

U. S. GEOLOGICAL SURVEY
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1974

Water Resources Data for Kansas

Part 1. Surface Water Records



UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Prepared in cooperation with the State of Kansas
and with other agencies

CALENDAR FOR WATER YEAR 1974

1973

OCTOBER

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NOVEMBER

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1974

JANUARY

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FEBRUARY

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AUGUST

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SEPTEMBER

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1974

Water Resources Data for Kansas

Part 1. Surface Water Records



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GEOLOGICAL SURVEY**

**Prepared in cooperation with the State of Kansas
and with other agencies**

Prepared in cooperation with

Kansas Water Resources Board
State Highway Commission of Kansas
City of Wichita
Corps of Engineers, U.S. Army
Bureau of Reclamation, Department of the Interior
Bureau of Sports Fisheries and Wildlife, Department of the Interior

Water resources records, 1974 for Kansas are in
the following reports of the U.S. Geological Survey:

1. Water Resources Data for Kansas
Part 1: Surface Water Records
2. Water Resources Data for Kansas
Part 2: Water Quality Records

Copies of this report may be obtained from
District Chief, Water Resources Division
U.S. Geological Survey
1950 Avenue "A" - Campus West
University of Kansas
Lawrence, Kansas 66045

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WATER RESOURCES DATA FOR KANSAS, 1974

Part 1. Surface-Water Records

INTRODUCTION

Water resources data for the 1974 water year for Kansas including records of streamflow or reservoir storage at gaging stations, partial-record stations, and miscellaneous sites are given in this report. Records are included for 163 gaging stations of which 143 are streamflow discharge stations and 20 are reservoir or lake stations; also are included records for 23 low-flow partial-record stations, 127 crest-stage partial-record stations, and 2 flood-hydrograph stations. Locations of gaging stations are shown in figure 1. A few pertinent stations (not included above) 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 Charles W. Lane, 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 Kansas.

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. 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. More information is given under the headings "Publications" on page 6.

COOPERATION

The U.S. Geological Survey and organizations of the State of Kansas have had cooperative agreements for the systematic collection of streamflow records since 1895. Organizations that assisted in collecting data through cooperative agreement with the Survey are:

State Water Resources Board, K. S. Krause, executive director.
State Highway Commission, E. E. Wilkinson, bridge engineer.
City of Wichita, M. S. Mitchell, assistant superintendent of public works maintenance.

Assistance in the form of funds or services was given by the Corps of Engineers, U.S. Army; Bureau of Reclamation, Department of the Interior; Bureau of Sports Fisheries and Wildlife, Department of the Interior; and Environmental Science Services Administration, Department of Commerce.

Organizations that supplied data are acknowledged in the station descriptions.

DEFINITION OF TERMS

Terms related to streamflow and other hydrologic data, as used in this report, are identified below. See also table for converting English units to International System of units (SI) on page 7.

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.

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-feet, 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.

Contents is the volume of water in a reservoir, lake, stream or aquifer. Contents herein is that of a reservoir or lake 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 (CFS, cfs) 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 given 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.

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.

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

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

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

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 in the front of this report the rank of tributaries is indicated by indention, each indention representing one rank.

As an added means of identification, each gaging station and partial-record station has been assigned a station number. These are in the same downstream order used in this report. In assigning station numbers, no distinction is made between partial-record stations and gaging stations; therefore, the station number for a partial-record station indicates downstream order position in a list made up of both types of stations. Gaps are left in the 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 06814000, which appears just to the left of the station name, includes the 2-digit part number "06" plus the 6-digit downstream order number "814000." 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 6 (Missouri River basin) and Part 7 (Arkansas 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.

EXPLANATION OF 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 hydrographers 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 hydrographers, 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 table showing the daily elevations is given. 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. The maximum discharge (or contents) and the maximum gage height (or elevation), the minimum discharge if there is little or no regulation (or minimum contents) are given under "EXTREMES." The minimum daily discharge is given if there is extensive regulation (or if the minimum occurs during an estimated period). 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, the fact is brought out by notations after the year dates as follows: "(M)" means that only the instantaneous maximum discharge was revised; "(m)" that only the instantaneous minimum was revised; and "(P)" that only peak discharges were revised. If the drainage area has been revised, the report in which the revised figure was first published is given.

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 is expressed in acre-feet (line headed "AC-FT").

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 site are indicated only if they are a month or more in length and the accuracy of the records is affected. Days on which the stage-discharge relation is affected by ice are not indicated. The methods used in computing discharge for various unusual conditions have been explained in preceding paragraphs.

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 given for some stations which are partially regulated and shown as "Peak discharge (regulated)." Peak discharges are not published for any canals, ditches, drains, or for any stream for which the peaks are subjected to complete 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 all gaging stations on lakes and reservoirs the data presented comprise a description of the station and a table showing daily elevations. A skeleton table of capacity at given stages is published for all reservoirs.

Data collected at partial-record stations 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 listing of instantaneous gage heights and discharges for flood hydrograph stations.

Accuracy of data

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

The station description under "REMARKS" states the degree of accuracy of the records. "Excellent" means that about 95 percent of the daily discharges are within 5 percent of true value; "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 cfs; to tenths between 1.0 and 10 cfs; to whole numbers between 10 and 1,000 cfs; and to 3 significant figures above 1,000 cfs. The number of significant figures used is based solely on the magnitude of the figure. The same rounding rules apply to discharge figures listed for partial-record stations.

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 Kansas for the period October 1960 to September 1965 are in Water-Supply Papers 1919 and 1921.

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 discharges 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 Kansas are compiled in Water-Supply Papers 1310 and 1311 through September 1950, and in 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.

SELECTED REFERENCES

- Carter, R. W., and Davidian, Jacob, 1968, General procedures for gaging streams: U.S. Geol. Survey Techniques of Water-Resources Inv., book 3, chap. A6, 13 p.
- Corbett, D. M., and others, 1943, reprinted 1957, Stream-gaging procedures, a manual describing methods and practices of the Geological Survey: U.S. Geol. Survey Water-Supply Paper 888, 245 p.
- Langbein, W. B., and Iseri, K. T., 1960, General introduction and hydrologic definitions: U.S. Geol. Survey Water-Supply Paper 1541-A, 29 p.

FACTORS FOR CONVERTING ENGLISH UNITS TO INTERNATIONAL
SYSTEM UNITS (SI)

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
<i>Length</i>		
feet (ft)	.3048	metres (m)
miles (mi)	1.609	kilometres (km)
<i>Area</i>		
acres	4047	square metres (m ²)
	.4047	*hectares (ha)
	.4047	square hectometres (hm ²)
	.004047	square kilometres (km ²)
square miles (mi ²)	2.590	square kilometres (km ²)
<i>Volume</i>		
cubic feet (ft ³)	28.32	cubic decimetres (dm ³)
	.02832	cubic metres (m ³)
cfs-days [(ft ³ /s) d]	2447	cubic metres (m ³)
	2.447x10 ⁻³	cubic hectometres (hm ³)
acre-feet (acre-ft)	1233	cubic metres (m ³)
	1.233x10 ⁻³	cubic hectometres (hm ³)
	1.233x10 ⁻⁶	cubic kilometres (km ³)
<i>Flow</i>		
cubic feet per second (ft ³ /s)	28.32	**litres per second (l/s)
	28.32	cubic decimetres per second (dm ³ /s)
	.02832	cubic metres per second (m ³ /s)

*The unit hectare is approved for use with the International System (SI) for a limited time. See NBS Special Bulletin 330, p. 15, 1972 edition.

**The unit litre is accepted for use with the International System (SI). See NBS Special Bulletin 330, p. 13, 1972 edition.

06814000 TURKEY CREEK NEAR SENECA, KS

LOCATION.--Lat 39°56'52", long 96°06'30", in SW¼NW¼SW¼ sec.20, T.1 S., R.12 E., Nemaha County, at downstream side of highway bridge, 2.0 mi (3.2 km) downstream from Clear Creek, 5.0 mi (8.0 km) upstream from Big Nemaha River, and 8.0 mi (12.9 km) northwest of Seneca.

DRAINAGE AREA.--276 mi² (715 km²).

PERIOD OF RECORD.--October 1948 to current year. Monthly discharge only for some periods, published in WSP 1310.

GAGE.--Water-stage recorder. Altitude of gage is 1,160 ft (354 m), from topographic map. Prior to Oct. 19, 1956, water-stage recorder (occasional operation only) and nonrecording gage on former channel 400 ft (120 m) south of present site at present datum. Oct. 19, 1956, to June 15, 1957, nonrecording gage at highway bridge 1.2 mi (1.9 km) upstream at different datum. June 16, 1957, to Mar. 27, 1958, nonrecording gage at present site and datum.

AVERAGE DISCHARGE.--26 years, 125 ft³/s (3,540 m³/s), 90,560 acre-ft/yr (112 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 21,400 ft³/s (606 m³/s) Oct. 11, gage height, 24.77 ft (7.550 m); minimum daily, 1.2 ft³/s (0.034 m³/s) Sept. 29, 30.
Period of record: Maximum discharge, 21,400 ft³/s (606 m³/s) Oct. 11, 1973, gage height, 24.77 ft (7.550 m); no flow at times in 1956-57.

REMARKS.--Records good except those for January and July thru September, 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	452	66	75	100	128	159	56	72	53	19	4.2	11
2	302	84	75	90	113	135	54	59	49	17	4.1	8.1
3	231	76	76	80	104	130	54	61	46	16	4.0	6.0
4	185	73	212	90	93	132	52	69	43	20	4.0	3.9
5	152	71	360	95	125	158	51	57	43	16	3.9	3.2
6	136	69	206	90	104	131	49	50	141	15	3.8	3.0
7	131	72	132	85	76	106	49	48	135	14	3.8	2.5
8	120	71	150	85	98	109	47	46	138	12	4.0	3.6
9	106	66	172	80	112	103	46	50	193	11	4.7	1.9
10	2,120	62	180	80	86	91	46	56	106	10	6.8	1.6
11	16,700	62	154	80	100	90	49	172	69	9.5	5.5	1.4
12	8,040	64	241	85	111	94	56	234	58	9.0	5.4	10
13	840	66	381	90	107	90	55	78	54	8.4	6.2	9.0
14	440	65	267	100	100	86	49	431	50	7.8	5.8	4.0
15	331	62	148	110	93	86	46	216	44	7.4	5.6	2.5
16	262	59	136	120	90	83	48	88	38	7.0	6.9	2.2
17	219	57	153	500	92	78	46	1,360	36	6.6	6.9	2.0
18	197	55	147	800	96	78	44	419	36	6.2	8.7	1.8
19	180	55	114	650	94	75	44	489	35	5.8	7.5	1.7
20	163	158	107	484	88	72	160	192	32	5.5	5.9	1.6
21	150	601	136	589	89	67	397	149	28	5.2	5.2	1.5
22	140	209	122	338	109	77	122	123	25	5.0	4.5	1.4
23	132	116	119	212	114	62	80	104	23	4.8	4.0	1.3
24	125	203	260	188	76	68	66	92	22	4.8	3.7	1.4
25	115	160	1,010	191	96	70	62	85	23	4.7	3.5	1.4
26	107	113	438	215	113	69	60	85	23	4.6	3.4	1.3
27	102	105	241	211	177	65	58	82	19	4.6	3.3	1.3
28	97	90	195	170	216	66	56	75	19	4.5	3.1	1.3
29	94	80	158	152	-----	65	132	103	20	4.5	3.1	1.2
30	93	79	129	152	-----	61	144	69	20	4.4	6.0	1.2
31	92	-----	103	147	-----	60	-----	59	-----	4.3	30	-----
TOTAL	32,554	3,169	6,397	6,459	3,000	2,816	2,278	5,273	1,621	274.6	177.5	94.3
MEAN	1,050	106	206	208	107	90.8	75.9	170	54.0	8.86	5.73	3.14
MAX	16,700	601	1,010	800	216	159	397	1,360	193	20	30	11
MIN	92	55	75	80	76	60	44	46	19	4.3	3.1	1.2
AC-FT	64,570	6,290	12,690	12,810	5,950	5,590	4,520	10,460	3,220	545	352	187

CAL YR 1973 TOTAL 138,871.5 MEAN 380 MAX 16,700 MIN 8.8 AC-FT 275,500
WTR YR 1974 TOTAL 64,113.4 MEAN 176 MAX 16,700 MIN 1.2 AC-FT 127,200

PEAK DISCHARGE (BASE, 3,100 CFS)

DATE	TIME	G.HT.	DISCHARGE
10-11	1100	24.77	21,400

06818000 MISSOURI RIVER AT ST. JOSEPH, MO.

LOCATION.--Lat 39°45'12", long 94°51'28", in NW¼ 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 mi² (1,099,000 km²), 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 ft³/s (1,092 m³/s), 27,930,000 acre-ft/yr (34.44 km³/yr).

EXTREMES.--Current year: Maximum discharge, 200,000 ft³/s (5,660 m³/s) Oct. 13, gage height, 25.63 ft (7.812 m); minimum daily discharge, 23,000 ft³/s (651 m³/s) Jan. 13-16; minimum gage height, 7.41 ft (2.259 m) Dec. 22.

Period of record: Maximum discharge, 397,000 ft³/s (11,240 m³/s) Apr. 22, 23, 1952, gage height, 26.82 ft (8.175 m); minimum, 2,300 ft³/s (65.1 m³/s) Jan. 9, 1937; minimum gage height, 0.00 ft (0.000 m) Dec. 18, 19, 1940.

Maximum stage known, 27.2 ft (8.29 m), present datum, Apr. 29, 1881, discharge, about 370,000 ft³/s (10,500 m³/s), computed by Corps of Engineers.

Flood of June 1844 reached a stage of 24.5 ft (7.47 m), discharge, about 350,000 ft³/s (9,910 m³/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.

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	83,600	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.

KANSAS RIVER BASIN

06844700 SOUTH FORK SAPPA CREEK NEAR BREWSTER, KS

LOCATION.--Lat 39°17'07", long 101°27'56", in NW¼NW¼SW¼ sec.9, T.9 S., R.37 W., Sherman County, on left bank at highway bridge 9.0 mi (14.5 km) southwest of Brewster.

DRAINAGE AREA.--74.0 mi² (191.7 km²).

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

GAGE.--Water-stage recorder. Altitude of gage is 3,440 ft (1,049 m), from topographic map.

AVERAGE DISCHARGE.--7 years, 0.176 ft³/s (0.0050 m³/s), 128 acre-ft/yr (0.158 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 0.48 ft³/s (0.014 m³/s) June 8, gage height, 1.73 ft (0.527 m); no flow most days.
Period of record: Maximum discharge, 294 ft³/s (8.33 m³/s) Apr. 19, 1971, gage height, 5.73 ft (1.747 m); no flow most days.

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									0			
2									0			
3									0			
4									0			
5									0			
6									0			
7									0			
8									.07			
9									.02			
10									0			
11									0			
12									0			
13									0			
14									0			
15									0			
16									0			
17									0			
18									0			
19									0			
20									0			
21									0			
22									0			
23									0			
24									0			
25									0			
26									0			
27									0			
28									0			
29									0			
30									0			
31									0			
TOTAL	0	0	0	0	0	0	0	0	.09	0	0	0
MEAN	0	0	0	0	0	0	0	0	.003	0	0	0
MAX	0	0	0	0	0	0	0	0	.07	0	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	0	0	0	0	0	0	0	.2	0	0	0

CAL YR 1973 TOTAL 11.98 MEAN .033 MAX 3.2 MIN 0 AC-FT 24
WTR YR 1974 TOTAL 0.09 MEAN .0002 MAX .07 MIN 0 AC-FT .2

PEAK DISCHARGE (BASE, 75 CFS).--NO PEAK ABOVE BASE.

06844900 SOUTH FORK SAPPA CREEK NEAR ACHILLES, KS

LOCATION.--Lat 39°40'37", long 100°43'18", in SW 1/4 NW 1/4 sec. 29, T.4 S., R.30 W., Decatur County, on right bank at downstream side of highway bridge, 5.5 mi (8.8 km) southeast of Achilles, 14 mi (23 km) southwest of Oberlin, and 18.5 mi (29.8 km) upstream from confluence with North Fork.

DRAINAGE AREA.--446 mi² (1,155 km²), of which 68 mi² (176 km²) is probably noncontributing.

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

GAGE.--Water-stage recorder. Datum of gage is 2,722.42 ft (829.794 m) above mean sea level.

AVERAGE DISCHARGE.--15 years, 4.32 ft³/s (0.122 m³/s), 3,130 acre-ft/yr (3.86 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 290 ft³/s (8.21 m³/s) June 8, gage height, 8.10 ft (2.469 m); no flow for many days.
Period of record: Maximum discharge, 4,120 ft³/s (117 m³/s) Mar. 20, 1960, gage height, 9.03 ft (2.752 m), from rating curve extended above 600 ft³/s (17.0 m³/s); no flow for many days in each year.

REMARKS.--Records good except those for winter periods, 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	.06	.02	.04	.10	.34	.15	.05	.33	.04	.09		
2	.02	.01	.04	.10	.28	.15	.05	.28	.11	.08		
3	.02	0	.06	0	.30	.15	.10	.26	.10	.08		
4	0	0	.04	0	.30	.14	.05	.22	.04	.07		
5	0	0	.05	0	.28	.14	13	.19	.02	.05		
6	0	0	.04	0	.20	.13	1.9	.17	.10	.01		
7	0	0	.05	0	.20	.14	3.7	.16	.03	0		
8	0	.02	.06	0	.30	.15	3.9	.14	66	.01		
9	0	.01	.04	0	.40	.15	3.8	.14	96	.11		
10	0	0	.04	0	.40	.15	3.9	.16	38	.08		
11	.23	0	.06	0	.30	.15	3.3	.17	44	0		
12	.10	.02	.07	0	.30	.16	2.4	.14	21	0		
13	.06	.03	.08	0	.30	.16	3.1	.14	12	0		
14	.03	.06	.09	0	.28	.15	3.4	.12	7.0	0		
15	.02	.03	.07	0	.26	.13	3.1	.12	4.3	0		
16	.01	0	.07	2.0	.26	.11	3.0	.12	2.5	0		
17	0	0	.07	10	.22	.11	2.5	.11	1.3	0		
18	0	0	.06	10	.22	.11	2.0	.15	.84	0		
19	0	.10	0	9.5	.22	.11	1.8	.12	.38	0		
20	0	.20	0	8.5	.24	.11	1.7	.08	.28	0		
21	0	.50	0	6.3	.26	.09	1.6	.07	.22	0		
22	0	.50	.05	6.4	.18	.10	1.1	.07	.18	0		
23	0	.20	.10	5.3	.10	.14	.94	.08	.16	0		
24	0	.20	.10	5.3	.10	.10	.88	.07	.15	0		
25	0	.10	.05	5.5	.18	.08	.82	.13	.15	.05		
26	0	.10	.10	5.4	.18	.07	.82	.11	.14	0		
27	0	.10	.20	3.7	.17	.07	.76	.08	.12	0		
28	0	.05	.20	1.5	.17	.06	.52	0	.10	0		
29	.01	.02	.20	.36	-----	.04	.38	0	.10	0		
30	.02	.02	.20	.30	-----	.03	.36	0	.10	0		
31	.02	-----	.10	.38	-----	.05	-----	0	-----	0		-----
TOTAL	.60	2.29	2.33	80.64	6.94	3.58	64.93	3.93	295.46	.63	0	0
MEAN	.019	.076	.075	2.60	.25	.12	2.16	.13	9.85	.020	0	0
MAX	.23	.50	.20	10	.40	.16	13	.33	96	.11	0	0
MIN	0	0	0	0	.10	.03	.05	0	.02	0	0	0
AC-FT	1.2	4.5	4.6	160	14	7.1	129	7.8	586	1.2	0	0

CAL YR 1973 TOTAL 205.07 MEAN .56 MAX 90 MIN 0 AC-FT 407
WTR YR 1974 TOTAL 461.33 MEAN 1.26 MAX 96 MIN 0 AC-FT 915

PEAK DISCHARGE (BASE, 100 CFS)

DATE TIME G.H.T. DISCHARGE
06-08 1800 8.10 290

KANSAS RIVER BASIN

06846500 BEAVER CREEK AT CEDAR BLUFFS, KS

LOCATION.--Lat 39°59'06", long 100°33'35", in NW¼NE¼ sec.10, T.1 S., R.29 W., Decatur County, on right bank at downstream side of bridge on U.S. Highway 83, 0.2 mi (0.3 km) north of Cedar Bluffs, 1.0 mi (1.6 km) south of Kansas-Nebraska state line, and at mile 107.4 (172.8 km). Prior to July 13, 1972, at temporary site 0.8 mi (1.3 km) downstream.

DRAINAGE AREA.--1,618 mi² (4,191 km²), of which 294 mi² (761 km²) is probably noncontributing.

PERIOD OF RECORD.--October 1945 to current year. Monthly discharge only for some periods, published in WSP 1310.

GAGE.--Water-stage recorder. Datum of gage is 2,520.33 ft (768.197 m) above mean sea level. Prior to Aug. 19, 1971, at site 0.1 mi (0.2 km) upstream at same datum. Aug. 19, 1971, to July 12, 1972 at site 0.8 mi (1.3 km) downstream at datum 5.00 ft (1.524 m) lower.

AVERAGE DISCHARGE.--29 years, 22.3 ft³/s (0.632 m³/s), 16,160 acre-ft/yr (19.9 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 546 ft³/s (15.5 m³/s) June 9, gage height, 7.97 ft (2.429 m); no flow at times.

Period of record: Maximum discharge, 7,940 ft³/s (225 m³/s) June 11, 1960, gage height, 18.71 ft (5.703 m); no flow at times in most years.

Flood in July 1944 reached a stage of 18.16 ft (5.535 m), from floodmark.

REMARKS.--Records fair. Records of suspended sediment loads for the water year 1974 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1510: 1947, 1950-51.

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	22	0	0		0	.20	1.3	4.0	16	8.4	1.9	
2	48	0	0		0	2.3	1.6	3.0	13	6.7	2.4	
3	17	0	0		0	1.6	2.6	2.6	6.5	5.4	1.6	
4	7.5	0	0		0	2.6	3.8	2.7	4.4	4.6	.44	
5	4.0	0	.90		0	4.3	2.6	2.7	3.1	4.1	25	
6	1.8	0	0		0	7.0	2.8	2.6	3.4	3.6	8.6	
7	1.6	0	.01		0	4.4	4.4	2.8	3.5	3.1	44	
8	2.2	0	0		0	2.6	6.7	2.3	63	2.6	42	
9	.77	0	0		0	1.1	6.0	1.8	492	3.2	108	
10	.25	0	.06		0	.57	5.0	1.8	287	4.0	13	
11	.38	0	0		0	.45	4.0	1.8	170	6.8	1.5	
12	.18	0	0		0	.22	7.0	3.0	269	4.8	.12	
13	.12	0	0		0	.20	10	5.6	249	2.5	0	
14	.02	0	0		0	.18	8.0	3.2	106	2.3	0	
15	0	0	0		0	.32	8.0	2.1	74	24	.54	
16	0	0	0		0	1.0	7.0	1.4	59	14	1.4	
17	0	0	0		0	1.3	7.0	1.2	49	7.0	.36	
18	0	0	0		0	1.3	6.0	1.3	43	4.7	0	
19	0	0	0		2.6	1.3	6.0	.83	37	2.7	.19	
20	0	.85	0		3.0	1.2	8.0	.70	32	1.4	.38	
21	0	.42	0		2.6	1.2	7.0	.64	27	.58	0	
22	0	.13	0		2.0	1.0	7.0	.38	20	.32	0	
23	0	0	0		1.0	1.2	6.0	.38	16	1.6	0	
24	0	0	0		.50	1.2	6.0	.32	14	9.5	0	
25	0	0	0		.50	1.6	5.0	50	12	10	0	
26	0	0	0		.30	1.8	5.0	105	11	28	0	
27	0	0	0		.18	1.6	5.0	48	12	4.5	0	
28	0	0	0		.05	2.2	4.0	5.1	11	1.6	0	
29	0	0	0		-----	1.7	4.0	42	10	3.0	0	
30	0	0	0		-----	1.3	4.0	61	9.6	.56	0	
31	0	-----	0		-----	1.4	-----	30	-----	.61	0	-----
TOTAL	105.82	1.40	.97	0	12.73	50.34	160.8	390.25	2,122.5	176.17	251.43	0
MEAN	3.41	.047	.031	0	.45	1.62	5.36	12.6	70.8	5.68	8.11	0
MAX	48	.85	.90	0	3.0	7.0	10	105	492	28	108	0
MIN	0	0	0	0	0	.18	1.3	.32	3.1	.32	0	0
AC-FT	210	2.8	1.9	0	25	100	319	774	4,210	349	499	0

CAL YR 1973 TOTAL 1,664.01 MEAN 4.56 MAX 355 MIN 0 AC-FT 3,300
WTR YR 1974 TOTAL 3,272.41 MEAN 8.97 MAX 492 MIN 0 AC-FT 6,490

PEAK DISCHARGE (BASE, 300 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
06-09	2000	7.97	546	08-09	0200	7.65	310
06-13	0600	7.65	310				

06847900 PRAIRIE DOG CREEK ABOVE NORTON RESERVOIR, KS

LOCATION.--Lat 39°46'13", long 100°06'00", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.23, T.3 S., R.25 W., Norton County, on right bank, 50 ft (15 m) downstream from bridge on county road, 4 mi (6.4 km) east of Clayton, and at mile 90.4 (145.5 km).

DRAINAGE AREA.--590 mi² (1,528 km²).

PERIOD OF RECORD.--June 1962 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 2,336.94 ft (712.299 m) above mean sea level.

AVERAGE DISCHARGE.--12 years, 12.1 ft³/s (0.343 m³/s), 8,766 acre-ft/yr (10.8 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 354 ft³/s (10.0 m³/s) June 11, gage height, 6.53 ft (1.990 m); no flow at times.
 Period of record: Maximum discharge, 8,880 ft³/s (251 m³/s) Sept. 6, 1972, gage height, 12.81 ft (3.904 m), from rating curve extended above 3,500 ft³/s (99.1 m³/s); no flow at times.
 Maximum flood known since at least 1944, 65,500 ft³/s (1,850 m³/s) May 28, 1953 at site 9.4 mi (15.1 km) downstream, based on contracted opening measurement of peak flow.

REMARKS.--Records good. Diversions for irrigation above station.

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	.14	1.4	1.0	4.6	4.2	3.9	3.6	1.0	1.0	2.9	
2	6.0	.14	1.4	1.1	4.9	4.3	4.0	3.7	.92	.87	.49	
3	2.7	.14	1.4	1.3	4.8	4.4	4.6	3.6	.92	.56	.06	
4	1.2	.14	1.3	1.0	4.7	4.2	5.3	3.5	1.0	.31	0	
5	.37	.14	1.5	1.0	5.0	4.0	5.4	3.5	.89	.38	0	
6	.14	.14	1.2	1.1	2.8	4.0	5.0	3.4	.98	.35	.33	
7	.10	.30	1.0	1.1	4.0	3.9	5.7	3.6	.85	.27	8.3	
8	.05	.35	1.4	1.2	3.0	3.8	5.9	3.4	2.0	.19	7.2	
9	.08	.35	1.7	1.2	4.0	4.1	6.1	3.5	4.1	.19	54	
10	.10	.35	1.1	1.1	4.8	4.0	6.1	3.5	181	.12	11	
11	.16	.38	1.4	1.1	4.8	4.0	5.9	3.0	319	.08	5.9	
12	.39	.43	1.9	.92	5.2	4.2	5.5	2.9	135	.06	2.4	
13	.10	.48	1.9	1.1	5.1	4.2	5.7	2.8	47	.03	.84	
14	.27	.52	2.1	1.2	5.0	4.2	5.8	2.7	28	.01	.29	
15	.24	.53	1.6	1.3	4.9	4.2	5.8	2.4	20	.06	.10	
16	.08	.49	1.4	1.4	5.0	4.2	5.6	2.5	16	.14	.03	
17	.08	.49	1.7	1.6	5.1	4.0	5.3	2.6	13	.06	0	
18	.10	.53	1.8	2.1	5.1	4.3	5.2	2.7	11	.01	0	
19	.14	.61	.40	2.2	4.9	4.2	5.0	2.7	9.4	0	0	
20	.13	1.0	.60	2.9	4.9	4.2	4.9	2.4	8.3	0	0	
21	.08	.77	.64	3.8	4.7	4.2	4.9	2.2	7.4	0	0	
22	.12	1.3	.71	3.7	3.6	4.4	4.6	1.9	6.3	0	0	
23	.13	1.5	.80	3.5	4.4	4.1	4.4	1.9	5.7	0	0	
24	.15	1.5	1.5	3.1	2.5	4.0	4.1	1.8	5.4	0	0	
25	.15	1.1	1.5	3.7	3.5	4.1	4.2	3.3	4.9	0	0	
26	.14	1.1	1.5	4.3	4.9	4.0	4.2	2.7	4.4	0	0	
27	.29	1.4	1.5	4.8	4.7	4.1	4.2	2.1	3.3	0	0	
28	.15	1.4	1.5	4.3	4.2	4.3	4.2	1.7	1.5	0	0	
29	.10	1.3	1.5	4.0	-----	4.3	4.2	1.5	1.3	9.3	0	
30	.11	1.4	1.5	4.8	-----	3.9	4.0	1.4	1.2	2.8	0	
31	.14	-----	1.3	4.4	-----	3.9	-----	1.1	-----	6.5	0	-----
TOTAL	18.69	20.42	42.15	71.32	125.1	127.9	149.7	83.6	841.76	23.29	93.84	0
MEAN	.60	.68	1.36	2.30	4.47	4.13	4.99	2.70	28.1	.75	3.03	0
MAX	6.0	1.5	2.1	4.8	5.2	4.4	6.1	3.7	319	9.3	54	0
MIN	.05	.14	.40	.92	2.5	3.8	3.9	1.1	.85	0	0	0
AC-FT	37	41	84	141	248	254	297	166	1,670	46	186	0

CAL YR 1973 TOTAL 1,838.33 MEAN 5.04 MAX 449 MIN 0 AC-FT 3,650
 WTR YR 1974 TOTAL 1,597.77 MEAN 4.38 MAX 319 MIN 0 AC-FT 3,170

PEAK DISCHARGE (BASE, 700 CFS).--NO PEAK ABOVE BASE.

KANSAS RIVER BASIN

06847950 NORTON RESERVOIR NEAR NORTON, KS

LOCATION.--Lat 39°48'27", long 99°56'04", in SW¼NE¼ sec.8, T.3 S., R.23 W., Norton County, in control tower near left end of Norton Dam on Prairie Dog Creek, 3.0 mi (4.8 km) southwest of Norton, and at mile 74.9 (120.5 km).

DRAINAGE AREA.--683 mi² (1,769 km²).

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

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (levels by Bureau of Reclamation).

EXTREMES.--Current year: Maximum elevation, 2,284.02 ft (696.169 m) June 20-24, contents, 7,730 acre-ft (9.53 hm³); minimum, 2,276.92 ft (694.005 m) Sept. 29, 30, contents, 3,520 acre-ft (4.34 hm³).
Period of record: Maximum elevation, 2,304.59 ft (702.439 m) June 27, 1967, contents, 36,570 acre-ft (45.1 hm³); minimum since conservation pool was first filled, 2,276.92 ft (694.005 m) Sept. 29, 30, 1974, contents, 3,520 acre-ft (4.34 hm³).

REMARKS.--Reservoir is formed by compacted earthfill dam; storage began Oct. 6, 1964. Total capacity, 193,023 acre-ft (238 hm³), consisting of the following: Sedimentation, 2,920 acre-ft (3.60 hm³) below elevation 2,275.5 ft (693.572 m); conservation pool, 33,010 acre-ft (40.7 hm³), between elevations 2,275.5 ft (693.572 m) and 2,304.3 ft (702.351 m); flood control pool, 98,800 acre-ft (122 hm³), between elevations 2,304.3 ft (702.351 m) and 2,331.4 ft (710.611 m); and surcharge pool, 58,280 acre-ft (71.9 hm³), between elevations 2,331.4 ft (710.611 m) and 2,341.0 ft (713.537 m). Reservoir is used for flood control and irrigation in Almena Unit, Missouri River Basin project. Figures given herein represent total contents.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on field survey by U.S. Bureau of Reclamation in 1955, revised in 1965)

2,276	3,120	2,282	6,280
2,278	4,010	2,284	7,720
2,280	5,050	2,286	9,320

ELEVATION, IN FEET, AT 2400, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2,278.36	2,278.93	2,279.43	2,279.98	2,280.54	2,281.07	2,281.47	2,282.04	2,282.16	2,282.78	2,276.94	2,277.22
2	2,278.39	2,278.93	2,279.46	2,280.00	2,280.56	2,281.08	2,281.55	2,282.00	2,282.13	2,282.50	2,276.94	2,277.22
3	2,278.42	2,278.93	2,279.46	2,280.00	2,280.58	2,281.09	2,281.57	2,282.01	2,282.10	2,282.23	2,276.93	2,277.23
4	2,278.44	2,278.93	2,279.52	2,280.01	2,280.62	2,281.10	2,281.57	2,282.01	2,282.11	2,281.97	2,276.93	2,277.22
5	2,278.48	2,278.94	2,279.52	2,280.03	2,280.63	2,281.10	2,281.60	2,282.02	2,282.14	2,281.71	2,276.97	2,277.18
6	2,278.48	2,278.96	2,279.53	2,280.04	2,280.63	2,281.13	2,281.62	2,282.03	2,282.15	2,281.47	2,276.98	2,277.18
7	2,278.50	2,278.97	2,279.55	2,280.05	2,280.65	2,281.12	2,281.65	2,282.01	2,282.15	2,281.19	2,277.00	2,277.18
8	2,278.52	2,278.96	2,279.57	2,280.05	2,280.66	2,281.15	2,281.67	2,282.01	2,282.31	2,280.95	2,277.12	2,277.17
9	2,278.61	2,278.97	2,279.57	2,280.07	2,280.68	2,281.13	2,281.70	2,282.03	2,282.34	2,280.70	2,277.16	2,277.16
10	2,278.62	2,279.00	2,279.61	2,280.08	2,280.71	2,281.17	2,281.74	2,282.07	2,282.36	2,280.46	2,277.38	2,277.14
11	2,278.75	2,279.00	2,279.61	2,280.08	2,280.72	2,281.20	2,281.80	2,282.07	2,283.07	2,280.20	2,277.44	2,277.11
12	2,278.80	2,279.02	2,279.67	2,280.10	2,280.76	2,281.20	2,281.80	2,282.04	2,283.61	2,279.92	2,277.44	2,277.08
13	2,278.80	2,279.03	2,279.67	2,280.12	2,280.78	2,281.21	2,281.88	2,282.03	2,283.82	2,279.60	2,277.42	2,277.08
14	2,278.82	2,279.06	2,279.68	2,280.14	2,280.80	2,281.23	2,281.90	2,282.02	2,283.91	2,279.27	2,277.42	2,277.08
15	2,278.82	2,279.07	2,279.70	2,280.14	2,280.82	2,281.23	2,281.92	2,281.99	2,283.93	2,278.96	2,277.40	2,277.08
16	2,278.83	2,279.10	2,279.71	2,280.16	2,280.84	2,281.26	2,281.92	2,281.99	2,283.96	2,278.62	2,277.40	2,277.08
17	2,278.83	2,279.10	2,279.72	2,280.17	2,280.88	2,281.27	2,281.96	2,281.99	2,283.98	2,278.27	2,277.38	2,277.08
18	2,278.86	2,279.10	2,279.77	2,280.20	2,280.90	2,281.27	2,281.95	2,282.07	2,284.00	2,277.93	2,277.38	2,277.07
19	2,278.86	2,279.15	2,279.77	2,280.23	2,280.92	2,281.30	2,281.98	2,282.09	2,284.00	2,277.72	2,277.38	2,277.03
20	2,278.89	2,279.29	2,279.78	2,280.25	2,280.92	2,281.32	2,282.02	2,282.10	2,284.02	2,277.52	2,277.35	2,277.01
21	2,278.90	2,279.31	2,279.80	2,280.28	2,280.93	2,281.33	2,282.02	2,282.08	2,284.02	2,277.26	2,277.32	2,277.02
22	2,278.90	2,279.31	2,279.80	2,280.30	2,280.95	2,281.32	2,282.02	2,282.07	2,284.02	2,277.09	2,277.32	2,277.04
23	2,278.92	2,279.33	2,279.82	2,280.32	2,280.95	2,281.38	2,281.99	2,282.05	2,284.02	2,276.98	2,277.32	2,277.01
24	2,278.92	2,279.35	2,279.85	2,280.37	2,280.95	2,281.40	2,282.00	2,282.05	2,283.98	2,276.98	2,277.33	2,277.01
25	2,278.91	2,279.37	2,279.87	2,280.37	2,280.98	2,281.42	2,282.00	2,282.22	2,283.85	2,276.98	2,277.33	2,277.01
26	2,278.89	2,279.38	2,279.88	2,280.39	2,280.98	2,281.42	2,282.05	2,282.22	2,283.70	2,276.98	2,277.31	2,276.98
27	2,278.91	2,279.40	2,279.89	2,280.42	2,281.03	2,281.42	2,282.04	2,282.25	2,283.52	2,276.93	2,277.29	2,276.95
28	2,278.91	2,279.40	2,279.92	2,280.45	2,281.04	2,281.43	2,282.01	2,282.20	2,283.37	2,276.94	2,277.28	2,276.93
29	2,278.93	2,279.43	2,279.93	2,280.47	-----	2,281.44	2,282.02	2,282.19	2,283.18	2,276.94	2,277.28	2,276.92
30	2,278.93	2,279.43	2,279.95	2,280.50	-----	2,281.45	2,282.02	2,282.18	2,283.00	2,276.94	2,277.25	2,276.93
31	2,278.97	-----	2,279.96	2,280.51	-----	2,281.47	-----	2,282.18	-----	2,276.94	2,277.23	-----
MEAN	2,278.75	2,279.14	2,279.71	2,280.20	2,280.80	2,281.26	2,281.85	2,282.07	2,283.23	2,279.06	2,277.25	2,277.08
MAX	2,278.97	2,279.43	2,279.96	2,280.51	2,281.04	2,281.47	2,282.05	2,282.25	2,284.02	2,282.78	2,277.44	2,277.23
MIN	2,278.36	2,278.93	2,279.43	2,279.98	2,280.54	2,281.07	2,281.47	2,281.99	2,282.10	2,276.93	2,276.93	2,276.92
(+)	4,490	4,740	5,020	5,350	5,660	5,940	6,300	6,410	6,980	3,530	3,660	3,530
(#)	+300	+250	+280	+330	+310	+280	+360	+110	+570	-3,450	+130	-130

CAL YR 1973 (#) -3,530
WTR YR 1974 (#) -660

+ CONTENTS, IN ACRE-FEET, AT END OF MONTH.

* CHANGE IN CONTENTS, IN ACRE-FEET.

KANSAS RIVER BASIN

15

06848000 PRAIRIE DOG CREEK AT NORTON, KS

LOCATION.--Lat 39°48'36", long 99°55'18", in NW¼NW¼ sec.9, T.3 S., R.23 W., Norton County, 0.9 mi (1.4 km) downstream from Norton Dam, 2 mi (3.2 km) southwest of Norton, and at mile 74.0 (119.1 km).

DRAINAGE AREA.--684 mi² (1,772 km²).

PERIOD OF RECORD.--October 1943 to current year. Monthly discharge only for some periods, published in WSP 1310.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 2,239.38 ft (682.563 m) above mean sea level, levels by Bureau of Reclamation. Apr. 13 to May 7, 1944, nonrecording gage and May 8, 1944, to Sept. 30, 1961, water-stage recorder at site 3.2 mi (5.1 km) downstream at datum 21.56 ft (6.571 m) lower. Oct. 1, 1961, to Apr. 19, 1965, water-stage recorder at site 0.5 mi (0.8 km) upstream at datum 5.82 ft (1.774 m) lower.

AVERAGE DISCHARGE.--31 years, 29.7 ft³/s (0.841 m³/yr), 21,520 acre-ft/yr (26.5 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 80 ft³/s (2.27 m³/s) July 13, gage height, 2.72 ft (0.829 m); no flow at times. Period of record: Maximum discharge, 37,500 ft³/s (1,060 m³/s) May 28, 1953, gage height, 25.6 ft (7.80 m); site and datum then in use, from rating curve extended above 14,000 ft³/s (396 m³/s) on basis of main channel velocity-area study and computation of peak flow over road; no flow at times in 1946, 1954-57, 1959-61, 1964-67, 1969-74.

REMARKS.--Records good. Flow completely regulated since 1964 by Norton Dam (see sta 06847950). Records of chemical analyses for the water year 1974 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1310: 1944(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	.50	.11	.30	.11	.11	.11	.05	.07	.03	.71	.24	.02
2	.30	.11	.30	.10	.11	.11	.05	.07	.03	.79	.17	.03
3	.20	.11	.30	.10	.11	.16	.12	.06	.04	.79	.11	.02
4	.20	.11	.37	.10	.11	.11	.37	.05	.03	.79	.11	.02
5	.20	.11	.44	.10	.11	.11	.32	.05	.06	.78	.41	0
6	.20	.11	.30	.10	.08	.14	.26	.05	.11	.77	.29	0
7	.20	.17	.25	.10	.10	.12	.20	.05	.06	.77	.18	0
8	.20	.15	.27	.10	.12	.11	.18	.04	.54	.75	.28	0
9	.60	.10	.30	.09	.11	.10	.16	.12	.49	.71	.54	0
10	.80	.10	.29	.10	.09	.10	.15	.07	.26	.69	.30	0
11	1.0	.10	.30	.05	.09	.13	.28	.04	.28	.71	.15	0
12	.69	.10	.38	.10	.11	.10	.14	.04	.14	.75	.10	0
13	.32	.10	.16	.15	.11	.10	.35	.04	.09	.79	.07	0
14	.15	.10	.16	.12	.11	.11	.30	.05	.07	.78	.06	0
15	.11	.10	.11	.11	.11	.09	.19	.05	.05	.78	.08	0
16	.29	.10	.09	.13	.08	.07	.17	.05	.05	.77	.08	0
17	.19	.10	.09	.17	.08	.07	.15	.05	.04	.76	.07	0
18	.19	.10	.07	.21	.09	.09	.11	.25	.04	.73	.07	0
19	.19	.15	.02	.22	.09	.10	.11	.14	.04	.45	.06	0
20	.23	.80	.01	.21	.09	.11	.20	.09	.03	.43	.02	0
21	.17	.60	.11	.20	.07	.11	.11	.07	0	.43	.01	0
22	.20	.52	.11	.19	.06	.09	.09	.05	0	.43	.03	0
23	.17	.46	.11	.16	.07	.11	.09	.05	0	.21	.04	0
24	.13	.40	.11	.16	.06	.16	.09	.05	.16	1.1	.03	0
25	.09	.33	.11	.16	.06	.16	.09	.14	.28	.66	.03	0
26	.11	.30	.11	.16	.17	.11	.09	.08	.52	.49	0	0
27	.11	.30	.11	.16	.11	.10	.07	.05	.53	.32	.01	0
28	.11	.30	.11	.12	.11	.11	.05	.04	.55	.24	.05	0
29	.12	.30	.11	.11	-----	.09	.05	.05	.64	.29	.03	0
30	.16	.30	.11	.11	-----	.05	.06	.05	.70	.22	.04	0
31	.11	-----	.11	.11	-----	.06	-----	.03	-----	.18	.02	-----
TOTAL	8.24	6.74	5.72	4.11	2.72	3.29	4.65	2.09	324.64	1,560.50	3.68	.09
MEAN	.27	.22	.18	.13	.097	.11	.16	.067	10.8	50.3	.12	.003
MAX	1.0	.80	.44	.22	.17	.16	.37	.25	70	79	.54	.03
MIN	.09	.10	.01	.05	.06	.05	.05	.03	0	.18	0	0
AC-FT	16	13	11	8.2	5.4	6.5	9.2	4.1	644	3,100	7.3	.2

CAL YR 1973 TOTAL 3,820.83 MEAN 10.5 MAX 115 MIN 0 AC-FT 7,580
WTR YR 1974 TOTAL 1,926.47 MEAN 5.28 MAX 79 MIN 0 AC-FT 3,820

KANSAS RIVER BASIN

06848500 PRAIRIE DOG CREEK NEAR WOODRUFF, KS

LOCATION.--Lat 39°59'09", long 99°28'39", in NW¼ sec.9, T.1 S., R.19 W., Phillips County, on left bank at downstream side of bridge on U.S. Highway 383, 1 mi (1.6 km) south of Kansas-Nebraska state line, 2.5 mi (4.0 km) west of Woodruff, and at mile 26.5 (42.6 km).

DRAINAGE AREA.--1,007 mi² (2,608 km²).

PERIOD OF RECORD.--October 1928 to September 1932, October 1944 to current year. Monthly discharge only for some periods, published in WSP 1310.

GAGE.--Water-stage recorder. Datum of gage is 2,016.20 ft (614.537 m) above mean sea level. See WSP 1919 for history of changes prior to Oct. 7, 1955.

AVERAGE DISCHARGE.--34 years, 42.1 ft³/s (1.192 m³/s), 30,500 acre-ft/yr (37.6 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 207 ft³/s (5.86 m³/s) Oct. 11, gage height, 5.71 ft (1.740 m); minimum, 0.10 ft³/s (0.003 m³/s) Aug. 12.

Period of record: Maximum discharge, 15,000 ft³/s (425 m³/s) June 23, 1947, gage height, 21.04 ft (6.413 m), site and datum then in use, from rating curve extended above 6,500 ft³/s (184 m³/s) on basis of contracted-opening measurement of 11,300 ft³/s (320 m³/s); no flow at times in 1945, 1948, 1950, 1954-61, 1963-66, 1971, 1972.

REMARKS.--Records good. Flow regulated to some extent since 1964 by Norton Reservoir 48.4 mi (77.9 km) upstream (see sta 06847950) and by irrigation development above station. Records of chemical analyses for the water year 1974 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	45	11	6.1	10	12	8.1	5.7	5.7	4.2	.43	.24	.22
2	20	11	6.0	10	12	9.1	5.4	5.7	4.2	1.5	.12	.30
3	10	11	7.9	9.3	10	9.4	6.3	5.7	4.1	2.3	.12	.31
4	6.1	10	8.0	9.5	8.9	8.6	7.5	6.1	4.2	1.3	.11	.25
5	4.4	9.9	6.6	9.7	7.9	8.2	7.9	6.1	4.6	2.8	.63	.20
6	3.7	9.7	8.1	9.7	8.3	8.2	8.4	5.7	4.7	3.5	.15	.49
7	3.5	11	6.8	9.7	3.5	8.5	9.4	5.5	4.5	4.6	.11	.37
8	3.9	11	9.5	10	7.1	8.2	7.9	5.4	9.8	4.1	.13	.22
9	5.6	10	8.2	11	7.7	7.9	8.5	5.3	31	5.2	.78	.19
10	23	11	6.6	10	7.9	7.3	8.0	5.4	24	1.7	1.8	.18
11	133	10	7.0	11	8.3	6.2	9.0	5.4	22	3.2	.12	.24
12	119	9.9	7.8	11	8.1	6.1	8.9	6.0	24	1.7	.10	.25
13	71	10	7.5	11	8.1	6.3	12	6.0	11	.53	.11	.20
14	26	11	7.3	11	7.3	6.5	18	5.6	6.1	1.3	.12	.28
15	11	10	7.2	12	7.1	6.5	15	5.5	5.3	2.6	.14	.31
16	7.2	10	7.6	12	7.7	6.2	16	5.1	4.3	2.5	.15	.31
17	5.8	10	6.0	12	6.9	6.3	15	4.9	4.3	3.1	.15	.27
18	4.8	10	7.0	13	6.9	6.3	12	9.2	4.5	1.9	.15	.29
19	4.3	9.5	7.7	14	7.5	6.3	9.4	11	4.2	3.6	.18	.20
20	4.2	14	5.3	21	7.3	6.5	9.5	12	2.3	4.8	.16	.17
21	5.4	15	8.7	27	8.1	6.4	9.2	12	1.6	.92	.18	.28
22	6.3	12	9.9	40	9.3	6.4	8.0	6.9	.63	.63	.20	.51
23	7.4	13	8.3	56	9.5	6.5	7.0	5.2	.19	.61	.19	.51
24	7.8	12	10	42	7.7	6.4	6.4	4.5	.66	1.0	.19	.60
25	9.1	9.4	11	22	7.3	6.4	6.0	4.4	1.3	1.7	.18	.55
26	9.4	8.9	10	18	7.5	6.6	6.1	4.4	.84	.12	.18	.64
27	9.9	7.6	12	18	9.3	6.6	6.1	4.3	.48	.11	.18	.50
28	11	6.4	13	19	7.7	6.4	6.2	4.3	.63	.11	.23	.37
29	10	7.0	11	17	-----	6.0	6.3	4.4	.34	.11	.22	.42
30	10	7.5	11	15	-----	6.2	5.9	4.3	.19	.11	.26	.50
31	10	-----	11	14	-----	6.0	-----	4.2	-----	.11	.22	-----
TOTAL	607.8	308.8	260.1	514.9	226.9	216.6	267.0	186.2	190.16	58.19	7.80	10.13
MEAN	19.6	10.3	8.39	16.6	8.10	6.99	8.90	6.01	6.34	1.88	.25	.34
MAX	133	15	13	56	12	9.4	18	12	31	5.2	1.8	.64
MIN	3.5	6.4	5.3	9.3	3.5	6.0	5.4	4.2	.19	.11	.10	.17
AC-FT	1,210	613	516	1,020	450	430	530	369	377	115	15	20

CAL YR 1973 TOTAL 3,498.85 MEAN 9.59 MAX 315 MIN .04 AC-FT 6,940
WTR YR 1974 TOTAL 2,854.58 MEAN 7.82 MAX 133 MIN .10 AC-FT 5,660

PEAK DISCHARGE (REGULATED) ABOVE 400 CFS.--NO PEAK ABOVE BASE.

KANSAS RIVER BASIN

17

06853500 REPUBLICAN RIVER NEAR HARDY, NE

LOCATION.--Lat 40°00'01", long 97°54'55", in NE¼NE¼ sec.6, T.1 S., R.5 W., in Kansas, Republic County, at downstream side of highway bridge, 1.2 mi (1.9 km) southwest of Hardy and at mile 141.2 (227.2 km).

DRAINAGE AREA.--22,401 mi² (58,019 km²), of which about 7,500 mi² (19,000 km²) does not contribute directly to surface runoff.

PERIOD OF RECORD.--June 1904 to September 1915 (no winter records), April 1931 to current year. Prior to May 1932, published as "at Bostwick". Records for June 1896 to November 1903 published as "near Superior" in 18th to 22nd Ann. Repts., inclusive, Pt. 4, and WSP 75, 84, and 99, have been found to be unreliable and should not be used.

GAGE.--Water-stage recorder. Datum of gage is 1,501.46 ft (457.645 m) above mean sea level. Prior to May 19, 1932, nonrecording gage at site at Bostwick, 20 mi (32 km) upstream at different datum.

AVERAGE DISCHARGE.--43 years (1913-14, 1932-74), 634 ft³/s (17.95 m³/s), 459,300 acre-ft/yr (566 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 8,640 ft³/s (245 m³/s) Oct. 11, gage height, 12.52 ft (3.816 m); minimum, 40 ft³/s (1.13 m³/s) Sept. 22.

Period of record: Maximum discharge, about 225,000 ft³/s (6,370 m³/s) June 2, 1935, gage height, 19.4 ft (5.9 m), based on records for stations upstream; no flow Aug. 9-19, 1934.

Maximum stages since at least 1895, that of June 2, 1935, and 17.00 ft (5.18 m) June 24, 1947, discharge, 100,000 ft³/s (2,800 m³/s), based on records for upstream stations.

REMARKS.--Records good except those for winter periods, which are poor. Natural flow affected by irrigation development above station and by storage in six reservoirs in Colorado and Nebraska. Considerable regulation since 1952 by Harlan County Reservoir (see sta 06849000).

REVISIONS (WATER YEARS).--WSP 806: Drainage area. WSP 1006: 1941. WSP 1340: 1905(M), 1907-9, 1912, 1914-15, 1931. See also PERIOD OF RECORD.

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	363	366	220	908	755	696	837	176	76	91	172
2	982	352	356	210	830	750	693	805	168	95	93	178
3	760	342	349	210	785	750	674	839	163	80	109	154
4	632	335	363	210	765	750	571	847	157	60	115	110
5	552	328	349	220	780	750	556	845	147	58	121	94
6	496	324	335	230	770	745	538	828	159	73	136	84
7	464	332	321	230	745	740	538	810	217	83	148	71
8	433	328	321	240	740	740	534	809	359	66	167	60
9	416	321	335	240	750	745	530	837	256	96	188	52
10	4,650	314	324	240	750	735	522	846	297	81	222	49
11	8,270	318	321	240	760	735	543	945	588	73	266	45
12	6,670	321	324	240	780	740	563	941	408	67	250	45
13	2,850	324	332	250	805	735	545	860	328	55	192	49
14	1,530	324	342	250	815	725	601	783	261	55	222	51
15	1,140	318	328	270	735	725	624	667	241	59	325	51
16	906	304	300	290	760	710	585	377	212	56	420	47
17	770	293	282	310	790	710	566	299	183	52	404	56
18	675	290	280	340	810	710	565	278	167	50	335	95
19	612	324	250	350	810	710	570	268	147	47	294	56
20	568	1,910	230	380	810	710	632	290	103	45	278	44
21	528	870	250	400	790	710	653	280	81	53	244	41
22	496	645	300	450	775	710	618	245	69	69	199	41
23	472	528	320	430	770	700	590	233	117	72	162	41
24	452	476	310	430	755	705	577	222	129	76	145	45
25	433	440	300	500	745	705	605	214	143	98	107	80
26	416	419	300	720	755	710	791	221	98	89	92	95
27	408	405	300	805	770	710	824	242	95	98	121	94
28	398	388	290	650	770	710	830	218	92	94	188	91
29	384	377	290	568	-----	705	850	205	84	80	177	91
30	377	370	280	636	-----	694	830	197	73	75	176	89
31	370	-----	250	950	-----	694	-----	188	-----	89	167	-----
TOTAL	39,440	12,983	9,598	11,709	21,828	22,423	18,814	16,476	5,718	2,220	6,154	2,271
MEAN	1,272	433	310	378	780	723	627	531	191	71.6	199	75.7
MAX	8,270	1,910	366	950	908	755	850	945	588	98	420	178
MIN	370	290	230	210	735	694	522	188	69	45	91	41
AC-FT	78,230	25,750	19,040	23,220	43,300	44,480	37,320	32,680	11,340	4,400	12,210	4,500

CAL YR 1973 TOTAL 183,259 MEAN 502 MAX 8,270 MIN 71 AC-FT 363,500
WTR YR 1974 TOTAL 169,634 MEAN 465 MAX 8,270 MIN 41 AC-FT 336,500

PEAK DISCHARGE (REGULATED) ABOVE 2,500 CFS

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
10-11	1100	12.52	8,640	11-20	1100	7.84	2,760

KANSAS RIVER BASIN

06853800 WHITE ROCK CREEK NEAR BURR OAK, KS

LOCATION.--Lat 39°53'55", long 98°15'05", in NE¼NE¼ sec.7, T.2 S., R.8 W., Jewell County, on right bank 500 ft (152 m) upstream from highway bridge, 3.5 mi (5.6 km) northeast of Burr Oak, and at mile 35.4 (57.0 km).

DRAINAGE AREA.--227 mi² (588 km²).

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1955-57, October 1957 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1,601.5 ft (488.14 m) above mean sea level (levels by Bureau of Reclamation).

AVERAGE DISCHARGE.--17 years, 26.6 ft³/s (0.753 m³/s), 19,270 acre-ft/yr (23.8 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 4,630 ft³/s (131 m³/s) Oct. 11, gage height, 20.84 ft (6.352 m); minimum, 2.8 ft³/s (0.079 m³/s) Sept. 30.

Period of record: Maximum discharge, 15,800 ft³/s (447 m³/s) Sept. 3, 1973, gage height, 25.06 ft (7.638 m), from floodmark; no flow at times in 1957-59, 1964, 1966, 1968.

Maximum stage known since at least 1869, 32.6 ft (9.94 m) July 9, 1950, from floodmark 300 ft (91 m) downstream and 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	76	44	37	29	57	35	27	22	14	7.9	4.4	4.2
2	59	41	39	28	50	35	27	22	14	7.6	4.8	4.3
3	52	38	38	28	47	35	28	22	13	7.2	4.4	4.3
4	45	38	40	28	43	36	27	22	13	6.8	4.0	4.2
5	40	37	39	28	46	34	27	29	13	6.4	4.7	4.0
6	39	37	36	28	39	32	27	23	16	6.0	5.3	4.1
7	39	38	34	28	36	31	27	21	16	6.0	4.7	4.1
8	38	37	37	28	38	35	26	20	16	5.8	5.5	3.8
9	39	36	38	28	39	35	26	21	18	5.6	6.2	3.7
10	2,270	36	36	28	39	34	26	21	18	5.6	6.0	3.7
11	3,590	36	38	29	41	37	34	26	22	5.7	5.2	3.6
12	2,220	36	41	29	44	36	32	24	20	5.5	4.8	3.6
13	269	37	39	30	45	34	34	28	20	6.5	4.4	3.6
14	109	36	39	30	44	34	47	24	18	6.2	4.3	3.6
15	88	35	37	30	41	34	46	20	15	5.2	8.3	3.6
16	88	34	31	31	39	32	43	19	13	4.7	70	3.5
17	76	34	33	34	40	32	34	19	12	4.5	17	3.5
18	70	33	34	47	43	32	31	21	12	4.2	9.7	3.4
19	66	333	31	97	40	31	30	20	12	4.2	8.1	3.5
20	61	980	31	113	40	30	49	19	11	4.1	7.3	3.3
21	58	119	32	223	38	29	53	18	10	4.1	6.5	3.1
22	57	76	33	173	34	30	38	17	9.7	4.2	6.1	3.0
23	54	58	34	95	34	29	31	16	9.3	4.2	5.8	3.0
24	53	53	35	76	30	30	29	16	9.2	4.2	5.5	3.1
25	49	49	34	84	30	30	27	16	9.0	4.0	5.3	3.3
26	47	48	34	149	35	30	27	17	8.7	4.1	5.2	3.3
27	52	43	33	146	37	29	27	16	8.5	4.0	5.1	3.5
28	48	39	34	101	36	30	25	17	8.4	4.0	5.0	3.4
29	46	39	32	84	-----	29	24	17	8.2	4.3	4.7	3.3
30	45	39	32	78	-----	28	23	16	8.0	4.3	4.5	2.9
31	45	-----	34	70	-----	28	-----	15	-----	4.2	4.6	-----
TOTAL	9,888	2,539	1,095	2,030	1,125	996	952	624	395.0	161.3	247.4	107.5
MEAN	319	84.6	35.3	65.5	40.2	32.1	31.7	20.1	13.2	5.20	7.98	3.58
MAX	3,590	980	41	223	57	37	53	29	22	7.9	70	4.3
MIN	38	33	31	28	30	28	23	15	8.0	4.0	4.0	2.9
AC-FT	19,610	5,040	2,170	4,030	2,230	1,980	1,890	1,240	783	320	491	213

CAL YR 1973 TOTAL 36,362.7 MEAN 99.6 MAX 6,000 MIN 3.8 AC-FT 72,130
WTR YR 1974 TOTAL 20,160.2 MEAN 55.2 MAX 3,590 MIN 2.9 AC-FT 39,990

PEAK DISCHARGE (BASE, 1,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
10-11	1200	20.84	4,630	11-20	0100	16.28	2,210

KANSAS RIVER BASIN

19

06853900 LOVEWELL RESERVOIR NEAR LOVEWELL, KS

LOCATION.--Lat 39°54'09", long 98°01'55", in SW¼SE¼ sec.6, T.2 S., R.6 W., Jewell County, at north end of Lovewell Dam on White Rock Creek, 3 mi (5 km) northwest of Lovewell, and 19.3 mi (31.1 km) upstream from mouth.

DRAINAGE AREA.--345 mi² (894 km²).

PERIOD OF RECORD.--May 1957 to current year. Monthly records only, May to September 1957.

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (levels by Bureau of Reclamation). Prior to June 15, 1960, water-stage recorder at south end of dam at same datum.

EXTREMES.--Current year: Maximum elevation, 1,595.01 ft (486.159 m) Oct. 13, contents, 90,700 acre-ft (112 hm³); minimum, 1,575.05 ft (480.075 m) Aug. 2-3, contents, 23,010 acre-ft (28.4 hm³).

Period of record: Maximum elevation, 1,595.01 ft (486.159 m) Oct. 13, 1973, contents, 90,700 acre-ft (112 hm³); minimum since irrigation pool was first filled, 1,563.70 ft (476.616 m) Oct. 1, 2, 1957, contents, 6,350 acre-ft (7.83 hm³).

REMARKS.--Reservoir is formed by earthfill dam. Closure was made May 29, 1957. Total capacity of 186,290 acre-ft (230 hm³) consists of the following: Dead storage, 5,050 acre-ft (6.23 hm³) below elevation 1,562.07 ft (476.119 m); irrigation pool, 36,640 acre-ft (45.2 hm³) between elevations 1,562.07 ft (476.119 m) and 1,582.6 ft (482.38 m); flood control pool, 50,460 acre-ft (62.2 hm³) between elevations 1,582.6 (482.38 m) and 1,595.3 ft (486.25 m); surcharge, 94,140 acre-ft (116 hm³) between elevations 1,595.3 ft (486.25 m) and 1,610.3 ft (490.82 m). Storage in reservoir is derived from White Rock Creek and diversion from the Republican River through upper Courtland Canal. Releases are made into White Rock Creek and for irrigation of 30,000 acres (12,000 hm³), through lower Courtland Canal. Figures given herein represent total contents.

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

1,575	22,910	1,590	67,940
1,580	34,440	1,595	90,650
1,585	49,290	1,600	117,500

ELEVATION, IN FEET, AT 2400, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,590.87	1,586.26	1,583.07	1,583.42	1,584.25	1,582.65	1,582.69	1,582.91	1,582.93	1,581.08	1,575.10	1,577.85
2	1,590.90	1,585.71	1,582.87	1,583.41	1,584.11	1,582.63	1,582.67	1,582.91	1,582.94	1,580.74	1,575.05	1,577.85
3	1,590.54	1,585.15	1,582.76	1,583.38	1,583.96	1,582.61	1,582.72	1,582.88	1,582.94	1,580.44	1,575.10	1,577.85
4	1,590.13	1,584.62	1,582.89	1,583.37	1,583.81	1,582.60	1,582.69	1,582.87	1,582.94	1,580.12	1,575.25	1,577.80
5	1,589.72	1,584.05	1,582.91	1,583.35	1,583.67	1,582.60	1,582.67	1,582.85	1,582.95	1,579.78	1,575.45	1,577.80
6	1,589.30	1,583.46	1,582.82	1,583.33	1,583.51	1,582.62	1,582.67	1,582.84	1,582.96	1,579.42	1,575.65	1,577.90
7	1,588.87	1,582.97	1,582.74	1,583.32	1,583.34	1,582.63	1,582.65	1,582.82	1,582.96	1,579.18	1,575.95	1,577.95
8	1,588.44	1,582.75	1,582.69	1,583.32	1,583.19	1,582.64	1,582.65	1,582.80	1,583.00	1,578.93	1,576.30	1,578.00
9	1,588.05	1,582.65	1,582.62	1,583.32	1,583.01	1,582.63	1,582.60	1,582.82	1,583.02	1,578.66	1,576.70	1,578.05
10	1,590.25	1,582.71	1,582.59	1,583.32	1,582.85	1,582.64	1,582.62	1,582.89	1,583.00	1,578.47	1,577.00	1,578.10
11	1,593.70	1,582.77	1,582.64	1,583.32	1,582.71	1,582.71	1,582.68	1,582.88	1,583.02	1,578.37	1,577.25	1,578.15
12	1,594.98	1,582.84	1,582.75	1,583.34	1,582.65	1,582.71	1,582.66	1,582.84	1,583.02	1,578.05	1,577.45	1,578.20
13	1,594.82	1,582.89	1,582.76	1,583.34	1,582.71	1,582.70	1,582.77	1,582.86	1,583.07	1,577.80	1,577.60	1,578.25
14	1,594.53	1,582.97	1,582.84	1,583.40	1,582.74	1,582.73	1,582.78	1,582.83	1,583.07	1,577.60	1,577.65	1,578.30
15	1,594.18	1,583.01	1,582.87	1,583.41	1,582.76	1,582.74	1,582.78	1,582.79	1,583.05	1,577.45	1,577.65	1,578.35
16	1,593.83	1,583.05	1,582.89	1,583.42	1,582.78	1,582.72	1,582.78	1,582.80	1,583.03	1,577.25	1,577.70	1,578.40
17	1,593.46	1,583.11	1,582.94	1,583.45	1,582.82	1,582.72	1,582.77	1,582.80	1,583.02	1,577.05	1,577.75	1,578.40
18	1,593.11	1,583.14	1,582.99	1,583.51	1,582.84	1,582.74	1,582.79	1,582.83	1,583.00	1,576.80	1,577.80	1,578.40
19	1,592.64	1,583.69	1,583.02	1,583.61	1,582.84	1,582.73	1,582.87	1,582.83	1,582.95	1,576.65	1,577.80	1,578.40
20	1,592.17	1,585.13	1,583.05	1,583.74	1,582.84	1,582.75	1,582.95	1,582.82	1,582.95	1,576.45	1,577.80	1,578.35
21	1,591.70	1,585.05	1,583.07	1,583.93	1,582.83	1,582.73	1,582.97	1,582.82	1,582.90	1,576.25	1,577.80	1,578.40
22	1,591.23	1,584.90	1,583.11	1,584.08	1,582.78	1,582.71	1,582.96	1,582.80	1,582.81	1,576.05	1,577.85	1,578.45
23	1,590.73	1,584.73	1,583.15	1,584.15	1,582.75	1,582.71	1,582.93	1,582.80	1,582.75	1,575.85	1,577.90	1,578.45
24	1,590.23	1,584.53	1,583.25	1,584.22	1,582.73	1,582.70	1,582.94	1,582.79	1,582.68	1,575.65	1,578.00	1,578.45
25	1,589.73	1,584.32	1,583.29	1,584.32	1,582.70	1,582.70	1,582.93	1,582.81	1,582.53	1,575.50	1,578.15	1,578.45
26	1,589.24	1,584.13	1,583.35	1,584.53	1,582.67	1,582.70	1,582.94	1,582.81	1,582.36	1,575.40	1,578.15	1,578.50
27	1,588.78	1,583.91	1,583.36	1,584.66	1,582.67	1,582.72	1,582.94	1,582.83	1,582.13	1,575.40	1,578.10	1,578.50
28	1,588.31	1,583.70	1,583.40	1,584.68	1,582.65	1,582.72	1,582.95	1,582.84	1,581.90	1,575.35	1,578.05	1,578.45
29	1,587.82	1,583.50	1,583.40	1,584.60	-----	1,582.71	1,582.93	1,582.88	1,581.65	1,575.30	1,578.00	1,578.45
30	1,587.32	1,583.28	1,583.44	1,584.50	-----	1,582.70	1,582.94	1,582.91	1,581.37	1,575.25	1,577.95	1,578.45
31	1,586.80	-----	1,583.43	1,584.38	-----	1,582.71	-----	1,582.90	-----	1,575.10	1,577.90	-----
MEAN	1,590.85	1,583.83	1,583.00	1,583.75	1,583.04	1,582.69	1,582.80	1,582.84	1,582.76	1,577.46	1,577.16	1,578.23
MAX	1,594.98	1,586.26	1,583.44	1,584.68	1,584.25	1,582.75	1,582.97	1,582.91	1,583.07	1,581.08	1,578.15	1,578.50
MIN	1,586.80	1,582.65	1,582.59	1,583.32	1,582.65	1,582.60	1,582.60	1,582.79	1,581.37	1,575.10	1,575.05	1,577.80
(+)	55,580	43,760	44,220	47,240	41,840	42,020	42,710	42,590	38,130	23,110	29,250	30,560
(#)	-15,620	-11,820	+460	+3,020	-5,400	+180	+690	-120	-4,460	-15,020	+6,140	+1,310

CAL YR 1973 (#) +2,140

WTR YR 1974 (#) -40,640

+ CONTENTS, IN ACRE-FEET, AT END OF MONTH.

CHANGE IN CONTENTS, IN ACRE-FEET.

LOCATION.--Lat 39°53'10", long 98°01'20", in NW¼ sec.17, T.2 S., R.6 W., Jewell County, on right bank 1,400 ft (427 m) east of Lovewell Dam, 2.5 mi (4.0 km) northwest of Lovewell, and at mile 18.8 (30.2 km).

PERIOD OF RECORD.--October 1945 to current year. Monthly discharge only for some periods, published in WSP 1310.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1,531.52 ft (466.807 m) above mean sea level (Bureau of Reclamation bench mark). May 21, 1946, to Sept. 13, 1947, nonrecording gage, and Sept. 14, 1947, to Apr. 23, 1951, water-stage recorder, at site 3.0 mi (4.8 km) downstream at datum 1,513.95 ft (461.452 m) above mean sea level (Corps of Engineers bench mark). Apr. 24, 1951, to Nov. 8, 1952, nonrecording gage, and Nov. 9, 1952, to June 14, 1960, water-stage recorder, at site 2.0 mi (3.2 km) downstream at datum 1,519.53 ft (463.153 m) above mean sea level.

EXTREMES.--Current year: Maximum discharge, 1,330 ft³/s (37.7 m³/s) Oct. 19, gage height, 14.09 ft (4.295 m); minimum, 0.08 ft³/s (0.002 m³/s) June 20, 21, Sept. 28-30.

Period of record: Maximum discharge, 23,300 ft³/s (660 m³/s) July 10, 1950, gage height, 21.62 ft (6.590 m), site and datum then in use, from rating curve extended above 5,200 ft³/s (147 m³/s) on basis of a discharge measurement of 20,800 ft³/s (589 m³/s) made at site about 6.0 mi (9.7 km) upstream; no flow at times in 1948, 1953-60, 1966, 1967, 1971. Maximum discharge since construction of Lovewell Dam in 1957, 2,650 ft³/s (75.0 m³/s) Sept. 4, 1958.

REMARKS.--Records good. Flow completely regulated by Lovewell Reservoir beginning May 29, 1957 (see sta 06853900). Large flows from Republican River enter Lovewell Reservoir from upper Courtland Canal. Figures of flow do not include diversion immediately above station into Lower Courtland Canal.

REVISIONS (WATER YEARS).--WSP 1340: 1946-47, 1949-50(P).

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		1,150	539	46	453	101	52	56	.12	1.7	.83	2.8
2	180	1,160	531	46	451	103	54	57	.13	1.8	.97	2.8
3	906	1,130	366	49	449	103	53	60	.17	1.7	.90	2.8
4	969	1,100	21	54	448	73	53	60	.22	1.5	.53	3.1
5	947	1,090	85	54	446	52	53	59	.56	.96	.65	2.9
6	958	1,130	270	54	445	52	53	58	.97	1.0	.57	2.9
7	959	967	268	54	442	52	53	58	.25	1.2	.56	2.8
8	946	543	267	54	441	52	53	58	.30	.87	.84	2.8
9	938	262	266	54	441	52	53	60	.35	.91	1.8	2.8
10	532	1.2	130	54	439	52	53	61	.18	.94	1.8	2.0
11	2.1	.9	20	54	438	52	53	60	.18	.67	2.2	.73
12	168	.9	20	54	238	52	53	58	.16	.57	2.0	.52
13	1,160	.8	20	54	32	52	53	58	.22	.57	2.1	.22
14	1,160	.8	20	54	45	52	53	58	.15	.53	2.3	.14
15	1,170	.7	20	54	54	52	54	58	.14	.50	1.7	1.0
16	1,180	.5	20	55	54	52	54	58	.14	.38	1.4	.13
17	1,170	.5	26	55	54	52	54	57	.17	.56	1.4	.14
18	1,180	.5	32	55	55	52	39	57	.16	2.6	1.3	.17
19	1,280	1.5	32	55	78	52	46	56	.14	3.7	1.7	.13
20	1,260	243	32	55	101	52	60	56	.11	3.3	2.1	.12
21	1,250	617	32	55	102	52	59	25	6.1	3.2	2.1	.15
22	1,250	607	32	55	101	52	58	1.8	2.6	3.1	2.3	.21
23	1,250	599	32	55	101	52	57	.41	2.6	2.5	2.5	.20
24	1,250	591	32	56	101	52	57	.33	2.3	1.2	2.5	.14
25	1,210	584	32	56	101	52	57	.62	2.0	2.0	2.6	.10
26	1,160	577	32	56	100	52	57	1.4	1.9	2.4	2.6	.10
27	1,140	570	38	56	100	52	57	1.5	1.8	2.1	2.7	.10
28	1,120	562	46	189	100	52	56	.99	1.4	1.6	2.8	.09
29	1,140	553	46	434	-----	52	57	.42	1.5	1.2	2.8	.08
30	1,160	545	46	459	-----	52	56	.21	1.7	1.2	2.8	.14
31	1,150	-----	46	455	-----	52	-----	.13	-----	1.2	2.8	-----
TOTAL	30,145.5	14,588.3	3,399	2,990	6,410	1,784	1,620	1,195.81	28.72	47.66	56.15	31.41
MEAN	972	486	110	96.5	229	57.5	54.0	38.6	.96	1.54	1.81	1.05
MAX	1,280	1,160	539	459	453	103	60	61	6.1	3.7	2.8	3.1
MIN	.40	.50	20	46	32	52	39	.13	.11	.38	.53	.08
AC-FT	59,790	28,940	6,740	5,930	12,710	3,540	3,210	2,370	57	95	111	62
CAL YR 1973	TOTAL 74,268.27		MEAN 203	MAX 1,280		MIN .05	AC-FT 147,300					
WTR YR 1974	TOTAL 62,296.55		MEAN 171	MAX 1,280								

KANSAS RIVER BASIN

21

06855800 BUFFALO CREEK NEAR JAMESTOWN, KS

LOCATION.--Lat 39°36'55", long 97°51'20", in SW 1/4 SW 1/4 sec.14, T.5 S., R.5 W., Cloud County, at downstream side of highway bridge, 1.1 mi (1.8 km) north of Jamestown, and 21 mi (34 km) upstream from mouth.

DRAINAGE AREA.--330 mi² (850 km²), approximately.

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1954-59. July 1959 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,373.66 ft (418.692 m) above mean sea level. Prior to June 7, 1966, water-stage recorder at present site and datum. June 7, 1966, to Feb. 3, 1967, nonrecording gage at site 5.4 mi (8.7 km) downstream at different datum. Feb. 4, 1967, to May 3, 1967, nonrecording gage at present site and datum.

AVERAGE DISCHARGE.--15 years, 80.5 ft³/s (2.280 m³/s), 58,320 acre-ft/yr (71.9 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 27,800 ft³/s (787 m³/s) Oct. 12, gage height, 19.65 ft (5.989 m); minimum, 1.9 ft³/s (0.054 m³/s) Sept. 24.

Period of record: Maximum discharge, 27,800 ft³/s (787 m³/s) Oct. 12, 1973, gage height, 19.65 ft (5.989 m); no flow at times in 1959, 1964-67.

Maximum stages known since at least 1898, 18.5 ft (5.64 m) in 1948, from information by local resident, and that of Oct. 12, 1973.

REMARKS.--Records good except those for winter periods, which are poor. Waste water from the Courtland West Irrigation Canal is occasionally diverted into the salt marsh above gage and may cause a considerable increase in low flow during irrigation periods. Some diversions above station for irrigation.

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	1,640	89	85	75	244	72	54	44	44	10	18	6.4
2	992	106	74	70	186	72	34	36	41	8.8	30	19
3	669	81	90	65	151	75	77	63	40	7.6	38	18
4	496	66	153	60	129	79	102	40	40	37	14	9.3
5	262	67	143	60	130	68	46	35	42	25	7.6	6.3
6	128	61	96	60	134	55	38	34	182	13	12	4.9
7	116	66	122	60	97	62	42	31	121	12	17	7.4
8	108	81	108	60	95	64	52	36	82	11	21	7.6
9	85	73	131	60	108	72	36	38	150	10	47	5.5
10	295	56	121	60	96	89	32	37	145	21	64	4.2
11	11,300	51	115	60	97	84	34	93	104	22	43	3.4
12	19,900	62	175	60	109	105	52	88	98	22	16	39
13	4,880	69	288	60	119	85	61	46	112	30	8.9	25
14	2,020	80	197	60	121	69	127	65	102	26	50	6.8
15	1,320	88	149	65	110	103	129	36	98	28	385	4.2
16	848	69	129	70	101	106	126	33	50	20	204	3.3
17	602	47	116	80	97	62	84	37	41	12	83	3.0
18	379	60	95	136	113	80	72	408	21	11	45	3.3
19	200	59	84	393	115	98	70	652	17	12	22	2.6
20	158	402	102	638	75	84	60	582	15	14	8.8	3.2
21	134	970	80	765	173	85	120	453	13	15	6.2	3.7
22	125	881	80	802	136	56	167	249	28	28	6.8	2.8
23	128	535	86	600	50	61	106	100	19	25	6.5	2.1
24	112	275	156	428	48	46	53	63	12	14	5.9	1.9
25	119	161	208	433	45	40	44	50	11	23	5.6	2.1
26	102	127	169	714	45	40	43	52	9.7	30	5.6	2.5
27	111	130	136	753	50	40	44	47	8.9	24	5.0	3.0
28	100	106	113	571	64	48	54	37	8.6	12	6.9	3.8
29	89	85	100	383	-----	95	92	46	8.4	18	4.6	3.8
30	83	84	90	316	-----	83	75	46	9.0	12	5.2	2.7
31	92	-----	85	311	-----	40	-----	58	-----	18	6.9	-----
TOTAL	47,593	5,087	3,876	8,328	3,038	2,218	2,126	3,635	1,672.6	571.4	1,199.5	210.8
MEAN	1,535	170	125	269	109	71.5	70.9	117	55.8	18.4	38.7	7.03
MAX	19,900	970	288	802	244	106	167	652	182	37	385	39
MIN	83	47	74	60	45	40	32	31	8.4	7.6	4.6	1.9
AC-FT	94,400	10,090	7,690	16,520	6,030	4,400	4,220	7,210	3,320	1,130	2,380	418

CAL YR 1973 TOTAL 128,155.5 MEAN 351 MAX 19,900 MIN 7.3 AC-FT 254,200
WTR YR 1974 TOTAL 79,555.3 MEAN 218 MAX 19,900 MIN 1.9 AC-FT 157,800

PEAK DISCHARGE (BASE, 800 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
10-12	0300	19.65	27,800	01-22	0800	13.93	830
11-21	2200	15.09	1,140				

KANSAS RIVER BASIN

06855900 WOLF CREEK NEAR CONCORDIA, KS

LOCATION.--Lat 39°32'35", long 97°43'20", in SW 1/4 SW 1/4 sec.12, T.6 S., R.4 W., Cloud County, at downstream side of bridge on State Highway 9, 3.8 mi (6.1 km) southwest of Concordia, and at mile 7.3 (11.7 km).

DRAINAGE AREA.--56 mi² (145 km²), approximately.

PERIOD OF RECORD.--April 1962 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,375.43 ft (419.231 m) above mean sea level.

AVERAGE DISCHARGE.--12 years, 12.6 ft³/s (0.357 m³/s), 9,130 acre-ft/yr (11.3 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 4,180 ft³/s (118 m³/s) Oct. 11, gage height, 17.95 ft (5.471 m); minimum, 0.52 ft³/s (0.015 m³/s) Sept. 9-11.

Period of record: Maximum discharge, 4,180 ft³/s (118 m³/s) Oct. 11, 1973, gage height, 17.95 ft (5.471 m); no flow at times in most years.

REMARKS.--Records good except those for winter periods, 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	67	27	16	23	32	17	13	12	7.5	4.3	1.1	.70
2	56	26	16	22	29	17	13	11	7.3	4.1	1.1	.77
3	50	22	17	21	26	17	13	11	7.1	3.9	.98	.84
4	45	22	41	20	24	17	13	10	7.0	3.6	.84	.77
5	39	22	52	18	23	16	13	10	7.3	3.3	.98	.63
6	37	22	26	17	23	15	14	10	36	3.2	1.1	.70
7	36	23	24	17	22	15	14	9.9	13	3.1	1.1	.77
8	34	22	23	17	23	15	14	9.6	16	2.8	2.1	.68
9	31	20	31	17	23	15	13	9.9	37	2.7	3.7	.59
10	263	20	29	17	22	16	13	9.9	14	2.4	2.4	.54
11	2,320	20	28	17	22	21	16	11	13	2.4	2.0	.55
12	244	21	47	17	23	20	25	11	12	2.1	1.6	.59
13	101	21	91	17	23	17	16	9.8	41	1.9	1.4	.57
14	79	20	41	18	22	17	15	9.4	17	1.8	1.3	.55
15	69	20	32	20	21	16	15	8.7	10	1.7	1.5	.54
16	58	18	30	21	21	15	14	8.7	8.5	1.5	1.4	.54
17	53	18	27	46	21	15	14	8.5	8.1	1.5	1.3	.55
18	50	18	26	164	22	15	13	9.0	8.0	1.3	1.3	.63
19	47	18	24	296	21	14	13	223	7.7	1.3	1.2	.62
20	43	34	23	85	20	14	18	28	7.0	1.2	1.1	.65
21	41	34	22	149	20	13	27	13	6.5	1.2	.98	.71
22	38	24	22	54	18	14	16	11	5.8	1.1	.98	.74
23	37	21	24	38	18	14	14	9.9	5.5	1.2	.91	.81
24	36	32	161	41	17	13	13	9.5	5.3	1.1	.84	.83
25	33	25	133	60	17	13	13	9.2	5.1	1.1	.77	1.0
26	31	21	59	85	18	14	13	9.5	5.1	1.1	.84	1.1
27	31	19	39	50	18	14	13	9.1	4.9	1.2	.77	1.2
28	30	17	34	37	18	14	12	8.8	4.6	1.1	.77	1.4
29	29	17	29	35	-----	14	12	8.4	4.7	1.0	.70	1.4
30	29	17	27	38	-----	13	12	8.3	4.4	1.0	.66	1.3
31	29	-----	25	39	-----	13	-----	8.0	-----	1.0	.70	-----
TOTAL	4,086	661	1,219	1,516	607	473	437	535.1	336.4	62.2	38.42	23.27
MEAN	132	22.0	39.3	48.9	21.7	15.3	14.6	17.3	11.2	2.01	1.24	.78
MAX	2,320	34	161	296	32	21	27	223	41	4.3	3.7	1.4
MIN	29	17	16	17	17	13	12	8.0	4.4	1.0	.66	.54
AC-FT	8,100	1,310	2,420	3,010	1,200	938	867	1,060	667	123	76	46

CAL YR 1973 TOTAL 20,070.20 MEAN 55.0 MAX 2,320 MIN 3.1 AC-FT 39,810
WTR YR 1974 TOTAL 9,994.39 MEAN 27.4 MAX 2,320 MIN .54 AC-FT 19,820

PEAK DISCHARGE (BASE, 250 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
10-11	1200	17.95	4,180	01-19	0400	11.13	433
12-24	1900	9.41	284	05-19	1530	12.61	593

06856000 REPUBLICAN RIVER AT CONCORDIA, KS

LOCATION.--Lat 39°35'25", long 97°39'32", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.28, T.5 S., R.3 W., Cloud County, at right downstream side of bridge on U.S. Highway 81, 1 mi (1.6 km) north of Concordia, 3.4 mi (5.5 km) downstream from Buffalo Creek, and at mile 98.5 (158.5 km).

DRAINAGE AREA.--23,560 mi² (61,020 km²), of which about 7,500 mi² (19,400 km²) is probably noncontributing.

PERIOD OF RECORD.--October 1945 to current year. Monthly discharge only for some periods, published in WSP 1310. Gage-height records collected at nearby sites since 1931 are contained in reports of U.S. Weather Bureau.

GAGE.--Water-stage recorder. Datum of gage is 1,333.62 ft (406.487 m) above mean sea level. Prior to Oct. 8, 1947, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--29 years, 791 ft³/s (22.40 m³/s), 573,100 acre-ft/yr (707 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 28,900 ft³/s (818 m³/s) Oct. 12, gage height, 13.98 ft (4.261 m); minimum, 75 ft³/s (2.12 m³/s) Sept. 24.
 Period of record: Maximum discharge, 75,000 ft³/s (2,124 m³/s) June 25, 1947, gage height, 14.90 ft (4.542 m); minimum, 8.0 ft³/s (0.23 m³/s) Sept. 2, 3, 1953.
 Maximum stage known since at least 1895, about 18 ft (5.5 m) June 2, 1935, present site and datum, from information by U.S. Weather Bureau, discharge, about 207,000 ft³/s (5,862 m³/s), on basis of records for stations upstream. Flood of June 21, 1915, reached a stage of 14.1 ft (4.30 m), present site and datum, from information by U.S. Weather Bureau, discharge, about 60,000 ft³/s (1,699 m³/s).

REMARKS.--Records fair except those for winter periods, which are poor. Natural flow affected by irrigation development above station and by storage in seven reservoirs in Colorado, Nebraska, and Kansas. Considerable regulation since 1952 by Harlan County Reservoir (see sta 06849000). Records of chemical analyses for the water year 1974 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1340: 1946-47.

