                            |                                                        |                                      |                                   |                                              |                                                   |                                                  |                                   |                                           |                                           |
| 10... | 3.8                                        | 1.5                                                    | 112                                  | 0                                 | 9.8                                          | 3.6                                               | .2                                               | 2.0                               | .33                                       | .87                                       |
| 26... | --                                         | --                                                     | --                                   | --                                | --                                           | --                                                | --                                               | --                                | --                                        | --                                        |
| JULY  |                                            |                                                        |                                      |                                   |                                              |                                                   |                                                  |                                   |                                           |                                           |
| 08... | 4.6                                        | 1.5                                                    | 140                                  | 0                                 | 14                                           | 7.5                                               | .2                                               | 4.2                               | .13                                       | .45                                       |
| 23... | --                                         | --                                                     | 144                                  | 0                                 | --                                           | --                                                | --                                               | --                                | --                                        | --                                        |
| AUG.  |                                            |                                                        |                                      |                                   |                                              |                                                   |                                                  |                                   |                                           |                                           |
| 07... | 11                                         | 1.3                                                    | 152                                  | 0                                 | 16                                           | 9.9                                               | .3                                               | 5.9                               | 1.8                                       | .40                                       |
| 20... | --                                         | --                                                     | 148                                  | 0                                 | --                                           | --                                                | --                                               | --                                | --                                        | --                                        |
| SEP.  |                                            |                                                        |                                      |                                   |                                              |                                                   |                                                  |                                   |                                           |                                           |
| 04... | 7.4                                        | 1.6                                                    | 144                                  | 0                                 | 17                                           | 8.3                                               | .3                                               | 6.0                               | 1.9                                       | .10                                       |
| 18... | --                                         | --                                                     | 160                                  | 0                                 | --                                           | --                                                | --                                               | --                                | --                                        | --                                        |

07186400 CENTER CREEK NEAR CARTERVILLE, MO--Continued

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

[illegible]

07186400 CENTER CREEK NEAR CARTERVILLE, MO--Continued

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE  | SPE-<br>CIFIC<br>CON-<br>DUCT-<br>ANCE<br>(MICRO-<br>MHOS) | PH<br>(UNITS) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | CHEM-<br>ICAL<br>OXYGEN<br>DEMAND<br>(LOW<br>LEVEL)<br>(MG/L) | DIS-<br>SOLVED<br>OXYGEN<br>(MG/L) | PER-<br>CENT<br>SATUR-<br>ATION | FECAL<br>COLI-<br>FORM<br>(COL.<br>PER<br>100 ML) | STREP-<br>TOCOCCI<br>(COL-<br>ONIES<br>PER<br>100 ML) |
|-------|------------------------------------------------------------|---------------|----------------------------------------------|-----------------------------|---------------------------------------------------------------|------------------------------------|---------------------------------|---------------------------------------------------|-------------------------------------------------------|
| OCT.  |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 05... | 305                                                        | 7.6           | 9                                            | 17.0                        | 7                                                             | 6.9                                | 71                              | 420                                               | 1300                                                  |
| NOV.  |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 06... | 328                                                        | 7.7           | --                                           | 10.5                        | --                                                            | 7.4                                | 66                              | 110                                               | 130                                                   |
| DEC.  |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 06... | 238                                                        | 7.5           | 10                                           | 9.0                         | 8                                                             | 8.6                                | 74                              | 500                                               | 2100                                                  |
| JAN.  |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 07... | 290                                                        | 8.0           | 5                                            | 5.5                         | 7                                                             | 8.4                                | 67                              | 20                                                | 30                                                    |
| 25... | 300                                                        | 7.9           | --                                           | 7.5                         | --                                                            | 10.8                               | 90                              | 24                                                | --                                                    |
| FEB.  |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 04... | 270                                                        | 7.9           | 8                                            | 8.5                         | 2                                                             | 10.0                               | 85                              | 2                                                 | 10                                                    |
| 19... | 210                                                        | 7.4           | --                                           | 8.5                         | --                                                            | 8.6                                | 73                              | 4400                                              | --                                                    |
| MAR.  |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 05... | 290                                                        | 8.1           | --                                           | 14.0                        | --                                                            | 10.4                               | 100                             | 20                                                | --                                                    |
| 18... | 273                                                        | 7.7           | 7                                            | 13.0                        | 3                                                             | 9.0                                | 85                              | 340                                               | 150                                                   |
| APR.  |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 03... | 290                                                        | 7.9           | --                                           | 15.0                        | --                                                            | 9.2                                | 92                              | 68                                                | --                                                    |
| 16... | 295                                                        | 8.1           | 3                                            | 15.0                        | 22                                                            | 9.5                                | 94                              | 20                                                | 8                                                     |
| 30... | 300                                                        | 7.5           | --                                           | 17.5                        | --                                                            | 6.6                                | 69                              | 900                                               | --                                                    |
| MAY   |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 14... | 388                                                        | 7.6           | 2                                            | 19.5                        | 24                                                            | 4.8                                | 52                              | 2900                                              | 3900                                                  |
| 29... | 252                                                        | 7.5           | --                                           | 18.5                        | --                                                            | 6.9                                | 73                              | 850                                               | --                                                    |
| JUNE  |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 10... | 230                                                        | 7.5           | 20                                           | 17.5                        | 9                                                             | 6.4                                | 67                              | 700                                               | 1900                                                  |
| 26... | 340                                                        | 7.8           | --                                           | 18.0                        | --                                                            | 7.9                                | 82                              | 34                                                | --                                                    |
| JULY  |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 08... | 310                                                        | 7.9           | 1                                            | 25.5                        | 10                                                            | 6.8                                | 83                              | 120                                               | 62                                                    |
| 23... | 340                                                        | 7.7           | --                                           | 26.5                        | --                                                            | 6.0                                | 74                              | 68                                                | --                                                    |
| AUG.  |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 07... | 358                                                        | 7.7           | 3                                            | 23.0                        | 11                                                            | 5.5                                | 63                              | 260                                               | 660                                                   |
| 20... | 398                                                        | 8.0           | --                                           | 23.0                        | --                                                            | 5.4                                | 62                              | 160                                               | --                                                    |
| SEP.  |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 04... | 352                                                        | 7.7           | 5                                            | 17.5                        | 11                                                            | 6.8                                | 71                              | 300                                               | 210                                                   |
| 18... | 400                                                        | 7.3           | --                                           | 19.0                        | --                                                            | 4.9                                | 52                              | 100                                               | --                                                    |



07186400 CENTER CREEK NEAR CARTERVILLE, MO.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C) , WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCTOBER |     | NOVEMBER |     | DECEMBER |     | JANUARY |     | FEBRUARY |     | MARCH |     |
|-------|---------|-----|----------|-----|----------|-----|---------|-----|----------|-----|-------|-----|
|       | MAX     | MIN | MAX      | MIN | MAX      | MIN | MAX     | MIN | MAX      | MIN | MAX   | MIN |
| 1     | 258     | 244 | 280      | 269 | 259      | 252 | 262     | 257 | 324      | 240 | 287   | 267 |
| 2     | 273     | 258 | 310      | 275 | 261      | 255 | 264     | 256 | 233      | 222 | ---   | --- |
| 3     | ---     | --- | 325      | 308 | 286      | 259 | 264     | 257 | 225      | 218 | ---   | --- |
| 4     | ---     | --- | 338      | 314 | 257      | 90  | 270     | 265 | 227      | 222 | ---   | --- |
| 5     | ---     | --- | 333      | 313 | 226      | 127 | 274     | 264 | ---      | --- | 295   | 289 |
| 6     | ---     | --- | 334      | 306 | 253      | 223 | 273     | 269 | ---      | --- | 297   | 289 |
| 7     | ---     | --- | 348      | 327 | 257      | 248 | 287     | 278 | ---      | --- | 300   | 290 |
| 8     | ---     | --- | 355      | 340 | 260      | 257 | 286     | 279 | ---      | --- | 306   | 296 |
| 9     | ---     | --- | 358      | 342 | 265      | 259 | 291     | 283 | ---      | --- | 307   | 269 |
| 10    | ---     | --- | 359      | 340 | 273      | 266 | 290     | 283 | ---      | --- | 181   | 101 |
| 11    | ---     | --- | 346      | 338 | 273      | 267 | 291     | 285 | 301      | 290 | 171   | 109 |
| 12    | ---     | --- | 359      | 337 | 276      | 270 | 295     | 291 | 301      | 294 | 229   | 177 |
| 13    | ---     | --- | 354      | 341 | 284      | 274 | 294     | 286 | 305      | 293 | 245   | 229 |
| 14    | ---     | --- | 353      | 329 | 285      | 278 | 309     | 295 | 309      | 295 | 255   | 244 |
| 15    | ---     | --- | 333      | 331 | 286      | 281 | 310     | 294 | 307      | 299 | 268   | 207 |
| 16    | ---     | --- | 332      | 313 | 288      | 284 | 300     | 287 | 305      | 292 | 241   | 211 |
| 17    | ---     | --- | 325      | 310 | 293      | 288 | 293     | 288 | 300      | 286 | 263   | 245 |
| 18    | ---     | --- | 314      | 311 | 294      | 288 | 304     | 289 | 348      | 291 | 276   | 267 |
| 19    | ---     | --- | 334      | 315 | 344      | 219 | 302     | 297 | 343      | 203 | 284   | 276 |
| 20    | ---     | --- | 480      | 133 | 273      | 232 | 301     | 296 | 247      | 210 | 290   | 282 |
| 21    | ---     | --- | 215      | 128 | 282      | 271 | 301     | 296 | 270      | 249 | ---   | --- |
| 22    | ---     | --- | 255      | 217 | 282      | 276 | 301     | 286 | 262      | 254 | ---   | --- |
| 23    | ---     | --- | 269      | 255 | 287      | 242 | 297     | 285 | 266      | 259 | ---   | --- |
| 24    | ---     | --- | 282      | 102 | 257      | 180 | 296     | 289 | 273      | 265 | ---   | --- |
| 25    | 342     | 325 | 143      | 84  | 209      | 149 | 299     | 290 | 277      | 272 | ---   | --- |
| 26    | 344     | 331 | 211      | 155 | 235      | 209 | 304     | 291 | 284      | 275 | 286   | 282 |
| 27    | 372     | 116 | 239      | 210 | 245      | 236 | 296     | 291 | 285      | 278 | 286   | 280 |
| 28    | 235     | 115 | 250      | 240 | 251      | 245 | 303     | 286 | 285      | 281 | 285   | 280 |
| 29    | 257     | 237 | 255      | 248 | 254      | 248 | 319     | 280 | ---      | --- | 288   | 283 |
| 30    | 274     | 253 | 253      | 249 | 258      | 251 | 324     | 313 | ---      | --- | 286   | 279 |
| 31    | 275     | 268 | ---      | --- | 260      | 256 | 325     | 317 | ---      | --- | 286   | 278 |
| MONTH | ---     | --- | 480      | 84  | 344      | 90  | 325     | 256 | 348      | 203 | ---   | --- |

| DAY   | APRIL |     | MAY |     | JUNE |     | JULY |     | AUGUST |     | SEPTEMBER |     |
|-------|-------|-----|-----|-----|------|-----|------|-----|--------|-----|-----------|-----|
|       | MAX   | MIN | MAX | MIN | MAX  | MIN | MAX  | MIN | MAX    | MIN | MAX       | MIN |
| 1     | 289   | 279 | 300 | 271 | 254  | 249 | 337  | 334 | 323    | 305 | 407       | 324 |
| 2     | 291   | 284 | 286 | 270 | 255  | 251 | 342  | 330 | 315    | 292 | 360       | 335 |
| 3     | 293   | 287 | 289 | 282 | 262  | 253 | 350  | 336 | 316    | 308 | 350       | 329 |
| 4     | 303   | 296 | 291 | 283 | 305  | 175 | 344  | 333 | 312    | 298 | 354       | 332 |
| 5     | 312   | 295 | 287 | 281 | 216  | 138 | 338  | 329 | 308    | 298 | 356       | 339 |
| 6     | 300   | 287 | 300 | 284 | 247  | 147 | 342  | 323 | 322    | 309 | 356       | 346 |
| 7     | 292   | 288 | 306 | 291 | 137  | 90  | 324  | 315 | 357    | 307 | 364       | 340 |
| 8     | 297   | 276 | 299 | 289 | 209  | 121 | 326  | 309 | 356    | 340 | 345       | 339 |
| 9     | 279   | 270 | 304 | 295 | 211  | 151 | 337  | 317 | 408    | 332 | 350       | 337 |
| 10    | 288   | 278 | 306 | 293 | 244  | 212 | 330  | 314 | 385    | 335 | 365       | 342 |
| 11    | 298   | 285 | 305 | 293 | 268  | 244 | 334  | 320 | 327    | 315 | 362       | 349 |
| 12    | 296   | 284 | 302 | 295 | 257  | 253 | 336  | 306 | 321    | 306 | 368       | 355 |
| 13    | 286   | 276 | 305 | 297 | 265  | 258 | 336  | 310 | 318    | 303 | 370       | 339 |
| 14    | 289   | 278 | 387 | 297 | 270  | 263 | ---  | --- | 311    | 302 | 364       | 350 |
| 15    | 296   | 289 | 332 | 316 | 273  | 269 | ---  | --- | 329    | 308 | 379       | 367 |
| 16    | 300   | 286 | 317 | 308 | 280  | 274 | ---  | --- | 326    | 311 | 407       | 384 |
| 17    | 303   | 287 | 313 | 307 | 287  | 279 | ---  | --- | 317    | 302 | 392       | 350 |
| 18    | 300   | 292 | 313 | 300 | 287  | 279 | ---  | --- | 334    | 299 | 401       | 380 |
| 19    | 300   | 294 | 304 | 299 | 283  | 277 | ---  | --- | 379    | 302 | ---       | --- |
| 20    | 298   | 284 | 313 | 302 | 281  | 276 | ---  | --- | 475    | 359 | ---       | --- |
| 21    | 309   | 287 | 317 | 298 | 283  | 275 | ---  | --- | 359    | 343 | ---       | --- |
| 22    | 303   | 284 | 306 | 294 | 284  | 279 | ---  | --- | 362    | 340 | ---       | --- |
| 23    | 300   | 287 | 309 | 300 | 286  | 282 | 340  | 329 | 370    | 325 | ---       | --- |
| 24    | 297   | 286 | 357 | 299 | 293  | 284 | 348  | 339 | 380    | 346 | ---       | --- |
| 25    | 294   | 288 | 337 | 141 | 297  | 282 | 345  | 336 | 350    | 330 | ---       | --- |
| 26    | 299   | 288 | 181 | 135 | 337  | 275 | 353  | 333 | 340    | 330 | ---       | --- |
| 27    | 295   | 285 | 215 | 166 | 345  | 336 | 342  | 331 | 350    | 330 | ---       | --- |
| 28    | 293   | 288 | 233 | 207 | 354  | 335 | 333  | 319 | 388    | 340 | ---       | --- |
| 29    | 295   | 285 | 257 | 234 | 351  | 329 | 322  | 310 | 348    | 335 | ---       | --- |
| 30    | 303   | 290 | 264 | 257 | 333  | 326 | 322  | 301 | 339    | 330 | ---       | --- |
| 31    | ---   | --- | 296 | 250 | ---  | --- | 323  | 302 | 344    | 331 | ---       | --- |
| MONTH | 312   | 270 | 387 | 135 | 354  | 90  | ---  | --- | 475    | 292 | ---       | --- |

07186400 CENTER CREEK NEAR CARTERVILLE, MO.--Continued

PH (UNITS) , WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

|       | OCTOBER |     | NOVEMBER |     | DECEMBER |     | JANUARY |     | FEBRUARY |     | MARCH |     |
|-------|---------|-----|----------|-----|----------|-----|---------|-----|----------|-----|-------|-----|
| DAY   | MAX     | MIN | MAX      | MIN | MAX      | MIN | MAX     | MIN | MAX      | MIN | MAX   | MIN |
| 1     | ---     | --- | ---      | --- | 7.7      | 7.3 | 7.7     | 7.6 | ---      | --- | 8.0   | 7.5 |
| 2     | ---     | --- | ---      | --- | 7.6      | 7.4 | 7.7     | 7.6 | ---      | --- | ---   | --- |
| 3     | ---     | --- | ---      | --- | 7.6      | 7.5 | 7.7     | 7.4 | ---      | --- | ---   | --- |
| 4     | ---     | --- | ---      | --- | 7.4      | 7.1 | 7.5     | 7.4 | ---      | --- | ---   | --- |
| 5     | ---     | --- | ---      | --- | 7.5      | 7.3 | 7.5     | 7.4 | ---      | --- | 8.1   | 7.7 |
| 6     | ---     | --- | ---      | --- | 7.6      | 7.5 | 7.6     | 7.4 | ---      | --- | 7.9   | 7.6 |
| 7     | ---     | --- | 7.8      | 7.6 | 7.7      | 7.6 | 7.8     | 7.6 | ---      | --- | 7.8   | 7.5 |
| 8     | ---     | --- | 7.7      | 7.7 | 7.7      | 7.6 | 7.8     | 7.6 | ---      | --- | 7.8   | 7.5 |
| 9     | ---     | --- | 7.8      | 7.6 | 7.7      | 7.6 | 8.0     | 7.8 | ---      | --- | 7.8   | 7.2 |
| 10    | ---     | --- | 7.8      | 7.4 | 7.7      | 7.7 | 8.0     | 7.8 | ---      | --- | 7.2   | 7.0 |
| 11    | ---     | --- | 7.6      | 7.4 | 7.7      | 7.5 | 8.0     | 7.9 | 8.2      | 7.9 | 7.3   | 7.1 |
| 12    | ---     | --- | 7.4      | 7.2 | 7.8      | 7.6 | 8.0     | 7.9 | 8.1      | 7.7 | 7.5   | 7.3 |
| 13    | ---     | --- | 7.8      | 7.5 | 7.8      | 7.7 | 7.9     | 7.8 | 8.3      | 7.7 | 7.6   | 7.5 |
| 14    | ---     | --- | 7.8      | 7.6 | 7.8      | 7.7 | 7.9     | 7.7 | 8.2      | 7.7 | 7.6   | 7.5 |
| 15    | ---     | --- | 7.7      | 7.5 | 7.8      | 7.7 | 7.8     | 7.6 | 7.9      | 7.7 | 7.6   | 7.6 |
| 16    | ---     | --- | 7.9      | 7.6 | 7.7      | 7.7 | 7.7     | 7.5 | 8.2      | 7.6 | 7.6   | 7.5 |
| 17    | ---     | --- | 7.8      | 7.6 | 7.7      | 7.7 | 7.6     | 7.5 | 8.2      | 7.7 | 7.6   | 7.6 |
| 18    | ---     | --- | 7.8      | 7.6 | 7.8      | 7.7 | 7.7     | 7.5 | 7.7      | 7.4 | 7.8   | 7.6 |
| 19    | ---     | --- | 7.7      | 7.6 | 7.8      | 7.5 | 7.8     | 7.6 | 7.6      | 7.3 | 7.8   | 7.8 |
| 20    | ---     | --- | 7.7      | 7.3 | 7.6      | 7.6 | 7.8     | 7.6 | 7.5      | 7.1 | 7.9   | 7.6 |
| 21    | ---     | --- | 7.5      | 7.2 | 7.7      | 7.6 | 7.9     | 7.6 | 7.5      | 7.4 | ---   | --- |
| 22    | ---     | --- | 7.4      | 7.1 | 7.7      | 7.6 | 7.7     | 7.5 | 7.5      | 7.2 | ---   | --- |
| 23    | ---     | --- | 7.5      | 7.4 | 7.7      | 7.4 | 7.9     | 7.6 | 7.5      | 7.0 | ---   | --- |
| 24    | ---     | --- | 7.6      | 7.1 | 7.5      | 7.4 | 7.8     | 7.7 | 7.6      | 7.4 | ---   | --- |
| 25    | ---     | --- | 7.1      | 6.9 | 7.5      | 7.4 | 7.8     | 7.5 | 7.6      | 7.5 | ---   | --- |
| 26    | ---     | --- | 7.4      | 7.1 | 7.6      | 7.0 | 7.6     | 7.4 | 7.6      | 7.4 | 7.8   | 7.8 |
| 27    | ---     | --- | 7.6      | 7.4 | 7.5      | 7.2 | 7.7     | 7.4 | 7.7      | 7.4 | 7.9   | 7.7 |
| 28    | ---     | --- | 7.7      | 7.5 | 7.5      | 7.4 | 7.6     | 7.5 | 7.8      | 7.4 | 8.0   | 7.7 |
| 29    | ---     | --- | 7.7      | 7.4 | 7.5      | 7.5 | 7.8     | 7.5 | ---      | --- | 8.1   | 7.8 |
| 30    | ---     | --- | 7.6      | 7.4 | 7.6      | 7.5 | ---     | --- | ---      | --- | 8.2   | 7.8 |
| 31    | ---     | --- | ---      | --- | 7.7      | 7.6 | ---     | --- | ---      | --- | 8.2   | 7.7 |
| MONTH | ---     | --- | 7.9      | 6.9 | 7.8      | 7.0 | 8.0     | 7.4 | ---      | --- | ---   | --- |

|       | APRIL |     | MAY |     | JUNE |     | JULY |     | AUGUST |     | SEPTEMBER |     |
|-------|-------|-----|-----|-----|------|-----|------|-----|--------|-----|-----------|-----|
| DAY   | MAX   | MIN | MAX | MIN | MAX  | MIN | MAX  | MIN | MAX    | MIN | MAX       | MIN |
| 1     | 8.3   | 7.7 | 7.6 | 7.5 | 7.5  | 7.4 | 8.2  | 7.8 | 7.7    | 7.5 | 7.7       | 7.4 |
| 2     | 8.4   | 7.8 | 7.7 | 7.6 | 7.6  | 7.4 | 8.1  | 7.7 | 7.6    | 7.5 | 7.5       | 7.4 |
| 3     | 8.3   | 7.8 | 7.8 | 7.6 | 7.6  | 7.6 | 7.9  | 7.6 | 7.7    | 7.6 | 7.5       | 7.3 |
| 4     | 7.9   | 7.5 | 7.8 | 7.6 | 7.7  | 7.4 | 7.8  | 7.6 | 7.7    | 7.6 | 7.7       | 7.6 |
| 5     | 8.1   | 7.4 | 7.8 | 7.6 | 7.6  | 7.2 | 7.9  | 7.4 | 7.8    | 7.6 | 8.1       | 7.5 |
| 6     | 8.2   | 7.3 | 7.8 | 7.5 | 7.4  | 7.1 | 7.8  | 7.4 | 7.6    | 7.5 | 8.0       | 7.6 |
| 7     | 8.1   | 7.7 | 7.7 | 7.5 | 7.1  | 6.8 | 7.9  | 7.6 | 7.8    | 7.6 | 7.9       | 7.5 |
| 8     | 7.9   | 7.1 | 7.7 | 7.5 | 7.3  | 7.0 | 8.0  | 7.6 | 7.8    | 7.7 | 7.8       | 7.5 |
| 9     | 8.0   | 7.3 | 7.7 | 7.5 | 7.5  | 7.3 | 7.9  | 7.7 | 7.7    | 7.7 | 7.7       | 7.4 |
| 10    | 7.9   | 7.7 | 7.7 | 7.5 | 7.6  | 7.4 | 7.8  | 7.6 | 7.8    | 7.6 | 7.6       | 7.5 |
| 11    | 7.8   | 7.5 | 7.7 | 7.6 | 7.6  | 7.2 | 7.9  | 7.5 | 8.0    | 7.7 | 7.8       | 7.4 |
| 12    | 7.9   | 7.5 | 7.7 | 7.6 | 7.6  | 7.3 | ---  | --- | 7.8    | 7.7 | 7.9       | 7.5 |
| 13    | 7.9   | 7.5 | 7.8 | 7.6 | 7.5  | 6.8 | ---  | --- | 7.8    | 7.6 | 7.9       | 7.5 |
| 14    | 7.6   | 7.5 | 7.7 | 7.5 | 7.6  | 7.3 | ---  | --- | 7.9    | 7.5 | 7.9       | 7.6 |
| 15    | ---   | --- | 7.5 | 7.4 | 7.8  | 7.6 | ---  | --- | 7.7    | 7.5 | 7.9       | 7.5 |
| 16    | ---   | --- | 7.5 | 7.4 | 7.8  | 7.5 | ---  | --- | 7.7    | 7.6 | 8.0       | 7.7 |
| 17    | ---   | --- | 7.5 | 7.4 | 7.8  | 7.4 | ---  | --- | 7.8    | 7.6 | ---       | --- |
| 18    | ---   | --- | 7.5 | 7.4 | 7.7  | 7.4 | ---  | --- | 7.9    | 7.7 | ---       | --- |
| 19    | 8.3   | 7.9 | 7.5 | 7.5 | 7.7  | 7.5 | ---  | --- | 8.0    | 7.8 | ---       | --- |
| 20    | 8.3   | 7.8 | 7.5 | 7.4 | 7.8  | 7.7 | ---  | --- | 8.2    | 8.0 | ---       | --- |
| 21    | 8.0   | 7.7 | 7.5 | 7.3 | 7.7  | 7.5 | ---  | --- | 8.3    | 7.7 | ---       | --- |
| 22    | 8.1   | 7.6 | 7.4 | 7.3 | 7.7  | 7.5 | ---  | --- | 7.9    | 7.7 | ---       | --- |
| 23    | 8.0   | 7.5 | 7.4 | 7.3 | 7.7  | 7.4 | 7.7  | 7.6 | 7.8    | 7.5 | ---       | --- |
| 24    | 8.1   | 7.6 | 7.3 | 7.2 | 7.8  | 7.5 | 7.8  | 7.5 | 7.6    | 7.3 | ---       | --- |
| 25    | 8.0   | 7.5 | 7.3 | 6.8 | 7.8  | 7.6 | 7.6  | 7.5 | 7.6    | 7.4 | ---       | --- |
| 26    | 7.9   | 7.4 | 7.2 | 6.7 | 7.9  | 7.6 | 7.7  | 7.4 | 7.6    | 7.5 | ---       | --- |
| 27    | 7.9   | 7.5 | 7.6 | 6.5 | 8.0  | 7.7 | 7.8  | 7.6 | 7.7    | 7.5 | ---       | --- |
| 28    | 7.7   | 7.5 | 7.6 | 7.1 | 8.0  | 7.6 | 7.7  | 7.5 | 7.8    | 7.6 | ---       | --- |
| 29    | 7.5   | 7.4 | 7.6 | 7.5 | 8.0  | 7.7 | 7.7  | 7.5 | 7.7    | 7.5 | ---       | --- |
| 30    | 7.6   | 7.4 | 7.7 | 7.5 | 8.1  | 7.7 | 7.8  | 7.6 | 7.8    | 7.3 | ---       | --- |
| 31    | ---   | --- | 7.7 | 7.5 | ---  | --- | 7.7  | 7.5 | 7.7    | 7.4 | ---       | --- |
| MONTH | 8.4   | 7.1 | 7.8 | 6.5 | 8.1  | 6.8 | ---  | --- | 8.3    | 7.3 | ---       | --- |

07186400 CENTER CREEK NEAR CARTERVILLE, MO.--Continued

DISSOLVED OXYGEN (DO), IN MILLIGRAMS PER LITER , WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

|       | OCTOBER |     | NOVEMBER |     | DECEMBER |      | JANUARY |      | FEBRUARY |      | MARCH |     |
|-------|---------|-----|----------|-----|----------|------|---------|------|----------|------|-------|-----|
| DAY   | MAX     | MIN | MAX      | MIN | MAX      | MIN  | MAX     | MIN  | MAX      | MIN  | MAX   | MIN |
| 1     | 8.9     | 8.1 | 8.0      | 6.9 | 8.7      | 8.1  | 10.5    | 9.8  | ---      | ---  | 10.5  | 7.0 |
| 2     | 8.0     | 7.4 | 8.2      | 6.6 | 8.3      | 8.0  | 10.0    | 9.6  | ---      | ---  | ---   | --- |
| 3     | ---     | --- | 8.5      | 7.4 | 8.4      | 7.4  | 9.5     | 8.7  | ---      | ---  | ---   | --- |
| 4     | ---     | --- | 8.5      | 7.7 | 8.9      | 7.5  | 9.7     | 8.7  | ---      | ---  | ---   | --- |
| 5     | ---     | --- | 9.5      | 8.3 | 9.0      | 8.6  | 9.9     | 9.3  | ---      | ---  | 10.4  | 8.0 |
| 6     | ---     | --- | 9.7      | 7.5 | 9.1      | 8.7  | 9.9     | 9.1  | ---      | ---  | 10.2  | 7.3 |
| 7     | ---     | --- | 9.0      | 7.1 | 9.3      | 9.0  | 10.8    | 9.6  | ---      | ---  | 9.2   | 6.2 |
| 8     | ---     | --- | 8.6      | 7.5 | 9.3      | 8.5  | 10.7    | 9.8  | ---      | ---  | 8.7   | 5.8 |
| 9     | ---     | --- | 9.2      | 7.5 | 8.4      | 8.3  | 10.8    | 9.7  | ---      | ---  | 8.3   | 5.9 |
| 10    | ---     | --- | 9.6      | 8.0 | 9.8      | 9.3  | 11.0    | 10.1 | ---      | ---  | 8.9   | 7.3 |
| 11    | ---     | --- | 9.4      | 8.1 | 9.4      | 8.8  | 11.6    | 10.4 | 11.2     | 9.0  | 9.0   | 8.4 |
| 12    | ---     | --- | 9.5      | 7.3 | 9.4      | 8.6  | 11.9    | 10.9 | 11.4     | 8.5  | 9.3   | 8.5 |
| 13    | ---     | --- | 8.4      | 6.5 | 9.1      | 8.5  | 11.4    | 10.1 | 11.4     | 8.1  | 9.6   | 9.3 |
| 14    | ---     | --- | 8.4      | 5.7 | 9.3      | 8.9  | 11.8    | 9.6  | 10.3     | 7.7  | 9.5   | 8.7 |
| 15    | ---     | --- | 7.5      | 5.3 | 9.5      | 8.8  | 11.2    | 9.6  | 10.0     | 7.9  | 8.7   | 8.3 |
| 16    | ---     | --- | 9.0      | 5.9 | 10.1     | 9.4  | 11.0    | 9.1  | 11.4     | 8.0  | 9.0   | 8.7 |
| 17    | ---     | --- | 9.1      | 6.8 | 10.5     | 10.0 | 10.5    | 8.6  | 11.5     | 8.3  | 8.9   | 8.4 |
| 18    | ---     | --- | 9.0      | 6.7 | 9.9      | 9.2  | 10.4    | 8.0  | 8.6      | 7.0  | 9.0   | 8.3 |
| 19    | ---     | --- | 8.6      | 6.2 | 10.1     | 8.8  | 10.1    | 8.4  | 8.8      | 6.8  | 9.0   | 8.4 |
| 20    | ---     | --- | 7.2      | 5.6 | 10.3     | 10.1 | 9.9     | 8.2  | 8.7      | 8.0  | 9.4   | 9.0 |
| 21    | ---     | --- | 7.4      | 6.8 | 10.3     | 9.5  | 10.6    | 8.5  | 7.9      | 7.3  | ---   | --- |
| 22    | ---     | --- | 7.8      | 7.1 | 9.7      | 9.0  | 9.4     | 7.7  | 10.0     | 7.7  | ---   | --- |
| 23    | ---     | --- | 7.3      | 6.4 | 9.3      | 8.6  | 11.0    | 8.7  | 10.3     | 9.1  | ---   | --- |
| 24    | ---     | --- | 7.5      | 6.5 | 9.4      | 8.8  | 10.9    | 8.9  | 11.0     | 9.0  | ---   | --- |
| 25    | 8.5     | 6.3 | 8.5      | 7.3 | 9.4      | 9.1  | 10.4    | 8.7  | 11.6     | 10.0 | ---   | --- |
| 26    | 8.8     | 6.3 | 8.6      | 7.7 | 9.5      | 9.3  | 8.6     | 7.4  | 10.8     | 8.5  | 10.4  | 9.2 |
| 27    | 8.6     | 6.1 | 8.7      | 8.4 | 9.2      | 8.8  | 9.6     | 7.5  | 10.4     | 8.1  | 9.9   | 8.6 |
| 28    | 8.5     | 8.2 | 9.2      | 8.7 | 9.2      | 8.6  | 9.0     | 7.4  | 10.4     | 7.7  | 9.3   | 8.0 |
| 29    | 8.5     | 7.8 | 9.2      | 8.8 | 9.1      | 8.5  | 9.6     | 8.1  | ---      | ---  | 10.0  | 7.8 |
| 30    | 8.4     | 7.2 | 8.9      | 8.5 | 9.0      | 8.7  | 11.0    | 8.8  | ---      | ---  | 10.4  | 7.6 |
| 31    | 7.6     | 6.9 | ---      | --- | 10.0     | 8.7  | ---     | ---  | ---      | ---  | 10.5  | 7.6 |
| MONTH | ---     | --- | 9.7      | 5.3 | 10.5     | 7.4  | 11.9    | 7.4  | ---      | ---  | ---   | --- |

|       | APRIL |     | MAY |     | JUNE |     | JULY |     | AUGUST |     | SEPTEMBER |     |
|-------|-------|-----|-----|-----|------|-----|------|-----|--------|-----|-----------|-----|
| DAY   | MAX   | MIN | MAX | MIN | MAX  | MIN | MAX  | MIN | MAX    | MIN | MAX       | MIN |
| 1     | 10.8  | 7.5 | 7.5 | 5.7 | 6.8  | 6.1 | 8.4  | 5.3 | 6.7    | 4.3 | 4.6       | 3.6 |
| 2     | 10.4  | 8.1 | 7.4 | 5.6 | 6.7  | 6.1 | 8.1  | 4.4 | 6.0    | 3.8 | 5.2       | 4.3 |
| 3     | 10.5  | 7.3 | 8.5 | 5.9 | 6.4  | 5.0 | 7.3  | 4.0 | 6.5    | 3.9 | 7.2       | 5.3 |
| 4     | 10.5  | 7.4 | 8.6 | 5.9 | 6.4  | 4.8 | 6.7  | 3.8 | 7.4    | 4.4 | 6.8       | 5.8 |
| 5     | 11.5  | 8.4 | 8.7 | 5.8 | 6.5  | 4.6 | 7.8  | 4.1 | 7.5    | 4.4 | 7.0       | 5.3 |
| 6     | 11.2  | 8.3 | 9.4 | 6.0 | 6.2  | 5.4 | 7.2  | 4.5 | 6.7    | 4.3 | 6.8       | 5.0 |
| 7     | 9.6   | 7.4 | 7.7 | 5.6 | 6.5  | 4.8 | 7.3  | 4.4 | 6.0    | 4.0 | 6.2       | 4.3 |
| 8     | 10.0  | 7.2 | 8.1 | 5.5 | 6.1  | 4.5 | 6.9  | 4.3 | 6.0    | 3.8 | 5.4       | 4.1 |
| 9     | 9.5   | 7.2 | 7.2 | 5.1 | 6.2  | 4.6 | 7.2  | 4.5 | 4.3    | 3.6 | 5.9       | 4.1 |
| 10    | 9.6   | 7.3 | 7.2 | 4.7 | 6.8  | 4.7 | 8.2  | 4.6 | 5.4    | 3.4 | 5.5       | 3.8 |
| 11    | 9.7   | 7.9 | 6.2 | 4.2 | 6.3  | 5.8 | 7.5  | 4.1 | 4.8    | 3.2 | 5.0       | 3.3 |
| 12    | 10.7  | 7.5 | 6.9 | 4.4 | 6.3  | 6.0 | 7.9  | 4.4 | 4.1    | 2.8 | 4.6       | 3.3 |
| 13    | 10.1  | 7.3 | 6.9 | 4.1 | 6.1  | 5.7 | ---  | --- | 5.6    | 3.2 | 6.1       | 3.5 |
| 14    | 10.3  | 7.3 | 7.6 | 3.9 | 6.4  | 5.7 | ---  | --- | 5.9    | 3.6 | 6.7       | 4.3 |
| 15    | 11.0  | 8.4 | 6.8 | 5.1 | 6.2  | 6.0 | ---  | --- | 5.1    | 3.6 | 7.0       | 4.7 |
| 16    | 10.2  | 7.6 | 6.7 | 4.6 | 6.4  | 6.0 | ---  | --- | 5.4    | 3.4 | 5.6       | 4.2 |
| 17    | 11.0  | 7.9 | 5.2 | 4.1 | 6.6  | 6.0 | ---  | --- | 5.2    | 3.1 | 5.7       | 3.5 |
| 18    | 10.1  | 7.2 | 5.6 | 4.1 | 6.7  | 6.0 | ---  | --- | 5.1    | 3.2 | ---       | --- |
| 19    | 10.0  | 6.7 | 5.7 | 4.0 | 7.4  | 5.9 | ---  | --- | 4.9    | 3.7 | ---       | --- |
| 20    | 9.6   | 6.2 | 5.5 | 3.6 | 7.3  | 5.9 | ---  | --- | 5.6    | 3.8 | ---       | --- |
| 21    | 8.6   | 5.3 | 5.5 | 4.2 | 7.3  | 5.9 | ---  | --- | 7.3    | 3.9 | ---       | --- |
| 22    | 8.6   | 5.1 | 6.3 | 4.6 | 7.0  | 5.5 | ---  | --- | 7.9    | 4.0 | ---       | --- |
| 23    | 8.2   | 5.0 | 6.0 | 4.8 | 7.4  | 5.6 | 6.1  | 3.9 | 5.4    | 4.0 | ---       | --- |
| 24    | 8.7   | 5.2 | 6.6 | 5.7 | 7.6  | 6.2 | 6.2  | 3.7 | 5.8    | 3.9 | ---       | --- |
| 25    | 9.1   | 5.0 | 8.2 | 6.0 | 7.4  | 6.2 | 5.3  | 3.5 | 5.5    | 3.6 | ---       | --- |
| 26    | 8.4   | 5.1 | 8.3 | 7.7 | 8.5  | 6.7 | 5.9  | 3.3 | 5.3    | 3.3 | ---       | --- |
| 27    | 8.2   | 5.0 | 8.2 | 7.6 | 8.7  | 6.5 | 6.2  | 3.8 | 4.8    | 3.2 | ---       | --- |
| 28    | 6.9   | 4.6 | 7.5 | 7.0 | 8.6  | 6.0 | 6.1  | 3.8 | 4.7    | 3.6 | ---       | --- |
| 29    | 6.8   | 4.4 | 7.2 | 6.8 | 8.4  | 5.1 | 6.3  | 3.7 | 4.7    | 4.0 | ---       | --- |
| 30    | 6.9   | 5.3 | 7.0 | 6.4 | 8.6  | 5.4 | 6.8  | 4.1 | 5.3    | 4.2 | ---       | --- |
| 31    | ---   | --- | 6.4 | 5.4 | ---  | --- | 6.8  | 4.2 | 5.3    | 3.6 | ---       | --- |
| MONTH | 11.5  | 4.4 | 9.4 | 3.6 | 8.7  | 4.5 | ---  | --- | 7.9    | 2.8 | ---       | --- |