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	6,100	2,140	1,300	560	2,030	1,080	937	1,080	345	305	285	254
2	3,580	2,080	1,200	540	1,610	1,080	951	1,050	320	314	320	266
3	2,650	2,010	1,150	520	1,430	1,080	930	940	300	299	340	279
4	2,820	1,820	1,000	510	1,340	1,080	972	986	288	297	336	277
5	2,730	1,760	850	500	1,350	1,070	930	984	289	295	332	227
6	2,350	1,740	800	490	1,400	1,020	848	980	435	288	352	196
7	2,210	1,730	775	480	1,270	993	800	961	514	269	384	177
8	2,180	1,730	850	480	1,220	1,010	800	911	396	300	392	164
9	2,100	1,670	900	480	1,230	1,010	806	913	671	301	548	145
10	3,760	1,570	986	480	1,230	1,050	782	927	599	293	512	128
11	18,400	1,460	936	490	1,280	1,070	812	1,040	497	325	430	117
12	26,300	1,310	844	490	1,410	1,080	818	1,260	750	296	400	108
13	18,200	1,190	1,080	500	1,410	1,080	842	1,180	735	281	380	125
14	9,660	1,060	1,120	510	1,180	1,040	888	1,050	707	286	336	130
15	6,600	945	867	540	1,100	1,010	1,010	1,010	480	286	420	108
16	5,080	869	694	600	1,030	1,020	1,030	917	406	286	746	98
17	4,240	819	660	660	1,040	1,000	945	699	370	274	737	89
18	3,720	751	656	760	1,090	951	895	1,120	330	275	595	86
19	3,200	908	633	900	1,130	958	872	2,320	301	275	473	87
20	2,920	1,900	403	1,200	1,110	972	859	2,960	285	276	378	111
21	2,900	2,250	535	1,600	1,100	951	943	2,000	253	273	341	86
22	2,770	2,240	579	1,550	1,200	937	1,020	1,100	219	279	326	85
23	2,690	2,260	610	1,500	1,100	916	994	700	204	308	302	88
24	2,610	2,310	878	1,450	1,030	902	868	548	215	328	264	82
25	2,520	2,000	1,260	1,400	1,000	902	800	480	243	310	249	88
26	2,440	1,800	942	1,850	1,030	909	800	445	265	332	226	90
27	2,350	1,700	757	2,150	1,050	923	970	420	262	344	197	112
28	2,280	1,600	699	2,100	1,060	937	1,050	420	240	328	184	130
29	2,260	1,500	664	1,750	-----	951	1,080	393	264	285	229	130
30	2,230	1,400	741	1,850	-----	993	1,130	376	282	274	263	124
31	2,170	-----	596	2,200	-----	993	-----	353	-----	264	269	-----
TOTAL	156,020	48,522	25,965	31,090	34,460	30,968	27,382	30,523	11,465	9,146	11,546	4,187
MEAN	5,033	1,617	838	1,003	1,231	999	913	985	382	295	372	140
MAX	26,300	2,310	1,300	2,200	2,030	1,080	1,130	2,960	750	344	746	279
MIN	2,100	751	403	480	1,000	902	782	353	204	264	184	82
AC-FT	309,500	96,240	51,500	61,670	68,350	61,430	54,310	60,540	22,740	18,140	22,900	8,300

CAL YR 1973 TOTAL 540,570 MEAN 1,481 MAX 26,300 MIN 200 AC-FT 1,072,000
 WTR YR 1974 TOTAL 421,274 MEAN 1,154 MAX 26,300 MIN 82 AC-FT 835,600

PEAK DISCHARGE (REGULATED) ABOVE 4,000 CFS

DATE	TIME	G.H.T.	DISCHARGE
10-12	1300	13.98	28,900

06856600 REPUBLICAN RIVER AT CLAY CENTER, KS

LOCATION.--Lat 39°21'20", long 97°07'34", in SW $\frac{1}{4}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.17, T.8 S., R.3 E., Clay County, at downstream side of bridge on State Highway 15, 1 mi (1.6 km) south of Clay Center, 4 mi (6.4 km) downstream from Five Creeks, and at mile 38.2 (61.5 km).

DRAINAGE AREA.--24,542 mi² (63,564 km²), of which about 7,500 mi² (19,400 km²) is noncontributing.

PERIOD OF RECORD.--June 1917 to current year. Monthly discharge only for some periods, published in WSP 1310. Prior to February 1934, published as "at Wakefield". Gage-height records collected in this vicinity August 1904 to October 1917 are contained in reports of U.S. Weather Bureau.

GAGE.--Water-stage recorder. Datum of gage is 1,159.21 ft (353.327 m) above mean sea level. See WSP 1919 for history of changes prior to Sept. 23, 1949.

AVERAGE DISCHARGE.--57 years, 1,043 ft³/s (29.54 m³/s), 755,700 acre-ft/yr (932 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 34,500 ft³/s (977 m³/s) Oct. 14, gage height, 21.47 ft (6.544 m); minimum, 120 ft³/s (3.40 m³/s) Sept. 27, 28.

Period of record: Maximum discharge, 195,000 ft³/s (5,522 m³/s) June 3, 1935, gage height, 25.74 ft (7.846 m), from floodmarks, from rating curve extended above 61,000 ft³/s (1,728 m³/s) on basis of velocity-area studies; no flow for part of Aug. 10, 1934; minimum daily, 1 ft³/s (0.028 m³/s) Aug. 9-11, 1934.

Maximum stage known since at least 1895, 26.2 ft (7.99 m) June 21, 1915, site and datum then in use, from information by U.S. Weather Bureau. Flood of May 29, 1903, reached a stage of 24.8 ft (7.56 m), site and datum then in use, from information by U.S. Weather Bureau.

REMARKS.--Records fair except those for winter periods, which are poor. Natural flow affected by irrigation development above station and by reservoirs in Colorado, Nebraska, and Kansas. Flow moderately regulated since 1952 by Harlan County Reservoir (see sta 06849000). Records of chemical analyses, water temperatures and specific conductance for the water year 1974 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 806: Drainage area. WSP 1006: 1941. WSP 1340: 1929, 1933-34. WSP 1310: 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	12,500	2,200	1,500	800	2,960	1,380	1,220	1,270	576	348	266	234
2	7,900	2,150	1,440	750	2,680	1,370	1,180	1,270	552	353	254	241
3	4,670	2,100	1,400	720	2,270	1,370	1,170	1,210	527	360	263	235
4	3,360	2,100	1,440	700	2,030	1,350	1,180	1,120	496	365	283	237
5	3,200	2,050	1,970	700	1,930	1,350	1,190	1,110	475	352	298	238
6	3,140	2,000	1,750	700	1,890	1,340	1,200	1,110	553	344	308	238
7	2,860	1,950	1,350	700	1,900	1,300	1,120	1,110	739	339	312	221
8	2,600	1,900	1,210	700	1,800	1,260	1,090	1,090	780	330	318	205
9	2,490	1,850	1,460	700	1,740	1,250	1,060	1,080	780	319	445	192
10	4,340	1,840	1,420	700	1,750	1,300	1,050	1,050	752	331	413	188
11	25,500	1,590	1,380	700	1,740	1,400	1,070	1,070	903	331	478	177
12	32,500	1,340	1,460	700	1,760	1,440	1,120	1,100	831	320	443	164
13	29,000	1,160	1,610	700	1,880	1,420	1,180	1,240	822	332	381	155
14	31,100	1,100	1,460	720	1,940	1,400	1,180	1,280	1,010	317	357	150
15	18,000	1,080	1,440	750	1,740	1,350	1,150	1,170	965	308	334	150
16	8,500	1,060	1,420	780	1,600	1,300	1,240	1,100	809	307	319	158
17	6,500	1,040	1,350	850	1,530	1,300	1,280	1,070	640	300	459	151
18	5,000	1,020	1,050	1,000	1,480	1,300	1,210	956	582	299	841	145
19	4,000	1,010	1,000	1,500	1,520	1,240	1,130	970	536	292	729	128
20	3,500	980	750	2,000	1,540	1,240	1,190	2,660	484	288	549	133
21	3,300	1,110	800	2,900	1,530	1,260	1,380	3,420	445	288	436	132
22	3,100	1,640	900	3,490	1,490	1,230	1,270	2,080	422	283	367	134
23	3,000	2,300	1,100	2,920	1,540	1,240	1,300	1,480	384	275	334	131
24	2,900	2,800	2,000	2,480	1,500	1,210	1,230	1,140	358	274	316	126
25	2,800	2,600	3,000	2,490	1,390	1,190	1,120	899	345	312	296	124
26	2,700	2,080	2,360	3,080	1,350	1,180	1,030	764	343	321	268	122
27	2,500	1,840	1,630	3,870	1,360	1,180	986	687	348	300	248	120
28	2,400	1,730	1,270	3,480	1,370	1,190	1,050	646	362	294	229	120
29	2,300	1,650	1,130	2,870	-----	1,180	1,200	635	351	297	212	123
30	2,300	1,580	1,050	2,810	-----	1,180	1,280	621	340	286	200	129
31	2,250	-----	900	2,800	-----	1,200	-----	589	-----	273	213	-----
TOTAL	240,210	50,850	44,000	50,060	49,210	39,900	35,056	36,997	17,510	9,738	11,169	5,001
MEAN	7,749	1,695	1,419	1,615	1,758	1,287	1,169	1,193	584	314	360	167
MAX	32,500	2,800	3,000	3,870	2,960	1,440	1,380	3,420	1,010	365	841	241
MIN	2,250	980	750	700	1,350	1,180	986	589	340	273	200	120
AC-FT	476,500	100,900	87,270	99,290	97,610	79,140	69,530	73,380	34,730	19,320	22,150	9,920

CAL YR 1973 TOTAL 864,565 MEAN 2,369 MAX 32,500 MIN 323 AC-FT 1,715,000
WTR YR 1974 TOTAL 589,701 MEAN 1,616 MAX 32,500 MIN 120 AC-FT 1,170,000

PEAK DISCHARGE (REGULATED) ABOVE 4,700 CFS

DATE TIME G.H.T. DISCHARGE

10-14 0400 21.47 34,500

06857050 MILFORD LAKE NEAR JUNCTION CITY, KS

LOCATION.--Lat 39°04'40", long 96°53'30", in SE¼ sec.20, T.11 S., R.5 E., Geary County, in control tower of dam on Republican River, 5 mi (8 km) northwest of Junction City and 7.7 mi (12.4 km) above mouth.

DRAINAGE AREA.--24,880 mi² (64,440 km²), of which a large area is noncontributing.

PERIOD OF RECORD.--December 1966 to current year. Prior to October 1971, published as "Milford Reservoir".

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (levels by Corps of Engineers).

EXTREMES.--Current year: Maximum elevation, 1,170.03 ft (356.625 m) Oct. 17, contents, 982,300 acre-ft (1,210 hm³); minimum, 1,142.00 ft (348.082 m) Mar. 24, 25, Apr. 2, 3, contents 377,700 acre-ft (465 hm³).

Period of record: Maximum elevation, 1,170.03 ft (356.625 m) Oct. 17, 1973, contents, 982,300 acre-ft (1,210 hm³); minimum since conservation pool first filled, 1,141.47 ft (347.920 m) Dec. 3, 1969, contents, 369,700 acre-ft (456 hm³).

REMARKS.--Reservoir is formed by compacted earthfill dam. Storage began Jan. 16, 1967. Total capacity 1,380,000 acre-ft (1,700 hm³) below elevation 1,182.0 ft (360.27 m). Crest of uncontrolled spillway is at elevation 1,173.6 ft (357.71 m). Storage capacity of 673,600 acre-ft (831 hm³) above elevation 1,144.4 ft (348.81 m) is provided for flood control. Storage capacity of 415,400 acre-ft (512 hm³) below elevation 1,144.4 ft (348.81 m) is provided for conservation and recreation. Figures given herein represent total contents.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Computed by Corps of Engineers in 1967 from topographic maps)

1,140	348,100	1,160	721,700
1,145	425,100	1,165	844,600
1,150	512,800	1,170	981,500
1,155	611,500	1,175	1,134,000

ELEVATION, IN FEET, AT 2400, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,157.93	1,163.00	1,146.69	1,145.01	1,146.24	1,144.48	1,142.08	1,145.32	1,145.56	1,145.87	1,144.33	1,143.37
2	1,158.62	1,162.50	1,146.63	1,144.86	1,146.04	1,144.48	1,142.01	1,145.33	1,145.48	1,145.83	1,144.25	1,143.32
3	1,159.08	1,162.00	1,146.74	1,144.70	1,145.78	1,144.53	1,142.22	1,145.30	1,145.41	1,145.93	1,144.13	1,143.26
4	1,159.31	1,161.30	1,146.80	1,144.58	1,145.65	1,144.55	1,142.17	1,145.28	1,145.40	1,145.90	1,144.05	1,143.23
5	1,159.21	1,160.60	1,146.81	1,144.47	1,145.66	1,144.55	1,142.29	1,145.26	1,145.49	1,145.86	1,143.99	1,143.20
6	1,158.82	1,160.16	1,146.76	1,144.35	1,145.33	1,144.57	1,142.41	1,145.23	1,145.65	1,145.84	1,143.96	1,143.22
7	1,158.41	1,159.53	1,146.66	1,144.35	1,145.00	1,144.57	1,142.65	1,145.25	1,145.62	1,145.79	1,143.89	1,143.23
8	1,157.92	1,158.66	1,146.63	1,144.40	1,144.74	1,144.62	1,142.70	1,145.27	1,145.70	1,145.73	1,143.84	1,143.24
9	1,157.37	1,157.82	1,146.59	1,144.44	1,144.59	1,144.72	1,142.78	1,145.33	1,145.72	1,145.74	1,143.87	1,143.24
10	1,157.73	1,156.91	1,146.51	1,144.45	1,144.48	1,144.77	1,142.96	1,145.38	1,145.64	1,145.67	1,143.86	1,143.21
11	1,160.63	1,156.00	1,146.48	1,144.44	1,144.40	1,144.85	1,143.12	1,145.40	1,145.70	1,145.64	1,143.79	1,143.20
12	1,163.42	1,155.03	1,146.55	1,144.44	1,144.41	1,144.87	1,143.29	1,145.39	1,145.67	1,145.61	1,143.76	1,143.15
13	1,165.68	1,154.11	1,146.38	1,144.43	1,144.41	1,144.76	1,143.50	1,145.48	1,145.75	1,145.59	1,143.70	1,143.07
14	1,168.05	1,153.06	1,146.40	1,144.45	1,144.43	1,144.47	1,143.55	1,145.44	1,145.87	1,145.57	1,143.64	1,142.99
15	1,169.36	1,151.99	1,146.29	1,144.46	1,144.42	1,144.19	1,143.72	1,145.38	1,145.97	1,145.52	1,143.59	1,142.94
16	1,169.83	1,150.88	1,146.00	1,144.46	1,144.38	1,143.87	1,143.83	1,145.45	1,146.05	1,145.45	1,143.58	1,142.93
17	1,170.02	1,149.86	1,145.82	1,144.50	1,144.37	1,143.54	1,143.97	1,145.40	1,146.11	1,145.37	1,143.63	1,142.88
18	1,169.98	1,148.82	1,145.68	1,144.55	1,144.35	1,143.24	1,144.13	1,145.47	1,146.15	1,145.30	1,143.62	1,142.87
19	1,169.91	1,147.92	1,145.38	1,144.64	1,144.30	1,142.90	1,144.22	1,145.41	1,146.25	1,145.26	1,143.60	1,142.88
20	1,169.53	1,147.31	1,145.07	1,144.84	1,144.36	1,142.59	1,144.58	1,145.57	1,146.26	1,145.20	1,143.58	1,142.86
21	1,169.05	1,147.11	1,144.89	1,145.09	1,144.56	1,142.18	1,144.85	1,145.96	1,146.34	1,145.14	1,143.57	1,142.82
22	1,168.60	1,147.16	1,144.86	1,145.42	1,144.38	1,142.06	1,144.96	1,146.10	1,146.34	1,145.07	1,143.56	1,142.78
23	1,168.05	1,147.24	1,144.84	1,145.69	1,144.47	1,142.06	1,144.97	1,146.19	1,146.34	1,144.99	1,143.52	1,142.73
24	1,167.61	1,147.19	1,145.02	1,145.94	1,144.42	1,142.00	1,144.93	1,146.15	1,146.34	1,144.91	1,143.50	1,142.72
25	1,167.10	1,147.13	1,145.27	1,146.16	1,144.38	1,142.05	1,144.98	1,146.09	1,146.35	1,144.87	1,143.45	1,142.68
26	1,166.58	1,147.11	1,145.48	1,146.51	1,144.39	1,142.08	1,144.97	1,145.95	1,146.34	1,144.80	1,143.43	1,142.63
27	1,166.04	1,146.94	1,145.48	1,146.90	1,144.43	1,142.15	1,145.01	1,145.77	1,146.28	1,144.71	1,143.42	1,142.58
28	1,165.48	1,146.84	1,145.54	1,147.08	1,144.46	1,142.25	1,145.03	1,145.70	1,146.17	1,144.65	1,143.35	1,142.43
29	1,164.93	1,146.80	1,145.41	1,146.86	-----	1,142.18	1,145.31	1,145.66	1,146.12	1,144.57	1,143.30	1,142.31
30	1,164.37	1,146.78	1,145.37	1,146.64	-----	1,142.16	1,145.32	1,145.65	1,146.04	1,144.49	1,143.25	1,142.16
31	1,163.74	-----	1,145.18	1,146.44	-----	1,142.17	-----	1,145.62	-----	1,144.40	1,143.34	-----
MEAN	1,164.27	1,152.93	1,145.94	1,145.15	1,144.74	1,143.50	1,143.75	1,145.55	1,145.94	1,145.33	1,143.69	1,142.94
MAX	1,170.02	1,163.00	1,146.81	1,147.08	1,146.24	1,144.87	1,145.32	1,146.19	1,146.35	1,145.93	1,144.33	1,143.37
MIN	1,157.37	1,146.78	1,144.84	1,144.35	1,144.30	1,142.00	1,142.01	1,145.23	1,145.40	1,144.40	1,143.25	1,142.16
(+)	812,300	455,100	428,100	449,300	416,300	380,300	430,400	435,400	442,500	415,400	398,400	380,100
(+)	+163,400	-357,200	-27,000	+21,200	-33,000	-36,000	+50,100	+5,000	+7,100	-27,100	-17,000	-18,300

CAL YR 1973 (#) +1,300

WTR YR 1974 (#) -268,800

+ CONTENTS, IN ACRE-FEET, AT END OF MONTH.

* CHANGE IN CONTENTS, IN ACRE-FEET.

KANSAS RIVER BASIN

06857100 REPUBLICAN RIVER BELOW MILFORD DAM, KS

LOCATION.--Lat 39°04'15", long 96°52'00", Geary County, at downstream side of bridge on U.S. Highway 77, 1.7 mi (2.7 km) below Milford Dam, 2.5 mi (4.0 km) northwest of Junction City, and at mile 6.0 (9.7 km).

DRAINAGE AREA.--24,890 mi² (64,470 km²), of which a large area is noncontributing.

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

GAGE.--Water-stage recorder. Datum of gage is 1,052.50 ft (320,802 m) above mean sea level (Corps of Engineers bench mark).

AVERAGE DISCHARGE.--11 years, 942 ft³/s (26.68 m³/s), 682,500 acre-ft/yr (842 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 12,600 ft³/s (357 m³/s) Nov. 14, 15, gage height, 18.63 ft (5.678 m); minimum daily, 24 ft³/s (0.68 m³/s) Apr. 6-10, June 5.

Period of record: Maximum discharge, 17,200 ft³/s (487 m³/s) June 22, 1964, gage height, 22.10 ft (6.736 m); minimum daily, 9.0 ft³/s (0.25 m³/s) Oct. 9, 1966.

REMARKS.--Records good. Flow completely regulated since 1967 by Milford Lake 1.7 mi (2.7 km) upstream (see sta 06857050). Records of chemical analyses for the water year 1974 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	80	9,220	2,460	2,070	4,790	1,320	1,390	1,470	1,030	858	758	534
2	77	9,160	2,430	2,060	4,750	1,310	1,100	1,410	1,030	495	744	526
3	77	9,040	2,410	2,050	4,740	1,300	835	1,300	1,020	495	744	525
4	74	8,960	2,410	2,060	3,500	1,290	716	1,310	810	495	744	332
5	3,410	8,220	2,390	2,060	2,060	1,280	177	1,300	24	495	749	184
6	7,310	7,650	2,360	2,050	4,740	1,280	24	1,300	303	495	750	184
7	7,290	9,150	2,350	1,110	4,710	1,290	24	1,200	1,010	495	750	185
8	7,230	10,900	2,330	482	4,170	1,290	24	888	1,020	495	747	182
9	7,800	10,900	2,320	610	3,100	1,270	24	888	1,010	500	750	182
10	7,190	10,900	2,300	840	3,080	1,270	24	954	1,010	500	747	336
11	2,400	10,800	2,280	846	2,740	1,270	40	1,050	1,010	500	745	500
12	178	10,900	2,270	846	2,220	1,260	72	1,040	1,010	495	748	500
13	150	10,900	2,240	845	2,200	2,030	72	1,040	481	495	748	500
14	130	11,300	2,230	830	2,190	3,850	72	1,430	36	500	744	500
15	124	11,600	2,790	822	2,180	3,800	72	1,530	31	583	744	500
16	113	11,100	3,060	804	2,170	3,740	72	1,040	27	684	751	497
17	1,940	11,000	3,020	799	2,170	3,710	72	1,040	27	684	769	377
18	4,900	10,900	2,990	798	2,150	3,670	72	1,030	27	684	769	169
19	4,890	9,640	2,960	798	1,880	3,670	72	1,030	42	684	768	168
20	7,700	7,180	2,980	792	1,630	3,730	72	1,030	83	681	657	166
21	9,210	4,540	2,420	798	1,610	3,700	72	1,030	122	684	522	166
22	9,150	3,440	1,680	836	1,600	2,600	380	1,030	186	678	524	166
23	9,030	3,400	1,640	870	1,590	1,130	1,280	1,030	186	716	525	215
24	8,950	3,360	1,620	858	1,580	1,110	1,320	1,290	186	774	520	330
25	8,840	3,330	1,620	844	1,580	992	1,060	1,860	186	774	520	336
26	8,960	3,310	1,770	834	1,490	858	1,060	1,860	186	774	526	338
27	9,250	3,290	2,100	825	1,330	858	1,060	1,850	480	774	520	712
28	9,180	2,900	2,100	2,400	1,320	1,040	1,050	1,450	954	774	520	954
29	9,190	2,500	2,090	4,850	-----	1,410	1,240	1,030	954	774	523	954
30	9,320	2,480	2,080	4,780	-----	1,400	1,480	1,030	954	774	525	954
31	9,290	-----	2,080	4,780	-----	1,400	-----	455	-----	769	531	-----
TOTAL	163,433	231,970	71,780	46,247	73,270	60,128	15,028	37,195	15,435	19,578	20,682	12,172
MEAN	5,272	7,372	2,315	1,492	2,617	1,940	501	1,200	515	632	667	406
MAX	9,320	11,600	3,060	4,850	4,790	3,850	1,480	1,860	1,030	858	769	954
MIN	74	2,480	1,620	482	1,320	858	24	455	24	495	520	166
AC-FT	324,200	460,100	142,400	91,730	145,300	119,300	29,810	73,780	30,620	38,830	41,020	24,140
CAL YR 1973	TOTAL 994,604	MEAN 2,725	MAX 11,600	MIN 20	AC-FT 1,973,000							
WTR YR 1974	TOTAL 766,918	MEAN 2,101	MAX 11,600	MIN 24	AC-FT 1,521,000							

KANSAS RIVER BASIN

27

06858500 NORTH FORK SMOKY HILL RIVER NEAR MCALLASTER, KS

LOCATION.--Lat 39°01'01", long 101°20'51", in NW¼ sec.17, T.12 S., R.36 W., Logan County, on left bank at downstream side of bridge on U.S. Highway 40, 3 mi (5 km) east of McAllaster.

DRAINAGE AREA.--670 mi² (1,740 km²), approximately, of which about 20 mi² (52 km²) is noncontributing.

PERIOD OF RECORD.--October 1946 to September 1953. Occasional low-flow measurements 1954-59 water years. July 1959 to current year. Monthly discharge only for some periods, published in WSP 1310.

GAGE.--Water-stage recorder. Datum of gage is 3,070.27 ft (935.818 m) above mean sea level. Jan. 12 to July 17, 1947, nonrecording gage and July 18, 1947, to Sept. 30, 1953, water-stage recorder, at site 2 mi (3 km) upstream at datum 15.75 ft (4.801 m) higher.

AVERAGE DISCHARGE.--22 years, 4.70 ft³/s (0.133 m³/s), 3,410 acre-ft/yr (4.20 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 72 ft³/s (2.04 m³/s) June 8, gage height, 6.08 ft (1.853 m); no flow for many days. Period of record: Maximum discharge, 21,700 ft³/s (615 m³/s) June 8, 1962, gage height, 10.40 ft (3.170 m) inside; 11.7 ft (3.57 m) from floodmarks, from rating curve extended above 350 ft³/s (9.91 m³/s) on basis of contracted-opening measurement of peak flow; no flow at times in most years. Maximum stage known, about 16 ft (4.9 m) former site and datum, date unknown, from information by local resident. Flood in 1930 reached a stage of 14.4 ft (4.39 m) datum at former site at railroad bridge 2 mi (3 km) upstream, from information by Union Pacific Railroad Company (discharge not determined).

REMARKS.--Records good.

REVISIONS (WATER YEARS).--WSP 1440: 1947(M), 1948.

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	.43	.71	.78	.51	0			
2				0	.51	.71	.78	.43	0			
3				0	.51	.71	.94	.43	0			
4				0	.51	.61	1.2	.43	0			
5				0	.51	.61	1.0	.43	0			
6				0	.40	.61	.94	.46	0			
7				0	.46	.61	1.3	.43	.01			
8				0	.48	.66	2.0	.38	13			
9				0	.51	.61	2.0	.34	30			
10				0	.54	.66	1.6	.29	8.2			
11				0	.57	.94	1.3	.27	4.0			
12				0	.61	1.0	1.3	.27	1.8			
13				0	.66	.94	1.5	.25	1.6			
14				0	.61	1.0	3.6	.22	1.0			
15				0	.57	.94	2.8	.23	.71			
16				0	.57	.85	1.8	.22	.61			
17				0	.57	.78	1.6	.22	.51			
18				0	.54	.78	1.4	.22	.48			
19				0	.54	.78	1.4	.22	.46			
20				.07	.57	.66	1.6	.15	.36			
21				.40	.57	.66	1.2	.09	.28			
22				.46	.54	.71	1.0	.05	.23			
23				.43	.50	.71	.85	.03	.22			
24				.43	.50	.78	.78	.16	.22			
25				.43	.54	.85	.71	.22	.19			
26				.46	.61	.85	.71	.19	.12			
27				.48	.66	.85	.71	.13	.02			
28				.48	.71	.85	.61	.03	0			
29				.46	-----	.78	.54	0	0			
30				.46	-----	.66	.54	0	0			
31		-----		.43	-----	.66	-----	0	-----			-----
TOTAL	0	0	0	4.99	15.30	23.53	38.49	7.30	64.02	0	0	0
MEAN	0	0	0	.16	.55	.76	1.28	.24	2.13	0	0	0
MAX	0	0	0	.48	.71	1.0	3.6	.51	30	0	0	0
MIN	0	0	0	0	.40	.61	.54	0	0	0	0	0
AC-FT	0	0	0	9.9	30	47	76	14	127	0	0	0

CAL YR 1973 TOTAL 362.05 MEAN .99 MAX 8.7 MIN 0 AC-FT 718
WTR YR 1974 TOTAL 153.63 MEAN .42 MAX 30 MIN 0 AC-FT 305

PEAK DISCHARGE (BASE, 300 CFS).-- NO PEAK ABOVE BASE.

06859500 LADDER CREEK BELOW CHALK CREEK NEAR SCOTT CITY, KS

LOCATION.--Lat 38°47'20", long 100°52'10", in SW¼SW¼ sec.34, T.14 S., R.32 W., Logan County, at downstream side of county highway bridge, 1.3 mi (2.1 km) upstream from mouth, 5.0 mi (8.0 km) downstream from Chalk Creek, and 23 mi (37 km) northeast of Scott City.

DRAINAGE AREA.--1,460 mi² (3,780 km²), approximately.

PERIOD OF RECORD.--April 1951 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,639.73 ft (804.590 m) above mean sea level. Prior to Oct. 17, 1951, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--23 years, 9.09 ft³/s (0.257 m³/s), 6,590 acre-ft/yr (8.13 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 210 ft³/s (5.95 m³/s) June 8, gage height, 3.64 ft (1.109 m); no flow for many days. Period of record: Maximum discharge, 28,000 ft³/s (793 m³/s) Aug. 23, 1969, gage height, 16.00 ft (4.877 m), from rating curve extended above 5,700 ft³/s (161 m³/s) on basis of slope-area measurement of peak flow; no flow at times in most years. Maximum stage known since at least 1900, 16.1 ft (4.91 m) Aug. 6, 1933, discharge, 30,000 ft³/s (850 m³/s), from rating curve extended above 5,700 ft³/s (161 m³/s) on basis of slope-area measurement at gage height 16.00 ft (4.877 m), augmented by failure of dam at Lake McBride, from information by local residents.

REMARKS.--Records good except those for winter periods, 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	4.0	.54	4.8	2.0	4.2	2.7	1.2	2.1	.60	.14	16	
2	3.0	.54	5.4	1.5	5.1	4.2	1.4	1.8	.51	.10	2.9	
3	2.1	.57	6.0	1.0	2.7	3.6	1.1	1.8	.48	.07	.39	
4	1.3	1.2	4.8	.50	2.4	4.2	1.1	1.8	.42	.06	.22	
5	1.1	1.2	3.0	.50	2.7	3.9	1.0	1.8	.36	.04	.12	
6	1.1	.87	2.5	.50	2.0	2.7	.96	1.5	.33	.02	.09	
7	1.3	2.1	2.5	.60	1.5	2.4	1.0	1.5	.36	.02	.07	
8	.69	1.2	3.0	.70	1.5	2.1	1.2	1.5	34	.01	.09	
9	.51	1.1	3.9	.80	2.0	2.7	1.1	1.4	14	.02	.51	
10	.78	1.4	2.4	.90	2.0	4.8	.99	1.3	12	.01	.26	
11	1.3	2.7	3.3	1.0	2.4	5.1	6.4	1.3	11	0	.14	
12	.96	1.2	4.2	1.0	2.4	4.8	4.4	1.3	8.4	0	.07	
13	1.1	1.1	2.4	1.5	2.4	5.1	3.6	1.2	6.6	0	.05	
14	1.1	1.2	2.4	2.0	2.4	5.1	3.0	1.0	4.0	0	.09	
15	.87	1.3	6.0	3.0	2.7	6.6	2.6	2.1	2.1	0	.12	
16	.87	1.1	2.4	4.0	2.1	4.2	3.6	1.2	1.2	0	.10	
17	.87	3.0	2.4	5.0	1.8	3.6	3.6	1.1	1.0	0	.06	
18	.78	2.1	3.0	5.0	2.4	4.2	6.8	1.4	1.0	0	.03	
19	.60	1.5	1.5	5.0	2.4	3.3	5.4	.87	.60	0	.01	
20	.57	1.0	1.0	5.0	1.5	3.0	3.7	.54	.45	0	0	
21	.57	1.0	2.0	5.0	3.3	2.8	8.8	.72	.39	0	0	
22	.87	1.0	3.0	4.0	1.2	2.4	5.1	2.4	.36	0	0	
23	.60	1.0	2.5	4.0	1.1	2.7	2.7	1.3	.30	0	0	
24	.51	1.5	1.5	4.0	1.5	2.7	1.5	.69	.30	.01	0	
25	.69	1.5	1.5	4.0	2.0	1.5	4.3	.78	.28	.01	0	
26	.60	1.5	2.0	4.0	2.7	3.6	6.8	.78	.24	0	0	
27	.57	2.0	3.0	3.0	3.0	2.7	3.9	.60	.20	0	0	
28	.57	3.0	4.0	3.0	3.0	2.1	4.2	.54	.18	0	0	
29	.51	4.0	5.0	3.0	-----	2.1	3.6	.54	.20	.01	0	
30	1.1	5.1	4.0	3.5	-----	1.2	2.4	.51	.18	0	0	
31	.96	-----	3.0	4.2	-----	1.2	-----	.54	-----	0	0	-----
TOTAL	32.45	48.52	98.4	83.20	66.4	103.3	97.45	37.91	102.04	.52	21.32	0
MEAN	1.05	1.62	3.17	2.68	2.37	3.33	3.25	1.22	3.40	.017	.69	0
MAX	4.0	5.1	6.0	5.0	5.1	6.6	8.8	2.4	34	.14	16	0
MIN	.51	.54	1.0	.50	1.1	1.2	.96	.51	.18	0	0	0
AC-FT	64	96	195	165	132	205	193	75	202	1.0	42	0

CAL YR 1973 TOTAL 1,026.86 MEAN 2.81 MAX 46 MIN 0 AC-FT 2,040
WTR YR 1974 TOTAL 691.51 MEAN 1.89 MAX 34 MIN 0 AC-FT 1,370

PEAK DISCHARGE (BASE, 250 CFS).--NO PEAK ABOVE BASE.

KANSAS RIVER BASIN

29

06860000 SMOKY HILL RIVER AT ELKADER, KS

LOCATION.--Lat 38°47'33", long 100°51'19", in NE¼SE¼ sec.34, T.14 S., R.32 W., Logan County, at downstream side of bridge on U.S. Highway 83 at Elkader, 0.1 mi (0.2 km) downstream from Ladder Creek, and at mile 409.9 (659.5 km).

DRAINAGE AREA.--3,555 mi² (9,207 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 2,624.62 ft (799.984 m) above mean sea level. Prior to Oct. 1, 1964, water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--35 years, 36.9 ft³/s (1.045 m³/s), 26,730 acre-ft/yr (33.0 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 537 ft³/s (15.2 m³/s) June 8, gage height, 3.13 ft (0.954 m); no flow for many days.
Period of record: Maximum discharge, 22,300 ft³/s (632 m³/s) Aug. 23, 1969, gage height, 8.85 ft (2.698 m); maximum gage height, 9.02 ft (2.794 m) June 17, 1955; no flow at times in most years.
Maximum stage known, 13.2 ft (4.02 m) May 30, 1938, from floodmark, discharge, 71,000 ft³/s (2,010 m³/s), on basis of slope-area measurement of peak flow.

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

REVISIONS (WATER YEARS).--WSP 1310: 1941(M), 1947(M), 1949(M). WSP 1510: 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	4.2	.87	2.8	1.5	3.6	3.0	2.2	2.0	1.0	.04	14	
2	2.9	.72	2.8	1.0	3.9	3.4	3.0	1.8	1.3	.06	1.9	
3	2.2	.91	3.2	.50	3.3	3.4	2.0	1.6	.89	.05	.10	
4	1.3	1.1	2.9	.50	3.2	3.0	1.5	1.9	.71	.03	.01	
5	.96	1.8	2.7	.50	3.2	3.5	1.5	1.9	.50	.02	.01	
6	.86	1.3	2.5	.50	2.5	2.8	1.5	1.9	.43	.02	.04	
7	1.6	1.9	2.5	.70	2.5	2.5	1.5	1.7	.42	.01	.06	
8	.91	1.7	2.5	.70	2.5	2.7	2.0	1.7	103	0	.11	
9	.64	1.4	2.6	.70	3.0	2.5	2.0	1.6	24	.01	.60	
10	.61	1.6	2.7	1.0	3.0	3.3	2.0	1.5	15	.01	.03	
11	1.7	2.3	2.5	1.0	3.3	3.7	5.0	1.3	13	0	.05	
12	1.1	2.0	2.6	1.0	3.3	3.6	3.5	1.4	8.1	0	.03	
13	.99	1.6	2.0	1.5	3.4	3.8	3.0	1.3	5.0	0	0	
14	1.1	1.7	2.1	2.0	3.3	3.8	2.5	1.2	3.6	0	.02	
15	.80	1.8	2.7	3.1	3.4	4.4	2.5	1.6	2.0	0	0	
16	.69	1.6	2.2	4.2	3.3	3.7	2.9	1.3	1.3	0	0	
17	.66	1.9	2.1	4.5	3.3	3.4	3.1	1.2	1.1	0	0	
18	.62	2.3	2.5	5.2	3.6	3.4	3.6	1.4	.98	0	0	
19	.61	2.0	1.5	6.0	3.8	3.3	4.7	1.4	.69	0	0	
20	.62	1.5	1.0	6.0	3.5	2.8	3.0	1.2	.49	0	0	
21	.62	1.5	1.5	5.7	3.5	3.0	5.0	.88	.45	0	0	
22	.76	1.5	2.5	5.0	3.0	2.8	3.6	1.9	.41	0	0	
23	.87	1.5	2.0	4.0	2.5	2.8	2.6	1.6	.31	0	0	
24	.59	1.5	1.5	4.0	2.5	2.8	2.3	1.4	.32	0	0	
25	.70	1.5	1.5	4.0	3.0	2.8	2.6	1.5	.25	0	0	
26	.75	2.0	1.5	4.0	3.2	3.4	4.1	1.8	.17	0	0	
27	.64	2.0	2.0	2.5	3.0	3.2	3.0	1.4	.15	0	0	
28	.67	2.5	2.5	2.5	2.9	3.0	2.5	.94	.15	0	0	
29	.56	3.0	3.3	3.0	-----	2.5	2.5	.72	.03	0	0	
30	.72	2.8	3.0	3.5	-----	2.4	2.1	.60	.12	0	0	
31	1.4	-----	2.5	3.7	-----	2.2	-----	.78	-----	0	0	-----
TOTAL	33.35	51.80	72.2	84.00	88.5	96.9	83.3	44.42	185.87	.25	16.96	0
MEAN	1.08	1.73	2.33	2.71	3.16	3.13	2.78	1.43	6.20	.008	.55	0
MAX	4.2	3.0	3.3	6.0	3.9	4.4	5.0	2.0	103	.06	14	0
MIN	.56	.72	1.0	.50	2.5	2.2	1.5	.60	.03	0	0	0
AC-FT	66	103	143	167	176	192	165	88	369	.5	34	0

CAL YR 1973 TOTAL 1,200.12 MEAN 3.29 MAX 56 MIN 0 AC-FT 2,380
WTR YR 1974 TOTAL 757.55 MEAN 2.08 MAX 103 MIN 0 AC-FT 1,500

PEAK DISCHARGE (BASE, 700 CFS).--NO PEAK ABOVE BASE.

KANSAS RIVER BASIN

06861000 SMOKY HILL RIVER NEAR ARNOLD, KS

LOCATION.--Lat 38°48'31", long 100°01'13", in SW 1/4 sec. 29, T.14 S., R.24 W., Trego County, on right bank near downstream side of highway bridge, 7.0 mi (11.3 km) upstream from headwaters of Cedar Bluff Reservoir, 12 mi (19.3 km) north of Arnold, and at mile 356.2 (573.1 km).

DRAINAGE AREA.--5,220 mi² (13,520 km²), approximately.

PERIOD OF RECORD.--February 1950 to current year. Prior to October 1950, published as "near Ransom".

GAGE.--Water-stage recorder. Datum of gage is 2,196.13 ft (669.380 m) above mean sea level. See WSP 1919 for history of changes prior to Sept. 30, 1961.

AVERAGE DISCHARGE.--24 years, 73.9 ft³/s (2.093 m³/s), 53,540 acre-ft/yr (66.0 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 475 ft³/s (13.5 m³/s) June 9, gage height, 3.81 ft (1.161 m); no flow at times.

Period of record: Maximum discharge, 23,800 ft³/s (674 m³/s) June 11, 1951, gage height, 12.57 ft (3.831 m), site and datum then in use; no flow at times in most years.

Flood of May 30, 1938 reached a stage of about 19 ft (5.8 m), present site and datum, from information by local resident.

REMARKS.--Records good, except those for winter periods, 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	24	6.7	9.0	5.0	17	9.4	7.8	4.5	1.3	0	0	.30
2	19	6.5	8.3	5.0	17	9.4	7.6	4.3	1.2	0	0	.22
3	15	6.4	8.0	4.0	16	8.9	8.1	4.2	1.3	0	0	.30
4	12	6.4	7.0	3.0	16	8.6	9.4	4.0	1.9	0	0	.22
5	9.5	6.4	6.0	2.0	16	8.6	8.6	4.0	8.3	0	0	.18
6	8.3	6.8	6.0	2.0	14	8.8	8.2	3.9	6.7	0	0	.23
7	7.5	8.2	9.0	2.0	12	9.4	8.4	3.8	4.1	0	0	.30
8	6.4	8.6	13	3.0	14	9.4	8.3	3.8	6.7	.15	0	.30
9	6.0	8.1	13	3.0	15	10	6.8	3.8	281	.25	0	.29
10	6.2	7.8	10	4.0	16	18	6.7	3.7	74	.82	0	.30
11	21	7.8	11	4.0	15	20	6.9	4.2	50	3.3	0	.42
12	30	7.8	11	4.0	16	20	6.6	3.7	34	2.2	0	.59
13	18	7.8	9.7	5.0	16	17	8.5	3.5	24	.90	.01	.45
14	13	7.8	9.1	6.0	16	17	14	3.4	18	.41	5.5	.29
15	11	7.8	7.9	7.0	16	16	10	3.0	14	.60	3.6	.15
16	9.0	7.1	7.0	11	15	15	8.8	2.8	10	8.9	1.2	.15
17	7.3	6.7	7.6	16	15	14	7.8	2.8	7.0	1.7	.66	.15
18	6.9	6.7	7.4	25	15	14	7.8	2.8	6.1	.84	.58	0
19	6.7	6.0	5.0	31	15	14	7.6	2.3	4.6	.37	.22	.05
20	6.6	5.0	4.0	34	15	13	7.2	2.0	3.5	.08	0	.54
21	6.7	5.0	5.0	32	15	13	6.7	2.0	2.5	0	0	.20
22	6.7	6.0	6.0	28	15	13	6.4	1.9	1.8	0	0	.07
23	6.6	7.0	5.0	23	14	15	6.0	1.8	1.4	0	0	0
24	6.4	7.0	4.0	23	13	13	5.5	1.8	1.2	.03	0	0
25	6.1	9.0	5.0	21	13	11	5.2	2.4	.90	.08	0	0
26	6.7	11	6.0	21	13	10	5.1	2.0	.75	0	0	0
27	7.5	12	8.0	21	12	9.4	4.8	1.5	.45	0	.05	.09
28	6.6	11	9.8	19	9.7	9.4	4.9	1.4	.18	0	.15	.20
29	6.4	11	11	19	-----	8.9	4.9	1.4	0	0	.15	.30
30	6.4	9.9	9.0	19	-----	7.5	4.7	1.4	0	0	.30	.30
31	6.4	-----	7.0	17	-----	7.1	-----	1.4	-----	0	.30	-----
TOTAL	315.9	231.3	244.8	419.0	411.7	377.8	219.3	89.5	566.88	20.63	12.72	6.59
MEAN	10.2	7.71	7.90	13.5	14.7	12.2	7.31	2.89	18.9	.67	.41	.22
MAX	30	12	13	34	17	20	14	4.5	281	8.9	5.5	.59
MIN	6.0	5.0	4.0	2.0	9.7	7.1	4.7	1.4	0	0	0	0
AC-FT	627	459	486	831	817	749	435	178	1,120	41	25	13

CAL YR 1973 TOTAL 11,817.30 MEAN 32.4 MAX 3,260 MIN 1.2 AC-FT 23,440
WTR YR 1974 TOTAL 2,916.12 MEAN 7.99 MAX 281 MIN 0 AC-FT 5,780

PEAK DISCHARGE (BASE, 1,800 CFS).--NO PEAK ABOVE BASE.

06861500 CEDAR BLUFF RESERVOIR NEAR ELLIS, KS

LOCATION.--Lat 38°47'24", long 99°43'13", in NE¼SW¼ sec.36, T.14 S., R.22 W., Trego County, in control house structure of outlet works conduit at dam on Smoky Hill River, 18 mi (29 km) southwest of Ellis, and at mile 333.7 (536.9 km).

DRAINAGE AREA.--5,530 mi² (14,300 km²), approximately.

PERIOD OF RECORD.--November 1950 to current year (monthly records only prior to August 1960).

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (levels by Bureau of Reclamation). Prior to Aug. 20, 1960, non-recording mercury-column gage at same site and datum.

EXTREMES.--Current year: Maximum elevation, 2,136.85 ft (651.312 m) Apr. 20, contents, 140,100 acre-ft (173 hm³); minimum, 2,131.33 ft (649.629 m) Sept. 30, contents, 111,500 acre-ft (137 hm³).

Period of record: Maximum elevation, 2,154.90 ft (656.814 m) July 2, 1951, July 4, 5, 1957, contents, 269,400 acre-ft (332 hm³); minimum elevation since irrigation pool was first filled, 2,127.35 ft (648.416 m) Mar. 26-30, 1955, contents, 93,960 acre-ft (116 hm³).

REMARKS.--Reservoir is formed by compacted earthfill dam; storage began Nov. 13, 1950; dam was completed in 1951. Total capacity, 870,400 acre-ft (1,070 hm³), consisting of the following: Dead storage, 8,260 acre-ft (10.2 hm³) below elevation 2,090 ft (637.0 m), sill of trashrack structure; irrigation pool, 176,800 acre-ft (218 hm³) between elevations 2,090 ft (637.0 m) and 2,144 ft (653.5 m); flood control pool, 191,900 acre-ft (237 hm³) between elevations 2,144 ft (653.5 m) and 2,166 ft (660.2 m), crest of uncontrolled spillway; and uncontrolled storage, 493,400 acre-ft (608 hm³) between elevations 2,166 ft (660.2 m) and 2,200 ft (670.6 m). Reservoir is used to store water for flood control, irrigation of 6,600 acres (26.7 km²), and recreation. Figures given herein represent total contents.

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

2,131	110,000	2,135	129,900
2,133	119,600	2,137	141,000

ELEVATION, IN FEET, AT 2400, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2,135.37	2,135.36	A	2,135.84	2,136.31	2,136.53	2,136.74	2,136.70	2,136.23	2,135.60	2,133.37	2,132.00
2	2,135.42	2,135.31		2,135.86	2,136.33	2,136.54	2,136.74	2,136.71	2,136.21	2,135.49	2,133.29	2,131.99
3	2,135.37	2,135.26		2,135.87	2,136.33	2,136.54	2,136.69	2,136.74	2,136.21	2,135.41	2,133.20	2,131.97
4	2,135.37	2,135.25		2,135.87	2,136.34	2,136.52	2,136.70	2,136.73	2,136.20	2,135.30	2,133.13	2,131.92
5	2,135.35	2,135.25		2,135.88	2,136.33	2,136.51	2,136.72	2,136.73	2,136.23	2,135.20	2,133.07	2,131.88
6	2,135.39	2,135.40		2,135.89	2,136.32	2,136.52	2,136.75	2,136.73	2,136.21	2,135.10	2,133.02	2,131.85
7	2,135.41	2,135.40		2,135.89	2,136.32	2,136.52	2,136.74	2,136.72	2,136.18	2,135.00	2,132.98	2,131.83
8	2,135.44	2,135.39		2,135.90	2,136.35	2,136.56	2,136.74	2,136.73	2,136.26	2,134.90	2,132.95	2,131.82
9	2,135.44	2,135.38		2,135.89	2,136.36	2,136.52	2,136.75	2,136.72	2,136.27	2,134.80	2,132.92	2,131.79
10	2,135.38	2,135.40		2,135.90	2,136.39	2,136.57	2,136.75	2,136.73	2,136.34	2,134.70	2,132.90	2,131.76
11	2,135.40	2,135.41		2,135.89	2,136.41	2,136.61	2,136.78	2,136.68	2,136.35	2,134.60	2,132.85	2,131.71
12	2,135.41	2,135.42	A	2,135.91	2,136.42	2,136.60	2,136.75	2,136.65	2,136.37	2,134.50	2,132.83	2,131.66
13	2,135.45	2,135.43	2,135.71	2,135.94	2,136.43	2,136.61	2,136.75	2,136.66	2,136.38	2,134.50	2,132.79	2,131.62
14	2,135.47	2,135.44	2,135.71	2,135.95	2,136.40	2,136.67	2,136.75	2,136.59	2,136.36	2,134.40	2,132.73	2,131.62
15	2,135.48	2,135.43	2,135.70	2,135.97	2,136.43	2,136.65	2,136.75	2,136.55	2,136.36	2,134.40	2,132.71	2,131.61
16	2,135.44	2,135.41	2,135.71	2,135.97	2,136.45	2,136.65	2,136.73	2,136.53	2,136.36	2,134.40	2,132.68	2,131.61
17	2,135.47	2,135.42	2,135.72	2,135.99	2,136.47	2,136.67	2,136.76	2,136.52	2,136.35	2,134.30	2,132.64	2,131.61
18	2,135.51	2,135.41	2,135.72	2,136.01	2,136.46	2,136.70	2,136.77	2,136.52	2,136.37	2,134.20	2,132.58	2,131.59
19	2,135.52	2,135.46	2,135.70	2,136.05	2,136.48	2,136.70	2,136.80	2,136.51	2,136.36	2,134.20	2,132.57	2,131.58
20	2,135.50	2,135.49	2,135.70	2,136.08	2,136.49	2,136.63	2,136.83	2,136.48	2,136.32	2,134.10	2,132.49	2,131.55
21	2,135.51	2,135.49	2,135.72	2,136.10	2,136.43	2,136.67	2,136.83	2,136.43	2,136.30	2,134.10	2,132.43	2,131.53
22	2,135.50	2,135.50	2,135.72	2,136.13	2,136.43	2,136.62	2,136.81	2,136.41	2,136.20	2,134.12	2,132.40	2,131.52
23	2,135.50	2,135.51	2,135.73	2,136.16	2,136.41	2,136.63	2,136.80	2,136.42	2,136.13	2,134.04	2,132.40	2,131.45
24	2,135.48	2,135.52	2,135.78	2,136.18	2,136.42	2,136.64	2,136.81	2,136.44	2,136.10	2,133.97	2,132.38	2,131.43
25	2,135.43	2,135.50	2,135.79	2,136.20	2,136.45	2,136.70	2,136.82	2,136.42	2,136.02	2,133.92	2,132.35	2,131.43
26	2,135.39	2,135.47	2,135.80	2,136.23	2,136.49	2,136.70	2,136.82	2,136.41	2,135.93	2,133.86	2,132.31	2,131.44
27	2,135.38	A	2,135.80	2,136.23	2,136.50	2,136.73	2,136.82	2,136.40	2,135.86	2,133.75	2,132.26	2,131.42
28	2,135.35		2,135.81	2,136.25	2,136.50	2,136.75	2,136.82	2,136.38	2,135.80	2,133.68	2,132.23	2,131.37
29	2,135.35		2,135.81	2,136.28	-----	2,136.75	2,136.78	2,136.37	2,135.77	2,133.60	2,132.18	2,131.35
30	2,135.35	A	2,135.82	2,136.30	-----	2,136.73	2,136.78	2,136.32	2,135.67	2,133.52	2,132.15	2,131.33
31	2,135.35	-----	2,135.83	2,136.28	-----	2,136.76	-----	2,136.26	-----	2,133.45	2,132.06	-----
MEAN	2,135.43			2,136.03	2,136.41	2,136.63	2,136.77	2,136.55	2,136.19	2,134.42	2,132.67	2,131.64
MAX	2,135.52	2,135.52	2,135.83	2,136.30	2,136.50	2,136.76	2,136.83	2,136.74	2,136.38	2,135.60	2,133.37	2,132.00
MIN	2,135.35	2,135.25	2,135.70	2,135.84	2,136.31	2,136.51	2,136.69	2,136.26	2,135.67	2,133.45	2,132.06	2,131.33
(+)	131,800	132,600	134,400	136,900	138,200	139,600	139,700	136,800	133,600	121,900	115,000	111,500
(+)	+100	+800	+1,800	+2,500	+1,300	+1,400	+100	-2,900	-3,200	-11,700	-6,900	-3,500

CAL YR 1973 (+) +27,410

WTR YR 1974 (+) -20,200

+ CONTENTS, IN ACRE-FEET, AT END OF MONTH.

* CHANGE IN CONTENTS, IN ACRE-FEET.

A NO GAGE-HEIGHT RECORD.

KANSAS RIVER BASIN

06862000 SMOKY HILL RIVER AT CEDAR BLUFF DAM, KS

LOCATION.--Lat 38°47'30", long 99°43'20", in NW¼NE¼ sec.1, T.15 S., R.22 W., Trego County, on right bank 0.2 mi (0.3 km) downstream from Cedar Bluff Dam, 14 mi (23 km) southwest of Ellis, and at mile 333.4 (536.4 km).

DRAINAGE AREA.--5,530 mi² (14,320 km²), approximately.

PERIOD OF RECORD.--February 1952 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 2,059.14 ft (627.626 m) above mean sea level (levels by Bureau of Reclamation).

AVERAGE DISCHARGE.--22 years, 36.0 ft³/s (1.020 m³/s), 26,080 acre-ft/yr (32.2 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 12 ft³/s (0.34 m³/s) May 13, 14, gage height, 1.53 ft (0.466 m); no flow, Apr. 18, 19, Apr. 22 to May 9.

Period of record: Maximum discharge, 2,010 ft³/s (56.9 m³/s) July 5, 1957, gage height, 4.89 ft (1.490 m); no flow at times in most years.

REMARKS.--Records fair. Flow completely regulated by Cedar Bluff Reservoir (see sta 06861500). Prior to Nov. 21, 1962, fish hatchery effluent was included in gaged flow. Records of chemical analyses for the water year 1974 are published in Part 2 of this report.

REVISIONS.--WSP 1510: 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	1.4	1.2	.57	.57	.41	.48	.22	0	.43	.33	.39	.51
2	1.3	.91	.57	.57	.43	.48	.19	0	.41	.31	.43	.60
3	1.2	.79	.63	.51	.43	.45	.24	0	.43	.25	.43	.60
4	1.2	.69	.75	.48	.41	.41	.27	0	.66	.25	.43	.57
5	1.2	.72	.75	.48	.41	.41	.27	0	.79	.25	.43	.54
6	1.2	.69	.66	.48	.48	.39	.25	0	.87	.24	.48	.51
7	1.2	.69	.63	.48	.48	.39	.24	0	.75	.22	.48	.48
8	1.1	.69	.60	.45	.48	.41	.24	0	1.0	.20	.45	.45
9	1.1	.66	.63	.43	.45	.45	.18	0	1.2	.22	.57	.45
10	1.2	.63	.60	.41	.43	.66	.10	.18	.87	.35	.54	.45
11	2.1	.63	.60	.39	.43	.75	.08	7.2	.91	.31	.48	.45
12	1.4	.63	.63	.39	.41	.69	.06	8.9	.79	.27	.45	.51
13	1.2	.60	.60	.39	.43	.63	.04	11	.72	.25	.43	.57
14	1.1	.60	.57	.41	.43	.57	.07	12	.69	.24	.48	.63
15	1.1	.60	.57	.48	.43	.57	.07	11	.63	.22	.48	.54
16	1.0	.60	.57	.48	.43	.57	.06	10	.63	.29	.48	.51
17	1.0	.60	.57	.51	.43	.54	.02	10	.63	.25	.43	.48
18	1.0	.60	.54	.54	.48	.54	0	9.7	.63	.24	.43	.43
19	1.0	.69	.57	.51	.48	.51	0	8.9	.63	.22	.45	.39
20	1.0	1.0	.51	.51	.48	.45	.02	6.6	.57	.20	.41	.35
21	1.1	.91	.51	.51	.54	.41	.01	1.5	.51	.22	.39	.35
22	1.1	.79	.51	.51	.48	.37	0	.99	.51	.22	.43	.35
23	1.0	.72	.51	.45	.45	.37	0	.99	.48	.25	.54	.35
24	1.0	.72	.63	.43	.48	.35	0	.91	.51	.29	.75	.35
25	1.0	.63	.66	.43	.45	.35	0	.87	.54	.35	.60	.33
26	1.0	.63	.63	.43	.45	.33	0	.75	.51	.35	.54	.31
27	1.1	.63	.57	.43	.48	.29	0	.60	.48	.29	.54	.29
28	1.1	.57	.57	.43	.48	.29	0	.51	.41	.27	.57	.29
29	1.1	.57	.57	.43	-----	.29	0	.43	.41	.33	.57	.29
30	1.1	.57	.60	.43	-----	.27	0	.43	.35	.37	.57	.25
31	1.1	-----	.60	.43	-----	.24	-----	.43	-----	.37	.48	-----
TOTAL	35.7	20.96	18.48	14.38	12.65	13.91	2.63	103.89	18.95	8.42	15.13	13.18
MEAN	1.15	.70	.60	.46	.45	.45	.088	3.35	.63	.27	.49	.44
MAX	2.1	1.2	.75	.57	.54	.75	.27	12	1.2	.37	.75	.63
MIN	1.0	.57	.51	.39	.41	.24	0	0	.35	.20	.39	.25
AC-FT	71	42	37	29	25	28	5.2	206	38	17	30	26

CAL YR 1973 TOTAL 359.63 MEAN .99 MAX 7.7 MIN .34 AC-FT 713
WTR YR 1974 TOTAL 278.28 MEAN .76 MAX 12 MIN 0 AC-FT 552

KANSAS RIVER BASIN

33

06862700 SMOKY HILL RIVER NEAR SCHOENCHEN, KS

LOCATION.--Lat 38°43'30", long 99°23'30", in NW¼NW¼ sec.25, T.15 S., R.19 W., Ellis County, on left bank, 3.0 mi (4.8 km) northwest of Schoenchen, and at mile 312.3 (502.5 km).

DRAINAGE AREA.--5,750 mi² (14,890 km²).

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

GAGE.--Water-stage recorder. Altitude of gage is 1,940 ft (591.3 m), from topographic map.

AVERAGE DISCHARGE.--10 years, 34.7 ft³/s (0.983 m³/s), 25,140 acre-ft/yr (31.0 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 1,430 ft³/s (40.5 m³/s) Oct. 11, gage height, 7.41 ft (2.259 m); minimum daily, 16 ft³/s (0.45 m³/s) Sept. 23-30, may have been lower during periods of missing record.

Period of record: Maximum discharge, 20,400 ft³/s (578 m³/s) June 14, 1970, gage height, 16.17 ft (4.929 m); minimum daily, 1.5 ft³/s (0.042 m³/s) Jan. 16-20, 1971.

REMARKS.--Records poor. Flow mostly regulated by Cedar Bluff Reservoir 21.4 mi (34.4 km) upstream (see sta 06861500). Records of chemical analyses for the water year 1974 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	41	33	32	35	47	30	31	32	25	19	17	18
2	38	33	32	33	46	29	30	31	25	19	17	18
3	35	32	32	32	45	28	31	30	25	19	17	18
4	33	32	41	32	44	28	33	29	30	19	17	18
5	32	32	38	32	43	27	33	28	28	18	17	18
6	32	32	36	32	42	27	32	28	34	18	18	18
7	31	32	33	32	40	27	32	27	31	18	19	18
8	31	32	38	32	40	27	31	27	41	18	19	18
9	30	32	59	32	39	28	30	26	157	18	21	18
10	33	32	46	32	39	34	30	26	61	285	22	18
11	764	32	46	32	39	50	30	27	92	77	21	18
12	268	32	46	32	39	44	29	26	70	32	21	18
13	101	32	49	32	38	41	30	26	41	26	21	18
14	68	32	46	35	37	39	30	27	34	20	20	18
15	56	32	42	35	36	38	30	28	30	19	20	19
16	49	32	41	40	36	36	30	33	28	18	20	18
17	45	31	40	45	36	36	29	34	26	18	20	18
18	44	31	39	55	34	34	28	34	25	18	20	17
19	41	34	38	80	34	34	28	30	24	18	20	17
20	40	42	39	110	32	34	66	29	24	18	20	17
21	39	39	39	181	32	34	49	28	23	18	19	17
22	38	39	39	111	31	34	41	27	22	18	19	17
23	36	39	39	76	30	34	40	34	21	18	19	16
24	36	37	38	65	29	34	38	32	21	18	19	16
25	35	36	39	63	30	34	37	32	21	18	19	16
26	34	35	38	64	30	33	36	30	20	17	19	16
27	34	34	38	60	30	34	34	28	20	17	19	16
28	34	34	38	55	30	34	34	26	20	17	19	16
29	34	32	38	54	-----	33	34	25	20	17	18	16
30	33	32	38	51	-----	32	32	25	19	17	18	16
31	34	-----	36	49	-----	32	-----	25	-----	17	18	-----
TOTAL	2,199	1,009	1,233	1,649	1,028	1,039	1,018	890	1,058	907	593	520
MEAN	70.9	33.6	39.8	53.2	36.7	33.5	33.9	28.7	35.3	29.3	19.1	17.3
MAX	764	42	59	181	47	50	66	34	157	285	22	19
MIN	30	31	32	32	29	27	28	25	19	17	17	16
AC-FT	4,360	2,000	2,450	3,270	2,040	2,060	2,020	1,770	2,100	1,800	1,180	1,030

CAL YR 1973 TOTAL 20,647 MEAN 56.6 MAX 1,770 MIN 13 AC-FT 40,950
WTR YR 1974 TOTAL 13,143 MEAN 36.0 MAX 764 MIN 16 AC-FT 26,070

PEAK DISCHARGE (REGULATED) ABOVE 400 CFS

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
10-11	1300	7.41	1,430	07-10	1300	6.30	700

KANSAS RIVER BASIN

06863500 BIG CREEK NEAR HAYS, KS

LOCATION.--Lat 38°48'45", long 99°15'14", in NW¼NW¼ sec.30, T.14 S., R.17 W., Ellis County, at downstream side of county highway bridge, 0.6 mi (1.0 km) east of Munjor, 6.0 mi (9.7 km) southeast of Hays, and at mile 31.7 (51.0 km).

DRAINAGE AREA.--542 mi² (1,400 km²).

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

GAGE.--Water-stage recorder. Altitude of gage is 1,915 ft (583.7 m), from topographic map. Prior to November 20, 1947, nonrecording gage, and Nov. 20, 1947, to Aug. 22, 1965, water-stage recorder and concrete control at site 12.5 mi (20.1 km) upstream at datum 1,955.13 ft (595.924 m) above mean sea level.

AVERAGE DISCHARGE.--28 years, 41.9 ft³/s (1.187 m³/s), 30,360 acre-ft/yr (37.4 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 1,340 ft³/s (37.9 m³/s) Oct. 11, gage height, 14.65 ft (4.465 m); minimum, 3.7 ft³/s (0.105 m³/s) Aug. 4.

Period of record: Maximum discharge, 22,400 ft³/s (634 m³/s) June 17, 1957, gage height, 22.07 ft (6.727 m), site and datum then in use; no flow at times in some years.

Maximum stage known since at least 1908, that of June 17, 1957, from engineering report by Servis, Van Doren and Hazard Engineers.

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

REVISIONS (WATER YEARS).--WSP 1340: 1947-48(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	67	26	30	30	46	34	31	26	14	8.8	4.0	7.0
2	43	26	30	30	44	33	31	26	13	7.9	4.1	6.8
3	35	25	30	31	44	34	31	25	13	7.5	4.1	6.8
4	30	26	39	31	41	33	33	24	28	7.0	3.7	7.2
5	27	25	34	32	42	32	34	24	17	6.3	4.8	7.5
6	25	26	33	32	42	32	33	23	20	6.3	6.0	7.5
7	24	27	33	33	40	32	34	23	17	6.6	5.1	7.5
8	22	27	35	34	40	32	34	23	19	6.0	4.9	7.5
9	21	27	39	35	40	32	33	23	58	5.8	4.58	7.2
10	29	27	39	37	39	42	32	23	96	33	52	8.8
11	700	28	39	40	39	50	32	26	58	40	21	6.8
12	304	28	39	43	40	51	32	22	47	15	12	6.5
13	110	29	44	45	39	47	33	21	53	9.8	9.9	7.2
14	64	30	45	47	39	43	34	20	43	7.7	15	7.0
15	48	29	41	50	37	40	36	19	47	10	11	7.0
16	42	27	38	55	37	38	37	18	36	7.7	8.5	7.2
17	37	27	35	60	36	36	35	18	29	6.4	7.5	7.8
18	34	28	35	65	36	36	34	19	27	6.7	7.5	7.5
19	34	32	34	70	36	36	33	18	24	6.1	7.2	7.2
20	33	52	34	100	36	35	44	18	21	5.6	7.0	7.0
21	31	44	35	180	36	35	62	18	19	5.1	7.0	7.0
22	29	46	38	150	34	34	42	17	17	5.1	7.2	7.0
23	28	40	40	100	33	34	36	26	14	5.3	7.2	6.5
24	26	38	34	90	32	35	33	22	12	5.5	7.2	7.2
25	27	37	34	80	33	34	30	18	12	7.1	7.5	9.3
26	28	36	33	75	33	35	29	19	12	7.6	7.5	7.5
27	30	35	33	65	35	34	28	17	11	6.0	7.5	6.8
28	26	33	32	61	35	34	27	17	11	5.5	7.8	6.8
29	25	31	32	54	-----	33	27	18	11	5.3	7.8	6.8
30	26	31	31	49	-----	33	26	16	10	5.1	7.5	6.3
31	26	-----	31	47	-----	33	-----	16	-----	4.3	7.2	-----
TOTAL	2,031	943	1,099	1,851	1,064	1,122	1,016	643	809	272.1	734.7	216.2
MEAN	65.5	31.4	35.5	59.7	38.0	36.2	33.9	20.7	27.0	8.78	23.7	7.21
MAX	700	52	45	180	46	51	62	26	96	40	458	9.3
MIN	21	25	30	30	32	32	26	16	10	4.3	3.7	6.3
AC-FT	4,030	1,870	2,180	3,670	2,110	2,230	2,020	1,280	1,600	540	1,460	429

CAL YR 1973 TOTAL 20,142.1 MEAN 55.2 MAX 1,590 MIN 2.2 AC-FT 39,950
WTR YR 1974 TOTAL 11,801.0 MEAN 32.3 MAX 700 MIN 3.7 AC-FT 23,410

PEAK DISCHARGE (BASE, 700 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
10-11	1400	14.65	1,340	08-09	1100	12.89	916

KANSAS RIVER BASIN

35

06863900 NORTH FORK BIG CREEK NEAR VICTORIA, KS

LOCATION.--Lat 38°53'12", long 99°12'21", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.27, T.13 S., R.17 W., Ellis County, at downstream side of highway bridge, 3.5 mi (5.6 km) northwest of Victoria, and about 18 mi (29 km) upstream from mouth.

DRAINAGE AREA.--54 mi² (140 km²), approximately.

PERIOD OF RECORD.--April 1962 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,940 ft (591 m), from topographic map.

AVERAGE DISCHARGE.--12 years, 5.45 ft³/s (0.154 m³/s), 3,950 acre-ft/yr (4.87 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 26,400 ft³/s (748 m³/s) Aug. 9, gage height, 21.34 ft (6.504 m); no flow many days.
Period of record: Maximum discharge, 26,400 ft³/s (748 m³/s) Aug. 9, 1974, gage height, 21.34 ft (6.504 m); no flow at times in most years.

REMARKS.--Records good except those for winter periods, 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	37	7.4	6.6	5.0	17	8.2	6.2	3.2	.37	.06	0	
2	32	7.2	6.6	5.0	17	8.0	6.4	3.4	.37	0	0	
3	11	6.8	7.2	5.0	16	8.6	6.4	3.2	.37	0	0	
4	8.0	6.6	8.0	5.0	14	8.0	6.6	3.2	.58	0	0	
5	6.8	6.4	8.0	5.0	14	7.4	7.2	3.3	.79	0	0	
6	6.2	6.4	7.5	5.5	12	6.8	8.8	3.2	.86	0	0	
7	5.6	6.6	7.5	6.0	11	6.8	8.8	3.0	1.0	0	0	
8	5.4	6.8	8.0	6.5	12	7.0	8.0	2.8	1.6	0	319	
9	5.0	6.4	9.0	7.0	13	7.2	7.4	2.6	2.4	.06	4,380	
10	6.0	6.2	10	7.5	13	8.8	6.6	3.2	2.5	.15	74	
11	650	6.2	12	8.0	12	14	7.6	3.4	3.4	.03	17	
12	308	6.2	13	8.5	12	16	7.8	2.6	2.6	0	5.0	
13	56	6.4	16	10	12	12	7.6	2.4	2.0	0	3.1	
14	29	6.4	15	12	11	11	7.4	2.0	1.4	0	4.0	
15	20	6.4	11	14	11	10	9.1	1.8	1.0	0	3.2	
16	16	6.2	10	16	10	9.1	8.2	1.6	.93	.06	1.9	
17	14	5.6	9.0	20	10	8.2	7.0	1.6	.79	0	1.5	
18	13	5.4	8.0	22	10	8.0	6.6	1.8	.58	0	1.3	
19	12	8.4	7.5	25	10	7.6	5.8	1.6	.24	0	1.2	
20	11	26	7.2	28	9.8	7.8	5.6	1.7	.21	0	1.0	
21	11	20	7.0	32	9.1	7.4	7.4	1.4	.18	0	.80	
22	9.8	15	7.5	36	8.0	7.2	9.6	1.0	.12	0	.60	
23	9.3	12	8.0	38	7.4	7.2	6.8	1.0	.09	0	.50	
24	8.2	11	8.5	39	7.2	7.2	5.2	1.2	.18	0	.40	
25	7.6	10	8.0	40	7.8	7.4	4.5	1.0	.18	0	.30	
26	7.4	9.3	7.5	38	8.4	7.6	4.2	1.1	.15	0	.25	
27	7.2	8.8	7.0	34	8.8	7.2	3.9	.93	.09	0	.15	
28	7.4	8.0	7.0	26	8.6	7.2	3.6	.86	.09	0	.10	
29	7.4	7.2	7.0	22	-----	6.8	3.3	.72	.09	0	.04	
30	7.4	6.8	6.5	21	-----	6.2	3.0	.65	.09	0	.02	
31	7.4	-----	6.0	19	-----	6.2	-----	.44	-----	0	.01	-----
TOTAL	1,342.1	258.1	267.1	566.0	312.1	258.1	196.6	61.90	25.25	.36	4,815.37	0
MEAN	43.3	8.60	8.62	18.3	11.1	8.33	6.55	2.00	.84	.012	155	0
MAX	650	26	16	40	17	16	9.6	3.4	3.4	.15	4,380	0
MIN	5.0	5.4	6.0	5.0	7.2	6.2	3.0	.44	.09	0	0	0
AC-FT	2,660	512	530	1,120	619	512	390	123	50	.7	9,550	0

CAL YR 1973 TOTAL 6,561.48 MEAN 18.0 MAX 749 MIN 0 AC-FT 13,010
WTR YR 1974 TOTAL 8,102.98 MEAN 22.2 MAX 4,380 MIN 0 AC-FT 16,070

PEAK DISCHARGE (BASE, 100 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
10-11	1600	11.38	1,130	08-09	0100	21.34	26,400

KANSAS RIVER BASIN

06864000 SMOKY HILL RIVER NEAR RUSSELL, KS

LOCATION.--Lat 38°46'36", long 98°51'16", in NW¼NW¼SW¼ sec.2, T.15 S., R.14 W., Russell County, at upstream side of bridge on U.S. Highway 281, 0.2 mi (0.3 km) upstream from Landon Creek, 7.7 mi (12.4 km) south of Russell, and at mile 266.3 (428.5 km).

DRAINAGE AREA.--6,965 mi² (18,040 km²).

PERIOD OF RECORD.--October 1939 to September 1974 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 1,689.05 ft (514.822 m) above mean sea level. Prior to Sept. 11, 1940, nonrecording gage at present site and datum.

AVERAGE DISCHARGE.--35 years, 207 ft³/s (5.862 m³/s), 150,000 acre-ft/yr (185 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 7,340 ft³/s (208 m³/s) Oct. 11, gage height, 13.64 ft (4.157 m); minimum, 20 ft³/s (0.57 m³/s) Aug. 4.

Period of record: Maximum discharge, 39,500 ft³/s (1,120 m³/s) May 23, 1951, gage height, 23.86 ft (7.273 m); no flow at times in 1940, 1943, 1955-57.

Flood of May 30, 1938, reached a stage of about 29.0 ft (8.84 m), from floodmarks, discharge, about 70,000 ft³/s (2,000 m³/s), from rating curve extended above 37,500 ft³/s (1,060 m³/s).

REMARKS.--Records good except those for winter periods, which are poor. Flow moderately regulated since 1950 by Cedar Bluff Reservoir 67.4 mi (108 km) upstream (see sta 06861500). Records of chemical analyses for the water year 1974 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1340: 1941-42(M), 1944-45(M), 1950(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	436	126	158	140	269	160	135	114	92	51	22	29
2	353	122	156	130	255	158	131	110	86	47	22	29
3	268	120	173	130	243	154	126	110	81	44	21	30
4	211	119	398	130	230	149	128	105	80	42	21	29
5	179	115	306	130	223	144	131	102	89	41	22	29
6	157	114	244	130	215	144	135	96	198	39	26	29
7	139	112	209	130	193	142	136	90	294	39	28	29
8	128	110	220	130	187	143	136	88	239	36	29	28
9	120	107	248	130	201	143	132	88	213	35	890	27
10	136	106	256	130	198	163	129	88	264	37	2,510	26
11	4,810	107	254	140	196	197	159	88	345	36	281	26
12	5,210	106	252	140	196	217	151	84	292	111	123	27
13	2,140	107	320	150	193	224	138	86	255	82	85	28
14	924	106	411	160	191	216	138	80	214	58	71	26
15	569	105	339	170	186	203	136	74	179	49	62	26
16	419	105	259	180	181	190	135	76	154	42	60	29
17	331	104	222	210	179	183	137	77	136	37	58	29
18	279	102	208	250	179	178	133	83	116	57	57	28
19	243	299	200	350	173	166	127	82	103	41	48	26
20	218	2,860	200	500	175	156	126	77	93	33	41	26
21	202	912	220	750	171	152	124	73	84	29	35	26
22	187	453	280	1,500	166	152	171	70	79	27	35	25
23	179	334	330	1,060	159	151	161	690	75	26	36	25
24	169	283	450	685	148	151	143	643	71	26	35	25
25	155	245	600	609	150	151	140	269	67	25	36	24
26	148	224	318	650	158	151	131	530	63	27	33	24
27	142	203	554	576	161	151	123	238	60	24	32	24
28	137	183	300	450	160	148	120	175	57	25	31	24
29	135	171	174	369	-----	145	125	136	55	26	30	24
30	131	165	160	317	-----	138	131	112	53	25	30	24
31	128	-----	150	291	-----	136	-----	100	-----	23	29	-----
TOTAL	18,983	8,325	8,569	10,817	5,336	5,056	4,068	4,834	4,187	1,240	4,839	801
MEAN	612	278	276	349	191	163	136	156	140	40.0	156	26.7
MAX	5,210	2,860	600	1,500	269	224	171	690	345	111	2,510	30
MIN	120	102	150	130	148	136	120	70	53	23	21	24
AC-FT	37,650	16,510	17,000	21,460	10,580	10,030	8,070	9,590	8,300	2,460	9,600	1,590

CAL YR 1973 TOTAL 133,431 MEAN 366 MAX 8,870 MIN 29 AC-FT 264,700
WTR YR 1974 TOTAL 77,055 MEAN 211 MAX 5,210 MIN 21 AC-FT 152,800

PEAK DISCHARGE (REGULATED) ABOVE 2,400 CFS

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
10-11	2000	13.64	7,340	08-10	0100	10.15	4,400
11-20	0500	9.52	3,960				

06864500 SMOKY HILL RIVER AT ELLSWORTH, KS

LOCATION.--Lat 38°43'36", long 98°14'00", in SW¼SW¼SE¼ sec.20, T.15 S., R.8 W., Ellsworth County, at downstream side of bridge on State Highway 14 in Ellsworth, 2.0 mi (3.2 km) downstream from Turkey Creek, and at mile 213.7 (343.8 km).

DRAINAGE AREA.--7,580 mi² (19,600 km²), approximately.

PERIOD OF RECORD.--April 1895 to October 1905, July 1918 to July 1925, August 1928 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,509.02 ft (459.949 m) above mean sea level. Prior to Oct. 31, 1905, nonrecording gage at present site at datum 1.61 ft (0.491 m) higher. July 23, 1918, to July 4, 1925, and Aug. 1, 1928, to Nov. 29, 1939, nonrecording gage at present site and datum.

AVERAGE DISCHARGE.--62 years (1895-1905, 1918-24, 1928-74), 263 ft³/s (7.448 m³/s), 190,500 acre-ft/yr (235 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 20,300 ft³/s (575 m³/s) Oct. 11, gage height, 21.71 ft (6.617 m); minimum, 53 ft³/s (1.50 m³/s) Sept. 27-30.

Period of record: Maximum discharge, 61,000 ft³/s (17,300 m³/s) June 1, 1938, gage height, 27.2 ft (8.29 m), from floodmarks; no flow for part of day Sept. 28, 1956.

Flood in August 1927 reached a stage of 25.7 ft (7.83 m), from floodmarks, discharge, 44,800 ft³/s (1,270 m³/s).

REMARKS.--Records good except those for winter periods, which are poor. Flow moderately regulated since 1950 by Cedar Bluff Reservoir 120.0 mi (193 km) upstream (see sta 06861500). Records of chemical analyses for the water year 1974 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 796-B: 1903. WSP 806: Drainage area. WSP 1176: 1923. WSP 1440: 1895-1905, 1919, 1921, 1929-30(M), 1936-37(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	1,230	271	314	260	540	258	223	480	395	120	66	62
2	902	264	302	260	501	259	220	345	356	113	65	62
3	746	254	309	250	471	255	215	296	324	106	64	62
4	619	249	1,690	250	441	253	224	268	303	101	63	62
5	517	244	1,360	250	429	246	228	250	299	99	64	61
6	452	241	739	260	417	242	233	236	925	96	68	59
7	410	241	568	270	382	239	234	222	589	93	68	59
8	377	239	564	270	353	238	238	211	572	89	68	59
9	348	238	910	270	337	234	241	206	705	86	73	59
10	924	233	828	260	341	297	237	196	587	88	926	57
11	15,000	235	622	260	343	391	433	190	510	86	1,510	57
12	13,000	235	574	260	342	400	530	181	553	83	392	55
13	5,220	235	574	280	337	368	341	172	736	89	227	55
14	2,230	230	646	310	330	359	283	161	561	134	338	55
15	1,360	226	627	350	321	343	267	154	408	111	309	55
16	998	218	546	400	313	319	252	148	336	96	182	55
17	802	215	459	450	309	298	242	145	292	88	130	55
18	674	208	402	550	304	287	237	634	270	84	122	55
19	591	278	351	650	298	277	234	5,580	243	81	120	55
20	534	5,030	275	900	292	270	246	1,030	216	86	110	55
21	483	3,220	300	1,540	279	259	249	485	193	79	93	54
22	441	1,330	350	2,300	268	256	227	326	179	74	88	54
23	408	882	500	2,070	264	254	239	3,000	167	72	81	54
24	375	695	700	1,360	260	254	243	6,400	161	71	79	54
25	345	573	1,000	1,140	251	254	233	4,730	155	70	76	54
26	327	488	500	1,150	247	255	233	7,010	148	69	73	54
27	313	432	900	1,100	254	250	231	1,810	142	68	69	53
28	300	386	600	906	266	248	305	903	134	68	65	53
29	289	353	450	746	-----	240	928	650	129	69	63	53
30	285	331	300	634	-----	233	1,380	528	124	69	62	53
31	278	-----	280	579	-----	229	-----	450	-----	68	62	-----
TOTAL	50,778	18,274	18,540	20,535	9,490	8,565	9,626	37,397	10,712	2,706	5,776	1,690
MEAN	1,638	609	598	662	339	276	321	1,206	357	87.3	186	56.3
MAX	15,000	5,030	1,690	2,300	540	400	1,380	7,010	925	134	1,510	62
MIN	278	208	275	250	247	229	215	145	124	68	62	53
AC-FT	100,700	36,250	36,770	40,730	18,820	16,990	19,090	74,180	21,250	5,370	11,460	3,350

CAL YR 1973 TOTAL 306,333 MEAN 839 MAX 15,300 MIN 54 AC-FT 607,600
WTR YR 1974 TOTAL 194,089 MEAN 532 MAX 15,000 MIN 53 AC-FT 385,000

PEAK DISCHARGE (REGULATED) ABOVE 3,200 CFS

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
10-11	1400	21.71	20,300	05-24	0300	16.50	10,300
11-20	0600	12.75	6,080	05-26	0100	18.78	13,700
05-19	0500	14.74	8,040				

KANSAS RIVER BASIN

06865000 KANOPOLIS LAKE NEAR KANOPOLIS, KS

LOCATION.--Lat 38°36'25", long 97°58'02", in SE 1/4 NW 1/4 sec. 3, T. 17 S., R. 6 W., Ellsworth County, in control tower at dam on Smoky Hill River, 12 mi (19 km) southeast of Kanopolis, 25 mi (40 km) southwest of Salina, and 183.7 mi (295.6 km) upstream from mouth.

DRAINAGE AREA.--7,857 mi² (20,350 km²).

PERIOD OF RECORD.--February 1948 to current year (monthly records only prior to October 1956). Prior to October 1971, published as "Kanopolis Reservoir".

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (levels by Corps of Engineers).

EXTREMES.--Current year: Maximum elevation, 1,490.31 ft (454.246 m) Oct. 15, 16, contents, 225,300 acre-ft (278 hm³); minimum, 1,454.86 ft (443.441 m) Sept. 30, contents, 32,360 acre-ft (39.9 hm³).

Period of record: Maximum elevation, 1,506.98 ft (459.328 m) July 14, 1951, contents, 435,100 acre-ft (536 hm³); minimum elevation since conservation pool was first filled, 1,454.44 ft (443.313 m) Feb. 5, 1950; minimum contents, 32,360 acre-ft (39.9 hm³) Sept. 30, 1974.

REMARKS.--Reservoir is formed by earthfill dam; storage began Feb. 17, 1948, and dam was completed in same year. Capacity, 432,900 acre-ft (534 hm³) between elevations 1,415 ft (431.3 m), sill of outlet gate and 1,508 ft (459.6 m). Crest of uncontrolled spillway is at elevation 1,507 ft (459.3 m). Storage capacity of 357,700 acre-ft (441 hm³) above elevation 1,463 ft (445.9 m) is provided for flood control. Storage capacity of 61,380 acre-ft (75.7 hm³) below elevation 1,463 ft (445.9 m) is provided for conservation and recreation. Inflow partly regulated by Cedar Bluff Reservoir (see sta 06861500). Figures given herein represent total contents.

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

1,450	22,370	1,475	112,600
1,455	32,650	1,480	144,600
1,460	45,410	1,485	180,800
1,465	62,850	1,490	222,500
1,470	85,460	1,495	270,300

ELEVATION, IN FEET, AT 2400, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,483.48	1,485.67	1,474.00	1,462.44	1,467.78	1,457.99	1,463.43	1,466.02	1,475.11	1,463.47	1,463.90	1,463.87
2	1,483.46	1,485.20	1,473.53	1,462.86	1,467.17	1,458.06	1,463.53	1,465.75	1,474.18	1,463.49	1,463.88	1,463.86
3	1,483.38	1,484.75	1,473.15	1,463.00	1,466.51	1,458.12	1,463.71	1,465.46	1,473.37	1,463.59	1,463.85	1,463.86
4	1,483.15	1,484.32	1,473.28	1,463.19	1,465.87	1,458.16	1,463.78	1,465.15	1,472.71	1,463.61	1,463.82	1,463.85
5	1,482.75	1,483.86	1,473.51	1,463.38	1,465.20	1,458.20	1,463.90	1,464.83	1,472.08	1,463.63	1,463.82	1,463.83
6	1,482.36	1,483.41	1,473.16	1,463.56	1,464.39	1,458.25	1,464.00	1,464.49	1,472.32	1,463.66	1,463.87	1,463.89
7	1,481.95	1,483.03	1,472.82	1,463.73	1,464.55	1,458.31	1,464.17	1,464.18	1,472.25	1,463.68	1,463.88	1,463.89
8	1,481.52	1,482.51	1,472.45	1,463.87	1,464.67	1,458.42	1,464.21	1,463.82	1,472.28	1,463.70	1,463.89	1,463.91
9	1,481.22	1,482.05	1,472.17	1,464.01	1,464.55	1,458.67	1,464.16	1,463.47	1,472.45	1,463.73	1,463.96	1,463.91
10	1,481.48	1,481.60	1,471.85	1,464.14	1,464.52	1,459.03	1,464.13	1,463.32	1,472.21	1,463.74	1,463.98	1,463.92
11	1,485.49	1,481.16	1,471.49	1,464.26	1,464.50	1,459.43	1,464.35	1,463.33	1,471.60	1,463.73	1,464.93	1,463.93
12	1,488.76	1,480.65	1,471.11	1,464.37	1,464.46	1,459.73	1,464.56	1,463.28	1,470.96	1,463.75	1,465.12	1,463.91
13	1,489.96	1,480.19	1,470.58	1,464.49	1,464.45	1,460.02	1,464.66	1,463.28	1,470.44	1,463.78	1,465.14	1,463.49
14	1,490.23	1,479.71	1,470.18	1,464.61	1,464.40	1,460.29	1,464.68	1,463.20	1,469.84	1,463.81	1,465.57	1,462.73
15	1,490.31	1,479.19	1,469.74	1,464.74	1,464.37	1,460.54	1,464.71	1,463.13	1,469.10	1,463.83	1,465.66	1,461.88
16	1,490.27	1,478.66	1,469.25	1,464.94	1,464.33	1,460.78	1,464.70	1,463.11	1,468.35	1,463.85	1,465.66	1,461.02
17	1,490.20	1,478.18	1,468.73	1,465.22	1,464.29	1,460.96	1,464.69	1,463.04	1,467.49	1,463.88	1,465.49	1,460.16
18	1,490.11	1,477.62	1,468.21	1,465.57	1,464.25	1,461.17	1,464.69	1,463.75	1,466.56	1,463.89	1,465.35	1,459.29
19	1,489.95	1,477.20	1,467.62	1,466.04	1,464.03	1,461.34	1,464.68	1,468.76	1,465.53	1,463.89	1,465.18	1,458.56
20	1,489.63	1,477.73	1,466.92	1,466.41	1,463.76	1,461.53	1,465.30	1,469.33	1,464.42	1,463.93	1,465.03	1,458.11
21	1,489.29	1,478.22	1,466.30	1,466.95	1,463.03	1,461.70	1,465.50	1,469.45	1,463.90	1,463.94	1,464.87	1,457.78
22	1,488.98	1,478.05	1,465.84	1,467.79	1,463.05	1,461.87	1,465.50	1,469.30	1,463.76	1,463.94	1,464.76	1,457.43
23	1,488.61	1,477.74	1,465.49	1,468.65	1,461.96	1,462.04	1,465.44	1,470.02	1,463.61	1,463.93	1,464.59	1,457.08
24	1,488.27	1,477.36	1,465.22	1,469.13	1,460.88	1,462.21	1,465.36	1,472.40	1,463.48	1,463.93	1,464.43	1,456.74
25	1,487.89	1,476.90	1,464.87	1,469.47	1,459.73	1,462.40	1,465.27	1,473.95	1,463.36	1,463.94	1,464.28	1,456.39
26	1,487.54	1,476.50	1,464.50	1,469.79	1,458.51	1,462.57	1,465.16	1,477.21	1,463.30	1,463.94	1,464.12	1,456.04
27	1,487.35	1,476.03	1,464.05	1,470.09	1,457.88	1,462.74	1,465.11	1,477.60	1,463.29	1,463.93	1,463.96	1,455.61
28	1,487.16	1,475.49	1,463.74	1,469.99	1,457.90	1,462.90	1,465.11	1,477.63	1,463.31	1,463.93	1,463.88	A
29	1,486.87	1,475.00	1,463.61	1,469.49	-----	1,463.06	1,465.32	1,477.40	1,463.43	1,463.93	1,463.87	A
30	1,486.47	1,474.52	1,463.41	1,468.98	-----	1,463.17	1,465.92	1,476.96	1,463.45	1,463.91	1,463.87	1,454.86
31	1,486.08	-----	1,463.18	1,468.41	-----	1,463.33	-----	1,476.10	-----	1,463.91	1,463.84	-----
MEAN	1,486.59	1,479.75	1,468.84	1,465.92	1,463.61	1,460.55	1,464.66	1,468.02	1,468.27	1,463.80	1,464.47	
MAX	1,490.31	1,485.67	1,474.00	1,470.09	1,467.78	1,463.33	1,465.92	1,477.63	1,475.11	1,463.94	1,465.66	1,463.93
MIN	1,481.22	1,474.52	1,463.18	1,462.44	1,457.88	1,457.99	1,463.43	1,463.04	1,463.29	1,463.47	1,463.82	1,454.86
(+)	189,280	109,810	55,880	77,690	39,340	56,420	66,660	119,310	56,860	58,560	58,300	32,360
(+)	+20,380	-79,470	-53,930	+21,810	-38,350	+17,080	+10,240	+52,650	-62,450	+1,700	-260	-25,940

CAL YR 1973 (#) -4,570

WTR YR 1974 (#) -136,540

+ CONTENTS, IN ACRE-FEET, AT END OF MONTH.