07186400 CENTER CREEK NEAR CARTERVILLE, MO.--Continued

TEMPERATURE (DEG. C) OF WATER , WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY   | OCTOBER |      | NOVEMBER |      | DECEMBER |      | JANUARY |      | FEBRUARY |      | MARCH |      |
|-------|---------|------|----------|------|----------|------|---------|------|----------|------|-------|------|
|       | MAX     | MIN  | MAX      | MIN  | MAX      | MIN  | MAX     | MIN  | MAX      | MIN  | MAX   | MIN  |
| 1     | 17.5    | 16.5 | 14.0     | 12.5 | 13.0     | 11.5 | 3.5     | 2.5  | ---      | ---  | 14.0  | 12.0 |
| 2     | 19.0    | 17.0 | 13.5     | 12.5 | 14.0     | 12.5 | 4.0     | 3.0  | ---      | ---  | ---   | ---  |
| 3     | ---     | ---  | 14.0     | 12.5 | 14.5     | 13.0 | 4.5     | 3.5  | ---      | ---  | ---   | ---  |
| 4     | ---     | ---  | 14.0     | 13.5 | 14.5     | 9.5  | 5.0     | 3.5  | ---      | ---  | ---   | ---  |
| 5     | ---     | ---  | 14.0     | 12.0 | 10.5     | 9.0  | 5.5     | 4.0  | ---      | ---  | 15.0  | 14.0 |
| 6     | ---     | ---  | 12.0     | 10.0 | 10.0     | 9.5  | 6.5     | 5.5  | ---      | ---  | 16.0  | 13.0 |
| 7     | ---     | ---  | 11.0     | 10.5 | 9.5      | 8.5  | 5.5     | 4.5  | ---      | ---  | 17.5  | 15.0 |
| 8     | ---     | ---  | 11.5     | 10.5 | 10.5     | 8.5  | 7.0     | 5.5  | ---      | ---  | 17.0  | 16.0 |
| 9     | ---     | ---  | 11.0     | 9.5  | 10.5     | 9.5  | 6.0     | 4.5  | ---      | ---  | 17.5  | 16.0 |
| 10    | ---     | ---  | 10.0     | 8.5  | 9.5      | 8.5  | 4.5     | 4.0  | ---      | ---  | 15.5  | 12.0 |
| 11    | ---     | ---  | 10.0     | 9.5  | 10.0     | 8.5  | 4.5     | 3.0  | 8.5      | 7.5  | 15.0  | 12.0 |
| 12    | ---     | ---  | 12.0     | 9.5  | 11.5     | 9.5  | 3.5     | 2.0  | 10.0     | 7.5  | 13.5  | 11.0 |
| 13    | ---     | ---  | 13.5     | 11.5 | 11.0     | 9.5  | 6.0     | 3.5  | 10.5     | 8.5  | 11.0  | 10.5 |
| 14    | ---     | ---  | 16.0     | 13.5 | 9.5      | 9.0  | 7.0     | 5.5  | 10.0     | 9.5  | 11.0  | 9.5  |
| 15    | ---     | ---  | 15.5     | 13.5 | 9.5      | 8.5  | 9.0     | 7.0  | 9.0      | 8.5  | 11.5  | 11.0 |
| 16    | ---     | ---  | 14.5     | 12.5 | 8.0      | 6.5  | 10.0    | 8.0  | 10.0     | 8.0  | 11.0  | 9.5  |
| 17    | ---     | ---  | 12.5     | 11.5 | 7.0      | 6.0  | 11.0    | 9.0  | 10.5     | 8.0  | 12.0  | 10.0 |
| 18    | ---     | ---  | 14.0     | 12.0 | 8.5      | 7.0  | 12.5    | 11.0 | 11.0     | 10.0 | 14.0  | 11.5 |
| 19    | ---     | ---  | 14.5     | 12.5 | 8.5      | 4.0  | 11.5    | 10.5 | 10.0     | 8.0  | 14.0  | 11.5 |
| 20    | ---     | ---  | 14.5     | 13.5 | 4.5      | 3.5  | 10.5    | 9.5  | 10.5     | 8.5  | 11.0  | 8.5  |
| 21    | ---     | ---  | 13.5     | 11.0 | 6.5      | 4.0  | 10.5    | 9.0  | 11.0     | 10.0 | ---   | ---  |
| 22    | ---     | ---  | 13.0     | 11.0 | 8.0      | 6.0  | 10.5    | 9.5  | 10.0     | 8.0  | ---   | ---  |
| 23    | ---     | ---  | 14.5     | 12.5 | 10.0     | 8.0  | 9.5     | 8.5  | 10.0     | 8.0  | ---   | ---  |
| 24    | ---     | ---  | 14.5     | 12.0 | 9.5      | 8.5  | 9.0     | 7.5  | 9.0      | 6.5  | ---   | ---  |
| 25    | 17.5    | 15.5 | 12.0     | 11.0 | 9.5      | 8.0  | 9.0     | 7.0  | 7.5      | 5.5  | ---   | ---  |
| 26    | 17.0    | 15.0 | 13.5     | 12.0 | 9.0      | 8.0  | 10.0    | 8.5  | 9.5      | 6.5  | 13.0  | 10.0 |
| 27    | 16.0    | 14.5 | 13.0     | 12.0 | 9.0      | 8.5  | 9.5     | 8.5  | 11.0     | 8.5  | 15.5  | 12.0 |
| 28    | 14.5    | 13.0 | 11.5     | 10.5 | 9.5      | 8.5  | 9.0     | 8.5  | 13.5     | 11.0 | 16.0  | 14.5 |
| 29    | 13.0    | 12.0 | 11.5     | 10.0 | 9.5      | 8.5  | ---     | ---  | ---      | ---  | 17.0  | 14.5 |
| 30    | 13.0    | 11.5 | 13.0     | 11.5 | 8.5      | 7.0  | ---     | ---  | ---      | ---  | 16.5  | 14.0 |
| 31    | 14.0    | 13.0 | ---      | ---  | 6.5      | 4.0  | ---     | ---  | ---      | ---  | 17.5  | 14.5 |
| MONTH | ---     | ---  | 16.0     | 8.5  | 14.5     | 3.5  | 12.5    | 2.0  | ---      | ---  | ---   | ---  |

| DAY   | APRIL |      | MAY  |      | JUNE |      | JULY |      | AUGUST |      | SEPTEMBER |      |
|-------|-------|------|------|------|------|------|------|------|--------|------|-----------|------|
|       | MAX   | MIN  | MAX  | MIN  | MAX  | MIN  | MAX  | MIN  | MAX    | MIN  | MAX       | MIN  |
| 1     | 17.5  | 16.0 | 17.0 | 16.0 | 18.0 | 16.5 | 23.5 | 20.5 | 26.5   | 23.0 | 22.5      | 20.5 |
| 2     | 16.5  | 14.5 | 17.5 | 15.0 | 19.5 | 16.5 | 25.0 | 22.0 | 26.5   | 23.0 | 20.5      | 17.5 |
| 3     | 17.0  | 14.5 | 18.0 | 16.5 | 19.5 | 17.5 | 25.5 | 23.5 | 26.0   | 23.5 | 18.5      | 17.0 |
| 4     | 14.5  | 10.5 | 18.0 | 16.0 | 18.5 | 18.0 | 25.0 | 21.5 | 25.0   | 26.5 | 18.0      | 15.5 |
| 5     | 12.5  | 9.5  | 19.0 | 16.0 | 18.0 | 17.0 | 25.0 | 20.5 | 24.5   | 20.5 | 18.5      | 15.5 |
| 6     | 13.5  | 10.0 | 19.5 | 16.5 | 17.5 | 17.0 | 25.0 | 22.0 | 23.0   | 21.0 | 18.5      | 16.0 |
| 7     | 14.5  | 13.0 | 19.5 | 16.5 | 18.5 | 17.0 | 26.0 | 23.0 | 23.5   | 20.5 | 20.5      | 17.0 |
| 8     | 14.0  | 12.5 | 20.5 | 17.5 | 18.0 | 16.5 | 26.0 | 24.0 | 24.5   | 21.5 | 21.0      | 18.0 |
| 9     | 14.0  | 11.0 | 20.0 | 18.0 | 18.0 | 17.5 | 26.0 | 23.5 | 23.5   | 22.5 | 21.5      | 19.5 |
| 10    | 13.0  | 12.5 | 20.5 | 18.0 | 18.5 | 16.0 | 26.5 | 23.5 | 24.0   | 21.5 | 22.5      | 20.5 |
| 11    | 14.5  | 12.5 | 20.5 | 19.0 | 17.5 | 16.5 | 26.0 | 23.5 | 25.5   | 22.5 | 24.0      | 21.5 |
| 12    | 16.5  | 13.0 | 20.0 | 17.5 | 18.5 | 16.0 | 25.5 | 22.5 | 25.0   | 23.5 | 23.5      | 21.0 |
| 13    | 19.0  | 14.5 | 21.0 | 17.5 | 19.0 | 16.5 | 26.0 | 22.5 | 26.0   | 23.0 | 21.0      | 18.5 |
| 14    | 14.0  | 14.5 | 20.0 | 18.0 | 20.0 | 17.5 | ---  | ---  | 26.5   | 23.5 | 19.5      | 16.5 |
| 15    | 15.0  | 12.5 | 19.0 | 16.5 | 20.5 | 18.5 | ---  | ---  | 25.5   | 24.5 | 18.0      | 16.0 |
| 16    | 14.0  | 12.5 | 22.5 | 18.5 | 19.5 | 17.5 | ---  | ---  | 25.5   | 23.5 | ---       | ---  |
| 17    | 15.5  | 11.0 | 23.0 | 21.0 | 18.5 | 17.0 | ---  | ---  | 28.0   | 24.0 | ---       | ---  |
| 18    | 16.5  | 13.5 | 24.0 | 21.5 | 20.5 | 17.5 | ---  | ---  | 27.0   | 24.0 | ---       | ---  |
| 19    | 18.0  | 15.0 | 25.0 | 22.0 | 22.5 | 19.5 | ---  | ---  | 25.5   | 22.5 | ---       | ---  |
| 20    | 18.5  | 16.5 | 25.5 | 22.5 | 23.5 | 21.0 | ---  | ---  | 25.5   | 22.0 | ---       | ---  |
| 21    | 20.0  | 17.0 | 24.0 | 22.5 | 24.5 | 21.5 | ---  | ---  | 27.0   | 23.5 | ---       | ---  |
| 22    | 19.0  | 17.5 | 24.5 | 21.0 | 23.5 | 22.5 | ---  | ---  | 26.5   | 24.5 | ---       | ---  |
| 23    | 19.0  | 15.5 | 22.5 | 20.0 | 22.0 | 20.5 | 27.0 | 25.5 | 25.0   | 23.5 | ---       | ---  |
| 24    | 18.0  | 15.5 | 20.0 | 19.0 | 20.5 | 18.5 | 26.5 | 23.5 | 25.5   | 23.0 | ---       | ---  |
| 25    | 19.0  | 15.5 | 19.0 | 16.5 | 19.0 | 17.0 | 24.5 | 23.5 | 26.0   | 23.5 | ---       | ---  |
| 26    | 19.0  | 16.5 | 16.5 | 15.5 | 19.0 | 16.5 | 25.5 | 22.5 | 26.0   | 23.5 | ---       | ---  |
| 27    | 19.5  | 17.0 | 18.0 | 15.5 | 20.0 | 17.0 | 26.0 | 22.5 | 25.5   | 24.0 | ---       | ---  |
| 28    | 19.5  | 18.0 | 19.5 | 17.0 | 20.5 | 17.5 | 27.0 | 23.5 | 24.5   | 23.5 | ---       | ---  |
| 29    | 19.0  | 18.0 | 19.5 | 18.5 | 21.5 | 19.0 | 26.5 | 24.0 | 23.5   | 21.5 | ---       | ---  |
| 30    | 18.5  | 17.0 | 21.5 | 18.5 | 22.0 | 20.0 | 26.0 | 22.0 | 22.0   | 20.5 | ---       | ---  |
| 31    | ---   | ---  | 20.5 | 17.5 | ---  | ---  | 26.0 | 22.5 | 24.5   | 21.0 | ---       | ---  |
| MONTH | 20.0  | 9.5  | 25.5 | 15.0 | 24.5 | 16.0 | ---  | ---  | 28.0   | 20.5 | ---       | ---  |

07186480 CENTER CREEK NEAR SMITHFIELD, MO.

LOCATION.--Lat 37°09'20", long 94°36'10", Jasper County, at bridge on county road 1 mi (1.6 km) south of Smithfield.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE          | DIS-<br>CHARGE<br>(CFS) | DIS-<br>SOLVED<br>SILICA<br>(SiO <sub>2</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>IRON<br>(FE)<br>(UG/L) | DIS-<br>SOLVED<br>MAN-<br>GANESE<br>(MN)<br>(UG/L) | DIS-<br>SOLVED<br>CHRO-<br>MIUM<br>(CR)<br>(UG/L) | DIS-<br>SOLVED<br>COPPER<br>(CU)<br>(UG/L) | DIS-<br>SOLVED<br>LEAD<br>(PB)<br>(UG/L) | DIS-<br>SOLVED<br>ZINC<br>(ZN)<br>(UG/L) | DIS-<br>SOLVED<br>CAL-<br>CIUM<br>(CA)<br>(MG/L) | DIS-<br>SOLVED<br>MAG-<br>NE-<br>SIUM<br>(MG)<br>(MG/L) |
|---------------|-------------------------|-----------------------------------------------------------|------------------------------------------|----------------------------------------------------|---------------------------------------------------|--------------------------------------------|------------------------------------------|------------------------------------------|--------------------------------------------------|---------------------------------------------------------|
| OCT.<br>04... | 560                     | 11                                                        | 80                                       | 130                                                | 0                                                 | 7                                          | 4                                        | 630                                      | 59                                               | 3.0                                                     |
| DEC.<br>03... | 662                     | 12                                                        | 70                                       | 50                                                 | 0                                                 | 11                                         | 5                                        | 460                                      | 63                                               | 2.8                                                     |
| FEB.<br>04... | 350                     | 7.6                                                       | 70                                       | 30                                                 | 0                                                 | 12                                         | 7                                        | 480                                      | 67                                               | 2.7                                                     |
| APR.<br>17... | 252                     | 7.1                                                       | 50                                       | 20                                                 | 0                                                 | 7                                          | 6                                        | 360                                      | 65                                               | 2.8                                                     |
| JUNE<br>10... | 1240                    | 12                                                        | 50                                       | 30                                                 | 0                                                 | 1                                          | 16                                       | 350                                      | 46                                               | 2.1                                                     |
| AUG.<br>05... | 92                      | 9.1                                                       | 10                                       | 20                                                 | 0                                                 | 3                                          | 4                                        | 170                                      | 66                                               | 3.2                                                     |

| DATE          | DIS-<br>SOL-<br>VED-<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | TOTAL<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(RESI-<br>DUE AT<br>180 C)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(TONS<br>PER<br>AC-FT) | DIS-<br>SOLVED<br>SOLIDS<br>(TONS<br>PER<br>DAY) | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | PERCENT<br>SODIUM | HARD-<br>NESS<br>(CA,MG)<br>(MG/L) | NON-<br>CAR-<br>BONATE<br>HARD-<br>NESS<br>(MG/L) | ALKA-<br>LITY<br>AS<br>CaCO <sub>3</sub><br>(MG/L) |
|---------------|----------------------------------------------------------|-------------------------------------------|------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------|-----------------------------------------|-------------------|------------------------------------|---------------------------------------------------|----------------------------------------------------|
| OCT.<br>04... | .19                                                      | .30                                       | 228                                                              | .31                                                | 345                                              | .2                                      | 7                 | 160                                | 65                                                | 95                                                 |
| DEC.<br>03... | .10                                                      | .15                                       | 216                                                              | .29                                                | 386                                              | .2                                      | 6                 | 170                                | 54                                                | 115                                                |
| FEB.<br>04... | .09                                                      | .11                                       | 221                                                              | .30                                                | 209                                              | .2                                      | 6                 | 180                                | 64                                                | 115                                                |
| APR.<br>17... | .11                                                      | .14                                       | 233                                                              | .32                                                | 159                                              | .2                                      | 7                 | 170                                | 64                                                | 110                                                |
| JUNE<br>10... | --                                                       | .16                                       | 179                                                              | .24                                                | 599                                              | .1                                      | 6                 | 120                                | 32                                                | 92                                                 |
| AUG.<br>05... | .13                                                      | .14                                       | 245                                                              | .33                                                | 60.9                                             | .3                                      | 10                | 180                                | 62                                                | 116                                                |

07186480 CENTER CREEK NEAR SMITHFIELD, MO.--Continued

PERIOD OF RECORD.--Chemical analyses: October 1968 to September 1974.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE  | DIS-<br>SOLVED<br>SODIUM<br>(NA)<br>(MG/L) | DIS-<br>SOLVED<br>PO-<br>TAS-<br>SIUM<br>(K)<br>(MG/L) | BICAR-<br>BONATE<br>(HCO3)<br>(MG/L) | CAR-<br>BONATE<br>(CO3)<br>(MG/L) | DIS-<br>SOLVED<br>SULFATE<br>(SO4)<br>(MG/L) | DIS-<br>SOLVED<br>CHLO-<br>RIDE<br>(CL)<br>(MG/L) | DIS-<br>SOLVED<br>FLUO-<br>RIDE<br>(F)<br>(MG/L) | TOTAL<br>NITRATE<br>(N)<br>(MG/L) | AMMONIA<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | ORGANIC<br>NITRO-<br>GEN<br>(N)<br>(MG/L) |
|-------|--------------------------------------------|--------------------------------------------------------|--------------------------------------|-----------------------------------|----------------------------------------------|---------------------------------------------------|--------------------------------------------------|-----------------------------------|-------------------------------------------|-------------------------------------------|
| OCT.  |                                            |                                                        |                                      |                                   |                                              |                                                   |                                                  |                                   |                                           |                                           |
| 04... | 6.0                                        | 2.3                                                    | 116                                  | 0                                 | 54                                           | 5.2                                               | .5                                               | 3.2                               | .06                                       | .75                                       |
| DEC.  |                                            |                                                        |                                      |                                   |                                              |                                                   |                                                  |                                   |                                           |                                           |
| 03... | 4.7                                        | 1.9                                                    | 140                                  | 0                                 | 42                                           | 5.4                                               | .2                                               | 3.1                               | .10                                       | .20                                       |
| FEB.  |                                            |                                                        |                                      |                                   |                                              |                                                   |                                                  |                                   |                                           |                                           |
| 04... | 5.4                                        | 1.4                                                    | 140                                  | 0                                 | 43                                           | 7.8                                               | .3                                               | 3.7                               | .15                                       | .24                                       |
| APR.  |                                            |                                                        |                                      |                                   |                                              |                                                   |                                                  |                                   |                                           |                                           |
| 17... | 5.8                                        | 1.2                                                    | 134                                  | 0                                 | 49                                           | 6.6                                               | .5                                               | 4.2                               | .20                                       | .41                                       |
| JUNE  |                                            |                                                        |                                      |                                   |                                              |                                                   |                                                  |                                   |                                           |                                           |
| 10... | 3.7                                        | 1.7                                                    | 112                                  | 0                                 | 30                                           | 4.1                                               | .3                                               | 1.8                               | .24                                       | .63                                       |
| AUG.  |                                            |                                                        |                                      |                                   |                                              |                                                   |                                                  |                                   |                                           |                                           |
| 05... | 8.9                                        | 1.5                                                    | 142                                  | 0                                 | 49                                           | 8.9                                               | .5                                               | 6.0                               | .04                                       | .39                                       |

| DATE  | SPE-<br>CIFIC<br>CON-<br>DUCT-<br>ANCE<br>(MICRO-<br>MHOS) | PH<br>(UNITS) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | CHEM-<br>ICAL<br>OXYGEN<br>DEMAND<br>(LOW<br>LEVEL)<br>(MG/L) | DIS-<br>SOLVED<br>OXYGEN<br>(MG/L) | PER-<br>CENT<br>SATUR-<br>ATION | FECAL<br>COLI-<br>FORM<br>(COL.<br>PER<br>100 ML) | STREP-<br>TOCOCCI<br>(COL-<br>ONIES<br>PER<br>100 ML) |
|-------|------------------------------------------------------------|---------------|----------------------------------------------|-----------------------------|---------------------------------------------------------------|------------------------------------|---------------------------------|---------------------------------------------------|-------------------------------------------------------|
| OCT.  |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 04... | 340                                                        | 7.6           | 20                                           | 20.0                        | 15                                                            | 6.7                                | 73                              | 11000                                             | 60000                                                 |
| DEC.  |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 03... | 340                                                        | 7.7           | 5                                            | 14.0                        | 7                                                             | 5.8                                | 56                              | 70                                                | 270                                                   |
| FEB.  |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 04... | 370                                                        | 7.9           | 8                                            | 9.0                         | 1                                                             | 11.0                               | 95                              | 3                                                 | 8                                                     |
| APR.  |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 17... | 378                                                        | 8.0           | 3                                            | 15.0                        | 15                                                            | 10.5                               | 104                             | 6                                                 | 1                                                     |
| JUNE  |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 10... | 284                                                        | 7.6           | 20                                           | 18.0                        | 14                                                            | 7.5                                | 78                              | 1900                                              | 2700                                                  |
| AUG.  |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 05... | 405                                                        | 8.1           | 3                                            | 25.0                        | 10                                                            | 7.6                                | 92                              | 12                                                | 76                                                    |



LOCATION.--Lat 37°07'15", long 94°34'55", NE¼SE¼ sec.25, T.28 N., R.34 W., Jasper County, at bridge on Jasper County Highway P, 2.5 mi (4.0 km) upstream from mouth, and 3 mi (4.8 km) northwest of Joplin.

[illegible]

07186600 TURKEY CREEK NEAR JOPLIN, MO.--Continued

DRAINAGE AREA.--41.8 mi<sup>2</sup> (108 km<sup>2</sup>).

PERIOD OF RECORD.--Chemical analyses: August 1963 to September 1974.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE  | DIS-<br>SOLVED<br>SODIUM<br>(NA)<br>(MG/L) | DIS-<br>SOLVED<br>PO-<br>TAS-<br>SIUM<br>(K)<br>(MG/L) | BICAR-<br>BONATE<br>(HCO <sub>3</sub> )<br>(MG/L) | CAR-<br>BONATE<br>(CO <sub>3</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>SULFATE<br>(SO <sub>4</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>CHLO-<br>RIDE<br>(CL)<br>(MG/L) | DIS-<br>SOLVED<br>FLUO-<br>RIDE<br>(F)<br>(MG/L) | TOTAL<br>NITRATE<br>(N)<br>(MG/L) | AMMONIA<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | ORGANIC<br>NITRO-<br>GEN<br>(N)<br>(MG/L) |
|-------|--------------------------------------------|--------------------------------------------------------|---------------------------------------------------|------------------------------------------------|-----------------------------------------------------------|---------------------------------------------------|--------------------------------------------------|-----------------------------------|-------------------------------------------|-------------------------------------------|
| OCT.  |                                            |                                                        |                                                   |                                                |                                                           |                                                   |                                                  |                                   |                                           |                                           |
| 02... | 17                                         | 3.7                                                    | 190                                               | 0                                              | 110                                                       | 14                                                | .2                                               | .65                               | .54                                       | .56                                       |
| NOV.  |                                            |                                                        |                                                   |                                                |                                                           |                                                   |                                                  |                                   |                                           |                                           |
| 07... | --                                         | --                                                     | 204                                               | 0                                              | 140                                                       | 19                                                | .8                                               | 1.3                               | .14                                       | 2.3                                       |
| DEC.  |                                            |                                                        |                                                   |                                                |                                                           |                                                   |                                                  |                                   |                                           |                                           |
| 06... | 9.0                                        | 3.1                                                    | 144                                               | 0                                              | 88                                                        | 8.6                                               | .1                                               | 1.3                               | .17                                       | .35                                       |
| 18... | --                                         | --                                                     | 180                                               | 0                                              | --                                                        | --                                                | --                                               | --                                | --                                        | --                                        |
| JAN.  |                                            |                                                        |                                                   |                                                |                                                           |                                                   |                                                  |                                   |                                           |                                           |
| 08... | 15                                         | 3.7                                                    | 186                                               | 0                                              | 110                                                       | 15                                                | .2                                               | 1.2                               | 1.1                                       | 1.1                                       |
| 25... | --                                         | --                                                     | 192                                               | 0                                              | --                                                        | --                                                | --                                               | --                                | --                                        | --                                        |
| FEB.  |                                            |                                                        |                                                   |                                                |                                                           |                                                   |                                                  |                                   |                                           |                                           |
| 04... | 16                                         | 4.3                                                    | 184                                               | 0                                              | 110                                                       | 18                                                | .3                                               | 1.3                               | .77                                       | .73                                       |
| 19... | --                                         | --                                                     | --                                                | --                                             | --                                                        | --                                                | --                                               | --                                | --                                        | --                                        |
| MAR.  |                                            |                                                        |                                                   |                                                |                                                           |                                                   |                                                  |                                   |                                           |                                           |
| 05... | --                                         | --                                                     | --                                                | --                                             | --                                                        | --                                                | --                                               | --                                | --                                        | --                                        |
| 18... | 10                                         | 2.6                                                    | 154                                               | 0                                              | 89                                                        | 12                                                | .4                                               | 1.4                               | .49                                       | .81                                       |
| APR.  |                                            |                                                        |                                                   |                                                |                                                           |                                                   |                                                  |                                   |                                           |                                           |
| 03... | --                                         | --                                                     | --                                                | --                                             | --                                                        | --                                                | --                                               | --                                | --                                        | --                                        |
| 15... | 18                                         | 4.1                                                    | 176                                               | 0                                              | 120                                                       | 20                                                | .3                                               | 1.1                               | 2.9                                       | 1.2                                       |
| 30... | --                                         | --                                                     | --                                                | --                                             | --                                                        | --                                                | --                                               | --                                | --                                        | --                                        |
| MAY   |                                            |                                                        |                                                   |                                                |                                                           |                                                   |                                                  |                                   |                                           |                                           |
| 14... | 12                                         | 3.3                                                    | 126                                               | 0                                              | 58                                                        | 12                                                | .5                                               | 1.8                               | .14                                       | .61                                       |
| 29... | --                                         | --                                                     | --                                                | --                                             | --                                                        | --                                                | --                                               | --                                | --                                        | --                                        |
| JUNE  |                                            |                                                        |                                                   |                                                |                                                           |                                                   |                                                  |                                   |                                           |                                           |
| 10... | 9.6                                        | 2.2                                                    | 160                                               | 0                                              | 84                                                        | 9.1                                               | .3                                               | .00                               | .33                                       | .87                                       |
| 26... | --                                         | --                                                     | --                                                | --                                             | --                                                        | --                                                | --                                               | --                                | --                                        | --                                        |
| JULY  |                                            |                                                        |                                                   |                                                |                                                           |                                                   |                                                  |                                   |                                           |                                           |
| 08... | 18                                         | 4.5                                                    | 186                                               | 0                                              | 100                                                       | 20                                                | .2                                               | 1.5                               | 1.0                                       | 1.6                                       |
| 23... | --                                         | --                                                     | 220                                               | 0                                              | --                                                        | --                                                | --                                               | --                                | --                                        | --                                        |
| AUG.  |                                            |                                                        |                                                   |                                                |                                                           |                                                   |                                                  |                                   |                                           |                                           |
| 05... | 26                                         | 5.6                                                    | 182                                               | 0                                              | 100                                                       | 32                                                | .3                                               | 1.7                               | 1.6                                       | 1.1                                       |
| 20... | --                                         | --                                                     | 166                                               | 0                                              | --                                                        | --                                                | --                                               | --                                | --                                        | --                                        |
| SEP.  |                                            |                                                        |                                                   |                                                |                                                           |                                                   |                                                  |                                   |                                           |                                           |
| 05... | 32                                         | 5.0                                                    | 202                                               | 0                                              | 95                                                        | 35                                                | .3                                               | 1.5                               | 1.4                                       | .50                                       |
| 18... | --                                         | --                                                     | 212                                               | 0                                              | --                                                        | --                                                | --                                               | --                                | --                                        | --                                        |

07186600 TURKEY CREEK NEAR JOPLIN, MO.--Continued

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

[illegible]

07186600 TURKEY CREEK NEAR JOPLIN, MO.--Continued

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE  | SPE-<br>CIFIC<br>CON-<br>DUCT-<br>ANCE<br>(MICRO-<br>MHOS) | PH<br>(UNITS) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | CHEM-<br>ICAL<br>OXYGEN<br>DEMAND<br>(LOW<br>LEVEL)<br>(MG/L) | DIS-<br>SOLVED<br>OXYGEN<br>(MG/L) | PER-<br>CENT<br>SATUR-<br>ATION | FECAL<br>COLI-<br>FORM<br>(COL.<br>PER<br>100 ML) | STREP-<br>TOCOCCI<br>(COL-<br>ONIES<br>PER<br>100 ML) |
|-------|------------------------------------------------------------|---------------|----------------------------------------------|-----------------------------|---------------------------------------------------------------|------------------------------------|---------------------------------|---------------------------------------------------|-------------------------------------------------------|
| OCT.  |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 02... | 555                                                        | 7.4           | 5                                            | 21.5                        | 17                                                            | 4.1                                | 46                              | 1600                                              | 850                                                   |
| NOV.  |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 07... | 595                                                        | 7.4           | --                                           | 13.0                        | --                                                            | 5.3                                | 50                              | 25                                                | 50                                                    |
| DEC.  |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 06... | 445                                                        | 7.3           | 6                                            | 9.0                         | 12                                                            | 7.8                                | 67                              | 8900                                              | 3400                                                  |
| 18... | 580                                                        | 7.5           | --                                           | 8.0                         | --                                                            | 7.4                                | 62                              | <10                                               | --                                                    |
| JAN.  |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 08... | 550                                                        | 7.5           | 5                                            | 5.5                         | 19                                                            | 7.5                                | 59                              | <25                                               | 25                                                    |
| 25... | 570                                                        | 7.4           | --                                           | 6.5                         | --                                                            | 8.1                                | 66                              | 55                                                | --                                                    |
| FEB.  |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 04... | 570                                                        | 7.4           | 20                                           | 9.5                         | 27                                                            | 8.9                                | 77                              | 16                                                | 4                                                     |
| 19... | 330                                                        | 7.6           | --                                           | 9.0                         | --                                                            | 8.2                                | 71                              | 12000                                             | --                                                    |
| MAR.  |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 05... | 580                                                        | 7.7           | --                                           | 14.5                        | --                                                            | 7.4                                | 72                              | <20                                               | --                                                    |
| 18... | 490                                                        | 7.4           | 7                                            | 14.5                        | 13                                                            | 7.0                                | 68                              | 950                                               | 1800                                                  |
| APR.  |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 03... | 550                                                        | 7.8           | --                                           | 16.0                        | --                                                            | 9.4                                | 95                              | 10                                                | --                                                    |
| 15... | 580                                                        | 7.7           | 6                                            | 16.5                        | 35                                                            | 8.8                                | 90                              | 10                                                | 18                                                    |
| 30... | 450                                                        | 7.5           | --                                           | 18.5                        | --                                                            | 5.2                                | 55                              | 7400                                              | --                                                    |
| MAY   |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 14... | 362                                                        | 7.5           | 5                                            | 19.0                        | 27                                                            | 4.0                                | 43                              | 48000                                             | 48000                                                 |
| 29... | 510                                                        | 7.6           | --                                           | 19.0                        | --                                                            | 5.4                                | 58                              | 300                                               | --                                                    |
| JUNE  |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 10... | 485                                                        | 7.6           | 5                                            | 19.5                        | 10                                                            | 6.0                                | 65                              | 25                                                | 900                                                   |
| 26... | 590                                                        | 7.6           | --                                           | 20.0                        | --                                                            | 6.0                                | 65                              | 260                                               | --                                                    |
| JULY  |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 08... | 590                                                        | 7.6           | 3                                            | 27.0                        | 32                                                            | 5.4                                | 68                              | 100                                               | 80                                                    |
| 23... | 650                                                        | 7.6           | --                                           | 27.0                        | --                                                            | 5.9                                | 74                              | 270                                               | --                                                    |
| AUG.  |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 05... | 625                                                        | 7.6           | 5                                            | 24.0                        | 19                                                            | 4.8                                | 56                              | 210                                               | 150                                                   |
| 20... | 530                                                        | 7.5           | --                                           | 24.5                        | --                                                            | 3.6                                | 43                              | 4400                                              | --                                                    |
| SEP.  |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 05... | 645                                                        | 7.4           | 7                                            | 17.0                        | 13                                                            | 2.8                                | 29                              | 460                                               | 220                                                   |
| 18... | 670                                                        | 7.5           | --                                           | 20.5                        | --                                                            | 4.6                                | 51                              | 200                                               | --                                                    |

07187560 SHOAL CREEK NEAR GALENA, KANS.

LOCATION.--Lat 37°02'31", long 94°38'34", Cherokee County, at bridge on State Highway 26, 2.5 mi (4.0 km) south of Galena.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE          | DIS-<br>CHARGE<br>(CFS) | DIS-<br>SOLVED<br>SILICA<br>(SI02)<br>(MG/L) | DIS-<br>SOLVED<br>IRON<br>(FE)<br>(UG/L) | DIS-<br>SOLVED<br>MAN-<br>GANESE<br>(MN)<br>(UG/L) | DIS-<br>SOLVED<br>CAL-<br>CIUM<br>(CA)<br>(MG/L) | DIS-<br>SOLVED<br>MAG-<br>NE-<br>SIUM<br>(MG)<br>(MG/L) | DIS-<br>SOLVED<br>SODIUM<br>(NA)<br>(MG/L) | DIS-<br>SOLVED<br>PO-<br>TAS-<br>SIUM<br>(K)<br>(MG/L) | BICAR-<br>BONATE<br>(HCO3)<br>(MG/L) | CAR-<br>BONATE<br>(CO3)<br>(MG/L) | DIS-<br>SOLVED<br>SULFATE<br>(SO4)<br>(MG/L) | DIS-<br>SOLVED<br>CHLO-<br>RIDE<br>(CL)<br>(MG/L) |
|---------------|-------------------------|----------------------------------------------|------------------------------------------|----------------------------------------------------|--------------------------------------------------|---------------------------------------------------------|--------------------------------------------|--------------------------------------------------------|--------------------------------------|-----------------------------------|----------------------------------------------|---------------------------------------------------|
| OCT.<br>04... | 260                     | 11                                           | 30                                       | 80                                                 | 48                                               | 2.6                                                     | 5.0                                        | 1.8                                                    | 144                                  | 0                                 | 11                                           | 5.7                                               |
| DEC.<br>03... | 1000                    | 12                                           | 60                                       | 30                                                 | 44                                               | 2.5                                                     | 3.9                                        | 1.9                                                    | 122                                  | 0                                 | 9.4                                          | 6.0                                               |
| FEB.<br>06... | 320                     | 6.7                                          | 30                                       | 10                                                 | 46                                               | 2.6                                                     | 4.5                                        | 1.3                                                    | 136                                  | 0                                 | 8.5                                          | 6.4                                               |
| APR.<br>17... | 420                     | 7.2                                          | 50                                       | 0                                                  | 46                                               | 2.6                                                     | 4.4                                        | 1.1                                                    | 140                                  | 0                                 | 9.7                                          | 5.2                                               |
| JUNE<br>11... | 1800                    | 12                                           | 30                                       | 0                                                  | 36                                               | 1.8                                                     | 3.1                                        | 1.5                                                    | 108                                  | 0                                 | 9.3                                          | 3.4                                               |
| AUG.<br>06... | 200                     | 10                                           | 10                                       | 30                                                 | 50                                               | 2.9                                                     | 6.2                                        | 1.5                                                    | 144                                  | 0                                 | 8.0                                          | 7.3                                               |

| DATE          | NON-<br>CAR-<br>BONATE<br>HARD-<br>NESS<br>(MG/L) | ALKA-<br>LINITY<br>AS<br>CACO3<br>(MG/L) | SPE-<br>CIFIC<br>CON-<br>DUCT-<br>ANCE<br>(MICRO-<br>MHOS) | PH<br>(UNITS) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | CHEM-<br>ICAL<br>OXYGEN<br>DEMAND<br>(LOW<br>LEVEL)<br>(MG/L) | DIS-<br>SOLVED<br>OXYGEN<br>(MG/L) | PER-<br>CENT<br>SATUR-<br>ATION | FECAL<br>COLI-<br>FORM<br>(COL.<br>PER<br>100 ML) | STREP-<br>TOCOCCI<br>(COL-<br>ONIES<br>PER<br>100 ML) |
|---------------|---------------------------------------------------|------------------------------------------|------------------------------------------------------------|---------------|----------------------------------------------|-----------------------------|---------------------------------------------------------------|------------------------------------|---------------------------------|---------------------------------------------------|-------------------------------------------------------|
| OCT.<br>04... | 12                                                | 118                                      | 270                                                        | 7.7           | 4                                            | 20.5                        | 3                                                             | 6.8                                | 76                              | 220                                               | 730                                                   |
| DEC.<br>03... | 20                                                | 100                                      | 250                                                        | 7.8           | 5                                            | 14.0                        | 2                                                             | 9.3                                | 88                              | 200                                               | 340                                                   |
| FEB.<br>06... | 14                                                | 112                                      | 265                                                        | 8.1           | 8                                            | 9.0                         | 2                                                             | 10.8                               | 93                              | 12                                                | 28                                                    |
| APR.<br>17... | 11                                                | 115                                      | 265                                                        | 8.2           | 3                                            | 13.5                        | 7                                                             | 9.8                                | 93                              | 16                                                | 4                                                     |
| JUNE<br>11... | 9                                                 | 89                                       | 220                                                        | 7.7           | 10                                           | 17.5                        | 4                                                             | 7.6                                | 79                              | 500                                               | 650                                                   |
| AUG.<br>06... | 22                                                | 118                                      | 292                                                        | 8.0           | 4                                            | 22.5                        | 6                                                             | 6.9                                | 61                              | 68                                                | 46                                                    |