CHANGE IN CONTENTS, IN ACRE-FEET.

A NO GAGE-HEIGHT RECORD.

NOTE.--NEW CAPACITY TABLE PUT IN USE OCT. 1, 1973. CONTENTS ON SEPT. 30, 1973, FROM NEW CAPACITY TABLE, 168,900 ACRE-FEET. CHANGE IN CONTENTS FOR OCTOBER 1973, CALENDAR YEAR 1973, AND WATER YEAR 1974 BASED ON NEW TABLE.

KANSAS RIVER BASIN

39

06865500 SMOKY HILL RIVER NEAR LANGLEY, KS

LOCATION.--Lat 38°36'38", long 97°57'04", in SW¼SW¼SE¼ sec.35, T.16 S., R.6 W., Ellsworth County, at downstream side of county highway bridge, 0.8 mi (1.3 km) downstream from Kanopolis Dam, 5.0 mi (8.0 km) north of Langley, and at mile 182.9 (294.3 km).

DRAINAGE AREA.--7,857 mi² (20,350 km²).

PERIOD OF RECORD.--October 1940 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,395.66 ft (425.397 m) above mean sea level (Corps of Engineers bench mark). Prior to Apr. 1, 1952, water-stage recorder at datum 2.00 ft (0.610 m) higher. Apr. 1, 1952 to Oct. 1, 1973, water-stage recorder at datum 5.00 ft (1.524 m) higher.

AVERAGE DISCHARGE.--34 years, 357 ft³/s (10.11 m³/s), 258,600 acre-ft/yr (319 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 4,470 ft³/s (127 m³/s) May 31, gage height, 15.29 ft (4.660 m); minimum, 23 ft³/s (0.65 m³/s) Feb. 7.

Period of record: Maximum discharge observed, 21,800 ft³/s (617 m³/s) Oct. 20, 1941, gage height, 32.2 ft (9.81 m), present datum; minimum daily, 0.40 ft³/s (0.011 m³/s) Jan. 23, 1948. Maximum discharge since closure of Kanopolis Dam in 1948, 5,570 ft³/s (158 m³/s) July 15, 1951.

Flood in June 1938 reached a stage of 33.9 ft (10.33 m), present datum, from information by Corps of Engineers, discharge, about 45,000 ft³/s (1,300 m³/s) by extension of subsequent rating curve above 16,000 ft³/s (450 m³/s) and correlation of peak flow at adjacent stations.

REMARKS.--Records good. Flow completely regulated by Kanopolis Lake since 1948 (see sta 06865000). Records of chemical analyses for the water year 1974 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1310: 1942(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	1,040	2,120	2,020	774	2,230	241	37	239	3,960	35	43	48
2	1,040	2,150	1,960	486	2,170	240	38	540	3,490	36	43	48
3	1,040	2,140	1,920	70	2,120	241	39	964	2,860	36	44	49
4	1,450	2,120	1,290	64	2,080	241	39	946	2,510	38	44	49
5	2,160	2,120	1,190	64	2,100	241	40	931	2,450	38	43	49
6	2,150	2,110	1,940	67	2,110	241	42	918	1,080	38	45	50
7	2,130	2,120	1,890	73	865	239	44	903	1,070	38	46	50
8	2,120	2,120	1,930	79	206	176	125	888	1,050	39	46	50
9	1,540	2,120	1,960	83	514	36	253	881	1,090	39	46	50
10	1,480	2,100	1,910	85	518	44	255	641	1,500	40	47	50
11	2,300	2,100	1,940	89	517	41	265	287	2,500	41	58	50
12	1,160	2,100	1,960	95	519	37	270	279	2,500	41	133	53
13	1,150	2,100	1,970	97	514	36	276	279	2,510	41	175	737
14	1,140	2,100	1,990	99	511	35	273	272	2,520	40	191	1,490
15	1,140	2,200	1,980	105	507	35	273	267	2,500	40	198	1,480
16	1,130	2,220	1,980	118	494	35	273	267	2,420	40	261	1,470
17	1,120	2,200	1,970	132	501	35	273	262	2,520	41	407	1,440
18	1,130	2,180	2,030	151	502	34	273	262	2,600	41	404	1,360
19	1,430	2,160	1,980	168	753	31	274	403	2,610	42	396	1,160
20	2,110	2,180	1,980	190	1,000	32	324	311	2,510	42	387	713
21	2,120	2,210	1,880	215	1,560	32	325	380	1,380	42	379	488
22	2,110	2,200	1,510	259	2,130	33	315	777	504	42	370	481
23	2,120	2,190	1,490	328	2,140	33	369	612	498	42	365	477
24	2,120	2,170	1,510	386	2,210	32	462	791	477	43	356	469
25	2,140	2,140	1,480	418	2,170	32	462	895	405	44	350	465
26	1,970	2,160	1,450	445	1,470	33	462	1,140	246	44	345	465
27	1,100	2,130	1,430	470	441	34	457	1,090	152	44	338	460
28	1,110	2,110	1,240	1,050	246	34	459	1,090	52	45	181	453
29	1,590	2,070	788	2,210	-----	35	460	1,520	35	44	51	450
30	2,090	2,030	781	2,180	-----	36	482	2,260	35	43	51	202
31	2,100	-----	781	2,210	-----	35	-----	3,330	-----	42	50	-----
TOTAL	50,530	64,170	52,130	13,260	33,098	2,660	7,939	24,625	50,034	1,261	5,893	14,856
MEAN	1,630	2,139	1,682	428	1,182	85.8	265	794	1,668	40.7	190	495
MAX	2,300	2,220	2,030	2,210	2,230	241	482	3,330	3,960	45	407	1,490
MIN	1,040	2,030	781	64	206	31	37	239	35	35	43	48
AC-FT	100,200	127,300	103,400	26,300	65,650	5,280	15,750	48,840	99,240	2,500	11,690	29,470
CAL YR 1973	TOTAL 394,520		MEAN 1,081	MAX 3,880	MIN 69	AC-FT 782,500						
WTR YR 1974	TOTAL 320,456		MEAN 878	MAX 3,960	MIN 31	AC-FT 635,600						

06866500 SMOKY HILL RIVER NEAR MENTOR, KS

LOCATION.--Lat 38°47'54", long 97°34'28", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.29, T.14 S., R.2 W., Saline County, at downstream side of highway bridge, 4.0 mi (6.4 km) north of Mentor, and at mile 101.7 (163.6 km).

DRAINAGE AREA.--8,358 mi² (21,650 km²).

PERIOD OF RECORD.--December 1923 to October 1930, May 1931 to June 1932, October 1947 to current year. Published as "near Salina" 1948-49.

GAGE.--Water-stage recorder. Datum of gage is 1,211.40 ft (369.235 m) above mean sea level, levels by Corps of Engineers. Prior to June 30, 1932, nonrecording gage at site 10 mi (16 km) upstream at datum 20.9 ft (6.37 m) higher. Oct. 1, 1947, to Sept. 18, 1948, nonrecording gage, and Sept. 19, 1948, to June 26, 1959, water-stage recorder at site 0.3 mi (.5 km) west on former channel, at present datum. June 27, 1959, to Sept. 8, 1959, nonrecording gage at present site and datum.

AVERAGE DISCHARGE.--33 years (1924-30, 1947-74), 440 ft³/s (12.46 m³/s), 318,800 acre-ft/yr (393 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 20,300 ft³/s (575 m³/s) Oct. 11, gage height, 24.82 ft (7.565 m); minimum, 76 ft³/s (2.15 m³/s) Aug. 4.

Period of record: Maximum discharge, 25,500 ft³/s (722 m³/s) Aug. 17, 1927, gage height, 26.2 ft (7.986 m), from floodmark, site and datum then in use, from rating curve extended above 5,700 ft³/s (161 m³/s) on basis of flood-routing study and slope-area measurement at gage height 25.8 ft (7.86 m); minimum, 1.8 ft³/s (0.051 m³/s) July 10, 1963.

Greatest flood known at Salina, 7.5 mi (12.1 km) downstream, occurred in 1844; second greatest flood known, May 29, 1903, reached a stage of 26.5 ft (8.08 m) near Mentor, from floodmarks, site and datum of 1923-32.

REMARKS.--Records good except those for winter periods, which are poor. Considerable regulation since 1948 by Kanopolis Lake 82.0 mi (132 km) upstream, see sta 06865000. Diversions above station for irrigation. Records of chemical analyses for the water year 1974 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1440: 1924, 1927-28, 1929(M), 1932(M). WSP 1919: 1960.

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	2,300	2,050	1,880	740	2,060	722	183	687	2,280	251	92	163
2	1,830	2,050	1,870	620	2,140	560	175	690	3,280	226	90	157
3	1,610	2,080	1,840	470	2,130	519	183	777	3,320	209	82	149
4	1,510	2,080	1,950	400	2,090	491	192	1,070	3,090	209	79	142
5	1,480	2,080	2,420	370	2,070	470	180	1,070	2,580	204	88	135
6	2,070	2,070	1,510	360	2,030	455	176	1,070	2,530	191	100	136
7	2,210	2,070	1,850	350	2,060	443	179	1,060	2,010	186	120	135
8	2,220	2,060	2,040	340	1,860	540	182	1,040	1,450	176	123	133
9	2,210	2,070	2,140	330	719	617	179	1,040	1,540	164	124	131
10	2,490	2,050	2,220	320	643	554	195	1,210	1,440	154	124	126
11	12,600	2,050	2,090	310	802	955	358	1,080	1,450	151	120	124
12	14,300	2,050	2,020	300	778	617	527	745	2,120	150	116	130
13	8,900	2,050	2,040	300	762	389	515	509	2,390	143	112	127
14	3,730	2,100	2,000	340	747	309	426	611	2,420	138	135	124
15	2,230	2,100	2,010	370	731	279	403	506	2,380	142	217	774
16	1,910	2,080	1,970	420	721	259	396	471	2,410	135	265	1,310
17	1,710	2,080	1,980	703	703	242	391	442	2,360	125	254	1,340
18	1,600	2,100	1,960	1,180	697	237	390	501	2,330	118	284	1,350
19	1,550	2,100	1,980	1,010	697	227	390	3,080	2,450	110	412	1,340
20	1,510	2,120	1,980	760	693	232	981	5,410	2,500	112	421	1,260
21	1,950	2,140	1,930	653	1,020	222	3,010	2,590	2,460	110	421	1,100
22	2,170	2,140	1,980	611	1,150	219	1,510	1,020	2,250	108	428	730
23	2,180	2,120	1,730	541	1,840	217	825	924	1,090	101	433	630
24	2,160	2,110	2,570	526	1,990	211	647	1,890	879	99	430	606
25	2,150	2,030	3,170	569	2,070	206	641	1,840	807	100	505	598
26	2,160	2,010	2,060	627	2,100	203	694	2,220	763	100	622	590
27	2,160	1,990	1,720	659	2,040	199	676	3,390	637	101	446	582
28	1,720	1,980	1,620	678	1,160	195	663	1,810	494	98	420	578
29	1,340	1,940	1,560	698	-----	201	721	1,460	402	96	406	570
30	1,350	1,930	1,220	1,610	-----	187	784	1,390	301	95	294	562
31	1,930	-----	900	2,080	-----	181	-----	1,970	-----	94	171	-----
TOTAL	91,240	61,880	60,210	19,245	38,503	11,358	16,772	43,573	56,413	4,396	7,934	15,832
MEAN	2,943	2,063	1,942	621	1,375	366	559	1,406	1,880	142	256	528
MAX	14,300	2,140	3,170	2,080	2,140	955	3,010	5,410	3,320	251	622	1,350
MIN	1,340	1,930	900	300	643	181	175	442	301	94	79	124
AC-FT	181,000	122,700	119,400	38,170	76,370	22,530	33,270	86,430	111,900	8,720	15,740	31,400
CAL YR 1973	TOTAL 576,528	MEAN 1,580	MAX 14,300	MIN 80	AC-FT 1,144,000							
WTR YR 1974	TOTAL 427,356	MEAN 1,171	MAX 14,300	MIN 79	AC-FT 847,700							

PEAK DISCHARGE (REGULATED) ABOVE 1,000 CFS

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
10-11	1900	24.82	20,300	02-25	1800	10.61	2,100	05-24	2400	11.51	2,560
12-05	1100	11.45	2,520	03-11	1000	7.95	1,020	05-27	0700	13.91	3,760
12-25	0400	13.39	3,500	04-21	1300	13.16	3,380	06-02	1900	13.39	3,500
01-18	1000	8.53	1,210	05-10	0500	8.82	1,330	06-20	1100	11.43	2,520
02-02	1500	10.71	2,160	05-20	1300	16.87	5,610	09-17	2100	8.88	1,350

KANSAS RIVER BASIN

41

06867000 SALINE RIVER NEAR RUSSELL, KS

LOCATION.--Lat 38°58'00", long 98°51'20", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.35, T.12 S., R.14 W., Russell County, at downstream side of bridge on U.S. Highway 281, 2.0 mi (3.2 km) downstream from Salt Creek, 5.0 mi (8.0 km) north of Russell, and at mile 190.6 (306.7 km).

DRAINAGE AREA.--1,502 mi² (3,890 km²).

PERIOD OF RECORD.--October 1945 to September 1953, June 1959 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,551.59 ft (472.925 m) above mean sea level. Prior to Jan. 22, 1946, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--23 years, 121 ft³/s (3.427 m³/s), 87,660 acre-ft/yr (108 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 3,610 ft³/s (102 m³/s) Oct. 12, gage height, 14.12 ft (4.304 m); minimum, 13 ft³/s (0.37 m³/s) Sept. 29, 30.

Period of record: Maximum discharge, 19,400 ft³/s (549 m³/s) Sept. 1, 1964, gage height, 19.70 ft (6.005 m); no flow Aug. 11, 12, 1964.

REMARKS.--Records good except those for winter periods, which are poor. Low flow partially regulated at times by irrigation. Records of chemical analyses for the water year 1974 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1919: 1960.

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	356	124	139	100	230	149	124	130	69	68	23	23
2	286	120	132	90	221	147	123	130	67	64	23	24
3	216	116	147	90	214	141	122	129	64	61	22	24
4	182	112	213	90	206	139	125	135	63	55	22	23
5	160	110	190	90	203	133	130	129	64	52	23	21
6	144	110	166	90	199	133	147	124	72	48	26	22
7	135	110	156	90	189	131	148	120	854	45	30	19
8	128	110	165	90	183	135	150	116	452	43	33	21
9	122	110	237	90	182	134	144	117	356	41	72	19
10	123	110	217	90	183	147	138	126	772	42	153	18
11	2,310	110	198	100	182	191	166	133	410	40	134	17
12	1,610	110	210	100	182	202	160	125	466	38	104	18
13	605	110	231	100	180	190	147	117	374	37	77	18
14	410	110	204	100	178	178	172	111	294	35	66	18
15	312	108	185	100	174	169	210	105	242	36	54	18
16	256	104	172	110	171	159	182	101	206	37	45	18
17	216	102	158	130	170	153	174	99	180	34	41	18
18	194	102	159	150	168	150	168	99	165	32	39	17
19	182	224	150	250	165	144	162	102	150	31	35	17
20	171	936	130	440	164	137	180	100	146	30	32	16
21	162	301	160	578	159	138	250	92	129	29	30	16
22	153	242	200	495	153	135	190	87	113	29	29	16
23	148	228	190	391	148	134	168	84	103	29	29	15
24	142	205	180	361	147	135	156	82	99	27	28	16
25	136	189	170	354	142	136	148	82	95	29	27	16
26	132	178	160	356	148	137	146	82	91	28	25	15
27	129	169	200	323	152	136	142	79	87	27	25	15
28	129	158	170	289	150	135	140	78	82	26	25	15
29	129	151	152	268	-----	131	136	75	76	28	24	14
30	124	145	140	255	-----	128	138	73	73	26	23	14
31	123	-----	120	240	-----	126	-----	71	-----	25	22	-----
TOTAL	9,625	5,114	5,401	6,400	4,943	4,533	4,686	3,233	6,414	1,172	1,341	541
MEAN	310	170	174	206	177	146	156	104	214	37.8	43.3	18.0
MAX	2,310	936	237	578	230	202	250	135	854	68	153	24
MIN	122	102	120	90	142	126	122	71	63	25	22	14
AC-FT	19,090	10,140	10,710	12,690	9,800	8,990	9,290	6,410	12,720	2,320	2,660	1,070

CAL YR 1973 TOTAL 77,700 MEAN 213 MAX 3,750 MIN 16 AC-FT 154,100
WTR YR 1974 TOTAL 53,403 MEAN 146 MAX 2,310 MIN 14 AC-FT 105,900

PEAK DISCHARGE (BASE, 2,000 CFS)

DATE	TIME	G.H.T.	DISCHARGE
10-12	0100	14.12	3,610

KANSAS RIVER BASIN

06867500 PARADISE CREEK NEAR PARADISE, KS

LOCATION.--Lat 39°04'25", long 98°51'15", NW¼NW¼ sec.26, T.11 S., R.14 W., Russell County, at downstream side of bridge on U.S. Highway 281, 4.5 mi (7.2 km) southeast of Paradise, and at mile 11.7 (18.8 km).

DRAINAGE AREA.--212 mi² (549 km²).

PERIOD OF RECORD.--April 1946 to September 1953, October 1962 to September 1974 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 1,602.85 ft (488.549 m) above mean sea level. Prior to June 25, 1947, nonrecording gage; June 25, 1947, to Sept. 30, 1953, water-stage recorder; and Oct. 1, 1962, to Feb. 7, 1963, nonrecording gage; all at present site and datum.

AVERAGE DISCHARGE.--19 years, 19.4 ft³/s (0.549 m³/s), 14,060 acre-ft/yr (17.3 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 3,010 ft³/s (85.2 m³/s) Oct. 11, gage height, 17.82 ft (5.432 m); no flow at times during many days.

Period of record: Maximum discharge, 14,800 ft³/s (419 m³/s) July 11, 1951, gage height, 23.10 ft (7.041 m), from rating curve extended above 9,300 ft³/s (260 m³/s) on basis of slope-area measurement of peak flow; no flow at times in most 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	94	35	47	30	73	41	33	38	15	3.9	.17	.25
2	65	34	47	30	70	40	33	39	14	3.4	.23	.36
3	50	32	46	30	67	39	33	36	14	2.8	.14	.34
4	41	30	55	30	64	37	34	36	14	2.4	.13	.24
5	36	29	57	30	63	36	41	58	14	2.0	.24	.24
6	32	29	53	30	62	35	40	43	15	1.5	.42	.18
7	29	29	62	30	54	35	43	38	16	1.3	.40	.10
8	27	29	65	30	58	35	44	36	18	1.3	5.0	.10
9	24	29	105	30	65	34	44	34	18	1.2	33	.10
10	25	28	69	30	59	52	42	32	18	1.0	5.0	.10
11	1,850	28	66	35	56	88	68	34	18	.80	2.0	.10
12	1,020	27	68	35	55	71	50	32	27	.60	1.0	.10
13	336	28	72	35	56	60	43	32	27	.40	.50	.10
14	158	28	70	35	55	55	115	33	25	.20	33	.10
15	106	28	64	40	51	50	72	31	20	.10	3.8	.10
16	85	26	59	50	50	46	64	29	18	.10	1.0	.10
17	73	26	61	93	50	46	65	28	16	.10	.80	.10
18	65	24	63	188	50	44	57	28	14	.10	.60	.10
19	60	63	55	304	50	42	51	26	12	.10	.50	.10
20	56	286	63	270	48	40	48	25	11	.10	.40	.10
21	53	88	66	371	45	38	110	25	9.3	.10	.30	.10
22	50	92	66	277	42	38	76	23	7.5	.10	.20	.10
23	48	74	64	233	42	38	61	21	6.5	.12	.20	.10
24	44	68	63	230	35	38	52	20	5.8	.11	.20	.06
25	40	62	58	193	35	39	49	19	5.4	.16	.20	.18
26	38	59	50	153	45	39	45	19	5.4	.14	.20	.18
27	37	56	45	121	45	38	45	18	5.1	.07	.20	.12
28	36	53	40	99	42	37	43	18	4.7	.02	.18	.12
29	36	51	35	89	-----	36	41	17	4.5	.14	.24	.06
30	36	49	30	83	-----	35	40	16	3.9	.11	.24	.06
31	35	-----	30	78	-----	33	-----	15	-----	.08	.24	-----
TOTAL	4,685	1,520	1,794	3,312	1,487	1,335	1,582	899	402.1	24.55	90.73	4.09
MEAN	151	50.7	57.9	107	53.1	43.1	52.7	29.0	13.4	.79	2.93	.14
MAX	1,850	286	105	371	73	88	115	58	27	3.9	33	.36
MIN	24	24	30	30	35	33	33	15	3.9	.02	.13	.06
AC-FT	9,290	3,010	3,560	6,570	2,950	2,650	3,140	1,780	798	49	180	8.1

CAL YR 1973 TOTAL 24,081.31 MEAN 66.0 MAX 1,850 MIN 0 AC-FT 47,770
WTR YR 1974 TOTAL 17,135.47 MEAN 46.9 MAX 1,850 MIN .02 AC-FT 33,990

PEAK DISCHARGE (BASE, 150 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
10-11	1500	17.82	3,010	01-21	0400	9.56	416
11-20	0300	10.60	560	08-08	2400	7.33	200

KANSAS RIVER BASIN

43

06868100 WILSON LAKE NEAR WILSON, KS

LOCATION.--Lat 38°58'00", long 98°29'35", in NE 1/4 NW 1/4 sec. 36, T. 12 S., R. 11 W., Russell County, in the control tower near right end of Wilson Dam on the Saline River, 10 mi (16 km) north of Wilson, and at mile 153.9 (247.6 km).

DRAINAGE AREA.--1,917 mi² (4,965 km²).

PERIOD OF RECORD.--December 1964 to current year. Prior to October 1971, published as "Wilson Reservoir".

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (levels by Corps of Engineers).

EXTREMES.--Current year: Maximum elevation, 1,521.92 ft (463.881 m) Nov. 7, contents, 305,600 acre-ft (377 hm³); minimum, 1,515.35 ft (461.879 m) Sept. 30, contents, 242,000 acre-ft (298 hm³).

Period of record: Maximum elevation, 1,521.92 ft (463.881 m) Nov. 7, 1973, contents, 305,600 acre-ft (377 hm³); minimum since conservation pool first filled, 1,493.59 ft (455.246 m) Dec. 26, 1966, contents, 91,500 acre-ft (113 hm³).

REMARKS.--Reservoir is formed by earthfill dam; storage began Dec. 29, 1964. Total capacity, 1,711,000 acre-ft (2,110 hm³) below elevation 1,587.5 ft (483.87 m), consisting of 1,960 acre-ft (2.42 hm³) of dead storage below elevation 1,450 ft (442.0 m); conservation pool, 245,880 acre-ft (303 hm³) between elevation 1,450 ft (442.0 m) and 1,516 ft (462.1 m); flood control pool, 1,253,000 acre-ft (1,540 hm³) between 1,516 ft (462.1 m) and 1,582 ft (482.2 m), crest of spillway; and surcharge capacity of 210,200 acre-ft (259 hm³) between 1,582 ft (482.2 m) and 1,587.5 ft (483.87 m). Figures given herein represent total contents.

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

1,514	230,200	1,520	285,900
1,516	247,800	1,522	306,400
1,518	266,400		

ELEVATION, IN FEET, AT 2400, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,518.46	1,521.83	1,521.43	1,520.45	1,518.55	1,516.15	1,516.79	1,516.37	1,516.35	1,517.23	1,515.80	1,515.85
2	1,518.56	1,521.84	1,521.39	1,520.40	1,518.35	1,516.19	1,516.78	1,516.31	1,516.37	1,517.15	1,515.76	1,515.85
3	1,518.62	1,521.83	1,521.36	1,520.35	1,518.23	1,516.18	1,516.87	1,516.28	1,516.39	1,517.10	1,515.72	1,515.83
4	1,518.64	1,521.86	1,521.46	1,520.30	1,518.08	1,516.21	1,516.83	1,516.23	1,516.38	1,517.05	1,515.68	1,515.80
5	1,518.67	1,521.87	1,521.42	1,520.25	1,517.90	1,516.21	1,516.82	1,516.18	1,516.40	1,516.98	1,515.68	1,515.77
6	1,518.70	1,521.90	1,521.35	1,520.20	1,517.74	1,516.22	1,516.84	1,516.15	1,516.43	1,516.92	1,515.70	1,515.78
7	1,518.74	1,521.88	1,521.32	1,520.15	1,517.61	1,516.25	1,516.88	1,516.13	1,516.53	1,516.88	1,515.68	1,515.77
8	1,518.76	1,521.80	1,521.31	1,520.10	1,517.45	1,516.31	1,516.86	1,516.10	1,516.76	1,516.82	1,515.72	1,515.75
9	1,518.82	1,521.73	1,521.29	1,520.00	1,517.35	1,516.34	1,516.81	1,516.13	1,516.80	1,516.77	1,515.75	1,515.75
10	1,519.05	1,521.67	1,521.27	1,519.85	1,517.20	1,516.42	1,516.77	1,516.18	1,516.92	1,516.73	1,515.79	1,515.74
11	1,520.09	1,521.61	1,521.23	1,519.70	1,517.05	1,516.44	1,516.85	1,516.19	1,517.03	1,516.67	1,515.78	1,515.68
12	1,520.80	1,521.55	1,521.23	1,519.50	1,516.93	1,516.47	1,516.76	1,516.15	1,517.19	1,516.62	1,515.78	1,515.67
13	1,521.05	1,521.50	1,521.15	1,519.40	1,516.79	1,516.52	1,516.80	1,516.15	1,517.27	1,516.56	1,515.80	1,515.65
14	1,521.19	1,521.46	1,521.14	1,519.20	1,516.64	1,516.54	1,516.70	1,516.14	1,517.33	1,516.50	1,515.95	1,515.63
15	1,521.28	1,521.37	1,521.10	1,519.10	1,516.49	1,516.57	1,516.70	1,516.09	1,517.36	1,516.45	1,515.96	1,515.62
16	1,521.36	1,521.29	1,521.05	1,518.90	1,516.35	1,516.57	1,516.65	1,516.10	1,517.38	1,516.40	1,515.98	1,515.62
17	1,521.41	1,521.24	1,521.01	1,518.40	1,516.20	1,516.61	1,516.65	1,516.10	1,517.40	1,516.35	1,516.04	1,515.61
18	1,521.49	1,521.13	1,520.97	1,518.31	1,516.07	1,516.63	1,516.60	1,516.14	1,517.44	1,516.28	1,516.03	1,515.59
19	1,521.52	1,521.35	1,520.91	1,518.29	1,515.99	1,516.64	1,516.58	1,516.15	1,517.45	1,516.22	1,516.00	1,515.57
20	1,521.56	1,521.62	1,520.83	1,518.30	1,516.06	1,516.65	1,516.60	1,516.17	1,517.47	1,516.18	1,515.92	1,515.56
21	1,521.60	1,521.59	1,520.77	1,518.38	1,516.08	1,516.65	1,516.61	1,516.18	1,517.47	1,516.13	1,515.92	1,515.54
22	1,521.64	1,521.58	1,520.73	1,518.41	1,516.03	1,516.64	1,516.57	1,516.20	1,517.47	1,516.08	1,515.91	1,515.53
23	1,521.68	1,521.61	1,520.69	1,518.49	1,516.05	1,516.68	1,516.51	1,516.22	1,517.46	1,516.01	1,515.90	1,515.50
24	1,521.70	1,521.65	1,520.74	1,518.59	1,516.06	1,516.70	1,516.47	1,516.26	1,517.46	1,515.98	1,515.90	1,515.48
25	1,521.70	1,521.71	1,520.67	1,518.69	1,516.09	1,516.72	1,516.45	1,516.33	1,517.45	1,515.96	1,515.88	1,515.47
26	1,521.73	1,521.76	1,520.66	1,518.80	1,516.09	1,516.70	1,516.45	1,516.33	1,517.43	1,515.95	1,515.88	1,515.45
27	1,521.75	1,521.74	1,520.59	1,518.88	1,516.12	1,516.73	1,516.38	1,516.34	1,517.43	1,515.90	1,515.85	1,515.45
28	1,521.77	1,521.62	1,520.56	1,519.10	1,516.13	1,516.75	1,516.44	1,516.33	1,517.35	1,515.90	1,515.84	1,515.40
29	1,521.77	1,521.55	1,520.48	1,518.95	-----	1,516.76	1,516.47	1,516.35	1,517.33	1,515.88	1,515.83	1,515.36
30	1,521.82	1,521.49	1,520.45	1,518.80	-----	1,516.75	1,516.42	1,516.37	1,517.28	1,515.85	1,515.85	1,515.35
31	1,521.83	-----	1,520.45	1,518.70	-----	1,516.80	-----	1,516.36	-----	1,515.82	1,515.85	-----
MEAN	1,520.57	1,521.62	1,521.00	1,519.26	1,516.85	1,516.52	1,516.66	1,516.22	1,517.09	1,516.43	1,515.84	1,515.62
MAX	1,521.83	1,521.90	1,521.46	1,520.45	1,518.55	1,516.80	1,516.88	1,516.37	1,517.47	1,517.23	1,516.04	1,515.85
MIN	1,518.46	1,521.13	1,520.45	1,518.29	1,515.99	1,516.15	1,516.38	1,516.09	1,516.35	1,515.82	1,515.68	1,515.35
(+)	304,600	301,100	290,500	273,100	249,000	255,100	251,700	251,100	259,600	246,200	246,500	242,000
(#)	+34,600	-3,500	-10,600	-17,400	-24,100	+6,100	-3,400	-600	+8,500	-13,400	+300	-4,500

CAL YR 1973 (+) +53,500
WTR YR 1974 (+) -28,000

+ CONTENTS, IN ACRE-FEET, AT END OF MONTH.
CHANGE IN CONTENTS, IN ACRE-FEET.

LOCATION.--Lat 38°58'35", long 98°29'20", in NE¼SW¼ sec.25, T.12 S., R.11 W., Russell County, 0.5 mi (0.8 km) downstream from outlet of Wilson Dam, 9.0 mi (14.5 km) upstream from Wolf Creek, 10.0 mi (16 km) north of Wilson, and at mile 153.4 (246.8 km).

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

GAGE.--Water-stage recorder. Altitude of gage is 1,437 ft (438.0 m), from topographic map. Prior to May 12, 1965, water-stage recorder at site 1.5 mi (2.4 km) downstream at different datum.

EXTREMES.--Current year: Maximum discharge, 1,260 ft³/s (35.7 m³/s) Jan. 8, gage height, 12.88 ft (3.926 m); minimum, 16 ft³/s (0.453 m³/s) Oct. 8, 9.

Period of record: Maximum discharge, 3,320 ft³/s (94.0 m³/s) Apr. 6, 1973, gage height, 18.84 ft (5.74 m); minimum, 0.30 ft³/s (0.008 m³/s) Mar. 2, 1966.

REMARKS.--Records good. Flow completely regulated by Wilson Lake (see sta 06868100).

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	18	499	486	997	148	134	384	17	192	31	29
2	19	18	499	487	994	147	133	384	17	192	31	30
3	18	18	499	487	991	146	134	385	17	191	31	30
4	18	18	499	486	989	146	132	385	17	192	31	30
5	17	18	496	487	988	145	132	386	18	191	31	30
6	17	18	495	487	982	144	132	332	17	191	31	30
7	17	168	494	487	980	143	131	189	17	190	31	30
8	16	530	495	814	978	143	212	188	17	190	31	30
9	16	523	493	1,260	977	142	383	187	17	189	31	30
10	19	518	492	1,260	977	142	383	189	17	189	31	30
11	37	514	492	1,250	976	141	384	189	17	188	31	30
12	18	512	491	1,250	973	140	383	188	19	187	31	30
13	17	511	492	1,250	971	140	383	188	21	187	31	30
14	17	508	491	1,090	966	139	384	187	20	186	33	30
15	17	508	490	765	965	139	383	187	20	186	31	30
16	17	506	490	764	965	138	382	187	20	185	31	30
17	17	504	490	762	963	138	382	187	18	185	31	30
18	17	502	489	761	963	138	382	186	19	184	31	30
19	17	507	490	760	615	136	381	96	20	184	31	30
20	17	508	489	762	199	137	382	26	19	183	30	31
21	17	502	489	760	194	136	381	26	18	183	30	26
22	17	499	488	760	180	136	381	25	18	183	30	28
23	17	332	487	581	157	136	382	24	18	182	30	28
24	17	38	489	181	154	136	382	23	18	127	30	28
25	17	37	488	168	152	136	383	23	18	32	30	28
26	17	37	487	162	151	136	384	21	18	32	30	28
27	17	435	487	158	149	136	384	20	74	32	30	28
28	18	800	487	421	148	136	386	20	193	32	30	28
29	18	625	486	1,010	-----	136	386	18	193	31	30	28
30	18	501	486	1,010	-----	136	385	18	192	31	30	28
31	18	-----	486	1,000	-----	135	-----	17	-----	31	30	-----
TOTAL	558	10,733	15,225	22,366	19,694	4,327	9,566	4,865	1,124	4,658	951	878
MEAN	18.0	358	491	721	703	140	319	157	37.5	150	30.7	29.3
MAX	37	800	499	1,260	997	148	386	386	193	192	33	31
MIN	16	18	486	158	148	135	131	17	17	31	30	26
AC-FT	1,110	21,290	30,200	44,360	39,060	8,580	18,970	9,650	2,230	9,240	1,890	1,740
CAL YR 1973	TOTAL 96,717.2		MEAN 265	MAX 2,920	MIN 2.1	AC-FT 191,800						
WTR YR 1974	TOTAL 94,945.0		MEAN 260	MAX 1,260	MIN 16	AC-FT 188,300						

KANSAS RIVER BASIN

45

06869500 SALINE RIVER AT TESCOTT, KS

LOCATION.--Lat 39°00'15", Long 97°52'26", in NE¼SE¼SE¼ sec.16, T.12 S., R.5 W., Ottawa County, at downstream side of highway bridge, 0.5 mi (0.8 km) south of Tescott, 0.5 mi (0.8 km) upstream from Dry Creek, and at mile 68.5 (110.2 km).

DRAINAGE AREA.--2,820 mi² (7,300 km²).

PERIOD OF RECORD.--September 1919 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,265.34 ft (385.676 m) above mean sea level. Prior to Nov. 23, 1934, nonrecording gage at present site and datum.

AVERAGE DISCHARGE.--55 years, 227 ft³/s (6.429 m³/s), 164,500 acre-ft/yr (203 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 7,000 ft³/s (198 m³/s) Oct. 12, gage height, 29.40 ft (8.961 m); minimum, 58 ft³/s (1.643 m³/s) June 29.

Period of record: Maximum discharge, 61,400 ft³/s (1,740 m³/s) July 13, 1951, gage height, 30.06 ft (9.162 m), from rating curve extended above 7,000 ft³/s (200 m³/s) on basis of slope-area measurement of peak flow; no flow at times in 1935-36.

Flood of July 13, 1951 was greatest known since at least 1903 and exceeded the flood of May-June 1903 by about 1.0 ft (0.3 m), from information by local residents.

REMARKS.--Records good, except those for winter periods, which are poor. Some diurnal fluctuation caused by power plants above station. Diversions above station for irrigation. Flow moderately regulated since 1964 by Wilson Lake (see sta 06868100). Records of chemical analyses, water temperatures, suspended sediment loads, and specific conductance for the water year 1974 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 806: Drainage area. WSP 856: 1931. WSP 1310: 1926-28(M), 1935(M), 1945(M), 1947-48(M). WSP 1919: 1922, 1960.

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	3,580	218	826	600	1,310	329	269	614	131	196	74	89
2	1,640	215	689	600	1,330	325	268	562	121	223	72	91
3	485	209	627	600	1,290	321	265	520	116	224	70	98
4	399	203	767	600	1,260	314	265	501	112	222	70	99
5	344	198	830	600	1,240	306	266	488	108	222	71	94
6	303	195	782	600	1,230	302	267	481	109	220	75	91
7	283	194	759	600	1,210	299	268	478	138	220	76	89
8	270	193	738	600	1,200	297	269	470	159	222	77	89
9	254	196	867	600	1,180	297	272	370	393	222	80	88
10	271	348	824	600	1,170	310	275	543	278	222	83	86
11	2,740	575	829	600	1,170	346	412	624	195	221	84	84
12	5,730	612	825	900	1,180	409	574	459	174	222	99	82
13	5,980	611	793	1,400	1,170	409	597	378	185	219	110	80
14	5,140	618	762	1,500	1,170	397	568	338	156	217	95	78
15	4,260	616	762	1,550	1,160	373	567	310	148	217	96	77
16	2,560	611	758	1,600	1,150	341	531	299	149	213	163	78
17	659	616	703	1,300	1,140	325	553	289	137	212	282	78
18	459	619	668	1,300	1,140	314	560	287	110	212	189	78
19	405	622	655	1,400	1,130	309	524	297	99	210	121	78
20	370	690	635	1,500	1,130	303	552	648	91	207	118	77
21	344	1,080	628	1,600	1,020	297	560	436	82	205	106	75
22	323	2,130	622	1,700	539	293	557	235	77	203	98	73
23	304	2,600	635	2,100	375	289	525	166	72	202	96	72
24	290	2,070	748	2,300	357	290	509	148	68	202	94	73
25	274	1,040	885	2,000	335	289	499	146	66	202	94	69
26	259	506	859	1,100	321	292	490	356	64	201	93	68
27	248	320	762	814	323	295	487	740	62	147	92	68
28	237	280	710	891	328	294	487	299	60	91	90	68
29	230	314	685	762	-----	289	455	188	58	80	89	68
30	224	723	620	656	-----	280	626	160	93	77	88	66
31	220	-----	600	1,060	-----	274	-----	142	-----	75	87	-----
TOTAL	39,085	19,422	22,853	34,033	27,558	9,808	13,317	11,972	3,811	6,028	3,132	2,404
MEAN	1,261	647	737	1,098	984	316	444	386	127	194	101	80.1
MAX	5,980	2,600	885	2,300	1,330	409	626	740	393	224	282	99
MIN	220	193	600	600	321	274	265	142	58	75	70	66
AC-FT	77,530	38,520	45,330	67,500	54,660	19,450	26,410	23,750	7,560	11,960	6,210	4,770

CAL YR 1973 TOTAL 269,855 MEAN 739 MAX 9,120 MIN 15 AC-FT 535,300
WTR YR 1974 TOTAL 193,423 MEAN 530 MAX 5,980 MIN 58 AC-FT 383,700

PEAK DISCHARGE (REGULATED) ABOVE 1,300 CFS

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
10-12	1700	29.40	7,000	01-24	1400	23.75	2,400
11-23	1600	23.18	2,650	02-01	1700	18.16	1,330

KANSAS RIVER BASIN

06870200 SMOKY HILL RIVER AT NEW CAMBRIA, KS

LOCATION.--Lat 38°51'13", long 97°27'52", in SW 1/4 NW 1/4 sec. 8, T.14 S., R.1 W., Saline County, at downstream side of county highway bridge, 3.0 mi (4.8 km) southeast of New Cambria, 7.4 mi (11.9 km) upstream from Gypsum Creek, about 15.4 mi (24.8 km) upstream from Solomon River, and at mile 83.9 (135.0 km).

DRAINAGE AREA.--11,730 mi² (30,380 km²), approximately.

PERIOD OF RECORD.--October 1962 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,157.96 ft (352.946 m) above mean sea level (levels by Corps of Engineers). Prior to Mar. 27, 1963, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--12 years, 694 ft³/s (19.65 m³/s), 502,800 acre-ft/yr (620 km³/yr).

EXTREMES.--Current year: Maximum discharge, 26,400 ft³/s (748 m³/s) Oct. 12, gage height, 30.91 ft (9.421 m); minimum, 182 ft³/s (5.15 m³/s) Aug. 4, 5.

Period of record: Maximum discharge, 26,400 ft³/s (748 m³/s) Oct. 12, 1973, gage height, 30.91 ft (9.421 m); minimum, 18 ft³/s (0.51 m³/s) July 16, 17, 1966.

REMARKS.--Records good except those for winter periods, which are poor. Flow moderately regulated by Kanopolis Lake 99.8 mi (161 km) upstream (see sta 06865000) and slightly regulated by Wilson Lake (see sta 06868100). Records of chemical analyses, water temperature and specific conductance for the water year 1974 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	11,400	2,740	2,690	1,930	2,920	1,290	612	2,050	2,550	535	216	344
2	8,260	2,750	2,950	1,800	3,210	1,080	598	1,600	3,160	502	202	343
3	6,470	2,740	3,100	1,600	3,420	1,030	588	1,470	3,700	550	195	287
4	4,700	2,750	3,170	1,400	3,460	989	591	1,670	3,500	573	188	269
5	2,820	2,730	3,970	1,350	3,460	956	590	1,660	3,060	575	185	262
6	2,690	2,710	3,810	1,300	3,380	922	589	1,630	2,940	557	218	265
7	2,900	2,710	3,140	1,250	3,340	911	593	1,600	3,440	548	237	273
8	2,840	2,700	3,370	1,200	3,340	917	599	1,560	2,490	536	247	261
9	2,770	2,690	3,450	1,200	2,400	1,090	597	1,550	2,620	520	259	250
10	3,010	2,680	3,800	1,200	1,960	1,080	595	2,870	2,900	507	274	246
11	12,800	2,670	3,650	1,200	2,050	1,480	746	4,030	2,510	494	256	243
12	25,000	2,700	3,410	1,200	2,110	1,560	976	3,210	2,660	490	248	242
13	19,600	2,900	3,310	1,200	2,080	1,170	1,220	1,860	2,970	479	240	234
14	14,900	3,040	3,250	1,300	2,050	1,000	1,200	1,590	2,940	468	261	226
15	10,600	3,070	3,150	1,500	2,020	933	1,150	1,220	2,870	495	361	385
16	8,650	3,040	3,080	1,920	2,010	876	1,100	1,050	2,780	472	449	1,270
17	7,590	3,040	3,040	2,290	2,000	822	1,080	947	2,710	450	443	1,360
18	6,270	3,030	3,030	3,050	1,980	773	1,050	956	2,650	435	498	1,380
19	4,240	3,040	2,980	3,180	1,970	740	1,050	3,580	2,700	418	693	1,390
20	2,940	3,070	2,930	2,860	1,960	716	1,650	10,800	2,750	408	725	1,350
21	2,840	3,410	2,900	2,730	2,090	694	4,050	11,300	2,720	404	632	1,220
22	3,140	3,590	2,890	2,680	2,330	680	4,200	3,880	2,640	398	607	947
23	3,120	3,560	2,820	2,580	2,630	665	1,990	2,000	1,760	387	607	731
24	3,070	4,010	3,270	2,370	2,720	661	1,460	2,160	1,140	374	579	700
25	3,010	4,370	5,680	2,480	2,560	653	1,300	2,830	1,040	371	579	688
26	2,980	4,340	5,230	2,620	2,580	655	1,310	3,130	980	370	708	688
27	2,970	3,800	3,610	2,720	2,560	654	1,280	5,650	916	368	624	680
28	2,810	3,170	3,030	2,300	2,000	658	1,270	4,040	767	368	548	672
29	2,270	2,840	2,800	1,890	-----	643	1,940	2,670	702	339	531	668
30	2,130	2,720	2,530	2,270	-----	638	2,230	2,120	595	271	502	665
31	2,420	-----	2,040	2,880	-----	629	-----	2,170	-----	234	341	-----
TOTAL	191,210	92,610	102,080	61,450	70,590	27,565	38,204	88,853	71,160	13,896	12,653	18,539
MEAN	6,168	3,087	3,293	1,982	2,521	889	1,273	2,866	2,372	448	408	618
MAX	25,000	4,370	5,680	3,180	3,460	1,560	4,200	11,300	3,700	575	725	1,390
MIN	2,130	2,670	2,040	1,200	1,960	629	588	947	595	234	185	226
AC-FT	379,300	183,700	202,500	121,900	140,000	54,680	75,780	176,200	141,100	27,560	25,100	36,770
CAL YR 1973	TOTAL 1,107,705 MEAN 3,035 MAX 25,000 MIN 150 AC-FT 2,197,000											
WTR YR 1974	TOTAL 788,810 MEAN 2,161 MAX 25,000 MIN 185 AC-FT 1,565,000											

PEAK DISCHARGE (REGULATED) ABOVE 3,500 CFS

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
10-12	0400	30.91	26,400	12-25	2100	23.29	6,270	05-27	1500	23.00	6,100
11-25	2300	19.39	4,460	04-22	0100	21.27	5,210	06-03	0600	17.61	3,740
12-05	2200	19.15	4,360	05-11	1700	18.77	4,210	06-07	1200	17.20	3,580
12-10	1600	17.87	3,850	05-21	0300	28.51	13,600				

KANSAS RIVER BASIN

47

06871000 NORTH FORK SOLOMON RIVER AT GLADE, KS

LOCATION.--Lat 39°40'40", long 99°18'30", in NW¼SW¼ sec.25, T.4 S., R.18 W., Phillips County, at downstream side of bridge on U.S. Highway 183, 0.5 mi (0.8 km) south of Glade.

DRAINAGE AREA.--849 mi² (2,200 km²).

PERIOD OF RECORD.--October 1952 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,754.04 ft (534.631 m) above mean sea level. Prior to June 16, 1960, at datum 2.00 ft (0.610 m) higher.

AVERAGE DISCHARGE.--22 years, 33.1 ft³/s (0.937 m³/s), 23,980 acre-ft/yr (29.6 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 280 ft³/s (7.93 m³/s) May 25, gage height, 5.10 ft (1.554 m); no flow many days.

Period of record: Maximum discharge, 23,300 ft³/s (660 m³/s) June 16, 1957, gage height, 16.55 ft (5.044 m); no flow at times in each year.

REMARKS.--Records good except those for winter periods, which are poor. Records of chemical analyses for the water year 1974 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	5.6	10	9.0	30	24	18	19	10	3.6	0	
2	9.0	5.8	10	8.0	25	24	18	19	9.0	2.6	0	
3	6.8	6.0	10	7.0	20	22	18	17	8.7	1.7	0	
4	5.2	6.2	10	7.0	17	22	24	17	7.4	1.2	0	
5	6.1	6.4	10	7.0	15	21	27	17	9.1	.95	0	
6	6.4	6.6	10	7.0	14	21	28	17	14	.25	0	
7	5.9	6.8	11	7.0	13	22	30	17	20	0	0	
8	5.6	7.0	12	7.0	15	22	30	16	46	0	0	
9	5.6	7.2	13	7.0	25	22	29	16	70	0	0	
10	31	7.4	15	7.0	38	22	27	17	43	0	0	
11	86	7.6	18	7.0	35	23	26	19	56	0	.67	
12	46	7.7	21	7.0	35	24	25	19	50	0	1.8	
13	18	7.7	19	7.0	34	24	30	18	39	0	.22	
14	11	7.7	16	7.0	32	24	37	15	65	0	0	
15	9.0	7.1	15	7.0	30	24	34	14	47	0	0	
16	7.4	7.0	15	8.0	29	21	31	13	35	0	0	
17	7.0	7.0	15	10	29	21	30	13	27	0	.37	
18	6.7	7.0	13	20	28	21	29	13	22	0	.14	
19	6.4	8.0	11	40	27	21	27	13	19	0	0	
20	6.2	15	11	80	27	21	27	13	16	0	0	
21	6.2	11	11	124	27	19	27	12	13	0	0	
22	5.7	14	12	110	27	19	25	10	10	0	0	
23	5.4	14	13	117	27	19	24	9.7	9.0	0	0	
24	5.6	12	14	122	20	21	23	9.3	8.4	0	0	
25	5.1	12	13	103	27	22	22	53	7.7	0	0	
26	5.1	11	12	100	25	21	21	124	7.0	0	0	
27	5.1	11	11	91	26	21	21	30	6.2	0	0	
28	5.1	11	10	79	25	21	21	19	5.6	0	0	
29	5.2	10	10	81	-----	20	19	14	4.8	0	0	
30	5.4	10	10	72	-----	19	19	13	4.0	0	0	
31	5.4	-----	10	40	-----	19	-----	10	-----	0	0	-----
TOTAL	358.6	262.8	391	1,305.0	722	667	767	626.0	688.9	10.30	3.20	0
MEAN	11.6	8.76	12.6	42.1	25.8	21.5	25.6	20.2	23.0	.33	.10	0
MAX	86	15	21	124	38	24	37	124	70	3.6	1.8	0
MIN	5.1	5.6	10	7.0	13	19	18	9.3	4.0	0	0	0
AC-FT	711	521	776	2,590	1,430	1,320	1,520	1,240	1,370	20	6.3	0

CAL YR 1973 TOTAL 5,003.77 MEAN 13.7 MAX 86 MIN 0 AC-FT 9,920
WTR YR 1974 TOTAL 5,801.80 MEAN 15.9 MAX 124 MIN 0 AC-FT 11,510

PEAK DISCHARGE (BASE, 2,000 CFS).--NO PEAK ABOVE BASE.

KANSAS RIVER BASIN

06871500 BOW CREEK NEAR STOCKTON, KS

LOCATION.--Lat 39°33'46", long 99°17'04", in SW¼NW¼ sec.1, T.6 S., R.18 W., Rooks County, at downstream side of bridge on U.S. Highway 183, 8.5 mi (13.7 km) north of Stockton.

DRAINAGE AREA.--341 mi² (883 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 1,801.80 ft (549.189 m) above mean sea level. Prior to June 28, 1951, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--23 years, 14.7 ft³/s (0.416 m³/s), 10,650 acre-ft/yr (13.1 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 856 ft³/s (24.2 m³/s) Oct. 10, gage height, 7.72 ft (2.353 m); minimum, 2.0 ft³/s (0.057 m³/s) July 27, Sept. 10, 11.

Period of record: Maximum discharge, 12,900 ft³/s (365 m³/s) July 12, 1951, gage height, 13.6 ft (4.15 m), from rating curve extended above 5,900 ft³/s (167 m³/s) on basis of contracted-opening measurement of peak flow; no flow at times.

REMARKS.--Records good except those for winter periods, 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	24	14	13	14	19	15	14	14	8.7	6.3	3.1	2.6
2	16	14	13	13	18	15	14	14	8.5	5.3	3.1	2.9
3	11	13	13	12	15	15	17	14	8.4	5.0	2.9	2.8
4	9.1	13	12	12	13	15	18	14	8.2	4.9	2.8	2.7
5	8.4	13	11	12	12	15	20	14	8.0	4.9	3.6	2.5
6	7.8	13	11	12	12	15	23	14	9.7	4.7	4.2	2.6
7	7.8	12	12	12	12	15	24	13	10	4.2	3.8	2.6
8	7.6	13	13	13	14	15	21	13	18	4.1	3.7	2.4
9	7.7	12	14	13	17	15	19	13	56	4.1	4.3	2.3
10	219	12	14	13	19	16	19	14	26	4.0	4.1	2.2
11	237	12	14	13	19	18	18	14	15	3.7	3.8	2.2
12	69	11	15	13	19	18	18	13	11	3.6	3.6	2.6
13	24	11	16	14	18	17	19	13	46	3.5	3.3	2.7
14	18	11	14	15	18	17	23	12	21	3.4	3.1	2.7
15	16	11	13	15	17	16	20	12	14	3.3	3.1	2.7
16	16	10	12	17	16	16	19	12	11	3.2	3.3	2.7
17	16	10	12	20	16	16	18	12	10	2.9	3.3	2.7
18	16	10	11	25	16	16	18	12	9.6	2.7	3.2	2.6
19	17	12	11	40	16	16	17	12	9.2	2.7	3.0	2.4
20	16	29	11	47	16	16	19	11	8.6	2.6	2.6	2.4
21	16	18	11	58	16	15	18	11	7.9	2.6	2.6	2.4
22	16	15	11	30	15	14	17	10	7.6	2.7	3.0	2.5
23	16	14	11	22	15	15	16	10	7.4	2.8	2.8	2.4
24	15	13	12	21	15	14	16	9.9	7.5	2.7	2.7	2.5
25	15	13	13	20	15	15	16	14	7.2	2.7	2.6	2.6
26	14	14	14	23	16	15	16	13	7.0	2.6	2.4	2.5
27	15	15	15	21	16	15	16	11	6.8	2.3	2.3	2.4
28	14	14	15	20	15	15	15	10	6.7	2.4	3.0	2.5
29	14	13	15	20	-----	15	15	9.9	6.7	10	2.8	2.5
30	14	13	15	20	-----	14	15	9.3	6.4	4.0	2.6	2.5
31	14	-----	15	19	-----	14	-----	8.8	-----	3.0	2.5	-----
TOTAL	926.4	398	402	619	445	478	538	376.9	388.1	116.9	97.2	76.1
MEAN	29.9	13.3	13.0	20.0	15.9	15.4	17.9	12.2	12.9	3.77	3.14	2.54
MAX	237	29	16	58	19	18	24	14	56	10	4.3	2.9
MIN	7.6	10	11	12	12	14	14	8.8	6.4	2.3	2.3	2.2
AC-FT	1,840	789	797	1,230	883	948	1,070	748	770	232	193	151

CAL YR 1973 TOTAL 5,274.2 MEAN 14.4 MAX 237 MIN 1.5 AC-FT 10,460
WTR YR 1974 TOTAL 4,861.6 MEAN 13.3 MAX 237 MIN 2.2 AC-FT 9,640

PEAK DISCHARGE (BASE, 600 CFS)

DATE	TIME	G.HT.	DISCHARGE
10-10	0300	7.72	856

06871700 KIRWIN RESERVOIR AT KIRWIN, KS

LOCATION.--Lat 39°39'49", long 99°07'29", in SE¼NE¼ sec.33, T.4 S., R.16 W., Phillips County, in control-house structure at outlet works of Kirwin dam on North Fork Solomon River, 0.5 mi (0.8 km) south of Kirwin, 1.6 mi (2.6 km) upstream from Deer Creek, and at mile 67.8 (109.1 km).

DRAINAGE AREA.--1,367 mi² (3,541 km²).

PERIOD OF RECORD.--September 1955 to current year. Monthly records only prior to October 1956.

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (levels by Bureau of Reclamation). Prior to Aug. 7, 1957, nonrecording gages at same site and datum.

EXTREMES.--Current year: Maximum elevation, 1,718.42 ft (523.774 m) June 13-15, contents, 53,190 acre-ft (65.6 hm³); minimum, 1,710.08 ft (521.232 m) Sept. 29, 30, contents, 29,660 acre-ft (36.6 hm³).

Period of record: Maximum elevation, 1,732.15 ft (527.959 m) June 10, 1961, contents, 114,900 acre-ft (142 hm³); minimum elevation since first filling of irrigation pool, 1,710.08 ft (521.232 m) Sept. 29, 30, 1974, contents, 29,660 acre-ft (36.6 hm³).

REMARKS.--Reservoir is formed by compacted earthfill dam. Storage began Sept. 19, 1955. Total capacity, 512,000 acre-ft (633 hm³), consisting of the following: Dead storage, 6,400 acre-ft (7.89 hm³) below elevation 1,693.0 ft (516.03 m), sill of trashrack structure; irrigation pool, 93,300 acre-ft (115 hm³) between elevations 1,693.0 ft (516.03 m) and 1,729.3 ft (527.09 m); flood control pool, 214,900 acre-ft (265 hm³) between elevations 1,729.3 ft (527.09 m) and 1,757.3 ft (535.63 m), crest of uncontrolled spillway; and uncontrolled storage, 198,400 acre-ft (245 hm³) between elevations 1,757.3 ft (535.63 m) and 1,773.0 ft (540.41 m). Reservoir is used to store water for flood control and irrigation in Kirwin Unit of 11,500 acres (4,650 hm³), Missouri River Basin project. Figures given herein represent total contents.

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

1,710	29,490	1,716	45,160
1,712	34,000	1,718	51,730
1,714	39,220	1,720	58,930

ELEVATION, IN FEET, AT 2400, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,712.12	1,713.29	1,713.86	1,714.50	1,715.47	1,716.27	1,716.95	1,717.77	1,718.18	1,716.86	1,712.28	1,710.41
2	1,712.16	1,713.31	1,713.88	1,714.52	1,715.50	1,716.33	1,716.95	1,717.77	1,718.17	1,716.73	1,712.10	1,710.41
3	1,712.18	1,713.28	1,713.90	1,714.54	1,715.53	1,716.34	1,717.06	1,717.77	1,718.15	1,716.58	1,711.89	1,710.40
4	1,712.18	1,713.28	1,713.98	1,714.55	1,715.59	1,716.36	1,717.07	1,717.78	1,718.14	1,716.46	1,711.72	1,710.38
5	1,712.20	1,713.30	1,713.98	1,714.58	1,715.61	1,716.36	1,717.09	1,717.78	1,718.18	1,716.31	1,711.62	1,710.37
6	1,712.20	1,713.33	1,714.00	1,714.60	1,715.63	1,716.37	1,717.14	1,717.81	1,718.15	1,716.18	1,711.48	1,710.39
7	1,712.21	1,713.34	1,714.02	1,714.62	1,715.64	1,716.40	1,717.18	1,717.80	1,718.15	1,716.04	1,711.33	1,710.38
8	1,712.22	1,713.34	1,714.05	1,714.62	1,715.68	1,716.45	1,717.20	1,717.80	1,718.33	1,715.89	1,711.23	1,710.37
9	1,712.36	1,713.36	1,714.06	1,714.64	1,715.71	1,716.43	1,717.22	1,717.81	1,718.37	1,715.75	1,711.13	1,710.36
10	1,712.53	1,713.37	1,714.08	1,714.65	1,715.74	1,716.48	1,717.25	1,717.90	1,718.38	1,715.63	1,711.02	1,710.35
11	1,712.86	1,713.38	1,714.11	1,714.67	1,715.79	1,716.53	1,717.31	1,717.90	1,718.40	1,715.48	1,710.91	1,710.33
12	1,713.02	1,713.40	1,714.13	1,714.68	1,715.83	1,716.53	1,717.30	1,717.88	1,718.41	1,715.35	1,710.80	1,710.30
13	1,713.09	1,713.41	1,714.15	1,714.71	1,715.86	1,716.58	1,717.39	1,717.89	1,718.42	1,715.20	1,710.71	1,710.28
14	1,713.13	1,713.42	1,714.19	1,714.74	1,715.88	1,716.59	1,717.41	1,717.88	1,718.42	1,715.05	1,710.63	1,710.29
15	1,713.15	1,713.44	1,714.19	1,714.75	1,715.92	1,716.61	1,717.43	1,717.86	1,718.40	1,714.90	1,710.60	1,710.29
16	1,713.16	1,713.44	1,714.20	1,714.76	1,715.94	1,716.62	1,717.45	1,717.86	1,718.39	1,714.76	1,710.58	1,710.28
17	1,713.19	1,713.46	1,714.22	1,714.78	1,715.99	1,716.65	1,717.53	1,717.88	1,718.35	1,714.62	1,710.60	1,710.27
18	1,713.20	1,713.46	1,714.23	1,714.80	1,716.02	1,716.67	1,717.52	1,717.93	1,718.34	1,714.45	1,710.60	1,710.27
19	1,713.21	1,713.54	1,714.24	1,714.85	1,716.04	1,716.69	1,717.60	1,717.95	1,718.30	1,714.32	1,710.59	1,710.23
20	1,713.23	1,713.65	1,714.25	1,714.89	1,716.07	1,716.70	1,717.64	1,717.95	1,718.23	1,714.16	1,710.55	1,710.21
21	1,713.23	1,713.66	1,714.26	1,714.95	1,716.09	1,716.72	1,717.65	1,717.93	1,718.14	1,714.01	1,710.54	1,710.22
22	1,713.25	1,713.67	1,714.26	1,715.00	1,716.10	1,716.72	1,717.65	1,717.93	1,718.02	1,713.86	1,710.54	1,710.20
23	1,713.31	1,713.71	1,714.28	1,715.04	1,716.11	1,716.76	1,717.64	1,717.90	1,717.91	1,713.70	1,710.53	1,710.18
24	1,713.27	1,713.72	1,714.35	1,715.09	1,716.11	1,716.78	1,717.69	1,717.95	1,717.80	1,713.53	1,710.53	1,710.18
25	1,713.28	1,713.75	1,714.37	1,715.14	1,716.14	1,716.80	1,717.70	1,718.11	1,717.67	1,713.41	1,710.52	1,710.17
26	1,713.27	1,713.78	1,714.40	1,715.19	1,716.18	1,716.82	1,717.75	1,718.16	1,717.53	1,713.25	1,710.50	1,710.17
27	1,713.28	1,713.81	1,714.42	1,715.24	1,716.21	1,716.84	1,717.74	1,718.20	1,717.38	1,713.08	1,710.49	1,710.12
28	1,713.28	1,713.83	1,714.43	1,715.29	1,716.24	1,716.86	1,717.74	1,718.20	1,717.26	1,712.92	1,710.49	1,710.12
29	1,713.28	1,713.84	1,714.44	1,715.36	-----	1,716.87	1,717.75	1,718.20	1,717.16	1,712.76	1,710.46	1,710.08
30	1,713.29	1,713.84	1,714.46	1,715.38	-----	1,716.90	1,717.76	1,718.19	1,717.03	1,712.60	1,710.44	1,710.08
31	1,713.32	-----	1,714.48	1,715.42	-----	1,716.92	-----	1,718.18	-----	1,712.40	1,710.42	-----
MEAN	1,712.89	1,713.51	1,714.19	1,714.86	1,715.88	1,716.61	1,717.43	1,717.93	1,718.06	1,714.72	1,710.90	1,710.27
MAX	1,713.32	1,713.84	1,714.48	1,715.42	1,716.24	1,716.92	1,717.76	1,718.20	1,718.42	1,716.86	1,712.28	1,710.41
MIN	1,712.12	1,713.28	1,713.86	1,714.50	1,715.47	1,716.27	1,716.95	1,717.77	1,717.03	1,712.40	1,710.42	1,710.08
(+)	37,360	38,780	40,580	40,370	45,910	48,110	50,910	52,350	48,470	34,980	30,380	29,660
(#)	+3,220	+1,420	+1,800	-210	+5,540	+2,200	+2,800	+1,440	-3,880	-13,490	-4,600	-720

CAL YR 1973 (#) +1,220

WTR YR 1974 (#) -4,480

+ CONTENTS, IN ACRE-FEET, AT END OF MONTH.

* CHANGE IN CONTENTS, IN ACRE-FEET.

0912-

LOCATION.--Lat 39°39'36", long 99°06'55", in two channels, in SE¼ sec.33 (river outlet gage) and SW¼ sec.34 (spillway gage), T.4 S., R.16 W., Phillips County, 200 ft (61 m) and 600 ft (183 m), respectively, downstream from toe of Kirwin Dam, 0.5 mi (0.8 km) and 0.8 mi (1.3 km), respectively, south of Kirwin, 1.3 mi (2.1 km) upstream from Deer Creek, and at mile 67.2 (108.1 km).

PERIOD OF RECORD.--August 1919 to June 1925, August 1928 to June 1932, December 1941 to current year.

GAGE.--Water-stage recorder and concrete control on river outlet channel. Datum of gage is 1,659.50 ft (505.816 m) above mean sea level (Bureau of Reclamation bench mark). Water-stage recorder on spillway channel. Datum of spillway channel gage is 1,650.81 ft (503.167 m) above mean sea level (Bureau of Reclamation bench mark). See MSP 1919 for history of changes prior to Jan. 30, 1957.

EXTREMES.--Current year: Maximum discharge, 5.2 ft³/s (0.15 m³/s) Oct. 11; no flow for part of each day Nov. 15, 16, Dec. 3, 4.
Period of record: Maximum discharge, 24,000 ft³/s (680 m³/s) Sept. 18, 1919, gage height, 22.5 ft (6.86 m), site and datum then in use, from rating curve extended above 10,000 ft³/s (283 m³/s) on basis of slope-area and contracted-opening measurements at gage height 22.3 ft (6.80 m); maximum discharge since construction of Kirwin Dam in 1955, 1,200 ft³/s (34.0 m³/s) Nov. 16, 1966; no flow at times in 1943, 1948, 1955-67, 1972-74.

Flood in June 1915 reached a stage of about 27 ft (8.2 m), site and datum in use prior to July 1955, from information by local residents.

REMARKS.--Records poor. Flow completely regulated by Kirwin Reservoir since 1955 (see sta 06871700). Figures of flow do not include diversion immediately above station into Kirwin Main Canal. Separate records are collected and computed for a river outlet channel and for spillway channel. Figures given herein represent combined discharge. Records of chemical analyses for the water year 1974 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1210: 1919(M). WSP 1440: 1919, 1929, 1931(M), 1942(P), 1944-47, 1948(M), drainage area (present and former sites).

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.77	.12	.08	.76	1.0	.45	.02	.03	.02	.07	.10	.04
2	.67	.06	.10	.62	1.0	.31	.16	.03	.02	.06	.10	.05
3	.77	.07	.05	.62	1.0	.31	.45	.03	.02	.06	.10	.04
4	.52	.08	.14	.76	1.0	.31	1.4	.03	.02	.06	.10	.03
5	.46	.08	.56	.76	1.2	.31	1.6	.03	.02	.06	.10	.03
6	.41	.08	.65	.90	1.0	.31	1.0	.03	.45	.06	.12	.03
7	.36	.07	.49	.90	1.2	.45	1.0	.03	.17	.06	.12	.04
8	.31	.07	.45	1.0	1.8	.31	1.0	.03	1.2	.07	.12	.03
9	.43	.07	.66	1.0	2.0	.31	1.0	.03	2.1	.07	.14	.03
10	2.4	.07	.66	1.2	1.8	.45	.72	.05	1.0	.07	.14	.03
11	3.4	.07	.63	1.2	1.6	.73	.72	.46	.62	.07	.14	.03
12	2.3	.05	.63	1.2	1.4	.77	.58	.32	.48	.07	.12	.03
13	1.4	.05	.63	1.4	1.3	.78	1.1	.03	.34	.07	.12	.03
14	.76	.07	.49	1.6	1.0	.62	2.0	.03	.20	.07	.12	.03
15	.62	.09	.49	2.2	1.0	.59	1.6	.03	.06	.07	.14	.03
16	.35	.02	.49	2.4	1.0	.45	1.1	.02	.06	.07	1.7	.03
17	.07	.04	.49	2.8	1.0	.45	1.0	.02	.06	.07	.14	.03
18	.05	.03	.63	2.5	.88	.45	.86	.02	.06	.07	.12	.02
19	.05	.11	.63	2.5	.73	.45	.72	.02	.06	.07	.10	.03
20	.05	1.2	1.0	2.5	.45	.45	1.0	.02	.06	.07	.10	.03
21	.05	1.2	1.4	2.3	.46	.45	1.0	.02	.06	.07	.08	.03
22	.05	.88	1.9	2.1	.32	.31	.59	.02	.06	.07	.08	.03
23	.06	.48	2.1	1.9	.31	.17	.45	.02	.06	.07	.08	.03
24	.06	.47	2.1	1.9	.45	.45	.31	.02	.06	.07	.08	.03
25	.19	.47	2.1	1.8	.59	.59	.17	.75	.07	.07	.07	.02
26	.16	.47	1.7	2.0	.73	.45	.03	.59	.07	.07	.07	.02
27	.16	.47	1.4	1.8	.73	.31	.03	.18	.07	.07	.07	.02
28	.19	.20	1.2	1.8	.59	.17	.03	.02	.07	.07	.06	.02
29	.16	.20	.90	1.4	-----	.17	.03	.02	.07	.07	.06	.02
30	.19	.22	.76	1.2	-----	.03	.03	.02	.07	.07	.06	.02
31	.22	-----	.62	1.2	-----	.03	-----	.02	-----	.08	.05	-----
TOTAL	17.64	7.56	26.13	48.22	27.54	12.39	21.70	2.97	7.68	2.12	4.70	.88
MEAN	.57	.25	.84	1.56	.98	.40	.72	.096	.26	.068	.15	.029
MAX	3.4	1.2	2.1	2.8	2.0	.78	2.0	.75	2.1	.08	1.7	.05
MIN	.05	.02	.05	.62	.31	.03	.02	.02	.02	.06	.05	.02
AC-FT	35	15	52	96	55	25	43	5.9	15	4.2	9.3	1.7

CAL YR 1973	TOTAL	85.60	MEAN	.23	MAX	3.4	MIN	0	AC-FT	170
WTR YR 1974	TOTAL	179.53	MEAN	.49	MAX	3.4	MIN	.02	AC-FT	356

KANSAS RIVER BASIN

51

06871900 DEER CREEK NEAR PHILLIPSBURG, KS

LOCATION.--Lat 39°46'50", long 99°25'20" in NW¼NW¼ sec.24, T.3 S., R.19 W., Phillips County, at highway bridge 5.0 mi (8.0 km) west of Phillipsburg.

DRAINAGE AREA.--65.0 mi² (168.4 km²).

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

GAGE.--Water-stage recorder. Altitude of gage is 1,950 ft (594 m), from topographic map.

AVERAGE DISCHARGE.--8 years, 3.48 ft³/s (0.0986 m³/s), 2,520 acre-ft/yr (3.11 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 806 ft³/s (22.8 m³/s) May 18, gage height, 9.12 ft (2.780 m); no flow many days.

Period of record: Maximum discharge, 6,490 ft³/s (184 m³/s) July 19, 1969, gage height, 20.43 ft (6.227 m), from rating curve extended above 650 ft³/s (18.4 m³/s) on basis of slope-conveyance study; no flow at times.

REMARKS.--Records good except those for winter periods, 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	1.4	.71	1.1	1.0	2.2	1.8	1.6	1.3	2.1		0	
2	.42	.63	1.1	1.0	2.0	1.9	1.6	1.3	2.1		0	
3	.26	.57	1.0	1.0	2.0	1.9	7.5	1.6	2.1		0	
4	.06	.56	1.9	1.0	2.0	1.8	6.5	1.5	2.2		0	
5	0	.59	2.0	1.0	2.1	1.7	4.1	1.3	12		0	
6	0	.73	1.4	1.1	2.0	1.8	3.4	1.3	24		0	
7	0	.84	1.6	1.2	2.0	1.8	3.2	1.3	3.1		0	
8	0	.84	2.0	1.3	2.0	1.8	2.7	1.2	40		.06	
9	4.6	.77	1.8	1.4	2.0	1.8	2.2	1.3	82		0	
10	1.6	.75	1.4	1.5	2.3	1.8	2.1	1.8	1.8		0	
11	52	.82	1.5	1.5	2.6	2.4	2.0	2.2	.92		0	
12	22	.85	1.5	1.5	2.9	2.2	1.8	1.8	.57		0	
13	1.8	.78	1.5	1.5	2.5	2.0	2.5	1.6	.31		0	
14	.56	.78	1.5	1.5	1.9	1.9	3.1	1.3	.21		0	
15	.42	.71	1.5	3.0	1.8	1.9	2.3	1.3	.13		0	
16	.34	.61	1.5	8.6	1.9	1.9	1.6	1.4	.07		10	
17	.30	.63	1.5	19	2.0	1.9	1.6	1.5	.09		.17	
18	.31	.67	1.5	22	2.0	2.0	1.6	136	.09		0	
19	.30	2.7	1.5	51	1.9	1.9	1.5	15	.07		0	
20	.30	46	1.5	38	1.9	1.7	1.9	4.8	.06		0	
21	.30	31	1.5	21	1.7	1.5	1.9	3.5	.03		0	
22	.32	6.3	1.5	11	1.5	1.5	1.4	3.0	.01		0	
23	.34	3.0	1.5	5.1	1.5	1.5	1.3	2.9	0		0	
24	.39	2.2	1.5	6.3	1.5	1.5	1.3	2.7	0		0	
25	.49	2.3	1.5	6.1	1.5	1.5	1.4	3.3	0		0	
26	.50	1.8	1.5	6.1	1.5	1.6	1.4	3.0	0		0	
27	.57	1.7	1.5	4.4	1.6	1.7	1.4	2.7	0		0	
28	.56	1.8	1.5	4.1	1.7	1.7	1.3	2.5	0		0	
29	.58	1.3	1.5	3.8	-----	1.6	1.3	2.4	0		0	
30	.58	1.1	1.5	3.8	-----	1.5	1.3	2.3	0		0	
31	.60	-----	1.0	3.9	-----	1.6	-----	2.1	-----		0	-----
TOTAL	91.90	114.04	46.3	234.7	54.5	55.1	68.8	211.2	173.96	0	10.23	0
MEAN	2.96	3.80	1.49	7.57	1.95	1.78	2.29	6.81	5.80	0	.33	0
MAX	52	46	2.0	51	2.9	2.4	7.5	136	82	0	10	0
MIN	0	.56	1.0	1.0	1.5	1.5	1.3	1.2	0	0	0	0
AC-FT	182	226	92	466	108	109	136	419	345	0	20	0

CAL YR 1973 TOTAL 983.82 MEAN 2.70 MAX 146 MIN 0 AC-FT 1,950
WTR YR 1974 TOTAL 1,060.73 MEAN 2.91 MAX 136 MIN 0 AC-FT 2,100

PEAK DISCHARGE (BASE, 200 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
05-18	0845	9.12	806	06-09	0130	6.47	294

KANSAS RIVER BASIN

06872500 NORTH FORK SOLOMON RIVER AT PORTIS, KS

LOCATION.--Lat 39°33'15", long 98°41'31", in SW¼SW¼SW¼ sec.5, T.6 S., R.12 W., Osborne County, at downstream side of bridge on U.S. Highway 281, 0.5 mi (0.8 km) south of Portis, and at mile 27.0 (43.4 km).

DRAINAGE AREA.--2,315 mi² (5,996 km²), approximately.

PERIOD OF RECORD.--September 1945 to current year. Prior to Oct. 1, 1964, published as "near Downs".

GAGE.--Water-stage recorder. Datum of gage is 1,490.71 ft (454.368 m) above mean sea level. Prior to Dec. 5, 1946, nonrecording gage and Dec. 5, 1946, to Sept. 30, 1964, water-stage recorder at site 9.0 mi (14.5 km) downstream at datum 30.39 ft (9.263 m) lower.

AVERAGE DISCHARGE.--29 years, 148 ft³/s (4.191 m³/s), 107,200 acre-ft/yr (132 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 6,720 ft³/s (190 m³/s) Oct. 11, gage height, 18.74 ft (5.712 m); minimum, 30 ft³/s (0.85 m³/s) July 19-21.

Period of record: Maximum discharge, 35,700 ft³/s (1,010 m³/s) July 12, 1951, gage height, 30.41 ft (9.269 m), site and datum then in use, from rating curve extended above 21,000 ft³/s (595 m³/s); no flow at times in 1955-56.

Flood of June 15, 1915, reached a stage about 1 ft (0.3 m) higher than that of July 12, 1951, from information by Kansas Highway Commission.

REMARKS.--Records good except those for winter periods, which are poor. Flow partially regulated by Kirwin Reservoir 40.8 mi (65.6 km) upstream beginning Mar. 7, 1955 (see sta 06871700). Records of chemical analyses for the water year 1974 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	342	121	123	76	207	130	104	90	60	53	35	42
2	228	118	120	74	206	126	103	89	60	49	36	42
3	163	114	119	73	199	126	102	88	61	44	36	42
4	126	110	125	72	189	123	103	85	61	45	35	41
5	109	106	120	70	185	120	105	85	59	46	43	38
6	101	105	112	70	167	117	108	84	61	44	52	38
7	97	106	112	68	131	115	111	82	68	38	51	39
8	94	104	117	68	132	115	116	82	80	38	51	39
9	90	103	117	68	152	114	117	81	99	38	55	38
10	2,170	101	116	69	144	116	115	80	513	39	124	38
11	6,030	101	115	70	144	119	120	85	446	39	74	37
12	4,510	98	122	74	146	124	119	83	227	36	53	38
13	1,100	101	122	86	153	125	122	84	168	33	49	37
14	522	100	124	104	153	125	154	82	176	34	507	37
15	318	98	120	112	149	121	165	75	159	34	194	38
16	238	96	109	122	146	119	148	72	118	35	140	38
17	206	94	106	140	144	116	135	72	90	35	108	37
18	186	92	108	150	144	115	125	72	81	32	119	36
19	172	93	93	180	144	113	123	74	76	32	72	36
20	161	140	96	212	141	111	128	80	73	30	60	35
21	154	226	115	346	137	109	129	153	69	31	54	34
22	147	243	108	422	130	107	125	108	65	31	53	33
23	143	184	105	329	125	107	117	91	63	34	53	33
24	137	168	99	266	118	107	109	84	63	32	51	33
25	130	156	94	244	109	108	103	86	61	34	49	34
26	127	147	90	276	122	109	102	158	60	34	48	33
27	126	141	86	328	127	110	100	111	57	32	46	32
28	124	133	82	294	136	109	99	78	51	31	44	33
29	123	121	80	247	-----	109	97	70	52	34	44	33
30	121	125	78	233	-----	106	94	66	51	33	45	32
31	122	-----	76	220	-----	104	-----	62	-----	33	41	-----
TOTAL	18,417	3,752	3,309	5,163	4,180	3,575	3,498	2,692	3,328	1,133	2,422	1,096
MEAN	594	125	107	167	149	115	117	86.8	111	36.5	78.1	36.5
MAX	6,030	243	125	422	207	130	165	158	513	53	507	42
MIN	90	92	76	68	109	104	94	62	51	30	35	32
AC-FT	36,530	7,440	6,560	10,240	8,290	7,090	6,940	5,340	6,600	2,250	4,800	2,170

CAL YR 1973 TOTAL 58,039 MEAN 159 MAX 6,030 MIN 22 AC-FT 115,100
WTR YR 1974 TOTAL 52,565 MEAN 144 MAX 6,030 MIN 30 AC-FT 104,300

PEAK DISCHARGE (REGULATED) ABOVE 1,400 CFS

DATE	TIME	G.H.T.	DISCHARGE
10-11	2000	18.74	6,720

06873000 SOUTH FORK SOLOMON RIVER ABOVE WEBSTER RESERVOIR, KS

LOCATION.--Lat 39°22'26", long 99°34'54", in SW¼NW¼ sec.8, T.8 S., R.20 W., Rooks County, at downstream side of highway bridge, 4.0 mi (6.4 km) north of Damar, 7.0 mi (11 km) downstream from Wild Horse Creek, and 11 mi (18 km) upstream from Webster Dam.

DRAINAGE AREA.--1,040 mi² (2,690 km²), approximately.

PERIOD OF RECORD.--January 1945 to current year. Prior to October 1953, published as "at Webster".

GAGE.--Water-stage recorder. Datum of gage is 1,936.51 ft (590.248 m) above mean sea level (levels by Bureau of Reclamation). Prior to May 17, 1946, nonrecording gage, May 17, 1946, to May 20, 1951, water-stage recorder, and May 21 to Sept. 30, 1951, nonrecording gage, all at site 8.0 mi (13 km) downstream at datum 94.52 ft (28.810 m) lower. Oct. 1, 1951, to May 22, 1952, nonrecording gage at bridge near Stockton, 23 mi (37 km) downstream, at different datum. May 23, 1952, to May 23, 1954, water-stage recorder at site 8.0 mi (13 km) downstream at datum 94.52 ft (28.810 m) lower.

AVERAGE DISCHARGE.--29 years, 72.2 ft³/s (2.045 m³/s), 52,310 acre-ft/yr (64.5 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 1,520 ft³/s (43.0 m³/s) Oct. 9, gage height, 6.98 ft (2.128 m); minimum, 0.10 ft³/s (0.003 m³/s) July 27.

Period of record: Maximum discharge, 55,200 ft³/s (1,560 m³/s) July 12, 1951, gage height, 14.9 ft (4.54 m), from floodmarks, site and datum then in use, from rating curve extended above 11,000 ft³/s (312 m³/s) on basis of slope-area measurement of peak flow; no flow at times in most years.

Maximum flood known, that of July 12, 1951; second highest known, that of June 1908, 13.4 ft (4.08 m), present site and datum, from information obtained from Kansas State Highway Commission.

REMARKS.--Records good. Records of chemical analyses for the water year 1974 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1440: 1945-48, 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	44	20	26	26	52	37	35	34	9.9	5.0	.36	.45
2	30	19	27	24	52	38	36	33	10	4.5	.36	.50
3	24	18	27	22	49	37	37	32	10	3.6	.31	.47
4	19	18	26	21	48	35	40	30	10	3.7	.29	.40
5	16	18	26	21	49	34	49	30	9.9	3.2	.57	.35
6	14	17	23	21	43	35	53	29	11	2.5	.54	.34
7	12	18	24	22	36	35	51	28	12	1.7	.50	.34
8	11	18	30	23	37	35	48	26	19	1.4	.68	.30
9	170	17	35	23	43	35	45	27	62	.97	179	.28
10	504	17	32	23	46	41	45	28	64	.78	71	.30
11	258	17	35	23	50	54	44	28	102	.56	16	.37
12	126	17	37	23	47	50	41	26	127	.49	8.0	.51
13	62	17	37	23	45	44	46	25	98	.34	4.7	.48
14	46	17	37	24	43	42	70	23	66	.38	3.2	.46
15	39	16	35	25	42	41	69	21	52	.38	2.6	.35
16	34	15	31	35	41	39	58	21	44	.33	1.9	.31
17	31	15	30	47	42	38	53	22	39	.30	1.2	.28
18	31	15	34	72	42	39	51	22	36	.28	1.0	.26
19	31	16	25	74	40	38	48	21	32	.26	.88	.22
20	29	31	21	81	40	37	55	20	28	.26	.67	.25
21	28	27	26	79	38	35	53	18	24	.25	.74	.29
22	27	26	28	70	36	37	45	17	20	.27	.80	.26
23	25	24	32	56	37	36	42	15	18	.28	.62	.21
24	24	25	26	60	31	37	40	14	17	.27	.62	.28
25	22	26	27	62	32	40	40	15	14	.31	.50	.37
26	22	28	32	68	38	40	39	15	12	.23	.43	.28
27	22	29	27	65	40	39	38	14	11	.19	.48	.26
28	22	27	31	57	38	39	37	12	8.8	.22	.50	.32
29	21	27	33	56	-----	37	36	12	7.0	.32	.46	.40
30	22	27	31	55	-----	36	34	12	6.2	.27	.39	.30
31	20	-----	27	53	-----	36	-----	10	-----	.25	.43	-----
TOTAL	1,786	622	918	1,334	1,177	1,196	1,378	680	979.8	33.79	299.73	10.19
MEAN	57.6	20.7	29.6	43.0	42.0	38.6	45.9	21.9	32.7	1.09	9.67	.34
MAX	504	31	37	81	52	54	70	34	127	5.0	179	.51
MIN	11	15	21	21	31	34	34	10	6.2	.19	.29	.21
AC-FT	3,540	1,230	1,820	2,650	2,330	2,370	2,730	1,350	1,940	67	595	20

CAL YR 1973 TOTAL 10,947.91 MEAN 30.0 MAX 504 MIN .08 AC-FT 21,720

WTR YR 1974 TOTAL 10,414.51 MEAN 28.5 MAX 504 MIN .19 AC-FT 20,660

PEAK DISCHARGE (BASE, 3,200 CFS).--NO PEAK ABOVE BASE.

KANSAS RIVER BASIN

06873100 WEBSTER RESERVOIR NEAR STOCKTON, KS

LOCATION.--Lat 39°23'29", long 99°25'33", in SW 1/4 sec. 3, T.8 S., R.19 W., Rooks County, on southeast shore near Webster Dam on South Fork Solomon River, 8 mi (12.9 km) west of Stockton, and at mile 92.4 (148.7 km).

DRAINAGE AREA.--1,150 mi² (2,980 km²).

PERIOD OF RECORD.--June 1956 to current year. (Prior to October 1956, monthly records only.)

GAGE.--Water-stage recorder. Prior to July 31, 1968, elevations below 1,873 ft (570.9 m) from mercury-column gage near south end of dam read once daily. Datum of gage is at mean sea level (levels by Bureau of Reclamation).

EXTREMES.--Current year: Maximum elevation, 1,879.64 ft (572.914 m) June 14, contents, 37,900 acre-ft (46.7 hm³); minimum, 1,865.45 ft (568.589 m) Oct. 1, contents, 11,280 acre-ft (13.9 hm³).

Period of record: Maximum elevation, 1,899.66 ft (579.016 m) June 10, 1961, contents, 107,600 acre-ft (133 hm³); minimum since first filling of irrigation pool, 1,857.33 ft (566.114 m) Oct. 23, 24, 1971, contents, 3,210 acre-ft (3.96 hm³).

REMARKS.--Reservoir is formed by compacted earthfill dam. Storage began May 3, 1956. Total capacity, 401,600 acre-ft (495 hm³), consisting of the following: Dead storage, 2,184 acre-ft (2.96 hm³) below elevation 1,855.5 ft (565.56 m), sill of trashrack; irrigation pool, 74,250 acre-ft (91.6 hm³) between elevations 1,855.5 (565.56 m) and 1,892.2 ft (576.75 m); flood control pool, 184,300 acre-ft (227 hm³) between elevations 1,892.2 ft (576.74 m) and 1,923.7 ft (586.34 m); and uncontrolled storage, 140,900 acre-ft (174 hm³) between elevations 1,923.7 ft (586.34 m) and 1,938.0 ft (590.72 m). Reservoir is used to store water for flood control and irrigation in Webster Unit of approximately 8,500 acres (3,440 hm³), Missouri River Basin project. Figures given herein represent total contents.

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

1,864	9,480	1,874	25,410
1,866	12,020	1,876	29,530
1,868	14,900	1,878	33,990
1,870	18,100	1,880	38,790
1,872	21,610		

ELEVATION, IN FEET, AT 2400, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,865.60	1,869.40	1,870.56	1,871.90	1,874.32	1,875.84	1,877.22	1,878.95	1,879.18	1,877.62	1,871.49	1,869.18
2	1,865.69	1,869.43	1,870.62	1,872.00	1,874.40	1,875.90	1,877.27	1,878.99	1,879.15	1,877.43	1,871.29	1,869.19
3	1,865.75	1,869.42	1,870.67	1,872.00	1,874.45	1,875.91	1,877.38	1,879.00	1,879.16	1,877.22	1,871.12	1,869.19
4	1,865.81	1,869.43	1,870.78	1,872.10	1,874.55	1,875.92	1,877.43	1,879.02	1,879.18	1,877.06	1,870.94	1,869.17
5	1,865.82	1,869.46	1,870.82	1,872.20	1,874.58	1,875.98	1,877.51	1,879.05	1,879.20	1,876.89	1,870.84	1,869.14
6	1,865.86	1,869.49	1,870.86	1,872.30	1,874.68	1,876.03	1,877.59	1,879.08	1,879.23	1,876.74	1,870.71	1,869.14
7	1,865.88	1,869.51	1,870.90	1,872.30	1,874.69	1,876.04	1,877.66	1,879.08	1,879.23	1,876.55	1,870.61	1,869.14
8	1,865.92	1,869.54	1,870.95	1,872.37	1,874.76	1,876.12	1,877.75	1,879.08	1,879.41	1,876.34	1,870.51	1,869.12
9	1,866.00	1,869.56	1,871.00	1,872.39	1,874.83	1,876.10	1,877.80	1,879.14	1,879.45	1,876.13	1,870.47	1,869.11
10	1,867.14	1,869.60	1,871.05	1,872.44	1,874.90	1,876.18	1,877.84	1,879.17	1,879.49	1,875.96	1,870.42	1,869.10
11	1,867.95	1,869.64	1,871.11	1,872.45	1,875.02	1,876.28	1,877.92	1,879.20	1,879.53	1,875.75	1,870.36	1,869.07
12	1,868.47	1,869.67	1,871.19	1,872.48	1,874.98	1,876.34	1,877.93	1,879.21	1,879.60	1,875.55	1,870.26	1,869.02
13	1,868.66	1,869.71	1,871.22	1,872.55	1,875.09	1,876.40	1,878.03	1,879.20	1,879.61	1,875.36	1,870.11	1,869.03
14	1,868.79	1,869.74	1,871.29	1,872.59	1,875.09	1,876.49	1,878.13	1,879.20	1,879.62	1,875.15	1,869.98	1,869.02
15	1,868.88	1,869.73	1,871.31	1,872.63	1,875.18	1,876.52	1,878.20	1,879.20	1,879.57	1,874.94	1,869.86	1,869.02
16	1,868.92	1,869.76	1,871.36	1,872.68	1,875.26	1,876.57	1,878.30	1,879.21	1,879.52	1,874.75	1,869.78	1,869.02
17	1,868.99	1,869.78	1,871.43	1,872.74	1,875.31	1,876.64	1,878.38	1,879.19	1,879.48	1,874.54	1,869.68	1,869.00
18	1,869.02	1,869.79	1,871.47	1,872.83	1,875.34	1,876.66	1,878.45	1,879.24	1,879.47	1,874.34	1,869.59	1,869.00
19	1,869.06	1,869.88	1,871.50	1,873.01	1,875.42	1,876.70	1,878.51	1,879.27	1,879.39	1,874.15	1,869.49	1,868.97
20	1,869.11	1,869.99	1,871.54	1,873.18	1,875.45	1,876.71	1,878.60	1,879.27	1,879.28	1,873.96	1,869.39	1,868.95
21	1,869.14	1,870.06	1,871.59	1,873.33	1,875.47	1,876.77	1,878.64	1,879.25	1,879.16	1,873.74	1,869.32	1,868.93
22	1,869.19	1,870.13	1,871.64	1,873.45	1,875.51	1,876.76	1,878.68	1,879.25	1,879.00	1,873.04	1,869.32	1,868.93
23	1,869.23	1,870.16	1,871.67	1,873.57	1,875.53	1,876.84	1,878.72	1,879.24	1,878.87	1,873.33	1,869.31	1,868.90
24	1,869.23	1,870.22	1,871.75	1,873.66	1,875.57	1,876.89	1,878.77	1,879.25	1,878.73	1,873.10	1,869.33	1,868.88
25	1,869.25	1,870.27	1,871.82	1,873.76	1,875.64	1,876.95	1,878.82	1,879.25	1,878.59	1,872.92	1,869.31	1,868.88
26	1,869.27	1,870.33	1,871.86	1,873.85	1,875.69	1,877.00	1,878.87	1,879.26	1,878.43	1,872.71	1,869.30	1,868.88
27	1,869.30	1,870.39	1,871.90	1,873.94	1,875.73	1,877.04	1,878.89	1,879.27	1,878.26	1,872.46	1,869.26	1,868.84
28	1,869.32	1,870.44	1,871.90	1,874.04	1,875.78	1,877.11	1,878.91	1,879.24	1,878.10	1,872.26	1,869.29	1,868.80
29	1,869.35	1,870.50	1,871.90	1,874.12	-----	1,877.10	1,878.91	1,879.25	1,877.95	1,872.07	1,869.27	1,868.79
30	1,869.37	1,870.53	1,871.90	1,874.21	-----	1,877.15	1,878.95	1,879.20	1,877.77	1,871.86	1,869.24	1,868.78
31	1,869.40	-----	1,871.90	1,874.25	-----	1,877.18	-----	1,879.18	-----	1,871.64	1,869.21	-----
MEAN	1,868.04	1,869.85	1,871.34	1,872.95	1,875.12	1,876.52	1,878.20	1,879.17	1,879.09	1,874.70	1,869.97	1,869.01
MAX	1,869.40	1,870.53	1,871.90	1,874.25	1,875.78	1,877.18	1,878.95	1,879.27	1,879.62	1,877.62	1,871.49	1,869.19
MIN	1,865.60	1,869.40	1,870.56	1,871.90	1,874.32	1,875.84	1,877.22	1,878.95	1,877.77	1,871.64	1,869.21	1,868.78
(+)	17,110	19,000	21,430	25,900	29,060	32,130	36,230	36,780	33,460	20,960	16,810	16,120
(#)	+5,830	+1,890	+2,430	+4,470	+3,160	+3,070	+4,100	+550	-3,320	-12,500	-4,150	-690

CAL YR 1973 (#) +12,950

WTR YR 1974 (#) +4,840

+ CONTENTS, IN ACRE-FEET, AT END OF MONTH.

* CHANGE IN CONTENTS, IN ACRE-FEET.

KANSAS RIVER BASIN

55

06873200 SOUTH FORK SOLOMON RIVER BELOW WEBSTER RESERVOIR, KS

LOCATION.--Lat 39°24'34", long 99°24'53", in SW¼SW¼SW¼ sec.26, T.7 S., R.19 W., Rooks County, 0.4 mi (0.6 km) downstream from Webster Dam, 1.1 mi (1.8 km) upstream from Sand Creek, 8.0 mi (13 km) west of Stockton, and at mile 92.0 (148 km).

DRAINAGE AREA.--1,150 mi² (2,980 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 1,828.50 ft (557.327 m) above mean sea level (Bureau of Reclamation bench mark). Prior to Apr. 9, 1963, water-stage recorders in two channels 0.2 mi (0.3 km) upstream at different datums.

AVERAGE DISCHARGE.--18 years, 50.9 ft³/s (1.441 m³/s), 36,880 acre-ft/yr (45.5 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 190 ft³/s (5.38 m³/s) July 9-16; maximum gage height, 2.96 ft (0.902 m) June 26; no flow at times.

Period of record: Maximum discharge, 2,070 ft³/s (58.6 m³/s) July 10, 1962; no flow at times in most years.

REMARKS.--Records fair. Flow completely regulated by Webster Reservoir (see sta 06873100). Records of chemical analyses for the water year 1974 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	.57	.25	.13	.04	.13	.28	.13	.19	.01	160	150	.22
2	.55	.24	.13	.03	.15	.28	.10	.20	0	160	140	.22
3	.50	.24	.14	.02	.15	.30	.15	.19	.01	160	140	.22
4	.42	.23	.18	.01	.15	.31	.19	.19	.02	160	140	.20
5	.37	.22	.15	0	.16	.37	.18	.19	.02	160	130	.18
6	.34	.22	.14	0	.16	.35	.19	.18	.04	160	110	.18
7	.33	.21	.13	0	.18	.34	.18	.18	.02	170	110	.18
8	.29	.19	.14	0	.18	.31	.18	.19	.17	180	90	.16
9	.32	.18	.14	0	.21	.31	.18	.22	.16	190	80	.14
10	.60	.18	.13	0	.21	.42	.18	.21	.13	190	70	.15
11	.70	.18	.15	0	.22	.32	.18	.18	.13	190	70	.15
12	.56	.17	.15	0	.22	.28	.18	.17	10	190	80	.15
13	.51	.16	.15	0	.22	.27	.22	.16	46	190	100	.14
14	.47	.16	.15	.01	.21	.26	.21	.14	50	190	100	.15
15	.43	.15	.15	.02	.21	.25	.19	.14	51	190	80	.14
16	.43	.15	.15	.03	.20	.24	.19	.14	53	190	70	.14
17	.44	.15	.15	.05	.21	.23	.18	.13	55	180	70	.14
18	.39	.15	.15	.06	.21	.23	.19	.13	65	180	70	.12
19	.39	.19	.14	.07	.22	.23	.20	.09	89	180	60	.12
20	.33	.21	.11	.08	.22	.21	.21	.08	107	180	50	.14
21	.30	.19	.10	.09	.23	.20	.21	.08	120	180	20	.14
22	.28	.17	.10	.09	.22	.18	.19	.05	124	180	1.1	.14
23	.28	.16	.10	.09	.24	.18	.19	.05	130	180	.70	.14
24	.28	.16	.11	.09	.24	.17	.21	.06	132	180	.52	.14
25	.30	.16	.10	.09	.26	.15	.21	.08	138	180	.44	.12
26	.32	.16	.10	.09	.25	.15	.19	.06	153	180	.30	.09
27	.32	.15	.10	.09	.27	.15	.17	.04	161	180	.30	.08
28	.27	.15	.10	.09	.27	.15	.19	.02	160	180	.28	.06
29	.25	.15	.09	.10	-----	.14	.18	.01	160	180	.27	.04
30	.25	.15	.07	.10	-----	.12	.17	.02	160	170	.26	.03
31	.25	-----	.05	.13	-----	.12	-----	.01	-----	160	.24	-----
TOTAL	12.04	5.43	3.88	1.47	5.80	7.50	5.52	3.78	1,964.71	5,500	1,934.41	4.22
MEAN	.39	.18	.13	.047	.21	.24	.18	.12	65.5	177	62.4	.14
MAX	.70	.25	.18	.13	.27	.42	.22	.22	161	190	150	.22
MIN	.25	.15	.05	0	.13	.12	.10	.01	0	160	.24	.03
AC-FT	24	11	7.7	2.9	12	15	11	7.5	3,900	10,910	3,840	8.4
CAL YR 1973	TOTAL	6,691.77	MEAN	18.3	MAX	167	MIN	0	AC-FT	13,270		
WTR YR 1974	TOTAL	9,448.76	MEAN	25.9	MAX	190	MIN	0	AC-FT	18,740		

KANSAS RIVER BASIN

06873700 KILL CREEK NEAR BLOOMINGTON, KS

LOCATION.--Lat 39°22'45", long 98°51'33", in NW¼NW¼ sec.11, T.8 S., R.14 W., Osborne County, at downstream side county highway bridge, 9.0 mi (14.5 km) southwest of Bloomington, and 9.6 mi (15.4 km) upstream from mouth.

DRAINAGE AREA.--52 mi² (135 km²), approximately.

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

GAGE.--Water-stage recorder. Altitude of gage is 1,670 ft (509.0 m), from topographic map.

AVERAGE DISCHARGE.--11 years, 2.64 ft³/s (0.0748 m³/s), 1,910 acre-ft/yr (2.36 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 1,010 ft³/s (28.6 m³/s) Oct. 11, gage height, 15.27 ft (4.654 m); no flow July 30 to Aug. 4.

Period of record: Maximum discharge, 4,370 ft³/s (124 m³/s) June 9, 1968, gage height, 18.90 ft (5.761 m), from rating curve extended above 1,000 ft³/s (28 m³/s) on basis of slope-area measurement; no flow most days.

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	4.6	17	5.7	6.0	20	13	8.2	11	5.2	1.8	0	.48
2	4.2	14	5.7	6.0	21	13	8.0	11	5.0	1.7	0	.51
3	3.8	11	6.5	6.0	18	12	8.4	11	5.2	1.6	0	.57
4	3.8	11	8.8	7.0	17	11	9.0	10	5.0	1.5	0	.60
5	3.6	11	9.6	8.0	18	9.9	8.7	9.9	5.1	1.6	.15	.63
6	3.4	12	7.5	8.0	17	9.8	11	9.9	13	1.4	.39	.69
7	3.6	12	7.0	8.0	14	9.8	11	9.7	7.0	1.3	.42	.66
8	3.7	11	8.4	7.0	17	9.5	9.9	9.4	5.2	1.2	.48	.60
9	3.7	9.7	9.2	7.0	17	9.0	9.1	9.7	5.4	.99	.66	.54
10	14	8.8	10	7.0	16	11	8.8	10	5.0	1.0	.81	.48
11	685	9.4	11	7.0	17	20	13	11	4.6	1.0	.48	.42
12	85	8.8	12	7.0	18	21	13	10	4.4	.87	.39	.42
13	26	8.6	14	8.0	18	17	13	9.9	4.4	.81	.36	.42
14	13	8.0	13	10	16	16	19	9.4	4.1	.78	1.8	.42
15	12	6.6	12	14	15	15	22	8.6	3.7	.75	1.2	.39
16	12	5.6	9.5	21	15	13	17	8.7	3.4	.72	.93	.39
17	11	5.7	11	27	15	12	15	8.7	3.4	.69	.90	.42
18	13	6.2	12	41	15	13	14	8.5	3.3	.66	.96	.42
19	15	8.7	6.8	54	15	12	13	8.4	3.1	.60	.93	.36
20	14	48	10	51	14	11	37	7.7	2.7	.54	.78	.33
21	14	33	11	71	13	11	33	7.0	2.4	.51	.72	.33
22	15	17	14	51	11	11	18	6.8	2.3	.51	.66	.33
23	13	13	15	37	11	11	16	6.6	2.2	.51	.63	.30
24	14	12	14	32	11	11	16	6.4	2.2	.51	.63	.30
25	13	12	17	33	12	11	15	6.6	2.2	.48	.66	.30
26	14	11	16	38	15	11	15	6.4	2.2	.48	.60	.30
27	16	11	12	36	14	11	14	6.2	2.1	.45	.60	.27
28	16	7.8	16	30	14	10	13	6.0	2.1	.36	.54	.27
29	17	5.7	16	27	-----	9.5	12	5.8	2.0	.18	.51	.27
30	18	6.0	11	26	-----	8.5	12	5.4	1.9	0	.51	.24
31	17	-----	7.0	24	-----	8.4	-----	5.4	-----	0	.51	-----
TOTAL	1,101.4	361.6	338.7	715.0	434	371.4	432.1	261.1	119.8	25.50	18.21	12.66
MEAN	35.5	12.1	10.9	23.1	15.5	12.0	14.4	8.42	3.99	.82	.59	.42
MAX	685	48	17	71	21	21	37	11	13	1.8	1.8	.69
MIN	3.4	5.6	5.7	6.0	11	8.4	8.0	5.4	1.9	0	0	.24
AC-FT	2,180	717	672	1,420	861	737	857	518	238	51	36	25

CAL YR 1973 TOTAL 4,894.86 MEAN 13.4 MAX 685 MIN 0 AC-FT 9,710
WTR YR 1974 TOTAL 4,191.47 MEAN 11.5 MAX 685 MIN 0 AC-FT 8,310

PEAK DISCHARGE (BASE, 300 CFS)

DATE	TIME	G.HT.	DISCHARGE
10-11	1700	15.27	1,010

06874000 SOUTH FORK SOLOMON RIVER AT OSBORNE, KS

LOCATION.--Lat 39°25'43", long 98°41'40", in SW¼NW¼SW¼ sec.20, T.7 S., R.12 W., Osborne County, at downstream side of bridge on U.S. Highway 281, 0.5 mi (0.8 km) south of Osborne, 0.6 mi (1.0 km) downstream from Covert Creek, and at mile 27.6 (44.4 km).

DRAINAGE AREA.--2,012 mi² (5,211 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 1,505.09 ft (458.751 m) above mean sea level. Prior to Dec. 12, 1946, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--28 years, 137 ft³/s (3.880 m³/s), 99,260 acre-ft/yr (122 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 5,020 ft³/s (142 m³/s) Oct. 12, gage height, 19.27 ft (5.873 m); minimum, 6.4 ft³/s (0.18 m³/s) July 8.

Period of record: Maximum discharge, 81,200 ft³/s (2,300 m³/s) July 13, 1951, gage height, 27.65 ft (8.428 m), from rating curve extended above 16,000 ft³/s (453 m³/s) on basis of slope-area and contracted-opening measurement of peak flow; no flow Aug. 21, 1946, Apr. 21, 1948, Aug. 8, 1968.

REMARKS.--Records good except those for winter periods, which are poor. Flow moderately regulated since 1956 by Webster Reservoir 64.8 mi (104 km) upstream (see sta 06873100). Diversions above station for irrigation. Occasional low water regulation by Osborne city reservoir 1.5 mi (2.4 km) upstream. Records of chemical analyses for the water year 1974 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	528	177	167	122	294	179	138	131	64	25	17	22
2	349	171	167	100	283	176	134	130	60	23	20	23
3	241	163	167	100	272	174	134	128	60	22	22	23
4	191	155	171	100	259	171	139	126	61	20	16	23
5	160	149	177	100	254	163	142	123	61	19	18	22
6	140	147	164	100	249	157	149	123	67	18	24	23
7	126	148	163	100	221	157	168	121	90	17	27	23
8	118	147	184	100	222	157	194	118	81	11	29	22
9	106	145	230	100	230	156	192	114	79	13	33	21
10	142	142	206	100	227	163	179	112	116	13	35	21
11	3,730	139	218	110	226	188	195	125	169	15	34	20
12	4,250	139	226	120	229	219	185	124	117	15	26	21
13	2,060	140	229	130	233	227	174	116	80	15	17	21
14	737	139	229	150	226	209	231	111	51	14	380	21
15	512	136	218	169	215	197	247	106	46	14	132	21
16	407	133	186	178	209	187	259	101	45	11	43	21
17	338	127	177	215	206	178	227	99	43	11	45	21
18	295	126	184	365	206	174	206	98	42	12	44	20
19	263	127	142	478	204	170	195	96	38	14	36	20
20	242	397	113	665	199	166	244	92	35	13	32	20
21	226	348	146	947	194	159	238	89	32	13	33	29
22	225	318	176	920	183	156	229	85	30	12	31	23
23	215	260	186	705	176	155	201	80	29	18	29	21
24	210	242	173	503	166	153	178	77	28	14	26	21
25	197	231	165	438	162	152	166	76	33	16	28	21
26	186	222	191	434	181	147	161	98	33	17	28	21
27	181	216	185	424	181	153	157	91	29	15	26	20
28	179	201	175	385	181	152	151	79	28	13	24	20
29	179	187	176	353	-----	149	145	75	27	15	23	20
30	179	178	165	330	-----	142	130	70	25	15	22	19
31	179	-----	130	314	-----	139	-----	67	-----	16	21	-----
TOTAL	17,091	5,550	5,586	9,355	6,088	5,225	5,488	3,181	1,699	479	1,321	644
MEAN	551	185	180	302	217	169	183	103	56.6	15.5	42.6	21.5
MAX	4,250	397	230	947	294	227	259	131	169	25	380	29
MIN	106	126	113	100	162	139	130	67	25	11	16	19
AC-FT	33,900	11,010	11,080	18,560	12,080	10,360	10,890	6,310	3,370	950	2,620	1,280

CAL YR 1973 TOTAL 70,293.0 MEAN 193 MAX 4,250 MIN 5.0 AC-FT 139,400
WTR YR 1974 TOTAL 61,707.0 MEAN 169 MAX 4,250 MIN 11 AC-FT 122,400

PEAK DISCHARGE (REGULATED) ABOVE 600 CFS

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
10-12	0800	19.27	5,020	01-21	2400	10.43	1,000
11-20	1900	8.69	654	08-14	1500	9.41	696

KANSAS RIVER BASIN

06874200 WACONDA LAKE AT GLEN ELDER, KS

LOCATION.--Lat 39°29'46", long 98°18'48", in SW $\frac{1}{4}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.27, T.6 S., R.9 W., Mitchell County, in outlet structure of Glen Elder Dam on Solomon River, southwest edge of Glen Elder, and at mile 172.4 (277.4 km).

DRAINAGE AREA.--5,076 mi² (13,150 km²).

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

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (levels by Bureau of Reclamation). Prior to June 4, 1969, nonrecording gage at same site and datum.

EXTREMES.--Current year: Maximum elevation, 1,465.26 ft (446.611 m) Oct. 20, contents, 384,300 acre-ft (474 hm³); minimum, 1,454.37 ft (443.292 m) Aug. 5, 8, contents, 226,300 acre-ft (279 hm³).
Period of record: Maximum elevation, 1,465.26 ft (446.611 m) Oct. 20, 1973, contents, 384,300 acre-ft (474 hm³); minimum since pool first filled, 1,434.89 ft (437.354 m) Oct. 4, 12, 1969, contents, 65,440 acre-ft (80.7 hm³).

REMARKS.--Reservoir is formed by compacted earthfill dam. Date of closure was Oct. 18, 1967. Regulated storage began Jan. 1, 1969. Total capacity, 1,128,700 acre-ft (1,390 hm³) consisting of the following: Dead storage, 1,236 acre-ft (1.52 hm³) below elevation 1,407.8 ft (429.10 m); conservation pool, 240,200 acre-ft (296 hm³) between elevations 1,407.8 ft (429.10 m) and 1,455.6 ft (443.67 m); flood control pool, 722,300 acre-ft (891 hm³) between elevations 1,455.6 ft (443.67 m) and 1,488.3 ft (453.63 m); and surcharge pool, 165,000 acre-ft (203 hm³) between elevations 1,488.3 ft (453.63 m) and 1,492.9 ft (455.04 m). Figures given herein represent total contents.

Inflow partially regulated by Webster Reservoir (see sta 06873100) and Kirwin Reservoir (see sta 06871700). Diversions for irrigation above station.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey made in June 1970 by U.S. Bureau of Reclamation)

1,454	221,800	1,462	330,800
1,458	272,800	1,466	397,300

ELEVATION, IN FEET, AT 2400, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,461.03	1,461.74	1,458.17	1,455.56	1,456.80	1,455.28	1,455.37	1,455.54	1,455.49	1,455.41	1,454.52	1,454.69
2	1,461.14	1,461.42	1,458.17	1,455.50	1,456.67	1,455.27	1,455.35	1,455.50	1,455.54	1,455.37	1,454.47	1,454.69
3	1,461.18	1,461.04	1,458.12	1,455.51	1,456.51	1,455.23	1,455.42	1,455.50	1,455.48	1,455.37	1,454.43	1,454.68
4	1,461.15	1,460.72	1,458.14	1,455.56	1,456.38	1,455.25	1,455.37	1,455.50	1,455.50	1,455.34	1,454.40	1,454.68
5	1,460.91	1,460.36	1,458.11	1,455.58	1,456.20	1,455.23	1,455.36	1,455.50	1,455.50	1,455.29	1,454.37	1,454.66
6	1,460.68	1,460.04	1,457.99	1,455.60	1,456.06	1,455.21	1,455.37	1,455.53	1,455.50	1,455.25	1,454.38	1,454.67
7	1,460.45	1,459.68	1,457.89	1,455.62	1,455.90	1,455.23	1,455.37	1,455.54	1,455.49	1,455.25	1,454.38	1,454.67
8	1,460.21	1,459.31	1,457.82	1,455.62	1,455.74	1,455.24	1,455.37	1,455.53	1,455.56	1,455.22	1,454.41	1,454.67
9	1,460.02	1,458.94	1,457.75	1,455.60	1,455.57	1,455.21	1,455.37	1,455.55	1,455.56	1,455.20	1,454.45	1,454.67
10	1,460.25	1,458.58	1,457.66	1,455.60	1,455.40	1,455.28	1,455.40	1,455.63	1,455.58	1,455.18	1,454.48	1,454.68
11	1,462.54	1,458.19	1,457.58	1,455.58	1,455.31	1,455.31	1,455.53	1,455.63	1,455.68	1,455.14	1,454.48	1,454.65
12	1,464.05	1,457.82	1,457.52	1,455.55	1,455.31	1,455.31	1,455.53	1,455.58	1,455.75	1,455.13	1,454.48	1,454.62
13	1,464.67	1,457.44	1,457.39	1,455.56	1,455.33	1,455.31	1,455.66	1,455.61	1,455.76	1,455.11	1,454.49	1,454.62
14	1,464.89	1,457.09	1,457.35	1,455.56	1,455.33	1,455.35	1,455.68	1,455.60	1,455.76	1,455.08	1,454.60	1,454.62
15	1,464.98	1,456.68	1,457.24	1,455.57	1,455.35	1,455.35	1,455.75	1,455.56	1,455.75	1,455.03	1,454.70	1,454.60
16	1,465.07	1,456.26	1,457.12	1,455.58	1,455.35	1,455.36	1,455.78	1,455.58	1,455.75	1,455.02	1,454.73	1,454.60
17	1,465.13	1,456.08	1,457.05	1,455.59	1,455.37	1,455.35	1,455.80	1,455.57	1,455.75	1,454.98	1,454.85	1,454.62
18	1,465.20	1,455.89	1,456.92	1,455.66	1,455.37	1,455.35	1,455.80	1,455.59	1,455.76	1,454.94	1,454.85	1,454.62
19	1,465.25	1,456.48	1,456.86	1,455.82	1,455.37	1,455.35	1,455.83	1,455.59	1,455.74	1,454.92	1,454.87	1,454.57
20	1,465.17	1,457.47	1,456.73	1,456.02	1,455.40	1,455.35	1,455.82	1,455.58	1,455.73	1,454.90	1,454.85	1,454.55
21	1,464.98	1,457.66	1,456.64	1,456.29	1,455.39	1,455.35	1,455.78	1,455.61	1,455.70	1,454.88	1,454.84	1,454.55
22	1,464.80	1,457.82	1,456.54	1,456.53	1,455.33	1,455.29	1,455.72	1,455.60	1,455.63	1,454.85	1,454.85	1,454.53
23	1,464.60	1,457.98	1,456.43	1,456.69	1,455.31	1,455.32	1,455.62	1,455.59	1,455.59	1,454.79	1,454.83	1,454.50
24	1,464.36	1,458.06	1,456.38	1,456.83	1,455.30	1,455.29	1,455.57	1,455.57	1,455.57	1,454.75	1,454.83	1,454.49
25	1,463.99	1,458.14	1,456.29	1,456.95	1,455.30	1,455.30	1,455.57	1,455.55	1,455.53	1,454.76	1,454.85	1,454.49
26	1,463.69	1,458.19	1,456.24	1,457.15	1,455.29	1,455.31	1,455.57	1,455.56	1,455.49	1,454.73	1,454.83	1,454.49
27	1,463.41	1,458.21	1,456.10	1,457.25	1,455.30	1,455.33	1,455.58	1,455.56	1,455.46	1,454.68	1,454.80	1,454.49
28	1,463.09	1,458.21	1,456.02	1,457.31	1,455.30	1,455.34	1,455.62	1,455.53	1,455.42	1,454.65	1,454.79	1,454.46
29	1,462.74	1,458.20	1,455.89	1,457.19	-----	1,455.35	1,455.59	1,455.55	1,455.43	1,454.63	1,454.77	1,454.42
30	1,462.42	1,458.18	1,455.81	1,457.08	-----	1,455.34	1,455.58	1,455.53	1,455.42	1,454.58	1,454.73	1,454.42
31	1,462.11	-----	1,455.68	1,456.93	-----	1,455.36	-----	1,455.50	-----	1,454.55	1,454.71	-----
MEAN	1,463.04	1,458.40	1,457.08	1,456.08	1,455.62	1,455.30	1,455.57	1,455.56	1,455.60	1,455.00	1,454.65	1,454.59
MAX	1,465.25	1,461.74	1,458.17	1,457.31	1,456.80	1,455.36	1,455.83	1,455.63	1,455.76	1,455.41	1,454.87	1,454.69
MIN	1,460.02	1,455.89	1,455.68	1,455.50	1,455.29	1,455.21	1,455.35	1,455.50	1,455.42	1,454.55	1,454.37	1,454.42
(+)	332,500	275,300	242,500	258,500	237,700	238,400	241,200	240,200	239,200	228,500	230,400	226,900
(*)	+18,270	-57,200	-32,800	+16,000	-20,800	+700	+2,800	-1,000	-1,000	-10,700	+1,900	-3,500

CAL YR 1973 (*) +126,040
WTR YR 1974 (*) -87,330

+ CONTENTS, IN ACRE-FEET, AT END OF MONTH.

* CHANGE IN CONTENTS, IN ACRE-FEET.

59

LOCATION.--Lat 39°28'27", long 98°16'58", in SE₄SE₄NE₄ sec.2, T.7 S., R.9 W., Mitchell County, near right bank, 3.6 mi (5.8 km) downstream from Glen Elder Dam, 2.0 mi (3.2 km) southeast of Glen Elder, and at mile 168.8 (271.6 km).

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

AVERAGE DISCHARGE.--10 years, 155 ft³/s (4.390 m³/s), 112,300 acre-ft/yr (138 hm³/yr).

Period of record: Maximum discharge, 6,890 ft³/s (195 m³/s) July 30, 1967, gage height, 26.89 ft (8.196 m); minimum, 0.32 ft³/s (0.009 m³/s) Nov. 22, 23, 1971.

REMARKS.--Records good. Flow completely regulated by Waconda Lake (see sta 06874200) which in turn is moderately regulated by Kirwin Reservoir (see sta 06871700) and Webster Reservoir (see sta 06873100). Large diversions below Kirwin and Webster Reservoirs and many small diversions above Waconda Lake for irrigation. Records of chemical analyses for the water year 1974 are published in Part 2 of this report.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	242	2,760	564	1,040	1,490	498	289	394	119	57	63	28
2	182	2,770	567	820	1,470	502	287	392	119	53	63	27
3	148	2,800	715	246	1,460	504	289	305	117	51	63	26
4	613	2,770	876	245	1,460	500	265	223	86	49	63	26
5	1,910	2,750	724	238	1,450	502	286	222	87	51	66	26
6	1,950	2,750	1,100	236	1,450	472	286	224	115	52	62	27
7	1,960	2,770	1,090	315	1,450	388	285	233	114	52	52	27
8	1,950	2,780	1,090	401	1,440	386	285	231	118	52	53	27
9	1,940	2,780	1,090	395	1,450	387	283	228	118	51	55	27
10	1,350	2,770	1,090	392	1,440	386	282	230	116	51	57	27
11	2,820	2,780	1,090	390	1,270	386	236	238	116	52	59	27
12	4,840	2,750	1,100	388	522	387	196	238	142	51	62	27
13	1,200	2,740	1,100	388	515	392	203	237	198	50	61	27
14	318	2,730	1,100	390	507	394	211	228	195	53	58	27
15	233	2,730	1,090	390	502	389	233	219	195	53	57	27
16	193	2,720	1,080	390	497	387	302	218	195	52	56	27
17	168	1,930	1,070	391	491	386	441	215	192	53	58	27
18	145	1,310	1,080	405	490	383	433	214	195	49	56	27
19	133	1,010	1,060	498	488	388	624	210	197	50	56	24
20	1,110	2,890	1,070	641	494	390	814	212	197	48	56	25
21	2,020	2,130	1,070	754	494	387	870	216	195	49	46	26
22	2,000	335	1,070	787	477	385	863	216	194	47	39	26
23	1,990	208	1,070	622	477	386	836	220	194	49	39	26
24	2,290	167	1,080	546	478	384	687	218	195	61	39	26
25	2,920	144	1,070	562	468	338	430	215	193	61	39	26
26	2,730	309	1,060	656	480	288	409	212	168	62	39	26
27	2,760	632	1,070	686	494	289	399	214	148	61	38	26
28	2,750	615	1,070	953	494	292	401	214	103	61	39	26
29	2,780	590	1,060	1,510	-----	294	399	212	59	68	34	27
30	2,850	576	1,060	1,490	-----	289	395	209	57	62	28	24
31	2,760	-----	1,060	1,490	-----	289	-----	160	-----	62	28	-----
TOTAL	51,255	56,996	31,486	18,655	24,198	12,028	12,219	7,217	4,437	1,673	1,584	792
MEAN	1,653	1,900	1,016	602	864	388	407	233	148	54.0	51.1	26.4
MAX	4,840	2,890	1,100	1,510	1,490	504	870	394	198	68	66	28
MIN	133	144	564	236	468	288	196	160	57	47	28	24
AC-FT	101,700	113,100	62,450	37,000	48,000	23,860	24,240	14,310	8,800	3,320	3,140	

KANSAS RIVER BASIN

06876700 SALT CREEK NEAR ADA, KS

LOCATION.--Lat 39°08'30", long 97°50'10", in NW¼NW¼SW¼ sec.36, T.10 S., R.5 W., Ottawa County, at downstream side of highway bridge, 3.0 mi (4.8 km) southeast of Ada, and 19.4 mi (31.2 km) upstream from mouth.

DRAINAGE AREA.--384 mi² (995 km²), approximately.

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

GAGE.--Water-stage recorder. Datum of gage is 1,247.18 ft (380.140 m) above mean sea level.

AVERAGE DISCHARGE.--15 years, 60.5 ft³/s (1.713 m³/s), 43,830 acre-ft/yr (54.0 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 7,700 ft³/s (218 m³/s) Oct. 12, gage height, 21.66 ft (6.602 m); minimum, 1.6 ft³/s (0.05 m³/s) Aug. 7.

Period of record: Maximum discharge, 16,000 ft³/s (453 m³/s) May 23, 1961, gage height, 23.25 ft (7.087 m); no flow at times in 1964, 1966, 1968, and 1970.

Maximum stage known since at least 1897, that of May 23, 1961. Flood in 1942 reached a stage of about 21 ft (6.4 m), from information by local residents.

REMARKS.--Records good except those for winter periods, 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	1,960	118	92	125	201	83	56	90	28	13	3.7	367
2	1,280	113	90	120	182	80	55	70	27	12	3.1	184
3	349	106	92	115	163	79	55	64	27	11	3.8	27
4	244	99	242	110	148	75	57	59	26	10	3.7	18
5	195	97	248	110	144	71	59	56	26	9.6	3.7	14
6	169	96	196	105	150	68	63	55	27	9.0	2.1	12
7	157	95	146	105	126	67	63	52	29	8.8	4.6	12
8	143	95	181	105	117	67	68	50	44	8.6	6.2	11
9	129	94	278	105	124	67	67	48	169	7.6	6.6	9.2
10	423	89	270	105	124	80	62	84	73	7.2	8.4	9.3
11	4,940	86	253	105	122	103	85	105	58	7.0	8.2	10
12	5,830	88	251	105	121	122	145	71	46	6.8	8.0	9.5
13	2,980	89	302	110	121	113	154	57	47	5.8	7.0	8.4
14	2,090	89	290	110	117	97	104	49	48	5.6	6.4	8.0
15	1,490	86	224	120	111	88	88	45	37	6.2	16	8.0
16	557	82	167	130	106	82	125	41	31	5.6	24	8.0
17	324	78	127	150	104	76	97	40	29	5.4	14	7.8
18	279	76	146	349	104	73	79	40	27	4.8	12	7.8
19	253	88	143	702	102	72	73	43	26	4.6	43	7.6
20	228	209	99	902	98	70	114	203	24	4.4	34	7.3
21	204	609	140	1,020	95	66	124	86	22	4.0	14	6.9
22	186	520	130	800	89	65	98	47	20	3.8	9.2	6.7
23	174	229	128	517	83	65	83	40	18	4.0	7.4	6.6
24	162	202	378	314	78	64	69	37	17	3.8	6.8	5.8
25	150	194	421	315	72	66	63	42	16	3.7	6.6	5.6
26	139	135	322	348	79	66	61	70	16	3.8	6.6	5.6
27	131	121	260	387	90	65	61	53	15	4.0	6.6	5.7
28	127	109	209	312	86	64	59	41	15	3.8	6.0	6.2
29	123	98	186	250	-----	64	99	34	14	3.7	5.8	6.1
30	117	94	150	224	-----	61	195	32	13	3.7	5.8	5.7
31	118	-----	130	217	-----	58	-----	30	-----	3.8	8.6	-----
TOTAL	25,651	4,284	6,291	8,592	3,257	2,337	2,581	1,834	1,015	195.1	301.9	806.8
MEAN	827	143	203	277	116	75.4	86.0	59.2	33.8	6.29	9.74	26.9
MAX	5,830	609	421	1,020	201	122	195	203	169	13	43	367
MIN	117	76	90	105	72	58	55	30	13	3.7	2.1	5.6
AC-FT	50,880	8,500	12,480	17,040	6,460	4,640	5,120	3,640	2,010	387	599	1,600

CAL YR 1973 TOTAL 124,722.8 MEAN 342 MAX 6,660 MIN 9.8 AC-FT 247,400
WTR YR 1974 TOTAL 57,145.8 MEAN 157 MAX 5,830 MIN 2.1 AC-FT 113,300

PEAK DISCHARGE (BASE, 580 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
10-12	0200	21.66	7,700	01-21	0800	15.78	1,050
11-21	1900	12.86	675				

06876900 SOLOMON RIVER AT NILES, KS

LOCATION.--Lat 38°58'08", long 97°28'34", in NW¼SE¼NW¼ sec.31, T.12 S., R.1 W., Ottawa County, at downstream side of county highway bridge, 0.8 mi (1.3 km) west of Niles, and at mile 21.6 (34.8 km).

DRAINAGE AREA.--6,770 mi² (17,530 km²), approximately.

PERIOD OF RECORD.--May 1897 to November 1903, October 1917 to current year. Published as "near Bennington" October 1917 to May 1919. Monthly discharge only for some periods, published in WSP 1310.

GAGE.--Water-stage recorder. Datum of gage is 1,160.97 ft (353.864 m) above mean sea level. Prior to Nov. 30, 1903, nonrecording gage at present site and at different datum. Oct. 1, 1917, to May 31, 1919, nonrecording gage near Bennington, 27 mi (43 km) upstream at different datum. June 1, 1919, to Sept. 30, 1922, nonrecording gage at present site at datum 2.00 ft (0.610 m) higher. Oct. 1, 1922, to Apr. 25, 1934, nonrecording gage at present site and datum.

AVERAGE DISCHARGE.--63 years, 578 ft³/s (16.37 m³/s), 418,800 acre-ft/yr (516 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 52,400 ft³/s (1,480 m³/s) Oct. 11, gage height, 30.92 ft (9.42 m); minimum, 80 ft³/s (2.27 m³/s) Aug. 2.
Period of record: Maximum discharge, 178,000 ft³/s (5,040 m³/s) July 14, 1951, gage height, 31.76 ft (9.680 m); minimum observed, 1 ft³/s (0.03 m³/s) Sept. 4, 1926.

REMARKS.--Records good except those for winter periods, which are poor. Flow moderately regulated since 1968 by Waconda Lake 150.8 mi (242.6 km) upstream (see sta 06874200). Slight regulation by Kirwin Reservoir since 1955 (see sta 06871700) and by Webster Reservoir since 1956 (see sta 06873100). Many small diversions above station for irrigation. Records of chemical analyses, water temperatures, suspended sediment loads, and specific conductance for the water year 1974 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 806: Drainage area. WSP 926: 1935. WSP 1310: 1897-1903. WSP 1440: 1903, 1919, 1927.

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	12,300	3,400	955	1,480	1,980	810	550	1,200	392	244	82	135
2	10,400	3,410	951	1,380	2,180	814	544	822	385	226	85	327
3	7,490	3,420	933	1,330	2,160	806	538	725	380	187	94	720
4	3,010	3,420	1,100	1,320	2,090	796	542	680	360	167	90	328
5	1,390	3,380	1,500	1,280	2,050	790	540	656	332	165	93	172
6	1,140	3,360	1,550	1,100	2,030	779	540	630	405	163	104	140
7	1,060	3,390	1,570	832	2,010	768	543	544	988	153	120	130
8	1,840	3,380	1,350	700	1,980	766	544	495	486	143	124	126
9	2,450	3,360	1,500	650	1,950	760	557	485	637	133	127	120
10	2,830	3,330	1,810	650	1,950	766	554	512	489	131	130	117
11	24,600	3,330	1,890	660	1,940	798	593	569	490	133	136	115
12	20,300	3,340	1,920	700	1,940	802	712	622	449	130	132	111
13	23,700	3,360	1,990	730	1,940	816	750	537	393	133	130	108
14	19,800	3,380	2,140	750	1,810	791	750	556	377	132	128	108
15	15,300	3,390	2,140	750	1,290	756	612	495	367	126	139	107
16	12,900	3,360	1,860	750	1,010	732	533	472	367	117	130	107
17	9,000	3,340	1,620	760	965	712	540	457	374	110	174	107
18	4,030	3,310	1,500	902	946	698	556	447	365	105	215	106
19	1,740	3,300	1,450	1,180	935	688	544	582	355	104	176	106
20	1,370	3,200	1,410	1,760	920	676	844	604	347	103	158	104
21	1,190	3,090	1,360	2,630	904	671	1,270	536	339	98	173	105
22	1,070	3,110	1,370	3,000	905	659	1,060	576	331	95	208	101
23	1,120	3,770	1,390	3,240	878	654	1,090	477	322	97	165	100
24	1,970	4,150	1,860	2,850	855	650	1,050	471	316	92	148	100
25	2,540	2,790	3,200	2,330	835	647	1,030	458	308	88	141	98
26	2,650	1,420	3,540	1,960	816	644	998	662	304	93	141	98
27	2,710	984	2,840	1,930	802	644	942	532	297	94	131	98
28	2,970	825	2,080	2,130	810	641	797	470	295	86	120	96
29	3,270	756	1,790	2,020	-----	602	886	435	286	92	116	96
30	3,370	873	1,630	1,630	-----	574	1,640	417	270	96	113	97
31	3,390	-----	1,560	1,530	-----	559	-----	402	-----	84	109	-----
TOTAL	202,900	88,928	53,759	44,914	40,881	22,269	22,649	17,526	11,806	3,920	4,132	4,383
MEAN	6,545	2,964	1,734	1,449	1,460	718	755	565	394	126	133	146
MAX	24,600	4,150	3,540	3,240	2,180	816	1,640	1,200	988	244	215	720
MIN	1,060	756	933	650	802	559	533	402	270	84	82	96
AC-FT	402,500	176,400	106,600	89,090	81,090	44,170	44,920	34,760	23,420	7,780	8,200	8,690
CAL YR 1973	TOTAL 660,746	MEAN 1,810	MAX 26,200	MIN 60	AC-FT 1,311,000							
WTR YR 1974	TOTAL 518,067	MEAN 1,419	MAX 24,600	MIN 82	AC-FT 1,028,000							

PEAK DISCHARGE (REGULATED) ABOVE 2,700 CFS

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
10-11	1600	30.92	52,400	12-26	0800	21.00	3,610
11-03	1900	20.58	3,440	01-23	0800	20.07	3,360
11-24	0900	22.31	4,260				

KANSAS RIVER BASIN

06877600 SMOKY HILL RIVER AT ENTERPRISE, KS

LOCATION.--Lat 38°54'24", long 97°07'12", in NW¼NW¼SE¼ sec.20, T.13 S., R.3 E., Dickinson County, at upstream side of bridge on State Highway 43 in Enterprise, 18.6 mi (29.9 km) upstream from Chapman Creek and at mile 43.3 (69.7 km).

DRAINAGE AREA.--19,260 mi² (49,880 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 1,103.25 ft (336.271 m) above mean sea level, datum of 1929. Nov. 1, 1934, to Jan. 28, 1935, nonrecording gage and Jan. 29, 1935, to May 3, 1959, water-stage recorder at site 0.2 mi (0.3 km) downstream at datum 5.40 ft (1.646 m) lower.

AVERAGE DISCHARGE.--40 years, 1,666 ft³/s (47.18 m³/s), 1,207,000 acre-ft/yr (1.49 km³/yr).

EXTREMES.--Current year: Maximum discharge, 47,100 ft³/s (1,330 m³/s) Oct. 13, gage height, 26.82 ft (8.175 m); minimum, 378 ft³/s (10.7 m³/s) Aug. 5.

Period of record: Maximum discharge, 233,000 ft³/s (6,600 m³/s) July 14, 1951, gage height, 33.96 ft (10.351 m), site and datum then in use, or 29.0 ft (8.84 m), present site and datum, from rating curve extended above 55,000 ft³/s (1,560 m³/s) on basis of slope-area measurement of peak flow; minimum, about 10 ft³/s (0.28 m³/s) Apr. 23, 1935, regulated by powerplant then in operation. Flood in May 1903 reached a stage of about 27 ft (8.2 m), present site and datum, from information by Corps of Engineers, discharge, 90,000 ft³/s (2,500 m³/s).

REMARKS.--Records good except those for winter periods, which are poor. Natural flow of stream affected by six lakes and reservoirs, and by numerous diversions for irrigation above station. Records of chemical analyses, water temperatures, suspended sediment loads, and specific conductance for the water year 1974 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1390: 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	36,700	6,320	4,300	3,700	4,830	2,980	1,650	4,270	2,920	1,110	430	566
2	30,500	6,440	4,370	3,500	5,160	2,530	1,660	3,380	3,150	1,010	400	800
3	25,200	6,420	4,580	3,400	5,420	2,400	1,640	2,760	3,840	928	382	895
4	20,800	6,430	5,470	3,300	5,520	2,350	1,620	2,570	4,060	946	385	1,210
5	12,300	6,370	6,310	3,200	5,540	2,290	1,610	2,670	3,840	976	380	870
6	6,410	6,330	6,610	3,100	5,960	2,210	1,600	2,590	3,470	905	406	650
7	5,680	6,320	5,820	3,000	5,520	2,150	1,620	2,530	4,720	855	433	586
8	5,300	6,260	5,450	2,800	5,180	2,200	1,610	2,420	4,760	835	475	566
9	5,670	6,220	5,480	2,600	4,800	2,250	1,610	2,360	4,280	805	538	550
10	6,680	6,200	5,870	2,400	4,340	2,740	1,630	4,310	4,870	790	550	518
11	21,600	6,180	6,100	2,300	4,180	3,210	1,690	5,320	3,840	770	550	506
12	35,000	6,150	5,930	2,200	4,260	3,430	1,930	4,940	3,500	745	534	489
13	46,200	6,180	5,780	2,500	4,230	2,880	2,340	3,690	3,620	740	514	475
14	37,500	6,370	5,740	2,700	4,210	2,490	2,370	3,070	3,600	719	485	466
15	33,000	6,430	5,720	2,790	4,050	2,310	2,260	2,540	3,540	715	503	457
16	27,300	6,440	5,580	2,990	3,640	2,180	2,080	2,120	3,370	720	594	690
17	23,000	6,380	5,320	3,360	3,430	2,100	1,960	1,940	3,260	698	654	1,420
18	20,000	6,340	5,150	4,520	3,350	2,040	1,960	1,850	3,190	668	702	1,510
19	14,800	6,330	5,010	4,950	3,300	1,980	1,940	3,930	3,130	648	820	1,520
20	7,740	6,370	4,880	5,460	3,270	1,940	2,530	11,000	3,150	627	890	1,520
21	6,040	6,440	4,840	5,820	3,250	1,890	6,430	11,800	3,150	618	880	1,490
22	5,710	6,620	4,790	5,960	3,420	1,860	7,200	11,300	3,100	607	855	1,360
23	5,630	6,700	4,810	5,780	3,590	1,820	5,230	5,140	2,940	591	875	1,110
24	5,600	7,130	5,410	5,620	3,860	1,800	3,400	3,470	2,120	578	820	922
25	6,000	7,680	8,140	5,420	3,770	1,790	2,930	3,600	1,770	563	785	890
26	6,240	7,050	9,670	5,180	3,650	1,780	2,760	4,650	1,630	555	775	880
27	6,270	5,970	8,670	5,100	3,660	1,780	2,700	5,270	1,560	550	855	875
28	6,250	5,150	6,570	4,920	3,600	1,790	2,590	6,120	1,460	546	780	845
29	6,200	4,570	5,540	4,600	-----	1,800	2,950	4,320	1,350	534	715	835
30	6,030	4,290	5,110	4,240	-----	1,760	4,510	3,280	1,230	518	690	820
31	6,020	-----	4,390	4,470	-----	1,720	-----	2,800	-----	475	650	-----
TOTAL	487,370	188,080	177,410	121,880	118,990	68,450	78,010	132,010	94,420	22,345	19,305	26,291
MEAN	15,720	6,269	5,723	3,932	4,250	2,208	2,600	4,258	3,147	721	623	876
MAX	46,200	7,680	9,670	5,960	5,960	3,430	7,200	11,800	4,870	1,110	890	1,520
MIN	5,300	4,290	4,300	2,200	3,250	1,720	1,600	1,850	1,230	475	380	457
AC-FT	966,700	373,100	351,900	241,700	236,000	135,800	154,700	261,800	187,300	44,320	38,290	52,150

PEAK DISCHARGE (REGULATED) ABOVE 4,000 CFS

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
10-13	1600	26.82	47,100	04-21	2000	13.63	7,600	05-28	0800	12.11	6,390
12-26	2000	16.31	10,100	04-30	1600	9.89	4,670	06-07	2000	11.08	5,560
01-22	1700	11.59	5,970	05-11	0500	11.09	5,570	06-10	0300	10.98	5,480
02-06	1700	11.88	6,200	05-22	0100	18.88	12,700				

KANSAS RIVER BASIN

63

06878000 CHAPMAN CREEK NEAR CHAPMAN, KS

LOCATION.--Lat 39°01'52", long 97°02'24", in SW $\frac{1}{4}$ SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.1, T.12 S., R.3 E., Dickinson County, on right bank at downstream side of bridge on State Highway 18, 5.0 mi (8.0 km) northwest of Chapman, and at mile 10.0 (16.1 km).

DRAINAGE AREA.--300 mi² (777 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 1,102.41 ft (336.015 m) above mean sea level (levels by Corps of Engineers). Prior to May 5, 1959, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--20 years (1954-74), 82.9 ft³/s (2.348 m³/s), 60,060 acre-ft/yr (74.1 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 15,800 ft³/s (447 m³/s) Oct. 12, gage height, 24.08 ft (7.340 m); minimum, 17.0 ft³/s (0.48 m³/s) July 29.

Period of record: Maximum discharge, 15,800 ft³/s (447 m³/s) Oct. 12, 1973, gage height, 24.08 ft (7.340 m); minimum observed, 0.10 ft³/s (0.003 m³/s) Oct. 10, 1956.

Flood in July 1951 reached a stage of 25.5 ft (7.77 m), from floodmarks, discharge, 46,700 ft³/s (1,320 m³/s), from rating curve extended above 12,000 ft³/s (340 m³/s) on basis of contracted-opening measurement of peak flow.

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	504	104	81	96	125	83	68	431	56	36	19	139
2	291	103	81	86	115	80	67	161	54	35	19	107
3	217	99	82	80	107	79	66	125	53	33	19	45
4	178	96	338	76	102	78	68	109	52	34	19	32
5	155	94	394	74	98	75	68	98	52	41	20	26
6	139	93	365	72	102	73	71	93	83	36	22	24
7	133	93	194	72	99	72	73	88	463	31	23	24
8	129	94	146	70	88	80	71	84	251	30	25	23
9	121	92	244	70	88	75	67	82	464	29	27	23
10	659	90	302	70	92	137	66	84	222	28	29	22
11	7,010	89	246	70	91	189	71	87	141	28	27	22
12	12,600	89	203	70	93	217	87	90	144	27	25	19
13	4,190	91	215	74	94	156	184	94	107	26	23	19
14	455	91	229	78	94	118	107	92	90	25	22	20
15	269	90	179	84	91	104	79	78	76	24	23	20
16	218	87	122	92	88	96	72	73	63	23	22	20
17	188	84	100	105	88	90	69	68	57	22	25	20
18	169	83	92	189	88	86	70	67	55	21	30	20
19	157	83	90	483	89	84	68	130	53	21	37	20
20	149	109	90	586	87	82	221	401	51	21	29	19
21	139	155	90	677	85	78	754	193	48	20	24	18
22	132	197	94	555	88	78	360	202	45	20	24	18
23	127	123	96	321	88	76	142	103	42	20	23	18
24	122	103	405	210	86	76	108	95	41	20	23	18
25	117	112	856	207	81	75	95	85	41	20	24	18
26	114	108	558	229	77	76	89	205	41	20	23	18
27	111	96	219	234	83	76	86	113	40	20	22	18
28	109	90	160	189	83	76	84	86	38	20	22	18
29	107	85	144	144	-----	75	164	71	37	18	21	19
30	105	82	122	130	-----	73	957	64	37	18	21	18
31	106	-----	105	128	-----	71	-----	59	-----	19	32	-----
TOTAL	29,220	3,005	6,642	5,621	2,590	2,884	4,552	3,811	2,997	786	744	845
MEAN	943	100	214	181	92.5	93.0	152	123	99.9	25.4	24.0	28.2
MAX	12,600	197	856	677	125	217	957	431	464	41	37	139
MIN	105	82	81	70	77	71	66	59	37	18	19	18
AC-FT	57,960	5,960	13,170	11,150	5,140	5,720	9,030	7,560	5,940	1,560	1,480	1,680

CAL YR 1973 TOTAL 126,753 MEAN 347 MAX 12,600 MIN 27 AC-FT 251,400
WTR YR 1974 TOTAL 63,697 MEAN 175 MAX 12,600 MIN 18 AC-FT 126,300

PEAK DISCHARGE (BASE, 1,200 CFS)

DATE	TIME	G.HT.	DISCHARGE
10-12	0500	24.08	15,800

KANSAS RIVER BASIN

06878500 LYON CREEK NEAR WOODBINE, KS

LOCATION.--Lat 38°53'05", long 96°54'35", in NE¼NE¼NE¼ sec.31, T.13 S., R.5 E., Geary County, on right bank at downstream side of highway bridge, 2.0 mi (3.2 km) downstream from Cary Creek, 7.0 mi (11.3 km) north of Woodbine, and at mile 17.0 (27.4 km).

DRAINAGE AREA.--230 mi² (596 km²).

PERIOD OF RECORD.--December 1953 to September 1974 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 1,109.79 ft (338.264 m) above mean sea level (levels by Corps of Engineers). Prior to May 8, 1959, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--20 years (1954-74), 108 ft³/s (3.059 m³/s), 78,250 acre-ft/yr (96.5 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 20,800 ft³/s (589 m³/s) Oct. 11, gage height, 30.12 ft (9.181 m); minimum, 22 ft³/s (0.62 m³/s) Sept. 1, 12.

Period of record: Maximum discharge, 34,400 ft³/s (974 m³/s) Oct. 7, 1967, gage height, 31.44 ft (9.583 m); no flow at times in 1953-57.

Flood in July 1951 reached a stage of about 34.8 ft (10.61 m) from floodmarks, discharge, 93,000 ft³/s (2,630 m³/s), from slope area measurement.

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	560	109	78	110	94	126	71	116	65	57	26	35
2	319	106	74	110	92	102	66	110	63	54	26	44
3	236	98	84	109	91	97	72	102	62	53	25	48
4	188	96	3,000	108	89	88	72	94	62	60	25	40
5	160	95	1,000	107	89	79	68	90	63	54	26	31
6	152	94	500	105	91	77	64	87	75	50	36	28
7	147	94	400	101	86	75	72	86	87	48	45	28
8	142	94	300	101	84	94	79	86	189	45	38	28
9	135	90	250	99	85	154	74	81	3,640	44	32	25
10	1,140	88	200	98	86	297	70	1,390	452	42	32	24
11	15,600	89	180	97	86	463	79	229	184	39	32	24
12	4,060	90	170	93	87	162	78	120	177	38	31	23
13	734	89	160	95	86	120	67	105	140	37	28	24
14	492	89	150	95	83	108	62	114	122	36	26	24
15	371	82	140	95	82	102	59	93	110	33	29	24
16	282	78	130	100	81	94	59	90	99	32	31	24
17	228	78	127	305	81	90	58	89	94	32	32	25
18	203	87	127	797	85	91	61	82	90	32	35	25
19	180	76	126	427	82	86	62	346	89	31	32	25
20	168	124	125	240	78	83	1,810	274	86	31	31	25
21	155	180	122	294	87	81	4,080	118	81	30	27	24
22	150	112	117	193	85	80	420	127	76	29	27	24
23	138	91	118	147	83	80	224	98	71	27	27	24
24	131	228	680	120	87	77	172	111	68	27	26	24
25	127	136	601	113	82	78	153	100	65	27	27	24
26	117	99	204	113	81	80	136	176	65	27	26	25
27	118	90	154	112	111	78	132	129	63	27	25	25
28	126	82	139	106	161	79	127	93	62	27	25	25
29	117	79	130	102	-----	74	172	82	59	27	24	26
30	113	78	125	100	-----	71	143	73	59	26	25	25
31	112	-----	119	98	-----	70	-----	68	-----	26	25	-----
TOTAL	26,901	3,021	9,830	4,890	2,495	3,436	8,862	4,959	6,618	1,148	902	820
MEAN	868	101	317	158	89.1	111	295	160	221	37.0	29.1	27.3
MAX	15,600	228	3,000	797	161	463	4,080	1,390	3,640	60	45	48
MIN	112	76	74	93	78	70	58	68	59	26	24	23
AC-FT	53,360	5,990	19,500	9,700	4,950	6,820	17,580	9,840	13,130	2,280	1,790	1,630
CAL YR 1973 TOTAL	122,664			MEAN 336	MAX 15,600	MIN 35	AC-FT 243,300					
WTR YR 1974 TOTAL	73,882			MEAN 202	MAX 15,600	MIN 23	AC-FT 146,500					

PEAK DISCHARGE (BASE, 2,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
10-11	1400	30.12	20,800	05-10	1000	17.54	3,060
12-04	UNKNOWN	20.6	4,200	06-09	1500	22.01	4,910
04-21	0600	23.93	6,150				

06879100 KANSAS RIVER AT FORT RILEY, KS

LOCATION.--Lat 39°03'09", long 96°46'33", in NE¼SW¼NW¼ sec.33, T.11 S., R.6 E., Geary County, at downstream side of military highway bridge 1.6 mi (2.6 km) below the confluence of Republican and Smoky Hill Rivers, and at mile 168.9 (271.8 km).

DRAINAGE AREA.--44,870 mi² (116,200 km²), of which a large area is noncontributing.

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

GAGE.--Water-stage recorder. Datum of gage is 1,034.69 ft (315.374 m) above mean sea level.

AVERAGE DISCHARGE.--10 years, 2,958 ft³/s (83.77 m³/s), 2,143,000 acre-ft/yr (2.64 km³/yr).

EXTREMES.--Current year: Maximum discharge, 59,400 ft³/s (1,680 m³/s) Oct. 14, gage height, 23.74 ft (7.236 m); minimum, 930 ft³/s (26.3 m³/s) Sept. 10.

Period of record: Maximum discharge, 59,400 ft³/s (1,680 m³/s) Oct. 14, 1973, gage height, 23.74 ft (7.236 m); minimum, 100 ft³/s (2.83 m³/s) Dec. 24, 1966.

Flood in July 1951 reached a stage of 34.5 ft (10.52 m), from information by Corps of Engineers.

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

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	38,600	18,100	7,370	7,170	11,600	5,740	3,870	8,290	4,780	2,810	1,490	1,950
2	38,500	18,400	7,420	6,710	11,900	5,020	3,620	7,010	5,020	2,030	1,430	1,840
3	33,500	18,400	7,590	6,100	12,300	4,650	3,220	5,660	5,310	1,940	1,400	1,900
4	28,000	18,300	10,200	5,700	11,800	4,500	3,150	5,140	5,900	1,890	1,400	1,810
5	25,200	17,700	13,900	5,400	8,780	4,410	2,370	5,010	5,160	1,830	1,410	1,750
6	20,500	16,800	11,600	5,200	12,700	4,350	2,010	5,030	5,030	1,830	1,470	1,350
7	16,300	18,100	11,100	5,000	12,400	4,290	1,980	4,880	5,830	1,650	1,490	1,120
8	15,200	20,500	9,620	4,810	11,800	4,340	2,000	4,340	7,850	1,570	1,530	1,040
9	15,500	20,500	9,590	4,520	10,000	4,390	1,960	4,190	9,050	1,520	1,630	1,000
10	16,900	20,500	9,940	4,770	9,470	4,660	1,920	5,650	9,760	1,490	1,670	1,050
11	31,100	20,400	10,500	4,700	8,130	5,660	1,950	8,590	7,090	1,450	1,690	1,290
12	40,600	20,300	10,400	4,610	7,300	5,850	2,050	7,630	6,030	1,400	1,700	1,290
13	44,400	20,400	9,980	4,750	7,300	6,140	2,510	6,950	5,510	1,380	1,710	1,260
14	56,600	20,700	9,800	4,990	7,260	7,950	3,060	5,900	4,910	1,360	1,690	1,240
15	47,400	21,300	10,300	5,100	7,170	7,540	2,990	5,860	4,760	1,380	1,680	1,230
16	38,700	20,700	10,800	5,260	6,840	7,280	2,810	4,530	4,600	1,540	1,720	1,220
17	32,800	20,600	10,400	5,570	6,420	7,100	2,580	4,060	4,380	1,570	1,880	1,420
18	31,400	20,400	10,000	6,610	6,250	6,970	2,460	3,820	4,280	1,540	1,990	1,860
19	27,700	19,200	9,800	8,490	6,000	6,850	2,450	3,670	4,180	1,510	2,000	1,990
20	22,800	15,800	9,560	9,390	5,630	6,880	3,000	10,300	4,150	1,470	2,040	2,050
21	19,100	12,600	8,880	9,100	5,640	6,790	10,100	14,900	4,180	1,450	1,890	2,050
22	17,400	11,900	7,630	9,420	5,620	5,930	11,300	15,900	4,270	1,430	1,910	2,000
23	17,000	12,000	7,590	9,120	5,800	3,890	10,100	12,400	4,170	1,420	1,860	1,850
24	16,700	12,200	7,970	8,630	5,980	3,790	7,280	6,890	3,760	1,490	1,890	1,740
25	16,900	12,900	11,600	8,220	6,260	3,670	5,510	6,690	2,800	1,520	1,840	1,560
26	17,500	13,100	14,200	7,870	6,060	3,500	5,110	7,440	2,440	1,540	1,780	1,510
27	18,100	11,800	15,000	7,680	5,850	3,470	4,920	8,320	2,470	1,530	1,760	1,750
28	18,000	9,980	12,200	8,970	5,920	3,560	4,810	9,200	3,180	1,520	1,860	2,280
29	18,100	8,270	10,000	12,000	-----	4,020	4,900	8,080	3,100	1,520	1,780	2,280
30	18,100	7,600	8,990	11,400	-----	3,960	6,860	6,030	2,980	1,520	1,700	2,260
31	18,000	-----	8,090	11,000	-----	3,910	-----	4,620	-----	1,530	1,840	-----
TOTAL	816,600	499,450	312,020	218,260	228,180	161,060	122,850	216,980	146,930	49,630	53,130	48,940
MEAN	26,340	16,650	10,070	7,041	8,149	5,195	4,095	6,999	4,898	1,601	1,714	1,631
MAX	56,600	21,300	15,000	12,000	12,700	7,950	11,300	15,900	9,760	2,810	2,040	2,280
MIN	15,200	7,600	7,370	4,520	5,620	3,470	1,920	3,670	2,440	1,360	1,400	1,000
AC-FT	1,620M	990,700	618,900	432,900	452,600	319,500	243,700	430,400	291,400	98,440	105,400	97,070

CAL YR 1973 TOTAL 3,554,103 MEAN 9,737 MAX 56,600 MIN 953 AC-FT 7,050,000
WTR YR 1974 TOTAL 2,874,030 MEAN 7,874 MAX 56,600 MIN 1,000 AC-FT 5,701,000

PEAK DISCHARGE (REGULATED) ABOVE 5,000 CFS

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
10-01	2100	20.14	39,700	02-05	2300	12.44	12,800
10-14	0500	23.74	59,400	03-14	0100	10.48	8,210
11-15	0400	15.89	22,200	04-21	2300	12.82	13,800
12-05	0700	13.31	15,000	05-22	1600	13.80	16,200
12-27	0100	13.46	15,400	06-10	0300	11.92	11,600

M EXPRESSED IN THOUSANDS.

KANSAS RIVER BASIN

06884200 MILL CREEK AT WASHINGTON, KS

LOCATION.--Lat 39°48'50", long 97°02'20", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.1, T.3 S., R.3 E., Washington County, at downstream side of bridge on U.S. Highway 36, 0.5 mi (0.8 km) east of Washington, and about 26 mi (41.8 km) upstream from mouth.

DRAINAGE AREA.--344 mi² (891 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 1,261.56 ft (384.523 m) above mean sea level.

AVERAGE DISCHARGE.--15 years, 103 ft³/s (2.917 m³/s), 74,620 acre-ft/yr (92.0 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 9,820 ft³/s (278 m³/s) Oct. 12, gage height, 27.02 ft (8.236 m); minimum, 1.1 ft³/s (0.031 m³/s) July 30, Aug. 1.

Period of record: Maximum discharge, 10,700 ft³/s (303 m³/s) June 16, 1967, gage height, 26.34 ft (8.028 m); maximum gage height, 27.17 ft (8.281 m) Sept. 26, 1973; no flow at times in 1963-66.

Maximum stages known since at least 1903, about 36 ft (11.0 m) June 8, 1941, about 34 ft (10.4 m) in 1903 and 1908, from information by local residents and newspaper files.

REMARKS.--Records good except those for winter periods, which are poor. Diversions above station for irrigation.

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	404	103	96	100	325	92	60	57	43	14	1.3	14
2	254	101	95	90	201	89	63	51	39	13	2.0	11
3	189	96	95	80	162	89	63	48	36	13	2.0	6.6
4	152	89	95	75	138	86	61	50	35	12	1.4	4.8
5	125	86	100	75	130	82	59	51	35	12	1.3	3.7
6	106	84	95	70	120	83	61	48	92	12	2.2	3.9
7	97	85	90	70	115	81	61	46	65	12	1.6	3.7
8	93	85	95	70	109	82	60	43	60	9.7	1.3	3.2
9	85	82	105	70	110	80	59	46	65	9.4	5.2	3.3
10	1,600	80	100	70	110	79	59	48	49	8.3	5.5	3.3
11	7,220	77	112	70	112	81	66	80	47	7.8	6.6	3.3
12	8,590	78	158	70	116	89	86	128	44	6.1	9.3	6.8
13	3,490	79	199	80	127	90	88	79	58	5.8	6.2	5.2
14	577	78	156	90	126	85	76	56	51	7.3	4.2	4.2
15	390	78	122	100	115	82	81	48	43	6.2	3.7	3.5
16	304	75	105	130	108	80	90	43	37	5.0	8.4	3.1
17	258	71	95	180	103	75	70	42	32	4.0	8.2	3.1
18	231	69	85	350	109	74	64	52	28	5.1	28	2.8
19	209	70	85	600	111	72	60	89	27	4.2	17	2.8
20	189	355	85	1,000	109	68	70	382	26	4.0	19	2.8
21	171	409	85	900	103	68	98	890	25	3.7	11	2.8
22	160	185	85	700	101	69	87	187	23	2.9	8.4	2.8
23	153	160	90	450	100	69	72	79	22	2.8	5.9	2.8
24	144	390	425	300	95	67	60	64	20	2.6	4.3	2.8
25	134	236	575	355	84	67	56	65	20	2.6	4.1	3.0
26	125	143	413	716	92	67	54	60	18	2.2	3.0	3.0
27	119	116	248	900	98	67	54	54	17	1.6	2.2	3.0
28	114	107	182	460	99	67	54	49	16	1.7	2.1	3.1
29	110	102	158	278	-----	66	53	65	15	1.3	2.9	2.9
30	106	99	140	317	-----	63	52	66	16	1.4	4.0	3.2
31	104	-----	120	392	-----	61	-----	52	-----	1.6	7.3	-----
TOTAL	26,003	3,868	4,689	9,208	3,428	2,370	1,997	3,118	1,104	195.3	189.6	124.5
MEAN	839	129	151	297	122	76.5	66.6	101	36.8	6.30	6.12	4.15
MAX	8,590	409	575	1,000	325	92	98	890	92	14	28	14
MIN	85	69	85	70	84	61	52	42	15	1.3	1.3	2.8
AC-FT	51,580	7,670	9,300	18,260	6,800	4,700	3,960	6,180	2,190	387	376	247

CAL YR 1973 TOTAL 133,813.0 MEAN 367 MAX 8,590 MIN 12 AC-FT 265,400
WTR YR 1974 TOTAL 56,294.4 MEAN 154 MAX 8,590 MIN 1.3 AC-FT 111,700

PEAK DISCHARGE (BASE, 1,200 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
10-12	0400	27.02	9,820	05-21	1100	14.40	1,920

KANSAS RIVER BASIN

67

06884400 LITTLE BLUE RIVER NEAR BARNES, KS

LOCATION.--Lat 39°46'33", long 96°51'29", in NW 1/4 sec. 22, T.3 S., R.5 E., Washington County, on right bank at downstream side of bridge on State Highway 15 E., 0.4 mi (0.6 km) downstream from Malone Creek, 4.5 mi (7.2 km) north of Barnes, and at mile 19.2 (30.9 km).

DRAINAGE AREA.--3,324 mi² (8,609 km²).

PERIOD OF RECORD.--April 1958 to current year. Published as "at Waterville" April 1958 to September 1960; those prior to April 1958 collected at site 11.5 mi (18.5 km) downstream and are considered not equivalent.

GAGE.--Water-stage recorder. Datum of gage is 1,140.06 ft (347.490 m) above mean sea level (levels by Corps of Engineers).

AVERAGE DISCHARGE.--16 years, 659 ft³/s (18.66 m³/s), 477,400 acre-ft/yr (589 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 53,700 ft³/s (1,520 m³/s) Oct. 12, gage height, 27.7 ft (8.44 m), from floodmark; minimum, 97 ft³/s (2.75 m³/s) Sept. 23.
Period of record: Maximum discharge, 53,700 ft³/s (1,520 m³/s) Oct. 12, 1973, gage height, 27.7 ft (8.44 m), from floodmark; minimum, 22 ft³/s (0.62 m³/s) Aug. 6, 1964.

REMARKS.--Records fair except those for winter periods, which are poor. Records of chemical analyses for the water year 1974 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	11,600	745	765	360	2,870	597	390	513	405	222	143	132
2	9,790	736	736	370	2,380	574	381	496	376	209	146	133
3	4,040	726	708	380	1,660	566	386	458	354	195	164	134
4	2,980	718	726	390	1,240	554	389	438	348	193	175	132
5	2,350	704	736	400	1,050	546	385	466	334	187	182	128
6	1,910	700	695	390	984	530	372	417	394	187	189	124
7	1,590	700	672	390	911	526	372	391	435	180	189	124
8	1,370	700	626	380	810	518	373	365	424	183	174	119
9	1,190	695	659	370	791	498	368	365	838	186	197	117
10	3,870	690	654	370	776	494	364	370	668	177	215	114
11	21,100	690	634	370	726	494	385	520	560	171	216	116
12	45,300	690	659	400	711	494	419	821	714	170	213	124
13	46,100	690	690	450	1,020	498	417	844	907	165	200	115
14	28,300	690	704	550	1,580	502	424	672	743	167	181	115
15	11,900	690	650	650	1,640	486	453	497	581	179	317	115
16	4,340	690	586	800	1,430	478	441	419	715	178	701	115
17	2,990	690	538	1,000	1,200	470	457	387	590	170	621	115
18	2,290	690	500	1,200	1,070	462	451	385	499	166	647	110
19	1,820	690	410	1,500	1,050	450	422	602	428	160	357	109
20	1,510	1,080	300	2,000	1,030	446	415	721	381	157	295	106
21	1,340	1,810	350	2,300	930	443	441	1,030	347	160	265	103
22	1,190	3,220	420	2,340	865	441	475	1,840	318	163	229	103
23	1,100	2,030	538	1,860	789	433	489	1,000	295	160	196	100
24	990	1,950	940	1,500	702	423	442	629	282	155	175	98
25	915	1,570	1,370	1,350	631	421	404	555	272	160	159	102
26	860	1,230	1,200	1,560	602	421	378	495	262	166	145	105
27	835	1,060	1,020	2,270	618	415	367	452	256	167	136	103
28	800	945	850	2,320	618	412	362	425	246	167	129	103
29	775	860	718	1,980	-----	413	775	424	233	167	135	103
30	760	805	540	1,720	-----	407	625	462	229	162	131	103
31	755	-----	350	2,100	-----	397	-----	444	-----	141	131	-----
TOTAL	216,660	29,884	20,944	34,020	30,684	14,809	12,822	17,903	13,434	5,370	7,353	3,420
MEAN	6,989	996	676	1,097	1,096	478	427	578	448	173	237	114
MAX	46,100	3,220	1,370	2,340	2,870	597	775	1,840	907	222	701	134
MIN	755	690	300	360	602	397	362	365	229	141	129	98
AC-FT	429,700	59,270	41,540	67,480	60,860	29,370	25,430	35,510	26,650	10,650	14,580	6,780

CAL YR 1973 TOTAL 671,720 MEAN 1,840 MAX 46,100 MIN 169 AC-FT 1,332,000
WTR YR 1974 TOTAL 407,303 MEAN 1,116 MAX 46,100 MIN 98 AC-FT 807,900

PEAK DISCHARGE (BASE, 4,500 CFS)

DATE	TIME	G.HT.	DISCHARGE
10-12	2200	27.7	53,700

KANSAS RIVER BASIN

06885500 BLACK VERMILLION RIVER NEAR FRANKFORT, KS

LOCATION.--Lat 39°41'03", long 96°26'15", in SE¼SW¼ sec.20, T.4 S., R.9 E., Marshall County, on right bank at downstream side of highway bridge, 0.2 mi (0.3 km) downstream from Robideau Creek, 2.2 mi (3.5 km) southwest of Frankfort, and at mile 19.9 (32.0 km).

DRAINAGE AREA.--410 mi² (1,060 km²).

PERIOD OF RECORD.--October 1953 to current year. Monthly discharge only for October to December 1953, published in WSP 1730.

GAGE.--Water-stage recorder. Datum of gage is 1,106.91 ft (337.386 m) above mean sea level. Prior to May 13, 1954, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--21 years, 138 ft³/s (3,908 m³/s), 99,980 acre-ft/yr (123 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 36,400 ft³/s (1,030 m³/s) Oct. 11, gage height, 30.06 ft (9.162 m); minimum, 3.2 ft³/s (0.091 m³/s) Aug. 30, 31.

Period of record: Maximum discharge, 38,300 ft³/s (1,080 m³/s) May 30, 1959, gage height, 29.40 ft (8.961 m); maximum gage height, 30.06 ft (9.162 m) Oct. 11, 1973; no flow at times in 1955-57.

Flood of Aug. 3, 1948, reached a stage of 30.2 ft (9.20 m), present site and datum, from floodmarks. Flood in June 1951 reached a stage of 28.6 ft (8.72 m), present site and datum, from floodmarks, discharge, 30,400 ft³/s (861 m³/s), based on contracted-opening measurement of peak flow.

REMARKS.--Records fair except those for winter periods, 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	561	110	81	110	155	192	66	227	52	24	4.8	3.5
2	316	100	80	120	131	143	63	136	50	24	4.8	5.4
3	222	100	82	120	114	130	62	124	46	23	4.3	6.3
4	183	90	222	120	126	117	62	104	43	21	3.8	5.6
5	152	90	976	120	130	119	61	92	42	21	3.8	5.2
6	138	90	334	110	117	101	58	86	73	21	3.4	4.8
7	141	88	202	100	85	88	59	81	724	20	3.8	5.2
8	134	83	164	100	113	500	59	79	170	18	4.7	5.0
9	126	78	227	100	110	300	56	79	2,070	17	9.5	4.2
10	2,180	74	230	100	101	200	55	78	835	16	11	3.8
11	28,800	75	191	100	100	150	58	74	158	15	8.9	3.4
12	14,000	79	407	100	100	130	65	72	118	15	6.8	3.6
13	1,700	85	583	100	104	120	62	70	107	14	5.6	15
14	500	90	334	110	99	110	58	70	92	13	5.1	10
15	350	91	177	110	93	100	56	70	77	12	4.6	6.2
16	300	87	186	130	89	96	55	70	59	11	5.5	4.2
17	250	85	172	150	90	94	54	2,000	52	11	6.8	3.5
18	220	89	148	200	93	92	53	1,000	51	10	7.7	3.6
19	210	87	121	500	97	90	52	500	49	9.7	6.5	3.5
20	190	220	120	1,000	89	86	235	300	44	9.3	5.6	3.5
21	180	707	120	500	89	83	1,980	176	40	8.9	4.9	3.8
22	170	201	120	350	121	87	562	115	36	8.4	4.4	3.8
23	160	105	120	310	123	78	179	92	32	7.9	3.9	3.8
24	150	205	120	275	90	77	127	82	29	7.1	3.5	4.4
25	140	166	1,000	297	96	79	107	75	28	7.1	3.7	4.8
26	140	110	300	393	106	79	98	72	28	7.0	3.7	6.4
27	130	112	200	321	186	80	91	70	28	6.6	3.5	6.7
28	130	128	180	222	271	78	88	66	27	6.5	3.4	6.0
29	120	87	160	182	-----	77	385	109	26	5.8	3.4	5.9
30	120	83	140	186	-----	72	782	129	25	5.4	3.3	6.0
31	110	-----	100	188	-----	67	-----	68	-----	5.0	3.2	-----
TOTAL	52,223	3,795	7,597	6,824	3,218	3,815	5,748	6,366	5,211	400.7	157.9	157.1
MEAN	1,685	127	245	220	115	123	192	205	174	12.9	5.09	5.24
MAX	28,800	707	1,000	1,000	271	500	1,980	2,000	2,070	24	11	15
MIN	110	74	80	100	85	67	52	66	25	5.0	3.2	3.4
AC-FT	103,600	7,530	15,070	13,540	6,380	7,570	11,400	12,630	10,340	795	313	312

CAL YR 1973 TOTAL 195,518.0 MEAN 536 MAX 28,800 MIN 15 AC-FT 387,800
WTR YR 1974 TOTAL 95,512.7 MEAN 262 MAX 28,800 MIN 3.2 AC-FT 189,400

PEAK DISCHARGE (BASE, 1,800 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
10-11	1400	30.06	36,400	05-17	UNKNOWN	21.8	3,000
04-21	1400	19.77	2,330	06-09	2100	22.49	3,250

06886900 TUTTLE CREEK LAKE NEAR MANHATTAN, KS

LOCATION.--Lat 39°15'16", long 96°36'08", in NW¼NE¼SW¼ sec.24, T.9 S., R.7 E., Pottawatomie County, on Big Blue River, near right end of dam, 5 mi (8 km) north of Manhattan and 10.0 mi (16.1 km) above mouth.

DRAINAGE AREA.--9,628 mi² (15,490 km²).

PERIOD OF RECORD.--March to April 1960, March 1962 to current year. Prior to October 1968, published as Tuttle Creek Reservoir near Randolph. October 1968 to September 1971 published as Tuttle Creek Reservoir near Manhattan.

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (levels by Corps of Engineers). Prior to July 1, 1968, at site 19.8 mi (31.9 km) upstream at same datum.

EXTREMES.--Current year: Maximum elevation, 1,127.90 ft (343.784 m) Oct. 18-20, contents, 1,958,000 acre-ft (2,410 hm³); minimum, 1,072.60 ft (326.928 m) Sept. 29, 30, contents, 388,300 acre-ft (479 hm³).
Period of record: Maximum elevation, 1,127.90 ft (343.784 m) Oct. 18-20, 1973, contents, 1,958,000 acre-ft (2,410 hm³); minimum since conservation pool was first filled, 1,060.82 ft (323.338 m) Jan. 4, 1967, contents, 231,000 acre-ft (285 hm³).

REMARKS.--Reservoir is formed by compacted earthfill dam. Storage began Mar. 15, 1962. Total capacity, 3,227,000 acre-ft (3,980 hm³) consisting of the following: Sedimentation, 233,000 acre-ft (287 hm³) below elevation 1,061.0 ft (323.39 m); conservation pool, 192,300 acre-ft (237 hm³) between elevations 1,061.0 ft (323.39 m) and 1,075.0 ft (327.66 m); flood control pool, 1,942,000 acre-ft (2,390 hm³) between elevations 1,075.0 ft (327.66 m) and 1,136.0 ft (346.25 m); and surcharge pool, 860,300 acre-ft (1,060 hm³) between elevations 1,136.0 ft (346.25 m) and 1,150.0 ft (350.52 m). Reservoir is used to store water for flood control. Figures given herein represent total contents.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on field survey by Corps of Engineers in 1962)

1,070	350,100	1,095	819,500	1,115	1,419,000
1,075	425,300	1,100	947,800	1,120	1,612,000
1,080	508,900	1,105	1,089,000	1,125	1,825,000
1,085	601,100	1,110	1,246,000	1,130	2,059,000
1,090	704,000				

ELEVATION, IN FEET, AT 2400, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,100.18	1,116.76	1,081.52	1,077.09	1,078.60	1,075.10	1,074.90	1,076.10	1,076.00	1,075.10	1,074.33	1,074.70
2	1,101.49	1,115.64	1,079.88	1,076.97	1,078.40	1,074.80	1,075.00	1,076.00	1,075.80	1,075.00	1,074.35	1,074.70
3	1,102.29	1,114.58	1,078.31	1,076.81	1,078.00	1,074.70	1,075.10	1,075.90	1,075.60	1,075.10	1,074.30	1,074.50
4	1,102.65	1,113.50	1,076.90	1,076.68	1,077.60	1,074.70	1,075.10	1,075.80	1,075.50	1,075.10	1,074.20	1,074.50
5	1,103.04	1,112.47	1,076.08	1,076.54	1,077.10	1,074.80	1,075.10	1,075.80	1,075.30	1,075.10	1,074.10	1,074.30
6	1,103.25	1,111.60	1,075.91	1,076.39	1,076.60	1,074.90	1,075.10	1,075.50	1,075.30	1,075.10	1,074.10	1,074.30
7	1,103.15	1,110.79	1,075.64	1,076.20	1,076.20	1,074.80	1,075.20	1,075.40	1,075.30	1,075.00	1,074.10	1,074.30
8	1,102.87	1,109.86	1,075.42	1,076.10	1,075.90	1,074.80	1,075.20	1,075.10	1,075.20	1,075.00	1,074.10	1,074.20
9	1,102.30	1,108.91	1,075.19	1,076.00	1,075.40	1,075.00	1,075.20	1,075.10	1,075.40	1,075.00	1,074.10	1,074.10
10	1,103.55	1,107.93	1,075.00	1,075.80	1,074.20	1,075.10	1,075.10	1,075.10	1,075.60	1,074.90	1,074.10	1,074.00
11	1,109.65	1,106.99	1,075.00	1,075.67	1,073.70	1,075.20	1,075.30	1,075.20	1,075.70	1,074.90	1,074.10	1,073.90
12	1,115.00	1,105.90	1,075.12	1,075.50	1,073.71	1,075.40	1,075.30	1,075.30	1,075.60	1,074.90	1,074.10	1,073.80
13	1,120.00	1,104.81	1,075.15	1,075.30	1,073.76	1,075.40	1,075.30	1,075.60	1,075.40	1,074.90	1,074.10	1,073.70
14	1,124.00	1,103.67	1,075.29	1,075.14	1,074.00	1,075.40	1,075.20	1,075.60	1,075.40	1,074.90	1,074.10	1,073.60
15	1,126.36	1,102.36	1,075.33	1,074.98	1,074.35	1,075.30	1,075.30	1,075.44	1,075.30	1,074.90	1,074.06	1,073.60
16	1,127.35	1,101.07	1,075.31	1,074.79	1,074.80	1,075.20	1,075.30	1,075.40	1,075.20	1,074.80	1,074.10	1,073.40
17	1,127.83	1,099.92	1,075.26	1,074.68	1,075.30	1,075.10	1,075.40	1,075.27	1,075.20	1,074.70	1,074.44	1,073.28
18	1,127.90	1,098.66	1,075.21	1,074.68	1,075.80	1,075.10	1,075.42	1,075.30	1,075.10	1,074.70	1,074.66	1,073.22
19	1,127.90	1,097.33	1,074.97	1,075.08	1,076.00	1,075.00	1,075.42	1,075.26	1,075.00	1,074.70	1,074.66	1,073.22
20	1,127.62	1,096.10	1,074.80	1,075.65	1,076.00	1,075.00	1,075.68	1,075.45	1,075.00	1,074.70	1,074.70	1,073.20
21	1,127.06	1,094.89	1,074.80	1,076.41	1,076.30	1,075.00	1,075.26	1,075.67	1,075.00	1,074.60	1,074.82	1,073.10
22	1,126.44	1,093.75	1,075.00	1,077.35	1,076.10	1,075.00	1,075.60	1,075.76	1,075.10	1,074.60	1,074.83	1,073.00
23	1,125.63	1,092.68	1,075.22	1,078.11	1,076.20	1,075.00	1,076.64	1,075.90	1,075.00	1,074.54	1,074.83	1,072.90
24	1,124.79	1,091.54	1,075.85	1,078.67	1,076.00	1,075.00	1,076.42	1,076.10	1,075.00	1,074.50	1,074.83	1,072.90
25	1,123.76	1,090.32	1,076.75	1,079.00	1,076.00	1,075.00	1,076.30	1,076.20	1,075.00	1,074.54	1,074.82	1,072.80
26	1,122.86	1,089.11	1,077.39	1,079.20	1,075.60	1,075.00	1,076.00	1,076.40	1,075.02	1,074.52	1,074.82	1,072.70
27	1,121.89	1,087.73	1,077.48	1,079.50	1,075.50	1,075.00	1,075.90	1,076.50	1,075.03	1,074.49	1,074.82	1,072.70
28	1,120.88	1,086.25	1,077.55	1,079.70	1,075.30	1,075.10	1,075.80	1,076.50	1,075.00	1,074.46	1,074.77	1,072.70
29	1,119.87	1,084.78	1,077.56	1,079.50	-----	1,075.10	1,075.80	1,076.40	1,075.03	1,074.45	1,074.72	1,072.60
30	1,118.82	1,083.22	1,077.49	1,079.20	-----	1,075.00	1,076.10	1,076.30	1,075.07	1,074.40	1,074.70	1,072.60
31	1,117.75	-----	1,077.28	1,078.80	-----	1,075.00	-----	1,076.20	-----	1,074.38	1,074.70	-----
MEAN	1,116.39	1,101.10	1,076.25	1,076.82	1,075.80	1,075.03	1,075.48	1,075.73	1,075.27	1,074.77	1,074.43	1,073.55
MAX	1,127.90	1,116.76	1,081.52	1,079.70	1,078.60	1,075.40	1,076.64	1,076.50	1,076.00	1,075.10	1,074.83	1,074.70
MIN	1,100.18	1,083.22	1,074.80	1,074.68	1,073.70	1,074.70	1,074.90	1,075.10	1,075.00	1,074.38	1,074.06	1,072.60
(+)	1,522,400	567,300	462,300	488,000	430,100	425,300	442,900	444,500	426,400	415,600	420,600	388,300
(#)	+621,300	-955,100	-105,000	+25,700	-57,900	-4,800	+17,600	+1,600	-18,100	-10,800	+5,000	-32,300

CAL YR 1973 (#) +10,300

WTR YR 1974 (#) -512,800

+ CONTENTS, IN ACRE-FEET, AT END OF MONTH.