07187560 SHOAL CREEK NEAR GALENA, KANS.--Continued

PERIOD OF RECORD.--Chemical analyses: October 1968 to September 1974.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE          | DIS-<br>SOLVED<br>FLUO-<br>RIDE<br>(F)<br>(MG/L) | TOTAL<br>NITRATE<br>(N)<br>(MG/L) | AMMONIA<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | ORGANIC<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | DIS-<br>SOL-<br>VED-<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | TOTAL<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(RESI-<br>DUE AT<br>180 C)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(TONS<br>PER<br>AC-FT) | DIS-<br>SOLVED<br>SOLIDS<br>(TONS<br>PER<br>DAY) | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | PERCENT<br>SODIUM | HARD-<br>NESS<br>(CA,MG)<br>(MG/L) |
|---------------|--------------------------------------------------|-----------------------------------|-------------------------------------------|-------------------------------------------|----------------------------------------------------------|-------------------------------------------|------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------|-----------------------------------------|-------------------|------------------------------------|
| OCT.<br>04... | .0                                               | .00                               | .03                                       | .29                                       | .14                                                      | .20                                       | 178                                                              | .24                                                | 125                                              | .2                                      | 8                 | 130                                |
| DEC.<br>03... | .0                                               | 2.2                               | .01                                       | .22                                       | .06                                                      | .12                                       | 148                                                              | .20                                                | 400                                              | .2                                      | 6                 | 120                                |
| FEB.<br>06... | .0                                               | 2.1                               | .01                                       | .34                                       | .05                                                      | .07                                       | 154                                                              | .21                                                | 133                                              | .2                                      | 7                 | 130                                |
| APR.<br>17... | .3                                               | 1.6                               | .04                                       | .30                                       | .06                                                      | .10                                       | 148                                                              | .20                                                | 168                                              | .2                                      | 7                 | 130                                |
| JUNE<br>11... | .1                                               | 1.5                               | .04                                       | .64                                       | --                                                       | .07                                       | 135                                                              | .18                                                | 656                                              | .1                                      | 6                 | 97                                 |
| AUG.<br>06... | .1                                               | 1.8                               | .04                                       | .31                                       | .13                                                      | .16                                       | 163                                                              | .22                                                | 88.0                                             | .2                                      | 9                 | 140                                |



## ARKANSAS RIVER BASIN

07188500 LOST CREEK AT SENECA, MO.

LOCATION.--Lat 36°50'25", long 94°36'40", Newton County, at bridge on State Highway 43 in Seneca, 0.4 mi (0.6 km) upstream from Little Lost Creek, and 9.5 mi (15.3 km) upstream from mouth.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE          | DIS-<br>CHARGE<br>(CFS) | DIS-<br>SOLVED<br>SILICA<br>(SIO <sub>2</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>IRON<br>(FE)<br>(UG/L) | DIS-<br>SOLVED<br>MAN-<br>GANESE<br>(MN)<br>(UG/L) | DIS-<br>SOLVED<br>CAL-<br>CIUM<br>(CA)<br>(MG/L) | DIS-<br>SOLVED<br>MAG-<br>NE-<br>SIUM<br>(MG)<br>(MG/L) | DIS-<br>SOLVED<br>SODIUM<br>(NA)<br>(MG/L) | DIS-<br>SOLVED<br>PO-<br>TAS-<br>SIUM<br>(K)<br>(MG/L) | BICAR-<br>BONATE<br>(HCO <sub>3</sub> )<br>(MG/L) | CAR-<br>BONATE<br>(CO <sub>3</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>SULFATE<br>(SO <sub>4</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>CHLO-<br>RIDE<br>(CL)<br>(MG/L) |
|---------------|-------------------------|-----------------------------------------------------------|------------------------------------------|----------------------------------------------------|--------------------------------------------------|---------------------------------------------------------|--------------------------------------------|--------------------------------------------------------|---------------------------------------------------|------------------------------------------------|-----------------------------------------------------------|---------------------------------------------------|
| OCT.<br>02... | 11                      | 12                                                        | 30                                       | 150                                                | 44                                               | 1.6                                                     | 3.9                                        | 1.5                                                    | 152                                               | 0                                              | 7.6                                                       | 3.8                                               |
| DEC.<br>06... | 100                     | 12                                                        | 50                                       | 0                                                  | 34                                               | 1.3                                                     | 2.5                                        | 1.5                                                    | 94                                                | 0                                              | 7.1                                                       | 3.2                                               |
| FEB.<br>06... | 16                      | 9.3                                                       | 120                                      | 0                                                  | 43                                               | 1.3                                                     | 3.6                                        | 1.1                                                    | 124                                               | 0                                              | 7.1                                                       | 4.4                                               |
| APR.<br>18... | 18                      | 11                                                        | 30                                       | 0                                                  | 43                                               | 1.3                                                     | 3.6                                        | 1.0                                                    | 124                                               | 0                                              | 8.7                                                       | 3.8                                               |
| JUNE<br>12... | 110                     | 11                                                        | 40                                       | 0                                                  | 36                                               | 1.2                                                     | 2.8                                        | 1.1                                                    | 100                                               | 0                                              | 7.5                                                       | 3.2                                               |
| AUG.<br>07... | 19                      | 10                                                        | 10                                       | 50                                                 | 48                                               | 1.4                                                     | 3.6                                        | 1.4                                                    | 138                                               | 0                                              | 6.9                                                       | 5.0                                               |

| DATE          | NON-<br>CAR-<br>BONATE<br>HARD-<br>NESS<br>(MG/L) | ALKA-<br>LINITY<br>AS<br>CaCO <sub>3</sub><br>(MG/L) | SPE-<br>CIFIC<br>CON-<br>DUCT-<br>ANCE<br>(MICRO-<br>MHOS) | PH<br>(UNITS) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | CHEM-<br>ICAL<br>OXYGEN<br>DEMAND<br>(LOW<br>LEVEL)<br>(MG/L) | DIS-<br>SOLVED<br>OXYGEN<br>(MG/L) | PER-<br>CENT<br>SATUR-<br>ATION | FECAL<br>COLI-<br>FORM<br>(COL.<br>PER<br>100 ML) | STREP-<br>TOCOCCI<br>(COL-<br>ONIES<br>PER<br>100 ML) |
|---------------|---------------------------------------------------|------------------------------------------------------|------------------------------------------------------------|---------------|----------------------------------------------|-----------------------------|---------------------------------------------------------------|------------------------------------|---------------------------------|---------------------------------------------------|-------------------------------------------------------|
| OCT.<br>02... | 0                                                 | 125                                                  | 258                                                        | 8.1           | 2                                            | 20.0                        | 4                                                             | 8.9                                | 97                              | 190                                               | 470                                                   |
| DEC.<br>06... | 13                                                | 77                                                   | 180                                                        | 7.5           | 3                                            | 11.0                        | 9                                                             | 8.7                                | 79                              | 150                                               | 170                                                   |
| FEB.<br>06... | 11                                                | 102                                                  | 235                                                        | 8.2           | 3                                            | 9.0                         | 2                                                             | 10.9                               | 94                              | 140                                               | 54                                                    |
| APR.<br>18... | 11                                                | 102                                                  | 238                                                        | 7.7           | 2                                            | 13.5                        | 4                                                             | 8.9                                | 85                              | 300                                               | 330                                                   |
| JUNE<br>12... | 13                                                | 82                                                   | 202                                                        | 7.6           | 8                                            | 15.0                        | 1                                                             | 7.5                                | 74                              | 760                                               | 2800                                                  |
| AUG.<br>07... | 12                                                | 113                                                  | 260                                                        | 7.9           | 3                                            | 20.5                        | 3                                                             | 7.9                                | 88                              | 480                                               | 820                                                   |

07188500 LOST CREEK AT SENECA, MO.--Continued

DRAINAGE AREA.--42 mi<sup>2</sup> (109 km<sup>2</sup>).

PERIOD OF RECORD.--Chemical analyses: August 1967 to September 1974.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE          | DIS-<br>SOLVED<br>FLUO-<br>RIDE<br>(F)<br>(MG/L) | TOTAL<br>NITRATE<br>(N)<br>(MG/L) | AMMONIA<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | ORGANIC<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | DIS-<br>SOL-<br>VED-<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | TOTAL<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(RESI-<br>DUE AT<br>180 C)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(TONS<br>PER<br>AC-FT) | DIS-<br>SOLVED<br>SOLIDS<br>(TONS<br>PER<br>DAY) | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | PERCENT<br>SODIUM | HARD-<br>NESS<br>(CA+MG)<br>(MG/L) |
|---------------|--------------------------------------------------|-----------------------------------|-------------------------------------------|-------------------------------------------|----------------------------------------------------------|-------------------------------------------|------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------|-----------------------------------------|-------------------|------------------------------------|
| OCT.<br>02... | .0                                               | 1.6                               | .04                                       | .24                                       | .04                                                      | .05                                       | 164                                                              | .22                                                | 4.87                                             | .2                                      | 7                 | 120                                |
| DEC.<br>06... | .0                                               | 1.7                               | .01                                       | .43                                       | .02                                                      | .05                                       | 119                                                              | .16                                                | 32.1                                             | .1                                      | 6                 | 90                                 |
| FEB.<br>06... | .0                                               | 2.1                               | .00                                       | .23                                       | .01                                                      | .01                                       | 140                                                              | .19                                                | 6.05                                             | .1                                      | 6                 | 110                                |
| APR.<br>18... | .1                                               | 1.4                               | .01                                       | .11                                       | .01                                                      | .04                                       | 137                                                              | .19                                                | 6.66                                             | .1                                      | 6                 | 110                                |
| JUNE<br>12... | .0                                               | 1.3                               | .03                                       | .31                                       | --                                                       | .02                                       | 128                                                              | .17                                                | 38.0                                             | .1                                      | 6                 | 95                                 |
| AUG.<br>07... | .1                                               | 1.5                               | .03                                       | .16                                       | .03                                                      | .03                                       | 143                                                              | .19                                                | 7.34                                             | .1                                      | 6                 | 130                                |

07188820 LITTLE SUGAR CREEK AT CAVERNA, MO.

LOCATION.--Lat 36°30'10", long 94°16'30", McDonald County, at bridge on U.S. Highway 71, 0.5 mi (0.8 km) north of Caverna.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE  | DIS-<br>CHARGE<br>(CFS) | DIS-<br>SOLVED<br>SILICA<br>(SiO <sub>2</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>IRON<br>(FE)<br>(UG/L) | DIS-<br>SOLVED<br>MAN-<br>GANESE<br>(MN)<br>(UG/L) | DIS-<br>SOLVED<br>CAL-<br>CIUM<br>(CA)<br>(MG/L) | DIS-<br>SOLVED<br>MAG-<br>NE-<br>SIUM<br>(MG) | DIS-<br>SOLVED<br>SODIUM<br>(NA)<br>(MG/L) | DIS-<br>SOLVED<br>PO-<br>TAS-<br>SIUM<br>(K)<br>(MG/L) | BICAR-<br>BONATE<br>(HCO <sub>3</sub> )<br>(MG/L) | CAR-<br>BONATE<br>(CO <sub>3</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>SULFATE<br>(SO <sub>4</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>CHLO-<br>RIDE<br>(CL)<br>(MG/L) |
|-------|-------------------------|-----------------------------------------------------------|------------------------------------------|----------------------------------------------------|--------------------------------------------------|-----------------------------------------------|--------------------------------------------|--------------------------------------------------------|---------------------------------------------------|------------------------------------------------|-----------------------------------------------------------|---------------------------------------------------|
| OCT.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 02... | 65                      | 10                                                        | 20                                       | 50                                                 | 54                                               | 1.9                                           | 5.5                                        | 1.9                                                    | 166                                               | 0                                              | 6.8                                                       | 5.8                                               |
| NOV.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 06... | 73                      | 9.9                                                       | 20                                       | 30                                                 | 58                                               | 1.8                                           | 4.5                                        | 1.9                                                    | 170                                               | 0                                              | 6.1                                                       | 5.4                                               |
| DEC.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 05... | 800                     | 10                                                        | 80                                       | 60                                                 | 40                                               | 1.3                                           | 3.0                                        | 1.8                                                    | 114                                               | 0                                              | 5.1                                                       | 3.6                                               |
| JAN.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 08... | 127                     | 9.2                                                       | 50                                       | 30                                                 | 48                                               | 1.3                                           | 4.1                                        | 1.4                                                    | 142                                               | 0                                              | 5.5                                                       | 5.3                                               |
| FEB.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 06... | 150                     | 7.1                                                       | 60                                       | 0                                                  | 49                                               | 1.7                                           | 4.7                                        | 1.5                                                    | 150                                               | 0                                              | 6.5                                                       | 5.8                                               |
| MAR.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 19... | 280                     | 8.8                                                       | 100                                      | 21                                                 | 46                                               | 1.3                                           | 3.6                                        | 1.4                                                    | 136                                               | 0                                              | 4.6                                                       | 4.1                                               |
| APR.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 18... | 90                      | 8.7                                                       | 90                                       | 0                                                  | 49                                               | 1.1                                           | 4.6                                        | 1.4                                                    | 144                                               | 0                                              | 5.6                                                       | 5.1                                               |
| MAY   |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 15... | 315                     | 9.0                                                       | 40                                       | 0                                                  | 43                                               | 1.0                                           | 3.1                                        | 1.8                                                    | 128                                               | 0                                              | 5.8                                                       | 3.4                                               |
| JUNE  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 12... | 550                     | 10                                                        | 20                                       | 30                                                 | 43                                               | 1.1                                           | 3.0                                        | 1.2                                                    | 128                                               | 0                                              | 5.4                                                       | 3.0                                               |
| JULY  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 09... | 80                      | 8.9                                                       | 20                                       | 20                                                 | 47                                               | 1.7                                           | 2.7                                        | 1.8                                                    | 148                                               | 0                                              | 7.5                                                       | 4.9                                               |
| AUG.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 07... | 76                      | 8.8                                                       | 20                                       | 250                                                | 41                                               | 1.6                                           | 4.0                                        | 1.8                                                    | 132                                               | 0                                              | .6                                                        | 4.4                                               |
| SEP.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 04... | 135                     | 11                                                        | 30                                       | 10                                                 | 49                                               | 1.6                                           | 4.6                                        | 2.0                                                    | 148                                               | 0                                              | 6.6                                                       | 5.5                                               |

| DATE  | NON-<br>CAR-<br>BONATE<br>HARD-<br>NESS<br>(MG/L) | ALKA-<br>LINITAS<br>AS<br>CaCO <sub>3</sub><br>(MG/L) | SPE-<br>CIFIC<br>CON-<br>DUCT-<br>ANCE<br>(MICRO-<br>MHQS) | PH<br>(UNITS) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | CHEM-<br>ICAL<br>OXYGEN<br>DEMAND<br>(LOW<br>LEVEL)<br>(MG/L) | DIS-<br>SOLVED<br>OXYGEN<br>(MG/L) | PER-<br>CENT<br>SATUR-<br>ATION | FECAL<br>COLI-<br>FORM<br>(COL.<br>PER<br>100 ML) | STREP-<br>TOCOCCI<br>(COL-<br>ONIES<br>PER<br>100 ML) |
|-------|---------------------------------------------------|-------------------------------------------------------|------------------------------------------------------------|---------------|----------------------------------------------|-----------------------------|---------------------------------------------------------------|------------------------------------|---------------------------------|---------------------------------------------------|-------------------------------------------------------|
| OCT.  |                                                   |                                                       |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 02... | 4                                                 | 136                                                   | 290                                                        | 7.7           | 2                                            | 18.5                        | 2                                                             | 7.4                                | 78                              | 60                                                | 200                                                   |
| NOV.  |                                                   |                                                       |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 06... | 13                                                | 139                                                   | 304                                                        | 7.6           | 1                                            | 12.0                        | 7                                                             | 7.3                                | 68                              | 35                                                | 100                                                   |
| DEC.  |                                                   |                                                       |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 05... | 12                                                | 94                                                    | 220                                                        | 7.6           | 9                                            | 12.0                        | 8                                                             | 7.1                                | 66                              | 820                                               | 920                                                   |
| JAN.  |                                                   |                                                       |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 08... | 9                                                 | 116                                                   | 265                                                        | 7.8           | 2                                            | 8.5                         | 2                                                             | 9.2                                | 79                              | 64                                                | 10                                                    |
| FEB.  |                                                   |                                                       |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 06... | 6                                                 | 123                                                   | 265                                                        | 7.9           | 8                                            | 9.5                         | 2                                                             | 9.6                                | 83                              | 28                                                | 12                                                    |
| MAR.  |                                                   |                                                       |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 19... | 9                                                 | 112                                                   | 253                                                        | 7.9           | 5                                            | 11.5                        | 4                                                             | 8.9                                | 82                              | 190                                               | 110                                                   |
| APR.  |                                                   |                                                       |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 18... | 9                                                 | 118                                                   | 272                                                        | 7.8           | 2                                            | 13.5                        | 1                                                             | 9.1                                | 87                              | 40                                                | 98                                                    |
| MAY   |                                                   |                                                       |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 15... | 7                                                 | 105                                                   | 235                                                        | 7.7           | 20                                           | 16.0                        | 8                                                             | 8.3                                | 84                              | 9200                                              | 23000                                                 |
| JUNE  |                                                   |                                                       |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 12... | 7                                                 | 105                                                   | 240                                                        | 7.7           | 5                                            | 17.0                        | 10                                                            | 7.9                                | 81                              | 1600                                              | 1400                                                  |
| JULY  |                                                   |                                                       |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 09... | 3                                                 | 121                                                   | 268                                                        | 8.0           | 1                                            | 24.0                        | 22                                                            | 7.6                                | 89                              | 660                                               | 52                                                    |
| AUG.  |                                                   |                                                       |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 07... | 1                                                 | 108                                                   | 234                                                        | 7.7           | 2                                            | 22.0                        | 6                                                             | 7.0                                | 80                              | 16                                                | 72                                                    |
| SEP.  |                                                   |                                                       |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 04... | 9                                                 | 121                                                   | 280                                                        | 7.6           | 2                                            | 19.0                        | 6                                                             | 7.6                                | 81                              | 1700                                              | 272                                                   |

07188820 LITTLE SUGAR CREEK AT CAVERNA, MO.--Continued

PERIOD OF RECORD.--Chemical analyses: August 1967 to September 1974.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE  | DIS-<br>SOLVED<br>FLUO-<br>RIDE<br>(F)<br>(MG/L) | TOTAL<br>NITRATE<br>(N)<br>(MG/L) | AMMONIA<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | ORGANIC<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | DIS-<br>SOL-<br>VED-<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | TOTAL<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(RESI-<br>DUE AT<br>180 C)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(TONS<br>PER<br>AC-FT) | DIS-<br>SOLVED<br>SOLIDS<br>(TONS<br>PER<br>DAY) | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | PERCENT<br>SODIUM | HARD-<br>NESS<br>(CA+MG)<br>(MG/L) |
|-------|--------------------------------------------------|-----------------------------------|-------------------------------------------|-------------------------------------------|----------------------------------------------------------|-------------------------------------------|------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------|-----------------------------------------|-------------------|------------------------------------|
| OCT.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 02... | .0                                               | .00                               | .03                                       | .15                                       | .17                                                      | .22                                       | 180                                                              | .24                                                | 31.6                                             | .2                                      | 8                 | 140                                |
| NOV.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 06... | .0                                               | 1.3                               | .01                                       | .18                                       | .15                                                      | .14                                       | 149                                                              | .20                                                | 29.4                                             | 2.0                                     | 6                 | 150                                |
| DEC.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 05... | .0                                               | 1.5                               | .03                                       | .36                                       | .04                                                      | .10                                       | 135                                                              | .18                                                | 292                                              | .1                                      | 6                 | 110                                |
| JAN.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 08... | .0                                               | 1.8                               | .03                                       | .11                                       | .06                                                      | .10                                       | 154                                                              | .21                                                | 52.8                                             | .2                                      | 7                 | 130                                |
| FEB.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 06... | .1                                               | 1.8                               | .00                                       | .26                                       | .09                                                      | .10                                       | 152                                                              | .21                                                | 61.6                                             | .2                                      | 7                 | 130                                |
| MAR.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 19... | .2                                               | 1.6                               | .09                                       | .14                                       | .10                                                      | .11                                       | 147                                                              | .20                                                | 111                                              | .1                                      | 6                 | 120                                |
| APR.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 18... | .1                                               | 1.5                               | .01                                       | .16                                       | .13                                                      | .15                                       | 152                                                              | .21                                                | 36.9                                             | .2                                      | 7                 | 130                                |
| MAY   |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 15... | .0                                               | 1.3                               | .08                                       | .26                                       | .12                                                      | .17                                       | 139                                                              | .19                                                | 118                                              | .1                                      | 6                 | 110                                |
| JUNE  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 12... | .0                                               | .00                               | .04                                       | .63                                       | --                                                       | .10                                       | 144                                                              | .20                                                | 214                                              | .1                                      | 5                 | 110                                |
| JULY  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 09... | .0                                               | .31                               | .28                                       | .00                                       | .07                                                      | .15                                       | 143                                                              | .19                                                | 30.9                                             | .1                                      | 4                 | 120                                |
| AUG.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 07... | .0                                               | .42                               | .06                                       | .23                                       | .05                                                      | .06                                       | 127                                                              | .17                                                | 26.1                                             | .2                                      | 7                 | 110                                |
| SEP.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 04... | .1                                               | 1.4                               | .05                                       | .33                                       | .15                                                      | .18                                       | 160                                                              | .22                                                | 58.3                                             | .2                                      | 7                 | 130                                |

## ARKANSAS RIVER BASIN

07189000 ELK RIVER NEAR TIFF CITY, MO.

LOCATION.--Lat 30°38', long 94°35', NE¼ sec.22, T.22 N., R.34 W., McDonald County, at gaging station on downstream side of right pier of bridge on State Highway 43, 0.8 mi (1.3 km) downstream from Blackfoot Branch, 2.8 mi (4.5 km) upstream from Buffalo Creek, 3 mi (4.8 km) southeast of Tiff City, and at mile 15.8 (25.4 km).

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE  | DIS-<br>CHARGE<br>(CFS) | DIS-<br>SOLVED<br>SILICA<br>(SiO <sub>2</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>IRON<br>(FE)<br>(UG/L) | DIS-<br>SOLVED<br>MAN-<br>GANESE<br>(MN)<br>(UG/L) | DIS-<br>SOLVED<br>CAL-<br>CIUM<br>(CA)<br>(MG/L) | DIS-<br>SOLVED<br>MAG-<br>NE-<br>SIUM<br>(MG) | DIS-<br>SOLVED<br>SODIUM<br>(NA)<br>(MG/L) | DIS-<br>SOLVED<br>PO-<br>TAS-<br>SIUM<br>(K)<br>(MG/L) | BICAR-<br>BONATE<br>(HCO <sub>3</sub> )<br>(MG/L) | CAR-<br>BONATE<br>(CO <sub>3</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>SULFATE<br>(SO <sub>4</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>CHLO-<br>RIDE<br>(CL)<br>(MG/L) |
|-------|-------------------------|-----------------------------------------------------------|------------------------------------------|----------------------------------------------------|--------------------------------------------------|-----------------------------------------------|--------------------------------------------|--------------------------------------------------------|---------------------------------------------------|------------------------------------------------|-----------------------------------------------------------|---------------------------------------------------|
| OCT.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 02... | 500                     | 11                                                        | 30                                       | 50                                                 | 52                                               | 2.5                                           | 4.9                                        | 1.8                                                    | 164                                               | 0                                              | 5.4                                                       | 5.3                                               |
| NOV.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 06... | 620                     | 9.7                                                       | 70                                       | 30                                                 | 54                                               | 2.8                                           | 3.6                                        | 1.7                                                    | 168                                               | 0                                              | 6.6                                                       | 5.1                                               |
| DEC.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 05... | 11200                   | 10                                                        | 80                                       | 20                                                 | 36                                               | 1.9                                           | 2.1                                        | 1.7                                                    | 110                                               | 0                                              | 5.1                                                       | 2.3                                               |
| JAN.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 08... | 893                     | 8.8                                                       | 50                                       | 10                                                 | 44                                               | 2.1                                           | 3.7                                        | 1.2                                                    | 134                                               | 0                                              | 5.9                                                       | 3.3                                               |
| FEB.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 06... | 922                     | 5.9                                                       | 70                                       | 0                                                  | 46                                               | 2.3                                           | 3.3                                        | 1.2                                                    | 144                                               | 0                                              | 6.0                                                       | 4.7                                               |
| MAR.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 19... | 2030                    | 9.1                                                       | 40                                       | 7                                                  | 42                                               | 2.0                                           | 2.8                                        | 1.3                                                    | 132                                               | 0                                              | 5.9                                                       | 2.6                                               |
| APR.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 18... | 595                     | 6.0                                                       | 70                                       | 0                                                  | 44                                               | 2.1                                           | 3.6                                        | 1.1                                                    | 140                                               | 0                                              | 6.4                                                       | 4.0                                               |
| MAY   |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 15... | 1230                    | 9.1                                                       | 40                                       | 0                                                  | 47                                               | 2.0                                           | 2.8                                        | 1.3                                                    | 152                                               | 0                                              | 6.4                                                       | 3.2                                               |
| JUNE  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 12... | 3800                    | 11                                                        | 20                                       | 0                                                  | 43                                               | 2.0                                           | 2.7                                        | 1.1                                                    | 132                                               | 0                                              | 6.4                                                       | 2.6                                               |
| JULY  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 09... | 410                     | 8.8                                                       | 20                                       | 10                                                 | 47                                               | 2.6                                           | 2.6                                        | 1.7                                                    | 146                                               | 0                                              | 6.1                                                       | 4.4                                               |
| AUG.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 07... | 244                     | 11                                                        | 10                                       | 10                                                 | 47                                               | 2.3                                           | 3.8                                        | 1.5                                                    | 148                                               | 0                                              | 3.1                                                       | 5.1                                               |
| SEP.  |                         |                                                           |                                          |                                                    |                                                  |                                               |                                            |                                                        |                                                   |                                                |                                                           |                                                   |
| 04... | 700                     | 11                                                        | 20                                       | 0                                                  | 50                                               | 3.2                                           | 3.7                                        | 1.7                                                    | 164                                               | 0                                              | 6.7                                                       | 5.0                                               |

| DATE  | NON-<br>CAR-<br>BONATE<br>HARD-<br>NESS<br>(MG/L) | ALKA-<br>LINITAS<br>AS<br>CaCO <sub>3</sub><br>(MG/L) | SPE-<br>CIFIC<br>CON-<br>DUCT-<br>ANCE<br>(MICRO-<br>MHOS) | PH<br>(UNITS) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | CHEM-<br>ICAL<br>OXYGEN<br>DEMAND<br>(LOW<br>LEVEL)<br>(MG/L) | DIS-<br>SOLVED<br>OXYGEN<br>(MG/L) | PER-<br>CENT<br>SATUR-<br>ATION | FECAL<br>COLI-<br>FORM<br>(COL.<br>PER<br>100 ML) | STREP-<br>TOCOCCI<br>(COL-<br>ONIES<br>PER<br>100 ML) |
|-------|---------------------------------------------------|-------------------------------------------------------|------------------------------------------------------------|---------------|----------------------------------------------|-----------------------------|---------------------------------------------------------------|------------------------------------|---------------------------------|---------------------------------------------------|-------------------------------------------------------|
| OCT.  |                                                   |                                                       |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 02... | 5                                                 | 135                                                   | 282                                                        | 7.9           | 2                                            | 20.5                        | 5                                                             | 6.8                                | 76                              | 40                                                | 130                                                   |
| NOV.  |                                                   |                                                       |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 06... | 9                                                 | 138                                                   | 292                                                        | 7.8           | 2                                            | 12.5                        | 4                                                             | 7.4                                | 69                              | 140                                               | 130                                                   |
| DEC.  |                                                   |                                                       |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 05... | 8                                                 | 90                                                    | 203                                                        | 7.7           | 20                                           | 12.0                        | 7                                                             | 7.2                                | 67                              | 1400                                              | 2900                                                  |
| JAN.  |                                                   |                                                       |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 08... | 9                                                 | 110                                                   | 253                                                        | 7.7           | 5                                            | 6.0                         | 0                                                             | 9.6                                | 77                              | 24                                                | 4                                                     |
| FEB.  |                                                   |                                                       |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 06... | 2                                                 | 117                                                   | 245                                                        | 8.0           | 5                                            | 9.0                         | 2                                                             | 10.0                               | 86                              | 170                                               | 43                                                    |
| MAR.  |                                                   |                                                       |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 19... | 5                                                 | 108                                                   | 250                                                        | 7.9           | 4                                            | 12.0                        | 5                                                             | 9.0                                | 83                              | 84                                                | 96                                                    |
| APR.  |                                                   |                                                       |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 18... | 4                                                 | 115                                                   | 255                                                        | 7.9           | 3                                            | 14.0                        | 3                                                             | 8.6                                | 83                              | 36                                                | 90                                                    |
| MAY   |                                                   |                                                       |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 15... | 1                                                 | 125                                                   | 250                                                        | 7.9           | 1                                            | 17.0                        | 0                                                             | 8.0                                | 82                              | 250                                               | 230                                                   |
| JUNE  |                                                   |                                                       |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 12... | 7                                                 | 108                                                   | 245                                                        | 7.7           | 4                                            | 17.0                        | 5                                                             | 7.8                                | 80                              | 520                                               | 1600                                                  |
| JULY  |                                                   |                                                       |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 09... | 8                                                 | 120                                                   | 263                                                        | 7.7           | 2                                            | 26.0                        | 5                                                             | 6.1                                | 74                              | 30                                                | 51                                                    |
| AUG.  |                                                   |                                                       |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 07... | 5                                                 | 121                                                   | 262                                                        | 7.8           | 2                                            | 23.0                        | 6                                                             | 6.6                                | 76                              | 38                                                | 90                                                    |
| SEP.  |                                                   |                                                       |                                                            |               |                                              |                             |                                                               |                                    |                                 |                                                   |                                                       |
| 04... | 5                                                 | 134                                                   | 292                                                        | 7.7           | 2                                            | 19.0                        | 7                                                             | 7.2                                | 77                              | 500                                               | 340                                                   |

07189000 ELK RIVER NEAR TIFF CITY, MO.--Continued

DRAINAGE AREA.--872 mi<sup>2</sup> (2,258 km<sup>2</sup>).

PERIOD OF RECORD.--Chemical analyses: August 1962 to June 1963; November 1965 to September 1974.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE  | DIS-<br>SOLVED<br>FLUO-<br>RIDE<br>(F)<br>(MG/L) | TOTAL<br>NITRATE<br>(N)<br>(MG/L) | AMMONIA<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | ORGANIC<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | DIS-<br>SOL-<br>VED-<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | TOTAL<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(RESI-<br>DUE AT<br>180 C)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(TONS<br>PER<br>AC-FT) | DIS-<br>SOLVED<br>SOLIDS<br>(TONS<br>PER<br>DAY) | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | PERCENT<br>SODIUM | HARD-<br>NESS<br>(CA,MG)<br>(MG/L) |
|-------|--------------------------------------------------|-----------------------------------|-------------------------------------------|-------------------------------------------|----------------------------------------------------------|-------------------------------------------|------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------|-----------------------------------------|-------------------|------------------------------------|
| OCT.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 02... | .0                                               | .85                               | .03                                       | .24                                       | .05                                                      | .06                                       | 161                                                              | .22                                                | 217                                              | .2                                      | 7                 | 140                                |
| NOV.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 06... | .0                                               | 1.2                               | .00                                       | .23                                       | .09                                                      | .06                                       | 164                                                              | .22                                                | 275                                              | .1                                      | 5                 | 150                                |
| DEC.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 05... | .0                                               | 1.2                               | .04                                       | .38                                       | .03                                                      | .09                                       | 128                                                              | .17                                                | 3870                                             | .1                                      | 4                 | 98                                 |
| JAN.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 08... | .0                                               | 1.4                               | .06                                       | .22                                       | .02                                                      | .03                                       | 148                                                              | .20                                                | 357                                              | .1                                      | 6                 | 120                                |
| FEB.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 06... | .0                                               | 1.3                               | .02                                       | .17                                       | .01                                                      | .01                                       | 145                                                              | .20                                                | 361                                              | .1                                      | 5                 | 120                                |
| MAR.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 19... | .3                                               | 1.3                               | .08                                       | .05                                       | .04                                                      | .05                                       | 138                                                              | .19                                                | 756                                              | .1                                      | 5                 | 110                                |
| APR.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 18... | .4                                               | .80                               | .02                                       | .06                                       | .00                                                      | .03                                       | 134                                                              | .18                                                | 215                                              | .1                                      | 6                 | 120                                |
| MAY   |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 15... | .0                                               | .81                               | .07                                       | .02                                       | .05                                                      | .04                                       | 142                                                              | .19                                                | 472                                              | .1                                      | 5                 | 130                                |
| JUNE  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 12... | .0                                               | .00                               | .01                                       | .30                                       | --                                                       | .03                                       | 145                                                              | .20                                                | 1490                                             | .1                                      | 5                 | 120                                |
| JULY  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 09... | .0                                               | .94                               | .04                                       | .07                                       | --                                                       | .00                                       | 148                                                              | .20                                                | 164                                              | .1                                      | 4                 | 130                                |
| AUG.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 07... | .1                                               | .65                               | .02                                       | .32                                       | .02                                                      | .02                                       | 143                                                              | .19                                                | 94.2                                             | .1                                      | 6                 | 130                                |
| SEP.  |                                                  |                                   |                                           |                                           |                                                          |                                           |                                                                  |                                                    |                                                  |                                         |                   |                                    |
| 04... | .1                                               | 1.3                               | .09                                       | .54                                       | .04                                                      | .05                                       | 169                                                              | .23                                                | 319                                              | .1                                      | 5                 | 140                                |



07189100 BUFFALO CREEK AT TIFF CITY, MO.

LOCATION.--Lat 36°40'15", long 90°36'15", McDonald County, at bridge on State Highway 76, 0.5 mi (0.8 km) east of Tiff City.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE          | DIS-<br>CHARGE<br>(CFS) | DIS-<br>SOLVED<br>SILICA<br>(SiO2)<br>(MG/L) | DIS-<br>SOLVED<br>IRON<br>(FE)<br>(UG/L) | DIS-<br>SOLVED<br>MAN-<br>GANESE<br>(MN)<br>(UG/L) | DIS-<br>SOLVED<br>CAL-<br>CIUM<br>(CA)<br>(MG/L) | DIS-<br>SOLVED<br>MAG-<br>NE-<br>SIUM<br>(MG) | DIS-<br>SOLVED<br>SODIUM<br>(NA)<br>(MG/L) | DIS-<br>SOLVED<br>PO-<br>TAS-<br>SIUM<br>(K)<br>(MG/L) | BICAR-<br>BONATE<br>(HCO3)<br>(MG/L) | CAR-<br>BONATE<br>(CO3)<br>(MG/L) | DIS-<br>SOLVED<br>SULFATE<br>(SO4)<br>(MG/L) | DIS-<br>SOLVED<br>CHLO-<br>RIDE<br>(CL)<br>(MG/L) |
|---------------|-------------------------|----------------------------------------------|------------------------------------------|----------------------------------------------------|--------------------------------------------------|-----------------------------------------------|--------------------------------------------|--------------------------------------------------------|--------------------------------------|-----------------------------------|----------------------------------------------|---------------------------------------------------|
| NOV.<br>06... | 47                      | 11                                           | 50                                       | 20                                                 | 46                                               | 1.5                                           | 4.4                                        | 1.9                                                    | 140                                  | 0                                 | 7.7                                          | 5.8                                               |
| JAN.<br>08... | 89                      | 9.2                                          | 60                                       | 70                                                 | 43                                               | 1.3                                           | 4.2                                        | 1.7                                                    | 118                                  | 0                                 | 8.5                                          | 5.7                                               |
| MAR.<br>19... | 230                     | 9.7                                          | 10                                       | 14                                                 | 40                                               | 1.2                                           | 3.6                                        | 1.4                                                    | 112                                  | 0                                 | 8.2                                          | 4.1                                               |
| MAY<br>15...  | 59                      | 10                                           | 30                                       | 0                                                  | 47                                               | 1.2                                           | 4.2                                        | 1.5                                                    | 138                                  | 0                                 | 8.6                                          | 5.6                                               |
| JULY<br>09... | 28                      | 9.8                                          | 10                                       | 10                                                 | 46                                               | 1.6                                           | 3.2                                        | 1.9                                                    | 140                                  | 0                                 | 9.0                                          | 6.0                                               |
| SEP.<br>04... | 120                     | 12                                           | 20                                       | 0                                                  | 49                                               | 1.9                                           | 4.2                                        | 1.7                                                    | 148                                  | 0                                 | 7.0                                          | 5.8                                               |

| DATE          | NON-<br>CAR-<br>BONATE<br>HARD-<br>NESS<br>(MG/L) | ALKA-<br>LINITAS<br>CACO3<br>(MG/L) | SPE-<br>CIFIC<br>CON-<br>DUCT-<br>ANCE<br>(MICRO-<br>MHOS) | PH<br>(UNITS) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | CHEM-<br>ICAL<br>OXYGEN<br>DEMAND<br>(LOW<br>LEVEL)<br>(MG/L) | DIS-<br>SOLVED<br>OXYGEN<br>(MG/L) | PER-<br>CENT<br>SATUR-<br>ATION | FECAL<br>COLI-<br>FORM<br>(COL.<br>PER<br>100 ML) | STREP-<br>TOCOCCI<br>(COL-<br>ONIES<br>PER<br>100 ML) |
|---------------|---------------------------------------------------|-------------------------------------|------------------------------------------------------------|---------------|----------------------------------------------|-----------------------------|---------------------------------------------------------------|------------------------------------|---------------------------------|---------------------------------------------------|-------------------------------------------------------|
| NOV.<br>06... | 6                                                 | 115                                 | 265                                                        | 7.7           | 3                                            | 13.0                        | 5                                                             | 7.2                                | 68                              | 26                                                | 86                                                    |
| JAN.<br>08... | 16                                                | 97                                  | 235                                                        | 7.7           | 5                                            | 8.0                         | 9                                                             | 9.2                                | 77                              | 23                                                | 26                                                    |
| MAR.<br>19... | 13                                                | 92                                  | 222                                                        | 7.7           | 3                                            | 11.5                        | 0                                                             | 9.4                                | 86                              | 88                                                | 74                                                    |
| MAY<br>15...  | 9                                                 | 113                                 | 255                                                        | 7.8           | 1                                            | 16.0                        | 1                                                             | 9.2                                | 93                              | 50                                                | 68                                                    |
| JULY<br>09... | 7                                                 | 115                                 | 260                                                        | 7.6           | 1                                            | 22.5                        | 6                                                             | 7.2                                | 82                              | 32                                                | 180                                                   |
| SEP.<br>04... | 9                                                 | 121                                 | 279                                                        | 7.7           | 1                                            | 18.0                        | 3                                                             | 81.0                               | 81                              | 80                                                | 380                                                   |