CHANGE IN CONTENTS, IN ACRE-FEET.

LOCATION.--Lat 39°14'14", long 96°34'16", in SWNWSE 1/4 sec.30, T.9 S., R.8 E., Riley County, at downstream side of highway bridge, 2.5 mi (4.0 km) downstream from Tuttle Creek Dam, 4.0 mi (6.4 km) north of Manhattan, and 7.5 mi (12.1 km) upstream from mouth.

PERIOD OF RECORD.--May to July 1951 (published in WSP 1139), October 1954 to current year. Records for April 1895 to October 1905, published in previous Annual Reports and Water-Supply Papers, have been found to be unreliable and should not be used.

GAGE.--Water-stage recorder. Datum of gage is 991.86 ft (302.319 m) above mean sea level. May 1 to July 31, 1951, nonrecording gage above power dam 1.1 mi (1.8 km) upstream at datum 5.34 ft (1.628 m) higher. Oct. 1 to Nov. 17, 1954, nonrecording gage at present site and datum.

EXTREMES.--Current year: Maximum discharge, 26,400 ft³/s (748 m³/s) Oct. 24, gage height, 19.71 ft (6.008 m); minimum daily, 50 ft³/s (1.42 m³/s) Oct. 1-5, 13-16.

Period of record: Maximum discharge, 93,400 ft³/s (2,650 m³/s) July 12, 1951, gage height, 33.04 ft (10.071 m), present site and datum, from floodmarks, from rating curve extended above 35,000 ft³/s (990 m³/s) on basis of slope-area measurement of peak flow; minimum daily, 11 ft³/s (0.31 m³/s) Aug. 4, 1966. Maximum discharge since construction of Tuttle Creek Dam in 1962, 31,500 ft³/s (892 m³/s) June 19, 1967, gage height, 21.61 ft (6.587 m).

Flood of May 31, 1903, reached a stage of 35.85 ft (10.927 m), and flood in June 1941 reached a stage of about 34.1 ft (10.39 m), from floodmarks and information by local resident.

REVISIONS.--See PERIOD OF RECORD.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	50	24,000	17,700	3,220	7,240	3,820	1,550	3,040	2,430	465	450	545
2	50	23,900	17,500	3,190	7,260	3,810	1,340	2,990	2,430	465	450	712
3	50	23,800	17,200	3,140	7,260	3,780	1,060	2,900	2,440	470	445	928
4	50	23,600	15,500	3,120	7,270	2,940	1,040	2,860	2,450	475	450	928
5	50	21,000	9,980	3,110	7,090	1,620	1,030	2,860	2,450	470	500	928
6	2,400	18,600	4,610	3,090	7,170	1,610	1,030	2,870	2,550	470	560	928
7	6,040	18,600	4,490	3,080	7,210	1,600	1,030	2,870	2,460	470	555	928
8	8,560	18,700	4,390	3,040	7,180	1,600	1,010	2,850	2,630	465	555	928
9	10,600	18,600	4,320	3,030	7,000	1,590	1,010	2,340	2,600	465	560	928
10	12,900	18,600	3,890	3,020	6,940	1,610	1,020	1,120	2,500	465	555	928
11	2,600	18,500	2,760	3,010	5,000	1,600	1,020	1,100	2,500	460	550	928
12	75	19,800	2,730	3,000	2,800	1,610	1,030	1,100	2,500	460	550	916
13	50	20,900	2,680	3,000	1,800	1,600	1,040	1,100	2,490	465	550	910
14	50	20,800	2,660	2,980	946	1,790	1,020	1,600	2,450	460	545	910
15	50	20,700	2,620	2,980	928	2,120	1,020	2,480	2,440	460	545	916
16	50	20,500	2,630	2,980	922	2,100	1,020	2,480	2,420	460	545	916
17	3,600	20,400	2,860	2,980	922	2,100	1,110	2,450	2,420	465	565	910
18	13,300	20,300	3,260	3,030	916	2,090	1,240	2,440	2,420	465	540	826
19	12,900	20,100	3,240	3,080	1,630	2,080	1,340	2,440	1,910	465	540	505
20	13,400	19,100	2,920	3,180	2,970	2,070	1,550	2,500	1,380	465	540	500
21	18,100	20,400	1,820	3,200	3,300	1,800	1,700	2,500	1,240	460	540	500
22	21,300	20,200	1,180	2,220	3,840	1,610	1,400	2,500	904	460	540	495
23	21,200	20,000	1,140	1,110	3,840	1,580	1,800	2,500	892	455	540	540
24	23,100	19,900	1,180	1,090	3,820	1,570	2,960	2,500	730	455	540	670
25	25,800	19,700	1,290	1,580	3,830	1,570	2,860	2,510	475	530	540	760
26	24,700	19,300	2,140	3,110	3,830	1,570	2,840	2,510	470	460	540	874
27	24,600	18,700	3,770	3,120	3,830	1,570	2,830	2,500	450	455	540	625
28	24,500	18,400	3,610	4,240	3,820	1,570	2,830	2,500	465	455	535	306
29	24,300	18,200	3,410	7,220	-----	1,560	3,380	2,500	465	450	535	302
30	24,400	17,900	3,320	7,270	-----	1,560	3,170	2,510	470	455	535	302
31	24,400	-----	3,250	7,230	-----	1,570	-----	2,440	-----	455	550	-----
TOTAL	343,225	603,200	154,050	102,650	120,564	60,670	48,280	73,860	54,431	14,395	16,485	

06887500 KANSAS RIVER AT WAMEGO, KS

LOCATION.--Lat 39°11'52", long 96°18'16", in NW¼SW¼NE¼ sec.9, T.10 S., R.10 E., Pottawatomie County, at downstream side of bridge on State Highway 99 at Wamego, 3.0 mi (4.8 km) downstream from Antelope Creek, and at mile 126.9 (204.2 km).

DRAINAGE AREA.--55,280 mi² (143,200 km²), approximately, of which a large area is probably noncontributing.

PERIOD OF RECORD.--January 1919 to current year.

GAGE.--Water-stage recorder. Datum of gage is 950.82 ft (289.810 m) above mean sea level. Prior to Aug. 1, 1934, nonrecording gage and Aug. 1, 1934, to Sept. 30, 1955, water-stage recorder at present site at datum 3.00 ft (0.914 m) higher.

AVERAGE DISCHARGE.--55 years, 4,939 ft³/s (139.9 m³/s), 3,578,000 acre-ft/yr (4.41 km³/yr).

EXTREMES.--Current year: Maximum discharge, 72,900 ft³/s (2,060 m³/s) Oct. 12, gage height, 18.70 ft (5.700 m); minimum, 1,840 ft³/s (52.1 m³/s) Sept. 28.

Period of record: Maximum discharge, 400,000 ft³/s (11,300 m³/s) July 13, 1951, gage height, 30.56 ft (9.315 m), present datum, from rating curve extended above 170,000 ft³/s (4,810 m³/s) on basis of slope-area measurement of peak flow and flood routing studies; minimum, 73 ft³/s (2.07 m³/s) Dec. 14, 1940.

Flood in May 1903 reached a stage of 29.3 ft (8.93 m), present datum, determined by U.S. Weather Bureau, from floodmarks.

REMARKS.--Records good. Natural flow of stream affected by reservoirs in Colorado, Nebraska, and Kansas, and by numerous small diversions for irrigation above station. Records of chemical analyses, water temperatures, suspended sediment loads, and specific conductance for the water year 1974 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 806: Drainage area. WSP 1310: 1937(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	33,500	41,000	24,500	10,500	17,600	10,000	5,210	11,400	7,050	3,480	2,140	2,680
2	38,200	41,200	24,300	10,100	18,100	9,680	5,120	11,300	7,260	3,280	2,100	2,750
3	36,600	41,100	24,100	9,400	18,400	8,940	4,390	9,950	7,470	2,810	2,040	2,790
4	31,200	40,900	26,200	8,500	18,800	8,530	4,050	8,800	7,870	2,800	2,020	2,840
5	25,900	39,700	26,600	7,800	16,700	6,290	3,890	8,330	8,200	2,740	2,020	2,720
6	25,100	34,100	17,200	7,400	17,100	5,950	3,290	8,230	8,030	2,650	2,180	2,640
7	22,100	33,700	15,200	7,000	18,900	5,840	3,010	8,180	8,690	2,670	2,230	2,360
8	23,600	35,900	14,100	6,800	18,600	6,000	2,940	7,880	10,400	2,530	2,240	2,160
9	23,100	36,600	13,100	6,800	17,500	5,940	2,950	7,460	17,400	2,420	2,310	2,060
10	33,100	36,500	13,400	6,800	16,500	6,220	2,900	5,910	15,700	2,370	2,330	2,020
11	58,000	36,400	12,100	6,800	15,400	6,990	2,910	9,620	12,000	2,330	2,360	2,030
12	61,500	36,900	12,100	6,800	11,100	7,770	2,930	9,600	10,000	2,270	2,350	2,210
13	43,300	39,400	11,900	7,000	10,000	7,690	2,970	8,710	9,190	2,240	2,330	2,220
14	52,400	39,400	11,600	7,200	8,170	8,260	3,320	7,980	8,320	2,190	2,320	2,190
15	57,700	40,300	11,300	7,300	7,930	9,880	3,740	8,460	7,730	2,170	2,350	2,190
16	44,600	39,500	12,000	7,650	7,800	9,580	3,740	8,150	7,440	2,180	2,280	2,190
17	36,600	39,100	12,100	8,170	7,430	9,370	3,610	7,000	7,240	2,290	2,420	2,160
18	42,200	38,900	12,500	8,850	7,100	9,230	3,680	6,620	7,050	2,300	2,720	2,270
19	40,600	38,400	12,200	10,400	6,970	9,040	3,750	6,370	6,920	2,270	2,570	2,410
20	35,700	36,100	11,900	12,400	8,660	8,960	4,960	6,590	5,960	2,220	2,500	2,290
21	36,400	33,200	10,600	12,600	8,750	8,890	12,800	14,400	5,790	2,180	2,520	2,320
22	38,300	31,000	8,810	12,200	9,620	8,330	15,700	16,400	5,400	2,150	2,420	2,330
23	37,600	30,800	8,030	10,100	9,690	6,900	12,300	16,900	5,240	2,130	2,430	2,300
24	37,800	30,600	8,480	9,630	9,840	5,440	12,200	12,200	5,110	2,120	2,380	2,270
25	42,900	30,800	9,770	9,090	10,100	5,310	9,870	9,370	4,300	2,680	2,390	2,290
26	41,900	31,300	12,800	10,600	10,200	5,150	8,610	9,390	3,470	2,460	2,320	2,300
27	42,200	29,900	16,300	10,800	10,000	5,010	8,220	10,300	3,150	2,230	2,260	2,340
28	42,100	28,400	16,000	10,700	9,930	5,000	7,980	10,700	3,170	2,160	2,230	2,030
29	41,900	26,400	13,700	16,400	-----	5,090	8,850	11,300	3,680	2,160	2,310	2,330
30	41,800	25,300	12,300	18,300	-----	5,380	12,100	9,860	3,600	2,140	2,250	2,360
31	42,100	-----	11,400	17,700	-----	5,330	-----	8,220	-----	2,150	2,210	-----
TOTAL	1,210.0M	1,062.8M	446,590	301,790	346,890	225,990	181,990	295,580	222,830	74,770	71,530	70,050
MEAN	39,030	35,430	14,410	9,735	12,390	7,290	6,066	9,535	7,428	2,412	2,307	2,335
MAX	61,500	41,200	26,600	18,300	18,900	10,000	15,700	16,900	17,400	3,480	2,720	2,840
MIN	22,100	25,300	8,030	6,800	6,970	5,000	2,900	5,910	3,150	2,120	2,020	2,020
AC-FT	2,400M	2,108M	885,800	598,600	688,100	448,300	361,000	586,300	442,000	148,300	141,900	138,900
CAL YR 1973	TOTAL 6,260,370			MEAN 17,150		MAX 61,500		MIN 2,170		AC-FT 12,420,000		
WTR YR 1974	TOTAL 4,510,810			MEAN 12,360		MAX 61,500		MIN 2,020		AC-FT 8,947,000		

PEAK DISCHARGE (REGULATED) ABOVE 8,000 CFS

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
10-12	0300	18.70	72,900	02-26	1200	7.88	10,300	05-11	1500	8.27	11,400
12-27	1800	9.96	16,900	03-15	0700	7.77	9,960	05-23	1000	10.09	17,400
01-20	2200	8.73	12,900	04-22	0600	9.88	16,600	06-09	0300	10.61	19,400
02-04	1700	10.51	19,000	04-30	0800	8.78	13,100				

M EXPRESSED IN THOUSANDS.

06888500 MILL CREEK NEAR PAXICO, KS

LOCATION.--Lat 39°03'44", long 96°10'52", in SW¼NE¼SW¼ sec.27, T.11 S., R.11 E., Wabaunsee County, at downstream side of bridge on Interstate Highway 70, 1.0 mi (1.6 km) southwest of Paxico, 2.0 mi (3.2 km) downstream from Kuenzli Creek, and 16.0 mi (25.7 km) upstream from mouth.

DRAINAGE AREA.--316 mi² (818 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 964.92 ft (294.108 m), above mean sea level. Prior to Apr. 15, 1958, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--20 years (1954-74), 172 ft³/s (4.871 m³/s), 124,600 acre-ft/yr (154 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 32,200 ft³/s (912 m³/s) Oct. 11, gage height, 30.75 ft (9.373 m); minimum, 21 ft³/s (0.595 m³/s) Aug. 5.
Period of record: Maximum discharge, 42,200 ft³/s (1,200 m³/s) Sept. 26, 1973, gage height, 32.21 ft (9.818 m); no flow at times.
Maximum stage known, 34.7 ft (10.58 m) July 12, 1951, from floodmarks, discharge, 77,200 ft³/s (2,190 m³/s), from contracted-opening measurement of peak flow.

REMARKS.--Records good.

REVISIONS (WATER YEARS).--WSP 1560: 1954, 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	834	197	138	230	263	227	152	458	129	81	26	184
2	673	186	134	240	254	213	143	388	123	76	25	189
3	557	173	134	250	237	203	142	344	117	73	23	135
4	470	167	7,590	260	224	190	159	307	115	81	22	82
5	407	160	2,090	260	223	177	151	287	111	75	21	66
6	398	154	894	260	212	171	146	266	165	69	28	60
7	380	151	640	258	194	167	146	246	175	66	31	59
8	335	147	561	231	185	307	209	234	1,300	61	30	55
9	305	139	541	217	181	255	196	236	6,700	57	30	51
10	725	133	474	223	176	828	170	1,300	680	55	31	48
11	20,100	130	438	208	169	608	167	543	696	52	29	45
12	2,500	129	415	195	165	438	167	352	511	50	27	44
13	1,190	126	388	203	163	378	156	303	408	47	25	43
14	866	124	353	197	157	350	147	772	353	44	25	42
15	713	121	324	196	151	328	142	432	298	42	37	39
16	597	116	285	300	146	296	141	418	249	40	70	39
17	524	113	269	700	143	279	137	1,060	225	39	51	38
18	478	113	265	1,080	143	268	135	375	208	39	103	37
19	438	112	255	594	143	250	135	330	192	37	57	34
20	403	732	253	1,160	136	236	3,940	293	174	36	40	33
21	370	362	223	733	171	224	4,400	253	154	35	34	32
22	338	241	218	562	221	218	803	233	140	34	33	30
23	318	205	221	478	209	212	575	231	129	32	33	29
24	294	196	1,030	432	204	202	476	277	121	31	33	27
25	271	184	615	403	186	194	422	217	112	41	32	27
26	257	175	408	385	189	186	380	212	105	43	31	27
27	247	166	352	362	277	181	355	195	100	35	29	26
28	234	153	329	334	264	175	325	176	93	30	29	26
29	222	147	312	315	-----	169	364	162	87	28	29	26
30	213	142	293	297	-----	162	1,010	149	83	27	29	25
31	206	-----	270	279	-----	157	-----	137	-----	26	38	-----
TOTAL	35,863	5,394	20,712	11,842	5,386	8,249	15,991	11,186	14,053	1,482	1,081	1,598
MEAN	1,157	180	668	382	192	266	533	361	468	47.8	34.9	53.3
MAX	20,100	732	7,590	1,160	277	828	4,400	1,300	6,700	81	103	189
MIN	206	112	134	195	136	157	135	137	83	26	21	25
AC-FT	71,130	10,700	41,080	23,490	10,680	16,360	31,720	22,190	27,870	2,940	2,140	3,170

CAL YR 1973 TOTAL 237,981 MEAN 652 MAX 21,300 MIN 25 AC-FT 472,000
WTR YR 1974 TOTAL 132,837 MEAN 364 MAX 20,100 MIN 21 AC-FT 263,500

PEAK DISCHARGE (BASE, 2,500 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
10-11	1200	30.75	32,200	05-10	1500	11.54	4,280
12-04	1600	22.23	12,600	05-17	0100	11.01	3,910
04-20	2400	23.73	14,400	06-09	0600	23.19	13,700

06889000 KANSAS RIVER AT TOPEKA, KS

LOCATION.--Lat 39°04'00", long 95°38'58", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.28, T.11 S., R.16 E., Shawnee County, near right bank at downstream side of Sardou Bridge in Topeka, 2.3 mi (3.7 km) upstream from Soldier Creek (diversion channel) and at mile 83.1 (133.7 km).

DRAINAGE AREA.--56,720 mi² (146,900 km²), approximately, of which a large area is probably noncontributing.

PERIOD OF RECORD.--April to August 1904 (gage heights only), June 1917 to current year. Gage-height records for this vicinity since August 1904 are contained in reports of U.S. Weather Bureau.

GAGE.--Water-stage recorder. Datum of gage is 851.66 ft (259.586 m) above mean sea level. Prior to Feb. 28, 1961, recording or non-recording gages at several sites within 8,000 ft (2,400 m) of present site at various datums.

AVERAGE DISCHARGE.--57 years, 5,479 ft³/s (155.2 m³/s), 3,970,000 acre-ft/yr (4.90 km³/yr).

EXTREMES.--Current year: Maximum discharge, 130,000 ft³/s (3,680 m³/s) Oct. 12, gage height, 27.29 ft (8.318 m); minimum, 2,260 ft³/s (64.0 m³/s) Aug. 5.

Period of record: Maximum discharge, 469,000 ft³/s (13,300 m³/s) July 13, 1951, gage height, 35.8 ft (10.91 m), from floodmark, present site and datum; minimum, 112 ft³/s (3.17 m³/s) Dec. 16, 1940, result of freezeup. Maximum stage known since at least 1844, that of July 13, 1951.

Flood of May 30, 1903 (second highest since 1844) reached a stage of about 33 ft (10.1 m), present site and datum, from floodmarks at site 5,900 ft (1,800 m) upstream, discharge, about 300,000 ft³/s (8,500 m³/s). A flood in the spring of 1844 is known to have been higher than that of 1903 and on the basis of legendary marks or deductions is believed to be the greatest known.

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

REVISIONS (WATER YEARS).-- WSP 806: Drainage area. WSP 1310: 1920(M), 1922(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	32,900	40,400	25,100	10,700	18,500	10,400	5,850	17,300	7,710	3,750	2,430	3,260
2	37,600	40,100	24,500	9,910	18,700	10,400	5,710	13,400	7,050	3,590	2,400	3,850
3	39,200	40,200	24,300	9,620	19,000	9,910	5,660	12,100	7,180	3,390	2,360	3,270
4	34,900	39,800	35,500	9,000	19,200	9,230	5,130	10,400	7,340	3,360	2,290	2,890
5	29,800	39,300	39,700	8,400	19,500	8,570	4,830	9,390	7,860	3,090	2,260	2,830
6	26,500	35,900	26,300	8,000	16,000	6,760	4,580	8,910	8,400	3,000	2,330	2,750
7	25,800	33,400	17,800	7,600	19,200	6,530	4,100	8,760	10,300	2,930	2,380	2,730
8	24,000	33,900	16,700	7,600	19,500	6,670	3,910	8,590	9,670	2,880	2,370	2,560
9	24,400	35,900	15,100	7,600	19,100	7,550	3,850	8,220	34,900	2,790	2,380	2,440
10	27,800	35,500	14,400	7,600	17,500	7,290	3,770	8,460	32,100	2,720	2,380	2,390
11	88,000	35,700	14,100	7,600	17,100	9,410	3,740	8,070	17,900	2,660	2,360	2,360
12	111,000	35,400	13,000	7,600	14,700	9,030	3,750	11,000	13,900	2,600	2,360	2,400
13	57,800	36,900	12,900	7,600	11,000	8,860	3,750	9,690	11,200	2,550	2,340	2,500
14	46,500	38,000	12,500	7,600	10,100	8,570	3,790	9,870	10,400	2,510	2,330	2,470
15	55,900	37,900	12,100	7,800	8,610	9,520	4,070	8,850	9,010	2,480	2,320	2,460
16	49,500	38,500	11,800	8,000	8,440	10,400	4,370	9,170	8,390	2,450	2,450	2,450
17	41,500	37,500	12,200	8,800	8,210	9,980	4,270	13,000	8,090	2,450	2,500	2,450
18	39,000	37,400	12,400	9,400	7,880	9,840	4,130	8,030	7,770	2,490	4,440	2,430
19	43,100	37,000	12,400	12,000	7,550	9,640	4,170	7,240	7,590	2,470	2,920	2,460
20	39,100	40,300	12,100	25,000	7,670	9,410	4,380	6,980	7,120	2,450	2,620	2,560
21	36,500	37,100	11,500	24,000	9,300	9,300	22,200	8,630	6,210	2,430	2,560	2,470
22	37,500	33,400	10,300	17,500	10,100	9,050	23,700	16,700	6,060	2,420	2,590	2,480
23	38,400	30,800	8,660	14,000	10,400	8,560	16,100	17,900	5,630	2,380	2,490	2,460
24	37,600	30,900	9,790	11,400	10,200	6,850	13,200	16,500	5,490	2,350	2,480	2,450
25	39,900	30,800	12,800	10,700	10,100	6,070	12,500	10,800	5,320	2,670	2,450	2,450
26	41,900	30,900	11,900	10,400	10,400	5,980	10,200	9,540	4,490	3,240	2,440	2,440
27	41,200	30,400	13,900	11,900	10,500	5,840	9,320	9,600	3,820	2,870	2,430	2,430
28	41,500	29,000	16,700	11,500	10,400	5,750	8,910	10,600	3,570	2,580	2,430	2,470
29	41,200	27,600	15,200	12,400	-----	5,720	9,350	11,100	3,600	2,510	2,390	2,320
30	41,000	25,900	13,000	19,300	-----	5,750	24,300	10,900	3,920	2,470	2,420	2,450
31	40,900	-----	11,700	19,200	-----	5,910	-----	9,150	-----	2,440	2,470	-----
TOTAL	1,311.9M	1,055.8M	500.350	349.730	368.860	252.750	237.590	328.850	281.990	84.970	77.370	77.930
MEAN	42.320	35.190	16.140	11.280	13.170	8.153	7.920	10.610	9.400	2.741	2.496	2.598
MAX	111,000	40,400	39,700	25,000	19,500	10,400	24,300	17,900	34,900	3,750	4,440	3,850
MIN	24,000	25,900	8,660	7,600	7,550	5,720	3,740	6,980	3,570	2,350	2,260	2,320
AC-FT	2,602M	2,094M	992,400	693,700	731,600	501,300	471,300	652,300	559,300	168,500	153,500	154,600

CAL YR 1973 TOTAL 7,050,800 MEAN 19,320 MAX 111,000 MIN 2,600 AC-FT 13,990,000
WTR YR 1974 TOTAL 4,928,090 MEAN 13,500 MAX 111,000 MIN 2,260 AC-FT 9,775,000

PEAK DISCHARGE (REGULATED) ABOVE 12,000 CFS

DATE	TIME	G.H.T.	DISCHARGE	DATE	TIME	G.H.T.	DISCHARGE	DATE	TIME	G.H.T.	DISCHARGE
10-12	0400	27.29	130,000	01-30	1600	9.35	20,000	05-17	0700	8.06	15,500
12-04	2300	16.04	46,700	02-07	1700	9.39	20,100	05-23	1800	8.93	18,500
12-28	1400	8.99	17,000	04-21	1700	12.07	30,000	06-07	1900	7.01	12,000
01-20	UNKNOWN	UNKNOWN	30,000	04-30	1300	11.78	28,800	06-09	2000	16.23	49,200

M EXPRESSED IN THOUSANDS.

06889100 SOLDIER CREEK NEAR GOFF, KS

LOCATION.--Lat 39°37'27", long 95°57'57", in NW¼NW¼ sec.16, T.5 S., R.13 E., Nemaha County, 20 ft (6 m) downstream from highway bridge, 3.3 mi (5.3 km) southwest of Goff, and at mile 71.9 (115.7 km).

DRAINAGE AREA.--2.06 mi² (5.34 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 1,297.10 ft (395.356 m) above mean sea level.

AVERAGE DISCHARGE.--10 years, 1.23 ft³/s (0.0348 m³/s), 891 acre-ft/yr (1.10 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 764 ft³/s (21.6 m³/s) Oct. 10, gage height, 11.21 ft (3.417 m); no flow at times. Period of record: Maximum discharge, 7,080 ft³/s (201 m³/s) May 10, 1970, gage height, 15.18 ft (4.627 m), from rating curve extended above 250 ft³/s (7.08 m³/s) on basis of slope-area measurement of peak flow; no flow at times in most years.

REMARKS.--Records good. Records of suspended sediment loads for the water year 1974 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	.52	.30	.24	.60	.37	.76	.15	1.3	.08	.03		
2	.44	.23	.24	.50	.35	.63	.14	1.2	.07	.02		
3	.40	.17	.25	.45	.30	.45	.14	.60	.06	.04		
4	.32	.18	20	.40	.25	1.1	.14	.56	.06	.06		
5	.24	.17	2.0	.40	.30	.48	.14	.56	.07	.03		
6	.40	.15	.55	.35	.30	.40	.14	.40	1.6	.03		
7	.36	.16	.35	.30	.25	.32	.14	.40	.23	.02		
8	.28	.16	.61	.30	.23	4.4	.12	.36	85	.02		
9	.24	.14	.82	.30	.20	.60	.12	.40	18	.01		
10	155	.12	.49	.30	.20	1.6	.12	.40	1.2	.01		
11	104	.13	1.1	.30	.25	.99	.14	.67	.72	.02		
12	2.3	.15	1.8	.25	.30	.87	.14	.42	.34	.01		
13	1.2	.15	1.3	.25	.28	.60	.12	.43	.24	.01		
14	.60	.15	.54	.30	.27	.52	.12	.37	.18	0		
15	.48	.15	.44	.40	.25	.53	.12	.20	.14	0		
16	.36	.14	.38	4.6	.25	.41	.12	.20	.11	0		
17	.32	.15	.40	21	.25	.40	.11	.27	.09	0		
18	.30	.15	.37	12	.30	.39	.11	.24	.08	0		
19	.38	.16	.37	3.3	.30	.35	.11	.20	.06	0		
20	.42	17	.37	32	.25	.34	74	.15	.05	0		
21	.50	1.9	.65	3.5	.46	.29	42	.13	.06	0		
22	.54	.52	.75	2.0	.65	.33	2.2	.12	.04	0		
23	.46	.48	.66	1.5	.70	.30	1.1	.11	.04	0		
24	.40	.78	26	1.0	.50	.25	.60	.13	.04	0		
25	.35	.45	2.9	1.0	.40	.26	.52	.12	.04	0		
26	.35	.44	.96	.92	1.5	.28	.52	.12	.04	0		
27	.41	.38	.70	.60	4.2	.27	.56	.12	.04	0		
28	.39	.30	1.3	.52	1.6	.20	.56	.12	.04	0		
29	.39	.24	1.0	.56	-----	.21	18	.15	.03	0		
30	.40	.24	.80	.55	-----	.16	6.6	.09	.03	0		
31	.37	-----	.70	.34	-----	.16	-----	.08	-----	0		-----
TOTAL	273.12	25.84	69.04	90.79	15.46	18.85	149.10	10.62	108.78	.31	0	0
MEAN	8.81	.86	2.23	2.93	.55	.61	4.97	.34	3.63	.010	0	0
MAX	155	17	26	32	4.2	4.4	74	1.3	85	.06	0	0
MIN	.24	.12	.24	.25	.20	.16	.11	.08	.03	0	0	0
AC-FT	542	51	137	180	31	37	296	21	216	.6	0	0

CAL YR 1973 TOTAL 1,341.55 MEAN 3.68 MAX 155 MIN 0 AC-FT 2,660
WTR YR 1974 TOTAL 761.91 MEAN 2.09 MAX 155 MIN 0 AC-FT 1,510

PEAK DISCHARGE (BASE, 100 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
10-10	0915	11.21	764	04-20	1845	10.11	452
10-10	2230	8.98	308	04-21	0130	9.20	330
10-11	0615	9.74	394	06-08	1900	9.12	322

KANSAS RIVER BASIN

75

06889120 SOLDIER CREEK NEAR BANCROFT, KS

LOCATION.--Lat 39°35'42", long 95°58'17", in NE¼NW¼ sec.28, T.5 S., R.13 E., Nemaha County, at downstream side of highway bridge, 4.0 mi (6.4 km) west of Bancroft, and at mile 68.7 (110.5 km).

DRAINAGE AREA.--10.5 mi² (27.2 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 1,239.50 ft (377.800 m) above mean sea level.

AVERAGE DISCHARGE.--10 years, 6.39 ft³/s (0.181 m³/s), 4,630 acre-ft/yr (5.71 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 1,400 ft³/s (39.6 m³/s) Oct. 10, gage height, 13.00 ft (3.962 m); no flow Aug. 3-6, 21-30, Sept. 19-30.

Period of record: Maximum discharge, 13,100 ft³/s (371 m³/s) May 10, 1970, gage height, 15.47 ft (4.715 m), from rating curve extended above 1,500 ft³/s (42.5 m³/s) on basis of contracted-opening and flow-over-road measurement of peak flow; no flow at times in most years.

REMARKS.--Records fair. Records of suspended sediment loads for the 1974 water 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	7.5	1.1	2.0	2.3	2.5	6.5	1.6	6.4	.59	.28	.05	.05
2	6.4	1.0	2.2	2.5	2.1	5.6	1.5	4.4	.55	.22	.04	.08
3	5.1	.94	2.3	2.6	2.0	4.6	1.5	3.2	.55	.25	0	.06
4	4.7	1.0	117	2.7	2.0	13	1.5	2.6	.53	.80	0	.04
5	4.3	1.1	20	3.2	2.0	4.2	1.4	2.3	.58	.28	0	.03
6	4.8	1.0	4.8	3.2	2.2	2.8	1.4	2.0	8.5	.22	0	.03
7	4.8	1.2	3.9	3.0	2.1	2.4	1.4	1.9	4.6	.19	.03	.05
8	4.5	1.1	4.5	2.9	2.0	36	1.2	1.8	228	.16	.04	.05
9	4.4	.97	6.1	2.7	2.0	6.3	1.4	1.9	120	.13	.03	.03
10	584	.94	4.4	2.5	1.8	13	1.5	1.7	5.7	.10	.04	.02
11	533	1.0	6.2	2.3	1.9	13	1.6	2.2	4.2	.10	.04	.02
12	24	1.0	11	2.2	2.4	7.3	1.5	1.6	2.6	.09	.02	.02
13	9.2	1.2	8.9	2.2	2.2	4.6	1.3	1.5	2.2	.08	.02	.03
14	5.0	1.1	4.0	2.5	2.0	4.2	1.3	1.6	1.8	.07	.01	.04
15	3.8	1.1	3.2	3.0	1.9	3.9	1.3	1.3	1.5	.07	.01	.03
16	3.0	1.1	2.9	3.5	1.9	3.1	1.3	1.3	1.1	.06	.04	.03
17	2.3	1.1	2.9	20	1.9	2.9	1.1	1.6	.96	.07	.05	.02
18	1.8	1.1	2.8	80	2.2	3.0	1.1	1.6	.88	.06	.07	.01
19	1.4	1.2	2.8	49	2.2	2.6	1.2	1.7	.80	.05	.04	0
20	1.1	75	2.8	197	1.9	2.6	273	1.2	.64	.05	.01	0
21	1.0	19	2.8	37	3.0	1.8	210	1.0	.72	.05	0	0
22	1.1	4.6	3.0	14	3.0	2.5	22	.86	.48	.04	0	0
23	1.2	4.0	3.5	10	3.0	1.7	11	.78	.40	.04	0	0
24	1.1	6.0	129	7.5	3.0	1.7	6.8	.77	.40	.03	0	0
25	.94	3.7	24	6.4	2.5	2.0	5.0	.76	.37	.04	0	0
26	1.0	3.1	5.6	6.0	4.0	2.1	4.1	.82	.34	.05	0	0
27	.88	2.7	4.6	4.3	20	2.1	3.3	.75	.31	.04	0	0
28	.94	2.4	4.3	3.6	12	2.0	2.8	.68	.31	.04	0	0
29	.94	2.2	3.5	3.2	-----	1.9	61	1.4	.31	.02	0	0
30	1.1	2.1	3.3	3.2	-----	1.7	47	.87	.31	.02	0	0
31	1.1	-----	3.0	2.8	-----	1.6	-----	.72	-----	.03	.05	-----
TOTAL	1,226.40	145.05	401.3	487.3	91.7	162.7	672.1	53.21	390.23	3.73	.59	.64
MEAN	39.6	4.84	12.9	15.7	3.28	5.25	22.4	1.72	13.0	.12	.019	.021
MAX	584	75	129	197	20	36	273	6.4	228	.80	.07	.08
MIN	.88	.94	2.0	2.2	1.8	1.6	1.1	.68	.31	.02	0	0
AC-FT	2,430	288	796	967	182	323	1,330	106	774	7.4	1.2	1.3

CAL YR 1973 TOTAL 7,317.28 MEAN 20.0 MAX 652 MIN .09 AC-FT 14,510
WTR YR 1974 TOTAL 3,634.95 MEAN 9.96 MAX 584 MIN 0 AC-FT 7,210

PEAK DISCHARGE (BASE, 400 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
10-10	1145	13.00	1,400	04-20	2000	12.38	1,200
10-11	0730	12.67	1,290	04-21	0345	10.33	793
01-20	0530	7.60	412	06-08	2215	10.90	884

KANSAS RIVER BASIN

06889140 SOLDIER CREEK NEAR SOLDIER, KS

LOCATION.--Lat 39°33'57", long 95°57'45", in NW¼NE¼ sec.4, T.6 S., R.13 E., Jackson County, at downstream side of highway bridge, 2.0 mi (3.2 km) north of Soldier, and at mile 65.7 (105.7 km).

DRAINAGE AREA.--16.9 mi² (43.8 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 1,206.02 ft (367.595 m) above mean sea level.

AVERAGE DISCHARGE.--10 years, 9.69 ft³/s (0.274 m³/s), 7,020 acre-ft/yr (8.66 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 1,510 ft³/s (42.8 m³/s) Oct. 11, gage height, 9.93 ft (3.027 m); minimum daily, 0.35 ft³/s (0.010 m³/s) Sept. 18, 22, 27-30.

Period of record: Maximum discharge, 11,700 ft³/s (331 m³/s) May 10, 1970, gage height, 16.46 ft (5.017 m), from rating curve extended above 1,200 ft³/s (34.0 m³/s) on basis of contracted-opening measurement of peak flow; no flow at times in 1966-68, 1972.

REMARKS.--Records fair. Records of suspended sediment loads for the 1974 water 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	17	2.8	2.8	4.0	5.4	15	2.1	12	1.8	1.3	.55	.46
2	14	2.6	3.0	4.5	5.1	14	2.1	11	1.7	1.2	.54	.42
3	12	2.2	3.1	4.5	4.7	12	2.1	8.9	1.7	1.9	.50	.42
4	10	2.1	166	5.0	4.7	37	2.0	7.7	1.6	2.3	.43	.42
5	8.7	2.1	31	6.0	5.7	12	1.8	7.2	1.6	1.4	.44	.41
6	9.6	2.2	12	6.0	5.7	8.9	2.0	6.3	6.0	1.2	.37	.46
7	10	2.6	7.8	5.0	5.5	7.6	2.2	5.7	7.4	1.1	.41	.48
8	8.9	2.6	9.4	4.5	5.5	80	2.2	5.6	225	.98	.44	.50
9	8.1	2.5	13	4.5	5.9	11	2.5	5.8	151	.90	.45	.43
10	654	2.3	9.7	5.0	5.1	35	2.6	5.5	11	.85	.42	.41
11	637	2.3	10	4.5	5.6	25	2.8	6.4	8.6	.85	.44	.40
12	37	2.5	18	4.0	6.6	13	2.9	4.7	5.7	.83	.43	.40
13	17	2.7	17	4.0	6.1	8.1	2.7	4.2	5.2	.79	.40	.45
14	12	2.7	8.7	4.5	5.8	6.8	2.9	4.3	4.3	.75	.50	.40
15	9.5	2.4	7.1	5.0	5.2	6.1	3.6	3.9	3.4	.73	.54	.40
16	7.8	2.4	5.4	7.0	5.3	4.9	4.8	3.4	2.9	.70	.50	.40
17	6.9	2.4	5.8	45	5.5	4.7	5.5	4.9	2.8	.70	.46	.37
18	6.1	2.4	6.0	100	6.6	4.8	7.6	4.5	2.7	.68	.53	.35
19	5.7	2.2	5.1	36	6.1	3.9	8.7	4.6	2.6	.64	.48	.37
20	5.0	132	4.2	199	5.2	3.5	319	3.5	2.3	.60	.46	.40
21	4.5	32	4.4	44	8.5	3.3	210	2.7	2.1	.59	.45	.37
22	4.4	8.6	5.2	23	8.8	3.7	19	2.6	1.9	.58	.43	.35
23	4.7	8.2	6.0	13	9.7	2.6	14	2.3	1.7	.60	.41	.36
24	4.7	15	169	11	9.0	2.8	11	2.3	1.5	.60	.44	.37
25	4.1	6.9	37	11	8.6	2.8	9.7	2.1	1.5	.66	.39	.40
26	3.5	5.6	11	12	15	2.9	8.5	2.1	1.4	.69	.41	.37
27	3.3	4.6	8.9	9.1	39	3.0	7.6	2.1	1.4	.61	.45	.35
28	3.1	3.6	8.8	6.9	26	2.8	6.5	2.0	1.4	.63	.48	.35
29	2.9	3.3	6.7	7.2	-----	2.6	77	3.8	1.4	.61	.45	.35
30	2.8	3.1	6.0	7.1	-----	2.3	49	3.1	1.4	.55	.42	.35
31	2.8	-----	5.0	6.5	-----	2.3	-----	2.2	-----	.55	.47	-----
TOTAL	1,537.1	268.9	613.1	608.8	235.9	344.4	794.4	147.4	465.0	27.07	14.09	11.97
MEAN	49.6	8.96	19.8	19.6	8.43	11.1	26.5	4.75	15.5	.87	.45	.40
MAX	654	132	169	199	39	80	319	12	225	2.3	.55	.50
MIN	2.8	2.1	2.8	4.0	4.7	2.3	1.8	2.0	1.4	.55	.37	.35
AC-FT	3,050	533	1,220	1,210	468	683	1,580	292	922	54	28	24

CAL YR 1973 TOTAL 10,822.76 MEAN 29.7 MAX 654 MIN .90 AC-FT 21,470
WTR YR 1974 TOTAL 5,068.13 MEAN 13.9 MAX 654 MIN .35 AC-FT 10,050

PEAK DISCHARGE (BASE, 600 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
10-10	1245	9.65	1,450	04-21	0415	6.05	685
10-11	0630	9.93	1,510	06-08	2315	7.62	999
04-20	1900	8.24	1,120				

KANSAS RIVER BASIN

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06889160 SOLDIER CREEK NEAR CIRCLEVILLE, KS

LOCATION.--Lat 39°27'47", long 95°57'00", in NW¼NW¼NE¼ sec.10, T.7 S., R.13 E., Jackson County, 160 ft (49 m) downstream from bridge on State Highway 16, 5.8 mi (9.3 km) southwest of Circleville, and at mile 55.2 (88.8 km).

DRAINAGE AREA.--49.3 mi² (127.7 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 1,094.58 ft (333.628 m) above mean sea level.

AVERAGE DISCHARGE.--10 years, 32.4 ft³/s (0.918 m³/s), 23,470 acre-ft/yr (28.9 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 5,310 ft³/s (150 m³/s) Oct. 11, gage height, 18.01 ft (5.489 m); minimum, 0.69 ft³/s (0.020 m³/s) Sept. 21, 22.
Period of record: Maximum discharge, 5,570 ft³/s (158 m³/s) May 10, 1970, gage height, 19.95 ft (6.081 m); minimum, 0.14 ft³/s (0.004 m³/s) Mar. 7, 1967.

REMARKS.--Records fair. Records of suspended sediment loads for the water year 1974 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	31	13	13	16	22	30	11	48	6.6	4.6	1.9	1.4
2	24	12	13	17	21	28	11	37	6.3	4.4	1.8	1.6
3	20	11	13	17	20	26	11	32	6.2	4.4	1.7	1.4
4	16	11	535	18	19	58	12	28	6.2	9.2	1.7	1.2
5	13	11	83	20	20	28	11	26	6.2	4.8	1.7	1.2
6	14	11	40	20	19	20	11	23	15	4.0	1.8	1.1
7	13	11	31	18	17	17	11	21	21	3.6	1.8	1.2
8	11	11	30	17	17	324	10	18	575	3.4	1.8	1.1
9	9.6	10	34	17	18	50	9.7	18	822	3.1	1.8	1.0
10	1,760	10	27	18	17	133	9.9	19	48	3.0	1.7	.98
11	3,080	10	25	17	16	87	10	20	44	2.9	1.7	.96
12	158	10	29	16	17	52	10	14	26	2.9	1.6	.95
13	74	11	28	17	17	36	9.4	13	21	2.8	1.5	1.1
14	51	10	23	20	16	33	9.4	12	16	2.6	1.5	1.0
15	41	9.8	19	25	15	29	9.6	12	12	2.5	1.5	.96
16	32	9.3	18	40	16	25	9.5	12	10	2.4	1.6	.96
17	29	9.2	15	100	16	24	8.9	12	9.4	2.4	1.6	.89
18	26	8.8	15	376	17	23	8.7	23	9.0	2.4	1.6	.84
19	24	8.4	14	146	16	21	8.5	47	8.4	2.3	1.4	.87
20	22	378	13	425	14	21	1,170	14	7.7	2.1	1.3	1.0
21	20	105	13	130	19	20	562	11	7.0	2.1	1.2	.92
22	19	28	13	70	25	20	56	9.9	6.4	2.0	1.2	.76
23	18	31	13	46	24	17	35	9.1	6.0	2.0	1.2	.83
24	17	56	325	39	21	16	27	8.7	5.8	2.1	1.2	.84
25	16	24	78	37	22	16	20	8.9	5.6	2.2	1.2	.99
26	15	21	35	37	26	15	16	9.4	5.4	2.1	1.2	.93
27	14	18	27	32	64	14	15	8.3	5.2	2.0	1.1	.86
28	13	15	28	27	47	14	13	8.0	5.2	2.0	1.1	.84
29	13	14	23	26	-----	13	347	8.9	4.9	2.0	1.1	.84
30	14	14	21	25	-----	12	217	8.2	4.6	2.0	1.1	.84
31	14	-----	19	24	-----	12	-----	7.1	-----	1.9	1.4	-----
TOTAL	5,621.6	901.5	1,613	1,853	598	1,234	2,669.6	546.5	1,732.1	92.2	46.0	30.36
MEAN	181	30.1	52.0	59.8	21.4	39.8	89.0	17.6	57.7	2.97	1.48	1.01
MAX	3,080	378	535	425	64	324	1,170	48	822	9.2	1.9	1.6
MIN	9.6	8.4	13	16	14	12	8.5	7.1	4.6	1.9	1.1	.76
AC-FT	11,150	1,790	3,200	3,680	1,190	2,450	5,300	1,080	3,440	183	91	60

CAL YR 1973 TOTAL 33,842.50 MEAN 92.7 MAX 3,080 MIN 3.4 AC-FT 67,130
WTR YR 1974 TOTAL 16,937.86 MEAN 46.4 MAX 3,080 MIN .76 AC-FT 33,600

PEAK DISCHARGE (BASE, 1,200 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
10-11	0800	18.01	5,310	04-20	1845	15.04	3,520
12-04	1145	9.77	1,390	06-09	0045	15.49	3,740
03-08	0445	10.09	1,500				

KANSAS RIVER BASIN

06889180 SOLDIER CREEK NEAR ST. CLERE, KS

LOCATION.--Lat 39°22'33", long 95°55'05", in NW¼NW¼ sec.12, T.8 S., R.13 E., Jackson County, at upstream side of highway bridge, 7.8 mi (12.6 km) east of St. Clere, and at mile 44.5 (71.6 km).

DRAINAGE AREA.--80 mi² (207 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 1,023.04 ft (311.823 m) above mean sea level.

AVERAGE DISCHARGE.--10 years, 54.7 ft³/s (1.549 m³/s), 39,630 acre-ft/yr (48.9 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 6,540 ft³/s (185 m³/s) Oct. 11, gage height, 20.67 ft (6.300 m); minimum, 1.8 ft³/s (0.05 m³/s) Sept. 25, 29, 30.

Period of record: Maximum discharge, 8,430 ft³/s (239 m³/s) June 12, 1967, gage height, 21.41 ft (6.526 m); maximum gage height, 21.54 ft (6.565 m) Sept. 21, 1965; no flow for part of Apr. 9, 1964 (result of beaver activity upstream).

REMARKS.--Records good. Records of suspended sediment loads for the water year 1974 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	150	31	22	35	45	50	28	116	16	13	3.2	7.8
2	120	29	22	37	43	44	27	84	15	12	3.2	5.9
3	100	28	21	38	39	42	26	67	14	11	3.3	4.8
4	84	27	899	40	38	66	27	57	14	21	3.2	3.2
5	73	27	258	40	40	52	25	52	14	15	3.0	2.9
6	80	27	113	39	36	38	25	47	64	11	3.3	2.8
7	75	26	86	35	32	34	24	44	58	9.7	4.1	2.8
8	65	26	82	35	34	361	23	41	375	9.1	4.5	2.8
9	59	24	83	36	35	86	22	41	1,310	8.2	4.1	2.6
10	1,490	24	76	37	31	197	22	41	123	7.6	4.1	2.5
11	4,410	24	73	35	32	162	23	39	99	7.8	3.8	2.5
12	466	24	75	35	32	93	23	35	68	6.8	3.3	2.5
13	209	24	73	36	32	68	21	32	63	6.7	3.0	2.5
14	139	23	68	40	31	61	21	35	48	6.4	3.0	2.5
15	105	22	61	50	30	57	21	30	40	6.0	2.9	2.6
16	86	21	57	60	29	50	21	29	35	5.4	3.2	2.6
17	74	21	53	100	29	48	20	28	33	5.7	4.8	2.5
18	67	20	52	436	30	47	19	30	31	5.4	5.9	2.4
19	61	20	48	325	30	44	19	73	29	4.9	3.4	2.3
20	56	574	44	641	28	42	980	30	27	4.7	3.0	2.3
21	52	318	44	293	36	39	1,090	25	24	4.4	2.8	2.3
22	48	61	44	139	51	40	149	23	22	4.4	2.6	2.3
23	45	54	51	92	47	35	94	22	20	4.3	2.6	2.2
24	43	102	425	79	35	36	77	21	19	4.1	2.6	2.0
25	39	43	177	73	35	35	66	21	18	4.4	2.6	1.9
26	38	35	79	73	36	34	58	24	17	4.3	2.5	1.9
27	36	30	65	65	88	33	53	21	16	3.8	2.4	2.1
28	34	26	61	57	73	32	49	19	15	4.1	2.4	2.0
29	34	25	56	54	-----	31	550	18	14	3.3	2.4	1.9
30	32	24	50	53	-----	29	438	20	13	3.3	2.4	1.8
31	32	-----	45	49	-----	28	-----	18	-----	3.2	5.9	-----
TOTAL	8,402	1,760	3,363	3,157	1,077	2,014	4,041	1,183	2,654	221.0	103.5	83.2
MEAN	271	58.7	108	102	38.5	65.0	135	38.2	88.5	7.13	3.34	2.77
MAX	4,410	574	899	641	88	361	1,090	116	1,310	21	5.9	7.8
MIN	32	20	21	35	28	28	19	18	13	3.2	2.4	1.8
AC-FT	16,670	3,490	6,670	6,260	2,140	3,990	8,020	2,350	5,260	438	205	165

CAL YR 1973 TOTAL 53,746.6 MEAN 147 MAX 4,410 MIN 8.0 AC-FT 106,600
WTR YR 1974 TOTAL 28,058.7 MEAN 76.9 MAX 4,410 MIN 1.8 AC-FT 55,650

PEAK DISCHARGE (BASE, 1,300 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
10-11	0230	20.67	6,540	04-20	2130	18.89	3,720
11-20	2045	12.18	1,400	04-29	1500	12.76	1,570
12-04	1315	14.05	1,890	06-09	0530	17.88	3,150

KANSAS RIVER BASIN

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06889200 SOLDIER CREEK NEAR DELIA, KS

LOCATION.--Lat 39°12'08", long 95°52'25", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.5, T.10 S., R.14 E., Shawnee County, at upstream side of highway bridge, 5.1 mi (8.2 km) upstream from Walnut Creek, 5.5 mi (8.8 km) southeast of Delia, and at mile 21.9 (35.2 km).

DRAINAGE AREA.--157 mi² (407 km²).

PERIOD OF RECORD.--October 1958 to current year.

GAGE.--Water-stage recorder. Datum of gage is 931.34 ft (283.872 m) above mean sea level.

AVERAGE DISCHARGE.--16 years, 92.2 ft³/s (2.611 m³/s), 66,800 acre-ft/yr (82.4 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 7,020 ft³/s (199 m³/s) Oct. 11, gage height, 21.53 ft (6.562 m); minimum, 2.7 ft³/s (0.076 m³/s) Sept. 27, 28.

Period of record: Maximum discharge, 7,580 ft³/s (215 m³/s) June 12, 1967, gage height, 21.45 ft (6.538 m); maximum gage height, 21.57 ft (6.575 m) Aug. 10, 1968; minimum discharge, 0.04 ft³/s (.001 m³/s) Oct. 17, 1966.

Maximum stage known since at least 1909, about 24 ft (7.3 m) June 21, 1951, from floodmarks and information by local residents.

REMARKS.--Records good. Records of chemical analyses and suspended sediment loads for the water year 1974 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	263	62	77	58	82	113	56	300	24	24	4.4	16
2	208	59	77	60	79	93	53	169	23	24	4.1	19
3	172	55	76	60	73	86	52	135	22	22	4.1	11
4	144	53	1,450	66	66	82	56	112	20	39	4.1	8.0
5	121	53	1,340	66	77	117	52	101	20	34	3.9	5.5
6	173	52	259	64	76	82	48	93	87	25	4.6	4.4
7	175	52	157	60	64	72	47	86	537	20	5.1	4.4
8	124	52	140	58	60	323	46	81	157	19	5.8	4.3
9	108	50	137	58	71	289	43	76	2,750	17	6.4	4.0
10	896	47	129	62	67	352	43	92	557	16	6.2	3.9
11	6,080	47	118	60	67	418	43	89	272	15	5.9	3.6
12	4,020	48	115	58	70	202	44	72	170	15	5.5	4.0
13	481	48	116	58	70	143	42	67	133	14	4.8	4.4
14	291	48	107	64	67	120	40	83	105	12	4.3	4.1
15	219	47	97	70	63	115	39	70	80	12	4.1	3.9
16	173	44	73	80	60	105	39	61	66	10	4.8	3.9
17	144	42	88	90	63	93	39	85	59	9.4	5.7	3.9
18	128	42	85	327	67	91	38	61	56	9.3	7.8	4.4
19	118	41	69	863	69	86	37	76	54	8.9	8.4	4.4
20	108	1,520	70	848	62	80	243	86	49	8.0	6.3	4.4
21	99	1,290	87	1,370	121	76	2,580	49	42	7.4	4.6	3.9
22	92	249	76	531	211	77	467	43	37	7.0	4.0	4.8
23	87	141	77	250	157	72	184	39	34	6.6	3.8	3.6
24	83	182	520	181	94	66	131	39	32	6.2	3.8	3.3
25	76	166	604	170	74	70	113	36	31	6.1	3.9	3.1
26	73	115	182	172	92	73	101	41	30	6.2	3.9	3.3
27	72	104	119	139	110	71	94	41	29	6.6	4.0	3.5
28	70	91	110	110	140	69	84	34	28	5.8	4.1	3.0
29	65	83	103	101	-----	68	410	32	27	5.1	3.8	3.1
30	64	81	79	98	-----	61	1,430	29	25	4.8	3.8	3.1
31	64	-----	69	93	-----	59	-----	28	-----	4.5	4.6	-----
TOTAL	14,991	4,964	6,806	6,345	2,372	3,824	6,694	2,406	5,556	419.9	150.6	156.2
MEAN	484	165	220	205	84.7	123	223	77.6	185	13.5	4.86	5.21
MAX	6,080	1,520	1,450	1,370	211	418	2,580	300	2,750	39	8.4	19
MIN	64	41	69	58	60	59	37	28	20	4.5	3.8	3.0
AC-FT	29,730	9,850	13,500	12,590	4,700	7,580	13,280	4,770	11,020	833	299	310

CAL YR 1973 TOTAL 111,214.0 MEAN 305 MAX 6,080 MIN 18 AC-FT 220,600
WTR YR 1974 TOTAL 54,684.7 MEAN 150 MAX 6,080 MIN 3.0 AC-FT 108,500

PEAK DISCHARGE (BASE, 1,500 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
10-11	1600	21.53	7,020	04-21	1545	19.36	3,490
11-20	2145	16.86	2,250	04-30	0515	16.82	2,240
12-04	2230	18.08	2,700	06-09	1830	19.67	3,770
01-21	0415	15.58	1,830				

06889500 SOLDIER CREEK NEAR TOPEKA, KS

LOCATION.--Lat 39°06'00", long 95°43'27", in SW 1/4 NW 1/4 sec. 14, T. 11 S., R. 15 E., Shawnee County, at downstream side of highway bridge, 1.5 mi (2.4 km) upstream from Halfday Creek, 4.0 mi (6.4 km) northwest of Topeka, and at mile 6.0 (9.7 km).

DRAINAGE AREA.--290 mi² (751 km²).

PERIOD OF RECORD.--May 1929 to September 1932, August 1935 to current year. Prior to October 1935, published as "at Topeka". Records for October 1932 to July 1935, published in WSP 746, 761, and 786, have been found to be unreliable and should not be used.

GAGE.--Water-stage recorder. Datum of gage is 862.95 ft (263.027 m) above mean sea level. Prior to July 27, 1935, chain gage at site 2.0 mi (3.2 km) downstream at different datum. Aug. 1, 1935, to June 16, 1958, nonrecording gage and June 17, 1958, to May 24, 1960, water-stage recorder, at present site and datum 4.0 ft (1.22 m) higher. May 25, 1960, to June 8, 1961, nonrecording gage at site 1.1 mi (1.8 km) downstream at datum 1.79 ft (.546 m) lower.

AVERAGE DISCHARGE.--42 years, 138 ft³/s (3.908 m³/s), 99,980 acre-ft/yr (123 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 20,800 ft³/s (589 m³/s) Oct. 11, gage height, 23.91 ft (7.288 m), backwater from Kansas River; minimum, 7.8 ft³/s (0.22 m³/s) Sept. 28, 29.
Period of record: Maximum discharge, 20,800 ft³/s (589 m³/s) Oct. 11, 1973, gage height, 23.91 ft (7.288 m), backwater from Kansas River; maximum gage height, 29.06 ft (8.857 m) July 12, 1951, datum then in use, from floodmark, backwater from Kansas River; no flow at times in 1931, 1935-40, 1953-57, 1966.

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

REVISIONS (WATER YEARS).--WSP 1440: 1929-30(M), 1941-42, 1948(P), 1950. See also PERIOD OF RECORD.

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	573	117	118	130	172	185	94	649	48	38	12	22
2	395	109	114	130	163	160	90	323	44	35	12	32
3	301	103	116	140	149	150	89	239	43	34	12	26
4	240	96	2,380	150	135	143	102	187	42	51	12	18
5	195	94	2,640	150	140	160	98	163	42	59	12	14
6	276	91	537	140	149	153	88	147	122	41	14	13
7	336	89	280	130	126	131	85	134	851	34	14	12
8	214	90	236	130	115	222	86	127	329	29	14	12
9	176	87	229	130	128	576	78	122	3,200	27	14	11
10	704	85	210	140	123	496	77	146	1,570	26	14	11
11	16,500	80	194	140	121	748	78	162	506	24	14	11
12	11,300	80	189	130	122	378	76	123	361	23	14	10
13	1,420	79	184	130	121	256	75	119	219	22	13	10
14	634	79	172	140	118	210	73	337	202	22	13	10
15	440	75	161	170	113	196	70	152	147	21	12	9.5
16	300	72	132	210	109	186	70	137	119	20	14	9.5
17	262	69	136	250	104	165	70	2,450	102	18	16	9.5
18	238	68	151	350	117	159	67	348	94	18	18	9.5
19	230	68	136	1,120	130	155	65	184	92	18	16	9.5
20	207	1,910	137	974	114	144	87	190	84	17	16	9.5
21	189	2,260	134	2,100	221	136	2,580	127	70	16	16	9.4
22	174	501	126	1,090	525	135	1,060	105	61	16	15	8.5
23	165	241	130	607	314	132	320	92	55	16	13	8.5
24	153	206	733	406	206	122	218	89	51	16	13	8.5
25	143	243	976	372	151	122	177	80	49	19	12	8.5
26	137	174	335	392	171	121	156	81	47	19	12	8.5
27	131	158	214	315	170	118	143	85	45	16	12	8.5
28	130	141	191	241	211	114	134	72	43	15	12	8.4
29	122	128	179	216	-----	113	327	65	41	13	12	7.9
30	119	123	153	205	-----	102	2,150	58	40	12	11	8.2
31	117	-----	140	192	-----	95	-----	52	-----	12	14	-----
TOTAL	36,521	7,716	11,763	11,120	4,538	6,283	8,883	7,345	8,719	747	418	353.9
MEAN	1,178	257	379	359	162	203	296	237	291	24.1	13.5	11.8
MAX	16,500	2,260	2,640	2,100	525	748	2,580	2,450	3,200	59	18	32
MIN	117	68	114	130	104	95	65	52	40	12	11	7.9
AC-FT	72,440	15,300	23,330	22,060	9,000	12,460	17,620	14,570	17,290	1,480	829	702

CAL YR 1973 TOTAL 189,922.0 MEAN 520 MAX 16,500 MIN 20 AC-FT 376,700
WTR YR 1974 TOTAL 104,406.9 MEAN 286 MAX 16,500 MIN 7.9 AC-FT 207,100

PEAK DISCHARGE (BASE, 3,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
10-11	1900	23.91	20,800	04-30	1000	9.14	3,030
11-20	2015	10.14	3,710	05-17	0330	15.16	9,120
12-04	2145	11.51	4,860	06-09	1330	10.47	3,980
04-21	1945	9.86	3,500				

KANSAS RIVER BASIN

81

06890100 DELAWARE RIVER NEAR MUSCOTAH, KS

LOCATION.--Lat 39°31'17", long 95°31'57", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.16, T.6 S., R.17 E., Atchison County, 2.0 mi (3.2 km) south of Muscotah, and at mile 45.5 (73.2 km).

DRAINAGE AREA.--431 mi² (1,116 km²).

PERIOD OF RECORD.--Occasional low-flow measurements water years 1964-67. July 1969 to current year.

GAGE.--Water-stage recorder. Datum of gage is 920.88 ft (280.684 m) above mean sea level (Kansas Geological Survey bench mark).

AVERAGE DISCHARGE.--5 years, 312 ft³/s (8.836 m³/s), 226,000 acre-ft/yr (279 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 26,400 ft³/s (748 m³/s) Oct. 11, gage height, 30.53 ft (9.306 m); minimum, 4.6 ft³/s (0.13 m³/s) Sept. 29, 30.

Period of record: Maximum discharge, 26,400 ft³/s (748 m³/s) Oct. 11, 1973, gage height, 30.53 ft (9.306 m); minimum, 0.48 ft³/s (0.014 m³/s) Oct. 7, 8, 11, 12, 1971.

Flood in 1925 reached a stage of 36.5 ft (11.13 m), from information by local residents (discharge not determined). Floods in 1951 and 1967 were lower than the flood of 1925.

REMARKS.--Records good except those for January, 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	1,910	122	117	150	217	265	111	390	75	38	10	15
2	1,060	122	117	160	201	225	110	256	66	37	11	18
3	825	112	118	160	177	216	108	217	63	70	11	14
4	710	111	4,750	150	158	561	115	176	61	744	11	12
5	617	111	3,310	150	198	300	108	159	62	84	10	9.6
6	692	109	812	140	185	208	104	147	253	50	10	8.5
7	696	110	210	130	135	176	96	136	696	43	10	8.6
8	598	113	193	130	136	898	89	131	569	39	12	9.1
9	546	107	185	130	163	440	81	129	8,360	36	14	9.3
10	8,490	102	170	130	142	285	81	136	903	34	13	8.6
11	23,400	102	158	130	158	313	84	137	282	32	13	7.6
12	11,700	105	197	130	162	266	89	136	182	31	11	7.8
13	2,170	107	270	140	160	221	83	108	137	28	11	9.0
14	1,420	107	204	150	151	200	83	106	116	24	9.4	9.3
15	1,020	104	148	160	143	199	82	104	100	23	17	9.8
16	672	97	114	250	139	180	83	95	87	21	22	8.4
17	495	92	123	600	140	159	83	1,590	78	20	17	7.4
18	345	93	133	1,490	157	158	80	1,210	76	19	15	6.6
19	256	91	104	1,590	156	154	78	561	71	18	13	6.1
20	225	2,840	77	1,950	137	140	607	228	66	17	11	5.9
21	205	2,310	121	2,540	188	132	6,230	154	59	16	9.2	5.5
22	191	374	118	1,010	283	142	821	128	55	15	8.2	5.4
23	181	204	124	528	235	122	322	111	50	15	7.5	5.2
24	169	390	1,650	420	154	120	239	101	47	14	7.0	5.4
25	151	216	2,380	410	142	125	204	94	46	15	7.0	5.5
26	143	166	582	448	191	125	181	97	45	15	6.9	4.9
27	141	148	318	402	332	122	166	92	43	14	6.7	4.9
28	138	158	277	299	376	120	152	86	41	13	6.7	4.9
29	133	128	253	274	-----	119	1,780	134	40	12	6.4	4.8
30	131	122	184	266	-----	116	1,810	249	41	11	6.1	4.6
31	132	-----	140	251	-----	114	-----	97	-----	10	8.1	-----
TOTAL	59,562	9,073	17,657	14,868	5,116	6,921	14,260	7,495	12,770	1,558	331.2	241.7
MEAN	1,921	302	570	480	183	223	475	242	426	50.3	10.7	8.06
MAX	23,400	2,840	4,750	2,540	376	898	6,230	1,590	8,360	744	22	18
MIN	131	91	77	130	135	114	78	86	40	10	6.1	4.6
AC-FT	118,100	18,000	35,020	29,490	10,150	13,730	28,280	14,870	25,330	3,090	657	479

CAL YR 1973 TOTAL 354,739.0 MEAN 972 MAX 23,400 MIN 21 AC-FT 703,600
WTR YR 1974 TOTAL 149,852.9 MEAN 411 MAX 23,400 MIN 4.6 AC-FT 297,200

PEAK DISCHARGE (BASE, 2,500 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
10-11	1400	30.53	26,400	04-21	1400	22.70	8,410
11-20	1800	19.05	5,420	04-29	2000	17.38	4,480
12-04	1600	24.17	10,000	05-17	1900	15.69	3,640
12-25	0200	15.29	3,440	06-09	0900	25.54	11,500
01-20	2400	17.39	4,480				

KANSAS RIVER BASIN

06890898 PERRY LAKE NEAR PERRY, KS

LOCATION.--Lat 39°06'52", long 95°25'33", in NE¼NW¼NW¼ sec.9, T.11 S., R.18 E., Jefferson County, in control tower near center of dam on Delaware River, 4.5 mi (7.2 km) northwest of Perry and 5.8 mi (9.3 km) above mouth.

DRAINAGE AREA.--1,117 mi² (2,893 km²).

PERIOD OF RECORD.--March 1969 to current year. Prior to October 1971, published as "Perry Reservoir".

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (levels by Corps of Engineers).

EXTREMES.--Current year: Maximum elevation, 917.07 ft (279,523 m) Oct. 19, contents, 679,700 acre-ft (838 hm³); minimum, 889.73 ft (271.19 m) Sept. 30, contents, 222,100 acre-ft (274 hm³).

Period of record: Maximum elevation, 917.07 ft (279,523 m) Oct. 19, 1973, contents, 679,700 acre-ft (838 hm³); minimum since conservation pool was first filled, 880.01 ft (268.23 m) May 12, 13, 1969, contents, 126,000 acre-ft (155 hm³).

REMARKS.--Reservoir is formed by compacted earthfill dam. Some temporary storage occurred in Feb. 1969; dam was closed Mar. 21, 1969. Total capacity, 801,300 acre-ft (988 hm³), consisting of the following: Dead storage, 250 acre-ft (.31 hm³) below elevation 833.0 ft (253.9 m) (invert of intake tube); conservation pool, 243,000 acre-ft (300 hm³) between elevations 833.0 (253.9 m) and 891.5 ft (271.73 m); flood control pool, 521,900 acre-ft (644 hm³) between elevations 891.5 (271.7 m) and 920.6 ft (280.6 m); and uncontrolled storage, 36,160 acre-ft (44.5 hm³) between elevations 920.6 (280.6 m) and 922.0 ft (281.0 m). Reservoir is used to store water for flood control, irrigation, and recreation. Figures given herein represent total contents.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Computed by Corps of Engineers in 1960 from topographic maps)

885	171,200	905	438,900
890	225,300	910	530,100
895	287,900	915	633,100
900	358,700	920	750,000

ELEVATION, IN FEET, AT 2400, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	906.70	904.72	892.53	891.90	893.40	891.70	891.54	893.81	891.49	891.13	890.63	890.17
2	906.85	903.80	892.30	891.74	893.18	891.64	891.50	893.77	891.42	891.12	890.57	890.17
3	906.96	903.16	892.18	891.65	892.98	891.64	891.61	893.68	891.33	891.23	890.51	890.14
4	906.90	902.58	893.53	891.65	892.74	891.65	891.58	893.56	891.31	891.36	890.48	890.13
5	906.85	901.85	894.78	891.65	892.52	891.65	891.59	893.44	891.27	891.37	890.45	890.09
6	906.77	901.27	894.75	891.64	892.29	891.61	891.56	893.29	891.73	891.36	890.43	890.09
7	906.42	900.50	894.56	891.63	892.02	891.56	891.62	893.18	892.22	891.35	890.42	890.09
8	906.09	899.60	894.43	891.62	891.82	891.74	891.60	893.04	892.85	891.34	890.38	890.08
9	905.42	898.65	894.26	891.63	891.74	891.88	891.59	892.92	894.94	891.31	890.38	890.07
10	905.73	897.63	894.02	891.62	891.65	892.12	891.59	892.84	895.40	891.29	890.37	890.05
11	910.97	896.60	893.84	891.61	891.58	892.30	891.57	892.74	895.58	891.27	890.34	890.05
12	915.60	895.62	893.72	891.59	891.58	892.33	891.63	892.58	895.46	891.25	890.28	890.07
13	916.55	894.65	893.49	891.56	891.58	892.26	891.63	892.62	895.14	891.22	890.27	890.02
14	916.72	894.13	893.34	891.55	891.57	892.19	891.61	892.53	894.77	891.21	890.23	889.99
15	916.89	893.86	893.10	891.54	891.55	892.11	891.61	892.36	894.39	891.19	890.22	889.98
16	916.93	893.59	892.81	891.55	891.52	892.02	891.60	892.67	894.00	891.15	890.25	889.96
17	916.99	893.33	892.57	891.59	891.48	891.89	891.59	893.84	893.63	891.11	890.27	889.96
18	917.04	893.06	892.42	891.87	891.57	891.82	891.59	894.09	893.24	891.08	890.23	889.93
19	916.77	892.77	892.15	892.43	891.50	891.67	891.58	894.14	892.92	891.05	890.18	889.95
20	916.00	893.90	891.86	892.94	891.50	891.56	891.63	894.07	892.55	891.04	890.13	889.92
21	915.20	894.48	891.71	893.91	891.89	891.45	893.11	893.96	892.23	891.03	890.20	889.90
22	914.40	894.38	891.72	894.34	891.86	891.51	893.49	893.66	891.94	890.98	890.22	889.87
23	913.60	894.21	891.77	894.54	891.98	891.50	893.54	893.33	891.65	890.95	890.22	889.83
24	912.70	894.07	892.07	894.55	891.85	891.44	893.41	892.96	891.39	890.92	890.20	889.83
25	911.80	893.85	892.64	894.44	891.76	891.47	893.31	892.61	891.33	890.88	890.12	889.83
26	910.80	893.66	892.73	894.37	891.72	891.51	893.17	892.26	891.29	890.87	890.10	889.80
27	909.94	893.48	892.60	894.28	891.73	891.56	893.08	891.84	891.26	890.83	890.11	889.82
28	908.93	893.26	892.51	894.12	891.73	891.59	892.97	891.55	891.23	890.82	890.10	889.80
29	907.95	893.03	892.37	893.93	-----	891.58	893.26	891.36	891.22	890.76	890.04	889.80
30	906.88	892.81	892.28	893.76	-----	891.57	893.81	891.48	891.20	890.71	890.02	889.73
31	905.82	-----	892.06	893.59	-----	891.58	-----	891.50	-----	890.65	890.12	-----
MEAN	911.07	896.42	892.94	892.61	891.94	891.75	892.17	892.96	892.68	891.09	890.27	889.97
MAX	917.04	904.72	894.78	894.55	893.40	892.33	893.81	894.14	895.58	891.37	890.63	890.17
MIN	905.42	892.77	891.71	891.54	891.48	891.44	891.50	891.36	891.20	890.65	890.02	889.73
(+)	453,100	259,500	250,100	269,400	246,000	244,200	272,300	243,200	239,600	233,000	226,700	222,100
(#)	-10,000	-193,600	-9,400	+19,300	-23,400	-1,800	+28,100	-29,100	-3,600	-6,600	-6,300	-4,600

CAL YR 1973 (#) -58,900
WTR YR 1974 (#) -241,000

+ CONTENTS, IN ACRE-FEET, AT END OF MONTH.
CHANGE IN CONTENTS, IN ACRE-FEET.

KANSAS RIVER BASIN

83

06890900 DELAWARE RIVER BELOW PERRY DAM, KS

LOCATION.--Lat 39°06'51", long 95°25'33", in NE 1/4 NW 1/4 sec. 9, T.11 S., R.18 E., Jefferson County, at outlet structure of Perry Dam, 4.5 mi (7.2 km) northwest of Perry and 5.8 mi (9.3 km) above mouth.

DRAINAGE AREA.--1,117 mi² (2,893 km²).

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

GAGE.--Water-stage recorders for reservoir elevations and gated outflow structure.

EXTREMES.--Current year: Maximum discharge, 10,000 ft³/s (283 m³/s) Nov. 1; no flow for Oct. 12-18.

Period of record: Maximum discharge, 10,000 ft³/s (283 m³/s) Nov. 1, 1973; no flow for parts of many days in 1970-73.

REMARKS.--Records fair. Flow completely regulated by Perry Lake (see sta 06890898). Discharge computed from relation between discharge, head, and gate openings. Records of chemical analyses for the 1974 water year are published in Part 2 of this report.

COOPERATION.--Reservoir elevation-discharge ratings for reservoir outflow gates and gate operation logs 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	28	10,000	1,930	1,440	1,890	779	402	1,150	467	104	103	105
2	28	8,240	1,900	1,440	1,890	779	267	1,160	466	104	103	105
3	445	5,650	1,930	1,030	1,860	779	170	1,160	466	104	103	62
4	938	4,980	1,970	467	1,910	779	170	1,160	327	104	103	37
5	938	4,950	2,000	467	1,990	779	170	1,160	208	104	103	37
6	2,060	4,970	2,010	467	1,960	769	170	1,160	208	104	103	37
7	3,820	6,220	2,010	467	1,960	763	170	1,140	296	104	103	37
8	3,730	7,420	1,990	467	1,590	685	170	1,140	470	104	103	37
9	6,300	7,460	1,990	467	936	572	170	1,130	476	104	103	37
10	7,120	7,440	1,990	467	934	573	170	1,130	482	104	103	37
11	1,680	7,440	1,970	467	778	558	170	1,150	482	104	103	37
12	0	7,400	1,950	467	467	851	170	1,150	1,340	104	103	37
13	0	7,380	1,960	467	467	1,150	170	1,150	2,880	104	103	37
14	0	4,510	1,980	467	467	1,150	170	1,140	2,880	104	103	37
15	0	1,860	1,970	467	467	1,150	182	1,140	2,840	104	103	37
16	0	1,910	1,960	467	467	1,150	190	1,140	2,760	104	103	24
17	0	1,950	1,980	467	467	1,140	190	1,150	2,650	104	103	1.3
18	0	1,950	1,960	467	467	1,140	190	1,160	2,600	104	103	1.3
19	4,130	1,950	1,930	469	467	1,140	190	1,160	2,500	104	103	1.3
20	9,870	1,940	1,940	471	367	1,140	190	1,140	2,420	104	103	1.3
21	9,760	1,960	1,210	475	201	771	190	1,590	2,250	104	103	1.3
22	9,480	1,950	467	477	419	402	192	2,470	1,980	104	103	1.3
23	9,640	1,960	467	478	781	402	555	2,390	1,960	104	103	1.3
24	9,930	1,960	468	1,330	781	402	1,160	2,550	1,580	104	103	1.3
25	9,980	1,960	470	1,910	780	286	1,150	2,630	450	104	103	1.3
26	9,980	1,920	841	1,910	779	170	1,150	2,540	208	104	103	1.3
27	9,960	1,890	1,460	1,890	779	170	1,160	2,450	156	104	103	12
28	9,960	1,860	1,460	1,890	779	257	1,150	2,380	104	104	103	29
29	9,930	1,830	1,450	1,910	-----	402	1,150	1,620	104	104	103	29
30	9,950	1,900	1,450	1,900	-----	402	1,130	466	104	103	104	186
31	9,970	-----	1,450	1,890	-----	402	-----	467	-----	103	105	-----
TOTAL	149,627	124,810	50,513	27,915	27,100	21,892	12,828	44,523	36,114	3,222	3,196	1,009.0
MEAN	4,827	4,160	1,629	900	968	706	428	1,436	1,204	104	103	33.6
MAX	9,980	10,000	2,010	1,910	1,990	1,150	1,160	2,630	2,880	104	105	186
MIN	0	1,830	467	467	201	170	170	466	104	103	103	1.3
AC-FT	296,800	247,600	100,200	55,370	53,750	43,420	25,440	88,310	71,630	6,390	6,340	2,000
CAL YR 1973	TOTAL 828,818.00		MEAN 2,271		MAX 10,000		MIN 0		AC-FT 1,644,000			
WTR YR 1974	TOTAL 502,749.00		MEAN 1,377		MAX 10,000		MIN 0		AC-FT 997,200			

KANSAS RIVER BASIN

06891000 KANSAS RIVER AT LECOMPTON, KS

LOCATION.--Lat 39°03'07", long 95°23'15", in SE 1/4 NW 1/4 sec. 35, T.11 S., R.18 E., Jefferson County, on left bank at upstream side of highway bridge at Lecompton, 0.8 mi (1.3 km) downstream from Delaware River, and at mile 63.8 (102.7 km).

DRAINAGE AREA.--58,460 mi² (151,410 km²), approximately, of which a large area is noncontributing.

PERIOD OF RECORD.--January to November 1896 and April to July 1906 (gage heights only), March 1936 to current year. Records for April 1899 to December 1905 published in WSP 37, 39, 50, 52, 66, 75, 84, 99, 131, 172, and 796-B have been found to be unreliable and should not be used.

GAGE.--Water-stage recorder. Datum of gage is 821.84 ft (250.497 m) above mean sea level. Prior to July 30, 1952, nonrecording gage, and July 30, 1952, to Apr. 29, 1970, recording gage, at site 0.15 mi (0.24 km) upstream at same datum.

AVERAGE DISCHARGE.--38 years (1936-74), 7,099 ft³/s (201.0 m³/s), 5,143,000 acre-ft/yr (6.34 km³/yr).

EXTREMES.--Current year: Maximum discharge, 140,000 ft³/s (3,960 m³/s) Oct. 12, gage height, 22.73 ft (6.928 m); minimum daily, 2,500 ft³/s (70.8 m³/s) Aug. 5.

Period of record: Maximum discharge, 483,000 ft³/s (13,700 m³/s) July 13, 1951, gage height, 30.23 ft (9.214 m); from rating curve extended above 120,000 ft³/s (3,400 m³/s) on basis of slope-area measurement of peak flow; minimum daily, 185 ft³/s (5.24 m³/s) Oct. 13, 1956.

Maximum stage known since 1844, 30.23 ft (9.214 m) July 13, 1951.

Flood of May 31, 1903 (second highest since 1844), reached a stage of 27.9 ft (8.50 m), from floodmark.

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. Records of chemical analyses for the water year 1974 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 876: 1937. WSP 1176: 1903(M). WSP 1440: 1948-49(P). See also PERIOD OF RECORD.

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	32,400	51,600	29,200	15,300	22,900	12,900	6,750	22,300	8,600	4,590	2,760	3,730
2	38,700	49,600	28,800	14,800	22,700	13,000	6,480	15,500	7,600	4,360	2,720	5,290
3	42,100	47,200	28,500	12,500	22,900	12,600	6,350	14,600	7,600	4,230	2,660	4,390
4	40,300	46,000	40,400	10,000	23,000	11,600	6,110	12,800	8,000	4,280	2,570	3,510
5	35,100	46,200	49,500	9,000	23,600	11,000	5,530	11,400	8,600	3,800	2,500	3,370
6	31,800	44,200	34,600	8,600	20,700	9,210	5,370	10,700	10,000	3,620	2,600	3,140
7	33,500	41,500	23,800	8,200	21,600	8,470	4,870	10,500	11,000	3,420	2,600	3,110
8	30,500	43,000	21,400	8,200	22,700	8,570	4,450	10,500	13,300	3,380	2,700	2,920
9	33,300	44,700	20,000	8,000	21,700	9,360	4,350	10,500	32,100	3,220	2,840	2,650
10	36,100	44,900	18,700	8,000	20,600	9,600	4,350	10,500	39,800	3,060	2,630	2,540
11	86,600	45,200	18,700	8,000	19,500	11,400	4,320	10,200	21,800	2,940	2,560	2,500
12	129,000	45,100	17,400	8,000	17,900	11,600	4,350	11,500	17,700	2,880	2,550	2,510
13	70,800	45,500	17,300	8,200	14,000	11,600	4,330	11,800	16,400	2,840	2,550	2,630
14	48,100	44,900	17,100	8,200	12,600	11,200	4,380	12,400	15,200	2,840	2,540	2,690
15	55,700	41,700	16,600	8,400	11,000	11,500	4,610	11,100	14,000	2,820	2,520	2,700
16	53,600	42,400	16,200	8,600	10,500	13,100	5,100	10,700	12,900	2,800	2,690	2,700
17	45,000	42,200	16,600	8,800	10,000	12,700	5,170	18,700	12,300	2,720	2,760	2,690
18	40,300	41,600	16,600	9,500	9,800	12,400	5,050	11,800	11,500	2,780	4,910	2,630
19	48,100	41,500	16,800	14,000	9,660	12,200	4,960	9,460	11,000	2,800	3,960	2,600
20	51,500	46,700	16,300	23,000	9,300	11,800	5,170	8,830	10,500	2,800	3,180	2,800
21	47,600	45,300	15,500	27,000	11,100	11,300	17,000	9,290	10,100	2,820	2,890	2,720
22	48,300	39,600	13,400	26,000	12,800	10,400	26,900	17,500	9,350	2,800	3,050	2,690
23	49,800	35,700	11,800	20,000	13,200	9,800	19,000	19,800	8,930	2,840	2,810	2,710
24	49,000	35,200	12,400	17,000	13,000	8,740	15,300	20,300	8,390	2,760	2,830	2,690
25	49,500	35,200	16,500	15,000	12,700	6,790	14,600	15,800	6,980	2,880	2,840	2,660
26	53,100	35,200	15,800	16,300	12,900	6,420	12,200	13,200	6,000	3,560	2,830	2,700
27	51,500	35,000	17,300	17,200	13,200	6,260	10,900	13,000	5,000	3,600	2,880	2,640
28	51,300	33,900	20,500	17,500	13,000	6,150	10,600	14,000	4,460	2,980	2,930	2,710
29	50,400	32,500	20,000	16,800	-----	6,430	10,500	14,000	4,210	2,840	2,820	2,560
30	50,500	30,300	17,700	22,100	-----	6,350	22,600	11,000	4,610	2,820	2,860	2,740
31	51,100	-----	16,100	23,800	-----	6,680	-----	10,000	-----	2,780	3,050	-----
TOTAL	1,534,6M	1,253,6M	641,500	426,000	448,560	311,130	261,650	403,680	357,930	98,860	88,590	87,920
MEAN	49,500	41,790	20,690	13,740	16,020	10,040	8,722	13,020	11,930	3,189	2,858	2,931
MAX	129,000	51,600	49,500	27,000	23,600	13,100	26,900	22,300	39,800	4,590	4,910	5,290
MIN	30,500	30,300	11,800	8,000	9,300	6,150	4,320	8,830	4,210	2,720	2,500	2,500
AC-FT	3,044M	2,487M	1,272M	845,000	889,700	617,100	519,000	800,700	710,000	196,100	175,700	174,400

CAL YR 1973 TOTAL 8,331,470 MEAN 22,830 MAX 129,000 MIN 2,700 AC-FT 16,530,000
WTR YR 1974 TOTAL 5,914,020 MEAN 16,200 MAX 129,000 MIN 2,500 AC-FT 11,730,000

PEAK DISCHARGE (REGULATED) ABOVE 15,000 CFS

DATE	TIME	G.H.T.	DISCHARGE	DATE	TIME	G.H.T.	DISCHARGE
10-12	1400	22.73	140,000	04-30	1900	10.85	31,200
12-05	0200	14.26	54,100	05-17	1200	9.50	24,000
01-21	UNKNOWN	UNKNOWN	30,000	05-24	0600	8.83	20,700
01-30	2100	9.14	24,400	06-09	2400	14.23	52,600
04-22	0100	10.90	31,400				

M EXPRESSED IN THOUSANDS.

KANSAS RIVER BASIN

85

06891483 WAKARUSA RIVER BELOW CLINTON DAM, KS

LOCATION.--Lat 38°55'14", long 95°17'17", in NW 1/4 NW 1/4 sec. 15, T. 13 S., R. 19 E., Douglas County, on left bank at downstream side of county road bridge, 3.0 mi (4.8 km) south and 2.0 mi (3.2 km) west of Lawrence, and at mile 18.6 (29.9 km).

DRAINAGE AREA.--412 mi² (1,070 km²). Prior to Dec. 1, 1972, 425 mi² (1,100 km²).

PERIOD OF RECORD.--April 1929 to current year. Prior to December 1972, published as "near Lawrence", sta 06891500.

GAGE.--Water-stage recorder. Datum of gage is 805.26 ft (245.443 m) above mean sea level. Prior to May 7, 1959, nonrecording gage, and May 8, 1959 to Nov. 30, 1972, water-stage recorder at site 2.3 mi (3.7 km) downstream at datum 6.00 ft (1.829 m) lower.

AVERAGE DISCHARGE.--45 years, 197 ft³/s (5.579 m³/s), 142,700 acre-ft/yr (176 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 8,210 ft³/s (233 m³/s) Oct. 11, gage height, 31.01 ft (9.452 m); minimum, 1.6 ft³/s (0.045 m³/s) Aug. 4.

Period of record: Maximum discharge, 24,200 ft³/s (685 m³/s) July 12, 1951, gage height, 31.59 ft (9.629 m), from floodmarks at site and datum then in use, from rating curve extended above 15,000 ft³/s (425 m³/s); no flow at times.

Maximum stage known since at least 1880, that of July 12, 1951, site and datum then in use.

REMARKS.--Records fair.

REVISIONS (WATER YEARS).--WSP 976: 1935. WSP 1310: 1929(M), 1933(M), 1938(M), 1945-47(M), 1949-50(M). WSP 1919: 1958, 1959.