07189100 BUFFALO CREEK AT TIFF CITY, MO.--Continued

PERIOD OF RECORD.--Chemical analyses: August 1967 to September 1974.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE          | DIS-<br>SOLVED<br>FLUO-<br>RIDE<br>(F)<br>(MG/L) | TOTAL<br>NITRATE<br>(N)<br>(MG/L) | AMMONIA<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | ORGANIC<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | DIS-<br>SOL-<br>VED-<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | TOTAL<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(RESI-<br>DUE AT<br>180 C)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(TONS<br>PER<br>AC-FT) | DIS-<br>SOLVED<br>SOLIDS<br>(TONS<br>PER<br>DAY) | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | PERCENT<br>SODIUM | HARD-<br>NESS<br>(CA,MG)<br>(MG/L) |
|---------------|--------------------------------------------------|-----------------------------------|-------------------------------------------|-------------------------------------------|----------------------------------------------------------|-------------------------------------------|------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------|-----------------------------------------|-------------------|------------------------------------|
| NOV.<br>06... | .0                                               | 1.5                               | .01                                       | .18                                       | .03                                                      | .05                                       | 162                                                              | .22                                                | 20.6                                             | .2                                      | 7                 | 120                                |
| JAN.<br>08... | .1                                               | 1.4                               | .04                                       | .12                                       | .03                                                      | .03                                       | 136                                                              | .19                                                | 32.7                                             | .2                                      | 7                 | 110                                |
| MAR.<br>19... | .3                                               | 1.4                               | .03                                       | .07                                       | .03                                                      | .03                                       | 131                                                              | .18                                                | 81.4                                             | .2                                      | 7                 | 100                                |
| MAY<br>15...  | .0                                               | 1.1                               | .08                                       | .01                                       | .02                                                      | 3.6                                       | 144                                                              | .20                                                | 22.9                                             | .2                                      | 7                 | 120                                |
| JULY<br>09... | .0                                               | .62                               | .15                                       | .35                                       | --                                                       | .00                                       | 150                                                              | .20                                                | 11.3                                             | .1                                      | 5                 | 120                                |
| SEP.<br>04... | .1                                               | 1.5                               | .08                                       | .26                                       | .02                                                      | .03                                       | 153                                                              | .21                                                | 49.6                                             | .2                                      | 6                 | 130                                |

## LOWER MISSISSIPPI RIVER BASIN

## ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE                                                                           | DIS-<br>CHARGE<br>(CFS) | DIS-<br>SOLVED<br>IRON<br>(FE)<br>(UG/L) | DIS-<br>SOLVED<br>MANGANESE<br>(MN)<br>(UG/L) | DIS-<br>SOLVED<br>CHROMIUM<br>(CR)<br>(UG/L) | DIS-<br>SOLVED<br>NICKEL<br>(NI)<br>(UG/L) | DIS-<br>SOLVED<br>SILVER<br>(AG)<br>(UG/L) | DIS-<br>SOLVED<br>COPPER<br>(CU)<br>(UG/L) | DIS-<br>SOLVED<br>LEAD<br>(PB)<br>(UG/L) | DIS-<br>SOLVED<br>ZINC<br>(ZN)<br>(UG/L) | DIS-<br>SOLVED<br>COBALT<br>(CO)<br>(UG/L) | DIS-<br>SOLVED<br>CADMIUM<br>(CD)<br>(UG/L) | DIS-<br>SOLVED<br>BARIUM<br>(BA)<br>(UG/L) |
|--------------------------------------------------------------------------------|-------------------------|------------------------------------------|-----------------------------------------------|----------------------------------------------|--------------------------------------------|--------------------------------------------|--------------------------------------------|------------------------------------------|------------------------------------------|--------------------------------------------|---------------------------------------------|--------------------------------------------|
| MERAMEC RIVER BASIN                                                            |                         |                                          |                                               |                                              |                                            |                                            |                                            |                                          |                                          |                                            |                                             |                                            |
| 07013050 - CROOKED CREEK NEAR DILLARD, MO. (LAT 37 42 40 LONG 091 11 50)       |                         |                                          |                                               |                                              |                                            |                                            |                                            |                                          |                                          |                                            |                                             |                                            |
| <sup>1</sup> NOV., 1973                                                        |                         |                                          |                                               |                                              |                                            |                                            |                                            |                                          |                                          |                                            |                                             |                                            |
| 26...                                                                          | 142                     | 50                                       | 0                                             | 0                                            | 9                                          | 0                                          | 10                                         | 8                                        | 40                                       | 1                                          | 12                                          | 0                                          |
| MAR., 1974                                                                     |                         |                                          |                                               |                                              |                                            |                                            |                                            |                                          |                                          |                                            |                                             |                                            |
| 04...                                                                          | 11                      | 0                                        | 0                                             | 0                                            | 1                                          | 0                                          | 23                                         | 5                                        | 20                                       | 2                                          | 6                                           | 0                                          |
| MAY                                                                            |                         |                                          |                                               |                                              |                                            |                                            |                                            |                                          |                                          |                                            |                                             |                                            |
| 13...                                                                          | 8.0                     | 20                                       | 10                                            | 0                                            | 0                                          | 0                                          | 1                                          | 4                                        | 40                                       | 0                                          | 6                                           | 0                                          |
| AUG.                                                                           |                         |                                          |                                               |                                              |                                            |                                            |                                            |                                          |                                          |                                            |                                             |                                            |
| 12...                                                                          | 2.0                     | --                                       | 40                                            | --                                           | --                                         | --                                         | 2                                          | 5                                        | 0                                        | --                                         | 2                                           | --                                         |
| 07013100 - HUZZAH CREEK AT DILLARD, MO. (LAT 37 44 20 LONG 091 12 10)          |                         |                                          |                                               |                                              |                                            |                                            |                                            |                                          |                                          |                                            |                                             |                                            |
| <sup>1</sup> NOV., 1973                                                        |                         |                                          |                                               |                                              |                                            |                                            |                                            |                                          |                                          |                                            |                                             |                                            |
| 26...                                                                          | 1050                    | 50                                       | 0                                             | 0                                            | 4                                          | 0                                          | 2                                          | 2                                        | 0                                        | 0                                          | 1                                           | 100                                        |
| MAR., 1974                                                                     |                         |                                          |                                               |                                              |                                            |                                            |                                            |                                          |                                          |                                            |                                             |                                            |
| 04...                                                                          | 86                      | 50                                       | 38                                            | 0                                            | 1                                          | 0                                          | 45                                         | 6                                        | 30                                       | 1                                          | 0                                           | 0                                          |
| MAY                                                                            |                         |                                          |                                               |                                              |                                            |                                            |                                            |                                          |                                          |                                            |                                             |                                            |
| 13...                                                                          | 86                      | 10                                       | 0                                             | 0                                            | 1                                          | 0                                          | 0                                          | 1                                        | 10                                       | 1                                          | 1                                           | 0                                          |
| AUG.                                                                           |                         |                                          |                                               |                                              |                                            |                                            |                                            |                                          |                                          |                                            |                                             |                                            |
| 12...                                                                          | 25                      | --                                       | 0                                             | --                                           | --                                         | --                                         | 1                                          | 4                                        | 0                                        | --                                         | 1                                           | --                                         |
| 07013200 - HUZZAH CREEK NEAR DILLARD, MO. (LAT 37 46 40 LONG 091 10 00)        |                         |                                          |                                               |                                              |                                            |                                            |                                            |                                          |                                          |                                            |                                             |                                            |
| <sup>1</sup> NOV., 1973                                                        |                         |                                          |                                               |                                              |                                            |                                            |                                            |                                          |                                          |                                            |                                             |                                            |
| 26...                                                                          | 1860                    | 60                                       | 10                                            | 0                                            | 2                                          | 0                                          | 5                                          | 3                                        | 0                                        | 0                                          | 1                                           | 0                                          |
| MAR., 1974                                                                     |                         |                                          |                                               |                                              |                                            |                                            |                                            |                                          |                                          |                                            |                                             |                                            |
| 04...                                                                          | 110                     | 0                                        | 25                                            | 0                                            | 2                                          | 0                                          | 23                                         | 5                                        | 20                                       | 2                                          | 0                                           | 0                                          |
| MAY                                                                            |                         |                                          |                                               |                                              |                                            |                                            |                                            |                                          |                                          |                                            |                                             |                                            |
| 13...                                                                          | 101                     | 10                                       | 0                                             | 0                                            | 1                                          | 0                                          | 1                                          | 4                                        | 20                                       | 0                                          | 0                                           | 0                                          |
| AUG.                                                                           |                         |                                          |                                               |                                              |                                            |                                            |                                            |                                          |                                          |                                            |                                             |                                            |
| 12...                                                                          | 27                      | --                                       | 10                                            | --                                           | --                                         | --                                         | 3                                          | 8                                        | 0                                        | --                                         | 1                                           | --                                         |
| 07014050 - COURTOIS CREEK AT COURTOIS, MO. (LAT 37 45 50 LONG 090 04 00)       |                         |                                          |                                               |                                              |                                            |                                            |                                            |                                          |                                          |                                            |                                             |                                            |
| <sup>1</sup> NOV., 1973                                                        |                         |                                          |                                               |                                              |                                            |                                            |                                            |                                          |                                          |                                            |                                             |                                            |
| 26...                                                                          | 310                     | 50                                       | 0                                             | 0                                            | 2                                          | 0                                          | 5                                          | 2                                        | 0                                        | 0                                          | 0                                           | 0                                          |
| MAR., 1974                                                                     |                         |                                          |                                               |                                              |                                            |                                            |                                            |                                          |                                          |                                            |                                             |                                            |
| 04...                                                                          | 20                      | 80                                       | 0                                             | 0                                            | 0                                          | 0                                          | 9                                          | 6                                        | 20                                       | 1                                          | 0                                           | 0                                          |
| MAY                                                                            |                         |                                          |                                               |                                              |                                            |                                            |                                            |                                          |                                          |                                            |                                             |                                            |
| 13...                                                                          | 15                      | 30                                       | 0                                             | 0                                            | 1                                          | 0                                          | 0                                          | 2                                        | 10                                       | 0                                          | 1                                           | 0                                          |
| AUG.                                                                           |                         |                                          |                                               |                                              |                                            |                                            |                                            |                                          |                                          |                                            |                                             |                                            |
| 12...                                                                          | 2.4                     | --                                       | 0                                             | --                                           | --                                         | --                                         | 2                                          | 7                                        | 0                                        | --                                         | 0                                           | --                                         |
| 07014060 - INDIAN CREEK AT COURTOIS, MO. (LAT 37 46 00 LONG 091 04 30)         |                         |                                          |                                               |                                              |                                            |                                            |                                            |                                          |                                          |                                            |                                             |                                            |
| <sup>1</sup> NOV., 1973                                                        |                         |                                          |                                               |                                              |                                            |                                            |                                            |                                          |                                          |                                            |                                             |                                            |
| 26...                                                                          | 211                     | 60                                       | 0                                             | 0                                            | 2                                          | 0                                          | 5                                          | 4                                        | 8                                        | 0                                          | 0                                           | 0                                          |
| MAR., 1974                                                                     |                         |                                          |                                               |                                              |                                            |                                            |                                            |                                          |                                          |                                            |                                             |                                            |
| 04...                                                                          | 30                      | 20                                       | 13                                            | 0                                            | 8                                          | 0                                          | 21                                         | 6                                        | 30                                       | 2                                          | 0                                           | 0                                          |
| MAY                                                                            |                         |                                          |                                               |                                              |                                            |                                            |                                            |                                          |                                          |                                            |                                             |                                            |
| 13...                                                                          | 24                      | 50                                       | 20                                            | 0                                            | 6                                          | 0                                          | 0                                          | 4                                        | 30                                       | 0                                          | 0                                           | 100                                        |
| AUG.                                                                           |                         |                                          |                                               |                                              |                                            |                                            |                                            |                                          |                                          |                                            |                                             |                                            |
| 12...                                                                          | 11                      | --                                       | 10                                            | --                                           | --                                         | --                                         | 2                                          | 10                                       | 0                                        | --                                         | 0                                           | --                                         |
| 07014550 - INDIAN CREEK NEAR ANTHONIES MILL, MO. (LAT 38 07 20 LONG 090 58 00) |                         |                                          |                                               |                                              |                                            |                                            |                                            |                                          |                                          |                                            |                                             |                                            |
| <sup>1</sup> NOV., 1973                                                        |                         |                                          |                                               |                                              |                                            |                                            |                                            |                                          |                                          |                                            |                                             |                                            |
| 29...                                                                          | 54                      | 20                                       | 0                                             | 0                                            | 2                                          | 0                                          | 2                                          | 2                                        | 0                                        | 0                                          | 0                                           | 0                                          |
| MAR., 1974                                                                     |                         |                                          |                                               |                                              |                                            |                                            |                                            |                                          |                                          |                                            |                                             |                                            |
| 07...                                                                          | 37                      | 80                                       | 25                                            | 0                                            | 2                                          | 0                                          | 10                                         | 3                                        | 50                                       | 1                                          | 0                                           | 0                                          |
| MAY                                                                            |                         |                                          |                                               |                                              |                                            |                                            |                                            |                                          |                                          |                                            |                                             |                                            |
| 16...                                                                          | 132                     | 40                                       | 0                                             | 0                                            | 2                                          | 0                                          | 1                                          | 3                                        | 10                                       | 0                                          | 1                                           | 100                                        |
| AUG.                                                                           |                         |                                          |                                               |                                              |                                            |                                            |                                            |                                          |                                          |                                            |                                             |                                            |
| 14...                                                                          | 6.7                     | --                                       | 0                                             | --                                           | --                                         | --                                         | 1                                          | 5                                        | 0                                        | --                                         | 1                                           | --                                         |

<sup>1</sup>See footnote at end of table page 357.

## ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE                                                                           | DIS-SOLVED<br>CAL-<br>CIUM<br>(CA)<br>(MG/L) | DIS-SOLVED<br>MAG-<br>NE-<br>SIUM<br>(MG)<br>(MG/L) | DIS-SOLVED<br>SODIUM<br>(NA)<br>(MG/L) | DIS-SOLVED<br>PO-<br>SIUM<br>(K)<br>(MG/L) | BICAR-<br>BONATE<br>(HCO3)<br>(MG/L) | CAR-<br>BONATE<br>(CO3)<br>(MG/L) | DIS-SOLVED<br>SULFATE<br>(SO4)<br>(MG/L) | DIS-SOLVED<br>CHLO-<br>RIDE<br>(CL)<br>(MG/L) | DIS-SOLVED<br>FLUO-<br>RIDE<br>(F)<br>(MG/L) | TOTAL<br>NITRATE<br>(N)<br>(MG/L) | AMMONIA<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | DIS-SOLVED<br>ORTHO<br>PHOS-<br>PHATE<br>(PO4)<br>(MG/L) |
|--------------------------------------------------------------------------------|----------------------------------------------|-----------------------------------------------------|----------------------------------------|--------------------------------------------|--------------------------------------|-----------------------------------|------------------------------------------|-----------------------------------------------|----------------------------------------------|-----------------------------------|-------------------------------------------|----------------------------------------------------------|
| MERAMEC RIVER BASIN--Continued                                                 |                                              |                                                     |                                        |                                            |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 07013050 - CROOKED CREEK NEAR DILLARD, MO. (LAT 37 42 40 LONG 091 11 50)       |                                              |                                                     |                                        |                                            |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| <sup>1</sup> NOV., 1973                                                        |                                              |                                                     |                                        |                                            |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 26...                                                                          | 9.6                                          | 1.7                                                 | 3.5                                    | 2.1                                        | 54                                   | 0                                 | 37                                       | --                                            | .1                                           | .20                               | <.10                                      | <.02                                                     |
| MAR., 1974                                                                     |                                              |                                                     |                                        |                                            |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 04...                                                                          | 37                                           | 16                                                  | 3.8                                    | 1.5                                        | 185                                  | 0                                 | 37                                       | 11                                            | .1                                           | <.10                              | .10                                       | <.02                                                     |
| MAY                                                                            |                                              |                                                     |                                        |                                            |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 13...                                                                          | 92                                           | 21                                                  | 3.3                                    | 1.8                                        | 185                                  | 0                                 | 46                                       | 3.6                                           | .1                                           | .10                               | .10                                       | <.02                                                     |
| AUG.                                                                           |                                              |                                                     |                                        |                                            |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 12...                                                                          | --                                           | --                                                  | 3.0                                    | 1.5                                        | --                                   | --                                | 24                                       | 5.0                                           | --                                           | .10                               | .10                                       | .02                                                      |
| 07013100 - HUZZAH CREEK AT DILLARD, MO. (LAT 37 44 20 LONG 091 12 10)          |                                              |                                                     |                                        |                                            |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| <sup>1</sup> NOV., 1973                                                        |                                              |                                                     |                                        |                                            |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 26...                                                                          | 7.2                                          | 1.7                                                 | 1.3                                    | 1.3                                        | 73                                   | 0                                 | 14                                       | --                                            | .0                                           | .20                               | <.10                                      | <.02                                                     |
| MAR., 1974                                                                     |                                              |                                                     |                                        |                                            |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 04...                                                                          | 34                                           | 19                                                  | 2.7                                    | .9                                         | 210                                  | 0                                 | 7.0                                      | 8.9                                           | .1                                           | .20                               | .20                                       | <.02                                                     |
| MAY                                                                            |                                              |                                                     |                                        |                                            |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 13...                                                                          | 38                                           | 22                                                  | 2.0                                    | 1.1                                        | 222                                  | 0                                 | 8.0                                      | 3.6                                           | .0                                           | .10                               | .10                                       | <.02                                                     |
| AUG.                                                                           |                                              |                                                     |                                        |                                            |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 12...                                                                          | --                                           | --                                                  | 2.1                                    | 1.2                                        | --                                   | --                                | 7.0                                      | 4.0                                           | --                                           | .10                               | .10                                       | .02                                                      |
| 07013200 - HUZZAH CREEK NEAR DILLARD, MO. (LAT 37 46 40 LONG 091 10 00)        |                                              |                                                     |                                        |                                            |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| <sup>1</sup> NOV., 1973                                                        |                                              |                                                     |                                        |                                            |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 26...                                                                          | 8.0                                          | 1.9                                                 | 1.2                                    | 1.3                                        | 80                                   | 0                                 | 16                                       | --                                            | .1                                           | .20                               | .10                                       | .02                                                      |
| MAR., 1974                                                                     |                                              |                                                     |                                        |                                            |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 04...                                                                          | 34                                           | 19                                                  | 2.2                                    | .9                                         | 210                                  | 0                                 | 10                                       | 10                                            | .1                                           | <.10                              | .10                                       | <.02                                                     |
| MAY                                                                            |                                              |                                                     |                                        |                                            |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 13...                                                                          | 39                                           | 22                                                  | 2.2                                    | 1.0                                        | 227                                  | 0                                 | 9.0                                      | 3.6                                           | .1                                           | .10                               | .10                                       | .23                                                      |
| AUG.                                                                           |                                              |                                                     |                                        |                                            |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 12...                                                                          | --                                           | --                                                  | 3.4                                    | 1.2                                        | --                                   | --                                | 20                                       | 4.0                                           | --                                           | .20                               | .10                                       | .02                                                      |
| 07014050 - COURTOIS CREEK AT COURTOIS, MO. (LAT 37 45 50 LONG 090 04 00)       |                                              |                                                     |                                        |                                            |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| <sup>1</sup> NOV., 1973                                                        |                                              |                                                     |                                        |                                            |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 26...                                                                          | 4.4                                          | 1.5                                                 | 1.1                                    | 1.1                                        | 49                                   | 0                                 | 7.6                                      | --                                            | .0                                           | .20                               | <.10                                      | <.02                                                     |
| MAR., 1974                                                                     |                                              |                                                     |                                        |                                            |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 04...                                                                          | 26                                           | 13                                                  | 1.6                                    | .8                                         | 158                                  | 0                                 | 7.0                                      | 8.2                                           | .1                                           | <.10                              | .20                                       | <.02                                                     |
| MAY                                                                            |                                              |                                                     |                                        |                                            |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 13...                                                                          | 31                                           | 17                                                  | 1.7                                    | .9                                         | 171                                  | 0                                 | 7.0                                      | 2.6                                           | .0                                           | .10                               | .10                                       | .07                                                      |
| AUG.                                                                           |                                              |                                                     |                                        |                                            |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 12...                                                                          | --                                           | --                                                  | 1.9                                    | .9                                         | --                                   | --                                | 5.0                                      | 4.0                                           | --                                           | .10                               | .10                                       | .02                                                      |
| 07014060 - INDIAN CREEK AT COURTOIS, MO. (LAT 37 46 00 LONG 091 04 30)         |                                              |                                                     |                                        |                                            |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| <sup>1</sup> NOV., 1973                                                        |                                              |                                                     |                                        |                                            |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 26...                                                                          | 8.8                                          | 2.4                                                 | 3.3                                    | 1.7                                        | 80                                   | 0                                 | 21                                       | --                                            | .1                                           | <.10                              | <.10                                      | <.02                                                     |
| MAR., 1974                                                                     |                                              |                                                     |                                        |                                            |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 04...                                                                          | 40                                           | 29                                                  | 10                                     | 2.8                                        | 205                                  | 0                                 | 55                                       | 22                                            | .2                                           | <.10                              | .10                                       | <.02                                                     |
| MAY                                                                            |                                              |                                                     |                                        |                                            |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 13...                                                                          | 39                                           | 28                                                  | 8.0                                    | 1.9                                        | 210                                  | 0                                 | 50                                       | 9.7                                           | .1                                           | .10                               | .10                                       | .20                                                      |
| AUG.                                                                           |                                              |                                                     |                                        |                                            |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 12...                                                                          | --                                           | --                                                  | 14                                     | 3.0                                        | --                                   | --                                | 55                                       | 17                                            | --                                           | 10                                | .10                                       | .02                                                      |
| 07014550 - INDIAN CREEK NEAR ANTHONIES MILL, MO. (LAT 38 07 20 LONG 090 58 00) |                                              |                                                     |                                        |                                            |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| <sup>1</sup> NOV., 1973                                                        |                                              |                                                     |                                        |                                            |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 29...                                                                          | 15                                           | 3.6                                                 | 2.6                                    | 1.2                                        | 163                                  | 0                                 | 12                                       | --                                            | .0                                           | .20                               | <.10                                      | <.02                                                     |
| MAR., 1974                                                                     |                                              |                                                     |                                        |                                            |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 07...                                                                          | 32                                           | 20                                                  | 3.0                                    | 1.2                                        | 193                                  | 0                                 | 11                                       | 11                                            | .2                                           | <.10                              | .10                                       | <.02                                                     |
| MAY                                                                            |                                              |                                                     |                                        |                                            |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 16...                                                                          | 28                                           | 18                                                  | 2.5                                    | 1.1                                        | 163                                  | 0                                 | 11                                       | 8.7                                           | .0                                           | <.10                              | .10                                       | <.02                                                     |
| AUG.                                                                           |                                              |                                                     |                                        |                                            |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 14...                                                                          | --                                           | --                                                  | 5.7                                    | 1.8                                        | --                                   | --                                | 21                                       | 13                                            | --                                           | .10                               | .10                                       | .04                                                      |

## LOWER MISSISSIPPI RIVER BASIN

## ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE                                                                     | PHOS-<br>PHATE<br>(PO <sub>4</sub> )<br>(MG/L) | HARD-<br>NESS<br>(CA, MG)<br>(MG/L) | NON-<br>CAR-<br>BONATE<br>HARD-<br>NESS<br>(MG/L) | ALKA-<br>LINITY<br>AS<br>CACO <sub>3</sub><br>(MG/L) | SPE-<br>CIFIC<br>CON-<br>DUCT-<br>ANCE<br>(MICRO-<br>MHOS) | PH<br>(UNITS) | TUR-<br>BID-<br>ITY<br>(MG/L) | TEMPER-<br>ATURE<br>(DEG C) | DIS-<br>SOLVED<br>OXYGEN<br>(MG/L) | PER-<br>CENT<br>SATUR-<br>ATION | CHEM-<br>ICAL<br>OXYGEN<br>DEMAND<br>(LOW<br>LEVEL)<br>(MG/L) |
|--------------------------------------------------------------------------|------------------------------------------------|-------------------------------------|---------------------------------------------------|------------------------------------------------------|------------------------------------------------------------|---------------|-------------------------------|-----------------------------|------------------------------------|---------------------------------|---------------------------------------------------------------|
| MERAMEC RIVER BASIN--Continued                                           |                                                |                                     |                                                   |                                                      |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 07013050 - CROOKED CREEK NEAR DILLARD, MO. (LAT 37 42 40 LONG 091 11 50) |                                                |                                     |                                                   |                                                      |                                                            |               |                               |                             |                                    |                                 |                                                               |
| <sup>1</sup> NOV., 1973                                                  |                                                |                                     |                                                   |                                                      |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 26...                                                                    | .04                                            | 31                                  | 0                                                 | 44                                                   | 230                                                        | 7.6           | --                            | 12.0                        | 9.6                                | 89                              | 8                                                             |
| MAR., 1974                                                               |                                                |                                     |                                                   |                                                      |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 04...                                                                    | .03                                            | 159                                 | 7                                                 | 152                                                  | 300                                                        | 7.6           | <10                           | 16.0                        | 10.2                               | 103                             | 0                                                             |
| MAY                                                                      |                                                |                                     |                                                   |                                                      |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 13...                                                                    | .03                                            | 318                                 | 166                                               | 152                                                  | 380                                                        | 7.8           | <10                           | 20.0                        | 8.9                                | 97                              | 3                                                             |
| AUG.                                                                     |                                                |                                     |                                                   |                                                      |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 12...                                                                    | .05                                            | 236                                 | --                                                | 224                                                  | 440                                                        | 7.9           | --                            | 25.0                        | 8.4                                | 101                             | 2                                                             |
| 07013100 - HUZAZH CREEK AT DILLARD, MO. (LAT 37 44 20 LONG 091 12 10)    |                                                |                                     |                                                   |                                                      |                                                            |               |                               |                             |                                    |                                 |                                                               |
| <sup>1</sup> NOV., 1973                                                  |                                                |                                     |                                                   |                                                      |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 26...                                                                    | .06                                            | 25                                  | 0                                                 | 60                                                   | 180                                                        | 7.8           | --                            | 12.0                        | 9.8                                | 91                              | 4                                                             |
| MAR., 1974                                                               |                                                |                                     |                                                   |                                                      |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 04...                                                                    | .03                                            | 163                                 | 0                                                 | 172                                                  | 290                                                        | 8.0           | <10                           | 16.0                        | 11.2                               | 113                             | 12                                                            |
| MAY                                                                      |                                                |                                     |                                                   |                                                      |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 13...                                                                    | .04                                            | 185                                 | 3                                                 | 182                                                  | 350                                                        | 7.9           | <10                           | 20.0                        | 10.0                               | 109                             | 3                                                             |
| AUG.                                                                     |                                                |                                     |                                                   |                                                      |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 12...                                                                    | .05                                            | 208                                 | --                                                | 214                                                  | 390                                                        | 8.3           | --                            | 26.0                        | 8.7                                | 106                             | 3                                                             |
| 07013200 - HUZAZH CREEK NEAR DILLARD, MO. (LAT 37 46 40 LONG 091 10 00)  |                                                |                                     |                                                   |                                                      |                                                            |               |                               |                             |                                    |                                 |                                                               |
| <sup>1</sup> NOV., 1973                                                  |                                                |                                     |                                                   |                                                      |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 26...                                                                    | .12                                            | 28                                  | 0                                                 | 66                                                   | 172                                                        | 7.5           | --                            | 11.0                        | 10.0                               | 91                              | 24                                                            |
| MAR., 1974                                                               |                                                |                                     |                                                   |                                                      |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 04...                                                                    | .02                                            | 163                                 | 0                                                 | 172                                                  | 305                                                        | 8.0           | <10                           | 13.0                        | 10.1                               | 95                              | 0                                                             |
| MAY                                                                      |                                                |                                     |                                                   |                                                      |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 13...                                                                    | .23                                            | 187                                 | 1                                                 | 186                                                  | 360                                                        | 8.1           | <10                           | 17.0                        | 10.1                               | 104                             | 2                                                             |
| AUG.                                                                     |                                                |                                     |                                                   |                                                      |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 12...                                                                    | .05                                            | 228                                 | --                                                | 200                                                  | 420                                                        | 8.0           | --                            | 23.0                        | 8.7                                | 100                             | 0                                                             |

## ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE                                                                           | PHOS-<br>PHATE<br>(PD4)<br>(MG/L) | HARD-<br>NESS<br>(CA,MG)<br>(MG/L) | NON-<br>CAR-<br>BONATE<br>HARD-<br>NESS<br>(MG/L) | ALKA-<br>LINEITY<br>AS<br>CACO3<br>(MG/L) | SPE-<br>CIFIC<br>CON-<br>DUCT-<br>ANCE<br>(MICRO-<br>MHOS) | PH<br>(UNITS) | TUR-<br>BID-<br>ITY<br>(MG/L) | TEMPER-<br>ATURE<br>(DEG C) | DIS-<br>SOLVED<br>OXYGEN<br>(MG/L) | PER-<br>CENT<br>SATUR-<br>ATION | CHEM-<br>ICAL<br>OXYGEN<br>DEMAND<br>(LOW<br>LEVEL)<br>(MG/L) |
|--------------------------------------------------------------------------------|-----------------------------------|------------------------------------|---------------------------------------------------|-------------------------------------------|------------------------------------------------------------|---------------|-------------------------------|-----------------------------|------------------------------------|---------------------------------|---------------------------------------------------------------|
| MERAMEC RIVER BASIN--Continued                                                 |                                   |                                    |                                                   |                                           |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 07014050 - COURTOIS CREEK AT COURTOIS, MO. (LAT 37 45 50 LONG 090 04 00)       |                                   |                                    |                                                   |                                           |                                                            |               |                               |                             |                                    |                                 |                                                               |
| <sup>1</sup> NOV., 1973                                                        |                                   |                                    |                                                   |                                           |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 26...                                                                          | .06                               | 17                                 | 0                                                 | 40                                        | 130                                                        | 7.5           | --                            | 12.0                        | 9.8                                | 91                              | 11                                                            |
| MAR., 1974                                                                     |                                   |                                    |                                                   |                                           |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 04...                                                                          | .04                               | 119                                | 0                                                 | 130                                       | 210                                                        | 8.2           | <10                           | 14.0                        | 11.0                               | 106                             | 2                                                             |
| MAY                                                                            |                                   |                                    |                                                   |                                           |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 13...                                                                          | .08                               | 147                                | 7                                                 | 140                                       | 290                                                        | 7.8           | <10                           | 20.0                        | 9.7                                | 105                             | 0                                                             |
| AUG.                                                                           |                                   |                                    |                                                   |                                           |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 12...                                                                          | .06                               | 194                                | --                                                | 144                                       | 360                                                        | 6.5           | --                            | 25.0                        | 8.8                                | 106                             | 4                                                             |
| 07014060 - INDIAN CREEK AT COURTOIS, MO. (LAT 37 46 00 LONG 091 04 30)         |                                   |                                    |                                                   |                                           |                                                            |               |                               |                             |                                    |                                 |                                                               |
| <sup>1</sup> NOV., 1973                                                        |                                   |                                    |                                                   |                                           |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 26...                                                                          | .06                               | 32                                 | 0                                                 | 66                                        | 235                                                        | 7.8           | --                            | 12.0                        | 9.8                                | 91                              | 14                                                            |
| MAR., 1974                                                                     |                                   |                                    |                                                   |                                           |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 04...                                                                          | <.02                              | 219                                | 51                                                | 168                                       | 440                                                        | 7.9           | <10                           | 14.0                        | 10.1                               | 97                              | 1                                                             |
| MAY                                                                            |                                   |                                    |                                                   |                                           |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 13...                                                                          | .22                               | 215                                | 43                                                | 172                                       | 440                                                        | 8.0           | <10                           | 20.0                        | 9.7                                | 105                             | 4                                                             |
| AUG.                                                                           |                                   |                                    |                                                   |                                           |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 12...                                                                          | .05                               | 262                                | --                                                | 156                                       | 550                                                        | 7.2           | --                            | 25.0                        | 7.8                                | 94                              | 4                                                             |
| 07014550 - INDIAN CREEK NEAR ANTHONIES MILL, MO. (LAT 38 07 20 LONG 090 58 00) |                                   |                                    |                                                   |                                           |                                                            |               |                               |                             |                                    |                                 |                                                               |
| <sup>1</sup> NOV., 1973                                                        |                                   |                                    |                                                   |                                           |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 29...                                                                          | .04                               | 53                                 | 0                                                 | 134                                       | 350                                                        | 7.6           | --                            | 8.0                         | 10.6                               | 89                              | 13                                                            |
| MAR., 1974                                                                     |                                   |                                    |                                                   |                                           |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 07...                                                                          | .03                               | 161                                | 3                                                 | 158                                       | 310                                                        | 8.0           | <10                           | 13.0                        | 10.2                               | 96                              | 8                                                             |
| MAY                                                                            |                                   |                                    |                                                   |                                           |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 16...                                                                          | .03                               | 145                                | 11                                                | 134                                       | 290                                                        | 7.9           | <10                           | 17.0                        | 9.0                                | 93                              | 5                                                             |
| AUG.                                                                           |                                   |                                    |                                                   |                                           |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 14...                                                                          | .08                               | 248                                | --                                                | 236                                       | 300                                                        | 8.3           | --                            | 25.0                        | 10.1                               | 122                             | 5                                                             |



## LOWER MISSISSIPPI RIVER BASIN

## ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE | DIS-<br>CHARGE<br>(CFS) | DIS-<br>SOLVED<br>IRON<br>(FE)<br>(UG/L) | DIS-<br>SOLVED<br>MAN-<br>GANESE<br>(MN)<br>(UG/L) | DIS-<br>SOLVED<br>CHRO-<br>MIUM<br>(CR)<br>(UG/L) | DIS-<br>SOLVED<br>NICKEL<br>(NI)<br>(UG/L) | DIS-<br>SOLVED<br>SILVER<br>(AG)<br>(UG/L) | DIS-<br>SOLVED<br>COPPER<br>(CU)<br>(UG/L) | DIS-<br>SOLVED<br>LEAD<br>(PB)<br>(UG/L) | DIS-<br>SOLVED<br>ZINC<br>(ZN)<br>(UG/L) | DIS-<br>SOLVED<br>COBALT<br>(CO)<br>(UG/L) | DIS-<br>SOLVED<br>CAD-<br>MIUM<br>(CD)<br>(UG/L) | DIS-<br>SOLVED<br>BARIUM<br>(BA)<br>(UG/L) |
|------|-------------------------|------------------------------------------|----------------------------------------------------|---------------------------------------------------|--------------------------------------------|--------------------------------------------|--------------------------------------------|------------------------------------------|------------------------------------------|--------------------------------------------|--------------------------------------------------|--------------------------------------------|
|------|-------------------------|------------------------------------------|----------------------------------------------------|---------------------------------------------------|--------------------------------------------|--------------------------------------------|--------------------------------------------|------------------------------------------|------------------------------------------|--------------------------------------------|--------------------------------------------------|--------------------------------------------|

## MERAMEC RIVER BASIN--Continued

## 07014600 - LITTLE COURTOIS CREEK NR. ANTHONIES MILL, MO. (LAT 38 08 10 LONG 091 00 30)

|                         |     |    |     |    |    |    |    |    |    |    |   |     |
|-------------------------|-----|----|-----|----|----|----|----|----|----|----|---|-----|
| <sup>1</sup> NOV., 1973 |     |    |     |    |    |    |    |    |    |    |   |     |
| 29...                   | 10  | 30 | 110 | 0  | 4  | 0  | 5  | 3  | 0  | 5  | 0 | 0   |
| MAR., 1974              |     |    |     |    |    |    |    |    |    |    |   |     |
| 07...                   | 8.2 | 10 | 50  | 0  | 3  | 0  | 11 | 6  | 30 | 3  | 0 | 100 |
| MAY                     |     |    |     |    |    |    |    |    |    |    |   |     |
| 16...                   | 15  | 10 | 30  | 0  | 16 | 0  | 1  | 12 | 20 | 17 | 5 | 0   |
| AUG.                    |     |    |     |    |    |    |    |    |    |    |   |     |
| 24...                   | 5.3 | -- | 0   | -- | -- | -- | 2  | 4  | 0  | -- | 0 | --  |

## 07014650 - INDIAN CREEK NEAR SULLIVAN, MO. (LAT 38 11 40 LONG 090 58 50)

|                         |     |    |    |    |    |    |   |   |    |    |   |     |
|-------------------------|-----|----|----|----|----|----|---|---|----|----|---|-----|
| <sup>1</sup> NOV., 1973 |     |    |    |    |    |    |   |   |    |    |   |     |
| 29...                   | 128 | 20 | 20 | 0  | 2  | 0  | 4 | 1 | 0  | 0  | 0 | 0   |
| MAR., 1974              |     |    |    |    |    |    |   |   |    |    |   |     |
| 07...                   | 65  | 0  | 25 | 0  | 1  | 0  | 7 | 8 | 10 | 2  | 0 | 200 |
| MAY                     |     |    |    |    |    |    |   |   |    |    |   |     |
| 16...                   | 231 | 50 | 0  | 0  | 3  | 0  | 1 | 3 | 10 | 1  | 1 | 200 |
| AUG.                    |     |    |    |    |    |    |   |   |    |    |   |     |
| 14...                   | 12  | -- | 0  | -- | -- | -- | 1 | 5 | 0  | -- | 0 | --  |

## 07017280 - FLAT RIVER AT ELVINS, MO. (LAT 37 49 36 LONG 090 32 21)

|                         |    |    |   |   |   |   |   |   |    |   |   |   |
|-------------------------|----|----|---|---|---|---|---|---|----|---|---|---|
| <sup>1</sup> NOV., 1973 |    |    |   |   |   |   |   |   |    |   |   |   |
| 28...                   | 27 | 40 | 0 | 0 | 1 | 0 | 3 | 2 | 0  | 0 | 0 | 0 |
| MAR., 1974              |    |    |   |   |   |   |   |   |    |   |   |   |
| 06...                   | 28 | 80 | 0 | 0 | 0 | 0 | 9 | 3 | 10 | 1 | 0 | 0 |