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	1,190	92	142	180	233	237	130	168	121	25	1.7	240
2	646	87	133	150	214	223	125	129	72	25	1.8	754
3	425	81	128	160	193	217	120	97	58	24	1.9	200
4	311	76	5,250	170	168	195	123	79	55	31	1.8	170
5	236	73	7,090	170	162	166	129	69	53	30	1.8	140
6	286	71	2,690	160	167	149	125	62	130	21	2.2	60
7	460	68	1,100	150	148	138	124	58	368	19	2.3	40
8	312	66	680	140	126	254	380	54	311	16	2.3	30
9	228	64	598	140	121	336	310	50	3,550	13	2.4	22
10	230	61	540	140	122	600	189	290	2,090	11	2.5	19
11	6,750	59	456	130	120	1,130	153	717	756	9.5	2.6	16
12	7,780	58	412	120	126	797	144	333	757	8.0	2.6	13
13	3,220	57	378	120	130	477	129	183	453	7.4	2.5	11
14	1,000	57	320	130	123	376	117	3,750	282	7.1	2.2	9.4
15	546	55	277	140	112	326	109	2,610	203	7.1	2.8	8.0
16	379	53	235	180	112	279	103	849	147	5.8	2.6	7.3
17	294	51	205	431	106	240	98	448	100	4.3	2.8	7.0
18	245	50	198	1,530	107	223	93	316	83	3.6	3.4	6.0
19	212	49	195	2,660	166	217	89	240	79	3.3	3.8	6.0
20	185	2,380	211	1,800	163	201	89	177	75	3.3	5.0	6.5
21	158	2,690	200	1,640	578	196	106	136	63	3.2	4.0	5.7
22	143	1,000	160	1,090	1,560	187	138	277	51	3.2	8.0	4.7
23	134	490	154	897	1,020	178	115	243	46	3.2	5.0	5.0
24	126	353	934	599	686	175	91	316	41	2.6	13	4.7
25	115	282	1,480	465	422	178	79	198	39	2.7	11	4.0
26	106	235	767	420	338	179	72	144	38	2.4	9.6	3.3
27	105	210	460	418	316	169	69	131	33	2.3	16	3.3
28	105	229	393	399	270	160	68	107	31	2.2	10	3.8
29	101	191	357	373	-----	158	71	88	29	2.9	8.0	4.4
30	99	159	294	309	-----	149	112	76	27	1.9	8.0	4.2
31	96	-----	273	272	-----	138	-----	201	-----	1.7	20	-----
TOTAL	26,223	9,447	26,710	15,683	8,109	8,648	3,800	12,596	10,141	302.7	163.6	1,808.3
MEAN	846	315	862	506	290	279	127	406	338	9.76	5.28	60.3
MAX	7,780	2,690	7,090	2,660	1,560	1,130	380	3,750	3,550	31	20	754
MIN	96	49	128	120	106	138	68	50	27	1.7	1.7	3.3
AC-FT	52,010	18,740	52,980	31,110	16,080	17,150	7,540	24,980	20,110	600	325	3,590

CAL YR 1973 TOTAL 281,464.3 MEAN 771 MAX 7,990 MIN 3.7 AC-FT 558,300
WTR YR 1974 TOTAL 123,631.6 MEAN 379 MAX 7,780 MIN 1.7 AC-FT 245,200

PEAK DISCHARGE (BASE, 2,500 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
10-11	1900	31.01	8,210	01-19	0700	20.32	2,800
11-20	1900	25.37	4,780	05-14	1600	25.87	5,040
12-04	1900	30.65	7,960	06-09	1200	24.58	4,230

KANSAS RIVER BASIN

06892000 STRANGER CREEK NEAR TONGANOXIE, KS

LOCATION.--Lat 39°06'59", long 95°00'39", in NE¼NE¼NW¼ sec.7, T.11 S., R.22 E., Leavenworth County, at downstream side of bridge on U.S. Highway 40, 2.0 mi (3.2 km) upstream from Tonganoxie Creek, 4.0 mi (6.4 km) east of Tonganoxie, and at mile 18.1 (29.1 km).

DRAINAGE AREA.--406 mi² (1,052 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 801.95 ft (244.434 m) above mean sea level (levels by Corps of Engineers). April 30, 1929, to June 1, 1939, nonrecording gage and June 2, 1939, to June 1, 1960, water-stage recorder, both at site 1.3 mi (2.1 km) downstream at datum 5.00 ft (1.524 m) lower.

AVERAGE DISCHARGE.--45 years, 219 ft³/s (6.202 m³/s), 158,700 acre-ft/yr (196 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 11,300 ft³/s (320 m³/s) Oct. 13, gage height, 26.09 ft (7.952 m); minimum, 2.5 ft³/s (0.071 m³/s) Aug. 27.

Period of record: Maximum discharge, 33,100 ft³/s (937 m³/s) July 12, 1951, gage height, 27.64 ft (8.425 m), present site and datum, from rating curve extended above 16,000 ft³/s (453 m³/s) on basis of contracted-opening measurement of peak flow; maximum stage, 28.70 ft (8.748 m) Oct. 13, 1961; no flow at times many years.

REMARKS.--Records good.

REVISIONS (WATER YEARS).--WSP 1440: 1929, 1936(M), 1940, 1942(M), 1949. WSP 1710: 1951.

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	881	103	144	180	253	247	105	602	252	33	4.4	97
2	407	98	139	210	230	211	98	288	154	30	4.2	100
3	275	91	136	200	206	196	96	194	122	28	3.9	53
4	206	85	3,130	180	173	189	103	154	108	52	3.5	29
5	161	82	4,770	170	177	189	97	134	115	41	3.2	18
6	239	82	3,170	160	198	186	91	120	201	45	4.0	13
7	358	81	632	150	164	166	88	111	1,410	40	4.7	11
8	270	82	432	150	136	196	87	107	1,550	26	4.2	9.8
9	189	82	384	150	149	292	81	100	4,440	22	4.2	8.9
10	235	78	330	150	154	600	77	109	4,290	19	5.4	8.5
11	6,880	76	296	150	150	700	78	135	973	17	8.1	7.2
12	6,640	76	278	150	152	450	86	117	486	16	6.0	6.9
13	9,640	77	274	150	151	325	79	100	316	14	5.0	6.8
14	6,570	78	250	150	143	261	77	596	233	13	4.2	5.7
15	580	78	226	160	135	235	73	360	185	12	3.9	5.2
16	355	73	187	180	132	214	72	210	153	10	3.8	4.8
17	275	71	156	240	129	192	71	3,930	134	9.7	4.2	4.8
18	237	69	178	900	135	184	72	6,670	120	8.9	5.4	5.4
19	213	65	183	1,800	181	175	71	4,350	111	8.3	6.8	5.4
20	191	899	145	2,100	183	162	72	698	102	7.7	7.5	7.0
21	174	3,050	155	2,000	604	154	106	390	90	7.2	5.5	6.5
22	160	2,270	181	1,570	1,090	148	117	1,300	76	6.5	13	5.2
23	149	412	162	1,120	640	140	121	424	63	5.8	45	4.7
24	142	294	436	665	418	132	86	274	54	5.4	16	4.3
25	129	253	1,110	528	260	129	71	212	49	5.0	5.3	4.1
26	117	212	645	530	267	130	67	206	46	4.9	3.2	4.2
27	115	185	370	668	270	129	67	192	44	4.9	2.5	4.3
28	114	215	301	569	289	128	71	166	41	4.7	4.9	4.0
29	110	188	274	394	-----	129	119	146	38	4.7	5.5	4.1
30	105	159	216	333	-----	120	993	212	35	4.7	3.6	5.3
31	105	-----	150	297	-----	110	-----	955	-----	4.6	5.0	-----
TOTAL	36,222	9,664	19,440	16,354	7,169	6,819	3,492	23,562	15,991	511.0	206.1	454.1
MEAN	1,168	322	627	528	256	220	116	760	533	16.5	6.65	15.1
MAX	9,640	3,050	4,770	2,100	1,090	700	993	6,670	4,440	52	45	100
MIN	105	65	136	150	129	110	67	100	35	4.6	2.5	4.0
AC-FT	71,850	19,170	38,560	32,440	14,220	13,530	6,930	46,740	31,720	1,010	409	901

CAL YR 1973 TOTAL 300,601.0 MEAN 824 MAX 9,640 MIN 20 AC-FT 596,200
WTR YR 1974 TOTAL 139,884.2 MEAN 383 MAX 9,640 MIN 2.5 AC-FT 277,500

PEAK DISCHARGE (BASE, 2,600 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
10-13	1500	26.09	11,300	05-18	1300	24.05	6,970
11-22	0500	18.76	3,580	06-09	1200	21.54	4,970
12-04	2100	21.94	5,170				

06892350 KANSAS RIVER AT DESOTO, KS
(Formerly published as 06892500 Kansas River at Bonner Springs, KS)

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 mi² (154,768 km²), of which a large area is noncontributing.

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

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 (3.600 m) lower; Nov. 26, 1961 to Sept. 30, 1971, water-stage recorder at site 10.2 mi (16.4 km) downstream at datum 17.81 ft (5.428 m) lower; and Oct. 1, 1971 to Sept. 30, 1973, at site 10.2 mi (16.4 km) downstream at datum 22.81 ft (6.592 m) lower.

AVERAGE DISCHARGE.--57 years, 6,947 ft³/s (196.7 m³/s) 5,033,000 acre-ft/yr (6.21 km³/yr).

EXTREMES.--Current year: Maximum discharge, 146,000 ft³/s (4,130 m³/s) Oct. 13, gage height, 27.54 ft (8.394 m); minimum, 2,280 ft³/s (64.57 m³/s) July 24.

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

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. Records of chemical analyses for the 1974 water year are published in Part 2 of this report.

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											
WTR YR 1974	TOTAL 6,228,280											
	MEAN 25,820											
	MAX 127,000											
	MIN 2,960											
	AC-FT 18,690,000											
	AC-FT 12,350,000											

PEAK DISCHARGE (REGULATED) ABOVE 17,000 CFS

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	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.

MISSOURI RIVER MAIN STEM

06893000 MISSOURI RIVER AT KANSAS CITY, MO.

LOCATION.--Lat 39°06'43", long 94°35'16", in sec.32, T.50 N., R.33 W., Jackson County, 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 mi² (1,267,000 km²), approximately.

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

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 ft³/s (1,550 m³/s), 39,660,000 acre-ft/yr (48.90 km³/yr).

EXTREMES.--Current year: Maximum discharge, 313,000 ft³/s (8,860 m³/s) Oct. 13, gage height, 28.86 ft (8.797 m); minimum, 26,100 ft³/s (739 m³/s) Jan. 13, gage height, -0.51 ft (-0.155 m).
Period of record: Maximum discharge, 573,000 ft³/s (16,230 m³/s) July 14, 1951; maximum gage height, 36.2 ft (11.03 m) July 14, 1951; minimum discharge, about 1,500 ft³/s (42.5 m³/s) Jan. 9, 10, 1937; minimum gage height, -2.91 ft (-0.887 m), Jan. 29, 1966.
Maximum stage known, 38.0 ft (11.58 m) June 16, 1844, discharge, about 625,000 ft³/s (17,000 m³/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.

BLUE RIVER BASIN

89

06893300 INDIAN CREEK AT OVERLAND PARK, KS

LOCATION.--Lat 38°56'30", long 94°40'10", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.6, T.13 S., R.25 E., Johnson County, at downstream side of highway bridge on 103rd Street in Overland Park.

DRAINAGE AREA.--26.6 mi² (68.9 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 856.88 ft (261.177 m) above mean sea level (levels by Corps of Engineers).

AVERAGE DISCHARGE.--11 years, 27.2 ft³/s (0.770 m³/s), 19,710 acre-ft/yr (24.3 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 3,990 ft³/s (113 m³/s) Oct. 11, gage height, 9.10 ft (2.774 m); no flow Aug. 3-5.

Period of record: Maximum discharge, 5,250 ft³/s (149 m³/s) June 5, 1965, gage height, 11.00 ft (3.353 m); no flow at times in most years.

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	76	6.5	8.0	11	18	12	7.9	15	7.5	2.3	.04	294
2	37	5.6	9.5	9.5	17	13	7.5	12	7.1	2.2	.02	54
3	25	5.5	14	9.0	15	12	7.1	10	7.1	4.0	0	22
4	21	5.1	1,200	10	13	10	12	9.2	13	22	0	9.2
5	17	5.1	81	11	13	10	7.5	8.7	10	3.8	0	5.8
6	72	5.1	38	10	14	9.2	6.2	9.2	52	2.5	5.6	5.0
7	31	5.1	29	9.6	10	9.2	119	9.2	26	2.3	6.6	4.3
8	21	5.6	27	9.4	9.5	39	161	10	910	2.2	5.8	3.0
9	16	5.6	26	9.2	9.9	48	26	12	142	2.0	10	2.7
10	55	5.3	21	8.6	8.8	145	20	64	25	2.0	3.3	2.5
11	1,970	5.1	21	8.4	9.1	87	19	37	44	1.7	2.0	2.3
12	81	5.9	20	8.0	9.9	33	18	15	17	1.7	1.4	2.2
13	46	7.3	20	8.4	9.4	25	14	75	12	1.5	.76	2.2
14	29	9.0	16	10	8.4	22	12	781	10	1.5	.64	1.7
15	23	9.1	15	15	7.6	20	10	41	7.9	1.2	.76	1.7
16	20	9.1	13	45	7.5	17	10	27	6.2	1.2	1.9	1.6
17	19	9.1	12	140	7.0	15	9.6	445	5.3	.87	4.6	1.5
18	15	10	11	115	14	15	9.6	72	4.8	.87	3.8	1.5
19	15	10	10	82	17	14	9.6	31	36	.99	75	1.6
20	14	278	9.0	61	8.6	14	85	22	16	1.1	4.3	1.5
21	13	34	8.0	42	156	14	69	17	5.8	.99	2.2	2.0
22	12	15	7.8	104	59	12	17	149	4.6	.87	46	1.7
23	9.4	19	7.6	36	24	14	12	30	3.3	.52	7.5	1.4
24	7.7	25	61	26	17	13	11	24	3.1	.34	2.8	1.1
25	6.8	13	28	22	14	12	10	17	3.1	1.3	2.0	.99
26	7.5	11	16	99	15	12	9.6	17	3.0	.99	1.7	1.4
27	16	13	16	58	15	10	15	14	3.0	.99	145	1.2
28	8.5	14	17	58	14	10	13	12	2.7	.76	91	1.4
29	6.9	9.5	17	34	-----	9.6	40	9.6	2.5	.52	11	1.5
30	6.6	8.5	13	25	-----	9.2	51	9.2	2.2	.42	4.3	1.4
31	6.4	-----	12	21	-----	8.7	-----	9.2	-----	.16	194	-----
TOTAL	2,703.8	569.1	1,803.9	1,115.1	540.7	693.9	818.6	2,013.3	1,392.2	65.79	634.02	434.39
MEAN	87.2	19.0	58.2	36.0	19.3	22.4	27.3	64.9	46.4	2.12	20.5	14.5
MAX	1,970	278	1,200	140	156	145	161	781	910	22	194	294
MIN	6.4	5.1	7.6	8.0	7.0	8.7	6.2	8.7	2.2	.16	0	.99
AC-FT	5,360	1,130	3,580	2,210	1,070	1,380	1,620	3,990	2,760	130	1,260	862

CAL YR 1973 TOTAL 23,302.37 MEAN 63.8 MAX 1,970 MIN .62 AC-FT 46,220
WTR YR 1974 TOTAL 12,784.80 MEAN 35.0 MAX 1,970 MIN 0 AC-FT 25,360

PEAK DISCHARGE (BASE, 1,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
10-10	2315	5.12	1,260	05-17	1130	5.37	1,410
10-11	0800	9.10	3,990	06-08	1645	8.20	3,290
12-04	0845	7.36	2,700	08-19	0945	5.29	1,360
05-14	0230	6.83	2,330	08-31	1600	5.74	1,630

OSAGE RIVER BASIN

06910800 MARAIS DES CYGNES RIVER NEAR READING, KS

LOCATION.--Lat 38°34'00", long 95°57'50", in SE¼SW¼ sec.15, T.17 S., R.13 E., Lyon County, at downstream side of highway bridge, 1.9 mi (3.1 km) downstream from confluence of One Hundred and Fortytwo Mile Creek and Elm Creek, 4.3 mi (6.9 km) upstream from Duck Creek, 3.0 mi (4.8 km) north of Reading, and at mile 467.0 (751.4 km).

DRAINAGE AREA.--177 mi² (458 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 1,048.32 ft (319.528 m) above mean sea level (Corps of Engineers bench mark).

AVERAGE DISCHARGE.--5 years, 120 ft³/s (3.398 m³/s), 86,940 acre-ft/yr (107 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 8,290 ft³/s (235 m³/s) Oct. 11, gage height, 22.93 ft (6.989 m); minimum, 1.0 ft³/s (0.028 m³/s) Aug. 4-6.

Period of record: Maximum discharge, 30,600 ft³/s (867 m³/s) June 27, 1969, gage height, 25.22 ft (7.687 m); minimum 0.03 ft³/s (0.001 m³/s) Oct. 18-20, 1972.

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	190	37	52	54	73	70	30	163	32	15	2.0	668
2	147	34	48	50	68	61	29	84	31	14	1.7	346
3	120	32	50	48	63	58	28	64	28	13	1.4	216
4	100	30	3,600	46	57	53	28	51	27	12	1.0	88
5	84	29	1,500	44	56	47	28	43	33	12	1.0	47
6	91	28	296	43	55	44	27	37	1,100	12	2.2	28
7	113	28	175	42	51	42	110	34	437	11	2.9	22
8	88	27	139	39	44	114	290	31	288	9.4	2.9	19
9	72	26	125	38	43	124	130	29	5,090	8.4	3.8	16
10	85	26	112	38	43	1,300	63	136	474	6.8	8.1	13
11	5,380	25	101	38	43	628	58	197	453	5.9	5.5	12
12	886	24	93	38	43	225	57	70	310	5.7	3.2	9.7
13	310	24	87	38	43	138	54	44	150	5.6	2.9	7.8
14	194	24	81	38	42	108	51	4,500	117	5.3	2.9	6.5
15	143	23	77	38	41	94	45	557	96	4.9	3.0	6.0
16	116	22	63	50	39	81	40	191	78	4.2	3.1	5.7
17	101	22	53	450	38	71	36	133	65	4.2	4.5	5.6
18	86	22	51	1,600	37	66	32	105	58	3.7	11	5.1
19	77	22	50	1,100	42	59	32	89	51	3.6	7.3	4.9
20	69	1,550	44	593	42	53	35	76	45	3.6	3.8	4.6
21	62	485	45	630	122	49	548	63	40	3.2	3.8	4.2
22	55	150	44	345	345	47	138	58	34	3.0	4.1	4.2
23	50	104	46	190	185	44	80	63	29	2.5	3.4	4.0
24	46	91	330	140	141	44	58	95	26	1.9	2.8	3.7
25	41	81	375	122	104	47	48	79	24	1.7	2.9	3.8
26	79	75	136	114	85	47	43	92	23	1.6	2.5	4.7
27	144	69	95	107	83	44	40	88	22	1.7	2.4	7.9
28	59	72	78	106	88	41	39	59	20	1.8	18	8.4
29	49	61	70	107	-----	39	41	45	19	1.9	28	8.4
30	43	56	64	94	-----	35	464	38	17	2.3	12	7.6
31	40	-----	60	83	-----	33	-----	34	-----	2.2	9.9	-----
TOTAL	9,120	3,299	8,140	6,463	2,116	3,906	2,702	7,348	9,217	184.1	164.0	1,587.8
MEAN	294	110	263	208	75.6	126	90.1	237	307	5.94	5.29	52.9
MAX	5,380	1,550	3,600	1,600	345	1,300	548	4,500	5,090	15	28	668
MIN	40	22	44	38	37	33	27	29	17	1.6	1.0	3.7
AC-FT	18,090	6,540	16,150	12,820	4,200	7,750	5,360	14,570	18,280	365	325	3,150

CAL YR 1973 TOTAL 103,829.60 MEAN 284 MAX 10,700 MIN .90 AC-FT 205,900
WTR YR 1974 TOTAL 54,246.90 MEAN 149 MAX 5,380 MIN 1.0 AC-FT 107,600

PEAK DISCHARGE (BASE, 3,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
10-11	1900	22.93	8,290	05-14	1400	22.16	7,130
12-04	UNKNOWN	UNKNOWN	5,000	06-09	1100	22.44	7,520

06910997 MELVERN LAKE NEAR MELVERN, KS

LOCATION.--Lat 38°30'34", long 95°42'36", in NW¼SW¼SW¼ sec.1, T.18 S., R.15 E., Osage County, in control tower of Melvern Dam on Marais des Cygnes River, 4.0 mi (6.4 km) west of Melvern, and at 447.7 mi (720.3 km).

DRAINAGE AREA.--349 mi² (904 km²).

PERIOD OF RECORD.--November 1972 to current year.

GAGE.--Water-stage recorder, Datum of gage is at mean sea level (levels by Corps of Engineers).

EXTREMES.--Maximum elevation during period, 1,033.00 ft (314.858 m) June 13-17, contents 134,600 acre-ft (166 hm³); minimum, 1,021.40 ft (311.323 m) Nov. 19, contents 73,640 acre-ft (90.8 hm³).

Period of record: Maximum elevation, 1,033.00 ft (314.858 m) June 13-17, 1974, contents, 134,600 acre-ft (166 hm³); minimum, 971.45 ft (296.10 m) Nov. 13, 1972, contents, 359 acre-ft (0.443 hm³).

REMARKS.--Reservoir is formed by compact earth-fill dam. Storage began in July 1972. Total capacity 652,500 acre-ft (804 hm³), consisting of the following: dead storage 26 acre-ft (32,100 m³) below elevation 962.0 ft (293.2 m); conservation pool 154,400 acre-ft (190 hm³) between elevations 962.0 ft (293.2 m) and 1036.0 ft (315.8 m); flood control pool 258,600 acre-ft (319 hm³) between elevations 1036.0 ft (315.8 m) and 1057.0 ft (322.2 m); and surcharge pool 507,600 acre-ft (626 hm³) between elevation 1057.0 ft (322.2 m) and 1073.0 ft (327.1 m). Reservoir is used to store water for flood control, irrigation and recreation.

Capacity table (elevation, in feet, and total contents, in acre-ft)
(Computed by Corps of Engineers in 1963)

1,020	67,710	1,030	116,600
1,025	90,250	1,035	147,600

ELEVATION, IN FEET, AT 2400, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,029.16	1,025.73	1,023.88	1,024.42	1,026.75	1,025.74	1,027.42	1,028.25	1,029.82	1,030.25	1,029.38	1,029.80
2	1,029.36	1,025.35	1,023.90	1,024.46	1,026.40	1,025.69	1,027.36	1,028.29	1,029.78	1,030.21	1,029.37	1,030.18
3	1,029.33	1,024.95	1,023.94	1,024.48	1,026.07	1,025.58	1,027.42	1,028.29	1,029.75	1,030.18	1,029.30	1,030.28
4	1,029.11	1,024.55	1,026.08	1,024.52	1,025.70	1,025.53	1,027.35	1,028.29	1,029.74	1,030.17	1,029.26	1,030.32
5	1,028.41	1,024.18	1,027.60	1,024.56	1,025.50	1,025.45	1,027.32	1,028.29	1,029.73	1,030.15	1,029.23	1,030.31
6	1,027.75	1,023.79	1,027.75	1,024.59	1,025.51	1,025.38	1,027.35	1,028.29	1,030.01	1,030.13	1,029.31	1,030.29
7	1,027.10	1,023.40	1,027.85	1,024.62	1,025.50	1,025.40	1,027.38	1,028.29	1,030.32	1,030.11	1,029.31	1,030.27
8	1,026.40	1,023.03	1,027.93	1,024.67	1,025.51	1,025.58	1,027.43	1,028.26	1,030.65	1,030.08	1,029.28	1,030.22
9	1,025.68	1,022.60	1,028.03	1,024.72	1,025.50	1,025.70	1,027.48	1,028.25	1,032.02	1,030.04	1,029.29	1,030.18
10	1,025.98	1,022.20	1,028.00	1,024.73	1,025.50	1,026.78	1,027.50	1,028.29	1,032.67	1,030.02	1,029.28	1,030.14
11	1,029.75	1,021.79	1,027.86	1,024.76	1,025.50	1,027.44	1,027.54	1,028.38	1,032.83	1,029.98	1,029.27	1,030.12
12	1,031.96	1,021.53	1,027.80	1,024.77	1,025.50	1,027.57	1,027.57	1,028.37	1,032.93	1,029.96	1,029.24	1,030.07
13	1,032.15	1,021.49	1,027.58	1,024.80	1,025.50	1,027.61	1,027.65	1,028.47	1,033.00	1,029.93	1,029.22	1,030.00
14	1,032.26	1,021.50	1,027.44	1,024.83	1,025.48	1,027.62	1,027.59	1,029.55	1,033.00	1,029.92	1,029.22	1,029.95
15	1,032.32	1,021.49	1,027.28	1,024.86	1,025.48	1,027.64	1,027.60	1,030.22	1,033.00	1,029.88	1,029.22	1,029.91
16	1,032.37	1,021.46	1,027.10	1,024.88	1,025.48	1,027.62	1,027.59	1,030.05	1,033.00	1,029.85	1,029.20	1,029.87
17	1,032.40	1,021.47	1,026.94	1,025.07	1,025.48	1,027.58	1,027.59	1,029.97	1,032.93	1,029.83	1,029.40	1,029.85
18	1,032.45	1,021.43	1,026.79	1,025.85	1,025.49	1,027.57	1,027.60	1,029.98	1,032.67	1,029.80	1,029.38	1,029.83
19	1,032.25	1,021.43	1,026.66	1,026.54	1,025.47	1,027.55	1,027.61	1,029.97	1,032.42	1,029.77	1,029.38	1,029.82
20	1,031.61	1,022.98	1,026.33	1,026.93	1,025.47	1,027.55	1,027.68	1,029.95	1,032.17	1,029.74	1,029.35	1,029.79
21	1,030.94	1,023.45	1,025.98	1,027.33	1,025.90	1,027.51	1,027.84	1,029.97	1,031.90	1,029.72	1,029.33	1,029.77
22	1,030.27	1,023.55	1,025.62	1,027.57	1,026.02	1,027.47	1,027.91	1,029.95	1,031.61	1,029.68	1,029.32	1,029.75
23	1,029.60	1,023.65	1,025.28	1,027.72	1,026.07	1,027.48	1,027.92	1,029.98	1,031.33	1,029.64	1,029.30	1,029.72
24	1,028.87	1,023.66	1,025.15	1,027.82	1,026.02	1,027.47	1,027.93	1,029.98	1,031.05	1,029.60	1,029.28	1,029.70
25	1,028.18	1,023.69	1,025.02	1,027.90	1,025.97	1,027.47	1,027.95	1,029.98	1,030.77	1,029.58	1,029.27	1,029.68
26	1,027.68	1,023.73	1,024.73	1,028.01	1,025.93	1,027.46	1,027.97	1,029.98	1,030.48	1,029.57	1,029.25	1,029.67
27	1,027.51	1,023.81	1,024.37	1,028.08	1,025.87	1,027.47	1,028.00	1,029.97	1,030.33	1,029.53	1,029.32	1,029.65
28	1,027.20	1,023.81	1,024.20	1,028.02	1,025.81	1,027.48	1,028.00	1,029.95	1,030.30	1,029.50	1,029.37	1,029.65
29	1,026.84	1,023.85	1,024.27	1,027.72	-----	1,027.48	1,028.05	1,029.93	1,030.28	1,029.47	1,029.35	1,029.62
30	1,026.48	1,023.85	1,024.36	1,027.40	-----	1,027.45	1,028.18	1,029.90	1,030.26	1,029.43	1,029.33	1,029.60
31	1,026.12	-----	1,024.38	1,027.08	-----	1,027.45	-----	1,029.86	-----	1,029.42	1,029.32	-----
MEAN	1,029.27	1,023.11	1,026.13	1,025.93	1,025.73	1,026.93	1,027.66	1,029.26	1,031.36	1,029.84	1,029.30	1,029.93
MAX	1,032.45	1,025.73	1,028.03	1,028.08	1,026.75	1,027.64	1,028.18	1,030.22	1,033.00	1,030.25	1,029.40	1,030.32
MIN	1,025.68	1,021.43	1,023.88	1,024.42	1,025.47	1,025.38	1,027.32	1,028.25	1,029.73	1,029.42	1,029.20	1,029.60
(+)	95,810	84,740	87,250	100,730	94,250	102,660	106,500	115,800	118,100	113,300	112,800	114,300
(#)	-15,490	-11,070	+2,510	+13,480	-4,480	+8,410	+3,840	+9,300	+2,300	-4,800	-500	+1,500

CAL YR 1973 (#) +79,828

WTR YR 1974 (#) +3,000

+ CONTENTS, IN ACRE-FEET, AT END OF MONTH.

CHANGE IN CONTENTS, IN ACRE-FEET.

LOCATION.--Lat 38°30'54", long 95°41'29", in NW 1/4 SW 1/4 sec. 6, T.18 S., R.16 E., Osage County, at downstream side of bridge on U.S. Highway 75, 3.0 mi (4.8 km) west of Melvern, 6.5 mi (10.5 km) upstream from Long Creek, and at mile 445.7 (717.1 km).

PERIOD OF RECORD.--September 1939 to September 1974 (discontinued). Prior to October 1948, published as Osage River at Melvern.

GAGE.--Water-stage recorder. Datum of gage is 947.65 ft (288.844 m) above mean sea level. Sept. 16, 1939, to Apr. 8, 1958, non-recording gage and Apr. 9, 1958, to Aug. 25, 1963, water-stage recorder, at site 4.4 mi (7.1 km) downstream at datum 8.54 ft (2.603 m) lower.

EXTREMES.--Current year: Maximum discharge, 2,210 ft³/s (62.6 m³/s) Oct. 20, gage height, 13.66 ft (4.164 m); minimum, 1.2 ft³/s (0.034 m³/s) Aug. 13.

Period of record: Maximum discharge, 68,500 ft³/s (1,940 m³/s) July 11, 1951, gage height, 30.8 ft (9.39 m), from floodmarks, site and datum then in use, from rating curve extended above 19,000 ft³/s (538 m³/s) on basis of contracted-opening measurement of peak flow; no flow at times in most years.

REMARKS.--Records good. Since August 1972, flow completely regulated by Melvern Lake (see sta 06910997). Records of chemical analyses for the water year 1974 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	15	1,040	54	19	1,100	271	97	18	99	19	20	77
2	15	1,040	54	19	1,100	271	97	28	99	19	20	58
3	15	1,030	147	19	1,090	271	97	40	80	19	20	37
4	664	1,030	247	19	1,090	271	97	40	43	19	20	30
5	2,150	1,020	26	19	748	271	54	40	43	19	20	62
6	2,150	1,020	22	19	72	200	17	40	46	19	21	153
7	2,130	1,020	21	19	72	46	17	40	44	19	21	153
8	2,130	1,020	21	19	72	51	18	40	79	19	21	151
9	2,120	1,010	21	19	72	49	17	40	65	19	21	150
10	1,100	1,010	187	19	72	76	17	40	46	19	21	151
11	442	1,010	531	19	72	58	17	40	48	19	21	151
12	9.5	672	531	19	72	110	17	40	45	19	21	151
13	3.0	106	531	19	72	191	17	40	45	19	14	149
14	1.7	52	531	18	72	191	18	40	45	19	17	148
15	1.7	52	529	18	72	191	18	320	45	19	18	148
16	12	52	526	19	72	191	18	850	45	19	18	148
17	18	53	525	24	72	191	18	400	357	19	40	88
18	18	53	525	33	72	191	18	100	986	19	23	16
19	668	53	525	27	72	191	18	100	985	19	23	16
20	2,200	155	865	27	75	191	18	98	965	20	21	15
21	2,180	59	1,120	23	90	133	18	98	969	20	21	15
22	2,150	55	1,110	23	146	96	18	97	968	20	21	15
23	2,140	54	1,110	21	275	96	18	99	969	20	21	15
24	2,140	54	1,120	21	274	96	18	98	968	20	21	15
25	2,130	53	1,100	21	274	96	18	97	967	20	21	15
26	1,820	53	1,100	21	272	96	18	98	967	20	21	14
27	1,060	53	1,090	20	271	96	18	99	500	20	21	15
28	1,050	55	776	466	271	96	18	99	19	20	26	15
29	1,040	55	20	1,110	-----	97	18	99	19	20	21	15
30	1,040	54	19	1,110	-----	97	18	99	19	20	21	15
31	1,040	-----	19	1,100	-----	97	-----	99	-----	20	21	-----
TOTAL	33,652.9	13,043	15,003	4,349	8,084	4,569	885	3,476	10,575	601	657	2,201
MEAN	1,086	435	484	140	289	147	29.5	112	353	19.4	21.2	73.4
MAX	2,200	1,040	1,120	1,110	1,100	271	97	850	986	20	40	153
MIN	1.7	52	19	18	72	46	17	18	19	19	14	14
AC-FT	66,750	25,870	29,760	8,630	16,030	9,060	1,760	6,890	20,980	1,190	1,300	4,370
CAL YR 1973	TOTAL	162,146.6	MEAN	444	MAX	3,300	MIN	1.7	AC-FT	321,600		
WTR YR 1974	TOTAL	97,095.9	MEAN	266	MAX	2,200	MIN	1.7	AC-FT	192,600		

OSAGE RIVER BASIN

93

06911500 SALT CREEK NEAR LYNDON, KS

LOCATION.--Lat 38°36'32", long 95°38'17", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.34, T.16 S., R.16 E., Osage County, at downstream side of highway bridge, 2.5 mi (4.0 km) east of Lyndon, and at mile 12.6 (20.3 km).

DRAINAGE AREA.--111 mi² (287 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 955.78 ft (291.322 m) above mean sea level. Prior to Nov. 25, 1957, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--35 years, 61.3 ft³/s (1.736 m³/s), 44,410 acre-ft/yr (54.8 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 6,300 ft³/s (178 m³/s) Oct. 11, gage height, 12.5 ft (3.81 m) from floodmark, no flow Aug. 3-5.

Period of record: Maximum discharge, 36,400 ft³/s (1,030 m³/s) July 11, 1951, gage height, 17.0 ft (5.18 m), from floodmark, from rating curve extended above 6,000 ft³/s (170 m³/s) on basis of slope-area measurement of peak flow; no flow at times.

Flood of 1935 reached a stage a few feet higher than that of July 11, 1951, from information by local residents.

REMARKS.--Records good.

REVISIONS (WATER YEARS).--WSP 1176: 1944-45(M). WSP 1340: 1943(M), 1946-47, 1948(P), 1949-50.

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	150	22	21	33	43	34	18	57	7.8	2.2	.07	637
2	100	19	20	31	39	32	18	32	6.8	2.1	.07	463
3	80	17	20	31	34	32	18	21	6.1	1.9	0	283
4	70	16	1,920	30	30	31	18	17	6.0	2.0	0	53
5	60	16	809	30	30	27	17	14	6.0	1.9	0	21
6	60	16	159	30	30	25	15	12	123	1.6	.20	11
7	70	15	91	27	26	23	17	11	135	1.5	.45	7.3
8	60	15	71	26	22	95	51	10	268	1.4	.49	5.3
9	50	15	63	25	22	101	54	9.5	893	1.3	.29	4.5
10	45	15	55	26	22	659	29	11	135	1.2	.28	3.8
11	2,500	15	48	27	21	482	23	14	116	1.2	.21	3.0
12	1,500	14	46	26	22	173	22	16	129	1.0	.17	2.3
13	200	15	45	26	23	95	20	15	45	.97	.07	2.0
14	100	16	38	26	22	72	17	1,910	28	.97	.08	1.8
15	64	16	33	26	20	61	15	276	20	.90	.07	1.8
16	50	15	29	30	19	52	14	69	15	.79	.01	1.6
17	40	15	26	86	19	44	13	45	12	.79	.51	1.6
18	35	15	25	592	19	41	14	33	9.9	.70	1.0	1.5
19	31	15	26	638	23	37	14	26	8.9	.70	13	1.5
20	28	1,210	23	442	22	33	13	21	7.7	.59	3.7	1.4
21	25	332	22	444	246	31	18	17	6.3	.56	1.5	1.2
22	22	85	22	285	319	30	21	16	5.4	.56	1.3	1.2
23	21	51	25	187	137	28	14	20	4.2	.56	6.8	1.2
24	20	41	197	101	77	27	9.7	36	3.8	.42	8.3	1.1
25	18	34	193	84	50	29	7.9	28	3.4	.42	2.7	1.1
26	18	31	83	77	45	29	7.2	36	3.2	.45	1.5	1.1
27	55	29	55	71	44	27	6.8	44	2.8	.49	1.3	.97
28	63	39	50	73	39	26	7.0	23	2.8	.37	3.4	.84
29	33	31	55	80	-----	24	12	15	2.6	.27	49	.68
30	25	26	49	65	-----	26	93	12	2.3	.14	19	.79
31	23	-----	40	51	-----	19	-----	9.2	-----	.14	5.9	-----
TOTAL	5,616	2,211	4,359	3,726	1,465	2,445	616.6	2,875.7	2,015.0	30.09	121.37	1,517.58
MEAN	181	73.7	141	120	52.3	78.9	20.6	92.8	67.2	.97	3.92	50.6
MAX	2,500	1,210	1,920	638	319	659	93	1,910	893	2.2	49	637
MIN	18	14	20	25	19	19	6.8	9.2	2.3	.14	0	.68
AC-FT	11,140	4,390	8,650	7,390	2,910	4,850	1,220	5,700	4,000	60	241	3,010

CAL YR 1973 TOTAL 60,137.79 MEAN 165 MAX 2,840 MIN .83 AC-FT 119,300
WTR YR 1974 TOTAL 26,998.34 MEAN 74.0 MAX 2,500 MIN 0 AC-FT 53,550

PEAK DISCHARGE (BASE, 3,000 CFS)

DATE	TIME	G.H.T.	DISCHARGE
10-11	UNKNOWN	12.5	6,300

OSAGE RIVER BASIN

06911900 DRAGOON CREEK NEAR BURLINGAME, KS

LOCATION.--Lat 38°42'30", long 95°50'20", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.27, T.15 S., R.14 E., Osage County, on left bank 110 ft (34 m) downstream from city of Burlingame pumping station and dam, 0.2 mi (0.3 km) downstream from bridge on U.S. Highway 56, 2.0 mi (3.2 km) downstream from Plum Creek and 3.0 mi (4.8 km) south of Burlingame.

DRAINAGE AREA.--114 mi² (295 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 1,016.06 ft (309.695 m) above mean sea level. Prior to June 8, 1960, nonrecording gage at bridge 180 ft (55 m) upstream at present datum.

AVERAGE DISCHARGE.--14 years, 68.2 ft³/s (1.931 m³/s), 49,410 acre-ft/yr (60.9 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 5,360 ft³/s (152 m³/s) Oct. 11, gage height, 19.10 ft (5.822 m); no flow Aug. 3-5.
Period of record: Maximum discharge, 11,400 ft³/s (323 m³/s) June 27, 1969, gage height, 20.81 ft (6.343 m); no flow at times.
Maximum stage known since at least 1900, 23.4 ft (7.13 m) June 26, 1946, from information by local residents.

REMARKS.--Records good. Diversions 110 ft (34 m) above station for municipal supply of Burlingame.

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	99	14	27	44	48	48	23	81	17	5.2	.24	229
2	76	13	27	44	46	46	22	45	14	4.5	.13	436
3	69	12	27	41	44	46	21	34	12	4.5	0	181
4	57	12	2,640	39	39	43	23	26	14	5.5	0	31
5	49	12	919	38	38	41	26	20	17	5.0	0	11
6	49	12	212	38	38	39	28	19	459	4.9	.92	6.0
7	60	12	111	35	35	39	28	17	142	4.6	1.4	5.4
8	52	12	94	33	28	87	231	13	248	3.9	1.0	4.9
9	43	12	89	30	27	79	75	13	3,120	3.3	1.0	4.1
10	40	12	77	30	30	417	48	117	198	3.0	1.0	3.8
11	3,750	12	67	30	31	246	39	89	330	3.0	.94	3.4
12	1,080	12	65	30	31	112	39	31	161	2.2	.60	3.0
13	146	12	60	30	31	75	35	52	76	2.2	.34	2.2
14	94	13	53	30	31	64	28	2,640	59	1.9	.10	2.0
15	71	14	47	32	28	58	25	179	48	1.8	.49	2.0
16	60	14	40	43	28	51	24	99	37	1.6	.45	1.9
17	50	14	36	242	28	44	23	71	30	1.6	2.3	1.9
18	45	14	36	891	28	42	23	61	27	1.6	3.8	2.0
19	41	14	36	618	35	41	23	52	24	1.6	3.6	2.0
20	36	726	33	314	34	38	28	44	22	1.6	2.7	1.3
21	30	227	30	394	118	36	160	35	16	1.6	16	.80
22	23	73	30	203	304	35	66	34	13	1.4	71	.80
23	18	52	33	123	181	32	41	43	9.6	1.4	4.0	.80
24	12	47	400	88	103	30	33	68	9.0	1.2	1.8	.80
25	12	45	199	79	67	32	31	44	8.1	.88	1.4	.80
26	11	39	84	75	59	33	29	60	8.1	.80	1.1	.80
27	12	36	64	73	60	33	27	48	7.9	.80	1.4	.80
28	15	35	60	68	56	31	27	32	6.2	.76	5.3	.80
29	15	32	61	68	-----	30	27	23	6.0	.40	5.9	.64
30	14	29	52	61	-----	26	236	19	5.2	.40	3.2	.47
31	14	-----	43	55	-----	23	-----	18	-----	.40	126	-----
TOTAL	6,143	1,583	5,752	3,919	1,626	1,997	1,489	4,127	5,144.1	73.54	258.11	941.41
MEAN	198	52.8	186	126	58.1	64.4	49.6	133	171	2.37	8.33	31.4
MAX	3,750	726	2,640	891	304	417	236	2,640	3,120	5.5	126	436
MIN	11	12	27	30	27	23	21	13	5.2	.40	0	.47
AC-FT	12,180	3,140	11,410	7,770	3,230	3,960	2,950	8,190	10,200	146	512	1,870

CAL YR 1973 TOTAL 66,817.01 MEAN 183 MAX 4,950 MIN .10 AC-FT 132,500
WTR YR 1974 TOTAL 33,053.16 MEAN 90.6 MAX 3,750 MIN 0 AC-FT 65,560

PEAK DISCHARGE (BASE, 1,500 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
10-11	1700	19.10	5,360	05-14	1100	16.77	3,970
11-20	1500	7.87	1,570	06-09	0900	18.74	4,990
12-04	1800	17.38	4,180				

06912490 POMONA LAKE NEAR QUENEMO, KS

LOCATION.--Lat 38°38'51", long 95°33'50", in NE¼SE¼NE¼ sec.19, T.16 S., R.17 E., Osage County, in control tower at dam on Hundred and Ten Mile Creek, 5 mi (8.0 km) northwest of Quenemo, and 7.9 mi (12.7 km) above mouth.

DRAINAGE AREA.--322 mi² (834 km²).

PERIOD OF RECORD.--April 1964 to current year. Prior to October 1971, published as "Pomona Reservoir".

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (Corps of Engineers bench mark).

EXTREMES.--Current year: Maximum elevation, 986.27 ft (300.615 m) Oct. 19, contents, 129,900 acre-ft (160 hm³); minimum, 972.56 ft (296.436 m) Aug. 17, contents, 64,980 acre-ft (80.1 hm³).

Period of record: Maximum elevation, 989.01 ft (301.450 m) Apr. 5, 1973, contents, 146,100 acre-ft (180 hm³); minimum since conservation pool was first filled, 969.60 ft (295.534 m) Mar. 29, 30, 1967, contents, 54,260 acre-ft (66.9 hm³).

REMARKS.--Reservoir is formed by compacted earthfill dam. Storage began Oct. 18, 1963. Total capacity, 502,600 acre-ft (620 hm³), consisting of the following: Sedimentation, 28,000 acre-ft (34.5 hm³) below elevation 960.5 ft (292.8 m); conservation pool, 42,600 acre-ft (52.5 hm³) between elevations 960.5 (292.8 m) and 974.0 (296.9 m); flood control pool, 176,800 acre-ft (218 hm³) between elevations 974.0 (296.9 m) and 1,003.0 ft (305.7 m); and surcharge pool, 255,200 acre-ft (315 hm³) between elevations 1,003.0 (296.9 m) and 1,025.4 ft (312.5 m). Reservoir is used for flood control, conservation, and recreation. Figures given herein represent total contents.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey by U.S. Army, Corps of Engineers, revised in 1964)

970	55,640	985	122,800
975	74,670	990	152,200
980	97,040		

ELEVATION, IN FEET, AT 2400, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	984.64	978.46	975.65	974.25	976.59	974.11	974.10	974.22	974.19	973.82	972.87	973.42
2	984.68	977.83	975.46	A	976.15	974.04	974.07	974.25	974.15	973.77	972.82	974.14
3	984.75	977.19	975.37		975.71	973.98	974.14	974.24	974.10	973.77	972.77	974.38
4	984.63	976.55	978.20		975.26	973.95	974.10	974.22	974.06	973.75	972.73	974.43
5	984.16	975.88	979.36		974.76	973.94	974.08	974.20	974.03	973.73	972.69	974.43
6	983.64	975.23	979.55		974.30	973.93	974.05	974.19	974.30	973.70	972.73	974.39
7	982.98	974.49	979.66		974.05	973.94	974.21	974.17	974.45	973.69	972.73	974.35
8	982.30	974.10	979.76		974.04	974.12	974.34	974.14	975.04	973.65	972.70	974.30
9	981.59	974.04	979.86		974.04	974.22	974.32	974.11	977.19	973.62	972.69	974.25
10	981.31	974.00	979.84		974.04	974.84	974.25	974.18	977.36	973.61	972.68	974.20
11	984.73	973.96	979.73		974.05	975.30	974.21	974.25	977.66	973.59	972.65	974.14
12	985.86	973.93	979.64		974.05	975.42	974.15	974.25	977.72	973.55	972.63	974.09
13	986.02	973.95	979.44		974.05	975.51	974.09	974.72	977.44	973.52	972.59	974.02
14	986.11	973.97	979.31		974.05	975.58	974.00	978.37	977.14	973.49	972.60	974.00
15	986.18	973.98	979.15		974.05	975.65	973.95	978.59	976.80	973.46	972.58	973.98
16	986.21	973.96	978.95		974.05	975.67	973.93	978.39	976.45	973.42	972.57	973.95
17	986.23	973.96	978.78	A	974.04	975.69	973.89	978.04	976.10	973.39	972.85	973.93
18	986.25	973.95	978.66	975.70	974.09	975.50	973.90	977.65	975.74	973.35	972.82	973.92
19	986.08	973.98	978.37	976.20	974.09	975.05	973.88	977.26	975.38	973.32	972.79	973.92
20	985.44	975.77	977.71	976.80	974.09	974.64	973.90	976.84	975.03	973.29	972.76	973.89
21	984.78	976.17	977.08	977.40	974.67	974.14	973.97	976.48	974.69	973.25	972.77	973.87
22	984.12	976.30	976.45	977.70	974.89	974.00	974.00	976.13	974.50	973.22	972.78	973.83
23	983.45	976.39	975.84	977.94	975.03	973.99	974.00	975.80	974.30	973.17	972.77	973.80
24	982.78	976.43	975.60	978.07	974.84	973.99	973.97	975.50	974.11	973.14	972.75	973.78
25	982.07	976.48	975.22	978.15	974.70	974.01	973.95	975.37	973.97	973.10	972.73	973.75
26	981.41	976.48	974.63	978.24	974.55	974.04	973.94	975.23	973.95	973.07	972.72	973.73
27	980.90	976.37	974.16	978.30	974.40	974.05	973.94	975.04	973.93	973.04	972.77	973.72
28	980.52	976.18	974.10	978.20	974.24	974.09	973.95	974.80	973.90	972.99	972.82	973.70
29	980.13	976.01	974.14	977.82	-----	974.10	974.05	974.61	973.86	972.96	972.79	973.67
30	979.67	975.83	974.24	977.43	-----	974.10	974.15	974.42	973.84	972.93	972.78	973.65
31	979.07	-----	974.24	977.00	-----	974.11	-----	974.24	-----	972.89	972.93	-----
MEAN	983.64	975.39	977.36		974.53	974.51	974.05	975.42	975.18	973.40	972.74	973.99
MAX	986.25	978.46	979.86	978.30	976.59	975.69	974.34	978.59	977.72	973.82	972.93	974.43
MIN	979.07	973.93	979.10	974.25	974.04	973.93	973.88	974.11	973.84	972.89	972.57	973.42
(+)	92,610	78,140	71,570	83,200	71,570	71,040	71,200	71,570	69,970	66,250	66,400	69,210
(#)	-27,790	-14,470	-6,570	+11,630	-11,630	-530	+160	+370	-1,600	-3,720	+150	+2,810

CAL YR 1973 (+) -15,330
WTR YR 1974 (+) -51,190

+ CONTENTS, IN ACRE-FEET, AT END OF MONTH.

CHANGE IN CONTENTS, IN ACRE-FEET.

A NO GAGE-HEIGHT RECORD.

LOCATION.--Lat 38°38'41", long 95°33'34", in NE1/4SW1/4 sec.20, T.16 S., R.17 E., Osage County, on left bank 800 ft (244 m) downstream from outlet works of Pomona Dam, 4.5 mi (7.2 km) northwest of Quenemo, and 7.7 mi (12.4 km) upstream from mouth.

PERIOD OF RECORD.--September 1939 to current year. Prior to October 1941, published as "Dragoon Creek".

GAGE.--Water-stage recorder. Datum of gage is 919.05 ft (280.126 m) above mean sea level (Corps of Engineers bench mark). See WSP 1919 for history of changes prior to Apr. 11, 1963.

AVERAGE DISCHARGE.--35 years, 176 ft³/s (4.984 m³/s), 127,500 acre-ft/yr (157 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 2,160 ft³/s (61.2 m³/s) Oct. 7, gage height, 11.35 ft (3.459 m); maximum gage height, 12.42 ft (3.786 m) Oct. 12, backwater from Marais des Cygnes River; minimum discharge, 4.8 ft³/s (0.136 m³/s) Oct. 16-19.
Period of record: Maximum discharge, 38,600 ft³/s (1,090 m³/s) July 11, 1951, gage height, 28.47 ft (8.678 m), site and datum then in use, from rating curve extended above 20,000 ft³/s (566 m³/s) on basis of slope-area measurement of peak flow; no flow at times in 1952-57, 1960, 1968, 1970, 1971, 1973.
Maximum stage known since at least 1919, 28.47 ft (8.678 m) July 11, 1951, from information by local resident.

REMARKS.--Records good. Flow completely regulated since 1964 by Pomona Lake (see sta 06912490).

REVISIONS (WATER YEARS).--WSP 1116: 1942.

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	1,660	469	58	1,050	379	59	64	81	20	21	30
2	29	1,650	456	58	1,040	280	59	63	81	20	21	43
3	29	1,640	441	58	1,020	279	59	60	81	20	21	24
4	388	1,620	180	58	1,020	194	59	59	81	20	21	22
5	1,430	1,600	25	58	1,020	112	59	59	81	20	21	70
6	1,960	1,600	22	58	1,010	84	60	59	81	20	22	155
7	2,140	1,590	22	58	584	58	64	59	81	18	21	155
8	2,110	994	22	57	59	63	135	59	178	18	21	155
9	2,100	115	21	57	58	60	257	59	145	19	21	155
10	2,040	116	199	57	58	74	257	59	104	19	21	155
11	1,000	116	494	57	58	61	257	58	107	19	21	155
12	6.0	71	491	57	58	61	254	58	367	19	21	151
13	5.0	22	492	57	54	61	253	61	926	19	21	107
14	5.0	22	493	57	58	60	251	94	922	19	21	26
15	5.0	22	490	57	58	59	193	209	914	19	21	26
16	5.0	23	487	57	58	58	61	842	909	19	21	26
17	4.8	23	490	59	59	58	61	1,240	909	19	29	26
18	4.8	23	488	67	59	542	61	1,230	906	28	33	26
19	604	23	834	64	59	1,000	61	1,230	908	28	33	26
20	2,090	60	1,680	64	59	1,000	61	1,230	911	21	33	24
21	2,100	24	1,670	63	71	1,020	61	1,230	737	20	29	23
22	2,090	22	1,650	62	250	420	64	1,230	420	20	22	23
23	2,080	22	1,630	62	480	55	67	1,220	420	20	22	23
24	2,080	21	1,650	62	470	56	67	973	419	27	22	22
25	2,060	21	1,630	61	470	57	68	494	290	26	22	22
26	2,050	168	1,610	61	465	57	68	495	20	21	22	22
27	1,610	473	1,300	61	465	57	65	497	20	21	22	22
28	1,050	473	349	456	464	57	65	498	20	21	28	22
29	1,040	470	58	1,070	-----	57	69	496	20	21	22	21
30	1,170	470	58	1,060	-----	57	70	496	20	21	21	21
31	1,670	-----	58	1,060	-----	59	-----	331	-----	21	21	-----
TOTAL	34,985.6	15,154	19,959	5,251	10,634	6,495	3,245	14,812	11,159	643	718	1,778
MEAN	1,129	505	644	169	380	210	108	478	372	20.7	23.2	59.3
MAX	2,140	1,660	1,680	1,070	1,050	1,020	257	1,240	926	28	33	155
MIN	4.8	21	21	57	54	55	59	58	20	18	21	21
AC-FT	69,390	30,060	39,590	10,420	21,090	12,880	6,440	29,380	22,130	1,280	1,420	3,530
CAL YR 1973	TOTAL 213,964.70	MEAN 586	MAX 3,070	MIN 0	AC-FT 424,400							
WTR YR 1974	TOTAL 124,833.60	MEAN 342	MAX 2,140	MIN 4.8	AC-FT 247,600							

06913000 MARAIS DES CYGNES RIVER NEAR POMONA, KS

LOCATION.--Lat 38°35'03", long 95°27'12", in SE $\frac{1}{4}$ NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.7, T.17 S., R.18 E., Franklin County, on right bank at downstream side of county highway bridge, 1.5 mi (2.4 km) south of Pomona, 4.7 mi (7.6 km) upstream from Miller Dam, 5.7 mi (9.2 km) downstream from 110 Mile Creek, and at mile 418.1 (672.7 km).

DRAINAGE AREA.--1,040 mi² (2,694 km²).

PERIOD OF RECORD.--July 1922 to February 1938, October 1968 to current year. Prior to October 1968, published as "near Quenemo".

GAGE.--Water-stage recorder. Datum of gage is 893.74 ft (272.412 m) above mean sea level. July 1922 to February 1938, nonrecording gage 1.7 mi (2.7 km) upstream at datum 891.36 ft (271.687 m) above mean sea level (levels by Corps of Engineers).

AVERAGE DISCHARGE.--21 years (1923-37, 1969-74), 464 ft³/s (13.14 m³/s), 336,200 acre-ft/yr (415 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 14,900 ft³/s (422 m³/s) Oct. 12, gage height, 28.25 ft (8.611 m); minimum, 35 ft³/s (0.99 m³/s) Aug. 6.

Period of record: Maximum discharge, 69,400 ft³/s (1,970 m³/s) Nov. 17, 1928, gage height, 38.38 ft (11.698 m), from floodmark, site and datum then in use, from rating curve extended above 20,000 ft³/s (566 m³/s) by logarithmic plotting and unit-runoff study at gage height 40.35 ft (12.299 m) for flood of July 11, 1951; no flow at times in 1926, 1931, 1933, 1934, 1936-38.

REMARKS.--Records good. Flow regulated since 1973 by Melvern Lake (see sta 06910997) and since 1964 by Pomona Lake (see sta 06912490).

REVISIONS (WATER YEARS).--WSP 1310: 1924(M), 1929, 1931(M), 1934, 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	1,170	2,810	753	240	2,390	1,010	233	244	281	51	38	1,550
2	671	2,780	744	180	2,360	806	222	183	207	49	38	5,270
3	428	2,750	742	150	2,330	795	217	146	205	48	38	3,540
4	341	2,730	3,010	150	2,310	770	220	142	190	51	37	848
5	2,370	2,710	5,740	160	2,300	598	217	134	145	50	37	404
6	4,310	2,690	1,540	160	1,670	567	177	128	239	49	43	339
7	5,220	2,690	643	150	1,210	362	138	124	712	48	50	402
8	4,610	2,570	459	150	305	253	329	120	437	46	44	370
9	4,330	1,350	383	150	230	400	469	117	4,510	46	40	339
10	4,280	1,220	330	150	238	1,050	423	118	2,660	46	40	317
11	10,300	1,220	1,030	150	231	2,880	370	120	785	46	40	303
12	13,900	1,210	1,320	160	230	1,340	359	115	820	46	39	291
13	6,020	660	1,300	168	225	799	352	112	1,140	46	40	282
14	992	177	1,280	170	214	691	333	1,580	1,110	42	40	206
15	641	112	1,250	183	213	609	320	2,070	1,050	42	38	167
16	431	110	1,230	202	209	547	173	1,400	1,010	42	39	164
17	299	108	1,210	370	204	497	133	1,950	993	44	57	161
18	288	107	1,210	2,010	204	636	131	1,520	1,400	45	156	132
19	314	113	1,240	3,440	215	1,410	128	1,320	1,740	53	179	67
20	3,200	2,890	2,170	1,970	220	1,410	130	1,300	1,740	49	103	57
21	4,430	5,480	2,740	1,710	524	1,410	143	1,280	1,710	46	75	55
22	4,470	1,310	2,830	1,040	1,800	1,130	156	1,270	1,330	43	52	55
23	4,430	612	2,830	1,010	1,610	320	153	1,260	1,270	41	44	53
24	4,410	456	3,250	633	1,350	285	141	1,260	1,270	40	42	53
25	4,380	375	3,680	492	1,170	284	130	792	1,260	46	44	53
26	4,340	322	3,160	435	1,120	290	126	731	964	45	47	53
27	3,910	718	2,940	436	1,100	283	121	734	900	42	50	53
28	2,730	816	1,990	540	1,060	273	120	736	358	42	311	53
29	2,390	808	932	2,200	-----	267	123	711	61	40	948	54
30	2,300	778	377	2,520	-----	255	309	696	54	40	226	55
31	2,720	-----	247	2,450	-----	248	-----	676	-----	38	123	-----
TOTAL	104,625	42,682	52,560	23,929	27,242	22,475	6,596	23,089	30,551	1,402	3,098	15,746
MEAN	3,375	1,423	1,695	772	973	725	220	745	1,018	45.2	99.9	525
MAX	13,900	5,480	5,740	3,440	2,390	2,880	469	2,070	4,510	53	948	5,270
MIN	288	107	247	150	204	248	120	112	54	38	37	53
AC-FT	207,500	84,660	104,300	47,460	54,030	44,580	13,080	45,800	60,600	2,780	6,140	31,230

CAL YR 1973 TOTAL 674,241 MEAN 1,847 MAX 13,900 MIN 27 AC-FT 1,337,000
WTR YR 1974 TOTAL 353,995 MEAN 970 MAX 13,900 MIN 37 AC-FT 702,100

PEAK DISCHARGE (REGULATED) ABOVE 4,000 CFS

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
10-12	1000	28.25	14,900	12-05	0600	17.96	6,580
10-22	1400	13.73	4,480	06-09	1800	16.15	5,680
11-21	0600	18.01	6,610	09-02	0900	15.81	5,500

OSAGE RIVER BASIN

06913500 MARAIS DES CYGNES RIVER NEAR OTTAWA, KS

LOCATION.--Lat 38°37'00", long 95°15'25", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.36, T.16 S., R.19 E., Franklin County, on right bank at sewage disposal plant in Ottawa, 0.9 mi (1.4 km) downstream from Main Street Bridge, 1.9 mi (3.1 km) downstream from Eightmile Creek, and at mile 398.9 (641.8 km).

DRAINAGE AREA.--1,250 mi² (3,240 km²), approximately.

PERIOD OF RECORD.--August 1902 to October 1905, October 1918 to current year. Published as Osage River at Ottawa 1902-5, and as Osage River near Ottawa 1918-47.

GAGE.--Water-stage recorder. Datum of gage is 857.68 ft (261.421 m) above mean sea level. Aug. 26, 1902, to Oct. 31, 1905, non-recording gages at Main Street Bridge in Ottawa at different datums. Oct. 27, 1918, to Sept. 4, 1962, water-stage recorder at Seventh Street Bridge, 0.9 mi (1.4 km) downstream at datum 0.47 ft (.143 m) higher.

AVERAGE DISCHARGE.--58 years (1902-5, 1919-74), 642 ft³/s (18.18 m³/s), 465,100 acre-ft/yr (573 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 21,000 ft³/s (595 m³/s) Oct. 12, gage height, 34.01 ft (10.366 m); minimum, 34 ft³/s (0.963 m³/s) Aug. 4, 5.

Period of record: Maximum discharge, 142,000 ft³/s (4,020 m³/s) July 11, 1951, gage height, 42.50 ft (12.954 m), site and datum then in use, from rating curve extended above 44,000 ft³/s (1,250 m³/s) on basis of slope-area measurement of peak flow; no flow at times in 1920, 1930-34, 1936, 1937, 1939-41.

The flood of 1951 is the highest known since Ottawa was settled (about 1864) according to information reported in "Climate of Kansas - 1948". Flood of June 13 or 14, 1844, reached a stage of about 1.5 ft (0.5 m) lower than that in 1951 according to same information.

REMARKS.--Records good. Flow regulated since 1973 by Melvern Lake (see sta 06910997) and since 1964 by Pomona Lake (see sta 06912490). Records of chemical analyses for the water year 1974 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1006: 1923, 1927, 1929. WSP 1440: 1904-5, 1922, 1929(M), 1935, 1941-43, 1944-45(M), 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	2,000	2,740	672	280	2,330	1,030	263	367	403	80	38	1,340
2	960	2,720	660	230	2,290	845	254	253	251	60	39	5,940
3	607	2,680	660	210	2,250	767	247	207	242	54	37	6,140
4	443	2,650	4,620	190	2,210	752	241	185	240	54	35	1,420
5	1,610	2,630	8,740	210	2,200	620	240	177	198	52	35	435
6	4,450	2,600	3,690	200	1,850	552	227	168	345	52	60	308
7	5,750	2,590	830	190	1,240	465	192	160	701	52	77	344
8	4,880	2,570	568	190	501	322	1,350	152	645	50	71	329
9	4,310	1,610	475	180	259	485	575	147	4,700	50	54	299
10	4,200	1,100	416	180	306	1,190	488	159	4,000	50	46	280
11	15,400	1,090	767	190	334	3,680	418	181	1,100	50	43	266
12	19,000	1,080	1,300	200	317	2,170	402	161	860	46	42	254
13	13,900	805	1,280	210	302	962	376	153	1,010	46	39	243
14	4,870	260	1,240	220	280	767	348	5,400	1,100	46	40	210
15	839	143	1,210	255	276	665	332	4,060	1,020	46	48	155
16	539	138	1,170	262	272	592	256	1,290	968	42	56	152
17	382	136	1,140	373	271	532	180	1,950	935	43	57	149
18	290	132	1,130	2,080	269	505	173	1,660	1,140	42	128	143
19	255	133	1,130	4,710	287	1,220	169	1,300	1,620	43	206	94
20	2,000	2,800	1,620	3,370	302	1,380	184	1,240	1,630	50	115	68
21	4,190	6,600	2,530	2,450	712	1,370	255	1,210	1,620	42	101	61
22	4,370	2,610	2,740	1,720	2,490	1,280	219	1,190	1,330	41	67	57
23	4,360	707	2,750	1,360	1,900	469	200	1,200	1,160	40	52	57
24	4,330	508	3,800	785	1,560	326	181	1,230	1,160	39	47	54
25	4,300	418	4,110	571	1,240	325	169	880	1,150	41	43	53
26	4,260	366	3,390	527	1,150	331	160	683	962	48	50	53
27	4,160	555	3,040	556	1,130	325	155	669	809	40	85	54
28	3,070	764	2,330	609	1,080	317	151	672	525	39	423	53
29	2,420	761	1,310	1,740	-----	306	167	645	118	38	893	51
30	2,270	708	450	2,490	-----	290	607	625	106	38	335	50
31	2,500	-----	350	2,410	-----	275	-----	612	-----	39	178	-----
TOTAL	126,915	44,604	60,318	29,148	29,608	25,115	9,179	28,986	32,048	1,453	3,540	19,112
MEAN	4,094	1,487	1,946	940	1,057	810	306	935	1,068	46.9	114	637
MAX	19,000	6,600	8,740	4,710	2,490	3,680	1,350	5,400	4,700	80	893	6,140
MIN	255	132	350	180	259	275	151	147	106	38	35	50
AC-FT	251,700	88,470	119,600	57,820	58,730	49,820	18,210	57,490	63,570	2,880	7,020	37,910
CAL YR 1973	TOTAL 762,343			MEAN 2,089	MAX 19,000	MIN 30	AC-FT 1,512,000					
WTR YR 1974	TOTAL 410,026			MEAN 1,123	MAX 19,000	MIN 35	AC-FT 813,300					

PEAK DISCHARGE (REGULATED) ABOVE 7,000 CFS

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
10-12	0200	34.01	21,000	05-14	1800	22.51	7,660
11-21	UNKNOWN	UNKNOWN	7,400	09-02	2400	22.9	7,850
12-05	0600	26.03	9,420				

OSAGE RIVER BASIN

99

06914000 POTTAWATOMIE CREEK NEAR GARNETT, KS

LOCATION.--Lat 38°20'01", long 95°14'55", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.6, T.20 S., R.20 E., Anderson County, at upstream side of bridge on U.S. Highway 59, 0.6 mi (1.0 km) downstream from confluence of North Pottawatomie and Cedar Creeks, 0.2 mi (0.3 km) upstream from Atchison, Topeka and Santa Fe Railway Co. bridge, 4.0 mi (6.4 km) north of Garnett, and at mile 40.7 (65.5 km).

DRAINAGE AREA.--334 mi² (865 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 873.23 ft (266.160 m) above mean sea level. See WSP 1919 for history of changes prior to May 16, 1958.

AVERAGE DISCHARGE.--35 years, 227 ft³/s (6.429 m³/s), 164,500 acre-ft/yr (203 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 36,200 ft³/s (1,030 m³/s) Oct. 11, gage height, 32.90 ft (10.028 m); minimum, 0.18 ft³/s (0.005 m³/s) Aug. 5.

Period of record: Maximum discharge, 57,000 ft³/s (1,610 m³/s) Sept. 13, 1961, gage height, 35.38 ft (10.784 m); no flow at times in most years.

Maximum stage known since at least 1858, 35.38 ft (10.784 m) Sept. 13, 1961, from information by local newspaper.

REMARKS.--Records good.

REVISIONS (WATER YEARS).--WSP 1390: 1940, 1941(M), 1945, 1947(M), 1949-50.

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	960	107	107	130	170	90	57	449	12	2.9	.22	9,920
2	384	91	95	110	139	72	50	221	10	2.3	.22	7,000
3	201	75	86	91	119	66	43	138	8.6	2.1	.20	5,000
4	143	68	1,650	83	104	59	39	102	8.1	2.1	.19	1,230
5	110	61	3,130	77	95	55	36	83	31	1.9	.18	361
6	103	54	756	73	88	54	34	70	357	1.7	.41	227
7	862	49	316	70	83	44	35	59	608	1.6	.97	149
8	270	46	228	65	71	40	127	51	813	1.5	.78	102
9	148	44	186	61	62	44	224	44	3,990	1.3	.64	79
10	109	40	157	58	59	1,190	113	39	924	1.2	.63	62
11	21,800	37	130	56	58	3,650	72	38	312	1.0	.55	50
12	14,600	35	113	54	59	1,210	98	35	356	.93	.52	41
13	1,530	33	103	51	61	375	119	30	178	.88	.45	35
14	332	31	91	50	58	262	81	122	94	.83	.44	30
15	224	30	81	54	53	212	58	352	60	.70	.64	25
16	207	26	69	62	49	177	47	135	43	.59	.65	23
17	122	26	60	241	45	139	39	69	33	.52	103	22
18	104	25	54	1,530	45	118	34	47	26	.47	525	20
19	87	25	55	2,360	89	104	31	35	20	.46	160	17
20	77	1,420	56	1,440	187	93	96	25	17	.45	31	16
21	72	4,530	48	1,200	222	90	904	20	15	.40	13	15
22	63	968	45	1,570	816	90	423	22	12	.36	7.3	13
23	56	310	47	1,310	602	95	186	29	9.5	.36	5.7	12
24	48	619	874	469	363	93	94	53	8.1	.32	4.5	11
25	40	467	906	366	209	90	67	46	6.8	.30	3.4	10
26	425	222	336	341	152	126	54	37	5.9	.30	2.7	9.2
27	3,210	159	210	447	136	144	47	38	5.1	.30	2.5	8.5
28	1,770	180	187	417	117	107	52	28	4.4	.28	1,120	8.6
29	323	175	258	506	-----	88	1,990	21	3.9	.26	2,570	8.8
30	178	127	246	310	-----	76	1,490	17	3.4	.24	770	8.0
31	133	-----	150	219	-----	67	-----	14	-----	.23	274	-----
TOTAL	48,691	10,080	10,830	13,871	4,311	9,120	6,740	2,469	7,974.8	28.78	5,599.79	24,513.1
MEAN	1,571	336	349	447	154	294	225	79.6	266	.93	181	817
MAX	21,800	4,530	3,130	2,360	816	3,650	1,990	449	3,990	2.9	2,570	9,920
MIN	40	25	45	50	45	40	31	14	3.4	.23	.18	8.0
AC-FT	96,580	19,990	21,480	27,510	8,550	18,090	13,370	4,900	15,820	57	11,110	48,620

CAL YR 1973 TOTAL 225,998.95 MEAN 619 MAX 21,800 MIN .41 AC-FT 448,300
WTR YR 1974 TOTAL 144,228.47 MEAN 395 MAX 21,800 MIN .18 AC-FT 286,100

PEAK DISCHARGE (BASE, 6,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
10-11	1900	32.90	36,200	09-01	1300	29.09	12,900
11-21	0600	26.98	6,650				

OSAGE RIVER BASIN

06915000 BIG BULL CREEK NEAR HILLSDALE, KS

LOCATION.--Lat 38°38'12", long 94°53'29", in SW¼SW¼SE¼ sec.20, T.16 S., R.23 E., Miami County, on right bank 1.0 mi (1.6 km) upstream from Tenmile Creek, 3.0 mi (4.8 km) southwest of Hillsdale, and 16.2 mi (26.1 km) upstream from mouth.

DRAINAGE AREA.--147 mi² (381 km²).

PERIOD OF RECORD.--July 1958 to current year. Records for 1949 to 1953 published in WSP 1146, 1176, 1210, 1240, and 1280 have been found to be unreliable and should not be used.

GAGE.--Water-stage recorder. Datum of gage is 854.49 ft (260.449 m) above mean sea level. Auxiliary water-stage recorder 1,850 ft (564 m) downstream from base gage. Datum of auxiliary gage is 848.49 ft (258.620 m) above mean sea level. Prior to July 29, 1958, water-stage recorder and nonrecording gage operated at auxiliary gage site. All records from this site were later discredited.

AVERAGE DISCHARGE.--16 years, 105 ft³/s (2.974 m³/s), 76,070 acre-ft/yr (93.8 hm³/yr).

EXTREMES.--Current year: Maximum discharge during year, 34,200 ft³/s (968.5 m³/s) Oct. 11, gage height, 20.84 ft (6.352 m), backwater from Tenmile Creek; no flow July 23, July 30 to Aug. 5.
Period of record: Maximum discharge, 39,600 ft³/s (1,120 m³/s) Sept. 13, 1961, gage height, 20.85 ft (6.355 m); no flow at times in 1959-64, 1966-67, 1969, 1971, 1974.
Maximum stage known since 1910, 21.2 ft (6.462 m) July 11, 1951, present site and datum, discharge, 45,200 ft³/s (1,280 m³/s), on basis of slope-area measurement of peak flow.

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

REVISIONS (WATER YEARS).--WSP 1919: 1958. See also PERIOD OF RECORD.

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	437	33	58	54	100	61	42	203	13	3.0	0	614
2	255	30	56	52	88	60	39	102	10	2.7	0	1,230
3	182	27	54	50	74	60	39	68	9.0	2.3	0	496
4	136	26	800	48	66	58	39	46	8.5	4.5	0	88
5	98	25	1,200	46	64	58	40	38	9.0	5.6	0	42
6	200	24	600	46	64	53	38	33	44	6.2	.11	29
7	382	24	300	42	57	51	50	27	90	4.0	.71	21
8	148	24	190	39	51	51	887	26	1,430	3.1	.75	17
9	102	23	130	39	50	122	203	22	2,940	2.4	1.6	13
10	82	20	95	39	48	877	95	22	254	2.0	2.2	10
11	17,200	18	80	39	48	950	76	26	321	1.5	1.5	9.0
12	2,750	17	72	39	46	373	80	34	227	1.3	.91	7.9
13	424	17	68	39	46	210	58	33	74	1.1	.75	6.2
14	280	17	64	39	46	150	46	3,380	49	.98	.64	5.1
15	193	17	60	41	45	127	41	486	44	.90	.46	4.6
16	133	16	53	43	44	103	36	200	31	.90	.37	4.0
17	91	15	51	195	42	83	34	490	23	.76	.34	3.6
18	74	15	50	994	90	79	32	707	19	.64	.34	2.9
19	66	15	50	1,120	350	71	31	212	16	.60	.72	2.9
20	58	1,050	44	700	250	63	140	90	23	.60	.72	2.6
21	53	537	43	606	280	62	896	56	17	.38	.47	2.3
22	54	135	42	668	200	60	170	45	11	.22	.55	1.8
23	56	126	46	415	130	57	80	44	7.6	0	26	1.5
24	53	779	580	227	90	55	58	52	6.8	.08	13	1.3
25	45	161	432	220	82	54	48	38	5.8	.10	3.1	1.3
26	48	102	170	300	86	54	44	39	5.2	.10	1.7	1.1
27	186	80	106	579	84	53	70	33	4.5	.13	1.1	1.1
28	67	76	106	517	71	51	60	25	4.0	.22	120	1.1
29	44	68	121	353	-----	50	150	20	3.5	.10	164	1.1
30	41	62	80	197	-----	45	759	16	3.2	0	27	.90
31	38	-----	57	135	-----	44	-----	15	-----	0	16	-----
TOTAL	23,976	3,579	5,858	7,921	2,692	4,245	4,381	6,628	5,703.1	46.41	385.04	2,622.30
MEAN	773	119	189	256	96.1	137	146	214	190	1.50	12.4	87.4
MAX	17,200	1,050	1,200	1,120	350	950	896	3,380	2,940	6.2	164	1,230
MIN	38	15	42	39	42	44	31	15	3.2	0	0	.90
AC-FT	47,560	7,100	11,620	15,710	5,340	8,420	8,690	13,150	11,310	92	764	5,200

CAL YR 1973 TOTAL 130,272.04 MEAN 357 MAX 17,200 MIN .90 AC-FT 258,400
WTR YR 1974 TOTAL 68,036.85 MEAN 186 MAX 17,200 MIN 0 AC-FT 135,000

PEAK DISCHARGE (BASE, 2,500 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
10-11	1200	20.84	34,200	06-09	0600	15.60	5,630
05-14	1615	15.28	5,630				

06916600 MARAIS DES CYGNES RIVER NEAR KANSAS-MISSOURI STATE LINE, KS

LOCATION.--Lat 38°13'21", long 94°40'04", in NE¼SE¼NW¼ sec.16, T.21 S., R.25 E., Linn County, on right bank 1.7 mi (2.7 km) downstream from Big Sugar Creek, 6.8 mi (10.9 km) upstream from Kansas-Missouri State line, and at mile 313.5 (504.4 km).

DRAINAGE AREA.--3,230 mi² (8,370 km²), approximately.

PERIOD OF RECORD.--October 1958 to current year.

GAGE.--Water-stage recorder. Datum of gage is 757.06 ft (230.752 m) above mean sea level. Prior to Jan. 15, 1959, nonrecording gage 6.8 mi (10.9 km) downstream at datum 15.62 ft (4.761 m) lower.

AVERAGE DISCHARGE.--16 years, 2,089 ft³/s (59.16 m³/s), 1,513,000 acre-ft/yr (1.87 km³/yr).

EXTREMES.--Current year: Maximum discharge, 44,900 ft³/s (1,270 m³/s) Oct. 15, gage height, 32.30 ft (9.845 m); minimum, 38 ft³/s (1.08 m³/s) July 26, 27.

Period of record: Maximum discharge, 57,400 ft³/s (1,630 m³/s) Sept. 16, 1961, gage height, 33.93 ft (10.342 m); no flow at times in 1963-64.

Flood of July 14, 1951, reached a stage of 41.2 ft (12.56 m), from floodmark, discharge, 148,000 ft³/s (4,190 m³/s), from rating curve extended above 110,000 ft³/s (3,120 m³/s) on basis of velocity-area study. Flood of Nov. 18, 1928, reached a stage about 3.7 ft (1.13 m) lower, discharge, 106,000 ft³/s (3,000 m³/s).

REMARKS.--Records good except those for January and February, which are fair. Natural flow of stream slightly affected by Pomona Lake since 1964 (see sta 06912490), Melvern Lake since 1973 (see sta 06910997), retention of overbank flow in wildlife refuge ponds, capacity, 5,500 acre-ft (6.78 hm³), and by numerous small diversions for irrigation above station.

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	24,100	3,570	1,910	1,380	4,600	2,540	915	8,380	866	212	44	4,980
2	26,200	3,540	1,720	1,200	4,180	2,100	845	5,890	801	137	50	11,800
3	27,100	3,480	1,620	1,050	3,900	1,840	780	2,650	535	111	48	14,500
4	24,900	3,340	4,670	1,000	3,690	1,640	740	1,710	416	150	44	15,200
5	16,900	3,230	13,100	1,100	3,510	1,570	715	1,230	397	146	41	14,800
6	7,300	3,120	14,800	1,100	3,450	1,470	670	1,040	512	171	53	14,300
7	6,220	3,060	14,700	1,050	3,350	1,300	655	906	1,010	148	82	9,570
8	7,860	3,010	14,500	1,050	2,700	1,290	1,230	902	2,350	124	85	1,990
9	7,770	2,970	8,870	1,000	2,060	3,600	4,040	1,220	7,850	109	97	1,260
10	6,390	2,630	2,980	1,000	1,280	6,910	3,180	780	12,000	100	96	1,100
11	8,230	1,730	2,220	960	990	13,300	1,800	2,030	12,200	95	88	976
12	15,300	1,500	2,040	940	965	15,500	1,550	1,240	10,000	85	74	728
13	21,600	1,450	2,470	920	955	14,600	1,390	862	4,060	75	65	604
14	39,700	1,410	2,610	895	940	10,600	1,210	2,300	2,020	83	60	530
15	43,400	1,010	2,450	835	900	4,500	1,080	8,510	1,800	78	56	485
16	35,100	625	2,300	870	865	2,880	965	9,870	1,580	70	54	442
17	27,100	504	2,130	1,640	820	2,890	875	6,440	1,400	63	84	378
18	19,100	464	2,020	8,100	890	2,560	720	4,020	1,290	61	2,040	354
19	8,600	448	1,940	11,900	2,400	1,790	620	4,230	1,240	55	1,690	332
20	1,760	2,580	1,780	12,400	2,120	1,860	605	2,490	1,630	53	929	385
21	1,700	10,900	1,880	12,700	2,020	2,340	1,590	1,890	1,810	51	549	299
22	3,810	12,300	2,680	12,800	5,710	2,310	4,270	1,710	1,780	51	336	228
23	4,690	12,300	3,160	12,400	6,550	2,250	2,700	1,610	1,660	52	286	198
24	4,770	12,000	5,940	9,650	5,640	1,810	1,370	1,650	1,360	44	335	175
25	4,680	10,300	9,020	6,400	4,140	1,290	999	1,700	1,290	45	252	163
26	4,900	5,870	8,810	3,780	3,010	1,260	834	1,600	1,270	41	163	155
27	10,600	3,100	7,620	4,810	2,630	1,250	731	1,230	1,220	41	129	147
28	12,500	2,350	5,510	5,260	2,740	1,210	679	1,110	994	45	1,910	167
29	11,700	2,350	4,560	5,780	-----	1,180	1,850	1,060	887	48	5,290	174
30	9,050	2,160	3,620	4,920	-----	1,070	6,440	991	505	47	5,460	161
31	5,040	-----	2,320	4,900	-----	1,020	-----	922	-----	44	4,370	-----
TOTAL	448,070	117,301	155,950	133,790	77,005	111,730	46,048	82,173	76,733	2,635	24,860	96,581
MEAN	14,450	3,910	5,031	4,316	2,750	3,604	1,535	2,651	2,558	85.0	802	3,219
MAX	43,400	12,300	14,800	12,800	6,550	15,500	6,440	9,870	12,200	212	5,460	15,200
MIN	1,700	448	1,620	835	820	1,020	605	780	397	41	41	147
AC-FT	888,700	232,700	309,300	265,400	152,700	221,600	91,340	163,000	152,200	5,230	49,310	191,600

CAL YR 1973 TOTAL 2,254,391 MEAN 6,176 MAX 43,400 MIN 45 AC-FT 4,472,000
WTR YR 1974 TOTAL 1,372,876 MEAN 3,761 MAX 43,400 MIN 41 AC-FT 2,723,000

PEAK DISCHARGE (BASE, 10,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
10-03	1400	29.87	27,400	01-23	0300	21.97	13,000
10-15	0100	32.30	44,900	03-12	1500	25.63	15,700
10-28	0600	21.39	12,600	05-16	0800	17.79	10,100
11-22	0200	21.17	12,400	06-11	1100	21.00	12,300
12-06	1400	24.52	14,800	09-04	1000	25.10	15,300

OSAGE RIVER BASIN

06917000 LITTLE OSAGE RIVER AT FULTON, KS

LOCATION.--Lat 38°01'09", long 94°42'48", in SE $\frac{1}{4}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.25, T.23 S., R.24 E., Bourbon County, on right bank at downstream side of bridge on U.S. Highway 69, 0.8 mi (1.3 km) north of Fulton.

DRAINAGE AREA.--295 mi² (764 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 776.37 ft (236.638 m) above mean sea level. Prior to May 28, 1952, nonrecording gage at present site and datum.

AVERAGE DISCHARGE.--25 years (1949-74), 210 ft³/s (5.947 m³/s), 152,100 acre-ft/yr (188 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 11,900 ft³/s (337 m³/s) Mar. 11, gage height, 27.20 ft (8.291 m); no flow for part of day Aug. 6.

Period of record: Maximum discharge, 26,300 ft³/s (745 m³/s) July 1, 1969, gage height, 30.03 ft (9.153 m); no flow at times in 1949, 1952-57, 1959, 1961-64, 1966-68, 1974.

REMARKS.--Records good.

REVISIONS (WATER YEARS).--WSP 1440: 1949(P), 1950(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	629	158	191	170	299	212	112	759	22	2.9	.30	2,460
2	488	130	171	150	257	192	101	246	19	2.6	.24	4,070
3	323	109	168	140	221	182	93	179	16	2.2	.23	2,800
4	233	95	3,680	130	190	164	86	132	16	2.0	.20	519
5	195	87	4,930	120	179	147	78	101	17	2.1	.13	278
6	157	79	1,090	110	172	134	73	83	274	2.0	.22	190
7	452	75	473	100	151	124	69	70	1,070	1.9	.41	139
8	317	71	365	100	132	126	76	60	445	1.7	.36	113
9	187	68	320	95	124	2,580	83	53	585	1.6	.39	85
10	138	64	273	95	121	6,980	81	48	264	1.5	.46	70
11	566	59	231	90	117	10,800	73	45	139	1.4	.50	50
12	32	56	206	90	113	4,740	72	45	103	1.3	.49	40
13	662	55	187	96	111	697	85	40	102	1.2	.35	35
14	431	58	164	96	104	479	73	1,400	70	1.1	.32	30
15	290	77	147	101	98	398	59	990	50	1.1	.16	30
16	218	76	130	128	93	326	53	330	39	.91	.07	50
17	170	69	116	1,240	90	269	49	230	31	.84	7.8	120
18	145	61	109	4,390	257	246	48	170	25	.75	246	100
19	126	55	120	4,040	2,540	217	46	110	21	.66	132	90
20	111	2,050	130	1,840	770	191	47	90	18	.65	113	90
21	99	3,550	120	845	988	191	103	69	15	.65	18	100
22	88	669	119	848	1,340	196	198	58	13	.58	7.0	70
23	8.5	377	131	939	611	194	92	52	11	.59	6.8	60
24	8.7	1,280	3,170	506	416	173	63	53	8.3	.56	2.7	50
25	65	850	2,100	392	314	189	52	52	6.2	.55	1.7	45
26	97	438	565	548	302	206	46	54	5.0	.54	1.4	40
27	2,150	334	413	686	293	189	42	52	4.4	.49	11	35
28	1,800	377	360	725	251	176	39	45	4.3	.44	769	80
29	382	318	315	939	-----	235	41	39	3.5	.40	2,080	150
30	247	234	260	509	-----	149	648	32	3.1	.36	553	40
31	190	-----	200	374	-----	124	-----	26	-----	.33	157	-----
TOTAL	11,005.2	11,979	20,954	20,632	10,654	31,226	2,781	5,713	3,399.8	35.90	4,111.23	12,029
MEAN	355	399	676	666	381	1,007	92.7	184	113	1.16	133	401
MAX	2,150	3,550	4,930	4,390	2,540	10,800	648	1,400	1,070	2.9	2,080	4,070
MIN	8.5	55	109	90	90	124	39	26	3.1	.33	.07	30
AC-FT	21,830	23,760	41,560	40,920	21,130	61,940	5,520	11,330	6,740	71	8,150	23,860

CAL YR 1973 TOTAL 239,404.50 MEAN 656 MAX 8,200 MIN 1.1 AC-FT 474,900
WTR YR 1974 TOTAL 134,520.13 MEAN 369 MAX 10,800 MIN .07 AC-FT 266,800

PEAK DISCHARGE (BASE, 3,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
10-12	1100	15.66	3,780	01-18	2200	18.94	5,030
10-28	0200	15.08	3,580	02-19	0400	13.66	3,080
11-21	0800	16.95	4,230	03-11	0500	27.20	11,900
12-04	2300	20.03	5,520	09-02	1000	17.72	4,540
12-24	2300	16.56	4,100				

OSAGE RIVER BASIN

103

06917380 MARMATON RIVER NEAR MARMATON, KS

LOCATION.--Lat 37°49'03", long 94°47'30", in SW 1/4 NW 1/4 sec.4, T.26 S., R.24 E., Bourbon County, on left bank 150 ft (46 m) downstream from Cedar Creek, 2.0 mi (3.2 km) southeast of Marmaton, and at mile 55.7 (89.6 km).

DRAINAGE AREA.--292 mi² (756 km²).

PERIOD OF RECORD.--May 1971 to current year.

GAGE.--Water-stage recorder. Datum of gage is 780.66 ft (237.945 m) above mean sea level.

EXTREMES.--Current year: Maximum discharge, 24,000 ft³/s (680 m³/s) March 10, gage height, 34.69 ft (10.574 m); minimum, 0.04 ft³/s (0.001 m³/s) Aug. 6.

Period of record: Maximum discharge, 24,000 ft³/s (680 m³/s) March 10, 1974, gage height, 34.69 ft (10.574 m); minimum, 0.04 ft³/s (0.001 m³/s) Aug. 6, 1974.

Maximum discharge since at least 1915 about 40,000 ft³/s (1,130 m³/s) on Sept. 7, 1915 and May 1935, from information by State of Kansas and Missouri-Kansas-Texas Railroad.

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	200	55	181	180	217	177	100	310	13	3.5	.12	8,640
2	114	46	165	160	199	169	84	152	11	2.9	.10	7,110
3	85	41	161	140	179	161	71	102	9.7	2.5	.09	2,240
4	67	34	5,260	120	164	148	62	72	9.8	2.1	.08	419
5	53	31	3,070	110	160	136	55	53	12	1.9	.07	280
6	44	28	501	110	152	118	44	42	2,610	1.7	.38	220
7	40	26	318	100	131	108	35	34	4,460	1.7	1.0	188
8	41	24	251	100	114	101	45	29	580	1.6	1.2	160
9	35	23	224	100	104	2,410	61	25	410	1.5	1.3	128
10	31	22	192	101	101	12,600	49	22	285	1.4	1.1	84
11	110	21	166	91	98	14,700	47	20	385	1.0	.94	60
12	550	20	146	66	96	2,490	48	18	428	.83	.70	45
13	386	19	129	51	94	493	48	16	275	.64	.59	34
14	246	19	113	59	87	347	43	470	201	.60	.49	28
15	156	21	99	64	80	291	37	414	140	.64	.43	24
16	81	23	84	123	76	255	33	204	72	.61	.43	48
17	62	33	70	2,010	69	208	30	101	50	.60	.65	171
18	52	58	65	5,310	558	191	27	57	39	.50	1.4	150
19	45	94	131	2,960	5,360	173	27	45	33	.50	2.3	91
20	38	1,610	204	1,230	768	154	26	36	28	.48	52	88
21	34	1,590	178	642	1,460	161	34	29	23	.43	16	118
22	30	348	144	1,190	1,510	175	62	25	19	.43	5.6	107
23	26	227	355	824	531	170	47	23	15	.32	790	50
24	23	572	5,720	415	328	157	36	23	12	.29	380	34
25	21	1,000	1,130	308	245	211	29	24	10	.29	128	29
26	19	441	413	517	236	207	25	27	8.4	.29	50	27
27	252	317	310	735	221	183	23	24	7.1	.21	30	26
28	393	409	268	754	197	162	21	22	5.9	.20	1,330	1,870
29	212	271	233	634	-----	163	22	19	5.0	.34	980	855
30	111	211	211	338	-----	140	272	16	3.8	.24	378	264
31	71	-----	200	253	-----	114	-----	14	-----	.19	653	-----
TOTAL	3,628	7,634	20,692	19,795	13,535	37,273	1,543	2,468	10,160.7	30.43	4,805.97	23,588
MEAN	117	254	667	639	483	1,202	51.4	79.6	339	.98	155	786
MAX	550	1,610	5,720	5,310	5,360	14,700	272	470	4,460	3.5	1,330	8,640
MIN	19	19	65	51	69	101	21	14	3.8	.19	.07	24
AC-FT	7,200	15,140	41,040	39,260	26,850	73,930	3,060	4,900	20,150	60	9,530	46,790

CAL YR 1973 TOTAL 210,729.78 MEAN 577 MAX 10,700 MIN .13 AC-FT 418,000

WTR YR 1974 TOTAL 145,153.10 MEAN 398 MAX 14,700 MIN .07 AC-FT 287,900

PEAK DISCHARGE (BASE, 3,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
11-20	2000	12.95	3,530	03-09	1100	12.01	3,100
12-04	1800	22.15	7,670	03-10	2400	34.69	24,000
12-24	1000	21.24	7,260	06-07	0600	20.36	6,860
01-18	0400	18.23	5,900	09-01	1700	28.76	11,100
02-19	0700	21.45	7,350	09-28	1800	13.51	3,780

ARKANSAS RIVER BASIN

07137000 FRONTIER DITCH NEAR COOLIDGE, KS

LOCATION.--Lat 38°02'18", long 102°02'19", in SW¼SE¼ sec.21, T.23 S., R.43 W., Hamilton County, on left bank 0.3 mi (0.5 km) east of Colorado-Kansas State line, 0.5 mi (0.8 km) downstream from Holly drain diversion, 1.5 mi (2.4 km) west of Coolidge, and 2.3 mi (3.7 km) downstream from diversion from Arkansas River.

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

GAGE.--Water-stage recorders and Parshall flume. Datum of gage is 3,353.14 ft (1,022.037 m) above mean sea level.

EXTREMES.--Period of record: Maximum daily discharge, 70 ft³/s (1.98 m³/s) May 7, 1959; no flow for many days each year.

REMARKS.--Records good. This ditch diverts water from Arkansas River in Colorado for use in Kansas. These records and records for Arkansas River near Coolidge represent total flow of Arkansas River at the Colorado-Kansas State line.

REVISIONS (WATER YEARS).--WSP 1731: 1951.

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				0	4.3	37	16	27	10	5.6
2		0				0	15	33	31	23	7.7	5.6
3		0				0	35	20	35	27	7.5	6.8
4		0				0	12	39	34	25	9.4	6.8
5		0				0	24	40	33	26	8.3	7.2
6		0				0	24	39	36	28	11	6.8
7		0				0	11	39	39	26	9.6	7.2
8		0				0	16	40	26	28	11	6.8
9		0				0	38	41	23	26	20	6.8
10		0				0	31	34	41	24	7.9	8.3
11		0				0	38	48	36	20	9.5	10
12		0				0	32	43	32	20	9.2	16
13		0				0	25	41	31	19	8.2	13
14		0				0	39	42	34	19	7.9	2.4
15		3.7				0	39	41	34	19	8.2	4.6
16		10				0	39	43	34	16	7.4	5.3
17		10				0	40	39	36	13	7.4	4.4
18		12				0	38	42	31	11	7.0	4.4
19		7.1				0	31	38	34	10	6.8	4.3
20		3.2				0	27	37	39	11	6.8	4.9
21		0				17	37	34	30	12	5.8	4.8
22		0				20	40	35	33	12	5.6	4.8
23		0				22	36	36	31	16	6.3	5.0
24		0				21	33	34	32	13	5.5	4.8
25		0				21	33	26	32	12	4.6	4.6
26		0				21	31	25	23	12	7.2	5.0
27		0				18	30	22	32	12	4.8	3.5
28		0				18	35	22	30	13	4.2	3.2
29		0			-----	13	39	19	29	17	4.6	3.7
30		0			-----	0	39	14	26	12	5.5	3.7
31		-----			-----	0	-----	14	-----	12	5.6	-----
TOTAL	0	46.0	0	0	0	171	911.3	1,057	953	561	240.5	180.3
MEAN	0	1.53	0	0	0	5.52	30.4	34.1	31.8	18.1	7.76	6.01
MAX	0	12	0	0	0	22	40	48	41	28	20	16
MIN	0	0	0	0	0	0	4.3	14	16	10	4.2	2.4
AC-FT	0	91	0	0	0	339	1,810	2,100	1,890	1,110	477	358
CAL YR 1973	TOTAL	4,802.50	MEAN	13.2	MAX	58	MIN	0	AC-FT	9,530		
WTR YR 1974	TOTAL	4,120.10	MEAN	11.3	MAX	48	MIN	0	AC-FT	8,170		

ARKANSAS RIVER BASIN

105

07137500 ARKANSAS RIVER NEAR COOLIDGE, KS

LOCATION.--Lat 38°01'34", long 102°00'41", in NW¼NE¼NW¼ sec.26, T.23 S., R.43 W., Hamilton County, on right bank at downstream side of bridge, 1.0 mi (1.6 km) south of Coolidge, and 1.9 mi (3.1 km) downstream from Colorado-Kansas State line.

DRAINAGE AREA.--25,410 mi² (65,812 km²), of which 1,708 mi² (4,424 km²) is probably noncontributing.

PERIOD OF RECORD.--May to October 1903, March to May 1921, October 1950 to current year. Monthly discharge only for some periods, published in WSP 1311.

GAGE.--Water-stage recorder. Datum of gage is 3,330.84 ft (1,015.240 m) above mean sea level. May 5 to Oct. 31, 1903, nonrecording gage, and Mar. 1 to May 31, 1921, water-stage recorder at present site at different datums. Oct. 1, 1950, to Mar. 31, 1966, water-stage recorder at site 0.3 mi (0.5 km) upstream at datum 3.00 ft (0.914 m) higher.

AVERAGE DISCHARGE.--24 years, 213 ft³/s (6.032 m³/s), 154,300 acre-ft/yr (190 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 684 ft³/s (19.4 m³/s) Apr. 4, May 25; maximum gage height, 4.33 ft (1.320 m) Dec. 29

(backwater from ice); minimum daily discharge, 1.1 ft³/s (0.031 m³/s) July 27.

Period of record: Maximum discharge, 158,000 ft³/s (4,470 m³/s) June 17, 1965, gage height, 14.8 ft (4.511 m), present site and datum, from floodmarks, from rating curve extended above 13,000 ft³/s (370 m³/s) on basis of slope-area measurement of peak flow; no flow for many days in 1903, 1954, 1960.

REMARKS.--Records good except those for winter periods, which are fair. Combined flow of river and Frontier ditch (see sta 07137000) represents entire flow that enters Kansas. Flow regulated by John Martin Reservoir (see sta 07130000). Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation of about 500,000 acres (2,020 km²), and return flow from irrigated areas.

REVISIONS (WATER YEARS).--WSP 1341: 1903, 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	92	104	70	119	125	92	55	34	16	2.6	1.6
2	136	101	110	70	119	122	86	39	22	13	2.2	2.2
3	122	107	113	70	113	122	280	57	44	5.3	1.6	1.6
4	104	98	113	70	104	116	625	22	29	4.2	1.8	2.4
5	122	101	110	70	107	122	536	26	4.2	3.9	1.6	2.0
6	116	95	104	70	84	122	452	22	7.2	3.9	2.2	2.8
7	119	86	107	70	90	116	440	19	22	3.3	2.0	2.8
8	132	80	104	71	100	107	370	24	83	3.3	2.2	2.2
9	122	65	107	70	107	113	365	11	153	3.3	4.2	3.0
10	119	62	110	70	136	132	345	60	107	4.9	4.2	2.2
11	139	62	113	70	125	128	390	42	77	3.0	1.8	3.0
12	146	68	107	70	122	136	424	29	57	3.0	1.6	3.0
13	142	62	104	100	119	139	429	16	22	3.0	1.6	2.6
14	128	57	107	115	107	146	412	8.6	16	3.0	2.2	2.6
15	125	49	116	130	107	146	458	29	9.3	3.0	1.6	2.4
16	146	42	113	130	110	150	488	71	7.2	3.0	2.4	2.6
17	168	36	105	130	113	150	482	60	16	2.8	2.0	2.0
18	150	42	100	130	116	146	446	80	29	2.6	2.2	2.0
19	136	42	100	146	116	125	295	71	22	2.8	1.3	2.0
20	122	42	100	150	125	107	136	52	13	2.6	2.0	1.4
21	128	50	100	156	119	101	104	19	9.3	2.2	1.4	1.6
22	113	65	100	150	110	110	95	24	10	2.2	1.4	3.3
23	86	98	90	150	122	119	89	24	9.3	2.4	2.4	4.2
24	77	98	90	136	119	113	83	32	14	1.8	3.0	3.0
25	83	95	90	136	116	107	89	313	32	1.3	3.6	2.6
26	101	74	90	116	113	89	86	110	42	1.3	2.4	2.0
27	89	77	80	125	119	83	86	62	42	1.1	2.8	1.8
28	104	83	80	122	119	74	65	49	24	1.6	2.6	1.8
29	98	95	80	119	-----	74	57	47	19	2.8	3.3	2.8
30	77	89	70	113	-----	86	57	39	14	2.0	2.2	2.8
31	86	-----	70	113	-----	110	-----	42	-----	2.6	1.6	-----
TOTAL	3,720	2,213	3,087	3,308	3,176	3,636	8,362	1,554.6	989.5	111.2	107.8	72.3
MEAN	120	73.8	99.6	107	113	117	279	50.1	33.0	3.59	3.48	2.41
MAX	184	107	116	156	136	150	625	313	153	16	42	4.2
MIN	77	36	70	70	84	74	57	8.6	4.2	1.1	1.3	1.4
AC-FT	7,380	4,390	6,120	6,560	6,300	7,210	16,590	3,080	1,960	221	214	143
CAL YR 1973	TOTAL	55,009.5	MEAN	151	MAX	867	MIN	6.2	AC-FT	109,100		
WTR YR 1974	TOTAL	30,337.4	MEAN	83.1	MAX	625	MIN	1.1	AC-FT	60,170		

ARKANSAS RIVER BASIN

07138000 ARKANSAS RIVER AT SYRACUSE, KS

LOCATION.--Lat 37°57'58", long 101°45'23", in NW¼SE¼NW¼ sec.18, T.24 S., R.40 W., Hamilton County, at left end of bridge on U.S. Highway 270, 0.5 mi (0.8 km) south of Syracuse, and at mile 1,080.9 (1,739.2 km).

DRAINAGE AREA.--25,763 mi² (66,726 km²), of which 1,857 mi² (4,810 km²) is probably noncontributing.

PERIOD OF RECORD.--August 1902 to September 1906 (published as "near Syracuse"), October 1920 to current year. Monthly discharge only for some periods published in WSP 1311.

GAGE.--Water-stage recorder. Datum of gage is 3,209.32 ft (978.201 m) above mean sea level. See WSP 1921 for history of changes prior to Nov. 15, 1956.

AVERAGE DISCHARGE.--58 years, 346 ft³/s (9.799 m³/s), 250,700 acre-ft/yr (309 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 535 ft³/s (15.2 m³/s) Apr. 4, gage height, 5.43 ft (1.655 m); no flow for part of each day Sept. 26, 27.

Period of record: Maximum discharge, 174,000 ft³/s (4,930 m³/s) June 17, 1965, gage height, 19.75 ft (6.020 m) from rating curve extended above 62,000 ft³/s (1.760 m³/s) on basis of indirect measurements; maximum gage height, 21.80 ft (6.645 m) June 17, 1965; no flow Aug. 17, 1946 and part of each day Sept. 26, 27, 1974.

Flood in October 1908 reached a stage of about 11.7 ft (3.57 m) from information by local newspaper, discharge, about 87,000 ft³/s (2,460 m³/s).

REMARKS.--Records good. Flow moderately regulated by John Martin Reservoir (see sta 07130000). Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation and return flow from irrigated areas. Records of suspended sediment loads for the water year 1974 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	232	88	153	70	136	137	100	66	38	18	1.1	.54
2	196	88	152	70	138	135	96	64	41	16	.72	.58
3	174	112	156	60	130	134	158	62	42	13	.72	.63
4	161	111	158	60	131	131	404	61	47	9.3	.67	.51
5	164	105	149	60	134	127	503	62	38	6.7	.64	.52
6	169	104	139	70	124	134	386	61	33	6.2	.67	.56
7	161	98	134	80	110	142	347	58	34	6.0	.68	.32
8	161	101	141	90	95	134	370	55	45	4.5	.79	.24
9	151	99	146	100	100	125	357	50	93	3.7	.83	.17
10	144	95	145	100	141	151	326	46	99	3.5	.79	.10
11	150	91	146	100	139	151	336	56	97	3.2	.67	.09
12	131	88	152	110	138	153	382	56	82	2.7	.42	.12
13	133	86	149	140	138	160	382	46	69	2.7	.43	.11
14	122	91	150	170	136	161	395	42	55	2.5	.45	.11
15	106	91	154	170	136	152	408	42	50	2.3	.34	.11
16	101	91	150	170	131	151	394	46	45	2.0	.28	.09
17	114	89	157	170	134	147	410	60	44	1.9	.25	.10
18	140	90	163	174	135	137	404	59	45	1.7	.24	.09
19	128	92	70	176	132	135	367	58	42	1.5	.18	.06
20	126	95	40	196	129	117	214	48	39	1.3	.17	.05
21	120	101	70	211	128	112	162	45	37	1.1	.19	.04
22	122	110	100	193	124	122	135	39	33	1.1	.24	.05
23	111	128	90	158	126	128	118	38	29	1.8	.29	.07
24	94	152	80	148	131	129	106	35	25	1.1	.29	.13
25	84	154	80	150	128	116	96	44	26	.90	.27	.09
26	97	146	80	148	125	106	95	197	30	.72	.29	.04
27	102	151	90	145	129	99	87	65	31	.64	.34	.03
28	105	144	110	135	134	91	80	49	32	.56	.46	.11
29	106	151	100	137	-----	92	75	44	25	.82	.87	.06
30	100	158	80	135	-----	96	65	40	21	.80	.83	.05
31	82	-----	70	138	-----	95	-----	36	-----	1.2	.40	-----
TOTAL	4,087	3,300	3,754	4,034	3,612	4,000	7,758	1,730	1,367	119.44	15.51	5.77
MEAN	132	110	121	130	129	129	259	55.8	45.6	3.85	.50	.19
MAX	232	158	163	211	141	161	503	197	99	18	1.1	.63
MIN	82	86	40	60	95	91	65	35	21	.56	.17	.03
AC-FT	8,110	6,550	7,450	8,000	7,160	7,930	15,390	3,430	2,710	237	31	11

CAL YR 1973 TOTAL 61,416.00 MEAN 168 MAX 938 MIN 15 AC-FT 121,800
WTR YR 1974 TOTAL 33,782.72 MEAN 92.6 MAX 503 MIN .03 AC-FT 67,010

ARKANSAS RIVER BASIN

107

07138650 WHITENOMAN CREEK NEAR LEOTI, KS

LOCATION.--Lat 38°28'52", long 101°29'16", NW¼ sec.23, T.18 S., R.38 W., Wichita County, near center of span at downstream side of bridge on State Highway 96, 7 mi (11 km) west of Leoti, 0.8 mi (1.3 km) upstream from small right-bank tributary, and at mile 42.0 (67.6 km).

DRAINAGE AREA.--750 mi² (1,942 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 3,324.79 ft (1,013.396 m) above mean sea level.

AVERAGE DISCHARGE.--8 years, 1.58 ft³/s (0.0448 m³/s), 1,140 acre-ft/yr (1.41 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 1,640 ft³/s (46.4 m³/s) Aug. 10, gage height, 6.05 ft (1.844 m); no flow most days.
Period of record: Maximum discharge, 5,600 ft³/s (159 m³/s) July 10, 1972, gage height, 13.10 ft (3.993 m); no flow most days.

REMARKS.--Records fair. Records of suspended sediment loads for the water year 1974 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							0		1.0		0	
2							0				0	
3							0		0		0	
4							0		0		0	
5							0		0		0	
6							0		0		0	
7							0		.02		0	
8							0				0	
9							0		0		0	
10							0		0		514	
11							0		0		79	
12							0		0		1.3	
13							0		0		0	
14							0		0		.28	
15							0		0		0	
16							0		0		0	
17							0		0		0	
18							0		0		0	
19							0		0		0	
20							0		0		0	
21							0		0		0	
22							0		0		0	
23							0		0		0	
24							0		0		0	
25							0		0		0	
26							.38		0		0	
27							0		0		0	
28							0		0		0	
29							0		0		0	
30							0		0		0	
31		-----			-----		-----		-----		0	-----
TOTAL	0	0	0	0	0	0	.38	0	1.02	0	594.58	0
MEAN	0	0	0	0	0	0	.013	0	.034	0	19.2	0
MAX	0	0	0	0	0	0	.38	0	1.0	0	514	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	0	0	0	0	0	.8	0	2.0	0	1,180	0

CAL YR 1973 TOTAL 15.90 MEAN .04 MAX 4.6 MIN 0 AC-FT 32
WTR YR 1974 TOTAL 595.98 MEAN 1.63 MAX 514 MIN 0 AC-FT 1,180

PEAK DISCHARGE (BASE, 300 CFS)

DATE	TIME	G.H.T.	DISCHARGE
08-10	1000	6.05	1,640

ARKANSAS RIVER BASIN

07139500 ARKANSAS RIVER AT DODGE CITY, KS

LOCATION.--Lat 37°44'51", long 100°01'08", in NE¼ sec.35, T.26 S., R.25 W., Ford County, on right bank, 30 ft (9 m) downstream from Second Street Bridge in Dodge City, at mile 970.2 (1,561.1 km).

DRAINAGE AREA.--30,600 mi² (79,254 km²), of which 5,583 mi² (14,460 km²) is probably noncontributing.

PERIOD OF RECORD.--October 1902 to September 1906 (published as "near Dodge"), September 1944 to current year. Monthly discharge only for some periods, published in WSP 1311. Gage-height records collected at same site at different datum 1909-1932 are contained in reports of U.S. Weather Bureau.

GAGE.--Water-stage recorder. Datum of gage is 2,467.71 ft (752.158 m) above mean sea level. Nov. 28, 1902, to Aug. 10, 1906, non-recording gage at same site at datum about 5.00 ft (1.524 m) higher. Sept. 1 to Nov. 5, 1944, nonrecording gage at present site and datum.

AVERAGE DISCHARGE.--34 years, 212 ft³/s (6.004 m³/s), 153,600 acre-ft/yr (189 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 730 ft³/s (20.7 m³/s) June 6, gage height, 5.32 ft (1.622 m); no flow for part of each day Sept. 13, 14.

Period of record: Maximum discharge, 82,000 ft³/s (2,320 m³/s) June 19, 1965, gage height, 15.68 ft (4.779 m); no flow at times in 1903, 1946, 1954, 1956, 1974.

REMARKS.--Records good except those for winter months, which are poor. Flow moderately regulated since 1943 by John Martin Reservoir (see sta 07130000). Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas. Records of chemical analyses and suspended sediment loads for the water year 1974 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1341: 1903(M), 1904, 1905(M), 1947(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	33	39	51	40	107	114	83	42	14	13	1.7	1.8
2	33	38	51	35	110	114	82	42	15	13	.95	1.9
3	31	38	67	35	111	119	82	42	15	11	.96	1.9
4	31	39	61	35	112	119	81	41	14	10	1.8	1.8
5	31	38	56	30	114	112	80	39	17	10	32	1.8
6	33	39	55	30	114	109	80	36	142	9.6	15	1.8
7	30	41	55	35	115	106	80	35	31	8.4	9.9	1.7
8	28	42	56	35	116	104	79	35	38	8.1	21	1.5
9	29	43	56	35	115	109	77	33	28	7.7	13	1.3
10	42	45	55	40	115	121	76	38	25	7.9	8.6	.51
11	51	45	56	40	118	111	75	39	23	7.0	8.1	.20
12	32	46	55	40	116	106	74	38	22	6.0	7.7	.03
13	30	47	55	40	115	106	74	37	22	5.6	6.7	0
14	30	48	55	45	120	107	72	35	21	5.6	9.1	.55
15	29	47	56	50	120	104	72	33	20	4.9	5.2	1.6
16	29	47	54	60	122	100	71	31	19	4.6	4.6	1.7
17	29	47	55	65	123	99	70	30	19	4.2	5.4	1.7
18	29	47	54	61	122	97	69	29	18	3.7	3.3	1.3
19	30	48	50	56	123	96	64	27	18	2.7	3.2	1.1
20	31	68	45	56	123	95	61	26	18	2.4	2.6	1.3
21	32	59	45	55	123	93	56	26	17	1.9	2.5	1.3
22	32	55	48	56	123	92	53	28	17	1.9	2.6	1.0
23	33	53	49	58	122	90	52	27	17	2.5	5.0	.67
24	33	53	49	57	115	89	51	25	17	3.9	4.1	.67
25	33	52	49	58	118	88	50	34	17	2.3	1.8	.77
26	35	52	49	71	118	88	49	20	17	1.6	1.5	.60
27	35	52	50	85	115	87	47	18	15	1.0	1.7	.24
28	36	51	48	90	119	87	45	16	14	.19	1.7	.07
29	37	51	48	93	-----	86	45	16	13	.85	1.6	.05
30	38	51	45	99	-----	85	43	16	14	2.2	1.6	.04
31	39	-----	40	105	-----	84	-----	15	-----	2.3	1.8	-----
TOTAL	1,024	1,421	1,618	1,690	3,284	3,117	1,993	949	697	166.04	186.71	30.90
MEAN	33.0	47.4	52.2	54.5	117	101	66.4	30.6	23.2	5.36	6.02	1.03
MAX	51	68	67	105	123	121	83	42	142	13	32	1.9
MIN	28	38	40	30	107	84	43	15	13	.19	.95	0
AC-FT	2,030	2,820	3,210	3,350	6,510	6,180	3,950	1,880	1,380	329	370	61

CAL YR 1973 TOTAL 42,923.00 MEAN 118 MAX 1,250 MIN 15 AC-FT 85,140
WTR YR 1974 TOTAL 16,176.65 MEAN 44.3 MAX 142 MIN 0 AC-FT 32,090

PEAK DISCHARGE (BASE, 500 CFS)

DATE	TIME	G.H.T.	DISCHARGE
06-06	0100	5.32	730

ARKANSAS RIVER BASIN

109

07139800 MULBERRY CREEK NEAR DODGE CITY, KS

LOCATION.--Lat 37°35'53", long 100°00'52", in NW¼ sec.24, T.28 S., R.25 W., Ford County, on right bank 75 ft (23 m) downstream from bridge on U.S. Highway 283, 9 mi (14 km) south of Dodge City, and 24 mi (39 km) above mouth.

DRAINAGE AREA.--73.8 mi² (191.1 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 2,509.96 ft (765.036 m) above mean sea level.

AVERAGE DISCHARGE.--6 years, 1.42 ft³/s (0.0402 m³/s), 1,030 acre-ft/yr (1.27 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 489 ft³/s (13.8 m³/s) Aug. 8, gage height, 8.72 ft (2.658 m); no flow most days.
Period of record: Maximum discharge, 1,220 ft³/s (34.6 m³/s) Oct. 16, 1968, gage height, 11.35 ft (3.459 m); no flow for most days.

REMARKS.--Records fair. Low flow infrequently augmented by irrigation runoff.

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	0	0			0	0	0	.04	3.6	
2		0	0	0			0	.03	0	.44	5.0	
3		0	.28	0			0	.44	0	.35	4.3	
4		0	.70	0			0	.35	0	.08	1.2	
5		0	.80	0			0	.60	0	.10	7.0	
6		0	.70	0			0	.35	1.8	.14	1.7	
7		0	.05	0			0	.70	3.4	0	.02	
8		0	.20	0			0	.80	1.2	0	.44	
9		0	.80	0			0	0	.55	0	140	
10		0	.06	0			0	0	0	0	8.7	
11		0	0	0			0	0	0	.04	.88	
12		0	0	0			0	0	0	.10	.08	
13		0	0	0			0	0	0	0	0	
14		0	0	0			0	0	0	0	0	
15		0	0	0			0	0	0	0	0	
16		0	0	.02			0	0	0	0	.18	
17		0	0	.30			0	0	0	0	1.1	
18		0	0	.30			0	0	0	.50	1.5	
19		.72	0	.20			0	0	0	3.3	1.6	
20		6.0	0	.10			0	0	0	4.8	.01	
21		12	0	.05			0	0	0	2.4	0	
22		3.5	0	0			0	0	0	.17	0	
23		1.8	0	0			0	0	0	0	.91	
24		.70	0	0			0	0	.90	0	3.3	
25		.01	0	0			0	0	.80	0	.08	
26		0	0	0			0	0	1.0	0	0	
27		0	0	0			0	0	1.0	0	0	
28		0	0	0			0	0	1.6	0	.10	
29		0	0	0	-----		.35	0	1.1	0	.01	
30		0	0	0	-----		.88	0	1.70	0	0	
31		-----	0	0	-----		-----	0	-----	0	0	-----
TOTAL	0	24.73	3.59	.97	0	0	1.23	3.27	14.05	12.46	225.27	0
MEAN	0	.82	.12	.031	0	0	.041	.11	.47	.40	7.27	0
MAX	0	12	.80	.30	0	0	.88	.80	3.4	4.8	140	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	49	7.1	1.9	0	0	2.4	6.5	28	25	447	0

CAL YR 1973 TOTAL 1,332.15 MEAN 3.65 MAX 624 MIN 0 AC-FT 2,640
WTR YR 1974 TOTAL 285.57 MEAN .78 MAX 140 MIN 0 AC-FT 566

PEAK DISCHARGE (BASE, 100 CFS)

DATE	TIME	G.HT.	DISCHARGE
08-08	2400	8.72	489

ARKANSAS RIVER BASIN

07140000 ARKANSAS RIVER NEAR KINSLEY, KS

LOCATION.--Lat 37°55'33", long 99°22'31", in SW¼SE¼ sec.26, T.24 S., R.19 W., Edwards County, on right bank at upstream side of bridge on U.S. Highway 50, 2.0 mi (3.0 km) east of Kinsley, and at mile 920.3 (1,480.8 km).

DRAINAGE AREA.--31,066 mi² (80,461 km²), of which 5,660 mi² (14,660 km²) is probably noncontributing.

PERIOD OF RECORD.--September 1944 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,144.64 ft (653.686 km) above mean sea level. Prior to Nov. 10, 1944, nonrecording gage at present site and datum.

AVERAGE DISCHARGE.--30 years, 197 ft³/s (5.579 m³/s), 142,700 acre-ft/yr (176 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 1,050 ft³/s (29.7 m³/s) Aug. 11, gage height, 5.85 ft (1.783 m); minimum discharge, 23 ft³/s (0.65 m³/s) Aug. 5.

Period of record: Maximum discharge, 49,800 ft³/s (1,410 m³/s) June 21, 1965, gage height, 14.60 ft (4.450 m); minimum, 0.70 ft³/s (0.020 m³/s) Oct. 28, 1956.

REMARKS.--Records good. Flow moderately regulated by John Martin Reservoir (see sta 07130000). Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas. Records of suspended sediment loads for the water year 1974 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	358	128	112	121	153	174	143	116	68	46	33	68
2	264	126	112	95	156	174	144	114	66	45	31	64
3	230	124	126	70	158	176	142	110	64	43	28	60
4	211	123	144	70	157	176	143	106	65	40	25	57
5	193	126	157	70	159	174	142	107	67	38	25	53
6	186	124	147	70	160	174	142	104	83	37	29	52
7	174	123	139	80	161	172	142	103	116	37	29	47
8	164	123	137	80	162	171	142	101	144	36	32	45
9	158	122	136	80	162	170	141	100	121	35	40	45
10	159	121	136	85	162	188	142	99	111	34	429	43
11	218	121	136	85	164	191	140	96	102	33	572	43
12	364	121	135	85	165	187	139	98	97	32	197	42
13	367	120	134	95	168	180	137	97	93	31	140	41
14	233	119	133	114	168	177	135	95	90	31	166	39
15	188	117	133	129	168	176	136	94	86	32	128	39
16	178	117	130	145	167	173	136	87	83	33	105	40
17	171	116	130	154	168	172	137	86	80	32	90	40
18	165	114	132	145	170	168	134	85	77	30	83	41
19	160	114	132	141	171	164	133	78	72	30	74	40
20	156	118	130	141	172	162	135	73	70	29	68	39
21	153	137	129	139	171	162	131	72	66	29	65	37
22	148	129	130	138	171	160	130	73	61	29	62	37
23	145	124	130	138	172	157	126	71	57	30	190	37
24	140	121	130	136	172	156	125	73	56	34	181	39
25	137	120	130	136	172	154	124	80	50	35	162	40
26	137	119	130	137	174	152	123	85	52	34	119	38
27	133	118	130	138	174	149	123	85	50	34	100	39
28	131	115	130	144	174	147	121	76	48	34	90	37
29	130	113	127	147	-----	144	119	71	47	33	81	37
30	129	112	127	149	-----	143	118	69	48	35	75	37
31	129	-----	123	153	-----	143	-----	67	-----	35	70	-----
TOTAL	5,809	3,625	4,087	3,610	4,651	5,166	4,025	2,771	2,290	1,066	3,519	1,316
MEAN	187	121	132	116	166	167	134	89.4	76.3	34.4	114	43.9
MAX	367	137	157	154	174	191	144	116	144	46	572	68
MIN	129	112	112	70	153	143	118	67	47	29	25	37
AC-FT	11,520	7,190	8,110	7,160	9,230	10,250	7,980	5,500	4,540	2,110	6,980	2,610

CAL YR 1973 TOTAL 95,738 MEAN 262 MAX 5,950 MIN 27 AC-FT 189,900
WTR YR 1974 TOTAL 41,935 MEAN 115 MAX 572 MIN 25 AC-FT 83,180

PEAK DISCHARGE (BASE, 500 CFS)

DATE TIME G.H.T. DISCHARGE
08-11 0100 5.85 1,050

ARKANSAS RIVER BASIN

111

07140700 GUZZLERS GULCH NEAR NESS CITY, KS

LOCATION.--Lat 38°17'40", long 99°57'10", in SW¼SW¼ sec.23, T.20 S., R.24 W., Ness County, on right bank 30 ft downstream from highway bridge, 5 mi (8 km) upstream from mouth, and 11 mi (18 km) southwest of Ness City.

DRAINAGE AREA.--58.2 mi² (150.7 km²).

PERIOD OF RECORD.--March 1961 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 2,240 ft (683 m); from topographic map.

AVERAGE DISCHARGE.--13 years (1962-74), 2.38 ft³/s (0.0674 m³/s), 1,720 acre-ft/yr (2.12 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 1.7 ft³/s (0.048 m³/s) May 25, gage height, 1.00 ft (0.305 m); no flow most days.

Period of record: Maximum discharge, 3,050 ft³/s (86.4 m³/s) July 29, 1971, gage height, 14.29 ft (4.356 m); from rating curve extended above 1,900 ft³/s (53.8 m³/s); no flow most days.

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								0	0	0	0	
2								0	0	0	0	
3								0	0	0	0	
4								0	0	0	0	
5								0	0	0	.02	
6								0	0	0	0	
7								0	0	0	0	
8								0	.18	0	0	
9								0	0	0	0	
10								0	0	0	0	
11								0	0	0	0	
12								0	0	0	0	
13								0	0	0	0	
14								0	0	0	0	
15								0	0	0	0	
16								0	0	0	0	
17								0	0	0	0	
18								0	0	0	0	
19								0	0	0	0	
20								0	0	0	0	
21								0	0	0	0	
22								0	0	0	0	
23								0	0	0	.16	
24								0	0	.12	0	
25								.70	0	0	0	
26								0	0	0	0	
27								0	0	0	0	
28								0	0	0	0	
29								0	0	0	0	
30								0	0	0	0	
31								0	0	0	0	
TOTAL	0	0	0	0	0	0	0	.70	.18	.12	.18	0
MEAN	0	0	0	0	0	0	0	.023	.006	.004	.006	0
MAX	0	0	0	0	0	0	0	.70	.18	.12	.16	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	0	0	0	0	0	0	1.4	.4	.2	.4	0

CAL YR 1973 TOTAL 1,683.48 MEAN 4.61 MAX 611 MIN 0 AC-FT 3,340
WTR YR 1974 TOTAL 1.18 MEAN .00 MAX .7 MIN 0 AC-FT 2

PEAK DISCHARGE (BASE, 75 CFS).--NO PEAK ABOVE BASE.

ARKANSAS RIVER BASIN

07141200 PAWNEE RIVER NEAR LARNED, KS

LOCATION.--Lat 38°12'00", long 99°20'50", in NW¼NW¼ sec.30, T.21 S., R.18 W., Pawnee County, on right bank, 0.8 mi (1.3 km) north of U.S. Highway 156, 14 mi (23 km) west of Larned, and at mile 24.8 (39.9 km).

DRAINAGE AREA.--2,148 mi² (5,563 km²), of which 138 mi² (357 km²) is probably noncontributing.

PERIOD OF RECORD.--April to September 1924 (gage heights and discharge measurements only), October 1924 to current year. Monthly discharge only for some periods, published in WSP 1311.

GAGE.--Water-stage recorder. Concrete control since June 2, 1959. Datum of gage is 2,040.90 ft (622.066 m) above mean sea level. See WSP 1921 for history of changes prior to June 2, 1959.

AVERAGE DISCHARGE.--50 years, 77.1 ft³/s (2.183 m³/s), 55,860 acre-ft/yr (68.9 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 1,710 ft³/s (48.4 m³/s) Oct. 11, gage height, 8.83 ft (2.691 m); no flow at times. Period of record: Maximum discharge, 16,300 ft³/s (462 m³/s) July 28, 1958, gage height, 28.22 ft (8.601 m); site and datum then in use, or 22.9 ft (6.98 m), present site and datum; no flow at times in most years.

REMARKS.--Records good. Diversions for irrigation above station. Records of chemical analyses and suspended sediment loads for the water year 1974 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1177: 1949. WSP 1241: 1927-28(M), 1935, 1940, 1943. WSP 1341: 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	157	9.4	15	13	14	9.1	10	5.8	5.1	.05	9.1	2.9
2	49	9.2	15	13	14	9.2	9.3	5.9	4.9	.55	4.5	2.1
3	29	8.8	99	12	14	9.9	9.5	6.9	4.4	1.5	1.8	2.4
4	22	8.8	325	10	13	10	8.7	5.9	4.0	1.6	.74	2.5
5	18	8.7	450	9.0	14	9.6	8.4	5.7	3.9	1.0	1.0	2.9
6	16	6.9	263	8.0	15	9.1	8.0	5.5	4.1	.46	1.3	3.2
7	14	6.5	190	8.0	12	10	8.0	5.5	4.1	.22	.56	3.4
8	10	6.5	76	9.0	9.3	13	7.6	5.6	4.1	.10	.04	3.4
9	8.1	6.5	47	9.0	11	10	8.0	5.2	.95	.05	.53	3.2
10	190	6.3	35	10	10	8.8	7.2	5.9	59	0	.72	2.1
11	1,360	6.2	40	10	15	9.0	9.1	5.7	28	0	.49	.99
12	1,530	6.5	35	9.4	16	8.9	8.1	5.2	24	0	.34	.81
13	1,230	6.5	33	9.1	13	11	7.5	4.9	23	0	1.4	.70
14	286	6.5	42	9.1	13	20	7.3	4.8	18	0	12	.39
15	81	6.5	35	10	14	23	7.1	4.8	13	0	45	.51
16	37	6.5	32	16	15	20	6.9	4.7	10	0	791	.64
17	26	6.5	26	23	16	17	6.9	5.0	10	0	861	.64
18	22	6.5	22	45	16	16	6.9	5.0	5.6	0	102	.69
19	19	17	15	79	16	14	6.9	4.4	4.5	0	28	.90
20	17	675	13	79	16	13	7.2	3.7	3.6	0	20	1.2
21	17	424	15	63	12	12	6.7	3.6	3.2	0	16	.91
22	17	164	15	47	8.8	11	6.3	3.7	2.9	0	13	.84
23	16	98	15	31	8.7	10	6.2	4.0	2.8	0	11	.66
24	14	44	15	29	8.7	10	6.1	3.8	2.4	0	9.4	.55
25	12	28	14	23	8.4	9.6	6.1	5.7	1.8	0	7.6	.58
26	12	22	14	22	8.3	9.4	6.3	6.5	1.5	0	11	.64
27	11	20	14	20	8.9	9.4	5.7	5.4	1.5	0	13	.65
28	9.9	17	14	17	9.2	9.4	6.7	4.5	.94	44	11	.53
29	9.4	15	15	16	-----	9.9	6.4	4.3	.16	28	9.8	.38
30	9.4	14	15	16	-----	9.7	6.1	4.7	.02	19	6.7	.28
31	9.4	-----	14	15	-----	9.9	-----	4.9	-----	16	4.8	-----
TOTAL	5,258.2	1,667.3	1,968	689.6	349.3	360.9	221.2	157.2	345.52	112.53	1,994.82	41.59
MEAN	170	55.6	63.5	22.2	12.5	11.6	7.37	5.07	11.5	3.63	64.3	1.39
MAX	1,530	675	450	79	16	23	10	6.9	95	44	861	3.4
MIN	8.1	6.2	13	8.0	8.3	8.8	5.7	3.6	.02	0	.04	.28
AC-FT	10,430	3,310	3,900	1,370	693	716	439	312	685	223	3,960	82

CAL YR 1973 TOTAL 51,264.59 MEAN 140 MAX 5,640 MIN 0 AC-FT 101,700
WTR YR 1974 TOTAL 13,166.16 MEAN 36.1 MAX 1,530 MIN 0 AC-FT 26,120

PEAK DISCHARGE (BASE, 900 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
10-11	1900	8.83	1,710	08-17	0700	6.27	1,150

07141300 ARKANSAS RIVER AT GREAT BEND, KS

LOCATION.--Lat 38°21'11", long 98°45'50", in SW¼NW¼SE¼ sec.33, T.19 S., R.13 W., Barton County, at downstream side of bridge on U.S. Highway 281, 0.5 mi (0.8 km) south of Great Bend, 4.5 mi (7.2 km) upstream from Walnut Creek, and at mile 873.2 (1,405.0 km).

DRAINAGE AREA.--34,356 mi² (88,982 km²), of which 6,002 mi² (15,545 km²) is probably noncontributing.

PERIOD OF RECORD.--September 1940 to current year. Fragmentary gage-height records collected at same site, at datum 3.0 ft (0.9 m) higher, 1906, 1908-12, are contained in reports of U.S. Weather Bureau.

GAGE.--Water-stage recorder. Datum of gage is 1,839.82 ft (560.777 m) above mean sea level (levels by Corps of Engineers).

AVERAGE DISCHARGE.--34 years, 382 ft³/s (10.82 m³/s), 276,800 acre-ft/yr (341 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 6,490 ft³/s (184 m³/s) Oct. 1, stage falling, peak occurred Sept. 29, 1973; maximum peak discharge, 5,740 ft³/s (163 m³/s) Oct. 14, gage height, 6.77 ft (2.063 m); minimum discharge, 10 ft³/s (0.28 m³/s) July 31 to Aug. 4. Period of record: Maximum discharge, 27,800 ft³/s (787 m³/s) June 23, 1965, gage height, 13.10 ft (3.993 m); maximum gage height, 13.18 ft (4.017 m) June 23, 1965; no flow at times in 1940, 1946, 1956. Maximum stage known prior to June 23, 1965, and since at least 1895, about 11.7 ft (3.57 m) in June 1921, from reports of U.S. Weather Bureau (discharge not determined).

REMARKS.--Records good. Flow moderately regulated since 1943 by John Martin Reservoir (see sta 07130000). Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals, diversions for irrigation and to Cheyenne Bottoms State Waterfowl Refuge, and return flow from irrigated areas. Records of chemical analyses and suspended sediment loads for the water year 1974 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1341: 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	4,420	310	228	162	298	262	218	178	117	46	10	65
2	2,580	297	228	146	270	250	210	178	114	44	10	78
3	1,740	265	244	214	278	234	202	161	120	42	10	85
4	1,290	294	643	222	262	230	202	157	117	42	10	65
5	989	290	1,200	226	274	246	206	153	108	42	11	54
6	750	290	1,450	250	266	258	214	150	102	42	16	46
7	636	289	1,230	258	266	270	214	144	100	41	17	41
8	588	283	1,100	291	286	298	218	142	105	39	14	36
9	522	268	778	282	290	298	210	149	114	38	19	33
10	465	245	612	262	282	318	208	155	123	37	13	30
11	882	245	565	238	274	318	252	150	182	34	13	38
12	3,480	242	538	210	270	322	276	153	191	33	183	64
13	4,930	242	529	219	274	322	256	148	174	31	177	62
14	5,310	244	517	250	278	330	234	131	167	30	139	41
15	2,870	241	489	277	302	360	219	132	148	30	102	32
16	1,660	228	447	309	314	365	209	129	131	31	90	28
17	1,080	221	416	352	326	360	200	129	117	33	187	26
18	821	212	394	415	310	340	201	126	110	34	774	26
19	687	218	359	561	266	290	203	122	102	33	394	25
20	606	360	335	606	274	274	207	120	93	23	273	23
21	544	1,210	337	595	262	298	189	124	85	23	177	21
22	498	1,300	314	578	254	290	185	130	79	24	129	20
23	421	1,030	310	516	246	294	182	139	74	24	111	17
24	352	713	308	460	230	314	177	126	72	25	114	17
25	368	517	293	415	222	314	181	138	72	29	149	17
26	347	389	275	365	238	298	186	135	70	18	144	15
27	333	299	267	350	254	298	183	132	68	14	115	15
28	334	270	261	355	266	282	175	129	66	13	102	14
29	320	251	249	350	-----	238	173	126	52	12	92	12
30	309	238	242	318	-----	234	174	120	47	12	80	11
31	305	-----	202	306	-----	230	-----	117	-----	11	71	-----
TOTAL	40,437	11,501	15,360	10,358	7,632	9,035	6,164	4,323	3,220	930	3,746	1,057
MEAN	1,304	383	495	334	273	291	205	139	107	30.0	121	35.2
MAX	5,310	1,300	1,450	606	326	365	276	178	191	46	774	85
MIN	305	212	202	146	222	230	173	117	47	11	10	11
AC-FT	80,210	22,810	30,470	20,550	15,140	17,920	12,230	8,570	6,390	1,840	7,430	2,100
CAL YR 1973	TOTAL 271,113	MEAN 743	MAX 15,000	MIN 17	AC-FT 537,800							
WTR YR 1974	TOTAL 113,763	MEAN 312	MAX 5,310	MIN 10	AC-FT 225,600							

PEAK DISCHARGE (BASE, 1,300 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
10-14	1100	6.77	5,740	12-06	1100	3.94	1,550
11-22	1800	3.74	1,370				

ARKANSAS RIVER BASIN

07141780 WALNUT CREEK NEAR RUSH CENTER, KS

LOCATION.--Lat 38°28'07", Long 99°22'07", in NE¼SW¼SE¼ sec.24, T.18 S., R.19 W., Rush County, on left bank at downstream side of bridge on State Highway 96, 3.0 mi (4.8 km) west of Rush Center.

DRAINAGE AREA.--1,256 mi² (3,253 km²), of which 104 mi² (269 km²) is probably noncontributing.

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

GAGE.--Water-stage recorder. Datum of gage is 1,983.99 ft (604.720 m) above mean sea level.

AVERAGE DISCHARGE.--5 years, 35.0 ft³/s (0.991 m³/s), 25,360 acre-ft/yr (31.3 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 1,540 ft³/s (43.6 m³/s) Oct. 11, gage height, 17.20 ft (5.243 m); no flow for many days.
Period of record: Maximum discharge, 5,020 ft³/s (142 m³/s) June 14, 1970, gage height, 24.89 ft (7.586 m); no flow for many days.

REMARKS.--Records fair. Occasional low flow diversions for irrigation.

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	9.4	14	10	33	17	19	13	10	2.3	.52	.80
2	21	9.6	14	10	31	18	18	12	9.1	2.1	.52	.80
3	15	9.0	26	10	29	19	18	11	38	2.0	.48	.90
4	11	8.9	131	10	27	18	17	11	91	2.0	.40	.70
5	11	9.0	53	10	27	17	16	12	20	1.9	.48	.32
6	9.5	9.5	41	10	25	17	17	12	70	1.8	.56	.16
7	8.3	9.8	34	10	19	17	17	11	177	1.7	.48	.10
8	7.7	9.9	27	10	20	17	16	11	40	1.6	.56	.02
9	7.5	9.9	39	10	22	16	17	11	109	1.5	.65	0
10	8.0	10	34	10	24	21	18	11	88	1.5	.80	0
11	936	10	45	11	22	28	17	11	57	1.5	.80	0
12	436	10	43	11	22	30	17	11	51	1.5	.65	0
13	80	11	77	11	24	27	16	11	29	1.4	.65	0
14	63	11	61	12	24	29	18	10	18	1.9	.75	0
15	39	11	37	14	23	32	17	10	12	2.0	.75	0
16	27	10	29	18	22	30	17	9.9	9.1	3.3	.75	0
17	19	10	23	86	22	28	16	9.7	8.2	2.1	.75	0
18	15	10	20	103	22	28	16	9.5	7.7	1.2	.75	0
19	13	24	15	118	21	25	16	9.0	7.1	1.0	.70	0
20	12	142	13	277	21	24	17	8.6	6.2	1.0	.60	0
21	11	63	12	335	19	23	40	8.2	5.3	.95	.56	0
22	11	28	12	201	17	22	80	7.9	4.7	.95	.52	0
23	10	23	13	121	17	21	41	7.0	3.9	1.0	.32	0
24	9.7	20	13	99	16	21	28	7.3	3.7	1.0	.12	0
25	9.3	20	13	74	15	21	22	9.0	3.0	1.0	.20	0
26	9.5	19	13	71	17	21	20	9.3	3.1	.95	.20	0
27	9.2	17	14	62	18	21	18	9.4	3.1	.95	.52	0
28	9.3	17	14	49	17	22	16	8.6	2.9	.90	.90	0
29	9.2	16	13	44	-----	22	15	9.6	2.6	.85	.90	0
30	8.8	16	11	41	-----	20	14	12	2.5	.70	.70	0
31	9.5	-----	10	36	-----	21	-----	12	-----	.60	.70	-----
TOTAL	1,873.5	583.0	914	1,894	616	693	634	315.0	892.2	45.15	18.24	3.80
MEAN	60.4	19.4	29.5	61.1	22.0	22.4	21.1	10.2	29.7	1.46	.59	.13
MAX	936	142	131	335	33	32	80	13	177	3.3	.90	.90
MIN	7.5	8.9	10	10	15	16	14	7.0	2.5	.60	.12	0
AC-FT	3,720	1,160	1,810	3,760	1,220	1,370	1,260	625	1,770	90	36	7.5

CAL YR 1973 TOTAL 34,812.50 MEAN 95.4 MAX 3,200 MIN 1.2 AC-FT 69,050
WTR YR 1974 TOTAL 8,481.89 MEAN 23.2 MAX 936 MIN 0 AC-FT 16,820

PEAK DISCHARGE (BASE, 1,000 CFS)

DATE	TIME	G.HT.	DISCHARGE
10-11	1900	17.20	1,540

ARKANSAS RIVER BASIN

115

07141900 WALNUT CREEK AT ALBERT, KS

LOCATION.--Lat 38°27'40", long 99°00'50", in SW 1/4 NW 1/4 sec. 29, T.18 S., R.15 W., Barton County, at downstream side of highway bridge, 0.2 mi (0.3 km) north of Albert, 14 mi (22.5 km) northwest of Great Bend, and at mile 43.0 (69.2 km).

DRAINAGE AREA.--1,410 mi² (3,652 km²), approximately, of which 104 mi² (269 km²) is probably noncontributing.

PERIOD OF RECORD.--May 1958 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,897.37 ft (578.318 m) above mean sea level (Corps of Engineers bench mark).

AVERAGE DISCHARGE.--16 years, 69.0 ft³/s (1.954 m³/s), 49,990 acre-ft/yr (61.6 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 2,760 ft³/s (78.2 m³/s) Oct. 12, gage height, 23.44 ft (7.145 m); minimum, 0.19 ft³/s (0.005 m³/s) Sept. 30.

Period of record: Maximum discharge, 12,700 ft³/s (360 m³/s) Sept. 22, 1959, gage height, 25.75 ft (7.849 m); no flow at times in most years.

Maximum stage known prior to July 1958 and since at least 1908, 21.3 ft (6.49 m) in August 1927, from floodmark and information by local residents (discharge not determined, but due to levees built in 1934 is substantially greater than indicated by current rating).

REMARKS.--Records fair. Records of chemical analyses, water temperatures and suspended sediment loads for the water year 1974 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	132	26	38	45	67	54	46	48	26	11	1.5	.75
2	67	26	36	41	66	52	44	40	27	9.8	1.3	.90
3	44	25	58	39	64	49	43	37	136	9.5	1.4	1.1
4	34	24	270	38	61	50	45	34	73	9.2	1.2	.90
5	28	25	282	37	59	49	43	34	127	8.6	2.0	.70
6	24	26	119	36	57	50	44	33	61	8.6	1.9	.60
7	22	26	90	36	56	49	46	33	44	7.8	1.9	.60
8	20	27	85	36	50	50	45	32	164	7.2	1.9	.60
9	20	27	103	35	50	50	44	31	76	7.2	2.4	.60
10	291	27	142	35	54	58	43	30	75	6.2	1.9	.60
11	1,980	27	110	35	54	83	50	30	114	5.1	1.6	.60
12	2,720	28	113	35	55	93	64	28	77	5.0	2.1	.70
13	2,010	29	186	36	55	76	52	28	70	5.1	1.2	.54
14	258	29	199	37	54	64	48	28	56	4.4	1.3	.65
15	105	28	121	38	54	61	48	27	42	4.3	1.3	.75
16	71	28	80	40	53	62	48	26	33	4.1	1.1	.75
17	55	27	64	50	52	60	46	26	29	3.8	1.0	.80
18	46	27	59	184	52	56	44	25	26	3.6	1.2	.75
19	40	58	46	251	52	55	45	30	24	3.3	1.2	.70
20	36	1,380	43	314	51	55	46	28	23	3.0	1.0	.75
21	32	1,270	44	569	49	54	45	26	21	3.1	1.1	.80
22	30	142	46	547	46	52	46	24	19	3.2	1.2	.75
23	29	83	48	259	44	52	77	26	18	3.4	1.1	1.4
24	28	62	52	162	45	50	63	38	17	3.0	1.1	.75
25	27	56	52	125	46	50	53	32	15	3.3	.95	.75
26	26	50	46	112	46	50	48	62	14	3.0	.85	.80
27	25	48	46	108	50	50	44	44	13	2.6	.90	1.5
28	25	44	52	94	54	48	41	34	13	1.9	.90	.70
29	25	40	52	80	-----	48	53	29	12	2.3	.95	1.0
30	25	39	50	72	-----	48	87	26	11	1.9	.85	.24
31	26	-----	48	68	-----	48	-----	24	-----	1.7	.85	-----
TOTAL	8,301	3,754	2,780	3,594	1,496	1,726	1,491	993	1,456	156.2	41.15	23.03
MEAN	268	125	89.7	116	53.4	55.7	49.7	32.0	48.5	5.04	1.33	.77
MAX	2,720	1,380	282	569	67	93	87	62	164	11	2.4	1.5
MIN	20	24	36	35	44	48	41	24	11	1.7	.85	.24
AC-FT	16,470	7,450	5,510	7,130	2,970	3,420	2,960	1,970	2,890	310	82	46

CAL YR 1973 TOTAL 63,863.40 MEAN 175 MAX 3,130 MIN 2.1 AC-FT 126,700
WTR YR 1974 TOTAL 25,811.38 MEAN 70.7 MAX 2,720 MIN .24 AC-FT 51,200

PEAK DISCHARGE (BASE, 1,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
10-12	1800	23.44	2,760	11-20	2400	20.75	2,070

ARKANSAS RIVER BASIN

07142015 WALNUT CREEK NEAR HEIZER, KS

LOCATION.--Lat 38°25'11", long 98°50'49", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.2, T.19 S., R.14 W., Barton County, at upstream side of county highway bridge, 2.2 mi (3.5 km) east of Heizer, 4.0 mi (6.4 km) northwest of Great Bend, and at mile 24.7 (39.7 km).

DRAINAGE AREA.--1,490 mi² (3,859 km²).

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

GAGE.--Water-stage recorder. Altitude of gage is 1,855 ft (565 m); from topographic map.

EXTREMES.--Maximum discharge during period June to September 1974, 112 ft³/s (3.17 m³/s) June 12, gage height, 11.90 ft (3.627 m); minimum, 0.24 ft³/s (0.007 m³/s) Sept. 26, 27, 30.

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										13	2.7	2.7
2										11	2.5	2.7
3										9.9	2.0	2.7
4										9.9	1.6	3.1
5										9.6	1.2	3.1
6										6.8	2.1	3.1
7										6.8	2.0	2.9
8										6.3	2.1	2.5
9										4.7	4.1	2.4
10										5.3	5.1	2.4
11										3.9	5.1	2.4
12									106	4.1	4.3	2.2
13									78	4.7	2.5	1.8
14									70	4.7	16	1.2
15									59	4.5	8.0	1.1
16									44	4.9	4.3	1.1
17									34	4.9	2.9	1.2
18									29	4.9	2.5	1.2
19									27	4.5	2.1	1.2
20									24	4.5	1.8	1.3
21									22	4.3	2.0	1.3
22									20	3.7	2.9	1.3
23									19	3.5	2.5	1.2
24									18	4.3	2.4	.84
25									17	5.9	2.4	.66
26									17	5.3	2.4	.27
27									16	5.1	2.4	.30
28									15	4.7	2.4	.39
29									14	4.7	2.4	.30
30									14	4.5	2.5	.27
31		-----			-----		-----		-----	2.9	2.7	-----
TOTAL										177.8	101.9	49.13
MEAN										5.74	3.29	1.64
MAX										13	16	3.1
MIN										2.9	1.2	.27
AC-FT										353	202	97

PEAK DISCHARGE (BASE, 1,000 CFS).--NO PEAK ABOVE BASE.

ARKANSAS RIVER BASIN

117

07142300 RATTLESNAKE CREEK NEAR MACKSVILLE, KS

LOCATION.--Lat 37°52'20", long 98°52'30", in SW¼SW¼ sec.16, T.25 S., R.14 W., Stafford County, at downstream side of highway bridge, 8 mi (13 km) southeast of Macksville, and 87.5 mi (140.8 km) upstream from mouth.

DRAINAGE AREA.--784 mi² (2,030 km²), of which about 428 mi² (1,110 km²) is probably noncontributing.

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

GAGE.--Water-stage recorder. Datum of gage is 1,963.46 ft (598.463 m), from Stafford County bench mark. Prior to July 14, 1960, non-recording gage and crest-stage gages at same site and datum.

AVERAGE DISCHARGE.--15 years, 35.2 ft³/s (0.997 m³/s), 25,500 acre-ft/yr (31.4 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 2,360 ft³/s (66.8 m³/s) Oct. 12, gage height, 9.23 ft (2.813 m); minimum, 35 ft³/s (0.99 m³/s) Aug. 4, 5.

Period of record: Maximum discharge, 17,700 ft³/s (501 m³/s) Sept. 26, 1973, gage height, 11.02 ft (3.359 m); minimum, 0.10 ft³/s (0.022 m³/s) Sept. 20, 1968.

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	834	129	101	86	96	85	77	75	56	45	36	40
2	498	128	100	82	95	85	76	74	56	44	35	42
3	389	124	111	80	94	84	76	74	55	43	35	42
4	308	123	160	80	92	84	76	73	55	43	35	41
5	254	121	180	80	93	82	75	71	59	42	35	40
6	228	121	259	80	92	82	73	71	69	42	36	40
7	208	120	259	80	90	82	74	70	75	42	38	40
8	195	120	190	80	90	86	74	69	68	40	37	40
9	183	118	160	80	91	89	73	69	74	39	39	39
10	190	117	137	82	92	110	72	68	75	40	40	38
11	457	116	125	84	92	164	98	67	69	39	38	38
12	1,090	116	122	86	92	150	111	66	71	39	37	39
13	1,390	116	118	90	91	266	93	65	67	38	36	39
14	706	116	113	94	90	208	86	64	61	37	40	39
15	431	113	109	98	90	138	80	63	57	37	45	41
16	290	110	104	105	89	108	79	63	56	37	46	40
17	224	108	101	111	88	99	77	62	54	36	40	39
18	196	107	102	114	89	94	77	61	54	36	39	38
19	182	113	102	112	88	91	78	59	53	36	38	38
20	171	138	94	111	88	89	104	58	51	36	37	37
21	161	164	95	110	88	86	102	57	50	36	36	37
22	157	133	99	106	85	87	86	56	49	36	37	37
23	152	122	105	102	86	86	81	56	49	36	38	36
24	145	118	106	99	86	85	79	57	48	36	39	37
25	141	113	103	97	86	85	77	62	48	37	39	37
26	139	110	103	97	86	84	78	64	48	36	38	37
27	137	109	102	97	86	84	78	61	48	36	38	36
28	134	105	101	98	86	84	77	59	47	36	39	36
29	131	102	100	101	-----	82	77	58	46	36	39	36
30	130	102	98	99	-----	79	76	57	46	37	38	36
31	128	-----	94	96	-----	78	-----	57	-----	36	41	-----
TOTAL	9,979	3,552	3,853	2,917	2,511	3,196	2,440	1,986	1,714	1,189	1,184	1,155
MEAN	322	118	124	94.1	89.7	103	81.3	64.1	57.1	38.4	38.2	38.5
MAX	1,390	164	259	114	96	266	111	75	75	45	46	42
MIN	128	102	94	80	85	78	72	56	46	36	35	36
AC-FT	19,790	7,050	7,640	5,790	4,980	6,340	4,840	3,940	3,400	2,360	2,350	2,290

CAL YR 1973 TOTAL 56,421 MEAN 155 MAX 7,330 MIN 12 AC-FT 111,900
WTR YR 1974 TOTAL 35,676 MEAN 97.7 MAX 1,390 MIN 35 AC-FT 70,760

PEAK DISCHARGE (BASE, 100 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
10-12	1900	9.23	2,360	03-13	1200	6.87	304
11-21	0700	6.19	164	04-12	0200	5.63	123
12-06	1800	6.97	312	04-20	2200	5.46	110

ARKANSAS RIVER BASIN

07142575 RATTLESNAKE CREEK NEAR ZENITH, KS

LOCATION.--Lat 38°06'01", long 98°30'32", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.26, T.22 S., R.11 W., Stafford County, at downstream side of highway bridge, 1.1 mi (1.8 km) upstream from Little Salt Marsh, 10.0 mi (16.1 km) north of Zenith, and at mile 19.3 (31.1 km).

DRAINAGE AREA.--1,052 mi² (2,725 km²), of which 519 mi² (1,344 km²) are noncontributing.

PERIOD OF RECORD.--May 1973 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,785 ft (544 m), from topographic map.

EXTREMES.--Current year: Maximum discharge, 4,200 ft³/s (119 m³/s), Oct. 1, gage height, 8.27 ft (2.521 m); minimum, 26 ft³/s (0.74 m³/s) July 22, 23.

Period of record: Maximum discharge, 18,200 ft³/s (515 m³/s), Sept. 26, 1973, gage height, 9.95 ft (3.033 m); minimum, 25 ft³/s (0.71 m³/s), July 12, 13, Aug. 25, 26, 1973.

REMARKS.--Records fair except those for winter periods, 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	2,780	192	162	230	166	130	127	118	78	55	32	50
2	1,530	192	160	220	162	128	126	116	77	53	32	59
3	982	188	212	210	156	128	122	116	72	51	31	63
4	748	185	415	210	152	127	122	115	72	51	30	58
5	568	182	398	180	160	127	122	114	75	49	31	53
6	500	182	382	140	158	122	122	110	82	48	34	48
7	420	180	345	135	150	122	124	104	83	48	37	51
8	375	180	345	130	145	121	124	103	92	46	38	53
9	345	178	378	130	140	122	124	164	116	45	50	53
10	408	175	352	130	136	168	128	148	121	52	57	52
11	1,400	175	315	130	138	282	156	122	114	45	51	49
12	1,720	175	290	135	138	290	315	112	109	42	47	49
13	1,470	175	275	140	136	278	260	108	109	40	43	53
14	1,100	175	258	145	136	258	195	103	100	38	43	53
15	1,440	175	245	145	132	260	168	99	98	37	50	52
16	958	172	208	160	134	298	146	95	94	37	52	51
17	685	170	190	195	134	248	134	94	87	31	53	51
18	508	172	185	230	136	208	128	100	81	36	53	51
19	400	172	180	260	134	182	128	127	76	33	52	52
20	340	200	160	290	134	175	250	98	71	32	48	52
21	320	218	180	308	134	162	298	89	65	29	45	51
22	308	212	230	275	130	160	250	84	62	28	45	50
23	292	220	270	245	127	154	210	93	60	27	48	49
24	272	220	300	222	130	152	166	83	59	27	52	49
25	250	202	310	208	135	150	140	96	58	34	52	51
26	240	192	310	202	138	148	130	104	58	33	54	50
27	222	182	290	192	136	144	127	98	57	33	52	49
28	212	172	270	185	130	140	128	94	58	32	50	49
29	208	168	260	185	-----	136	126	90	55	31	51	50
30	205	164	250	190	-----	130	122	84	56	32	50	48
31	202	-----	240	182	-----	128	-----	80	-----	32	47	-----
TOTAL	21,408	5,545	8,365	5,939	3,937	5,378	4,818	3,261	2,395	1,207	1,410	1,549
MEAN	691	185	270	192	141	173	161	105	79.8	38.9	45.5	51.6
MAX	2,780	220	415	308	166	298	315	164	121	55	57	63
MIN	202	164	160	130	127	121	122	80	55	27	30	48
AC-FT	42,460	11,000	16,590	11,780	7,810	10,670	9,560	6,470	4,750	2,390	2,800	3,070

WTR YR 1974 TOTAL 65,212 MEAN 179 MAX 2,780 MIN 27 AC-FT 129,300

PEAK DISCHARGE (BASE, 100 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
10-11	1700	7.24	1,840	04-20	2400	5.02	350
12-04	1800	5.30	423	05-09	1700	4.37	188
01-20	UNKNOWN	UNKNOWN	350	05-19	0100	4.25	160
03-11	1700	4.83	302	06-09	1300	4.03	120
04-12	1600	5.10	370				

ARKANSAS RIVER BASIN

119

07142620 RATTLESNAKE CREEK NEAR RAYMOND, KS

LOCATION.--Lat 38°13'50", long 98°25'00", in SW 1/4 NW 1/4 sec.15, T.21 S., R.10 W., Rice County, at downstream side of highway bridge, 3.5 mi (5.6 km) south of Raymond, and 5.4 mi (8.7 km) upstream from mouth.

DRAINAGE AREA.--1,167 mi² (3,023 km²), of which 569 mi² (1,474 km²) is probably noncontributing.

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

GAGE.--Water-stage recorder. Datum of gage is 1,701.64 ft (518.660 m) above mean sea level. Prior to July 27, 1960, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--14 years, 60.7 ft³/s (1.719 m³/s), 43,980 acre-ft/yr (54.2 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 1,780 ft³/s (50.4 m³/s) Oct. 1, stage falling, peak occurred Sept. 29, 1973; maximum peak discharge, 985 ft³/s (27.9 m³/s) Oct. 13, gage height, 6.53 ft (1.990 m); minimum discharge, 5.3 ft³/s (0.150 m³/s) Sept. 23, 24. Period of record: Maximum discharge, 2,140 ft³/s (60.6 m³/s) Sept. 29, 1973, gage height, 8.74 ft (2.664 m); no flow at times in 1964, 1968, 1969.

Flood of Sept. 29, 1973 was the maximum known since at least 1891, from information by local resident.

REMARKS.--Records fair except those for winter periods, which are poor. Flow regulated by salt refinement operations and by sportsmen's dams 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	1,640	184	244	155	232	169	149	178	91	54	51	36
2	1,290	202	240	160	218	166	161	173	91	47	34	46
3	1,070	198	262	160	210	167	154	136	90	47	38	64
4	851	202	286	165	208	131	101	149	128	47	47	71
5	709	198	385	190	212	134	142	152	133	45	35	62
6	574	206	390	190	151	157	175	146	134	42	35	61
7	496	212	387	190	184	149	161	148	124	39	45	49
8	435	208	445	180	198	139	110	133	129	41	48	51
9	382	200	432	155	185	137	172	143	133	37	55	51
10	440	202	405	150	182	137	188	178	134	36	51	53
11	855	212	392	150	188	206	169	178	137	41	47	52
12	899	214	382	150	190	242	176	149	131	35	47	31
13	970	216	357	150	164	270	200	152	140	30	53	28
14	898	212	330	155	161	300	210	133	137	26	50	52
15	782	210	310	160	157	302	220	148	128	20	61	50
16	670	208	297	182	161	285	218	146	120	21	56	51
17	577	220	282	218	169	290	214	67	119	31	45	47
18	487	214	282	264	170	292	206	63	118	22	56	16
19	410	212	246	307	140	264	190	86	114	30	61	7.8
20	362	232	124	337	172	248	270	78	110	21	64	6.7
21	330	240	184	382	131	222	307	72	106	20	49	6.2
22	284	264	210	405	87	234	310	65	82	20	39	5.8
23	248	272	236	367	181	184	312	75	61	12	43	5.5
24	266	276	260	352	158	214	315	79	77	21	59	6.2
25	297	278	274	332	175	220	307	120	70	30	61	26
26	307	278	292	325	184	218	292	131	68	46	62	33
27	290	266	270	310	190	210	272	133	69	60	55	29
28	274	250	220	297	176	202	254	133	69	53	43	22
29	262	252	170	285	-----	161	214	117	65	36	56	21
30	254	262	155	270	-----	149	175	104	55	49	57	26
31	176	-----	155	260	-----	187	-----	95	-----	51	52	-----
TOTAL	17,785	6,800	8,904	7,353	4,934	6,386	6,344	3,860	3,163	1,110	1,555	1,066.2
MEAN	574	227	287	237	176	206	211	125	105	35.8	50.2	35.5
MAX	1,640	278	445	405	232	302	315	178	140	60	64	71
MIN	176	184	124	150	87	131	101	63	55	12	34	5.5
AC-FT	35,280	13,490	17,660	14,580	9,790	12,670	12,580	7,660	6,270	2,200	3,080	2,110
CAL YR 1973	TOTAL 78,564.5		MEAN 215		MAX 2,070		MIN 8.0		AC-FT 155,800			
WTR YR 1974	TOTAL 69,260.2		MEAN 190		MAX 1,640		MIN 5.5		AC-FT 137,400			

PEAK DISCHARGE (REGULATED) ABOVE 100 CFS

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
10-13	0600	6.53	985	03-14	1900	4.94	305
12-08	0600	5.20	445	04-24	0200	5.01	322
12-26	1200	4.63	397	05-25	1600	4.14	151
01-22	0200	5.40	420	06-04	1800	4.06	139

ARKANSAS RIVER BASIN

07142860 COW CREEK NEAR CLAFLIN, KS

LOCATION.--Lat 38°31'20", long 98°35'00", in NE¼NW¼ sec.6, T.18 S., R.11 W., Barton County, at downstream side of bridge on State Highway 4, 2.5 mi (4.0 km) west of Claflin, and at mile 97.8 (157.4 km).

DRAINAGE AREA.--43 mi² (111 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 1,780.90 ft (542.818 m) above mean sea level.

AVERAGE DISCHARGE.--8 years, 9.12 ft³/s (0.258 m³/s), 6,610 acre-ft/yr (8.15 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 2,640 ft³/s (74.8 m³/s) May 25, gage height, 13.73 ft (4.185 m); no flow July 19.

Period of record: Maximum discharge, 3,300 ft³/s (93.5 m³/s) Aug. 24, 1969, gage height, 14.00 ft (4.267 m); no flow at times each year.

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	29	3.2	4.7	4.0	7.4	3.2	1.7	15	5.8	.60	.02	2.6
2	21	3.2	4.7	4.0	6.8	3.0	1.5	8.1	5.0	.53	.01	1.9
3	11	3.0	3.4	4.0	6.1	2.6	1.5	5.0	4.2	.46	.01	1.5
4	8.7	2.8	2.95	4.0	5.5	2.6	1.5	4.0	18	.32	.01	1.0
5	6.8	2.8	4.3	4.0	5.2	2.6	1.5	3.5	9.4	.26	.01	.46
6	5.8	2.6	1.7	4.0	5.2	2.3	3.0	2.8	5.6	.09	.01	.19
7	5.2	2.6	1.2	4.0	4.5	1.9	3.7	2.6	5.0	.08	.01	.19
8	4.7	2.6	1.4	4.0	4.2	1.9	3.5	2.6	1.5	.08	.02	.39
9	4.5	2.6	5.7	4.0	4.0	3.5	3.2	2.1	2.6	.05	.06	.53
10	5.0	2.6	2.7	4.0	4.0	3.7	3.2	2.3	1.7	.05	.07	.39
11	953	2.6	1.6	4.0	4.0	1.2	5.8	2.3	9.0	.04	.06	.12
12	245	2.6	1.4	4.0	3.8	1.0	8.1	2.3	6.1	.02	.10	.12
13	3.2	2.6	1.8	4.0	4.2	5.8	1.1	2.6	7.4	.02	.09	.12
14	2.3	2.6	1.6	4.5	4.2	4.2	6.8	2.1	1.0	.02	1.38	.12
15	1.8	2.3	1.0	5.2	4.2	3.7	4.7	1.2	8.7	.01	1.37	.12
16	9.7	2.3	6.8	6.5	3.5	3.2	4.7	1.7	5.0	.01	1.6	.11
17	7.7	2.3	5.8	1.6	3.2	2.8	4.2	2.1	4.2	.01	9.0	.10
18	6.1	1.9	5.5	5.7	3.2	2.6	4.2	4.4	3.5	.01	1.0	.07
19	5.5	2.4	5.0	9.2	3.5	2.3	4.2	7.72	3.2	0	6.5	.07
20	5.2	3.82	4.8	8.8	3.5	2.1	5.0	1.41	2.6	5.3	5.8	.09
21	4.7	4.1	4.8	1.04	3.5	2.1	9.7	2.3	2.6	2.8	5.0	.19
22	4.2	2.2	4.8	8.8	3.0	2.1	6.5	1.2	1.9	.80	4.0	.10
23	4.0	1.7	4.5	4.8	2.8	1.9	4.7	8.8	1.7	.39	3.5	.08
24	3.7	1.0	4.0	2.2	2.6	2.1	4.5	3.93	1.7	.19	3.2	.07
25	3.2	8.1	4.0	1.9	2.6	2.1	4.0	2.74	1.7	.10	3.0	.07
26	3.0	7.4	4.0	1.9	2.6	2.1	4.0	8.87	1.5	.11	2.6	.07
27	3.0	6.8	4.0	1.8	2.8	2.1	4.0	5.5	1.2	.09	1.9	.05
28	3.0	5.5	4.0	1.3	3.0	2.1	4.0	2.6	.80	.06	1.5	.04
29	3.2	5.0	4.0	9.7	-----	2.1	9.2	1.6	.73	.05	1.2	.03
30	3.2	4.7	4.0	9.0	-----	2.1	1.00	1.0	.66	.05	.80	.03
31	3.2	-----	4.0	8.7	-----	1.7	-----	8.1	-----	.04	1.5	-----
TOTAL	1,445.3	580.7	656.4	679.6	113.1	98.5	358.7	2,771.8	318.39	12.64	350.98	10.92
MEAN	46.6	19.4	21.2	21.9	4.04	3.18	12.0	89.4	10.6	.41	11.3	.36
MAX	953	382	295	104	7.4	1.2	100	887	56	5.3	138	2.6
MIN	3.0	1.9	4.0	4.0	2.6	1.7	1.5	1.2	.66	0	.01	.03
AC-FT	2,870	1,150	1,300	1,350	224	195	711	5,500	632	25	696	22

CAL YR 1973 TOTAL 9,384.06 MEAN 25.7 MAX 953 MIN 0 AC-FT 18,610

WTR YR 1974 TOTAL 7,397.03 MEAN 20.3 MAX 953 MIN 0 AC-FT 14,670

PEAK DISCHARGE (BASE, 250 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
10-11	1400	13.30	2,040	05-24	0300	10.07	717
11-20	0600	10.19	747	05-25	2400	13.73	2,640
12-04	0600	8.35	402	08-14	2400	8.25	387
05-19	1200	12.28	1,330				

ARKANSAS RIVER BASIN

121

07142900 BLOOD CREEK NEAR BOYD, KS

LOCATION.--Lat 38°32'10", long 98°51'35", in NE¼NW¼ sec.34, T.17 S., R.14 W., Barton County, at downstream side of bridge on State Highway 4, 1.3 mi (2.1 km) northwest of Boyd, 4.8 mi (7.7 km) northwest of Hoisington, and 11.9 mi (19.1 km) upstream from Cheyenne Bottoms.

DRAINAGE AREA.--61 mi² (158 km²).

PERIOD OF RECORD.--Annual maximums, water years 1957-62. March 1962 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,834.947 ft (559.292 m) above mean sea level. Prior to Mar. 23, 1962, crest-stage gage at site 0.7 mi (1.1 km) upstream at different datum.

AVERAGE DISCHARGE.--12 years, 8.99 ft³/s (0.255 m³/s), 6,510 acre-ft/yr (8.03 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 2,030 ft³/s (57.5 m³/s) Oct. 11, gage height 14.02 ft (4.273 m); minimum, 0.49 ft³/s (0.014 m³/s) July 30 to Aug. 2.

Period of record: Maximum discharge, 3,860 ft³/s (109 m³/s) June 29, 1967, gage height, 14.87 ft (4.532 m); no flow at times during most years.

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	9.9	4.7	10	8.0	12	6.5	5.0	4.1	5.9	1.8	.49	.87
2	6.9	4.6	10	8.0	11	6.4	4.8	3.7	5.2	1.7	.52	.79
3	5.4	4.4	83	8.0	10	6.3	4.9	3.2	6.4	1.6	.52	.79
4	4.4	4.4	142	8.0	9.4	6.0	5.0	2.9	12	1.6	.54	.79
5	3.8	4.4	42	8.0	9.6	5.9	5.2	2.8	18	1.6	.54	.74
6	3.5	4.5	21	8.0	8.6	5.8	5.3	2.7	8.2	1.5	1.2	.72
7	3.3	4.6	17	8.0	8.1	5.8	5.3	2.7	6.0	1.4	1.1	.66
8	3.2	4.6	24	8.0	8.1	5.9	5.4	2.7	7.8	1.4	.82	.66
9	3.4	4.6	42	8.0	8.1	6.1	5.2	2.5	20	1.2	.82	.66
10	494	4.5	28	8.2	8.1	11	5.0	2.4	12	1.2	.82	.66
11	1,370	4.4	24	8.4	8.2	14	6.1	2.4	7.1	1.1	.66	.64
12	389	4.4	30	8.7	8.4	10	6.7	2.4	5.8	1.1	.59	.64
13	43	4.5	79	10	8.4	8.4	5.4	2.3	5.4	1.0	.56	.66
14	23	4.2	40	11	8.1	8.0	5.4	2.2	5.0	.92	2.0	.66
15	17	4.1	20	12	7.8	7.4	5.2	2.0	4.4	.90	.92	.69
16	12	3.8	13	15	7.6	6.8	5.2	2.0	3.8	.87	.82	.74
17	9.6	3.8	12	32	7.6	6.4	5.0	2.0	3.6	.87	.79	.74
18	8.2	3.8	11	65	7.8	6.7	4.9	2.2	3.4	.82	.92	.72
19	7.4	94	10	82	7.4	6.2	4.8	668	3.2	.77	1.3	.74
20	6.9	1,040	8.5	93	7.3	6.3	5.3	65	3.0	.72	.97	.74
21	6.2	84	9.0	165	7.0	6.2	5.1	13	2.7	.69	.77	.72
22	5.9	30	11	103	6.5	6.4	4.7	7.4	2.4	.66	.74	.69
23	5.6	23	12	40	6.8	6.2	4.4	124	2.3	.64	.72	.66
24	5.4	19	12	27	6.7	6.2	4.2	179	2.1	.64	.74	.64
25	5.0	16	12	25	6.4	6.2	3.9	397	2.1	.64	.74	.64
26	4.9	15	11	27	7.0	6.2	3.8	746	2.1	.64	.74	.66
27	5.0	13	11	24	7.1	6.0	3.7	51	2.0	.62	.72	.66
28	4.9	11	11	19	6.9	6.0	3.4	17	2.0	.56	.72	.66
29	4.8	11	10	15	-----	5.6	20	12	1.9	.52	.66	.64
30	4.7	10	10	13	-----	5.2	6.7	9.0	1.9	.52	3.4	.66
31	4.7	-----	8.5	12	-----	5.1	-----	6.8	-----	.49	1.6	-----
TOTAL	2,481.0	1,444.3	784.0	887.3	226.0	211.2	165.0	2,342.4	167.7	30.69	28.45	20.94
MEAN	80.0	48.1	25.3	28.6	8.07	6.81	5.50	75.6	5.59	.99	.92	.70
MAX	1,370	1,040	142	165	12	14	20	746	20	1.8	3.4	.87
MIN	3.2	3.8	8.5	8.0	6.4	5.1	3.4	2.0	1.9	.49	.49	.64
AC-FT	4,920	2,860	1,560	1,760	448	419	327	4,650	333	61	56	42

CAL YR 1973 TOTAL 10,643.19 MEAN 29.2 MAX 1,370 MIN .55 AC-FT 21,110
WTR YR 1974 TOTAL 8,788.98 MEAN 24.1 MAX 1,370 MIN .49 AC-FT 17,430

PEAK DISCHARGE (BASE, 250 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
10-11	1600	14.02	2,030	05-23	2400	10.88	416
11-20	0700	13.68	1,680	05-25	2400	13.12	1,200
05-19	1200	12.80	980				

ARKANSAS RIVER BASIN

07143300 COW CREEK NEAR LYONS, KS

LOCATION.--Lat 38°18'30", long 98°11'30", in SW¼SE¼ sec.15, T.20 S., R.8 W., Rice County, at downstream side of Missouri Pacific Railroad bridge, 500 ft (150 m) downstream from Little Cow Creek, 3.0 mi (4.8 km) south of Lyons, and 33 mi (53 km) upstream from mouth.

DRAINAGE AREA.--728 mi² (1,890 km²), includes 229 mi² (593 km²) in Cheyenne Bottoms, closed basin.

PERIOD OF RECORD.--October 1937 to September 1951. Occasional low-flow measurements, water years 1954-60. Annual maximum, water years 1960-61. October 1961 to current year. Prior to April 1938, monthly discharge only, published in WSP 1311.

GAGE.--Water-stage recorder. Datum of gage is 1,628.16 ft (496.263 m) above mean sea level (levels by Corps of Engineers). Prior to July 3, 1938, nonrecording gage at present site and datum. July 3, 1938, to Sept. 30, 1951, water-stage recorder at site 60 ft (18 m) upstream at same datum. October 1959, to Mar. 12, 1962, crest-stage gage at present site and datum.

AVERAGE DISCHARGE.--27 years, 88.2 ft³/s (2.498 m³/s), 63,900 acre-ft/yr (78.8 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 11,800 ft³/s (334 m³/s) Oct. 12, gage height, 19.04 ft (5.803 m), from rating curve extended above 7,200 ft³/s (200 m³/s); minimum, 10 ft³/s (0.283 m³/s) Sept. 8, 9.
Period of record: Maximum discharge, 24,100 ft³/s (683 m³/s) Sept. 26, 1973, gage height, 20.38 ft (6.212 m), from rating curve extended above 7,200 ft³/s (200 m³/s); no flow at times during 1938, 1946.
Maximum stage known, 22.75 ft (6.934 m) July 11, 1929, from information by Missouri Pacific Railroad Co. Flood on Oct. 20, 1941 reached a stage of 20.49 ft (6.245 m), discharge, 12,400 ft³/s (351 m³/s), from rating curve extended above 2,700 ft³/s (76.5 m³/s).

REMARKS.--Records good. Natural flow of stream affected by releases from Cheyenne Bottoms, which in turn is affected by diversions from Arkansas River and Walnut Creek. Records of suspended sediment loads for the water year 1974 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 877: 1938(M). WSP 1117: Drainage area. WSP 1177: 1950(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	1,250	221	207	150	281	218	50	336	107	22	12	11
2	313	227	205	150	277	219	49	223	88	21	12	11
3	190	224	211	170	275	212	51	92	75	21	12	11
4	140	224	378	200	272	162	49	62	75	20	12	11
5	127	220	800	220	269	171	83	51	140	20	12	11
6	146	217	1,010	225	272	202	87	44	153	20	13	13
7	147	218	430	215	269	185	49	41	199	19	12	12
8	150	216	287	223	266	185	44	39	544	19	13	10
9	148	217	279	214	266	180	46	37	288	18	14	10
10	621	213	336	180	271	138	49	36	263	17	15	11
11	7,000	216	371	190	273	207	50	35	264	17	15	11
12	10,500	209	281	200	269	231	412	33	169	17	15	12
13	5,680	218	250	211	273	219	562	35	154	16	15	11
14	1,780	216	240	229	269	219	172	38	185	16	38	11
15	424	212	236	232	265	162	82	35	240	16	178	11
16	198	210	225	244	263	129	59	33	213	16	145	12
17	154	210	191	360	260	169	50	33	184	16	118	12
18	127	204	180	637	255	142	45	32	176	16	41	12
19	142	202	170	858	243	87	42	3,900	172	15	24	13
20	181	218	168	907	252	128	103	3,490	166	15	19	13
21	186	526	212	753	241	129	476	1,840	162	15	18	14
22	179	894	248	599	235	121	333	1,010	192	14	21	15
23	181	282	232	604	230	76	141	242	144	14	14	16
24	205	209	222	434	220	87	76	1,360	98	14	18	18
25	215	180	216	365	210	81	53	2,660	65	14	16	17
26	218	162	215	331	238	57	45	3,180	50	14	15	19
27	271	152	214	316	231	52	43	6,080	40	14	14	20
28	241	187	206	315	218	52	40	2,980	30	13	13	22
29	222	212	190	308	-----	52	318	1,030	25	13	13	22
30	221	210	160	294	-----	51	325	220	23	14	12	22
31	217	-----	150	284	-----	52	-----	148	-----	13	11	-----
TOTAL	31,774	7,326	8,720	10,618	7,163	4,375	3,984	29,375	4,684	509	900	414
MEAN	1,025	244	281	343	256	141	133	948	156	16.4	29.0	13.8
MAX	10,500	894	1,010	907	281	231	562	6,080	544	22	178	22
MIN	127	152	150	150	210	51	40	32	23	13	11	10
AC-FT	63,020	14,530	17,300	21,060	14,210	8,680	7,900	58,270	9,290	1,010	1,790	821

CAL YR 1973 TOTAL 183,757.3 MEAN 503 MAX 16,800 MIN 5.0 AC-FT 364,500
WTR YR 1974 TOTAL 109,842.0 MEAN 301 MAX 10,500 MIN 10 AC-FT 217,900

PEAK DISCHARGE (BASE, 1,200 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
10-12	1100	19.04	11,800	05-27	0700	18.32	7,420
05-19	2000	18.16	6,460				

07143330 ARKANSAS RIVER NEAR HUTCHINSON, KS

LOCATION.--Lat 37°56'47", long 97°46'29", in SW¼NW¼SW¼ sec.21, T.24 S., R.4 W., Reno County, at downstream side of highway bridge, 3.0 mi (4.8 km) north of Haven, 4.5 mi (7.2 km) downstream from Cow Creek, 11 mi (17.7 km) southeast of Hutchinson, and at mile 800.3 (1287.7 km).

DRAINAGE AREA.--38,910 mi² (100,780 km²), of which 7,186 mi² (18,612 km²) is probably noncontributing.

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

GAGE.--Water-stage recorder. Datum of gage is 1,454.10 ft (443.210 m) above mean sea level. Prior to June 22, 1960, nonrecording gage at present site and datum.