## 07017300 - FLAT RIVER AT FLAT RIVER, MO. (LAT 37 52 00 LONG 090 40 30)

|                         |     |    |    |   |    |   |    |    |     |   |   |   |
|-------------------------|-----|----|----|---|----|---|----|----|-----|---|---|---|
| <sup>1</sup> NOV., 1973 |     |    |    |   |    |   |    |    |     |   |   |   |
| 28...                   | 35  | 40 | 20 | 0 | 11 | 0 | 6  | 11 | 100 | 8 | 0 | 0 |
| MAR., 1974              |     |    |    |   |    |   |    |    |     |   |   |   |
| 06...                   | 33  | 30 | 13 | 0 | 13 | 0 | 13 | 10 | 80  | 8 | 1 | 0 |
| MAY                     |     |    |    |   |    |   |    |    |     |   |   |   |
| 15...                   | 128 | 30 | 20 | 0 | 6  | 0 | 0  | 1  | 50  | 3 | 1 | 0 |

## ST. FRANCIS RIVER BASIN

## 07033850 - BREWERS CREEK NEAR ROSELLE, MO. (LAT 37 37 00 LONG 090 30 10)

|                         |     |    |    |   |   |   |    |   |    |   |   |     |
|-------------------------|-----|----|----|---|---|---|----|---|----|---|---|-----|
| <sup>1</sup> NOV., 1973 |     |    |    |   |   |   |    |   |    |   |   |     |
| 28...                   | 17  | 30 | 30 | 0 | 1 | 0 | 2  | 1 | 0  | 0 | 0 | 0   |
| MAR., 1974              |     |    |    |   |   |   |    |   |    |   |   |     |
| 06...                   | 9.6 | 10 | 25 | 0 | 2 | 0 | 13 | 5 | 0  | 1 | 1 | 0   |
| MAY                     |     |    |    |   |   |   |    |   |    |   |   |     |
| 15...                   | 18  | 20 | 10 | 0 | 2 | 0 | 0  | 5 | 10 | 0 | 1 | 100 |

## 07034450 - STOUTS CREEK AT IRONTON, MO. (LAT 37 36 50 LONG 090 37 50)

|                         |     |    |    |    |    |    |    |   |    |    |   |     |
|-------------------------|-----|----|----|----|----|----|----|---|----|----|---|-----|
| <sup>1</sup> NOV., 1973 |     |    |    |    |    |    |    |   |    |    |   |     |
| 28...                   | 30  | 50 | 40 | 0  | 0  | 0  | 1  | 1 | 0  | 0  | 0 | 0   |
| MAR., 1974              |     |    |    |    |    |    |    |   |    |    |   |     |
| 06...                   | 52  | 10 | 50 | 0  | 2  | 0  | 12 | 7 | 30 | 1  | 3 | 0   |
| MAY                     |     |    |    |    |    |    |    |   |    |    |   |     |
| 15...                   | 84  | 50 | 50 | 0  | 3  | 0  | 0  | 4 | 20 | 0  | 2 | 100 |
| AUG.                    |     |    |    |    |    |    |    |   |    |    |   |     |
| 14...                   | .28 | -- | 10 | -- | -- | -- | 3  | 5 | 0  | -- | 0 | --  |

## 07036940 - BIG CREEK AT CHLORIDE, MO. (LAT 37 27 40 LONG 090 41 10)

|                         |     |    |    |    |    |    |    |    |     |    |    |    |
|-------------------------|-----|----|----|----|----|----|----|----|-----|----|----|----|
| <sup>1</sup> NOV., 1973 |     |    |    |    |    |    |    |    |     |    |    |    |
| 28...                   | 81  | 40 | 58 | 0  | 1  | 0  | 4  | 8  | 20  | 0  | 6  | 0  |
| MAR., 1974              |     |    |    |    |    |    |    |    |     |    |    |    |
| 06...                   | 35  | 20 | 25 | 0  | 2  | 0  | 11 | 24 | 100 | 2  | 36 | 0  |
| MAY                     |     |    |    |    |    |    |    |    |     |    |    |    |
| 15...                   | 251 | 20 | 0  | 0  | 1  | 0  | 1  | 4  | 20  | 0  | 3  | 0  |
| AUG.                    |     |    |    |    |    |    |    |    |     |    |    |    |
| 14...                   | 1.1 | -- | 10 | -- | -- | -- | 2  | 6  | 10  | -- | 8  | -- |

## ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE                                                                                   | DIS-SOLVED<br>CAL-<br>CIUM<br>(CA)<br>(MG/L) | DIS-SOLVED<br>MAG-<br>NE-<br>SIUM<br>(MG)<br>(MG/L) | DIS-SOLVED<br>SODIUM<br>(NA)<br>(MG/L) | DIS-SOLVED<br>PO-<br>TAS-<br>SIUM<br>(K)<br>(MG/L) | BICAR-<br>BONATE<br>(HCO3)<br>(MG/L) | CAR-<br>BONATE<br>(CO3)<br>(MG/L) | DIS-SOLVED<br>SULFATE<br>(SO4)<br>(MG/L) | DIS-SOLVED<br>CHLO-<br>RIDE<br>(CL)<br>(MG/L) | DIS-SOLVED<br>FLUO-<br>RIDE<br>(F)<br>(MG/L) | TOTAL<br>NITRATE<br>(N)<br>(MG/L) | AMMONIA<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | DIS-SOLVED<br>ORTHO<br>PHOS-<br>PHATE<br>(PO4)<br>(MG/L) |
|----------------------------------------------------------------------------------------|----------------------------------------------|-----------------------------------------------------|----------------------------------------|----------------------------------------------------|--------------------------------------|-----------------------------------|------------------------------------------|-----------------------------------------------|----------------------------------------------|-----------------------------------|-------------------------------------------|----------------------------------------------------------|
| MERAMEC RIVER BASIN--Continued                                                         |                                              |                                                     |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 07014600 - LITTLE COURTOIS CREEK NR. ANTHONIES MILL, MO. (LAT 38 08 10 LONG 091 00 30) |                                              |                                                     |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| <sup>1</sup> NOV., 1973                                                                |                                              |                                                     |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 29...                                                                                  | 23                                           | 5.1                                                 | 60                                     | 14                                                 | 149                                  | 0                                 | 76                                       | --                                            | .9                                           | --                                | .30                                       | .05                                                      |
| MAR., 1974                                                                             |                                              |                                                     |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 07...                                                                                  | 52                                           | 24                                                  | 72                                     | 13                                                 | 176                                  | 0                                 | 70                                       | 110                                           | 1.3                                          | 1.0                               | .40                                       | <.02                                                     |
| MAY                                                                                    |                                              |                                                     |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 16...                                                                                  | 54                                           | 24                                                  | 51                                     | 10                                                 | 158                                  | 0                                 | 140                                      | 81                                            | 1.6                                          | 3.4                               | .20                                       | .13                                                      |
| AUG.                                                                                   |                                              |                                                     |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 24...                                                                                  | --                                           | --                                                  | 130                                    | 24                                                 | --                                   | --                                | 210                                      | 220                                           | --                                           | 9.2                               | .10                                       | .05                                                      |
| 07014650 - INDIAN CREEK NEAR SULLIVAN, MO. (LAT 38 11 40 LONG 090 58 50)               |                                              |                                                     |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| <sup>1</sup> NOV., 1973                                                                |                                              |                                                     |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 29...                                                                                  | 15                                           | 4.6                                                 | 12                                     | 3.0                                                | 171                                  | 0                                 | 21                                       | --                                            | .3                                           | .70                               | .10                                       | <.02                                                     |
| MAR., 1974                                                                             |                                              |                                                     |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 07...                                                                                  | 35                                           | 19                                                  | 10                                     | 2.6                                                | 190                                  | 0                                 | 16                                       | 24                                            | .3                                           | .50                               | .10                                       | <.02                                                     |
| MAY                                                                                    |                                              |                                                     |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 16...                                                                                  | 34                                           | 18                                                  | 7.4                                    | 2.2                                                | 176                                  | 0                                 | 17                                       | 11                                            | .2                                           | .40                               | .10                                       | .02                                                      |
| AUG.                                                                                   |                                              |                                                     |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 14...                                                                                  | --                                           | --                                                  | 31                                     | 5.6                                                | --                                   | --                                | 35                                       | 54                                            | --                                           | 1.5                               | .10                                       | .05                                                      |
| 07017280 - FLAT RIVER AT ELVINS, MO. (LAT 37 49 36 LONG 090 32 21)                     |                                              |                                                     |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| <sup>1</sup> NOV., 1973                                                                |                                              |                                                     |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 28...                                                                                  | 10                                           | 3.4                                                 | 4.0                                    | 1.8                                                | 122                                  | 0                                 | 15                                       | --                                            | .0                                           | .40                               | .10                                       | .04                                                      |
| MAR., 1974                                                                             |                                              |                                                     |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 06...                                                                                  | 21                                           | 12                                                  | 3.7                                    | 1.2                                                | 119                                  | 0                                 | 15                                       | 12                                            | .2                                           | <.10                              | .20                                       | .02                                                      |
| 07017300 - FLAT RIVER AT FLAT RIVER, MO. (LAT 37 52 00 LONG 090 40 30)                 |                                              |                                                     |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| <sup>1</sup> NOV., 1973                                                                |                                              |                                                     |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 28...                                                                                  | 16                                           | 4.8                                                 | 4.9                                    | 2.4                                                | 146                                  | 0                                 | 53                                       | --                                            | .0                                           | .50                               | .10                                       | .06                                                      |
| MAR., 1974                                                                             |                                              |                                                     |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 06...                                                                                  | 31                                           | 18                                                  | 4.8                                    | 1.7                                                | 146                                  | 0                                 | 50                                       | 14                                            | .3                                           | .10                               | .20                                       | .03                                                      |
| MAY                                                                                    |                                              |                                                     |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 15...                                                                                  | 21                                           | 12                                                  | 2.5                                    | 1.5                                                | 95                                   | 0                                 | 25                                       | 4.1                                           | .1                                           | .10                               | .10                                       | .05                                                      |
| ST. FRANCIS RIVER BASIN--Continued                                                     |                                              |                                                     |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 07033850 - BREWERS CREEK NEAR ROSELLE, MO. (LAT 37 37 00 LONG 090 30 10)               |                                              |                                                     |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| <sup>1</sup> NOV., 1973                                                                |                                              |                                                     |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 28...                                                                                  | 7.6                                          | 1.4                                                 | 22                                     | 9.6                                                | 78                                   | 0                                 | 28                                       | --                                            | .5                                           | .60                               | .10                                       | .05                                                      |
| MAR., 1974                                                                             |                                              |                                                     |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 06...                                                                                  | 11                                           | 4.3                                                 | 13                                     | 5.5                                                | 54                                   | 0                                 | 24                                       | 8.2                                           | .5                                           | .70                               | .10                                       | <.02                                                     |
| MAY                                                                                    |                                              |                                                     |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 15...                                                                                  | 16                                           | 5.8                                                 | 14                                     | 6.4                                                | 66                                   | 0                                 | 27                                       | 14                                            | .7                                           | .80                               | .10                                       | <.02                                                     |
| 07034450 - STOUTS CREEK AT IRONTON, MO. (LAT 37 36 50 LONG 090 37 50)                  |                                              |                                                     |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| <sup>1</sup> NOV., 1973                                                                |                                              |                                                     |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 28...                                                                                  | 7.2                                          | 1.7                                                 | 5.3                                    | 2.7                                                | 68                                   | 0                                 | 15                                       | --                                            | .0                                           | .50                               | .10                                       | .09                                                      |
| MAR., 1974                                                                             |                                              |                                                     |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 06...                                                                                  | 11                                           | 4.8                                                 | 4.1                                    | 1.9                                                | 56                                   | 0                                 | 15                                       | 12                                            | .2                                           | .10                               | <.10                                      | .06                                                      |
| MAY                                                                                    |                                              |                                                     |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 15...                                                                                  | 9.6                                          | 5.3                                                 | 2.3                                    | 1.6                                                | 46                                   | 0                                 | 11                                       | 6.1                                           | .1                                           | .10                               | .10                                       | .04                                                      |
| AUG.                                                                                   |                                              |                                                     |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 14...                                                                                  | --                                           | --                                                  | 36                                     | 14                                                 | --                                   | --                                | 60                                       | 31                                            | --                                           | 1.1                               | .10                                       | .04                                                      |
| 07036940 - BIG CREEK AT CHLORIDE, MO. (LAT 37 27 40 LONG 090 41 10)                    |                                              |                                                     |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| <sup>1</sup> NOV., 1973                                                                |                                              |                                                     |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 28...                                                                                  | 5.6                                          | 1.4                                                 | 1.4                                    | 1.3                                                | 54                                   | 0                                 | 11                                       | --                                            | .0                                           | .20                               | .10                                       | <.02                                                     |
| MAR., 1974                                                                             |                                              |                                                     |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 06...                                                                                  | 14                                           | 8.2                                                 | 2.3                                    | 1.5                                                | 73                                   | 0                                 | 12                                       | 12                                            | .2                                           | <.10                              | .10                                       | <.02                                                     |
| MAY                                                                                    |                                              |                                                     |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 15...                                                                                  | 6.4                                          | 4.3                                                 | 1.4                                    | 1.3                                                | 34                                   | 0                                 | 10                                       | 3.1                                           | .0                                           | <.10                              | .10                                       | .04                                                      |
| AUG.                                                                                   |                                              |                                                     |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 14...                                                                                  | --                                           | --                                                  | 6.6                                    | 2.7                                                | --                                   | --                                | 20                                       | 12                                            | --                                           | .10                               | .10                                       | .03                                                      |

## LOWER MISSISSIPPI RIVER BASIN

## ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE                                                                                   | PHOS-<br>PHATE<br>(PO <sub>4</sub> )<br>(MG/L) | HARD-<br>NESS<br>(CA, MG)<br>(MG/L) | NON-<br>CAR-<br>BONATE<br>HARD-<br>NESS<br>(MG/L) | ALKA-<br>LINIT-<br>Y AS<br>CACO <sub>3</sub><br>(MG/L) | SPE-<br>CIFIC<br>CON-<br>DUCT-<br>ANCE<br>(MICRO-<br>MHOS) | PH<br>(UNITS) | TUR-<br>BID-<br>ITY<br>(MG/L) | TEMPER-<br>ATURE<br>(DEG C) | DIS-<br>SOLVED<br>OXYGEN<br>(MG/L) | PER-<br>CENT<br>SATUR-<br>ATION | CHEM-<br>ICAL<br>OXYGEN<br>DEMAND<br>(LOW<br>LEVEL)<br>(MG/L) |
|----------------------------------------------------------------------------------------|------------------------------------------------|-------------------------------------|---------------------------------------------------|--------------------------------------------------------|------------------------------------------------------------|---------------|-------------------------------|-----------------------------|------------------------------------|---------------------------------|---------------------------------------------------------------|
| MERAMEC RIVER BASIN--Continued                                                         |                                                |                                     |                                                   |                                                        |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 07014600 - LITTLE COURTOIS CREEK NR. ANTHONIES MILL, MO. (LAT 38 08 10 LONG 091 00 30) |                                                |                                     |                                                   |                                                        |                                                            |               |                               |                             |                                    |                                 |                                                               |
| <sup>1</sup> NOV., 1973                                                                |                                                |                                     |                                                   |                                                        |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 29...                                                                                  | .09                                            | 78                                  | 0                                                 | 122                                                    | 900                                                        | 7.7           | --                            | 10.0                        | 10.6                               | 94                              | 4                                                             |
| MAR., 1974                                                                             |                                                |                                     |                                                   |                                                        |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 07...                                                                                  | .04                                            | 231                                 | 87                                                | 144                                                    | 800                                                        | 7.9           | 10                            | 16.0                        | 10.5                               | 106                             | 3                                                             |
| MAY                                                                                    |                                                |                                     |                                                   |                                                        |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 16...                                                                                  | .14                                            | 235                                 | 105                                               | 130                                                    | 750                                                        | 8.0           | <10                           | 20.0                        | 8.8                                | 96                              | 4                                                             |
| AUG.                                                                                   |                                                |                                     |                                                   |                                                        |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 24...                                                                                  | .10                                            | 410                                 | --                                                | 130                                                    | 1500                                                       | 8.0           | --                            | 26.0                        | 8.1                                | 98                              | 7                                                             |
| 07014650 - INDIAN CREEK NEAR SULLIVAN, MO. (LAT 38 11 40 LONG 090 58 50)               |                                                |                                     |                                                   |                                                        |                                                            |               |                               |                             |                                    |                                 |                                                               |
| <sup>1</sup> NOV., 1973                                                                |                                                |                                     |                                                   |                                                        |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 29...                                                                                  | .05                                            | 57                                  | 0                                                 | 140                                                    | 440                                                        | 7.8           | --                            | 10.0                        | 10.3                               | 91                              | 8                                                             |
| MAR., 1974                                                                             |                                                |                                     |                                                   |                                                        |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 07...                                                                                  | .03                                            | 164                                 | 8                                                 | 156                                                    | 370                                                        | 8.0           | <10                           | 14.0                        | 10.8                               | 104                             | 0                                                             |
| MAY                                                                                    |                                                |                                     |                                                   |                                                        |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 16...                                                                                  | .04                                            | 157                                 | 13                                                | 144                                                    | 350                                                        | 8.0           | <10                           | 18.0                        | 9.0                                | 94                              | 6                                                             |
| AUG.                                                                                   |                                                |                                     |                                                   |                                                        |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 14...                                                                                  | .08                                            | 262                                 | --                                                | 196                                                    | 600                                                        | 8.3           | --                            | 26.0                        | 9.9                                | 121                             | 3                                                             |
| 07017280 - FLAT RIVER AT ELVINS, MO. (LAT 37 49 36 LONG 090 32 21)                     |                                                |                                     |                                                   |                                                        |                                                            |               |                               |                             |                                    |                                 |                                                               |
| <sup>1</sup> NOV., 1973                                                                |                                                |                                     |                                                   |                                                        |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 28...                                                                                  | .08                                            | 40                                  | 0                                                 | 100                                                    | 280                                                        | 8.0           | --                            | 11.0                        | 10.7                               | 97                              | 14                                                            |
| MAR., 1974                                                                             |                                                |                                     |                                                   |                                                        |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 06...                                                                                  | .06                                            | 101                                 | 3                                                 | 98                                                     | 190                                                        | 8.3           | <10                           | 16.0                        | 11.9                               | 120                             | 18                                                            |
| 07017300 - FLAT RIVER AT FLAT RIVER, MO. (LAT 37 52 00 LONG 090 40 30)                 |                                                |                                     |                                                   |                                                        |                                                            |               |                               |                             |                                    |                                 |                                                               |
| <sup>1</sup> NOV., 1973                                                                |                                                |                                     |                                                   |                                                        |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 28...                                                                                  | .13                                            | 61                                  | 0                                                 | 120                                                    | 420                                                        | 7.8           | --                            | 11.0                        | 10.5                               | 95                              | 24                                                            |
| MAR., 1974                                                                             |                                                |                                     |                                                   |                                                        |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 06...                                                                                  | .07                                            | 153                                 | 33                                                | 120                                                    | 310                                                        | 8.1           | <10                           | 17.0                        | 10.5                               | 108                             | 6                                                             |
| MAY                                                                                    |                                                |                                     |                                                   |                                                        |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 15...                                                                                  | .07                                            | 101                                 | 23                                                | 78                                                     | 215                                                        | 7.8           | <10                           | 20.0                        | 9.0                                | 98                              | 14                                                            |

## ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE                                                                     | PHOS-<br>PHATE<br>(PO4)<br>(MG/L) | HARD-<br>NESS<br>(CA,MG)<br>(MG/L) | NON-<br>CAR-<br>BONATE<br>HARD-<br>NESS<br>(MG/L) | ALKA-<br>LINITY<br>AS<br>CACO3<br>(MG/L) | SPE-<br>CIFIC<br>CON-<br>DUCT-<br>ANCE<br>(MICRO-<br>MHOS) | PH<br>(UNITS) | TUR-<br>BID-<br>ITY<br>(MG/L) | TEMPER-<br>ATURE<br>(DEG C) | DIS-<br>SOLVED<br>OXYGEN<br>(MG/L) | PER-<br>CENT<br>SATUR-<br>ATION | CHEM-<br>ICAL<br>OXYGEN<br>DEMAND<br>(LOW<br>LEVEL)<br>(MG/L) |
|--------------------------------------------------------------------------|-----------------------------------|------------------------------------|---------------------------------------------------|------------------------------------------|------------------------------------------------------------|---------------|-------------------------------|-----------------------------|------------------------------------|---------------------------------|---------------------------------------------------------------|
| ST. FRANCIS RIVER BASIN--Continued                                       |                                   |                                    |                                                   |                                          |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 07033850 - BREWERS CREEK NEAR ROSELLE, MO. (LAT 37 37 00 LONG 090 30 10) |                                   |                                    |                                                   |                                          |                                                            |               |                               |                             |                                    |                                 |                                                               |
| <sup>1</sup> NOV., 1973                                                  |                                   |                                    |                                                   |                                          |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 28...                                                                    | .07                               | 25                                 | 0                                                 | 64                                       | 310                                                        | 7.5           | --                            | 11.0                        | 10.2                               | 93                              | 5                                                             |
| MAR., 1974                                                               |                                   |                                    |                                                   |                                          |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 06...                                                                    | .04                               | 46                                 | 2                                                 | 44                                       | 170                                                        | 7.2           | <10                           | 15.0                        | 10.3                               | 102                             | 7                                                             |
| MAY                                                                      |                                   |                                    |                                                   |                                          |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 15...                                                                    | .03                               | 64                                 | 10                                                | 54                                       | 225                                                        | 7.3           | <10                           | 19.0                        | 9.0                                | 96                              | 8                                                             |
| 07034450 - STOUTS CREEK AT IRONTON, MO. (LAT 37 36 50 LONG 090 37 50)    |                                   |                                    |                                                   |                                          |                                                            |               |                               |                             |                                    |                                 |                                                               |
| <sup>1</sup> NOV., 1973                                                  |                                   |                                    |                                                   |                                          |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 28...                                                                    | .14                               | 25                                 | 0                                                 | 56                                       | 200                                                        | 7.4           | --                            | 11.0                        | 10.2                               | 93                              | 4                                                             |
| MAR., 1974                                                               |                                   |                                    |                                                   |                                          |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 06...                                                                    | .11                               | 48                                 | 2                                                 | 46                                       | 125                                                        | 7.6           | <10                           | 12.0                        | 11.0                               | 102                             | 5                                                             |
| MAY                                                                      |                                   |                                    |                                                   |                                          |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 15...                                                                    | .08                               | 46                                 | 8                                                 | 38                                       | 105                                                        | 7.6           | <10                           | 19.0                        | 9.1                                | 97                              | 6                                                             |
| AUG.                                                                     |                                   |                                    |                                                   |                                          |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 14...                                                                    | .09                               | 168                                | --                                                | 150                                      | 550                                                        | 8.8           | --                            | 26.0                        | 16.6                               | 202                             | 10                                                            |
| 07036940 - BIG CREEK AT CHLORIDE, MO. (LAT 37 27 40 LONG 090 41 10)      |                                   |                                    |                                                   |                                          |                                                            |               |                               |                             |                                    |                                 |                                                               |
| <sup>1</sup> NOV., 1973                                                  |                                   |                                    |                                                   |                                          |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 28...                                                                    | .06                               | 20                                 | 0                                                 | 44                                       | 140                                                        | 7.5           | --                            | 11.0                        | 10.5                               | 95                              | 1                                                             |
| MAR., 1974                                                               |                                   |                                    |                                                   |                                          |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 06...                                                                    | .04                               | 68                                 | 8                                                 | 60                                       | 140                                                        | 7.4           | <10                           | 12.0                        | 11.1                               | 103                             | 1                                                             |
| MAY                                                                      |                                   |                                    |                                                   |                                          |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 15...                                                                    | .10                               | 34                                 | 6                                                 | 28                                       | 80                                                         | 7.2           | 14                            | 15.0                        | 9.9                                | 98                              | 9                                                             |
| AUG.                                                                     |                                   |                                    |                                                   |                                          |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 14...                                                                    | .05                               | 158                                | --                                                | 144                                      | 320                                                        | 7.6           | --                            | 23.0                        | 8.0                                | 91                              | 2                                                             |

## ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE                                                                         | DIS-<br>CHARGE<br>(CFS) | DIS-<br>SOLVED<br>IRON<br>(FE)<br>(UG/L) | DIS-<br>SOLVED<br>MAN-<br>GANESE<br>(MN)<br>(UG/L) | DIS-<br>SOLVED<br>CHRO-<br>MIUM<br>(CR)<br>(UG/L) | DIS-<br>SOLVED<br>NICKEL<br>(NI)<br>(UG/L) | DIS-<br>SOLVED<br>SILVER<br>(AG)<br>(UG/L) | DIS-<br>SOLVED<br>COPPER<br>(CU)<br>(UG/L) | DIS-<br>SOLVED<br>LEAD<br>(PB)<br>(UG/L) | DIS-<br>SOLVED<br>ZINC<br>(ZN)<br>(UG/L) | DIS-<br>SOLVED<br>COBALT<br>(CO)<br>(UG/L) | DIS-<br>SOLVED<br>CAD-<br>MIUM<br>(CD)<br>(UG/L) | DIS-<br>SOLVED<br>BARIUM<br>(BA)<br>(UG/L) |
|------------------------------------------------------------------------------|-------------------------|------------------------------------------|----------------------------------------------------|---------------------------------------------------|--------------------------------------------|--------------------------------------------|--------------------------------------------|------------------------------------------|------------------------------------------|--------------------------------------------|--------------------------------------------------|--------------------------------------------|
| ST. FRANCIS RIVER BASIN--Continued                                           |                         |                                          |                                                    |                                                   |                                            |                                            |                                            |                                          |                                          |                                            |                                                  |                                            |
| 07036970 - BIG CREEK AT ANNAPOLIS, MO. (LAT 37 21 20 LONG 090 41 20)         |                         |                                          |                                                    |                                                   |                                            |                                            |                                            |                                          |                                          |                                            |                                                  |                                            |
| <sup>1</sup> NOV., 1973                                                      |                         |                                          |                                                    |                                                   |                                            |                                            |                                            |                                          |                                          |                                            |                                                  |                                            |
| 28...                                                                        | 365                     | 20                                       | 0                                                  | 0                                                 | 1                                          | 0                                          | 3                                          | 1                                        | 0                                        | 0                                          | 2                                                | 100                                        |
| MAR., 1974                                                                   |                         |                                          |                                                    |                                                   |                                            |                                            |                                            |                                          |                                          |                                            |                                                  |                                            |
| 06...                                                                        | 156                     | 100                                      | 0                                                  | 0                                                 | 1                                          | 0                                          | 15                                         | 7                                        | 10                                       | 2                                          | 1                                                | 0                                          |
| MAY                                                                          |                         |                                          |                                                    |                                                   |                                            |                                            |                                            |                                          |                                          |                                            |                                                  |                                            |
| 15...                                                                        | 897                     | 80                                       | 20                                                 | 0                                                 | 2                                          | 0                                          | 0                                          | 10                                       | 10                                       | 1                                          | 3                                                | 100                                        |
| AUG.                                                                         |                         |                                          |                                                    |                                                   |                                            |                                            |                                            |                                          |                                          |                                            |                                                  |                                            |
| 14...                                                                        | 6.3                     | --                                       | 10                                                 | --                                                | --                                         | --                                         | 1                                          | 6                                        | 0                                        | --                                         | 1                                                | --                                         |
| WHITE RIVER BASIN                                                            |                         |                                          |                                                    |                                                   |                                            |                                            |                                            |                                          |                                          |                                            |                                                  |                                            |
| 07061125 - WEST FORK BLACK RIVER NR GREELEY MO (LAT 37 30 25 LONG 091 09 40) |                         |                                          |                                                    |                                                   |                                            |                                            |                                            |                                          |                                          |                                            |                                                  |                                            |
| <sup>1</sup> NOV., 1973                                                      |                         |                                          |                                                    |                                                   |                                            |                                            |                                            |                                          |                                          |                                            |                                                  |                                            |
| 27...                                                                        | 187                     | 30                                       | 0                                                  | 0                                                 | 0                                          | 0                                          | 3                                          | 1                                        | 0                                        | 0                                          | 0                                                | 0                                          |
| MAR., 1974                                                                   |                         |                                          |                                                    |                                                   |                                            |                                            |                                            |                                          |                                          |                                            |                                                  |                                            |
| 05...                                                                        | 54                      | 10                                       | 0                                                  | 0                                                 | 0                                          | 0                                          | 9                                          | 1                                        | 20                                       | 1                                          | 0                                                | 0                                          |
| MAY                                                                          |                         |                                          |                                                    |                                                   |                                            |                                            |                                            |                                          |                                          |                                            |                                                  |                                            |
| 14...                                                                        | 92                      | 40                                       | 0                                                  | 0                                                 | 1                                          | 0                                          | 0                                          | 2                                        | 10                                       | 0                                          | 1                                                | 0                                          |
| AUG.                                                                         |                         |                                          |                                                    |                                                   |                                            |                                            |                                            |                                          |                                          |                                            |                                                  |                                            |
| 13...                                                                        | 11                      | --                                       | 0                                                  | --                                                | --                                         | --                                         | 2                                          | 6                                        | 0                                        | --                                         | 1                                                | --                                         |
| 07061130 - BILLS CREEK NR GREELEY MO (LAT 37 30 04 LONG 091 08 26)           |                         |                                          |                                                    |                                                   |                                            |                                            |                                            |                                          |                                          |                                            |                                                  |                                            |
| <sup>1</sup> NOV., 1973                                                      |                         |                                          |                                                    |                                                   |                                            |                                            |                                            |                                          |                                          |                                            |                                                  |                                            |
| 27...                                                                        | 57                      | 30                                       | 0                                                  | 0                                                 | 1                                          | 0                                          | 4                                          | 3                                        | 0                                        | 1                                          | 0                                                | 0                                          |
| MAR., 1974                                                                   |                         |                                          |                                                    |                                                   |                                            |                                            |                                            |                                          |                                          |                                            |                                                  |                                            |
| 05...                                                                        | 24                      | 20                                       | 0                                                  | 0                                                 | 0                                          | 0                                          | 6                                          | 8                                        | 90                                       | 0                                          | 0                                                | 0                                          |
| MAY                                                                          |                         |                                          |                                                    |                                                   |                                            |                                            |                                            |                                          |                                          |                                            |                                                  |                                            |
| 14...                                                                        | 23                      | 10                                       | 20                                                 | 0                                                 | 1                                          | 0                                          | 0                                          | 5                                        | 20                                       | 0                                          | 1                                                | 0                                          |
| AUG.                                                                         |                         |                                          |                                                    |                                                   |                                            |                                            |                                            |                                          |                                          |                                            |                                                  |                                            |
| 13...                                                                        | 2.1                     | --                                       | 0                                                  | --                                                | --                                         | --                                         | 1                                          | 7                                        | 0                                        | --                                         | 1                                                | --                                         |
| 07061135 - W. F. BLACK RIVER AT WEST FORK, MO. (LAT 37 29 32 LONG 091 06 29) |                         |                                          |                                                    |                                                   |                                            |                                            |                                            |                                          |                                          |                                            |                                                  |                                            |
| <sup>1</sup> NOV., 1973                                                      |                         |                                          |                                                    |                                                   |                                            |                                            |                                            |                                          |                                          |                                            |                                                  |                                            |
| 27...                                                                        | 457                     | 60                                       | 0                                                  | 0                                                 | 0                                          | 0                                          | 1                                          | 1                                        | 0                                        | 0                                          | 0                                                | 0                                          |
| MAR., 1974                                                                   |                         |                                          |                                                    |                                                   |                                            |                                            |                                            |                                          |                                          |                                            |                                                  |                                            |
| 05...                                                                        | 92                      | 10                                       | 0                                                  | 0                                                 | 0                                          | 0                                          | 16                                         | 9                                        | 10                                       | 1                                          | 0                                                | 0                                          |
| MAY                                                                          |                         |                                          |                                                    |                                                   |                                            |                                            |                                            |                                          |                                          |                                            |                                                  |                                            |
| 14...                                                                        | 116                     | 10                                       | 0                                                  | 0                                                 | 1                                          | 0                                          | 0                                          | 4                                        | 30                                       | 0                                          | 1                                                | 0                                          |
| AUG.                                                                         |                         |                                          |                                                    |                                                   |                                            |                                            |                                            |                                          |                                          |                                            |                                                  |                                            |
| 13...                                                                        | 12                      | --                                       | 0                                                  | --                                                | --                                         | --                                         | 1                                          | 5                                        | 0                                        | --                                         | 0                                                | --                                         |
| 07061140 - BEE FORK AB HWY T NR. BUNKER, MO. (LAT 37 26 40 LONG 091 06 00)   |                         |                                          |                                                    |                                                   |                                            |                                            |                                            |                                          |                                          |                                            |                                                  |                                            |
| <sup>1</sup> NOV., 1973                                                      |                         |                                          |                                                    |                                                   |                                            |                                            |                                            |                                          |                                          |                                            |                                                  |                                            |
| 27...                                                                        | 81                      | 30                                       | 0                                                  | 0                                                 | 0                                          | 0                                          | 2                                          | 0                                        | 0                                        | 0                                          | 0                                                | 0                                          |
| MAR., 1974                                                                   |                         |                                          |                                                    |                                                   |                                            |                                            |                                            |                                          |                                          |                                            |                                                  |                                            |
| 05...                                                                        | 18                      | 10                                       | 0                                                  | 0                                                 | 0                                          | 0                                          | 7                                          | 5                                        | 10                                       | 1                                          | 0                                                | 0                                          |
| MAY                                                                          |                         |                                          |                                                    |                                                   |                                            |                                            |                                            |                                          |                                          |                                            |                                                  |                                            |
| 14...                                                                        | 18                      | 30                                       | 0                                                  | 0                                                 | 2                                          | 0                                          | 0                                          | 2                                        | 20                                       | 1                                          | 0                                                | 0                                          |
| AUG.                                                                         |                         |                                          |                                                    |                                                   |                                            |                                            |                                            |                                          |                                          |                                            |                                                  |                                            |
| 13...                                                                        | .82                     | --                                       | 0                                                  | --                                                | --                                         | --                                         | 1                                          | 6                                        | 0                                        | --                                         | 0                                                | --                                         |
| 07061145 - BEE FORK BL HWY T NR. BUNKER, MO. (LAT 37 26 30 LONG 091 05 30)   |                         |                                          |                                                    |                                                   |                                            |                                            |                                            |                                          |                                          |                                            |                                                  |                                            |
| <sup>1</sup> MAR., 1974                                                      |                         |                                          |                                                    |                                                   |                                            |                                            |                                            |                                          |                                          |                                            |                                                  |                                            |
| 05...                                                                        | 35                      | 20                                       | 170                                                | 0                                                 | 8                                          | 0                                          | 7                                          | 7                                        | 20                                       | 2                                          | 0                                                | 0                                          |
| MAY                                                                          |                         |                                          |                                                    |                                                   |                                            |                                            |                                            |                                          |                                          |                                            |                                                  |                                            |
| 14...                                                                        | 44                      | 20                                       | 180                                                | 0                                                 | 4                                          | 1                                          | 1                                          | 3                                        | 20                                       | 1                                          | 0                                                | 0                                          |
| AUG.                                                                         |                         |                                          |                                                    |                                                   |                                            |                                            |                                            |                                          |                                          |                                            |                                                  |                                            |
| 13...                                                                        | 1.5                     | --                                       | 0                                                  | --                                                | --                                         | --                                         | 1                                          | 7                                        | 0                                        | --                                         | 1                                                | --                                         |

## ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

## WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE                                                                         | DIS-SOLVED<br>CAL-<br>CIUM<br>(CA)<br>(MG/L) | DIS-SOLVED<br>MAG-<br>NE-<br>SIUM<br>(MG) | DIS-SOLVED<br>SODIUM<br>(NA)<br>(MG/L) | DIS-SOLVED<br>PO-<br>TAS-<br>SIUM<br>(K)<br>(MG/L) | BICAR-<br>BONATE<br>(HCO3)<br>(MG/L) | CAR-<br>BONATE<br>(CO3)<br>(MG/L) | DIS-SOLVED<br>SULFATE<br>(SO4)<br>(MG/L) | DIS-SOLVED<br>CHLO-<br>RIDE<br>(CL)<br>(MG/L) | DIS-SOLVED<br>FLUO-<br>RIDE<br>(F)<br>(MG/L) | TOTAL<br>NITRATE<br>(N)<br>(MG/L) | AMMONIA<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | DIS-SOLVED<br>ORTHO<br>PHOS-<br>PHATE<br>(PO4)<br>(MG/L) |
|------------------------------------------------------------------------------|----------------------------------------------|-------------------------------------------|----------------------------------------|----------------------------------------------------|--------------------------------------|-----------------------------------|------------------------------------------|-----------------------------------------------|----------------------------------------------|-----------------------------------|-------------------------------------------|----------------------------------------------------------|
| ST. FRANCIS RIVER BASIN--Continued                                           |                                              |                                           |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 07036970 - BIG CREEK AT ANNAPOLIS, MO. (LAT 37 21 20 LONG 090 41 20)         |                                              |                                           |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| <sup>1</sup> NOV., 1973                                                      |                                              |                                           |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 28...                                                                        | 6.4                                          | 1.7                                       | 1.6                                    | 1.1                                                | 66                                   | 0                                 | 7.8                                      | --                                            | .0                                           | .20                               | <.10                                      | <.02                                                     |
| MAR., 1974                                                                   |                                              |                                           |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 06...                                                                        | 15                                           | 8.6                                       | 2.4                                    | 1.1                                                | 88                                   | 0                                 | 12                                       | 9.7                                           | .1                                           | .10                               | .10                                       | .02                                                      |
| MAY                                                                          |                                              |                                           |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 15...                                                                        | 8.8                                          | 5.3                                       | 1.4                                    | 1.1                                                | 46                                   | 0                                 | 10                                       | 3.6                                           | .0                                           | <.10                              | .10                                       | .02                                                      |
| AUG.                                                                         |                                              |                                           |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 14...                                                                        | --                                           | --                                        | 5.2                                    | 2.1                                                | --                                   | --                                | 7.0                                      | 6.0                                           | --                                           | .10                               | .10                                       | .03                                                      |
| WHITE RIVER BASIN--Continued                                                 |                                              |                                           |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 07061125 - WEST FORK BLACK RIVER NR GREELEY MO (LAT 37 30 25 LONG 091 09 40) |                                              |                                           |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| <sup>1</sup> NOV., 1973                                                      |                                              |                                           |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 27...                                                                        | 6.4                                          | 1.9                                       | 1.4                                    | 1.0                                                | 73                                   | 0                                 | 7.2                                      | --                                            | .0                                           | .30                               | <.10                                      | <.02                                                     |
| MAR., 1974                                                                   |                                              |                                           |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 05...                                                                        | 25                                           | 12                                        | 1.8                                    | .8                                                 | 149                                  | 0                                 | 8.0                                      | 8.2                                           | .1                                           | .10                               | .20                                       | <.02                                                     |
| MAY                                                                          |                                              |                                           |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 14...                                                                        | 26                                           | 15                                        | 1.5                                    | 1.0                                                | 154                                  | 0                                 | 7.0                                      | 6.6                                           | .1                                           | .10                               | .10                                       | <.02                                                     |
| AUG.                                                                         |                                              |                                           |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 13...                                                                        | --                                           | --                                        | 1.7                                    | .9                                                 | --                                   | --                                | 4.0                                      | 3.0                                           | --                                           | .10                               | .10                                       | .03                                                      |
| 07061130 - BILLS CREEK NR GREELEY MO (LAT 37 30 04 LONG 091 08 26)           |                                              |                                           |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| <sup>1</sup> NOV., 1973                                                      |                                              |                                           |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 27...                                                                        | 9.2                                          | 2.9                                       | 4.1                                    | 1.3                                                | 115                                  | 0                                 | 8.6                                      | --                                            | .0                                           | .20                               | <.10                                      | <.02                                                     |
| MAR., 1974                                                                   |                                              |                                           |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 05...                                                                        | 34                                           | 18                                        | 10                                     | 1.8                                                | 210                                  | 0                                 | 11                                       | 16                                            | .3                                           | .20                               | .10                                       | <.02                                                     |
| MAY                                                                          |                                              |                                           |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 14...                                                                        | 35                                           | 20                                        | 10                                     | 1.7                                                | 202                                  | 0                                 | 14                                       | 10                                            | .2                                           | .20                               | .10                                       | <.02                                                     |
| AUG.                                                                         |                                              |                                           |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 13...                                                                        | --                                           | --                                        | 8.3                                    | 1.8                                                | --                                   | --                                | 12                                       | 13                                            | --                                           | .20                               | .10                                       | .02                                                      |
| 07061135 - W. F. BLACK RIVER AT WEST FORK, MO. (LAT 37 29 32 LONG 091 06 29) |                                              |                                           |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| <sup>1</sup> NOV., 1973                                                      |                                              |                                           |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 27...                                                                        | 7.6                                          | 1.7                                       | 1.6                                    | 1.0                                                | 83                                   | 0                                 | 8.2                                      | --                                            | .0                                           | .20                               | <.10                                      | <.02                                                     |
| MAR., 1974                                                                   |                                              |                                           |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 05...                                                                        | 26                                           | 13                                        | 3.8                                    | 1.1                                                | 161                                  | 0                                 | 35                                       | 10                                            | .1                                           | .10                               | .10                                       | <.02                                                     |
| MAY                                                                          |                                              |                                           |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 14...                                                                        | 26                                           | 16                                        | 3.2                                    | 1.1                                                | 158                                  | 0                                 | 8.0                                      | 3.6                                           | .0                                           | .10                               | .10                                       | <.02                                                     |
| AUG.                                                                         |                                              |                                           |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 13...                                                                        | --                                           | --                                        | 2.3                                    | 1.2                                                | --                                   | --                                | 8.0                                      | 4.0                                           | --                                           | .10                               | .10                                       | .02                                                      |
| 07061140 - BEE FORK AB HWY T NR. BUNKER, MO. (LAT 37 26 40 LONG 091 06 00)   |                                              |                                           |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| <sup>1</sup> NOV., 1973                                                      |                                              |                                           |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 27...                                                                        | 2.9                                          | .8                                        | .9                                     | .8                                                 | 29                                   | 0                                 | 7.2                                      | --                                            | .0                                           | .20                               | <.10                                      | .00                                                      |
| MAR., 1974                                                                   |                                              |                                           |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 05...                                                                        | 10                                           | 2.4                                       | 1.3                                    | .7                                                 | 46                                   | 0                                 | 8.0                                      | 10                                            | .2                                           | <.10                              | .10                                       | <.02                                                     |
| MAY                                                                          |                                              |                                           |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 14...                                                                        | 10                                           | 5.3                                       | .9                                     | .9                                                 | 54                                   | 0                                 | 8.0                                      | 5.6                                           | .1                                           | .10                               | .10                                       | <.02                                                     |
| AUG.                                                                         |                                              |                                           |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 13...                                                                        | --                                           | --                                        | 2.3                                    | 1.0                                                | --                                   | --                                | 4.0                                      | 4.0                                           | --                                           | .10                               | .10                                       | .02                                                      |
| 07061145 - BEE FORK BL HWY T NR. BUNKER, MO. (LAT 37 26 30 LONG 091 05 30)   |                                              |                                           |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| <sup>1</sup> MAR., 1974                                                      |                                              |                                           |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 05...                                                                        | 19                                           | 11                                        | 11                                     | 1.5                                                | 98                                   | 0                                 | 28                                       | 20                                            | .3                                           | .10                               | .20                                       | <.02                                                     |
| MAY                                                                          |                                              |                                           |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 14...                                                                        | 12                                           | 8.6                                       | 12                                     | 1.5                                                | 107                                  | 0                                 | 33                                       | 13                                            | .3                                           | .10                               | .10                                       | <.02                                                     |
| AUG.                                                                         |                                              |                                           |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 13...                                                                        | --                                           | --                                        | 42                                     | 4.1                                                | --                                   | --                                | 75                                       | 39                                            | --                                           | .20                               | .10                                       | .03                                                      |



## LOWER MISSISSIPPI RIVER BASIN

## ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE                                                                         | PHOS-<br>PHATE<br>(PO <sub>4</sub> )<br>(MG/L) | HARD-<br>NESS<br>(CA, MG)<br>(MG/L) | NON-<br>CAR-<br>BONATE<br>HARD-<br>NESS<br>(MG/L) | ALKA-<br>LINEITY<br>AS<br>CACO <sub>3</sub><br>(MG/L) | SPE-<br>CIFIC<br>CON-<br>DUCT-<br>ANCE<br>(MICRO-<br>MHOS) | PH<br>(UNITS) | TUR-<br>BID-<br>ITY<br>(MG/L) | TEMPER-<br>ATURE<br>(DEG C) | DIS-<br>SOLVED<br>OXYGEN<br>(MG/L) | PER-<br>CENT<br>SATUR-<br>ATION | CHEM-<br>ICAL<br>OXYGEN<br>DEMAND<br>(LOW<br>LEVEL)<br>(MG/L) |
|------------------------------------------------------------------------------|------------------------------------------------|-------------------------------------|---------------------------------------------------|-------------------------------------------------------|------------------------------------------------------------|---------------|-------------------------------|-----------------------------|------------------------------------|---------------------------------|---------------------------------------------------------------|
| ST. FRANCIS RIVER BASIN--Continued                                           |                                                |                                     |                                                   |                                                       |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 07036970 - BIG CREEK AT ANNAPOLIS, MD. (LAT 37 21 20 LONG 090 41 20)         |                                                |                                     |                                                   |                                                       |                                                            |               |                               |                             |                                    |                                 |                                                               |
| <sup>1</sup> NOV., 1973                                                      |                                                |                                     |                                                   |                                                       |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 28...                                                                        | .04                                            | 23                                  | 0                                                 | 54                                                    | 155                                                        | 7.5           | --                            | 11.0                        | 10.3                               | 94                              | 9                                                             |
| MAR., 1974                                                                   |                                                |                                     |                                                   |                                                       |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 06...                                                                        | .07                                            | 73                                  | 1                                                 | 72                                                    | 150                                                        | 7.3           | 22                            | 11.0                        | 10.6                               | 96                              | 2                                                             |
| MAY                                                                          |                                                |                                     |                                                   |                                                       |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 15...                                                                        | .06                                            | 44                                  | 6                                                 | 38                                                    | 96                                                         | 7.1           | 13                            | 15.0                        | 9.7                                | 96                              | 6                                                             |
| AUG.                                                                         |                                                |                                     |                                                   |                                                       |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 14...                                                                        | .06                                            | 146                                 | --                                                | 154                                                   | 310                                                        | 7.5           | --                            | 21.0                        | 6.7                                | 74                              | 0                                                             |
| WHITE RIVER BASIN--Continued                                                 |                                                |                                     |                                                   |                                                       |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 07061125 - WEST FORK BLACK RIVER NR GREELEY MD (LAT 37 30 25 LONG 091 09 40) |                                                |                                     |                                                   |                                                       |                                                            |               |                               |                             |                                    |                                 |                                                               |
| <sup>1</sup> NOV., 1973                                                      |                                                |                                     |                                                   |                                                       |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 27...                                                                        | .07                                            | 24                                  | 0                                                 | 60                                                    | 170                                                        | 7.5           | --                            | 12.0                        | 9.6                                | 89                              | 9                                                             |
| MAR., 1974                                                                   |                                                |                                     |                                                   |                                                       |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 05...                                                                        | .03                                            | 113                                 | 0                                                 | 122                                                   | 205                                                        | 7.8           | <10                           | 14.0                        | 11.8                               | 113                             | 14                                                            |
| MAY                                                                          |                                                |                                     |                                                   |                                                       |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 14...                                                                        | .04                                            | 129                                 | 3                                                 | 126                                                   | 250                                                        | 7.7           | <10                           | 16.0                        | 9.5                                | 96                              | 4                                                             |
| AUG.                                                                         |                                                |                                     |                                                   |                                                       |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 13...                                                                        | .07                                            | 186                                 | --                                                | 190                                                   | 350                                                        | 8.0           | --                            | 25.0                        | 9.3                                | 112                             | 0                                                             |
| 07061130 - BILLS CREEK NR GREELEY MD (LAT 37 30 04 LONG 091 08 26)           |                                                |                                     |                                                   |                                                       |                                                            |               |                               |                             |                                    |                                 |                                                               |
| <sup>1</sup> NOV., 1973                                                      |                                                |                                     |                                                   |                                                       |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 27...                                                                        | .05                                            | 35                                  | 0                                                 | 94                                                    | 240                                                        | 7.6           | --                            | 12.0                        | 9.6                                | 89                              | 13                                                            |
| MAR., 1974                                                                   |                                                |                                     |                                                   |                                                       |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 05...                                                                        | .03                                            | 157                                 | 0                                                 | 172                                                   | 310                                                        | 7.7           | <10                           | 14.0                        | 10.1                               | 97                              | 6                                                             |
| MAY                                                                          |                                                |                                     |                                                   |                                                       |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 14...                                                                        | <.02                                           | 169                                 | 3                                                 | 166                                                   | 370                                                        | 7.9           | <10                           | 17.0                        | 9.6                                | 99                              | 9                                                             |
| AUG.                                                                         |                                                |                                     |                                                   |                                                       |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 13...                                                                        | .07                                            | 200                                 | --                                                | 198                                                   | 400                                                        | 7.6           | --                            | 23.0                        | 7.3                                | 83                              | 0                                                             |

## ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE                                                                         | PHOS-<br>PHATE<br>(PO <sub>4</sub> )<br>(MG/L) | HARD-<br>NESS<br>(CA,MG)<br>(MG/L) | NON-<br>CAR-<br>BONATE<br>HARD-<br>NESS<br>(MG/L) | ALKA-<br>LINIT-<br>Y AS<br>CACO <sub>3</sub><br>(MG/L) | SPE-<br>CIFIC<br>CON-<br>DUCT-<br>ANCE<br>(MICRO-<br>MHOS) | PH<br>(UNITS) | TUR-<br>BID-<br>ITY<br>(MG/L) | TEMPER-<br>ATURE<br>(DEG C) | DIS-<br>SOLVED<br>OXYGEN<br>(MG/L) | PER-<br>CENT<br>SATUR-<br>ATION | CHEM-<br>ICAL<br>OXYGEN<br>DEMAND<br>(LOW<br>LEVEL)<br>(MG/L) |
|------------------------------------------------------------------------------|------------------------------------------------|------------------------------------|---------------------------------------------------|--------------------------------------------------------|------------------------------------------------------------|---------------|-------------------------------|-----------------------------|------------------------------------|---------------------------------|---------------------------------------------------------------|
| WHITE RIVER BASIN--Continued                                                 |                                                |                                    |                                                   |                                                        |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 07061135 - W. F. BLACK RIVER AT WEST FORK, MO. (LAT 37 29 32 LONG 091 06 29) |                                                |                                    |                                                   |                                                        |                                                            |               |                               |                             |                                    |                                 |                                                               |
| <sup>1</sup> NOV., 1973                                                      |                                                |                                    |                                                   |                                                        |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 27...                                                                        | .05                                            | 26                                 | 0                                                 | 68                                                     | 178                                                        | 7.4           | --                            | 12.0                        | 9.3                                | 86                              | 5                                                             |
| MAR., 1974                                                                   |                                                |                                    |                                                   |                                                        |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 05...                                                                        | .03                                            | 119                                | 0                                                 | 132                                                    | 245                                                        | 7.7           | <10                           | 12.0                        | 11.1                               | 103                             | 12                                                            |
| MAY                                                                          |                                                |                                    |                                                   |                                                        |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 14...                                                                        | .04                                            | 133                                | 3                                                 | 130                                                    | 270                                                        | 7.7           | <10                           | 16.0                        | 9.3                                | 94                              | 5                                                             |
| AUG.                                                                         |                                                |                                    |                                                   |                                                        |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 13...                                                                        | .06                                            | 176                                | --                                                | 172                                                    | 320                                                        | 7.9           | --                            | 24.0                        | 7.7                                | 90                              | 0                                                             |
| 07061140 - BEE FORK AB HWY T NR. BUNKER, MO. (LAT 37 26 40 LONG 091 06 00)   |                                                |                                    |                                                   |                                                        |                                                            |               |                               |                             |                                    |                                 |                                                               |
| <sup>1</sup> NOV., 1973                                                      |                                                |                                    |                                                   |                                                        |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 27...                                                                        | .05                                            | 11                                 | 0                                                 | 24                                                     | 80                                                         | 7.3           | --                            | 13.0                        | 9.8                                | 92                              | 55                                                            |
| MAR., 1974                                                                   |                                                |                                    |                                                   |                                                        |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 05...                                                                        | .03                                            | 36                                 | 0                                                 | 38                                                     | 80                                                         | 7.0           | <10                           | 13.0                        | 11.1                               | 105                             | 1                                                             |
| MAY                                                                          |                                                |                                    |                                                   |                                                        |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 14...                                                                        | .03                                            | 48                                 | 4                                                 | 44                                                     | 108                                                        | 7.3           | <10                           | 16.0                        | 9.3                                | 94                              | 8                                                             |
| AUG.                                                                         |                                                |                                    |                                                   |                                                        |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 13...                                                                        | .05                                            | 130                                | --                                                | 130                                                    | 250                                                        | 7.5           | --                            | 25.0                        | 8.5                                | 102                             | 0                                                             |
| 07061145 - BEE FORK BL HWY T NR. BUNKER, MO. (LAT 37 26 30 LONG 091 05 30)   |                                                |                                    |                                                   |                                                        |                                                            |               |                               |                             |                                    |                                 |                                                               |
| <sup>1</sup> MAR., 1974                                                      |                                                |                                    |                                                   |                                                        |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 05...                                                                        | <.03                                           | 93                                 | 13                                                | 80                                                     | 240                                                        | 7.4           | <10                           | 14.0                        | 10.1                               | 97                              | 2                                                             |
| MAY                                                                          |                                                |                                    |                                                   |                                                        |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 14...                                                                        | .02                                            | 65                                 | 0                                                 | 88                                                     | 270                                                        | 7.9           | <10                           | 16.0                        | 9.3                                | 94                              | 5                                                             |
| AUG.                                                                         |                                                |                                    |                                                   |                                                        |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 13...                                                                        | .07                                            | 226                                | --                                                | 158                                                    | 575                                                        | 8.0           | --                            | 27.0                        | 8.9                                | 113                             | 0                                                             |

## ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE                                                                                    | DIS-<br>CHARGE<br>(CFS) | DIS-<br>SOLVED<br>IRON<br>(FE)<br>(UG/L) | DIS-<br>SOLVED<br>MAN-<br>GANESE<br>(MN)<br>(UG/L) | DIS-<br>SOLVED<br>CHRO-<br>MIUM<br>(CR)<br>(UG/L) | DIS-<br>SOLVED<br>NICKEL<br>(NI)<br>(UG/L) | DIS-<br>SOLVED<br>SILVER<br>(AG)<br>(UG/L) | DIS-<br>SOLVED<br>COPPER<br>(CU)<br>(UG/L) | DIS-<br>SOLVED<br>LEAD<br>(PB)<br>(UG/L) | DIS-<br>SOLVED<br>ZINC<br>(ZN)<br>(UG/L) | DIS-<br>SOLVED<br>COBALT<br>(CO)<br>(UG/L) | DIS-<br>SOLVED<br>CAD-<br>MIUM<br>(CD)<br>(UG/L) | DIS-<br>SOLVED<br>BARIUM<br>(BA)<br>(UG/L) |
|-----------------------------------------------------------------------------------------|-------------------------|------------------------------------------|----------------------------------------------------|---------------------------------------------------|--------------------------------------------|--------------------------------------------|--------------------------------------------|------------------------------------------|------------------------------------------|--------------------------------------------|--------------------------------------------------|--------------------------------------------|
| WHITE RIVER BASIN--Continued                                                            |                         |                                          |                                                    |                                                   |                                            |                                            |                                            |                                          |                                          |                                            |                                                  |                                            |
| 07061155 - STROTHER CREEK NEAR OATES, MO. (LAT 37 35 20 LONG 091 03 20)                 |                         |                                          |                                                    |                                                   |                                            |                                            |                                            |                                          |                                          |                                            |                                                  |                                            |
| 1 NOV., 1973                                                                            |                         |                                          |                                                    |                                                   |                                            |                                            |                                            |                                          |                                          |                                            |                                                  |                                            |
| 27....                                                                                  | 107                     | 40                                       | 210                                                | 0                                                 | 10                                         | 0                                          | 6                                          | 65                                       | 90                                       | 6                                          | 0                                                | 0                                          |
| MAR., 1974                                                                              |                         |                                          |                                                    |                                                   |                                            |                                            |                                            |                                          |                                          |                                            |                                                  |                                            |
| 05....                                                                                  | 22                      | 30                                       | 280                                                | 0                                                 | 10                                         | 0                                          | 11                                         | 12                                       | 60                                       | 5                                          | 0                                                | 0                                          |
| MAY                                                                                     |                         |                                          |                                                    |                                                   |                                            |                                            |                                            |                                          |                                          |                                            |                                                  |                                            |
| 14....                                                                                  | 23                      | 50                                       | 120                                                | 0                                                 | 6                                          | 0                                          | 3                                          | 4                                        | 10                                       | 1                                          | 1                                                | 0                                          |
| AUG.                                                                                    |                         |                                          |                                                    |                                                   |                                            |                                            |                                            |                                          |                                          |                                            |                                                  |                                            |
| 13....                                                                                  | 7.1                     | --                                       | 80                                                 | --                                                | --                                         | --                                         | 2                                          | 5                                        | 0                                        | --                                         | 0                                                | --                                         |
| 07061160 - NEALS CREEK NR. BUICK, MO. (LAT 37 38 30 LONG 091 02 30)                     |                         |                                          |                                                    |                                                   |                                            |                                            |                                            |                                          |                                          |                                            |                                                  |                                            |
| 1 NOV., 1973                                                                            |                         |                                          |                                                    |                                                   |                                            |                                            |                                            |                                          |                                          |                                            |                                                  |                                            |
| 26....                                                                                  | 109                     | 40                                       | 50                                                 | 0                                                 | 7                                          | 0                                          | 7                                          | 7                                        | 20                                       | 0                                          | 0                                                | 0                                          |
| MAR., 1974                                                                              |                         |                                          |                                                    |                                                   |                                            |                                            |                                            |                                          |                                          |                                            |                                                  |                                            |
| 05....                                                                                  | 16                      | 10                                       | 50                                                 | 0                                                 | 4                                          | 0                                          | 9                                          | 7                                        | 70                                       | 2                                          | 0                                                | 0                                          |
| MAY                                                                                     |                         |                                          |                                                    |                                                   |                                            |                                            |                                            |                                          |                                          |                                            |                                                  |                                            |
| 14....                                                                                  | 9.8                     | 10                                       | 20                                                 | 0                                                 | 2                                          | 0                                          | 0                                          | 3                                        | 40                                       | 0                                          | 1                                                | 0                                          |
| AUG.                                                                                    |                         |                                          |                                                    |                                                   |                                            |                                            |                                            |                                          |                                          |                                            |                                                  |                                            |
| 13....                                                                                  | 2.1                     | --                                       | 10                                                 | --                                                | --                                         | --                                         | 2                                          | 3                                        | 0                                        | --                                         | 0                                                | --                                         |
| 07061165 - BRUSHY CREEK AT OATES, MO. (LAT 37 33 42 LONG 091 03 20)                     |                         |                                          |                                                    |                                                   |                                            |                                            |                                            |                                          |                                          |                                            |                                                  |                                            |
| 1 NOV., 1973                                                                            |                         |                                          |                                                    |                                                   |                                            |                                            |                                            |                                          |                                          |                                            |                                                  |                                            |
| 27....                                                                                  | 43                      | 20                                       | 10                                                 | 0                                                 | 1                                          | 0                                          | 2                                          | 2                                        | 0                                        | 1                                          | 0                                                | 0                                          |
| MAR., 1974                                                                              |                         |                                          |                                                    |                                                   |                                            |                                            |                                            |                                          |                                          |                                            |                                                  |                                            |
| 05....                                                                                  | 7.9                     | 80                                       | 0                                                  | 0                                                 | 0                                          | 0                                          | 16                                         | 5                                        | 40                                       | 1                                          | 0                                                | 0                                          |
| MAY                                                                                     |                         |                                          |                                                    |                                                   |                                            |                                            |                                            |                                          |                                          |                                            |                                                  |                                            |
| 14....                                                                                  | 7.7                     | 20                                       | 0                                                  | 0                                                 | 0                                          | 0                                          | 0                                          | 4                                        | 10                                       | 0                                          | 1                                                | 0                                          |
| AUG.                                                                                    |                         |                                          |                                                    |                                                   |                                            |                                            |                                            |                                          |                                          |                                            |                                                  |                                            |
| 13....                                                                                  | .50                     | --                                       | 0                                                  | --                                                | --                                         | --                                         | 1                                          | 4                                        | 0                                        | --                                         | 1                                                | --                                         |
| 07061600 - BLACK RIVER BELOW ANAPOLIS, MO. (LAT 37 19 30 LONG 090 45 53)                |                         |                                          |                                                    |                                                   |                                            |                                            |                                            |                                          |                                          |                                            |                                                  |                                            |
| 1 NOV., 1973                                                                            |                         |                                          |                                                    |                                                   |                                            |                                            |                                            |                                          |                                          |                                            |                                                  |                                            |
| 28....                                                                                  | 2970                    | 20                                       | 0                                                  | 0                                                 | 0                                          | 0                                          | 2                                          | 1                                        | 0                                        | 0                                          | 0                                                | 0                                          |
| MAR., 1974                                                                              |                         |                                          |                                                    |                                                   |                                            |                                            |                                            |                                          |                                          |                                            |                                                  |                                            |
| 06....                                                                                  | 770                     | 10                                       | 0                                                  | 0                                                 | 0                                          | 0                                          | 8                                          | 3                                        | 20                                       | 1                                          | 0                                                | 0                                          |
| MAY                                                                                     |                         |                                          |                                                    |                                                   |                                            |                                            |                                            |                                          |                                          |                                            |                                                  |                                            |
| 15....                                                                                  | 3360                    | 20                                       | 0                                                  | 0                                                 | 1                                          | 0                                          | 0                                          | 1                                        | 10                                       | 0                                          | 0                                                | 0                                          |
| AUG.                                                                                    |                         |                                          |                                                    |                                                   |                                            |                                            |                                            |                                          |                                          |                                            |                                                  |                                            |
| 14....                                                                                  | 147                     | --                                       | 0                                                  | --                                                | --                                         | --                                         | 2                                          | 7                                        | 0                                        | --                                         | 1                                                | --                                         |
| 07061810 - LOGAN CR. AB. SWEETWATER CR. NR. CORRISON, MO. (LAT 37 22 15 LONG 091 06 48) |                         |                                          |                                                    |                                                   |                                            |                                            |                                            |                                          |                                          |                                            |                                                  |                                            |
| 1 NOV., 1973                                                                            |                         |                                          |                                                    |                                                   |                                            |                                            |                                            |                                          |                                          |                                            |                                                  |                                            |
| 27....                                                                                  | 52                      | 30                                       | 0                                                  | 0                                                 | 1                                          | 0                                          | 4                                          | 1                                        | 0                                        | 0                                          | 0                                                | 0                                          |
| MAR., 1974                                                                              |                         |                                          |                                                    |                                                   |                                            |                                            |                                            |                                          |                                          |                                            |                                                  |                                            |
| 05....                                                                                  | 9.7                     | 10                                       | 13                                                 | 0                                                 | 0                                          | 0                                          | 12                                         | 8                                        | 0                                        | 1                                          | 0                                                | 0                                          |
| MAY                                                                                     |                         |                                          |                                                    |                                                   |                                            |                                            |                                            |                                          |                                          |                                            |                                                  |                                            |
| 14....                                                                                  | 13                      | 40                                       | 10                                                 | 0                                                 | 0                                          | 0                                          | 0                                          | 1                                        | 10                                       | 0                                          | 0                                                | 0                                          |
| AUG.                                                                                    |                         |                                          |                                                    |                                                   |                                            |                                            |                                            |                                          |                                          |                                            |                                                  |                                            |
| 13....                                                                                  | .86                     | --                                       | 50                                                 | --                                                | --                                         | --                                         | 2                                          | 6                                        | 0                                        | --                                         | 1                                                | --                                         |
| 07061840 - LOGAN CR. BL. SWEETWATER CR. NR. CORRISON, MO. (LAT 37 18 50 LONG 091 07 40) |                         |                                          |                                                    |                                                   |                                            |                                            |                                            |                                          |                                          |                                            |                                                  |                                            |
| 1 NOV., 1973                                                                            |                         |                                          |                                                    |                                                   |                                            |                                            |                                            |                                          |                                          |                                            |                                                  |                                            |
| 27....                                                                                  | 206                     | 40                                       | 83                                                 | 0                                                 | 2                                          | 0                                          | 17                                         | 4                                        | 8                                        | 0                                          | 0                                                | 0                                          |
| MAR., 1974                                                                              |                         |                                          |                                                    |                                                   |                                            |                                            |                                            |                                          |                                          |                                            |                                                  |                                            |
| 05....                                                                                  | 39                      | 30                                       | 130                                                | 0                                                 | 2                                          | 0                                          | 14                                         | 6                                        | 30                                       | 1                                          | 0                                                | 0                                          |
| MAY                                                                                     |                         |                                          |                                                    |                                                   |                                            |                                            |                                            |                                          |                                          |                                            |                                                  |                                            |
| 14....                                                                                  | 81                      | 50                                       | 50                                                 | 0                                                 | 3                                          | 0                                          | 4                                          | 2                                        | 20                                       | 0                                          | 1                                                | 0                                          |
| AUG.                                                                                    |                         |                                          |                                                    |                                                   |                                            |                                            |                                            |                                          |                                          |                                            |                                                  |                                            |
| 13....                                                                                  | 2.4                     | --                                       | 20                                                 | --                                                | --                                         | --                                         | 4                                          | 5                                        | 0                                        | --                                         | 0                                                | --                                         |

## ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE                                                                                    | DIS-SOLVED<br>CAL-<br>CIUM<br>(CA)<br>(MG/L) | DIS-SOLVED<br>MAG-<br>NE-<br>SIUM<br>(MG) | DIS-SOLVED<br>SODIUM<br>(NA)<br>(MG/L) | DIS-SOLVED<br>PO-<br>TAS-<br>SIUM<br>(K)<br>(MG/L) | BICAR-<br>BONATE<br>(HCO3)<br>(MG/L) | CAR-<br>BONATE<br>(CO3)<br>(MG/L) | DIS-SOLVED<br>SULFATE<br>(SO4)<br>(MG/L) | DIS-SOLVED<br>CHLO-<br>RIDE<br>(CL)<br>(MG/L) | DIS-SOLVED<br>FLUO-<br>RIDE<br>(F)<br>(MG/L) | TOTAL<br>NITRATE<br>(N)<br>(MG/L) | AMMONIA<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | DIS-SOLVED<br>ORTHO<br>PHOS-<br>PHATE<br>(PO4)<br>(MG/L) |
|-----------------------------------------------------------------------------------------|----------------------------------------------|-------------------------------------------|----------------------------------------|----------------------------------------------------|--------------------------------------|-----------------------------------|------------------------------------------|-----------------------------------------------|----------------------------------------------|-----------------------------------|-------------------------------------------|----------------------------------------------------------|
| WHITE RIVER BASIN--Continued                                                            |                                              |                                           |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 07061155 - STROTHER CREEK NEAR DATES, MO. (LAT 37 35 20 LONG 091 03 20)                 |                                              |                                           |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| <sup>1</sup> NOV., 1973                                                                 |                                              |                                           |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 27...                                                                                   | 13                                           | 2.9                                       | 8.3                                    | 2.7                                                | 98                                   | 0                                 | 48                                       | --                                            | .1                                           | .30                               | .30                                       | .05                                                      |
| MAR., 1974                                                                              |                                              |                                           |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 05...                                                                                   | 35                                           | 20                                        | 10                                     | 2.9                                                | 151                                  | 0                                 | 11                                       | 22                                            | .2                                           | .60                               | .40                                       | <.02                                                     |
| MAY                                                                                     |                                              |                                           |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 14...                                                                                   | 34                                           | 17                                        | 8.6                                    | 2.4                                                | 154                                  | 0                                 | 68                                       | 11                                            | .1                                           | .50                               | .20                                       | .05                                                      |
| AUG.                                                                                    |                                              |                                           |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 13...                                                                                   | --                                           | --                                        | 24                                     | 6.8                                                | --                                   | --                                | 130                                      | 40                                            | --                                           | 1.3                               | .20                                       | .03                                                      |
| 07061160 - NEALS CREEK NR. BUICK, MO. (LAT 37 38 30 LONG 091 02 30)                     |                                              |                                           |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| <sup>1</sup> NOV., 1973                                                                 |                                              |                                           |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 26...                                                                                   | 12                                           | 3.2                                       | 4.9                                    | 2.6                                                | 80                                   | 0                                 | 63                                       | --                                            | .0                                           | .20                               | .30                                       | <.02                                                     |
| MAR., 1974                                                                              |                                              |                                           |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 05...                                                                                   | 46                                           | 25                                        | 6.4                                    | 2.7                                                | 200                                  | 0                                 | 70                                       | 17                                            | .2                                           | .40                               | .30                                       | <.02                                                     |
| MAY                                                                                     |                                              |                                           |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 14...                                                                                   | 49                                           | 26                                        | 5.7                                    | 2.5                                                | 215                                  | 0                                 | 72                                       | 11                                            | .1                                           | .60                               | .30                                       | .05                                                      |
| AUG.                                                                                    |                                              |                                           |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 13...                                                                                   | --                                           | --                                        | 8.8                                    | 2.8                                                | --                                   | --                                | 95                                       | 17                                            | --                                           | .30                               | .10                                       | .02                                                      |
| 07061165 - BRUSHY CREEK AT DATES, MO. (LAT 37 33 42 LONG 091 03 20)                     |                                              |                                           |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| <sup>1</sup> NOV., 1973                                                                 |                                              |                                           |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 27...                                                                                   | 5.2                                          | 1.3                                       | .8                                     | .9                                                 | 34                                   | 0                                 | 7.0                                      | --                                            | .1                                           | .10                               | <.10                                      | <.02                                                     |
| MAR., 1974                                                                              |                                              |                                           |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 05...                                                                                   | 19                                           | 12                                        | 1.5                                    | .8                                                 | 122                                  | 0                                 | 7.0                                      | 9.7                                           | .1                                           | <.10                              | .10                                       | <.02                                                     |
| MAY                                                                                     |                                              |                                           |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 14...                                                                                   | 22                                           | 13                                        | 1.4                                    | .9                                                 | 124                                  | 0                                 | 6.0                                      | 3.1                                           | .0                                           | .10                               | .10                                       | <.02                                                     |
| AUG.                                                                                    |                                              |                                           |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 13...                                                                                   | --                                           | --                                        | 1.6                                    | .8                                                 | --                                   | --                                | 3.0                                      | 3.0                                           | --                                           | .10                               | .10                                       | .02                                                      |
| 07061600 - BLACK RIVER BELOW ANAPOLIS, MO. (LAT 37 19 30 LONG 090 45 53)                |                                              |                                           |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| <sup>1</sup> NOV., 1973                                                                 |                                              |                                           |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 28...                                                                                   | 7.2                                          | 1.7                                       | 1.9                                    | 1.1                                                | 76                                   | 0                                 | 8.6                                      | --                                            | .0                                           | .20                               | <.10                                      | <.02                                                     |
| MAR., 1974                                                                              |                                              |                                           |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 06...                                                                                   | 18                                           | 11                                        | 2.4                                    | 1.0                                                | 127                                  | 0                                 | 12                                       | 9.7                                           | .1                                           | .10                               | <.10                                      | .02                                                      |
| MAY                                                                                     |                                              |                                           |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 15...                                                                                   | 14                                           | 7.2                                       | 1.5                                    | 1.1                                                | 78                                   | 0                                 | 9.0                                      | 7.1                                           | .1                                           | .10                               | .10                                       | .02                                                      |
| AUG.                                                                                    |                                              |                                           |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 14...                                                                                   | --                                           | --                                        | 3.4                                    | 1.1                                                | --                                   | --                                | 8.0                                      | 4.0                                           | --                                           | .10                               | .10                                       | .03                                                      |
| 07061810 - LOGAN CR. AB. SWEETWATER CR. NR. CORRIDON, MO. (LAT 37 22 15 LONG 091 06 48) |                                              |                                           |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| <sup>1</sup> NOV., 1973                                                                 |                                              |                                           |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 27...                                                                                   | 1.3                                          | .1                                        | .7                                     | .6                                                 | 7                                    | 0                                 | 3.8                                      | --                                            | .0                                           | .20                               | <.10                                      | <.02                                                     |
| MAR., 1974                                                                              |                                              |                                           |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 05...                                                                                   | 1.6                                          | 1.9                                       | .9                                     | .7                                                 | 10                                   | 0                                 | 9.0                                      | 9.7                                           | .1                                           | .10                               | .20                                       | <.02                                                     |
| MAY                                                                                     |                                              |                                           |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 14...                                                                                   | 1.6                                          | 2.4                                       | 1.8                                    | .8                                                 | 7                                    | 0                                 | 8.0                                      | 3.1                                           | .0                                           | .10                               | .10                                       | <.02                                                     |
| AUG.                                                                                    |                                              |                                           |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 13...                                                                                   | --                                           | --                                        | 1.5                                    | .8                                                 | --                                   | --                                | 7.0                                      | 4.0                                           | --                                           | .10                               | .10                                       | .04                                                      |
| 07061840 - LOGAN CR. BL. SWEETWATER CR. NR. CORRIDON, MO. (LAT 37 18 50 LONG 091 07 40) |                                              |                                           |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| <sup>1</sup> NOV., 1973                                                                 |                                              |                                           |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 27...                                                                                   | 2.9                                          | 1.4                                       | 4.5                                    | 1.5                                                | 32                                   | 0                                 | 11                                       | --                                            | .0                                           | .30                               | .10                                       | .02                                                      |
| MAR., 1974                                                                              |                                              |                                           |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 05...                                                                                   | 10                                           | 7.7                                       | 6.1                                    | 1.5                                                | 66                                   | 0                                 | 16                                       | 16                                            | .1                                           | .30                               | .20                                       | <.02                                                     |
| MAY                                                                                     |                                              |                                           |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 14...                                                                                   | 9.6                                          | 6.2                                       | 3.4                                    | 1.2                                                | 44                                   | 0                                 | 12                                       | 9.2                                           | .1                                           | .20                               | .10                                       | .02                                                      |
| AUG.                                                                                    |                                              |                                           |                                        |                                                    |                                      |                                   |                                          |                                               |                                              |                                   |                                           |                                                          |
| 13...                                                                                   | --                                           | --                                        | 8.1                                    | 2.2                                                | --                                   | --                                | 27                                       | 15                                            | --                                           | .30                               | .10                                       | .03                                                      |

## ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE                                                                    | PHOS-<br>PHATE<br>(PO <sub>4</sub> )<br>(MG/L) | HARD-<br>NESS<br>(CA, MG)<br>(MG/L) | NON-<br>CAR-<br>BONATE<br>HARD-<br>NESS<br>(MG/L) | ALKA-<br>LINIT-<br>AS<br>CACO <sub>3</sub><br>(MG/L) | SPE-<br>CIFIC<br>CON-<br>DUCT-<br>ANCE<br>(MICRO-<br>MHOS) | PH<br>(UNITS) | TUR-<br>BID-<br>ITY<br>(MG/L) | TEMPER-<br>ATURE<br>(DEG C) | DIS-<br>SOLVED<br>OXYGEN<br>(MG/L) | PER-<br>CENT<br>SATUR-<br>ATION | CHEM-<br>ICAL<br>OXYGEN<br>DEMAND<br>(LOW<br>LEVEL)<br>(MG/L) |
|-------------------------------------------------------------------------|------------------------------------------------|-------------------------------------|---------------------------------------------------|------------------------------------------------------|------------------------------------------------------------|---------------|-------------------------------|-----------------------------|------------------------------------|---------------------------------|---------------------------------------------------------------|
| WHITE RIVER BASIN--Continued                                            |                                                |                                     |                                                   |                                                      |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 07061155 - STRUTHER CREEK NEAR OATES, MO. (LAT 37 35 20 LONG 091 03 20) |                                                |                                     |                                                   |                                                      |                                                            |               |                               |                             |                                    |                                 |                                                               |
| <sup>1</sup> NOV., 1973                                                 |                                                |                                     |                                                   |                                                      |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 27...                                                                   | .10                                            | 45                                  | 0                                                 | 80                                                   | 340                                                        | 7.6           | --                            | 12.0                        | 9.4                                | 87                              | 9                                                             |
| MAR., 1974                                                              |                                                |                                     |                                                   |                                                      |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 05...                                                                   | .09                                            | 171                                 | 47                                                | 124                                                  | 360                                                        | 7.9           | <10                           | 14.0                        | 10.0                               | 96                              | 9                                                             |
| MAY                                                                     |                                                |                                     |                                                   |                                                      |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 14...                                                                   | .10                                            | 160                                 | 29                                                | 126                                                  | 370                                                        | 8.3           | 24                            | 18.0                        | 8.5                                | 89                              | 5                                                             |
| AUG.                                                                    |                                                |                                     |                                                   |                                                      |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 13...                                                                   | .11                                            | 268                                 | --                                                | 106                                                  | 625                                                        | 8.3           | --                            | 27.0                        | 7.8                                | 97                              | 21                                                            |
| 07061160 - NEALS CREEK NR. BUICK, MO. (LAT 37 38 30 LONG 091 02 30)     |                                                |                                     |                                                   |                                                      |                                                            |               |                               |                             |                                    |                                 |                                                               |
| <sup>1</sup> NOV., 1973                                                 |                                                |                                     |                                                   |                                                      |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 26...                                                                   | .05                                            | 44                                  | 0                                                 | 66                                                   | 330                                                        | 7.6           | --                            | 12.0                        | 9.6                                | 89                              | 14                                                            |
| MAR., 1974                                                              |                                                |                                     |                                                   |                                                      |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 05...                                                                   | .03                                            | 219                                 | 55                                                | 164                                                  | 420                                                        | 8.0           | <10                           | 9.0                         | 11.5                               | 99                              | 0                                                             |
| MAY                                                                     |                                                |                                     |                                                   |                                                      |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 14...                                                                   | .06                                            | 231                                 | 55                                                | 176                                                  | 460                                                        | 8.0           | <10                           | 16.0                        | 8.6                                | 87                              | 5                                                             |
| AUG.                                                                    |                                                |                                     |                                                   |                                                      |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 13...                                                                   | .04                                            | 312                                 | --                                                | 216                                                  | 600                                                        | 8.1           | --                            | 20.0                        | 8.6                                | 93                              | 7                                                             |
| 07061165 - BRUSHY CREEK AT OATES, MO. (LAT 37 33 42 LONG 091 03 20)     |                                                |                                     |                                                   |                                                      |                                                            |               |                               |                             |                                    |                                 |                                                               |
| <sup>1</sup> NOV., 1973                                                 |                                                |                                     |                                                   |                                                      |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 27...                                                                   | .04                                            | 18                                  | 0                                                 | 28                                                   | 142                                                        | 7.2           | --                            | 12.0                        | 9.6                                | 89                              | 3                                                             |
| MAR., 1974                                                              |                                                |                                     |                                                   |                                                      |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 05...                                                                   | .04                                            | 95                                  | 0                                                 | 100                                                  | 180                                                        | 7.5           | <10                           | 12.0                        | 11.1                               | 103                             | 1                                                             |
| MAY                                                                     |                                                |                                     |                                                   |                                                      |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 14...                                                                   | .04                                            | 110                                 | 7                                                 | 102                                                  | 200                                                        | 7.6           | <10                           | 15.0                        | 9.0                                | 89                              | 9                                                             |
| AUG.                                                                    |                                                |                                     |                                                   |                                                      |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 13...                                                                   | .06                                            | 174                                 | --                                                | 176                                                  | 330                                                        | 7.8           | --                            | 24.0                        | 8.0                                | 94                              | 3                                                             |

## ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE                                                                                    | PHOS-<br>PHATE<br>(PO4)<br>(MG/L) | HARD-<br>NESS<br>(CA,MG)<br>(MG/L) | NON-<br>CAR-<br>BONATE<br>HARD-<br>NESS<br>(MG/L) | ALKA-<br>LINIT<br>Y AS<br>CAC03<br>(MG/L) | SPE-<br>CIFIC<br>CON-<br>DUCT-<br>ANCE<br>(MICRO-<br>MHOS) | PH<br>(UNITS) | TUR-<br>BID-<br>ITY<br>(MG/L) | TEMPER-<br>ATURE<br>(DEG C) | DIS-<br>SOLVED<br>OXYGEN<br>(MG/L) | PER-<br>CENT<br>SATUR-<br>ATION | CHEM-<br>ICAL<br>OXYGEN<br>DEMAND<br>(LOW<br>LEVEL)<br>(MG/L) |
|-----------------------------------------------------------------------------------------|-----------------------------------|------------------------------------|---------------------------------------------------|-------------------------------------------|------------------------------------------------------------|---------------|-------------------------------|-----------------------------|------------------------------------|---------------------------------|---------------------------------------------------------------|
| WHITE RIVER BASIN--Continued                                                            |                                   |                                    |                                                   |                                           |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 07061600 - BLACK RIVER BELOW ANAPOLIS, MO. (LAT 37 19 30 LONG 090 45 53)                |                                   |                                    |                                                   |                                           |                                                            |               |                               |                             |                                    |                                 |                                                               |
| <sup>1</sup> NOV., 1973                                                                 |                                   |                                    |                                                   |                                           |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 28...                                                                                   | .06                               | 25                                 | 0                                                 | 62                                        | 175                                                        | 7.3           | --                            | 11.0                        | 9.7                                | 88                              | 9                                                             |
| MAR., 1974                                                                              |                                   |                                    |                                                   |                                           |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 06...                                                                                   | .04                               | 90                                 | 0                                                 | 104                                       | 175                                                        | 7.8           | <10                           | 11.0                        | 10.6                               | 96                              | 2                                                             |
| MAY                                                                                     |                                   |                                    |                                                   |                                           |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 15...                                                                                   | .05                               | 65                                 | 1                                                 | 64                                        | 140                                                        | 7.2           | <10                           | 16.0                        | 9.3                                | 94                              | 11                                                            |
| AUG.                                                                                    |                                   |                                    |                                                   |                                           |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 14...                                                                                   | .07                               | 136                                | --                                                | 138                                       | 270                                                        | 7.7           | --                            | 23.0                        | 7.7                                | 88                              | 0                                                             |
| 07061810 - LOGAN CR. AB. SWEETWATER CR. NR. CORRISON, MO. (LAT 37 22 15 LONG 091 06 48) |                                   |                                    |                                                   |                                           |                                                            |               |                               |                             |                                    |                                 |                                                               |
| <sup>1</sup> NOV., 1973                                                                 |                                   |                                    |                                                   |                                           |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 27...                                                                                   | .04                               | 3                                  | 0                                                 | 6                                         | 40                                                         | 6.3           | --                            | 12.0                        | 9.6                                | 89                              | 10                                                            |
| MAR., 1974                                                                              |                                   |                                    |                                                   |                                           |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 05...                                                                                   | .03                               | 12                                 | 4                                                 | 8                                         | 32                                                         | 6.3           | <10                           | 12.0                        | 11.2                               | 104                             | 1                                                             |
| MAY                                                                                     |                                   |                                    |                                                   |                                           |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 14...                                                                                   | .03                               | 14                                 | 8                                                 | 6                                         | 30                                                         | 5.8           | <10                           | 15.0                        | 9.0                                | 89                              | 3                                                             |
| AUG.                                                                                    |                                   |                                    |                                                   |                                           |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 13...                                                                                   | .15                               | 98                                 | --                                                | 92                                        | 170                                                        | 7.8           | --                            | 23.0                        | 8.6                                | 98                              | 0                                                             |
| 07061840 - LOGAN CR. BL. SWEETWATER CR. NR. CORRISON, MO. (LAT 37 18 50 LONG 091 07 40) |                                   |                                    |                                                   |                                           |                                                            |               |                               |                             |                                    |                                 |                                                               |
| <sup>1</sup> NOV., 1973                                                                 |                                   |                                    |                                                   |                                           |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 27...                                                                                   | .05                               | 13                                 | 0                                                 | 26                                        | 112                                                        | 7.1           | --                            | 12.0                        | 9.2                                | 85                              | 65                                                            |
| MAR., 1974                                                                              |                                   |                                    |                                                   |                                           |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 05...                                                                                   | .03                               | 58                                 | 4                                                 | 54                                        | 128                                                        | 7.5           | <10                           | 13.0                        | 9.9                                | 93                              | 2                                                             |
| MAY                                                                                     |                                   |                                    |                                                   |                                           |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 14...                                                                                   | .06                               | 50                                 | 14                                                | 36                                        | 125                                                        | 7.0           | <10                           | 16.0                        | 8.8                                | 89                              | 12                                                            |
| AUG.                                                                                    |                                   |                                    |                                                   |                                           |                                                            |               |                               |                             |                                    |                                 |                                                               |
| 13...                                                                                   | .07                               | 128                                | --                                                | 100                                       | 280                                                        | 8.2           | --                            | 26.0                        | 8.3                                | 101                             | 0                                                             |

<sup>1</sup>Minor elements determinations by U.S. Geological Survey, remainder of analyses by Missouri Clean Water Commission.



## ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE | INSTAN-<br>TANEOUS<br>DIS-<br>CHARGE<br>(CFS) | DIS-<br>SOLVED<br>SILICA<br>(SiO <sub>2</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>IRON<br>(FE)<br>(UG/L) | DIS-<br>SOLVED<br>MAN-<br>GANESE<br>(MN)<br>(UG/L) | DIS-<br>SOLVED<br>CAL-<br>CIUM<br>(CA)<br>(MG/L) | DIS-<br>SOLVED<br>MAG-<br>NE-<br>SIUM<br>(MG)<br>(MG/L) | DIS-<br>SOLVED<br>SODIUM<br>(NA)<br>(MG/L) | DIS-<br>SOLVED<br>PO-<br>TAS-<br>SIUM<br>(K)<br>(MG/L) | BICAR-<br>BONATE<br>(HCO <sub>3</sub> )<br>(MG/L) | CAR-<br>BONATE<br>(CO <sub>3</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>SULFATE<br>(SO <sub>4</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>CHLO-<br>RIDE<br>(CL)<br>(MG/L) |
|------|-----------------------------------------------|-----------------------------------------------------------|------------------------------------------|----------------------------------------------------|--------------------------------------------------|---------------------------------------------------------|--------------------------------------------|--------------------------------------------------------|---------------------------------------------------|------------------------------------------------|-----------------------------------------------------------|---------------------------------------------------|
|------|-----------------------------------------------|-----------------------------------------------------------|------------------------------------------|----------------------------------------------------|--------------------------------------------------|---------------------------------------------------------|--------------------------------------------|--------------------------------------------------------|---------------------------------------------------|------------------------------------------------|-----------------------------------------------------------|---------------------------------------------------|

## WHITE RIVER BASIN--Continued

## 07064440 - CURRENT RIVER BELOW MONTAUK STATE PARK (LAT 37 27 01 LONG 091 29 41)

|            |     |     |    |    |    |    |     |     |     |   |     |     |
|------------|-----|-----|----|----|----|----|-----|-----|-----|---|-----|-----|
| OCT., 1973 |     |     |    |    |    |    |     |     |     |   |     |     |
| 15...      | 152 | 8.8 | 80 | 10 | 31 | 17 | 2.1 | 1.1 | 168 | 0 | 4.1 | 2.4 |
| JAN., 1974 |     |     |    |    |    |    |     |     |     |   |     |     |
| 18...      | 160 | 8.4 | 30 | 0  | 26 | 14 | 2.3 | 1.0 | 144 | 0 | 5.2 | 3.1 |
| APR.       |     |     |    |    |    |    |     |     |     |   |     |     |
| 17...      | 204 | 9.8 | 60 | 20 | 22 | 12 | 2.4 | .9  | 118 | 0 | 13  | 2.2 |
| JULY       |     |     |    |    |    |    |     |     |     |   |     |     |
| 09...      | 146 | 8.2 | 20 | 20 | 30 | 16 | 2.3 | 1.2 | 154 | 0 | 4.9 | 2.8 |

## 07066110 - JACKS FORK ABOVE TWO RIVERS (LAT 37 10 53 LONG 091 17 36)

|            |     |     |    |    |    |    |     |     |     |   |     |     |
|------------|-----|-----|----|----|----|----|-----|-----|-----|---|-----|-----|
| OCT., 1973 |     |     |    |    |    |    |     |     |     |   |     |     |
| 17...      | 439 | 8.8 | 70 | 10 | 35 | 21 | 1.4 | 1.1 | 208 | 0 | 3.6 | 1.4 |
| JAN., 1974 |     |     |    |    |    |    |     |     |     |   |     |     |
| 18...      | 560 | 6.3 | 40 | 10 | 32 | 19 | 1.5 | .9  | 192 | 0 | 4.7 | 2.5 |
| APR.       |     |     |    |    |    |    |     |     |     |   |     |     |
| 17...      | 680 | 7.8 | 30 | 0  | 31 | 18 | 1.8 | .8  | 180 | 0 | 4.6 | 1.7 |
| JULY       |     |     |    |    |    |    |     |     |     |   |     |     |
| 10...      | 326 | 8.4 | 10 | 0  | 35 | 21 | 1.3 | 1.0 | 206 | 0 | 4.0 | 2.2 |

## 07066510 - CURRENT RIVER ABOVE POWDER MILL (LAT 37 10 32 LONG 091 12 48)

|            |      |     |    |    |    |    |     |     |     |   |     |     |
|------------|------|-----|----|----|----|----|-----|-----|-----|---|-----|-----|
| OCT., 1973 |      |     |    |    |    |    |     |     |     |   |     |     |
| 17...      | 1480 | 8.5 | 60 | 10 | 35 | 20 | 1.8 | 1.0 | 208 | 0 | 3.7 | 1.5 |
| JAN., 1974 |      |     |    |    |    |    |     |     |     |   |     |     |
| 18...      | 1820 | 6.4 | 10 | 0  | 32 | 18 | 1.6 | 1.0 | 184 | 0 | 5.1 | 2.4 |
| APR.       |      |     |    |    |    |    |     |     |     |   |     |     |
| 17...      | 2420 | 8.0 | 20 | 0  | 30 | 17 | 2.0 | .8  | 174 | 0 | 4.8 | 1.7 |
| JULY       |      |     |    |    |    |    |     |     |     |   |     |     |
| 10...      | --   | 7.7 | 40 | 10 | 34 | 19 | 1.4 | 1.1 | 198 | 0 | 7.8 | 3.0 |

## 07066550 - BLUE SPRING NEAR EMINENCE, MO. (LAT 37 09 58 LONG 091 09 47)

|            |     |    |    |    |    |    |    |    |     |   |    |    |
|------------|-----|----|----|----|----|----|----|----|-----|---|----|----|
| OCT., 1973 |     |    |    |    |    |    |    |    |     |   |    |    |
| 17...      | 180 | -- | -- | -- | -- | -- | -- | -- | 136 | 0 | -- | -- |
| JULY, 1974 |     |    |    |    |    |    |    |    |     |   |    |    |
| 10...      | 134 | -- | -- | -- | -- | -- | -- | -- | 142 | 0 | -- | -- |

## 07067800 - CURRENT RIVER BELOW HAWES CAMPGROUND (LAT 36 49 08 LONG 090 56 48)

|            |      |     |    |    |    |    |     |     |     |   |     |     |
|------------|------|-----|----|----|----|----|-----|-----|-----|---|-----|-----|
| OCT., 1973 |      |     |    |    |    |    |     |     |     |   |     |     |
| 18...      | 2420 | 8.4 | 60 | 10 | 35 | 20 | 1.6 | .9  | 212 | 0 | 3.7 | 1.3 |
| JAN., 1974 |      |     |    |    |    |    |     |     |     |   |     |     |
| 17...      | 2900 | 6.9 | 40 | 10 | 31 | 17 | 2.0 | .9  | 176 | 0 | 5.8 | 2.7 |
| APR.       |      |     |    |    |    |    |     |     |     |   |     |     |
| 18...      | 3840 | 8.0 | 20 | 0  | 30 | 17 | 2.5 | .8  | 172 | 0 | 4.9 | 1.7 |
| JULY       |      |     |    |    |    |    |     |     |     |   |     |     |
| 10...      | --   | 7.7 | 20 | 0  | 34 | 19 | 1.2 | 1.0 | 198 | 0 | 4.4 | 2.2 |

## ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE | DIS-<br>SOLVED<br>FLUO-<br>RIDE<br>(F)<br>(MG/L) | TOTAL<br>NITRATE<br>(N)<br>(MG/L) | AMMONIA<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | ORGANIC<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | DIS-<br>SOL-<br>VED-<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | TOTAL<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | METHY-<br>LENE<br>BLUE<br>ACTIVE<br>SUB-<br>STANCE<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(RESI-<br>DUE AT<br>180 C)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(TONS<br>PER<br>AC-FT) | DIS-<br>SOLVED<br>SOLIDS<br>(TONS<br>PER<br>DAY) | HARD-<br>NESS<br>(CA,MG)<br>(MG/L) | NON-<br>CAR-<br>BONATE<br>HARD-<br>NESS<br>(MG/L) |
|------|--------------------------------------------------|-----------------------------------|-------------------------------------------|-------------------------------------------|----------------------------------------------------------|-------------------------------------------|--------------------------------------------------------------|------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------|------------------------------------|---------------------------------------------------|
|------|--------------------------------------------------|-----------------------------------|-------------------------------------------|-------------------------------------------|----------------------------------------------------------|-------------------------------------------|--------------------------------------------------------------|------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------|------------------------------------|---------------------------------------------------|

## WHITE RIVER BASIN--Continued

## 07064440 - CURRENT RIVER BELOW MONTAUK STATE PARK (LAT 37 27 01 LONG 091 29 41)

|            |    |     |     |     |     |     |    |     |     |      |     |    |
|------------|----|-----|-----|-----|-----|-----|----|-----|-----|------|-----|----|
| OCT., 1973 |    |     |     |     |     |     |    |     |     |      |     |    |
| 15...      | .0 | .77 | .11 | .04 | .00 | .01 | .1 | 142 | .19 | 58.3 | 150 | 12 |
| JAN., 1974 |    |     |     |     |     |     |    |     |     |      |     |    |
| 18...      | .0 | .46 | .06 | .13 | .03 | .04 | -- | 127 | .17 | 54.9 | 120 | 4  |
| APR.       |    |     |     |     |     |     |    |     |     |      |     |    |
| 17...      | .7 | .51 | .04 | .23 | .01 | .04 | -- | 116 | .16 | 63.9 | 100 | 8  |
| JULY       |    |     |     |     |     |     |    |     |     |      |     |    |
| 09...      | .0 | .66 | .09 | .11 | .04 | .03 | .0 | 137 | .19 | 54.0 | 140 | 14 |

## 07066110 - JACKS FORK ABOVE TWO RIVERS (LAT 37 10 53 LONG 091 17 36)

|            |    |     |     |     |     |     |    |     |     |     |     |   |
|------------|----|-----|-----|-----|-----|-----|----|-----|-----|-----|-----|---|
| OCT., 1973 |    |     |     |     |     |     |    |     |     |     |     |   |
| 17...      | .0 | .42 | .05 | .10 | .04 | .04 | .1 | 157 | .21 | 186 | 170 | 0 |
| JAN., 1974 |    |     |     |     |     |     |    |     |     |     |     |   |
| 18...      | .0 | .25 | .07 | .07 | .00 | .03 | -- | 149 | .20 | 225 | 160 | 1 |
| APR.       |    |     |     |     |     |     |    |     |     |     |     |   |
| 17...      | .4 | .23 | .00 | .23 | .00 | .03 | .0 | 145 | .20 | 266 | 150 | 4 |
| JULY       |    |     |     |     |     |     |    |     |     |     |     |   |
| 10...      | .0 | .36 | .03 | .07 | --  | .01 | .0 | 165 | .22 | 145 | 170 | 5 |

## 07066510 - CURRENT RIVER ABOVE POWDER MILL (LAT 37 10 32 LONG 091 12 48)

|            |    |     |     |     |     |     |    |     |     |     |     |   |
|------------|----|-----|-----|-----|-----|-----|----|-----|-----|-----|-----|---|
| OCT., 1973 |    |     |     |     |     |     |    |     |     |     |     |   |
| 17...      | .1 | .41 | .05 | .06 | .00 | .00 | .0 | 162 | .22 | 648 | 170 | 0 |
| JAN., 1974 |    |     |     |     |     |     |    |     |     |     |     |   |
| 18...      | .0 | .21 | .05 | .07 | .03 | .03 | -- | 142 | .19 | 698 | 150 | 3 |
| APR.       |    |     |     |     |     |     |    |     |     |     |     |   |
| 17...      | .1 | .24 | .01 | .24 | .00 | .03 | .1 | 140 | .19 | 915 | 150 | 2 |
| JULY       |    |     |     |     |     |     |    |     |     |     |     |   |
| 10...      | .1 | .42 | .03 | .01 | --  | .02 | .0 | 165 | .22 | --  | 160 | 1 |

## 07066550 - BLUE SPRING NEAR EMINENCE, MO. (LAT 37 09 58 LONG 091 09 47)

|            |    |     |     |     |     |     |    |    |    |    |    |    |
|------------|----|-----|-----|-----|-----|-----|----|----|----|----|----|----|
| OCT., 1973 |    |     |     |     |     |     |    |    |    |    |    |    |
| 17...      | -- | .58 | .05 | .00 | .00 | .02 | -- | -- | -- | -- | -- | -- |
| JULY, 1974 |    |     |     |     |     |     |    |    |    |    |    |    |
| 10...      | -- | --  | --  | --  | --  | --  | -- | -- | -- | -- | -- | -- |

## 07067800 - CURRENT RIVER BELOW HAWES CAMPGROUND (LAT 36 49 08 LONG 090 56 48)

|            |    |     |     |     |     |     |    |     |     |      |     |   |
|------------|----|-----|-----|-----|-----|-----|----|-----|-----|------|-----|---|
| OCT., 1973 |    |     |     |     |     |     |    |     |     |      |     |   |
| 18...      | .1 | .35 | .15 | .00 | .01 | .01 | .1 | 186 | .25 | 1220 | 170 | 0 |
| JAN., 1974 |    |     |     |     |     |     |    |     |     |      |     |   |
| 17...      | .0 | .18 | .05 | .06 | .03 | .03 | -- | 144 | .20 | 1130 | 150 | 3 |
| APR.       |    |     |     |     |     |     |    |     |     |      |     |   |
| 18...      | .2 | .23 | .03 | .21 | .00 | .03 | .0 | 141 | .19 | 1460 | 150 | 4 |
| JULY       |    |     |     |     |     |     |    |     |     |      |     |   |
| 10...      | .0 | .23 | .03 | .00 | --  | .01 | .0 | 167 | .23 | --   | 160 | 1 |

## LOWER MISSISSIPPI RIVER BASIN

## ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE                                                                            | ALKALINITY<br>AS<br>CACO <sub>3</sub><br>(MG/L) | SPECIFIC<br>CONDUCTANCE<br>(MICRO-<br>MHOS) | PH<br>(UNITS) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | TUR-<br>BID-<br>ITY<br>(JTU) | TEMPER-<br>ATURE<br>(DEG C) | CHEM-<br>ICAL<br>OXYGEN<br>DEMAND<br>(LOW<br>LEVEL)<br>(MG/L) | DIS-<br>SOLVED<br>OXYGEN<br>(MG/L) | PER-<br>CENT<br>SATUR-<br>ATION | FECAL<br>COLI-<br>FORM<br>(COL.<br>PER<br>100 ML) | STREP-<br>TOCOCCI<br>(COL-<br>ONIES<br>PER<br>100 ML) | TOTAL<br>ARSENIC<br>(AS)<br>(UG/L) |
|---------------------------------------------------------------------------------|-------------------------------------------------|---------------------------------------------|---------------|----------------------------------------------|------------------------------|-----------------------------|---------------------------------------------------------------|------------------------------------|---------------------------------|---------------------------------------------------|-------------------------------------------------------|------------------------------------|
| WHITE RIVER BASIN--Continued                                                    |                                                 |                                             |               |                                              |                              |                             |                                                               |                                    |                                 |                                                   |                                                       |                                    |
| 07064440 - CURRENT RIVER BELOW MONTAUK STATE PARK (LAT 37 27 01 LONG 091 29 41) |                                                 |                                             |               |                                              |                              |                             |                                                               |                                    |                                 |                                                   |                                                       |                                    |
| OCT., 1973                                                                      |                                                 |                                             |               |                                              |                              |                             |                                                               |                                    |                                 |                                                   |                                                       |                                    |
| 15...                                                                           | 138                                             | 286                                         | 7.3           | 4                                            | 2                            | 13.0                        | 2                                                             | 9.3                                | 88                              | 290                                               | 660                                                   | 2                                  |
| JAN., 1974                                                                      |                                                 |                                             |               |                                              |                              |                             |                                                               |                                    |                                 |                                                   |                                                       |                                    |
| 18...                                                                           | 118                                             | 242                                         | 8.0           | 5                                            | 1                            | 13.5                        | 5                                                             | 11.6                               | 110                             | <2                                                | 6                                                     | 2                                  |
| APR.                                                                            |                                                 |                                             |               |                                              |                              |                             |                                                               |                                    |                                 |                                                   |                                                       |                                    |
| 17...                                                                           | 97                                              | 205                                         | 7.8           | 3                                            | 3                            | 11.5                        | 3                                                             | 10.4                               | 95                              | 24                                                | 20                                                    | 5                                  |
| JULY                                                                            |                                                 |                                             |               |                                              |                              |                             |                                                               |                                    |                                 |                                                   |                                                       |                                    |
| 09...                                                                           | 126                                             | 272                                         | 7.4           | 1                                            | 1                            | 15.5                        | 23                                                            | 10.2                               | 102                             | --                                                | --                                                    | 1                                  |
| 07066110 - JACKS FORK ABOVE TWO RIVERS (LAT 37 10 53 LONG 091 17 36)            |                                                 |                                             |               |                                              |                              |                             |                                                               |                                    |                                 |                                                   |                                                       |                                    |
| OCT., 1973                                                                      |                                                 |                                             |               |                                              |                              |                             |                                                               |                                    |                                 |                                                   |                                                       |                                    |
| 17...                                                                           | 171                                             | 329                                         | 8.0           | 3                                            | 1                            | 15.0                        | 1                                                             | 9.9                                | 98                              | 53                                                | 80                                                    | 2                                  |
| JAN., 1974                                                                      |                                                 |                                             |               |                                              |                              |                             |                                                               |                                    |                                 |                                                   |                                                       |                                    |
| 18...                                                                           | 157                                             | 305                                         | 7.9           | 5                                            | 1                            | 10.5                        | 0                                                             | 10.8                               | 96                              | 21                                                | 16                                                    | 0                                  |
| APR.                                                                            |                                                 |                                             |               |                                              |                              |                             |                                                               |                                    |                                 |                                                   |                                                       |                                    |
| 17...                                                                           | 148                                             | 295                                         | 8.2           | 2                                            | 1                            | 13.0                        | 1                                                             | 11.3                               | 107                             | 2                                                 | 12                                                    | 1                                  |
| JULY                                                                            |                                                 |                                             |               |                                              |                              |                             |                                                               |                                    |                                 |                                                   |                                                       |                                    |
| 10...                                                                           | 169                                             | 338                                         | 8.0           | 1                                            | 1                            | 21.0                        | 2                                                             | 7.9                                | 88                              | --                                                | --                                                    | 1                                  |
| 07066510 - CURRENT RIVER ABOVE POWDER MILL (LAT 37 10 32 LONG 091 12 48)        |                                                 |                                             |               |                                              |                              |                             |                                                               |                                    |                                 |                                                   |                                                       |                                    |
| OCT., 1973                                                                      |                                                 |                                             |               |                                              |                              |                             |                                                               |                                    |                                 |                                                   |                                                       |                                    |
| 17...                                                                           | 171                                             | 328                                         | 8.2           | 2                                            | 1                            | 15.0                        | 1                                                             | 9.9                                | 98                              | 22                                                | 52                                                    | 2                                  |
| JAN., 1974                                                                      |                                                 |                                             |               |                                              |                              |                             |                                                               |                                    |                                 |                                                   |                                                       |                                    |
| 18...                                                                           | 151                                             | 292                                         | 8.0           | 8                                            | 1                            | 11.0                        | 5                                                             | 8.2                                | 75                              | 14                                                | 7                                                     | 0                                  |
| APR.                                                                            |                                                 |                                             |               |                                              |                              |                             |                                                               |                                    |                                 |                                                   |                                                       |                                    |
| 17...                                                                           | 143                                             | 285                                         | 8.2           | 3                                            | 1                            | 13.5                        | 20                                                            | 10.8                               | 103                             | 1                                                 | 3                                                     | 1                                  |
| JULY                                                                            |                                                 |                                             |               |                                              |                              |                             |                                                               |                                    |                                 |                                                   |                                                       |                                    |
| 10...                                                                           | 162                                             | 318                                         | 8.1           | 2                                            | 1                            | 21.5                        | 24                                                            | 8.2                                | 92                              | --                                                | --                                                    | 2                                  |
| 07066550 - BLUE SPRING NEAR EMINENCE, MO. (LAT 37 09 58 LONG 091 09 47)         |                                                 |                                             |               |                                              |                              |                             |                                                               |                                    |                                 |                                                   |                                                       |                                    |
| OCT., 1973                                                                      |                                                 |                                             |               |                                              |                              |                             |                                                               |                                    |                                 |                                                   |                                                       |                                    |
| 17...                                                                           | 112                                             | 243                                         | 7.5           | --                                           | --                           | 14.0                        | --                                                            | 8.9                                | 86                              | 140                                               | 950                                                   | 0                                  |
| JULY, 1974                                                                      |                                                 |                                             |               |                                              |                              |                             |                                                               |                                    |                                 |                                                   |                                                       |                                    |
| 10...                                                                           | 117                                             | 266                                         | 7.5           | --                                           | --                           | 14.5                        | --                                                            | 8.4                                | 82                              | --                                                | --                                                    | 1                                  |
| 07067800 - CURRENT RIVER BELOW HAWES CAMPGROUND (LAT 36 49 08 LONG 090 56 48)   |                                                 |                                             |               |                                              |                              |                             |                                                               |                                    |                                 |                                                   |                                                       |                                    |
| OCT., 1973                                                                      |                                                 |                                             |               |                                              |                              |                             |                                                               |                                    |                                 |                                                   |                                                       |                                    |
| 18...                                                                           | 174                                             | 324                                         | 8.0           | 2                                            | 1                            | 15.0                        | 1                                                             | 10.0                               | 99                              | 9                                                 | 19                                                    | 2                                  |
| JAN., 1974                                                                      |                                                 |                                             |               |                                              |                              |                             |                                                               |                                    |                                 |                                                   |                                                       |                                    |
| 17...                                                                           | 144                                             | 280                                         | 7.9           | 5                                            | 1                            | 11.0                        | 3                                                             | 9.1                                | 83                              | 3                                                 | 6                                                     | 1                                  |
| APR.                                                                            |                                                 |                                             |               |                                              |                              |                             |                                                               |                                    |                                 |                                                   |                                                       |                                    |
| 18...                                                                           | 141                                             | 273                                         | 8.0           | 2                                            | 2                            | 13.5                        | 6                                                             | 9.2                                | 88                              | 10                                                | 17                                                    | 1                                  |
| JULY                                                                            |                                                 |                                             |               |                                              |                              |                             |                                                               |                                    |                                 |                                                   |                                                       |                                    |
| 10...                                                                           | 162                                             | 316                                         | 8.1           | 1                                            | 1                            | 22.5                        | 24                                                            | 8.8                                | 100                             | --                                                | --                                                    | 2                                  |

## ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE                                                                            | TOTAL<br>BARIUM<br>(BA)<br>(UG/L) | TOTAL<br>CAD-<br>MIUM<br>(CD)<br>(UG/L) | TOTAL<br>CHRO-<br>MIUM<br>(CR)<br>(UG/L) | TOTAL<br>COBALT<br>(CO)<br>(UG/L) | TOTAL<br>COPPER<br>(CU)<br>(UG/L) | TOTAL<br>LEAD<br>(PB)<br>(UG/L) | TOTAL<br>MERCURY<br>(HG)<br>(UG/L) | TOTAL<br>NICKEL<br>(NI)<br>(UG/L) | TOTAL<br>SILVER<br>(AG)<br>(UG/L) | TOTAL<br>ZINC<br>(ZN)<br>(UG/L) | ALDRIN<br>(UG/L) | DDD<br>(UG/L) |
|---------------------------------------------------------------------------------|-----------------------------------|-----------------------------------------|------------------------------------------|-----------------------------------|-----------------------------------|---------------------------------|------------------------------------|-----------------------------------|-----------------------------------|---------------------------------|------------------|---------------|
| WHITE RIVER BASIN--Continued                                                    |                                   |                                         |                                          |                                   |                                   |                                 |                                    |                                   |                                   |                                 |                  |               |
| 07064440 - CURRENT RIVER BELOW MONTAUK STATE PARK (LAT 37 27 01 LONG 091 29 41) |                                   |                                         |                                          |                                   |                                   |                                 |                                    |                                   |                                   |                                 |                  |               |
| OCT., 1973                                                                      |                                   |                                         |                                          |                                   |                                   |                                 |                                    |                                   |                                   |                                 |                  |               |
| 15...                                                                           | 0                                 | <10                                     | 0                                        | <25                               | <10                               | <50                             | .0                                 | <25                               | <10                               | 80                              | .00              | .00           |
| JAN., 1974                                                                      |                                   |                                         |                                          |                                   |                                   |                                 |                                    |                                   |                                   |                                 |                  |               |
| 18...                                                                           | 0                                 | 20                                      | 0                                        | 50                                | <10                               | <100                            | .0                                 | <50                               | <10                               | 30                              | --               | --            |
| APR.                                                                            |                                   |                                         |                                          |                                   |                                   |                                 |                                    |                                   |                                   |                                 |                  |               |
| 17...                                                                           | 0                                 | 10                                      | 0                                        | <50                               | <10                               | <100                            | .0                                 | 100                               | <10                               | 480                             | --               | --            |
| JULY                                                                            |                                   |                                         |                                          |                                   |                                   |                                 |                                    |                                   |                                   |                                 |                  |               |
| 09...                                                                           | 0                                 | <10                                     | 0                                        | <50                               | <10                               | <100                            | .0                                 | <50                               | <10                               | 10                              | .00              | .00           |
| 07066110 - JACKS FORK ABOVE TWO RIVERS (LAT 37 10 53 LONG 091 17 36)            |                                   |                                         |                                          |                                   |                                   |                                 |                                    |                                   |                                   |                                 |                  |               |
| OCT., 1973                                                                      |                                   |                                         |                                          |                                   |                                   |                                 |                                    |                                   |                                   |                                 |                  |               |
| 17...                                                                           | --                                | <10                                     | 0                                        | 25                                | 10                                | <50                             | .0                                 | <25                               | <10                               | 80                              | .00              | .00           |
| JAN., 1974                                                                      |                                   |                                         |                                          |                                   |                                   |                                 |                                    |                                   |                                   |                                 |                  |               |
| 18...                                                                           | 0                                 | <10                                     | 0                                        | <50                               | <10                               | <100                            | .0                                 | <50                               | <10                               | 30                              | --               | --            |
| APR.                                                                            |                                   |                                         |                                          |                                   |                                   |                                 |                                    |                                   |                                   |                                 |                  |               |
| 17...                                                                           | 0                                 | <10                                     | 0                                        | <50                               | <10                               | <100                            | .0                                 | 100                               | <10                               | 260                             | --               | --            |
| JULY                                                                            |                                   |                                         |                                          |                                   |                                   |                                 |                                    |                                   |                                   |                                 |                  |               |
| 10...                                                                           | 0                                 | <10                                     | 0                                        | <50                               | <10                               | <100                            | .0                                 | <50                               | <10                               | 20                              | .00              | .00           |
| 07066510 - CURRENT RIVER ABOVE POWDER MILL (LAT 37 10 32 LONG 091 12 48)        |                                   |                                         |                                          |                                   |                                   |                                 |                                    |                                   |                                   |                                 |                  |               |
| OCT., 1973                                                                      |                                   |                                         |                                          |                                   |                                   |                                 |                                    |                                   |                                   |                                 |                  |               |
| 17...                                                                           | 0                                 | <10                                     | 0                                        | 25                                | 10                                | <50                             | .1                                 | <25                               | <10                               | 70                              | .00              | .00           |
| JAN., 1974                                                                      |                                   |                                         |                                          |                                   |                                   |                                 |                                    |                                   |                                   |                                 |                  |               |
| 18...                                                                           | 0                                 | 10                                      | 0                                        | 50                                | <10                               | <100                            | .0                                 | <50                               | <10                               | 30                              | --               | --            |
| APR.                                                                            |                                   |                                         |                                          |                                   |                                   |                                 |                                    |                                   |                                   |                                 |                  |               |
| 17...                                                                           | 0                                 | <10                                     | 0                                        | <50                               | <10                               | <100                            | .0                                 | 50                                | <10                               | 230                             | --               | --            |
| JULY                                                                            |                                   |                                         |                                          |                                   |                                   |                                 |                                    |                                   |                                   |                                 |                  |               |
| 10...                                                                           | 0                                 | <10                                     | 0                                        | <50                               | 10                                | <100                            | .0                                 | <50                               | --                                | 30                              | .00              | .00           |
| 07066550 - BLUE SPRING NEAR EMINENCE, MO. (LAT 37 09 58 LONG 091 09 47)         |                                   |                                         |                                          |                                   |                                   |                                 |                                    |                                   |                                   |                                 |                  |               |
| OCT., 1973                                                                      |                                   |                                         |                                          |                                   |                                   |                                 |                                    |                                   |                                   |                                 |                  |               |
| 17...                                                                           | 0                                 | <10                                     | 0                                        | <25                               | <10                               | <50                             | .0                                 | <25                               | <10                               | 80                              | --               | --            |
| JULY, 1974                                                                      |                                   |                                         |                                          |                                   |                                   |                                 |                                    |                                   |                                   |                                 |                  |               |
| 10...                                                                           | 0                                 | <10                                     | 0                                        | <50                               | <10                               | <100                            | .0                                 | <50                               | <10                               | 10                              | --               | --            |
| 07067800 - CURRENT RIVER BELOW HAWES CAMPGROUND (LAT 36 49 08 LONG 090 56 48)   |                                   |                                         |                                          |                                   |                                   |                                 |                                    |                                   |                                   |                                 |                  |               |
| OCT., 1973                                                                      |                                   |                                         |                                          |                                   |                                   |                                 |                                    |                                   |                                   |                                 |                  |               |
| 18...                                                                           | 0                                 | <10                                     | 0                                        | <25                               | <10                               | <50                             | .0                                 | <25                               | <10                               | 80                              | .00              | .00           |
| JAN., 1974                                                                      |                                   |                                         |                                          |                                   |                                   |                                 |                                    |                                   |                                   |                                 |                  |               |
| 17...                                                                           | 0                                 | 10                                      | 0                                        | 50                                | <10                               | <100                            | .0                                 | <50                               | <10                               | 30                              | --               | --            |
| APR.                                                                            |                                   |                                         |                                          |                                   |                                   |                                 |                                    |                                   |                                   |                                 |                  |               |
| 18...                                                                           | 0                                 | 10                                      | 0                                        | <50                               | <10                               | <100                            | .0                                 | 100                               | <10                               | 210                             | --               | --            |
| JULY                                                                            |                                   |                                         |                                          |                                   |                                   |                                 |                                    |                                   |                                   |                                 |                  |               |
| 10...                                                                           | 0                                 | <10                                     | 0                                        | <50                               | <10                               | <100                            | .0                                 | <50                               | <10                               | 30                              | .00              | .00           |

## LOWER MISSISSIPPI RIVER BASIN

## ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE | DDE<br>(UG/L) | DDT<br>(UG/L) | DI-<br>ELDRIN<br>(UG/L) | ENDRIN<br>(UG/L) | HEPTA-<br>CHLOR<br>(UG/L) | HEPTA-<br>CHLOR<br>EPOXIDE<br>(UG/L) | LINDANE<br>(UG/L) | CHLOR-<br>DANE<br>(UG/L) | 2,4-D<br>(UG/L) | SILVEX<br>(UG/L) | 2,4,5-T<br>(UG/L) | PCB<br>(UG/L) |
|------|---------------|---------------|-------------------------|------------------|---------------------------|--------------------------------------|-------------------|--------------------------|-----------------|------------------|-------------------|---------------|
|------|---------------|---------------|-------------------------|------------------|---------------------------|--------------------------------------|-------------------|--------------------------|-----------------|------------------|-------------------|---------------|

## WHITE RIVER BASIN--Continued

## 07064440 - CURRENT RIVER BELOW MONTAUK STATE PARK (LAT 37 27 01 LONG 091 29 41)

|            |     |     |     |     |     |     |     |    |     |     |     |    |
|------------|-----|-----|-----|-----|-----|-----|-----|----|-----|-----|-----|----|
| OCT., 1973 |     |     |     |     |     |     |     |    |     |     |     |    |
| 15...      | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .0 | .00 | .00 | .00 | .0 |
| JAN., 1974 |     |     |     |     |     |     |     |    |     |     |     |    |
| 18...      | --  | --  | --  | --  | --  | --  | --  | -- | --  | --  | --  | -- |
| APR.       |     |     |     |     |     |     |     |    |     |     |     |    |
| 17...      | --  | --  | --  | --  | --  | --  | --  | -- | --  | --  | --  | -- |
| JULY       |     |     |     |     |     |     |     |    |     |     |     |    |
| 09...      | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .0 | .00 | .00 | .00 | .0 |

## 07066110 - JACKS FORK ABOVE TWO RIVERS (LAT 37 10 53 LONG 091 17 36)

|            |     |     |     |     |     |     |     |    |     |     |     |    |
|------------|-----|-----|-----|-----|-----|-----|-----|----|-----|-----|-----|----|
| OCT., 1973 |     |     |     |     |     |     |     |    |     |     |     |    |
| 17...      | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .0 | .00 | .00 | .00 | .0 |
| JAN., 1974 |     |     |     |     |     |     |     |    |     |     |     |    |
| 18...      | --  | --  | --  | --  | --  | --  | --  | -- | --  | --  | --  | -- |
| APR.       |     |     |     |     |     |     |     |    |     |     |     |    |
| 17...      | --  | --  | --  | --  | --  | --  | --  | -- | --  | --  | --  | -- |
| JULY       |     |     |     |     |     |     |     |    |     |     |     |    |
| 10...      | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .0 | .00 | .00 | .00 | .0 |

## 07066510 - CURRENT RIVER ABOVE POWDER MILL (LAT 37 10 32 LONG 091 12 48)

|            |     |     |     |     |     |     |     |    |     |     |     |    |
|------------|-----|-----|-----|-----|-----|-----|-----|----|-----|-----|-----|----|
| OCT., 1973 |     |     |     |     |     |     |     |    |     |     |     |    |
| 17...      | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .0 | .00 | .00 | .00 | .0 |
| JAN., 1974 |     |     |     |     |     |     |     |    |     |     |     |    |
| 18...      | --  | --  | --  | --  | --  | --  | --  | -- | --  | --  | --  | -- |
| APR.       |     |     |     |     |     |     |     |    |     |     |     |    |
| 17...      | --  | --  | --  | --  | --  | --  | --  | -- | --  | --  | --  | -- |
| JULY       |     |     |     |     |     |     |     |    |     |     |     |    |
| 10...      | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .0 | .00 | .00 | .00 | .0 |

## 07066550 - BLUE SPRING NEAR EMINENCE, MO. (LAT 37 09 58 LONG 091 09 47)

|            |    |    |    |    |    |    |    |    |    |    |    |    |
|------------|----|----|----|----|----|----|----|----|----|----|----|----|
| OCT., 1973 |    |    |    |    |    |    |    |    |    |    |    |    |
| 17...      | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JULY, 1974 |    |    |    |    |    |    |    |    |    |    |    |    |
| 10...      | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

## 07067800 - CURRENT RIVER BELOW HAWES CAMPGROUND (LAT 36 49 08 LONG 090 56 48)

|            |     |     |     |     |     |     |     |    |     |     |     |    |
|------------|-----|-----|-----|-----|-----|-----|-----|----|-----|-----|-----|----|
| OCT., 1973 |     |     |     |     |     |     |     |    |     |     |     |    |
| 18...      | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .0 | .00 | .00 | .00 | .0 |
| JAN., 1974 |     |     |     |     |     |     |     |    |     |     |     |    |
| 17...      | --  | --  | --  | --  | --  | --  | --  | -- | --  | --  | --  | -- |
| APR.       |     |     |     |     |     |     |     |    |     |     |     |    |
| 18...      | --  | --  | --  | --  | --  | --  | --  | -- | --  | --  | --  | -- |
| JULY       |     |     |     |     |     |     |     |    |     |     |     |    |
| 10...      | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .0 | .00 | .00 | .00 | .0 |

LOWER MISSISSIPPI RIVER BASIN

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN MISSOURI

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WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE | INSTAN-<br>TANEOUS<br>DIS-<br>CHARGE<br>(CFS) | BICAR-<br>BONATE<br>(HCO3)<br>(MG/L) | CAR-<br>BONATE<br>(CO3)<br>(MG/L) | TOTAL<br>NITRATE<br>(N)<br>(MG/L) | AMMONIA<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | ORGANIC<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | DIS-<br>SOL-<br>VED-<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | TOTAL<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) |
|------|-----------------------------------------------|--------------------------------------|-----------------------------------|-----------------------------------|-------------------------------------------|-------------------------------------------|----------------------------------------------------------|-------------------------------------------|
|------|-----------------------------------------------|--------------------------------------|-----------------------------------|-----------------------------------|-------------------------------------------|-------------------------------------------|----------------------------------------------------------|-------------------------------------------|

WHITE RIVER BASIN

07064420 - CURRENT RIVER BELOW MONTAUK SPRINGS (LAT 37 27 36 LONG 091 40 53)

|            |  |     |   |     |     |     |     |     |
|------------|--|-----|---|-----|-----|-----|-----|-----|
| OCT., 1973 |  |     |   |     |     |     |     |     |
| 15... 121  |  | 168 | 0 | .84 | .09 | .00 | .00 | .01 |
| JULY, 1974 |  |     |   |     |     |     |     |     |
| 09... 110  |  | 152 | 0 | .72 | .04 | .00 | --  | .00 |

07064530 - WELCH SPRING NEAR AKERS, MO (LAT 37 23 38 LONG 091 34 25)

|            |  |     |   |     |     |     |     |     |
|------------|--|-----|---|-----|-----|-----|-----|-----|
| OCT., 1973 |  |     |   |     |     |     |     |     |
| 15... 284  |  | 202 | 0 | .75 | .14 | .01 | .00 | .00 |

07064533 - CURRENT RIVER ABOVE AKERS, MO. (LAT 37 22 30 LONG 091 33 13)

|            |  |     |   |     |     |     |     |     |
|------------|--|-----|---|-----|-----|-----|-----|-----|
| OCT., 1973 |  |     |   |     |     |     |     |     |
| 15... 540  |  | 202 | 0 | .63 | .02 | .41 | .00 | .01 |

07064535 - CURRENT RIVER BELOW AKERS, MO (LAT 37 22 35 LONG 091 32 51)

|            |  |     |   |     |     |     |     |     |
|------------|--|-----|---|-----|-----|-----|-----|-----|
| OCT., 1973 |  |     |   |     |     |     |     |     |
| 15... 545  |  | 200 | 0 | .63 | .06 | .04 | .00 | .04 |

07064550 - CURRENT RIVER ABOVE PULLTITE SPRING (LAT 37 30 02 LONG 091 28 29)

|            |  |     |   |     |     |     |     |     |
|------------|--|-----|---|-----|-----|-----|-----|-----|
| OCT., 1973 |  |     |   |     |     |     |     |     |
| 15... 647  |  | 204 | 0 | .55 | .06 | .10 | .00 | .00 |

07064555 - PULLTITE SPRING NEAR ROUND SPRING, MO (LAT 37 20 03 LONG 091 29 24)

|            |  |     |   |     |     |     |     |     |
|------------|--|-----|---|-----|-----|-----|-----|-----|
| OCT., 1973 |  |     |   |     |     |     |     |     |
| 15... 114  |  | 190 | 0 | .61 | .25 | .00 | .00 | .00 |

07064560 - CURRENT RIVER BELOW PULLTITE SPRING (LAT 37 19 58 LONG 091 29 20)

|            |  |     |   |     |     |     |     |     |
|------------|--|-----|---|-----|-----|-----|-----|-----|
| OCT., 1973 |  |     |   |     |     |     |     |     |
| 15... 761  |  | 204 | 0 | .55 | .18 | .00 | .00 | .01 |

07064800 - SINKING CREEK NEAR ROUND SPRING, MO (LAT 37 18 12 LONG 091 24 50)

|            |  |     |   |     |     |     |     |     |
|------------|--|-----|---|-----|-----|-----|-----|-----|
| OCT., 1973 |  |     |   |     |     |     |     |     |
| 16... 146  |  | 210 | 0 | .17 | .12 | .23 | .00 | .00 |

07064940 - CURRENT RIVER ABOVE ROUND SPRING (LAT 37 17 17 LONG 091 24 43)

|            |  |     |   |     |     |     |     |     |
|------------|--|-----|---|-----|-----|-----|-----|-----|
| OCT., 1973 |  |     |   |     |     |     |     |     |
| 16... 936  |  | 208 | 0 | .48 | .02 | .14 | .00 | .00 |

07065000 - ROUND SPRING AT ROUND SPRING MO (LAT 37 16 57 LONG 091 24 26)

|            |  |     |   |     |     |     |     |     |
|------------|--|-----|---|-----|-----|-----|-----|-----|
| OCT., 1973 |  |     |   |     |     |     |     |     |
| 16... 71   |  | 180 | 0 | .37 | .01 | .11 | .00 | .02 |

07065010 - CURRENT RIVER BELOW ROUND SPRING (LAT 37 16 44 LONG 091 24 13)

|            |  |     |   |     |     |     |     |     |
|------------|--|-----|---|-----|-----|-----|-----|-----|
| OCT., 1973 |  |     |   |     |     |     |     |     |
| 16... 1010 |  | 202 | 0 | .58 | .11 | .00 | .00 | .02 |

07065200 - JACKS FORK NEAR MOUNTAIN VIEW, MO (LAT 37 03 22 LONG 091 40 05)

|            |  |     |   |     |     |     |     |     |
|------------|--|-----|---|-----|-----|-----|-----|-----|
| OCT., 1973 |  |     |   |     |     |     |     |     |
| 16... 156  |  | 216 | 0 | .36 | .05 | .24 | .00 | .00 |
| JULY, 1974 |  |     |   |     |     |     |     |     |
| 09... 56   |  | 234 | 0 | .22 | .03 | .16 | --  | .00 |

07065490 - JACKS FORK ABOVE ALLEY SPRING (LAT 37 08 40 LONG 091 27 31)

|            |  |     |   |     |     |     |     |     |
|------------|--|-----|---|-----|-----|-----|-----|-----|
| OCT., 1973 |  |     |   |     |     |     |     |     |
| 16... 242  |  | 216 | 0 | .30 | .06 | .10 | .01 | .01 |



LOWER MISSISSIPPI RIVER BASIN  
ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN MISSOURI  
WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE | ALKA-<br>LITY<br>AS<br>CAC03<br>(MG/L) | SPE-<br>CIFIC<br>CON-<br>DUCT-<br>ANCE<br>(MICRO-<br>MHOS) | PH<br>(UNITS) | TEMPER-<br>ATURE<br>(DEG C) | DIS-<br>SOLVED<br>OXYGEN<br>(MG/L) | PER-<br>CENT<br>SATUR-<br>ATION | FECAL<br>COLI-<br>FORM<br>(COL.<br>PER<br>100 ML) | STREP-<br>TOCOCCI<br>(COL-<br>UNIES<br>PER<br>100 ML) |
|------|----------------------------------------|------------------------------------------------------------|---------------|-----------------------------|------------------------------------|---------------------------------|---------------------------------------------------|-------------------------------------------------------|
|------|----------------------------------------|------------------------------------------------------------|---------------|-----------------------------|------------------------------------|---------------------------------|---------------------------------------------------|-------------------------------------------------------|

WHITE RIVER BASIN--Continued

07064420 - CURRENT RIVER BELOW MONTAUK SPRINGS (LAT 37 27 36 LONG 091 40 53)

|            |     |     |     |      |     |    |     |     |
|------------|-----|-----|-----|------|-----|----|-----|-----|
| OCT., 1973 |     |     |     |      |     |    |     |     |
| 15...      | 138 | 278 | 7.4 | 13.5 | 8.4 | 80 | 260 | 780 |
| JULY, 1974 |     |     |     |      |     |    |     |     |
| 09...      | 125 | 283 | 7.0 | 14.5 | 8.8 | 85 | --  | --  |

07064530 - WELCH SPRING NEAR AKERS, MO (LAT 37 23 38 LONG 091 34 25)

|            |     |     |     |      |     |    |    |     |
|------------|-----|-----|-----|------|-----|----|----|-----|
| OCT., 1973 |     |     |     |      |     |    |    |     |
| 15...      | 166 | 335 | 6.9 | 13.5 | 8.3 | 79 | 62 | 180 |

07064533 - CURRENT RIVER ABOVE AKERS, MO. (LAT 37 22 30 LONG 091 33 13)

|            |     |     |     |      |      |     |    |     |
|------------|-----|-----|-----|------|------|-----|----|-----|
| OCT., 1973 |     |     |     |      |      |     |    |     |
| 15...      | 166 | 324 | 7.7 | 15.5 | 10.0 | 100 | 98 | 240 |

07064535 - CURRENT RIVER BELOW AKERS, MO (LAT 37 22 35 LONG 091 32 51)

|            |     |     |     |      |      |     |     |     |
|------------|-----|-----|-----|------|------|-----|-----|-----|
| OCT., 1973 |     |     |     |      |      |     |     |     |
| 15...      | 164 | 324 | 7.7 | 15.5 | 10.2 | 102 | 100 | 210 |

07064550 - CURRENT RIVER ABOVE PULLTITE SPRING (LAT 37 30 02 LONG 091 28 29)

|            |     |     |     |      |      |     |    |     |
|------------|-----|-----|-----|------|------|-----|----|-----|
| OCT., 1973 |     |     |     |      |      |     |    |     |
| 15...      | 167 | 328 | 7.9 | 16.0 | 10.2 | 103 | 96 | 260 |

07064555 - PULLTITE SPRING NEAR ROUND SPRING, MO (LAT 37 20 03 LONG 091 29 24)

|            |     |     |     |      |     |    |    |    |
|------------|-----|-----|-----|------|-----|----|----|----|
| OCT., 1973 |     |     |     |      |     |    |    |    |
| 15...      | 156 | 307 | 7.3 | 14.5 | 8.0 | 78 | 22 | 51 |

07064560 - CURRENT RIVER BELOW PULLTITE SPRING (LAT 37 19 58 LONG 091 29 20)

|            |     |     |     |      |      |     |    |     |
|------------|-----|-----|-----|------|------|-----|----|-----|
| OCT., 1973 |     |     |     |      |      |     |    |     |
| 15...      | 167 | 324 | 7.9 | 16.0 | 10.0 | 101 | 82 | 180 |

07064800 - SINKING CREEK NEAR ROUND SPRING, MO (LAT 37 18 12 LONG 091 24 50)

|            |     |     |     |      |     |    |    |     |
|------------|-----|-----|-----|------|-----|----|----|-----|
| OCT., 1973 |     |     |     |      |     |    |    |     |
| 16...      | 172 | 324 | 7.8 | 15.5 | 8.8 | 88 | 39 | 160 |

07064940 - CURRENT RIVER ABOVE ROUND SPRING (LAT 37 17 17 LONG 091 24 43)

|            |     |     |     |      |     |    |    |     |
|------------|-----|-----|-----|------|-----|----|----|-----|
| OCT., 1973 |     |     |     |      |     |    |    |     |
| 16...      | 171 | 322 | 7.8 | 14.0 | 9.0 | 86 | 54 | 140 |

07065000 - ROUND SPRING AT ROUND SPRING MO (LAT 37 16 57 LONG 091 24 26)

|            |     |     |     |      |     |    |    |    |
|------------|-----|-----|-----|------|-----|----|----|----|
| OCT., 1973 |     |     |     |      |     |    |    |    |
| 16...      | 148 | 273 | 7.3 | 14.0 | 8.1 | 78 | 32 | 91 |

07065010 - CURRENT RIVER BELOW ROUND SPRING (LAT 37 16 44 LONG 091 24 13)

|            |     |     |     |      |     |    |    |     |
|------------|-----|-----|-----|------|-----|----|----|-----|
| OCT., 1973 |     |     |     |      |     |    |    |     |
| 16...      | 166 | 313 | 7.7 | 14.0 | 9.1 | 88 | 43 | 120 |

07065200 - JACKS FORK NEAR MOUNTAIN VIEW, MO (LAT 37 03 22 LONG 091 40 05)

|            |     |     |     |      |     |     |     |     |
|------------|-----|-----|-----|------|-----|-----|-----|-----|
| OCT., 1973 |     |     |     |      |     |     |     |     |
| 16...      | 177 | 341 | 8.1 | 17.0 | 9.2 | 95  | 100 | 240 |
| JULY, 1974 |     |     |     |      |     |     |     |     |
| 09...      | 192 | 402 | 8.2 | 26.5 | 8.2 | 101 | --  | --  |

07065490 - JACKS FORK ABOVE ALLEY SPRING (LAT 37 08 40 LONG 091 27 31)

|            |     |     |     |      |     |    |    |    |
|------------|-----|-----|-----|------|-----|----|----|----|
| OCT., 1973 |     |     |     |      |     |    |    |    |
| 16...      | 177 | 323 | 8.1 | 18.0 | 8.5 | 88 | 13 | 97 |

LOWER MISSISSIPPI RIVER BASIN

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN MISSOURI

565

WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE | INSTANTANEOUS<br>DIS-<br>CHARGE<br>(CFS) | BICARBONATE<br>(HCO <sub>3</sub> )<br>(MG/L) | CARBONATE<br>(CO <sub>3</sub> )<br>(MG/L) | TOTAL<br>NITRATE<br>(N)<br>(MG/L) | AMMONIA<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | ORGANIC<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | DIS-<br>SOL-<br>VED-<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | TOTAL<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) |
|------|------------------------------------------|----------------------------------------------|-------------------------------------------|-----------------------------------|-------------------------------------------|-------------------------------------------|----------------------------------------------------------|-------------------------------------------|
|------|------------------------------------------|----------------------------------------------|-------------------------------------------|-----------------------------------|-------------------------------------------|-------------------------------------------|----------------------------------------------------------|-------------------------------------------|

WHITE RIVER BASIN--Continued

07065500 - ALLEY SPRING AT ALLEY MO (LAT 37 09 14 LONG 091 26 29)

|            |     |     |   |     |     |     |     |     |
|------------|-----|-----|---|-----|-----|-----|-----|-----|
| OCT., 1973 |     |     |   |     |     |     |     |     |
| 16...      | 201 | 164 | 0 | .78 | .01 | .16 | .00 | .02 |
| JULY, 1974 |     |     |   |     |     |     |     |     |
| 10...      | 169 | 164 | 0 | .70 | .03 | .00 | --  | .03 |

07065510 - JACKS FORK BELOW ALLEY SPRING (LAT 37 09 31 LONG 091 25 41)

|            |     |     |   |     |     |     |     |     |
|------------|-----|-----|---|-----|-----|-----|-----|-----|
| OCT., 1973 |     |     |   |     |     |     |     |     |
| 16...      | 443 | 188 | 0 | .47 | .08 | .33 | .00 | .00 |

07065950 - MAHANS CREEK AT WEST EMINENCE, MO (LAT 37 08 50 LONG 091 22 42)

|            |    |     |   |     |     |     |     |     |
|------------|----|-----|---|-----|-----|-----|-----|-----|
| OCT., 1973 |    |     |   |     |     |     |     |     |
| 16...      | 15 | 276 | 0 | .22 | .03 | .17 | .00 | .00 |

07065980 - JACKS FORK ABOVE EMINENCE, MO. (LAT 37 09 26 LONG 091 22 11)

|            |     |     |   |     |     |     |     |     |
|------------|-----|-----|---|-----|-----|-----|-----|-----|
| OCT., 1973 |     |     |   |     |     |     |     |     |
| 17...      | 430 | 196 | 0 | .48 | .05 | .10 | .00 | .10 |

07066010 - JACKS FORK BELOW EMINENCE, MO (LAT 37 10 14 LONG 091 20 12)

|            |     |     |   |     |     |     |     |     |
|------------|-----|-----|---|-----|-----|-----|-----|-----|
| OCT., 1973 |     |     |   |     |     |     |     |     |
| 17...      | 435 | 198 | 0 | .46 | .08 | .15 | .00 | .00 |

07066100 - SHAWNEE CREEK NEAR EMINENCE, MO (LAT 37 10 18 LONG 091 18 07)

|            |     |     |   |     |     |     |     |     |
|------------|-----|-----|---|-----|-----|-----|-----|-----|
| OCT., 1973 |     |     |   |     |     |     |     |     |
| 17...      | 8.4 | 350 | 0 | .41 | .01 | .15 | .02 | .09 |

07066540 - CURRENT RIVER BELOW POWDER MILL (LAT 37 10 48 LONG 091 10 22)

|            |      |     |   |     |     |     |     |     |
|------------|------|-----|---|-----|-----|-----|-----|-----|
| OCT., 1973 |      |     |   |     |     |     |     |     |
| 17...      | 1490 | 204 | 0 | .33 | .03 | .10 | .00 | .10 |

07066700 - CURRENT RIVER ABOVE VAN BUREN, MO (LAT 37 02 03 LONG 091 03 16)

|            |      |     |   |     |     |     |     |     |
|------------|------|-----|---|-----|-----|-----|-----|-----|
| OCT., 1973 |      |     |   |     |     |     |     |     |
| 18...      | 1930 | 202 | 0 | .40 | .00 | .17 | .00 | .09 |

07066990 - PIKE CREEK AT VAN BUREN, MO (LAT 36 59 22 LONG 091 01 36)

|            |     |     |   |     |     |     |     |     |
|------------|-----|-----|---|-----|-----|-----|-----|-----|
| OCT., 1973 |     |     |   |     |     |     |     |     |
| 18...      | 3.9 | 304 | 0 | .18 | .01 | .14 | .00 | .06 |

07067300 - CURRENT RIVER BELOW VAN BUREN, MO (LAT 36 57 36 LONG 090 59 01)

|            |      |     |   |     |     |     |     |     |
|------------|------|-----|---|-----|-----|-----|-----|-----|
| OCT., 1973 |      |     |   |     |     |     |     |     |
| 18...      | 1940 | 204 | 0 | .38 | .04 | .20 | .00 | .05 |

07067500 - BIG SPRING NEAR VAN BUREN, MO. (LAT 36 57 05 LONG 090 59 31)

|            |     |     |   |     |     |     |     |     |
|------------|-----|-----|---|-----|-----|-----|-----|-----|
| OCT., 1973 |     |     |   |     |     |     |     |     |
| 18...      | 441 | 220 | 0 | .38 | .09 | .01 | .00 | .10 |

07067600 - CURRENT RIVER BELOW BIG SPRING (LAT 36 56 45 LONG 090 58 48)

|            |      |     |   |     |     |     |     |     |
|------------|------|-----|---|-----|-----|-----|-----|-----|
| OCT., 1973 |      |     |   |     |     |     |     |     |
| 18...      | 2390 | 208 | 0 | .38 | .01 | .12 | .00 | .06 |

LOWER MISSISSIPPI RIVER BASIN  
ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN MISSOURI  
WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DATE | ALKA-<br>LINITY<br>AS<br>CACO3<br>(MG/L) | SPE-<br>CIFIC<br>CON-<br>DUCT-<br>ANCE<br>(MICRO-<br>MHOS) | PH<br>(UNITS) | TEMPER-<br>ATURE<br>(DEG C) | DIS-<br>SOLVED<br>OXYGEN<br>(MG/L) | PER-<br>CENT<br>SATUR-<br>ATION | FECAL<br>COLI-<br>FORM<br>(COL.<br>PER<br>100 ML) | STREP-<br>TOCOCCI<br>(COL-<br>ONIES<br>PER<br>100 ML) |
|------|------------------------------------------|------------------------------------------------------------|---------------|-----------------------------|------------------------------------|---------------------------------|---------------------------------------------------|-------------------------------------------------------|
|------|------------------------------------------|------------------------------------------------------------|---------------|-----------------------------|------------------------------------|---------------------------------|---------------------------------------------------|-------------------------------------------------------|

WHITE RIVER BASIN--Continued

07065500 - ALLEY SPRING AT ALLEY MO (LAT 37 09 14 LONG 091 26 29)

|            |     |     |     |      |     |    |     |     |
|------------|-----|-----|-----|------|-----|----|-----|-----|
| OCT., 1973 |     |     |     |      |     |    |     |     |
| 16...      | 135 | 260 | 7.4 | 14.0 | 8.1 | 78 | 210 | 360 |
| JULY, 1974 |     |     |     |      |     |    |     |     |
| 10...      | 135 | 273 | 7.4 | 14.0 | 8.4 | 81 | --  | --  |

07065510 - JACKS FORK BELOW ALLEY SPRING (LAT 37 09 31 LONG 091 25 41)

|            |     |     |     |      |     |    |    |     |
|------------|-----|-----|-----|------|-----|----|----|-----|
| OCT., 1973 |     |     |     |      |     |    |    |     |
| 16...      | 154 | 306 | 7.9 | 16.5 | 9.5 | 97 | 76 | 170 |

07065950 - MAHANS CREEK AT WEST EMINENCE, MO (LAT 37 08 50 LONG 091 22 42)

|            |     |     |     |      |     |    |    |     |
|------------|-----|-----|-----|------|-----|----|----|-----|
| OCT., 1973 |     |     |     |      |     |    |    |     |
| 16...      | 226 | 410 | 8.0 | 17.5 | 8.5 | 88 | 41 | 210 |

07065980 - JACKS FORK ABOVE EMINENCE, MO. (LAT 37 09 26 LONG 091 22 11)

|            |     |     |     |      |     |    |     |     |
|------------|-----|-----|-----|------|-----|----|-----|-----|
| OCT., 1973 |     |     |     |      |     |    |     |     |
| 17...      | 161 | 305 | 7.8 | 13.5 | 9.2 | 88 | 130 | 140 |

07066010 - JACKS FORK BELOW EMINENCE, MO (LAT 37 10 14 LONG 091 20 12)

|            |     |     |     |      |     |    |     |     |
|------------|-----|-----|-----|------|-----|----|-----|-----|
| OCT., 1973 |     |     |     |      |     |    |     |     |
| 17...      | 162 | 318 | 7.8 | 13.5 | 9.2 | 88 | 110 | 220 |

07066100 - SHAWNEE CREEK NEAR EMINENCE, MO (LAT 37 10 18 LONG 091 18 07)

|            |     |     |     |      |     |    |    |     |
|------------|-----|-----|-----|------|-----|----|----|-----|
| OCT., 1973 |     |     |     |      |     |    |    |     |
| 17...      | 287 | 550 | 8.0 | 14.5 | 9.5 | 92 | 59 | 230 |

07066540 - CURRENT RIVER BELOW POWDER MILL (LAT 37 10 48 LONG 091 10 22)

|            |     |     |     |      |      |     |    |    |
|------------|-----|-----|-----|------|------|-----|----|----|
| OCT., 1973 |     |     |     |      |      |     |    |    |
| 17...      | 167 | 322 | 8.1 | 15.5 | 10.1 | 101 | 10 | 38 |

07066700 - CURRENT RIVER ABOVE VAN BUREN, MO (LAT 37 02 03 LONG 091 03 16)

|            |     |     |     |      |     |    |    |     |
|------------|-----|-----|-----|------|-----|----|----|-----|
| OCT., 1973 |     |     |     |      |     |    |    |     |
| 18...      | 166 | 320 | 8.1 | 13.5 | 9.4 | 90 | 20 | 160 |

07066990 - PIKE CREEK AT VAN BUREN, MO (LAT 36 59 22 LONG 091 01 36)

|            |     |     |     |      |     |    |     |     |
|------------|-----|-----|-----|------|-----|----|-----|-----|
| OCT., 1973 |     |     |     |      |     |    |     |     |
| 18...      | 249 | 429 | 7.7 | 12.5 | 8.5 | 79 | 260 | 140 |

07067300 - CURRENT RIVER BELOW VAN BUREN, MO (LAT 36 57 36 LONG 090 59 01)

|            |     |     |     |      |     |    |    |    |
|------------|-----|-----|-----|------|-----|----|----|----|
| OCT., 1973 |     |     |     |      |     |    |    |    |
| 18...      | 167 | 321 | 8.1 | 14.0 | 9.6 | 92 | 13 | 62 |

07067500 - BIG SPRING NEAR VAN BUREN, MO. (LAT 36 57 05 LONG 090 59 31)

|            |     |     |     |      |     |    |    |    |
|------------|-----|-----|-----|------|-----|----|----|----|
| OCT., 1973 |     |     |     |      |     |    |    |    |
| 18...      | 180 | 348 | 7.4 | 14.0 | 9.0 | 86 | 10 | 32 |

07067600 - CURRENT RIVER BELOW BIG SPRING (LAT 36 56 45 LONG 090 58 48)

|            |     |     |     |      |     |    |    |    |
|------------|-----|-----|-----|------|-----|----|----|----|
| OCT., 1973 |     |     |     |      |     |    |    |    |
| 18...      | 171 | 330 | 7.8 | 14.0 | 9.8 | 91 | 10 | 38 |





Figure 1.--Map of the north half of Missouri showing locations of gaging and water-quality stations, 1974 water year.



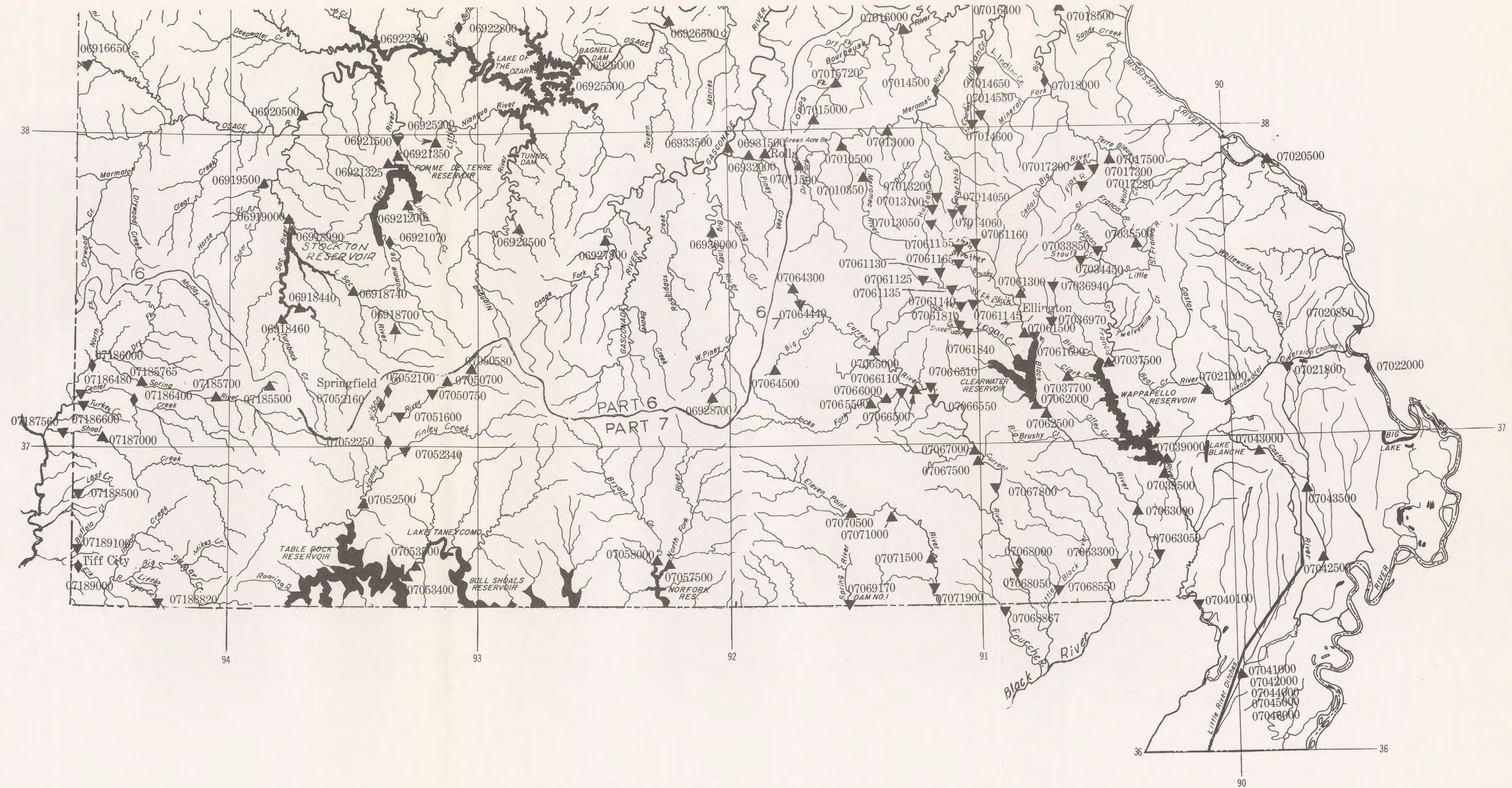


Figure 1.--Map of the south half of Missouri showing locations of gaging and water-quality stations, 1974 water year.



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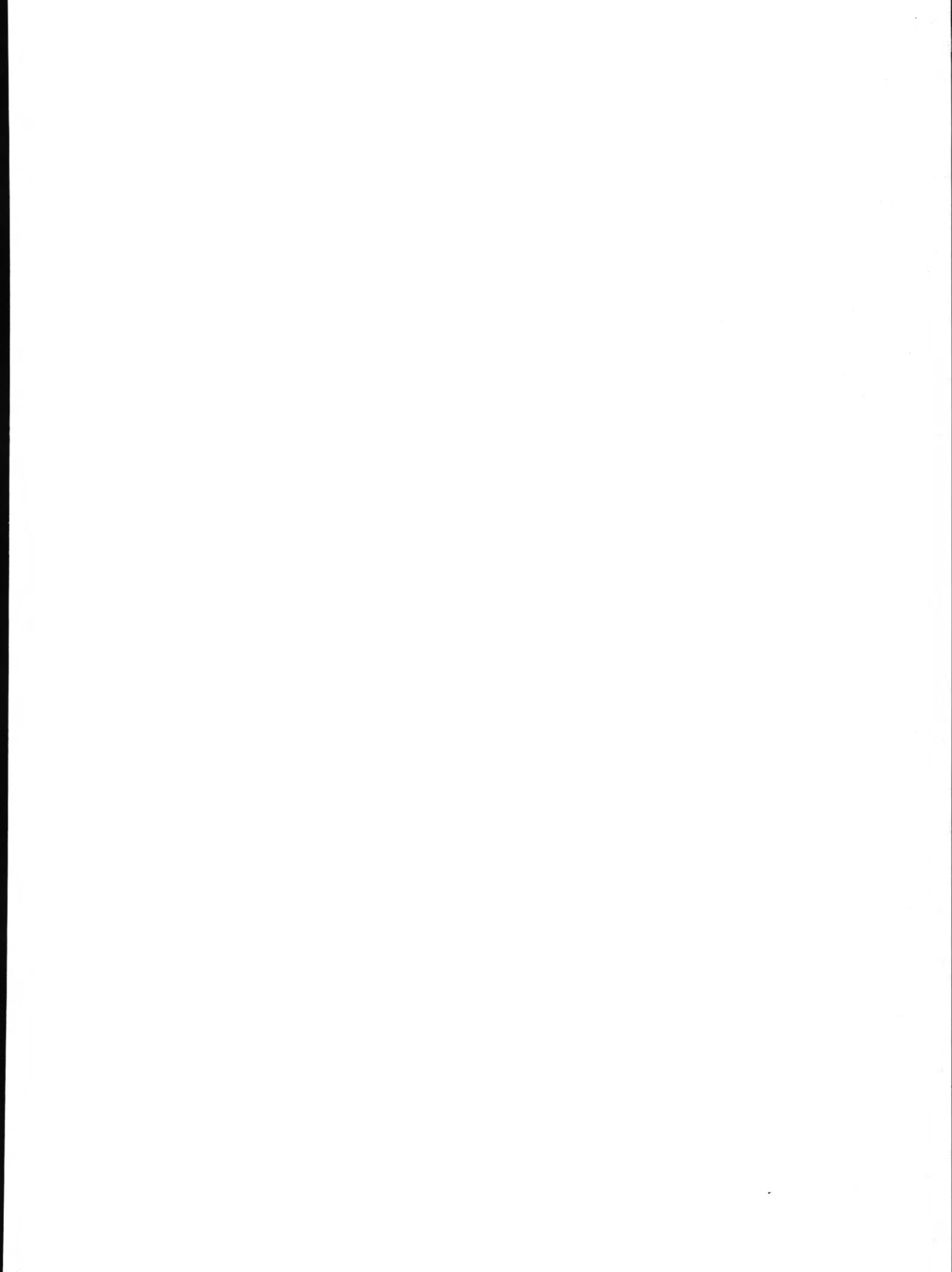
|                                                 | Page    |                                               | Page    |
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| Big Creek, at Annapolis .....                   | 350-353 | Creve Coeur basin, flood data .....           |         |
| at Blairstown .....                             | 98      | partial-record stations in .....              | 193-194 |
| at Chloride .....                               | 346-349 | Crooked Creek near Dillard .....              | 342-345 |
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| Big Piney River near Big Piney .....            | 108     | partial-record stations in .....              | 184     |
| Big River, at Byrnesville .....                 | 127     | Cubic feet per second, definition of ....     | 6       |
| at Irondale .....                               | 124     | Cubic feet per second per square mile, .....  |         |
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