AVERAGE DISCHARGE.--15 years, 698 ft³/s (19.77 m³/s), 505,700 acre-ft/yr (624 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 24,000 ft³/s (680 m³/s) Oct. 1, stage falling, peak occurred Sept. 28, 1973; maximum peak discharge, 18,000 ft³/s (510 m³/s) Oct. 13, gage height 11.81 ft (3.600 m); minimum, 98 ft³/s (2.78 m³/s) Aug. 4.

Period of record: Maximum discharge, 24,700 ft³/s (700 m³/s) Sept. 28, 1973, gage height, 12.95 ft (3.947 m); minimum, 30 ft³/s (0.85 m³/s) Oct. 4, 5, 1964.

Maximum stage since at least 1901, that of Sept. 28, 1973, from information by local resident.

REMARKS.--Records fair. Flow slightly regulated by John Martin Reservoir (see sta 07130000). Records of chemical analyses, water temperatures, suspended sediment loads, and specific conductance for the water year 1974 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	22,700	1,680	1,320	1,170	1,360	1,190	930	1,270	1,350	396	214	329
2	20,600	1,610	1,270	1,160	1,310	1,150	880	1,180	933	379	213	362
3	15,800	1,560	1,300	1,140	1,290	1,130	869	1,220	860	368	204	354
4	9,370	1,490	1,760	1,250	1,280	1,110	857	1,040	810	359	191	324
5	5,940	1,470	2,080	1,280	1,280	1,030	781	916	805	344	194	320
6	4,590	1,450	2,980	1,290	1,260	953	767	862	948	337	213	318
7	3,860	1,400	3,460	1,260	1,180	1,010	817	820	994	332	230	330
8	3,380	1,390	3,380	1,280	1,170	1,220	795	830	1,060	325	223	303
9	2,980	1,360	2,930	1,200	1,160	1,190	703	823	1,280	318	292	283
10	3,830	1,300	2,590	1,100	1,140	1,280	755	751	1,210	307	273	283
11	13,100	1,270	2,390	1,000	1,140	1,500	997	754	1,060	299	240	273
12	17,000	1,240	2,360	950	1,150	1,460	905	733	1,040	300	233	266
13	17,400	1,230	2,230	1,000	1,170	1,400	964	728	1,000	297	226	257
14	16,800	1,220	2,050	1,100	1,150	1,410	1,280	3,380	948	288	331	248
15	14,200	1,190	1,940	1,200	1,140	1,440	1,250	2,640	900	285	427	254
16	11,900	1,170	1,890	1,300	1,120	1,360	994	1,560	853	284	377	260
17	7,330	1,140	1,780	1,400	1,100	1,270	921	1,060	844	276	428	260
18	4,920	1,130	1,720	1,500	1,130	1,310	874	855	794	271	439	249
19	3,950	1,130	1,580	1,700	1,090	1,300	813	1,120	706	268	404	240
20	3,380	1,220	1,350	1,980	1,100	1,230	7,160	1,740	667	264	499	223
21	3,020	1,270	1,260	2,380	1,160	1,160	6,850	2,060	645	252	493	214
22	2,780	2,450	1,260	2,590	1,120	1,180	2,750	3,220	631	246	683	202
23	2,580	3,740	1,340	2,610	1,090	1,130	2,010	2,830	613	246	504	202
24	2,370	3,340	1,410	2,390	1,170	1,110	1,620	2,500	566	235	444	198
25	2,220	2,310	1,390	2,170	1,170	1,070	1,420	2,610	517	252	408	198
26	2,150	1,900	1,370	1,880	1,170	1,080	1,300	3,620	508	241	382	198
27	2,060	1,690	1,360	1,710	1,170	1,070	1,240	3,800	508	232	380	201
28	1,930	1,510	1,340	1,620	1,210	1,010	1,170	4,580	455	225	384	205
29	1,890	1,390	1,360	1,560	-----	988	1,100	6,360	429	225	365	201
30	1,830	1,340	1,350	1,500	-----	957	1,080	4,660	413	226	343	194
31	1,740	-----	1,260	1,440	-----	914	-----	2,670	-----	216	340	-----
TOTAL	227,600	47,590	57,060	47,110	32,980	36,612	44,852	63,192	24,347	8,893	10,577	7,749
MEAN	7,342	1,586	1,841	1,520	1,178	1,181	1,495	2,038	812	287	341	258
MAX	22,700	3,740	3,460	2,610	1,360	1,500	7,160	6,360	1,350	396	683	362
MIN	1,740	1,130	1,260	950	1,090	914	703	728	413	216	191	194
AC-FT	451,400	94,390	113,200	93,440	65,420	72,620	88,960	125,300	48,290	17,640	20,980	15,370
CAL YR 1973	TOTAL 883,062	MEAN 2,419	MAX 24,200	MIN 190	AC-FT 1,752,000							
WTR YR 1974	TOTAL 608,562	MEAN 1,667	MAX 22,700	MIN 191	AC-FT 1,207,000							

PEAK DISCHARGE (BASE, 1,800 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
10-13	1800	11.81	18,000	04-20	1300	10.34	11,700
11-23	1700	7.03	3,940	05-14	0800	7.58	4,870
12-07	1500	6.79	3,560	05-22	0800	6.74	3,330
01-23	1500	6.29	2,650	05-29	1300	8.56	6,940

ARKANSAS RIVER BASIN

07143665 LITTLE ARKANSAS RIVER AT ALTA MILLS, KS

LOCATION.--Lat 38°06'44", long 97°35'30", in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.30, T.22 S., R.2 W., Harvey County, at downstream side of county highway bridge, 0.4 mi (0.6 km) south of Alta Mills, 0.8 mi (1.3 km) downstream from Sand Creek, and at mile 50.1 (80.6 km).

DRAINAGE AREA.--736 mi² (1,910 km²), of which 55 mi² (140 km²) is noncontributing.

PERIOD OF RECORD.--June 1973 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,395 ft (425.2 m), from topographic map.

EXTREMES.--Maximum discharge, 15,300 ft³/s (433 m³/s) Oct. 12, gage height, 27.42 ft (8.358 m) from rating curve extended above 7,000 ft³/s (198 m³/s); minimum, 14 ft³/s (0.40 m³/s) several days.

Period of record: Maximum discharge, 15,300 ft³/s (433 m³/s) Oct. 12, 1973, gage height, 27.42 ft (8.358 m) from rating curve extended above 7,000 ft³/s (198 m³/s); minimum, 14 ft³/s (0.40 m³/s) several days in 1974.

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	6,260	108	53	90	120	46	46	130	298	34	15	16
2	2,860	97	52	80	100	47	44	111	198	32	14	17
3	1,510	88	53	70	88	47	42	96	142	29	15	26
4	1,120	80	2,000	65	79	47	40	82	115	27	14	25
5	965	71	1,400	65	75	45	40	72	95	28	16	19
6	876	67	1,000	60	70	44	40	65	88	27	24	20
7	807	63	700	60	63	44	40	58	88	29	36	324
8	716	60	500	60	58	434	40	54	318	27	38	205
9	605	58	350	55	56	592	40	52	2,120	22	36	54
10	774	58	300	55	56	766	40	50	1,520	23	67	27
11	6,670	56	250	50	55	1,820	67	46	493	23	66	18
12	13,900	54	220	50	55	1,170	304	45	245	21	37	16
13	10,200	53	201	45	54	442	263	45	160	21	23	15
14	7,610	53	165	46	54	242	123	1,950	126	21	19	14
15	4,070	52	139	47	53	167	76	1,470	102	22	25	14
16	2,200	51	120	60	52	128	56	441	87	21	74	14
17	1,610	50	100	315	52	99	48	177	78	19	48	14
18	1,360	48	90	1,140	50	84	44	103	66	18	48	14
19	1,220	49	80	1,690	50	75	42	2,270	60	17	27	14
20	1,120	83	75	1,490	50	68	4,050	3,760	54	16	20	14
21	1,040	125	75	1,270	49	62	8,840	4,680	50	16	17	14
22	920	133	200	1,080	48	58	7,540	5,110	46	16	18	14
23	772	112	600	718	48	55	3,550	2,920	44	14	21	14
24	612	116	2,000	404	46	54	1,600	3,760	43	15	27	14
25	470	102	2,000	278	43	54	983	5,200	42	15	24	14
26	350	85	1,300	249	44	59	626	5,450	39	14	21	14
27	406	74	700	227	44	59	435	5,230	38	14	90	14
28	259	66	400	206	46	59	292	4,550	38	15	40	14
29	196	61	250	190	-----	58	201	3,260	36	15	23	14
30	146	56	160	178	-----	54	158	1,020	34	14	19	14
31	123	-----	120	152	-----	50	-----	484	-----	14	17	-----
TOTAL	71,747	2,229	15,653	10,545	1,658	7,029	29,710	52,741	6,863	639	979	1,020
MEAN	2,314	74.3	505	340	59.2	227	990	1,701	229	20.6	31.6	34.0
MAX	13,900	133	2,000	1,690	120	1,820	8,840	5,450	2,120	34	90	324
MIN	123	48	52	45	43	44	40	45	34	14	14	14
AC-FT	142,300	4,420	31,050	20,920	3,290	13,940	58,930	104,600	13,610	1,270	1,940	2,020

WTR YR 1974 TOTAL 200,813 MEAN 550 MAX 13,900 MIN 14 AC-FT 398,300

PEAK DISCHARGE (BASE, 1,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
10-12	1100	27.42	15,300	04-21	1200	24.92	9,140
12-04	UNKNOWN	UNKNOWN	2,500	05-14	1600	15.80	2,460
12-24	UNKNOWN	UNKNOWN	2,500	05-22	0600	21.77	5,620
01-19	1200	13.63	1,730	05-26	0100	21.84	5,670
03-11	1500	14.50	1,990	06-09	1600	15.30	2,260

07144200 LITTLE ARKANSAS RIVER AT VALLEY CENTER, KS

LOCATION.--Lat 37°49'56", long 97°23'16", river gage is in NE¼NW¼SW¼ sec.36, T.25 S., R.1 W., Sedgwick County, at downstream side of highway bridge, 0.5 mi (0.8 km) west of Valley Center, and 17.5 mi (28.2 km) upstream from mouth. Little Arkansas River Floodway gage is in NE¼NE¼NE¼ sec.34, T.25 S., R.1 W., at downstream side of highway bridge, 1.2 mi (1.9 km) northwest of river gage.

DRAINAGE AREA.--1,327 mi² (3,437 km²), of which about 77 mi² (199 km²) is probably noncontributing.

PERIOD OF RECORD.--June 1922 to current year. Monthly discharge only for some periods, published in WSP 1311.

GAGE.--River gage is water-stage recorder. Datum of gage is 1,327.66 ft (404.671 m) above mean sea level. Prior to Feb. 12, 1935, nonrecording gage at site 2.0 mi (3.2 km) downstream at different datum. Feb. 12, 1935, to July 1, 1951, water-stage recorder and July 2, 1951, to Feb. 16, 1952, nonrecording gage at present site and datum. Floodway gage is water-stage recorder. Datum of floodway gage is 1,340.00 ft (408.432 m) above mean sea level (levels by Wichita-Valley Center Flood Control project).

AVERAGE DISCHARGE.--52 years, 273 ft³/s (7.731 m³/s), 197,800 acre-ft/yr (244 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 3,600 ft³/s (102 m³/s) Apr. 21 at river gage, gage height, 10.81 ft (3.295 m); 23,000 ft³/s (651 m³/s) Apr. 21 at floodway gage, gage height, 17.67 ft (5.386 m); combined discharge, 26,600 ft³/s (753 m³/s) Apr. 21; minimum, 46 ft³/s (1.30 m³/s) Aug. 4.

Period of record: Maximum discharge, 32,000 ft³/s (906 m³/s) Apr. 16, 1945, gage height, 22.05 ft (6.721 m), from rating curve extended above 12,000 ft³/s (340 m³/s) on basis of slope-area measurement of peak flow; minimum, 1.0 ft³/s (0.028 m³/s) Oct. 6, 1956.

REMARKS.--Combined records good. Natural flow of stream affected by diversions and ground-water withdrawal for irrigation and municipal supply. Since May 1957, part of high-water flow bypasses river gage through floodway channel for which separate records are computed; figures representing combined discharge are given herein. Records of chemical analyses for the water year 1974 are published in Part 2 of this report. Discharge, in cubic feet per second, through floodway occurred only on the days given on the following page.

REVISIONS (WATER YEARS).--WSP 1037: 1944. WSP 1117: Drainage area. WSP 1241: 1923, 1924-26(M), 1928-29(M), 1930(M, m), 1931(M), 1932(M, m), 1933(M), 1934, 1937(M), 1949(M). WSP 1711: 1958.

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	11,400	274	120	242	246	116	121	321	626	112	49	101
2	9,400	251	116	234	223	116	116	293	482	109	48	504
3	5,830	230	118	212	207	116	111	270	394	104	47	575
4	2,560	215	1,090	197	195	114	110	249	348	101	46	211
5	1,420	200	2,860	192	186	112	109	225	413	98	47	146
6	1,070	189	2,190	182	177	111	106	210	412	95	49	123
7	937	182	1,280	178	168	110	104	199	373	91	53	240
8	822	175	727	170	157	115	105	190	502	88	73	471
9	700	168	502	164	153	522	103	184	3,490	85	107	277
10	617	162	442	161	149	701	102	178	3,700	82	107	160
11	6,950	158	472	154	145	1,600	129	170	2,480	87	104	129
12	14,800	153	401	156	143	2,130	246	163	905	79	107	110
13	15,800	149	328	141	141	1,340	341	158	550	73	87	103
14	15,700	144	283	138	138	524	283	1,400	450	67	95	97
15	10,900	141	251	139	134	341	213	2,910	350	65	184	94
16	6,060	136	223	142	131	270	182	2,070	300	63	91	90
17	2,780	133	200	166	130	228	163	1,000	270	63	103	85
18	1,720	129	190	521	127	207	148	500	230	61	99	80
19	1,360	127	179	1,970	127	187	142	1,820	210	60	94	80
20	1,160	254	161	2,500	125	172	3,520	4,420	196	59	83	75
21	1,050	352	159	2,330	123	164	23,200	3,470	170	57	163	75
22	949	246	162	1,940	121	156	13,100	3,970	160	55	5,650	75
23	839	210	157	1,420	120	150	9,690	3,790	150	55	1,560	70
24	706	190	1,340	803	118	143	4,740	5,870	150	53	279	70
25	578	182	3,100	522	116	141	2,180	4,080	146	52	254	70
26	478	172	2,230	419	116	137	1,170	4,510	140	52	143	70
27	1,180	158	1,730	374	116	142	723	4,010	132	51	120	70
28	1,120	143	686	336	116	141	539	3,620	124	49	269	65
29	505	132	439	311	-----	135	440	3,420	120	49	199	65
30	368	126	347	297	-----	130	366	3,050	116	49	127	65
31	308	-----	272	276	-----	123	-----	1,290	-----	50	110	-----
TOTAL	120,067	5,481	22,755	16,987	4,148	10,694	62,602	58,010	18,089	2,214	10,547	4,446
MEAN	3,873	183	734	548	148	345	2,087	1,871	603	71.4	340	148
MAX	15,800	352	3,100	2,500	246	2,130	23,200	5,870	3,700	112	5,650	575
MIN	308	126	116	138	116	110	102	158	116	49	46	65
AC-FT	238,200	10,870	45,130	33,690	8,230	21,210	124,200	115,100	35,880	4,390	20,920	8,820

CAL YR 1973 TOTAL 457,272 MEAN 1,253 MAX 15,800 MIN 48 AC-FT 907,000
WTR YR 1974 TOTAL 336,040 MEAN 921 MAX 23,200 MIN 46 AC-FT 666,500

PEAK DISCHARGE (BASE, 3,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
10-01	0600	-	11,800	12-25	0200	-	3,530	05-24	1400	-	6,500
10-13	2100	-	18,100	04-21	0800	-	26,600	06-09	2200	-	4,260
12-05	1000	-	3,000	05-20	0900	-	4,730	08-22	1000	-	8,540

ARKANSAS RIVER BASIN

07144200 LITTLE ARKANSAS RIVER AT VALLEY CENTER, KS--CONTINUED

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

OCT.	1	8,380	DEC.	26	82	MAY	19	319
	2	6,470		27	.58		20	2,060
	3	3,210	JAN.	19	112		21	1,280
	4	465		20	296		22	1,670
	11	4,570		21	197		23	1,480
	12	11,600		22	19		24	3,270
	13	12,600	MAR.	11	9.9		25	1,590
	14	12,500		12	100		26	1,980
	15	7,930		13	.14		27	1,540
	16	3,420	APR.	20	2,310		28	1,220
	17	615		21	19,700		29	1,080
	18	17		22	10,000		30	849
	27	43		23	6,760		31	24
	28	9.2		24	2,200	JUNE	9	1,100
DEC.	4	31		25	205		10	1,140
	5	465	MAY	14	201		11	403
	6	86		15	649	AUG.	22	2,920
	24	231		16	152		23	126
	25	631						

07144300 ARKANSAS RIVER AT WICHITA, KS

LOCATION.--Lat. 37°38'41", long 97°20'06", river gage is in SE $\frac{1}{4}$ SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.5, T.28 S., R.1 E., Sedgwick County, at bridge on U.S. Highway 81 in Wichita, 3.7 mi (6.0 km) downstream from mouth of Little Arkansas River and at mile 759.7 (1,222 km). Big Slough-Cowskin Floodway gage is in sec.11, T.27 S., R.1 W., Sedgwick County, at downstream side of Bickel Avenue Bridge in Wichita, 1.0 mi (1.6 km) downstream from control structure and 6.5 mi (10.5 km) northwest of U.S. Highway 81 gage.

DRAINAGE AREA.--40,490 mi² (104,900 km²), of which 7,263 mi² (18,810 km²) is probably noncontributing.

PERIOD OF RECORD.--July 1934 to current year. Gage-height records collected at site 3.2 mi (5.1 km) upstream since 1897 are contained in reports of U.S. Weather Bureau.

GAGE.--River gage is water-stage recorder. Datum of gage is 1,267.42 ft (386.310 m) above mean sea level. See WSP 1921 for history of changes prior to Oct. 1, 1968. Floodway gage is water-stage recorder. Datum of floodway gage is 1,300.00 ft (396.240 m) above mean sea level (levels by Wichita-Valley Center Flood Control Project).

AVERAGE DISCHARGE.--40 years, 1,107 ft³/s (31.35 m³/s), 802,000 acre-ft/yr (989 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 22,900 ft³/s (649 m³/s) Oct. 14 at river gage, gage height, 13.86 ft (4.225 m); 17,300 ft³/s (490 m³/s) Oct. 1 at floodway gage, gage height, 17.27 ft (5.264 m); combined discharge 39,400 ft³/s (1,120 m³/s) Oct. 1.

Minimum daily discharge at river gage, 240 ft³/s (6.80 m³/s) Aug. 2-6.

Period of record: Maximum discharge, 39,400 ft³/s (1,120 m³/s) Oct. 1, 1973; minimum, 3.0 ft³/s (0.085 m³/s) Sept. 3, 1934.

Floods of May 18, 1877, and July 8, 1904, reached stages of 21 ft (6.4 m) and 20.3 ft (6.19 m), respectively, river gage site and datum then in use (from reports of U.S. Weather Bureau).

REMARKS.--Records fair. Flow slightly regulated by John Martin Reservoir since 1943 (see sta 07130000). Considerable low-flow regulation by City of Wichita dam 2.2 mi (3.5 km) upstream. Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals, diversions for irrigation, and return flow from irrigated areas. Since May 1957, part of high-water flow bypasses river gage through floodway channel for which separate records are computed; figures representing floodway discharge and combined discharge are given herein. Discharge, in cubic feet per second, through floodway occurred only on the days given in the table on the following page.

REVISIONS (WATER YEARS).--WSP 1241: 1940, 1944. WSP 1341: 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	39,000	2,340	1,620	1,690	1,960	1,140	1,050	1,740	3,600	710	250	538
2	35,200	2,230	1,580	1,210	1,840	1,110	1,040	1,880	2,300	660	240	706
3	27,400	2,100	1,730	900	1,730	1,090	1,020	1,710	1,900	624	240	1,860
4	19,100	2,000	2,960	880	1,680	1,080	1,040	1,720	1,800	670	240	916
5	11,600	1,960	5,170	860	1,670	1,060	1,020	1,540	1,800	600	240	636
6	7,200	1,940	5,260	860	1,660	1,010	976	1,430	2,400	576	240	552
7	5,900	1,900	5,230	860	1,600	975	1,020	1,350	2,220	544	280	621
8	4,800	1,880	4,740	860	1,520	1,230	1,080	1,300	2,100	504	300	957
9	4,100	1,780	4,320	860	1,520	1,620	1,010	1,600	5,340	488	400	986
10	4,000	1,720	3,670	880	1,510	2,850	920	1,500	8,040	488	502	676
11	17,000	1,670	3,400	900	1,490	3,270	1,200	1,290	5,200	480	374	554
12	29,200	1,600	3,180	900	1,480	3,970	1,440	1,190	3,300	472	340	503
13	33,100	1,580	3,030	940	1,470	3,700	1,490	1,130	2,800	450	300	465
14	36,100	1,590	2,730	1,000	1,440	2,430	1,580	2,240	2,040	430	335	438
15	29,200	1,580	2,480	1,300	1,400	2,000	1,700	6,390	1,700	410	512	429
16	22,100	1,540	2,370	1,500	1,360	1,840	1,540	5,280	1,500	408	560	432
17	15,400	1,490	2,270	1,680	1,340	1,710	1,250	3,180	1,380	380	420	436
18	9,890	1,470	2,100	2,090	1,350	1,580	1,140	1,980	1,360	370	538	420
19	6,940	1,500	2,020	3,530	1,340	1,520	1,060	1,720	1,290	352	494	409
20	5,000	1,580	2,010	4,880	1,300	1,480	4,680	6,260	1,190	340	432	402
21	4,500	1,870	1,720	5,030	1,290	1,370	32,300	6,400	1,120	320	494	383
22	4,200	1,880	1,670	5,400	1,220	1,300	19,300	7,740	1,060	310	6,840	364
23	4,100	3,340	1,680	5,050	1,170	1,380	14,000	8,950	1,020	310	4,740	349
24	3,710	4,180	2,340	4,430	1,110	1,330	9,150	11,400	990	310	1,970	347
25	3,450	3,310	5,140	3,560	1,150	1,280	5,010	9,750	950	300	1,120	339
26	3,150	2,500	4,450	3,080	1,140	1,260	3,490	9,790	880	298	796	327
27	3,000	2,120	3,880	2,690	1,130	1,260	2,590	9,800	840	290	815	322
28	3,500	1,860	2,910	2,450	1,120	1,250	2,210	9,220	850	280	853	319
29	3,010	1,700	2,210	2,250	-----	1,210	2,120	9,200	790	270	932	310
30	2,690	1,640	2,090	2,140	-----	1,170	1,920	9,290	750	260	681	300
31	2,480	-----	1,880	2,070	-----	1,100	-----	6,200	-----	260	588	-----
TOTAL	400,020	59,850	91,840	66,730	39,990	50,575	119,346	144,170	62,510	13,164	27,066	16,296
MEAN	12,900	1,995	2,963	2,153	1,428	1,631	3,978	4,651	2,084	425	873	543
MAX	39,000	4,180	5,260	5,400	1,960	3,970	32,300	11,400	8,040	710	6,840	1,860
MIN	2,480	1,470	1,580	860	1,110	975	920	1,130	750	260	240	300
AC-FT	793,400	118,700	182,200	132,400	79,320	100,300	236,700	286,000	124,000	26,110	53,690	32,320

CAL YR 1973 TOTAL 1,466,966 MEAN 4,019 MAX 39,000 MIN 230 AC-FT 2,910,000
WTR YR 1974 TOTAL 1,091,557 MEAN 2,991 MAX 39,000 MIN 240 AC-FT 2,165,000

PEAK DISCHARGE (BASE, 3,700 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
10-01	1000	-	39,400	12-25	1115	6.86	5,500	05-15	0330	7.65	6,670
10-14	0300	-	38,000	01-22	0400	6.95	5,630	05-24	1500	-	11,900
11-24	1100	6.01	4,310	03-12	1915	5.91	4,170	06-10	UNKNOWN	UNKNOWN	9,000
12-05	2230	6.88	5,530	04-21	1200	-	37,900	08-22	1600	-	11,000

07144300 ARKANSAS RIVER AT WICHITA, KS--CONTINUED

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974 AT FLOODWAY GAGE

OCT.	1	17,000	OCT.	15	10,200	MAY	23	602
	2	14,000		16	6,210		24	1,850
	3	9,430		17	2,930		25	1,150
	4	4,970		18	759		26	1,690
	5	1,630		19	35		27	1,500
	6	346	APR.	20	1,130		28	1,320
	7	27		21	13,300		29	1,500
	10	21		22	5,660		30	1,090
	11	3,450		23	3,030	JUNE	9	236
	12	10,700		24	806		10	240
	13	13,000	MAY	22	291	AUG.	22	896
	14	14,200						

ARKANSAS RIVER BASIN

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07144550 ARKANSAS RIVER AT DERBY, KS

LOCATION.--Lat 37°32'34", long 97°16'31", in SE¼SW¼NW¼ sec.12, T.29 S., R.1 E., Sedgwick County, at highway bridge on the west edge of Derby, 0.9 mi (1.4 km) below mouth of bypass channel, and at mile 749.5 (1,205.9 km).

DRAINAGE AREA.--40,830 mi² (105,750 km²), of which 7,263 mi² (18,810 km²) is probably noncontributing.

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

GAGE.--Water-stage recorder. Datum of gage is 1,229.95 ft (374.889 m) above mean sea level (City of Wichita bench mark).

AVERAGE DISCHARGE.--6 years, 1,564 ft³/s (44.29 m³/s), 1,133,000 acre-ft/yr (1.40 km³/yr).

EXTREMES.--Current year: Maximum discharge, 45,800 ft³/s (1,300 m³/s) Oct. 1, gage height, 15.51 ft (4.727 m); minimum daily, 250 ft³/s (7.08 m³/s) Aug. 4.

Period of record: Maximum discharge, 45,800 ft³/s (1,300 m³/s) Oct. 1, 1973, gage height, 15.51 ft (4.727 m); minimum, 105 ft³/s (2.97 m³/s) Aug. 23, 1972.

REMARKS.--Records good. Flow moderately regulated by John Martin Reservoir (see sta 07130000). Low flow regulated by City of Wichita low-water dam. Diversions above station for irrigation. Records for chemical analyses and specific conductance for the water year 1974 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	43,400	2,220	1,660	1,750	1,960	1,180	1,080	1,710	3,650	726	288	622
2	39,700	2,110	1,620	1,200	1,830	1,170	1,080	1,780	2,380	703	387	955
3	27,200	1,990	1,810	1,000	1,710	1,140	1,060	1,640	1,910	678	315	1,590
4	18,700	1,930	3,040	900	1,640	1,150	1,040	1,620	1,720	650	250	1,100
5	11,700	1,870	4,960	850	1,620	1,140	1,020	1,550	1,720	605	276	792
6	7,920	1,840	4,980	850	1,620	1,110	982	1,390	2,550	566	260	686
7	6,080	1,820	4,840	850	1,550	1,080	962	1,300	2,040	544	266	686
8	4,950	1,770	4,480	850	1,470	1,210	1,080	1,220	2,150	522	288	895
9	4,240	1,740	4,120	850	1,460	1,490	1,030	1,720	5,380	507	320	1,020
10	4,050	1,690	3,560	850	1,420	3,320	974	1,470	8,220	500	600	743
11	13,600	1,660	3,250	900	1,410	3,660	1,380	1,260	5,350	473	736	607
12	26,100	1,630	3,120	900	1,400	3,440	1,400	1,170	3,410	461	500	541
13	34,100	1,620	2,980	900	1,400	3,300	1,360	1,120	2,360	441	423	512
14	41,900	1,620	2,740	1,000	1,380	2,300	1,420	1,760	2,000	423	423	488
15	27,800	1,590	2,500	1,200	1,350	1,870	1,500	6,020	1,750	416	528	473
16	19,500	1,520	2,320	1,500	1,340	1,740	1,500	5,200	1,570	402	698	489
17	13,900	1,460	2,240	1,900	1,320	1,650	1,290	3,110	1,450	375	521	503
18	9,580	1,410	2,110	2,350	1,330	1,560	1,220	1,840	1,420	361	578	495
19	6,820	1,390	2,000	3,520	1,350	1,490	1,170	1,550	1,330	352	585	480
20	5,360	1,740	1,880	4,730	1,340	1,480	3,560	5,000	1,230	338	549	475
21	4,570	1,780	1,820	4,890	1,370	1,430	33,200	6,190	1,150	312	570	452
22	4,100	1,720	1,740	5,320	1,340	1,310	19,400	6,820	1,080	311	4,850	423
23	3,810	2,780	1,670	5,100	1,280	1,300	13,000	8,170	1,010	308	5,540	414
24	3,430	3,740	2,450	4,620	1,220	1,300	9,520	9,630	975	305	2,360	418
25	3,060	3,050	4,770	3,850	1,220	1,230	5,520	9,620	940	308	1,240	413
26	2,870	2,360	4,570	3,270	1,210	1,210	3,720	9,700	873	313	976	406
27	2,920	2,150	3,850	2,800	1,200	1,220	2,720	9,660	800	318	1,160	397
28	3,810	1,980	3,050	2,520	1,180	1,230	2,260	9,090	784	315	1,220	393
29	2,930	1,810	2,220	2,360	-----	1,200	2,220	9,090	781	298	1,080	379
30	2,500	1,700	2,070	2,220	-----	1,170	2,050	9,230	765	298	828	382
31	2,290	-----	1,980	2,100	-----	1,140	-----	6,360	-----	304	697	-----
TOTAL	402,890	57,690	90,400	67,900	39,920	50,220	119,718	136,990	62,748	13,433	29,312	18,229
MEAN	13,000	1,923	2,916	2,190	1,426	1,620	3,991	4,419	2,092	433	946	608
MAX	43,400	3,740	4,980	5,320	1,960	3,660	33,200	9,700	8,220	726	5,540	1,590
MIN	2,290	1,390	1,620	850	1,180	1,080	962	1,120	765	298	250	379
AC-FT	799,100	114,400	179,300	134,700	79,180	99,610	237,500	271,700	124,500	26,640	58,140	36,160

CAL YR 1973 TOTAL 1,499,353 MEAN 4,108 MAX 43,400 MIN 285 AC-FT 2,974,000
WTR YR 1974 TOTAL 1,089,450 MEAN 2,985 MAX 43,400 MIN 250 AC-FT 2,161,000

PEAK DISCHARGE (BASE, 4,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
10-01	1800	15.51	45,800	01-22	1300	6.76	4,870	05-25	0800	9.16	10,600
10-14	1500	15.43	44,500	03-10	2400	6.54	4,440	06-10	0600	8.46	9,010
12-05	2400	6.69	5,380	04-21	1500	15.47	45,100	08-22	2200	8.62	9,360
12-25	1500	6.78	5,560	05-15	1100	7.20	6,400				

ARKANSAS RIVER BASIN

07144780 NORTH FORK NINNESCAH RIVER ABOVE CHENEY RESERVOIR, KS

LOCATION.--Lat 37°50'41", long 97°56'09", in SW¼NE¼SW¼ sec.25, T.25 S., R.6 W., Reno County, at downstream side of bridge on State Highway 17, 12 mi (19.3 km) south of Hutchinson, 12.5 mi (20.1 km) upstream from Cheney Dam, and at mile 28.2 (45.4 km).

DRAINAGE AREA.--787 mi² (2,040 km²), of which 237 mi² (614 km²) is probably noncontributing.

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

GAGE.--Water-stage recorder. Datum of gage is 1,431.75 ft (436.397 m) above mean sea level.

AVERAGE DISCHARGE.--9 years, 121 ft³/s (3.427 m³/s), 87,660 acre-ft/yr (108 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 43,000 ft³/s (1,220 m³/s) Apr. 20, gage height, 10.80 ft (3.292 m); minimum, 13 ft³/s (0.37 m³/s) Aug. 5.

Period of record: Maximum discharge, 43,000 ft³/s (1,220 m³/s) Apr. 20, 1974, gage height, 10.80 ft (3.292 m); no flow July 14, 1966, part of day Aug. 23, 1968.

REMARKS.--Records fair except those for winter periods, which are poor. Records of suspended sediment loads for the water year 1974 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	680	152	150	160	176	128	122	184	111	42	19	60
2	440	150	146	150	168	126	118	175	100	36	16	116
3	330	144	231	140	160	122	116	164	93	31	14	155
4	270	140	782	130	144	116	118	151	100	33	14	142
5	232	140	636	130	142	116	116	137	96	34	14	115
6	205	140	444	130	136	116	114	129	100	33	22	87
7	191	130	356	130	128	115	114	113	198	30	60	85
8	172	138	314	130	120	512	122	104	217	27	57	82
9	150	144	282	130	116	595	128	377	258	25	64	80
10	312	148	248	130	120	451	130	416	198	24	69	74
11	16,900	140	228	130	116	620	232	173	155	22	64	67
12	6,430	138	208	130	118	437	242	129	133	20	54	62
13	3,580	146	195	130	120	311	185	109	122	19	44	60
14	2,050	150	182	130	120	262	162	3,670	118	18	52	57
15	1,340	148	174	130	116	230	150	1,550	111	19	57	57
16	846	144	166	140	111	212	138	572	107	19	55	55
17	560	140	174	160	118	190	134	336	93	19	50	55
18	444	136	170	190	126	180	130	255	85	18	50	54
19	362	144	160	220	132	170	126	201	76	15	46	54
20	308	232	150	250	134	158	19,200	175	67	16	34	52
21	262	275	170	292	134	150	5,950	157	64	15	33	50
22	230	238	200	270	130	146	1,970	146	62	15	115	49
23	198	218	230	245	124	144	958	146	62	14	115	46
24	180	208	278	222	127	144	548	155	58	14	126	42
25	174	195	252	210	130	148	357	621	57	23	102	42
26	168	182	238	205	132	148	297	1,040	55	20	93	42
27	180	174	232	200	132	148	264	321	54	20	87	42
28	166	164	220	190	130	148	235	181	49	19	78	42
29	156	156	220	198	-----	144	222	148	46	16	69	42
30	154	150	200	202	-----	140	204	126	46	18	62	42
31	152	-----	170	192	-----	132	-----	118	-----	20	62	-----
TOTAL	37,822	4,904	7,806	5,396	3,660	6,759	32,902	12,279	3,091	694	1,797	2,008
MEAN	1,220	163	252	174	131	218	1,097	396	103	22.4	58.0	66.9
MAX	16,900	275	782	292	176	620	19,200	3,670	258	42	126	155
MIN	150	130	146	130	111	115	114	104	46	14	14	42
AC-FT	75,020	9,730	15,480	10,700	7,260	13,410	65,260	24,360	6,130	1,380	3,560	3,980

CAL YR 1973 TOTAL 125,643.5 MEAN 344 MAX 16,900 MIN 5.0 AC-FT 249,200
WTR YR 1974 TOTAL 119,118.0 MEAN 326 MAX 19,200 MIN 14 AC-FT 236,300

PEAK DISCHARGE (BASE, 1,300 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
10-11	1200	10.20	26,000	05-14	0600	7.59	4,870
04-20	1200	10.80	43,000	05-25	2400	5.43	1,580

ARKANSAS RIVER BASIN

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07144790 CHENEY RESERVOIR NEAR CHENEY, KS

LOCATION.--Lat 37°43'34", long 97°47'38", in NW¼NE¼SE¼ sec.6, T.27 S., R.4 W., Sedgwick County, in control-house structure at outlet works of Cheney Dam on North Fork Ninnescah River, 6 mi (9.7 km) north of Cheney, and at mile 15.9 (25.6 km).

DRAINAGE AREA.--901 mi² (2,334 km²), of which 237 mi² (614 km²) is probably noncontributing.

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

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (levels by U.S. Bureau of Reclamation).

EXTREMES.--Current year: Maximum elevation, 1,429.00 ft (435.559 m) Oct. 14, contents, 247,900 acre-ft (306 hm³); minimum, 1,419.93 ft (432.795 m) Mar. 4, 5, contents, 151,600 acre-ft (187 hm³).

Period of record: Maximum elevation, 1,429.00 ft (435.559 m) Oct. 14, 1973, contents 247,900 acre-ft (306 hm³); minimum since conservation pool was first filled, 1,412.33 ft (430.478 m) Dec. 2-4, 1971, contents, 93,300 acre-ft (115 hm³).

REMARKS.--Reservoir is formed by compacted earthfill dam. Storage began Nov. 17, 1964. Total capacity, 566,300 acre-ft (698 hm³), consisting of the following: Dead storage, 979 acre-ft (1.21 hm³) below elevation 1,378.5 ft (420.17 m); fish and wildlife storage, 14,310 acre-ft (17.6 hm³) between elevations 1,378.5 ft (420.17 m) and 1,392.9 ft (424.56 m); conservation pool, 151,800 acre-ft (187 hm³) between elevations 1,392.9 ft (424.56 m) and 1,421.6 ft (433.30 m); flood control pool, 80,860 acre-ft (99.7 hm³) between elevations 1,421.6 ft (433.30 m) and 1,429.0 ft (435.56 m), crest of uncontrolled spillway; and uncontrolled storage, 318,300 acre-ft (392 hm³) between elevations 1,429.0 ft (435.56 m) and 1,447.8 ft (441.29 m). Reservoir is used for supplemental water supply for municipal and industrial uses in the city of Wichita, fish and wildlife conservation, flood control, and recreational purposes in Cheney Division, Wichita project. Figures given herein represent total contents.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey by U.S. Bureau of Reclamation computed in 1965)

1,416	119,100	1,427	223,900
1,420	152,200	1,430	260,600
1,424	191,000		

ELEVATION, IN FEET, AT 2400, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,424.82	1,425.28	1,421.67	1,421.73	1,422.27	1,420.64	1,421.58	1,425.40	1,421.62	1,421.82	1,421.09	1,421.62
2	1,424.89	1,424.89	1,421.71	1,421.74	1,422.27	1,420.48	1,421.57	1,425.20	1,421.60	1,421.81	1,421.02	1,421.70
3	1,424.94	1,424.66	1,422.05	1,421.75	1,422.28	1,420.29	1,421.73	1,424.79	1,421.60	1,421.85	1,420.98	1,421.70
4	1,424.92	1,424.38	1,422.15	1,421.76	1,422.27	1,419.93	1,421.63	1,424.57	1,421.65	1,421.83	1,420.97	1,421.70
5	1,424.81	1,424.15	1,422.24	1,421.76	1,422.36	1,420.03	1,421.65	1,424.35	1,421.58	1,421.80	1,420.94	1,421.70
6	1,424.72	1,423.90	1,422.19	1,421.76	1,421.25	1,420.06	1,421.67	1,424.07	1,421.71	1,421.78	1,420.93	1,421.72
7	1,424.63	1,423.69	1,422.17	1,421.76	1,422.24	1,420.16	1,421.80	1,423.85	1,421.69	1,421.75	1,420.93	1,421.72
8	1,424.50	1,423.40	1,422.19	1,421.81	1,422.16	1,420.27	1,421.72	1,423.54	1,422.03	1,421.70	1,420.95	1,421.73
9	1,424.38	1,423.15	1,422.17	1,421.79	1,422.08	1,420.51	1,421.72	1,423.45	1,422.08	1,421.66	1,421.12	1,421.73
10	1,424.77	1,422.88	1,422.13	1,421.79	1,422.04	1,420.67	1,421.75	1,423.24	1,422.13	1,421.65	1,421.12	1,421.75
11	1,427.73	1,422.63	1,422.10	1,421.79	1,421.98	1,420.84	1,421.95	1,423.00	1,422.15	1,421.65	1,421.12	1,421.73
12	1,428.64	1,422.38	1,422.20	1,421.77	1,421.94	1,420.90	1,421.99	1,422.81	1,422.14	1,421.58	1,421.11	1,421.75
13	1,428.97	1,422.27	1,422.02	1,421.79	1,421.90	1,420.95	1,422.15	1,422.57	1,422.17	1,421.56	1,421.11	1,421.70
14	1,428.98	1,422.18	1,422.01	1,421.77	1,421.86	1,421.03	1,422.09	1,423.18	1,422.17	1,421.56	1,421.19	1,421.68
15	1,428.91	1,422.03	1,421.97	1,421.78	1,421.80	1,421.10	1,422.10	1,423.30	1,422.20	1,421.53	1,421.20	1,421.68
16	1,428.75	1,421.95	1,421.87	1,421.80	1,421.74	1,421.10	1,422.06	1,423.68	1,422.20	1,421.50	1,421.21	1,421.68
17	1,428.59	1,421.94	1,421.88	1,421.84	1,421.68	1,421.15	1,422.02	1,422.97	1,422.15	1,421.46	1,421.21	1,421.68
18	1,428.36	1,421.89	1,421.94	1,421.90	1,421.71	1,421.25	1,422.01	1,422.72	1,422.15	1,421.45	1,421.20	1,421.68
19	1,428.21	1,421.91	1,421.84	1,421.97	1,421.66	1,421.23	1,422.00	1,422.44	1,422.16	1,421.40	1,421.19	1,421.70
20	1,428.00	1,421.92	1,421.71	1,422.03	1,421.68	1,421.30	1,425.38	1,422.17	1,422.13	1,421.39	1,421.14	1,421.69
21	1,427.76	1,421.87	1,421.67	1,422.10	1,421.80	1,421.25	1,426.53	1,422.04	1,422.13	1,421.39	1,421.40	1,421.67
22	1,427.56	1,421.85	1,421.64	1,422.10	1,421.58	1,421.33	1,426.67	1,421.91	1,422.10	1,421.32	1,421.58	1,421.65
23	1,427.29	1,421.90	1,421.66	1,422.10	1,421.69	1,421.33	1,426.77	1,421.80	1,422.07	1,421.28	1,421.58	1,421.60
24	1,427.09	1,421.81	1,421.74	1,422.14	1,421.59	1,421.33	1,426.72	1,421.72	1,422.07	1,421.25	1,421.60	1,421.60
25	1,426.83	1,421.74	1,421.68	1,422.14	1,421.42	1,421.35	A	1,421.85	1,422.05	1,421.27	1,421.60	1,421.60
26	1,426.71	1,421.74	1,421.78	1,422.19	1,421.22	1,421.38	A	1,421.90	1,421.99	1,421.23	1,421.61	1,421.60
27	1,426.39	1,421.72	1,421.70	1,422.19	1,421.05	1,421.43	1,426.22	1,421.85	1,421.96	1,421.20	1,421.65	1,421.62
28	1,426.13	1,421.64	1,421.81	1,422.19	1,420.82	1,421.48	1,426.04	1,421.84	1,421.92	1,421.19	1,421.65	1,421.58
29	1,425.88	1,421.63	1,421.75	1,422.21	-----	1,421.50	1,425.86	1,421.78	1,421.92	1,421.15	1,421.63	1,421.58
30	1,425.66	1,421.68	1,421.80	1,422.23	-----	1,421.53	1,425.47	1,421.73	1,421.88	1,421.13	1,421.62	1,421.56
31	1,425.39	-----	1,421.74	1,422.25	-----	1,421.57	-----	1,421.66	-----	1,421.09	1,421.63	-----
MEAN	1,426.62	1,422.64	1,421.91	1,421.93	1,421.80	1,420.95		1,422.95	1,421.98	1,421.49	1,421.27	1,421.67
MAX	1,428.98	1,425.28	1,422.24	1,422.25	1,422.36	1,421.57	1,426.77	1,425.40	1,422.20	1,421.85	1,421.65	1,421.75
MIN	1,424.38	1,421.63	1,421.64	1,421.73	1,420.82	1,419.93	1,421.58	1,421.66	1,421.58	1,421.09	1,420.93	1,421.56
(+)	205,800	167,800	168,400	173,300	159,700	166,800	206,700	167,600	169,700	162,200	167,400	166,700
(#)	+7,300	-38,000	+600	+4,900	-13,600	+7,100	+39,900	-39,100	+2,100	-7,500	+5,200	-700

CAL YR 1973 (#) +60,800
WTR YR 1974 (#) -31,800

+ CONTENTS, IN ACRE-FEET, AT END OF MONTH.

CHANGE IN CONTENTS, IN ACRE-FEET.

A NO GAGE-HEIGHT RECORD.

LOCATION.--Lat 37°43'17", long 97°47'39", in NE¼SW¼ sec. 6, T.27 S., R.4 W., Sedgwick County, 1,400 ft (427 m) downstream from Cheney Dam, 6.0 mi (9.7 km) north of Cheney, and at mile 15.5 (24.9 km).

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

GAGE.--Water-stage recorder and concrete Parshall flume. Datum of gage is 1,366.022 ft (416.364 m) above mean sea level (Bureau of Reclamation bench mark). Prior to Oct. 1, 1973, at datum 1.00 ft (0.305 m) higher.

EXTREMES.--Current year: Maximum discharge, 1,800 ft³/s (51.0 m³/s) Apr. 26, gage height, 5.05 ft (1.539 m); maximum observed gage height, 5.92 ft (1.804 m) Oct. 23; minimum discharge, 0.10 ft³/s (0.003 m³/s) Sept. 28.

Period of record: Maximum discharge, 1,960 ft³/s (55.5 m³/s) Apr. 29, 30, 1969, gage height, 5.45 ft (1.661 m); maximum observed gage height, 5.92 ft (1.804 m) Oct. 23, 1973; no flow at times in 1966. 1968.

REMARKS.--Records fair. Flow completely regulated by Cheney Reservoir 1,400 ft (427 m) upstream (see sta 07144790). Records of chemical analyses for the water year 1974 are published in Part 2 of this report.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.4	1,480	.84	125	132	859	.8	1,690	164	.78	.60	.24
2	.4	1,440	.88	125	133	858	.9	1,680	63	.78	.60	.48
3	.4	1,440	1.1	125	133	855	.9	1,660	.78	.90	.48	.32
4	470	1,430	235	125	132	853	.8	1,650	.78	.84	.48	.32
5	750	1,430	378	122	132	289	.8	1,640	.90	.66	.48	.32
6	750	1,430	378	131	272	.87	.9	1,630	1.1	.72	.48	.36
7	750	1,430	378	127	384	.90	.9	1,630	.80	.72	.48	.36
8	750	1,410	378	130	383	.99	.8	1,600	1.4	.72	.48	.36
9	750	1,410	378	127	379	1.0	.8	1,590	.82	.72	1.0	.36
10	475	1,410	378	127	378	1.2	.9	1,590	.78	.84	.48	.36
11	.4	1,410	378	130	379	1.0	1.1	1,570	.77	.84	.48	.18
12	.4	1,410	378	130	378	1.0	.8	1,560	.76	.84	.48	.14
13	725	894	378	129	378	1.0	.8	1,560	.80	.90	.40	.14
14	1,200	584	378	128	378	.99	.9	348	.79	.90	.78	.16
15	1,200	584	378	128	378	.86	.9	442	.77	.90	.44	.16
16	1,200	436	378	127	378	.91	122	1,170	.76	.84	.48	.18
17	1,340	349	378	127	378	.89	206	1,500	.79	.84	.52	.18
18	1,690	348	378	127	378	.82	206	1,490	.80	.78	.52	.18
19	1,680	348	374	127	287	.78	206	1,480	.80	.78	.52	.19
20	1,670	351	378	127	167	.89	78	1,470	.80	.72	.52	.17
21	1,660	350	378	127	164	1.1	1.2	904	.78	.66	.84	.14
22	1,650	348	378	127	171	.80	1.2	575	.72	.56	.96	.13
23	1,640	348	241	127	169	1.0	1.2	575	.78	.52	.44	.14
24	1,600	348	127	127	170	.83	409	426	.78	.52	.52	.16
25	1,580	348	127	127	605	.82	965	340	.78	.56	.56	.15
26	1,550	348	127	127	893	.84	1,360	340	.78	.52	.66	.13
27	1,550	348	127	127	877	.78	1,760	348	.78	.52	.32	.15
28	1,530	348	127	127	863	.78	1,730	348	.78	.52	.28	.13
29	1,520	141	127	127	-----	.77	1,710	348	.78	.56	.24	.13
30	1,490	.9	128	127	-----	.78	1,700	348	.72	.60	.24	.13
31	1,490	-----	128	129	-----	.84	-----	235	-----	.60	.24	-----
TOTAL	32,662.0	23,951.9	8,296.82	3,943	9,849	3,737.44	10,468.6	33,737	249.88	22.16	16.00	6.55
MEAN	1,054	798	268	127	352	121	349	1,088	8.33	.71	.52	.22
MAX	1,690	1,480	378	131	893	859	1,760	1,690	164	.90	1.0	.48
MIN	.40	.90	.84	122	132	.77	.80	235	.72	.52	.24	.13
AC-FT	64,790	47,510	16,460	7,820	19,540	7,410	20,760	66,920	496	44	32	13
CAL YR 1973	TOTAL 112,680.04			MEAN 309	MAX 1,820	MIN .20	AC-FT 223,500					

ARKANSAS RIVER BASIN

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07144850 SOUTH FORK SOUTH FORK NINNESCAH RIVER NEAR PRATT, KS

LOCATION.--Lat 37°35'10", long 98°49'40", in NW¼NW¼ sec.26, T.28 S., R.14 W., Pratt County, at downstream side of highway bridge, 6.0 mi (9.7 km) southwest of Pratt, and 6.5 mi (10.5 km) upstream from mouth.

DRAINAGE AREA.--21 mi² (54 km²), approximately.

PERIOD OF RECORD.--March 1961 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,920 ft (585 m), from topographic map.

AVERAGE DISCHARGE.--13 years, 2.54 ft³/s (0.0719 m³/s), 1,840 acre-ft/yr (2.27 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 7,050 ft³/s (200 m³/s) Apr. 20, gage height, 10.05 ft (3.063 m); no flow for most days.
Period of record: Maximum discharge, 7,050 ft³/s (200 m³/s) Apr. 20, 1974, gage height, 10.05 ft (3.063 m); no flow for most days.

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	.15	0				0	0	0	0		0	7.8
2	0	0				0	0	0	0		0	.15
3	0	0				0	0	0	0		0	0
4	0	0				0	0	0	0		0	0
5	0	0				0	0	0	.20		25	0
6	0	0				0	0	0	5.0		21	0
7	0	0				0	0	0	2.0		1.3	0
8	0	0				0	0	0	.40		0	0
9	0	0				0	0	0	.50		7.3	0
10	393	0				5.8	0	0	0		.18	0
11	802	0				9.9	.77	0	0		0	0
12	34	0				.70	0	0	0		0	0
13	4.9	0				0	0	0	11		0	0
14	.40	0				0	0	0	.02		218	0
15	0	0				0	0	0	0		29	0
16	0	0				0	0	0	0		0	0
17	0	0				0	0	0	0		0	0
18	0	0				0	0	0	0		0	0
19	0	0				0	0	0	0		0	0
20	0	.40				0	956	0	0		0	0
21	0	0				0	20	0	0		0	0
22	0	0				0	4.1	.20	0		0	0
23	0	0				0	.50	0	0		0	0
24	0	0				0	0	.50	0		4.8	0
25	0	0				0	0	0	0		0	0
26	0	0				0	0	0	0		0	0
27	0	0				0	0	0	0		4.0	0
28	0	0				0	0	0	0		.01	0
29	0	0				0	0	0	0		0	0
30	0	0				0	0	0	0		0	0
31	0	-----				0	-----	0	-----		0	-----
TOTAL	1,234.45	.40	0	0	0	16.40	981.37	.70	19.12	0	310.59	7.95
MEAN	39.8	.013	0	0	0	.53	32.7	.023	.64	0	10.0	.27
MAX	802	.40	0	0	0	9.9	956	.50	11	0	218	7.8
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	2,450	.8	0	0	0	33	1,950	1.4	38	0	616	16

CAL YR 1973 TOTAL 4,178.22 MEAN 11.4 MAX 802 MIN 0 AC-FT 8,290
WTR YR 1974 TOTAL 2,570.98 MEAN 7.04 MAX 956 MIN 0 AC-FT 5,100

PEAK DISCHARGE (BASE, 100 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
10-11	0300	7.55	2,290	08-05	2200	3.59	103
04-20	0600	10.05	7,050	08-14	1100	4.95	555

ARKANSAS RIVER BASIN

07145200 SOUTH FORK NINNESCAH RIVER NEAR MURDOCK, KS

LOCATION.--Lat 37°33'51", long 97°51'10", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.34, T.28 S., R.5 W., Kingman County, near right bank on downstream side of pier of county highway bridge, 4.0 mi (6.4 km) southeast of Murdock, and at mile 68.0 (109.4 km).

DRAINAGE AREA.--650 mi² (1,680 km²), of which 107 mi² (277 km²) is probably noncontributing.

PERIOD OF RECORD.--August 1950 to September 1959. Annual maximums, water years 1960-64. June 1964 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,357.81 ft (413.860 m) above mean sea level (Corps of Engineers bench mark). Prior to Mar. 30, 1951, nonrecording gage, Mar. 30, 1951, to Sept. 30, 1959, water-stage recorder, and Oct. 1, 1959 to June 3, 1964, crest-stage gage, at same site and datum.

AVERAGE DISCHARGE.--19 years, 197 ft³/s (5.579 m³/s), 142,700 acre-ft/yr (176 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 22,400 ft³/s (634 m³/s) Oct. 11, gage height, 11.93 ft (3.636 m); minimum, 54 ft³/s (1.53 m³/s) July 22.

Period of record: Maximum discharge, 25,900 ft³/s (733 m³/s) June 26, 1957, gage height, 11.87 ft (3.618 m); maximum gage height, 11.93 ft (3.636 m) Oct. 11, 1973; minimum discharge, 5.0 ft³/s (0.14 m³/s) Aug. 5, 1964.

REMARKS.--Records fair except those for winter periods, which are poor. Records of chemical analyses, suspended sediment loads, and specific conductance for the water year 1974 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1561: 1957(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	686	218	276	160	217	190	178	442	158	118	78	103
2	494	215	312	150	222	185	166	421	146	122	75	182
3	410	212	529	150	217	180	174	414	134	118	66	199
4	332	210	830	150	217	180	174	388	130	126	63	217
5	285	208	564	150	222	175	166	364	255	154	63	199
6	255	208	382	150	226	175	154	334	1,970	199	75	174
7	225	208	322	150	217	182	162	322	936	138	114	174
8	195	208	304	150	210	380	170	322	1,720	114	208	358
9	175	208	304	150	210	585	170	328	1,410	103	186	244
10	560	208	262	150	212	974	166	322	540	96	166	194
11	14,200	208	248	150	212	760	364	316	364	89	146	170
12	9,810	208	266	160	212	572	540	298	280	82	130	158
13	2,480	208	253	170	208	376	304	286	258	78	118	142
14	1,300	210	253	180	208	322	248	334	244	75	142	130
15	861	210	253	200	204	292	240	328	230	69	162	122
16	644	210	244	215	204	262	244	292	217	72	244	126
17	529	212	235	250	199	240	235	262	208	69	292	126
18	468	218	226	310	199	235	217	244	204	66	212	122
19	450	230	180	350	199	226	217	230	194	60	174	114
20	390	360	150	380	204	230	2,890	222	174	57	146	110
21	350	372	270	370	222	222	7,500	217	162	57	182	106
22	320	342	500	360	194	212	1,520	212	150	57	1,560	106
23	300	300	600	340	190	208	930	208	142	60	340	106
24	280	282	519	280	204	208	684	212	138	63	222	100
25	265	282	298	262	202	212	548	217	154	69	199	103
26	250	288	262	253	200	212	526	280	142	72	174	103
27	240	306	240	253	195	199	491	292	130	86	186	100
28	235	294	220	248	190	190	463	226	130	86	178	96
29	230	276	210	248	-----	194	484	204	122	72	142	92
30	225	276	200	244	-----	190	533	190	130	66	126	92
31	220	-----	180	226	-----	186	-----	182	-----	72	110	-----
TOTAL	37,664	7,395	9,892	6,959	5,816	8,954	20,858	8,909	11,172	2,765	6,279	4,368
MEAN	1,215	247	319	224	208	289	695	287	372	89.2	203	146
MAX	14,200	372	830	380	226	974	7,500	442	1,970	199	1,560	358
MIN	175	208	150	150	190	175	154	182	122	57	63	92
AC-FT	74,710	14,670	19,620	13,800	11,540	17,760	41,370	17,670	22,160	5,480	12,450	8,660
CAL YR 1973	TOTAL 178,237		MEAN 488		MAX 14,200		MIN 47		AC-FT 353,500			
WTR YR 1974	TOTAL 131,031		MEAN 359		MAX 14,200		MIN 57		AC-FT 259,900			

PEAK DISCHARGE (BASE, 2,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
10-11	2100	11.93	22,400	06-08	1700	7.38	3,560
04-21	1100	10.26	13,200	08-22	0400	7.03	2,860
06-06	1000	7.35	3,500				

07145500 NINNESCAH RIVER NEAR PECK, KS

LOCATION.--Lat 37°27'34", long 97°25'20", in NW¼SW¼NW¼ sec.10, T.30 S., R.1 W., Sumner County, at downstream side of highway bridge, 3.0 mi (4.8 km) southwest of Peck, and at mile 31.6 (50.8 km).

DRAINAGE AREA.--2,129 mi² (5,514 km²), of which 344 mi² (891 km²) is probably noncontributing.

PERIOD OF RECORD.--October 1937 to current year. Prior to April 1938 monthly discharge only, published in WSP 1311.

GAGE.--Water-stage recorder. Datum of gage is 1,222.38 ft (372.581 m) above mean sea level (levels by Corps of Engineers). Prior to Feb. 4, 1939, nonrecording gage at present site and datum.

AVERAGE DISCHARGE.--37 years, 504 ft³/s (14.27 m³/s), 365,100 acre-ft/yr (450 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 25,100 ft³/s (711 m³/s) Oct. 12, gage height, 19.72 ft (6.011 m); minimum, 45 ft³/s (1.22 m³/s) July 31, Aug. 1, 5, 6.

Period of record: Maximum discharge, 38,200 ft³/s (1,080 m³/s) May 17, 1957, gage height, 21.85 ft (6.660 m); minimum daily, 0.20 ft³/s (0.0057 m³/s) Sept. 3, 1956.

Maximum stage known, 26.4 ft (8.047 m) June 9, 1923, from floodmark, discharge, about 70,000 ft³/s (2,000 m³/s).

REMARKS.--Records good except those for winter periods, which are poor. Flow partially regulated by Cheney Reservoir since 1964 (see sta 07144790). Records of chemical analyses and suspended sediment loads for the water year 1974 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1117: Drainage area. WSP 1211: 1944(M). WSP 1241: 1944, 1945(M), 1947-48(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	1,590	1,790	401	300	490	1,220	302	2,280	494	114	45	162
2	1,180	1,750	368	300	483	1,220	282	2,060	403	105	58	460
3	940	1,740	508	300	476	1,230	288	1,980	341	98	52	812
4	804	1,720	2,020	300	468	1,230	292	1,920	239	98	47	424
5	945	1,720	2,010	310	464	1,220	284	1,880	279	234	48	324
6	1,260	1,710	1,290	310	471	629	280	1,850	2,790	136	49	272
7	1,230	1,710	998	310	544	344	272	1,830	2,380	177	53	228
8	1,180	1,730	907	310	627	392	276	1,750	1,160	119	62	196
9	1,140	1,710	859	310	644	560	280	1,810	3,800	92	220	340
10	1,370	1,690	828	310	646	2,130	287	1,810	1,520	80	200	272
11	12,700	1,690	805	310	640	2,950	564	1,790	810	72	156	190
12	22,400	1,700	799	320	644	1,200	818	1,760	617	67	116	168
13	7,410	1,710	795	330	644	788	661	1,740	497	65	108	159
14	2,910	1,230	784	350	644	632	445	1,700	432	63	104	144
15	2,720	1,020	776	400	644	556	367	850	380	62	150	135
16	2,500	978	768	500	644	500	321	879	342	61	145	132
17	2,280	784	750	700	644	456	336	1,520	305	58	156	123
18	2,220	683	752	900	644	432	430	1,740	276	57	277	126
19	2,260	692	710	1,250	648	412	443	1,730	255	56	182	126
20	2,200	799	600	1,300	580	395	2,310	1,700	232	55	130	132
21	2,150	812	610	1,250	480	401	11,000	1,720	207	53	96	132
22	2,100	742	690	1,200	472	392	5,280	1,190	192	52	956	129
23	2,060	707	759	753	452	393	1,750	966	178	51	1,610	126
24	2,010	685	810	614	444	364	1,120	948	164	49	542	126
25	1,970	677	684	579	440	361	1,280	769	157	49	362	125
26	1,950	668	604	562	831	367	1,560	691	157	53	253	117
27	2,010	667	572	549	1,200	360	1,810	707	147	52	248	123
28	1,970	657	554	532	1,220	347	2,010	687	129	49	568	122
29	1,890	642	520	518	-----	340	2,030	633	119	54	368	117
30	1,850	532	500	506	-----	321	3,110	611	116	55	224	115
31	1,830	-----	350	500	-----	307	-----	589	-----	50	182	-----
TOTAL	93,029	35,345	24,381	16,983	17,228	22,449	40,488	44,090	19,118	2,436	7,767	6,157
MEAN	3,001	1,178	786	548	615	724	1,350	1,422	637	78.6	251	205
MAX	22,400	1,790	2,020	1,300	1,220	2,950	11,000	2,280	3,800	234	1,610	812
MIN	804	532	350	300	440	307	272	589	116	49	45	115
AC-FT	184,500	70,110	48,360	33,690	34,170	44,530	80,310	87,450	37,920	4,830	15,410	12,210

CAL YR 1973 TOTAL 453,736 MEAN 1,243 MAX 22,400 MIN 46 AC-FT 900,000
WTR YR 1974 TOTAL 329,471 MEAN 903 MAX 22,400 MIN 45 AC-FT 653,500

PEAK DISCHARGE (BASE, 3,500 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
10-12	0600	19.72	25,100	04-30	1600	8.75	3,780
03-11	0100	9.16	4,140	06-07	0100	9.02	4,020
04-21	1000	15.67	12,400	06-09	1000	9.89	4,800

ARKANSAS RIVER BASIN

07145700 SLATE CREEK AT WELLINGTON, KS

LOCATION.--Lat 37°15'00", long 97°24'12", in SE $\frac{1}{4}$ NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.22, T.32 S., R.1 W., Sumner County, on right bank at upstream side of U.S. Highway 81 bridge, at southern edge of Wellington.

DRAINAGE AREA.--154 mi² (399 km²).

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1954-66. Annual maximum, water years 1960-69. April 1969 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,157.24 ft (352.727 m) above mean sea level. Prior to Apr. 1, 1969, crest-stage gage at present site and at datum 3.0 ft (0.91 m) higher.

AVERAGE DISCHARGE.--5 years (1970-74), 60.1 ft³/s (1.702 m³/s), 43,540 acre-ft/yr (53.7 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 5,560 ft³/s (157 m³/s) Oct. 11, gage height, 22.82 ft (6.956 m); minimum, 0.45 ft³/s (0.013 m³/s) Aug. 5-8.
1960-74: Maximum discharge, 9,000 ft³/s (255 m³/s) Nov. 15, 1964, gage height, 23.44 ft (7.145 m), present datum; no flow at times.

REMARKS.--Records good, except those for winter periods and those for 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	68	18	15	13	21	13	14	77	8.6	3.6	1.0	3.6
2	50	17	15	12	20	13	13	26	7.7	3.6	.84	44
3	40	17	15	12	18	13	12	18	7.4	3.1	.50	101
4	31	16	45	11	16	13	12	16	7.2	2.6	.50	20
5	24	15	30	11	17	13	12	14	7.7	2.6	.45	8.6
6	23	15	25	11	17	13	12	12	1,480	2.6	.45	5.8
7	22	15	23	11	16	12	11	11	1,510	2.4	.45	4.6
8	20	15	22	11	15	13	12	10	167	2.1	.45	3.3
9	18	15	21	12	15	16	12	10	268	1.6	7.4	3.3
10	391	15	20	12	15	549	12	10	47	1.4	2.2	3.1
11	4,590	15	19	12	15	1,610	144	9.4	25	1.3	4.9	2.8
12	2,090	15	18	12	15	239	242	8.6	17	1.2	13	2.8
13	168	15	17	12	15	66	37	8.6	14	1.2	4.4	2.4
14	89	15	15	12	15	44	19	19	12	1.1	2.8	2.4
15	62	15	14	13	16	36	15	9.1	11	1.0	1.9	2.1
16	48	15	12	16	14	30	13	8.3	9.4	1.0	1.4	9.7
17	39	15	12	44	14	26	12	8.3	8.8	.98	2.1	4.4
18	35	15	12	220	14	24	12	8.0	8.6	.91	6.3	2.8
19	31	16	11	345	14	23	12	7.4	7.7	.77	1.6	3.1
20	29	25	11	186	14	22	40	6.6	6.6	.65	1.2	3.1
21	26	20	12	137	24	20	808	6.9	5.5	.60	.98	2.8
22	24	18	12	123	21	22	143	22	5.2	.55	.77	2.4
23	22	17	22	84	17	23	36	46	4.9	.55	.65	2.4
24	20	16	136	42	15	20	24	34	4.9	.55	2.1	2.1
25	18	15	75	33	14	20	19	117	4.6	.55	2.8	2.8
26	18	15	48	32	14	20	17	748	4.6	.55	2.1	2.6
27	86	15	36	31	13	19	15	73	4.6	.55	6.3	2.6
28	121	16	30	30	13	18	17	22	4.4	.55	38	2.6
29	34	15	27	28	-----	16	22	14	3.8	.55	78	2.4
30	24	15	23	24	-----	15	36	11	3.6	.55	12	2.6
31	20	-----	14	22	-----	14	-----	9.4	-----	.55	6.0	-----
TOTAL	8,281	481	807	1,574	447	2,995	1,805	1,400.6	3,676.8	41.81	203.54	258.2
MEAN	267	16.0	26.0	50.8	16.0	96.6	60.2	45.2	123	1.35	6.57	8.61
MAX	4,590	25	136	345	24	1,610	808	748	1,510	3.6	78	101
MIN	18	15	11	11	13	12	11	6.6	3.6	.55	.45	2.1
AC-FT	16,430	954	1,600	3,120	887	5,940	3,580	2,780	7,290	83	404	512

CAL YR 1973 TOTAL 64,802.66 MEAN 178 MAX 4,590 MIN .30 AC-FT 128,500
WTR YR 1974 TOTAL 21,970.95 MEAN 60.2 MAX 4,590 MIN .45 AC-FT 43,580

PEAK DISCHARGE (BASE, 1,000 CFS)

NOTE: NO GAGE-HEIGHT RECORD NOV. 2 TO DEC. 10.

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
10-11	1300	22.82	5,560	05-26	1200	13.64	1,010
03-11	0600	17.12	1,890	06-07	0300	19.03	2,620
04-21	1500	14.39	1,170				

07146500 ARKANSAS RIVER AT ARKANSAS CITY, KS

LOCATION.--Lat 37°03'23", long 97°03'32", in NE¼NE¼NE¼ sec.35, T.34 S., R.3 E., Cowley County, near left bank at downstream side of bridge on U.S. Highway 166, 0.1 mi (0.2 km) downstream from St. Louis - San Francisco Railway Co. bridge, 0.5 mi (0.8 km) west of Arkansas City, 5.4 mi (8.7 km) upstream from Walnut River and at mile 701.4 (1,128.6 km).

DRAINAGE AREA.--43,713 mi² (113,220 km²), of which 7,607 mi² (19,700 km²) is probably noncontributing.

PERIOD OF RECORD.--September 1902 to September 1906, September 1921 to current year. Published as "near Arkansas City" 1903-4. Monthly discharge only for some periods, published in WSP 1311.

GAGE.--Water-stage recorder. Datum of gage is 1,050.04 ft (320.052 m) above mean sea level (levels by Corps of Engineers). Sept. 23, 1902, to July 31, 1906, nonrecording gage at site 0.5 mi (0.8 km) upstream at datum 9.5 ft (2.90 m) higher. Sept. 10, 1921, to Sept. 27, 1929, nonrecording gage and Sept. 28, 1929, to Aug. 28, 1956, water-stage recorder at site 0.5 mi (0.8 km) upstream at datum 2.97 ft (0.905 m) higher than present datum.

AVERAGE DISCHARGE.--57 years, 1,812 ft³/s (51.32 m³/s), 1,313,000 acre-ft/yr (1.62 km³/yr).

EXTREMES.--Current year: Maximum discharge, 56,800 ft³/s (1,610 m³/s), Oct. 13, gage height, 23.72 ft (7.230 m); minimum, 556 ft³/s (15.7 m³/s) Aug. 9.

Period of record: Maximum discharge, 103,000 ft³/s (2,920 m³/s) June 10, 1923, gage height, 25.46 ft (7.760 m), from floodmarks, site and datum then in use, from rating curve extended above 8,000 ft³/s (226.6 m³/s) on basis of field estimate, maximum gage height, 25.55 ft (7.788 m) May 18, 1957; minimum discharge, 1.0 ft³/s (0.028 m³/s) Oct. 9, 1921, result of diversion by local power canal.

Maximum stage known since at least 1877, 25.55 ft (7.788 m) May 18, 1957, from information by local residents.

REMARKS.--Records fair. Flow moderately regulated by John Martin Reservoir since 1943 (see sta 07130000) and Cheney Reservoir since 1964 (see sta 07144790). Diversions above station for irrigation. Records of chemical analyses, water temperatures, suspended sediment loads and specific conductance for the water year 1974 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1311: 1905. WSP 1341: 1922-23, 1927, 1929, 1931, 1933, 1940, 1945-46(M), 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	34,200	4,780	2,360	2,160	2,740	2,600	1,770	5,000	6,580	1,140	638	1,090
2	35,100	4,600	2,020	1,480	2,640	2,620	1,700	4,120	4,160	1,130	645	1,060
3	34,000	4,480	2,020	1,340	2,540	2,620	1,680	3,760	2,920	1,090	617	1,280
4	29,400	4,440	3,520	1,300	2,440	2,620	1,660	3,460	2,570	1,060	604	2,240
5	19,000	4,380	6,850	1,300	2,300	2,600	1,640	3,340	2,750	1,020	598	1,650
6	12,000	4,340	8,250	1,300	2,260	2,600	1,650	3,120	5,620	990	592	1,190
7	8,850	4,300	6,400	1,300	2,200	2,210	1,600	2,940	11,200	990	631	980
8	6,950	4,240	6,020	1,400	2,200	1,820	1,620	2,820	7,150	930	631	904
9	5,750	4,180	5,350	1,400	2,260	2,180	1,700	2,760	8,050	920	760	950
10	7,150	4,140	4,800	1,400	2,240	7,420	1,630	3,520	12,000	904	848	1,070
11	37,200	4,080	4,220	1,400	2,240	12,700	1,720	3,200	9,810	888	912	1,000
12	41,000	4,040	3,900	1,500	2,280	10,000	2,210	2,880	6,220	864	792	856
13	52,700	4,040	3,800	1,500	2,270	6,750	2,840	2,720	4,320	840	736	800
14	50,900	4,040	3,660	1,500	2,220	5,100	2,640	2,760	3,120	824	720	768
15	41,700	3,600	3,440	1,500	2,210	3,720	2,330	4,600	2,680	848	712	736
16	36,100	3,220	3,040	1,500	2,210	3,060	2,220	7,380	2,400	824	760	752
17	25,900	3,120	2,980	2,200	2,200	2,750	2,160	5,720	2,140	776	848	720
18	16,500	2,900	2,920	3,000	2,180	2,540	1,950	4,540	2,000	752	904	704
19	12,000	2,720	2,880	3,940	2,140	2,400	1,960	3,880	1,840	784	824	673
20	9,600	3,200	2,630	5,620	2,160	2,300	2,330	3,640	1,760	760	832	673
21	8,300	3,220	2,360	6,680	2,460	2,260	11,800	7,980	1,640	736	784	659
22	7,450	3,260	2,400	6,980	2,420	2,160	33,600	8,400	1,570	728	760	652
23	6,950	3,120	2,640	7,580	2,090	2,060	28,200	9,630	1,490	720	5,240	645
24	6,500	4,180	2,860	6,100	1,920	2,040	16,000	11,800	1,410	712	5,500	645
25	6,080	5,020	3,780	5,050	1,830	2,020	10,500	13,000	1,420	712	2,760	645
26	5,700	4,260	5,620	4,220	1,820	1,950	6,680	12,700	1,410	680	1,750	638
27	5,880	3,500	4,700	3,820	1,950	1,930	5,180	13,400	1,380	696	1,450	638
28	5,800	3,120	4,140	3,440	2,540	1,920	4,460	12,200	1,320	696	1,520	659
29	6,620	2,750	3,440	3,220	-----	1,920	4,320	11,700	1,350	666	1,710	652
30	5,380	2,500	2,860	3,060	-----	1,870	4,280	11,600	1,180	638	1,580	624
31	5,020	-----	2,620	2,860	-----	1,820	-----	10,000	-----	638	1,280	-----
TOTAL	585,680	113,770	118,480	91,050	62,960	102,560	164,030	198,570	113,460	25,956	38,938	26,553
MEAN	18,890	3,792	3,822	2,937	2,249	3,308	5,468	6,405	3,782	837	1,256	885
MAX	52,700	5,020	8,250	7,580	2,740	12,700	33,600	13,400	12,000	1,140	5,500	2,240
MIN	5,020	2,500	2,020	1,300	1,820	1,820	1,600	2,720	1,180	638	592	624
AC-FT	1.162M	225,700	235,000	180,600	124,900	203,400	325,400	393,900	225,000	51,480	77,230	52,670

CAL YR 1973 TOTAL 2,199,860 MEAN 6.027 MAX 52,700 MIN 436 AC-FT 4,363,000
WTR YR 1974 TOTAL 1,642,007 MEAN 4.499 MAX 52,700 MIN 592 AC-FT 3,257,000

PEAK DISCHARGE (BASE, 10,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
10-13	1900	23.72	56,800	05-27	1300	15.22	13,900
03-11	1800	15.05	13,400	06-07	0300	14.90	12,900
04-22	2200	21.39	40,300	06-10	1400	15.14	13,600

ARKANSAS RIVER BASIN

07146570 COLE CREEK NEAR DEGRAFF, KS

LOCATION.--Lat 37°56'50", long 96°46'50", in NE¼NW¼ sec.21, T.24 S., R.6 E., Butler County, at downstream side of highway bridge, 5.0 mi (8.0 km) southeast of DeGraff, and 6.0 mi (9.7 km) upstream from mouth.

DRAINAGE AREA.--30 mi² (80 km²), approximately.

PERIOD OF RECORD.--March 1961 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,335 ft (407 m), from topographic map.

AVERAGE DISCHARGE.--13 years, 16.8 ft³/s (0.476 m³/s), 12,170 acre-ft/yr (15.0 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 2,360 ft³/s (66.8 m³/s) Oct. 11, gage height, 11.54 ft (3.517 m); no flow at times.
Period of record: Maximum discharge, 11,100 ft³/s (314 m³/s) June 5, 1965, gage height, 14.12 ft (4.304 m); no flow at times in most years.
Maximum stage known since at least 1947, 17.0 ft (5.18 m) May 1955, 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	11	4.5	2.1	4.5	5.3	7.3	4.5	4.7	4.9	.88	0	.01
2	8.9	3.9	2.1	4.0	5.1	5.6	4.5	4.1	4.9	.76	.01	.06
3	5.6	3.1	7.7	4.0	5.0	5.3	4.3	3.7	4.6	.56	.01	.96
4	4.0	2.9	249	4.0	4.8	5.0	4.1	3.3	4.5	.46	0	1.6
5	3.3	3.0	88	4.0	4.7	4.5	4.1	3.2	4.3	.46	0	1.3
6	2.8	2.8	61	4.0	4.5	4.3	4.1	2.8	5.7	.46	.01	.57
7	3.0	2.8	26	4.0	4.3	4.1	4.1	3.0	8.3	.42	.02	.45
8	3.0	2.8	21	4.0	4.0	4.4	4.3	3.3	9.2	.37	.01	.34
9	2.4	2.8	90	4.0	4.0	17	5.0	2.6	215	.32	.03	.23
10	196	2.8	32	4.0	4.1	577	4.5	2.8	31	.25	.04	.19
11	1,620	2.7	15	4.0	4.1	245	6.3	2.8	11	.21	.02	.16
12	107	2.5	12	4.0	4.1	53	16	3.0	7.1	.18	.01	.10
13	64	2.4	10	4.5	4.1	21	5.8	3.0	5.4	.11	.01	.08
14	30	2.3	8.6	5.0	4.0	15	4.4	192	5.1	.10	.01	.07
15	17	2.4	6.8	5.5	3.9	12	3.9	22	4.5	.08	.03	.06
16	12	2.5	5.5	6.0	3.9	9.8	3.9	7.3	3.8	.07	.01	.05
17	9.6	2.5	5.1	28	3.9	8.8	3.9	4.9	3.6	.06	.01	.03
18	8.6	2.3	4.9	300	3.9	8.5	3.9	4.1	3.2	.04	.02	.01
19	7.8	2.2	4.9	206	3.9	7.8	3.9	63	3.1	.03	.01	.01
20	6.8	3.7	4.9	72	3.9	7.3	52	30	2.9	.02	0	.01
21	6.0	7.0	4.9	51	7.0	7.8	60	7.0	2.4	.02	0	0
22	4.9	4.4	4.9	29	19	7.9	10	4.3	1.8	.02	0	0
23	4.5	3.3	5.5	18	39	7.7	6.0	736	1.7	.01	0	0
24	4.5	2.8	115	9.5	38	6.3	4.5	164	1.5	.01	0	0
25	4.3	2.5	44	8.1	12	7.0	4.1	65	1.3	.01	0	0
26	4.3	2.5	15	7.8	21	7.8	3.9	32	1.3	.01	0	0
27	184	2.4	9.2	7.7	27	7.5	3.7	16	1.3	.01	0	0
28	31	2.3	7.5	7.3	12	6.8	3.7	9.6	1.2	.01	.01	0
29	10	2.2	7.0	6.8	-----	5.6	4.3	7.5	1.2	0	.01	0
30	6.4	2.1	6.0	6.3	-----	5.3	4.9	6.2	.96	0	0	0
31	5.3	-----	5.0	5.5	-----	4.6	-----	5.0	-----	0	0	-----
TOTAL	2,388.0	88.4	880.6	832.5	260.5	1,097.0	252.6	1,418.2	356.76	5.94	.28	6.29
MEAN	77.0	2.95	28.4	26.9	9.30	35.4	8.42	45.7	11.9	.19	.009	.21
MAX	1,620	7.0	249	300	39	577	60	736	215	.88	.04	1.6
MIN	2.4	2.1	2.1	4.0	3.9	4.1	3.7	2.6	.96	0	0	0
AC-FT	4,740	175	1,750	1,650	517	2,180	501	2,810	708	12	.6	12

CAL YR 1973 TOTAL 12,779.47 MEAN 35.0 MAX 1,620 MIN 0 AC-FT 25,350
WTR YR 1974 TOTAL 7,587.07 MEAN 20.8 MAX 1,620 MIN 0 AC-FT 15,050

PEAK DISCHARGE (BASE, 1,000 CFS)

DATE	TIME	G.H.T.	DISCHARGE	DATE	TIME	G.H.T.	DISCHARGE
10-11	0845	11.54	2,360	05-23	2045	10.47	1,770
03-10	1100	8.76	1,170				

ARKANSAS RIVER BASIN

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07147070 WHITEWATER RIVER AT TOWANDA, KS

LOCATION.--Lat 37°47'45", long 97°00'45", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.8, T.26 S., R.4 E., Butler County, at downstream side of bridge on State Highway 254, 0.5 mi (0.8 km) west of Towanda, 2.4 mi (3.9 km) downstream from West Branch, and at mile 17.5 (28.2 km).

DRAINAGE AREA.--426 mi² (1,100 km²).

PERIOD OF RECORD.--Annual maximums, water years 1960-61. October 1961 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,231.47 ft (375.352 m) above mean sea level (levels by State Highway Commission). Prior to Oct. 1, 1961, crest-stage gage at same site at datum 5.22 ft (1.591 m) higher.

AVERAGE DISCHARGE.--13 years, 207 ft³/s (5.862 m³/s), 150,000 acre-ft/yr (185 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 11,800 ft³/s (334 m³/s) Oct. 12, gage height, 24.86 ft (7.577 m); minimum, 14 ft³/s (0.396 m³/s) Aug. 4, 5.
Period of record: Maximum discharge, 40,200 ft³/s (1,140 m³/s) June 5, 1965, gage height, 28.02 ft (8.540 m); minimum, 0.20 ft³/s (0.006 m³/s) July 14, 1966.
Maximum stage known since at least 1923, 28.6 ft (8.72 m) April 1944, from floodmark.

REMARKS.--Records good. Records of chemical analyses for the water year 1974 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	256	90	48	76	101	100	79	154	113	42	17	39
2	196	80	49	75	96	84	74	125	105	40	17	846
3	111	73	56	74	93	78	74	111	119	42	16	923
4	82	68	1,920	74	88	76	71	98	207	35	15	171
5	65	64	2,570	73	88	72	72	91	370	35	17	80
6	56	64	702	73	85	70	72	86	600	36	19	54
7	52	64	320	71	82	68	72	81	435	35	20	83
8	55	62	177	69	78	75	73	78	376	34	20	119
9	55	60	149	66	77	170	74	76	5,710	32	23	65
10	230	58	167	65	77	1,910	74	76	3,010	31	26	45
11	6,520	57	126	62	77	3,360	80	81	316	30	26	39
12	10,400	55	107	58	77	638	99	75	204	28	24	35
13	3,060	55	96	56	77	270	96	69	163	28	20	31
14	347	57	90	59	76	188	82	437	149	26	19	30
15	228	59	84	62	75	159	71	656	127	26	34	28
16	172	54	76	68	74	139	66	161	107	25	29	28
17	146	54	71	132	73	121	67	107	96	24	23	28
18	133	51	70	784	73	116	64	86	91	24	22	28
19	122	51	69	1,520	73	110	61	2,630	84	22	20	26
20	114	84	68	856	74	105	480	4,900	79	22	19	27
21	106	200	68	794	76	102	6,790	525	72	22	20	28
22	96	116	68	520	78	101	3,610	1,280	65	22	622	26
23	87	79	71	324	81	98	348	1,930	58	22	212	25
24	83	67	424	191	84	95	230	6,040	54	22	70	24
25	77	60	838	153	83	94	177	3,470	53	19	52	24
26	74	58	298	143	81	94	150	1,140	51	19	36	24
27	865	57	168	138	88	94	135	354	49	18	42	26
28	1,390	54	133	128	122	92	125	228	47	18	342	26
29	182	52	113	119	-----	90	170	175	45	19	227	26
30	128	51	101	113	-----	85	287	149	43	19	85	26
31	102	-----	78	107	-----	81	-----	127	-----	18	48	-----
TOTAL	25,590	2,054	9,375	7,103	2,307	8,935	13,923	25,596	12,998	835	2,182	2,980
MEAN	825	68.5	302	229	82.4	288	464	826	433	26.9	70.4	99.3
MAX	10,400	200	2,570	1,520	122	3,360	6,790	6,040	5,710	42	622	923
MIN	52	51	48	56	73	68	61	69	43	18	15	24
AC-FT	50,760	4,070	18,600	14,090	4,580	17,720	27,620	50,770	25,780	1,660	4,330	5,910

CAL YR 1973 TOTAL 157,960.7 MEAN 433 MAX 10,400 MIN 4.6 AC-FT 313,300
WTR YR 1974 TOTAL 113,878.0 MEAN 312 MAX 10,400 MIN 15 AC-FT 225,900

PEAK DISCHARGE (BASE, 2,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
10-12	1200	24.86	11,800	04-21	1700	23.82	8,980
10-28	0200	12.86	2,890	05-20	1100	19.36	5,490
12-05	0100	14.91	3,710	05-24	1600	21.03	6,420
03-11	0400	16.35	4,290	06-09	2000	21.42	6,650

ARKANSAS RIVER BASIN

07147800 WALNUT RIVER AT WINFIELD, KS

LOCATION.--Lat 37°13'27", long 96°59'40", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.33, T.32 S., R.4 E., Cowley County, at downstream side of bridge on U.S. Highway 77, 1.0 mi (1.6 km) south of Winfield, 1.0 mi (1.6 km) upstream from Black Creek Creek, and at mile 24.8 (39.9 km).

DRAINAGE AREA.--1,872 mi² (4,848 km²).

PERIOD OF RECORD.--October 1921 to current year. October to November 1921 monthly discharge only, published in WSP 1311.

GAGE.--Water-stage recorder. Datum of gage is 1,082.86 ft (330.056 m) above mean sea level (Corps of Engineers bench mark). Prior to Oct. 1, 1934, nonrecording gage on upstream side of former bridge just upstream from present gage at same datum.

AVERAGE DISCHARGE.--53 years, 794 ft³/s (22.49 m³/s), 575,300 acre-ft/yr (709 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 46,000 ft³/s (1,300 m³/s) Oct. 12, gage height, 33.80 ft (10.302 m); minimum, 52 ft³/s (1.47 m³/s) Aug. 1, 3, 5.

Period of record: Maximum discharge, 105,000 ft³/s (2,970 m³/s) Apr. 23, 1944, gage height, 38.30 ft (11.674 m); no flow at times in 1929, 1936, 1954-56.

Maximum floods known since at least 1877, that of Apr. 23, 1944; Nov. 18, 1928, discharge, 94,400 ft³/s (2,670 m³/s), gage height, 41.0 ft (12.50 m), from graph based on gage readings at former site.

REMARKS.--Records good. Some regulation at low flow by City Water Works Dam and Timber Creek Reservoir above station. Records of chemical analyses, water temperatures, and suspended sediment loads for the water year 1974 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 607: 1923(M). WSP 1117: Drainage area. WSP 1241: 1922(M), 1923, 1926-27, 1928-29(M), 1934, 1940-41.

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	918	328	450	648	744	575	2,490	822	260	72	254
2	1,130	744	320	430	603	666	542	1,740	678	246	73	845
3	955	619	372	420	564	597	500	1,170	581	232	71	1,670
4	668	548	1,950	420	526	548	475	894	672	222	71	1,780
5	495	485	7,340	410	500	505	457	732	3,490	216	83	745
6	406	457	7,840	400	480	475	434	603	10,900	201	124	377
7	354	430	3,590	400	457	448	421	520	15,000	195	151	276
8	324	407	2,020	400	439	443	416	475	9,090	186	109	228
9	299	389	1,400	390	416	448	416	570	12,800	177	172	239
10	982	376	1,170	380	403	4,660	412	2,110	14,700	167	134	240
11	31,800	364	1,180	360	394	14,800	466	1,070	12,200	158	137	193
12	42,900	348	942	350	385	16,600	526	732	4,130	153	141	164
13	39,500	336	810	350	385	8,690	592	581	2,710	144	133	145
14	28,700	332	732	364	380	3,590	526	3,450	2,080	136	122	136
15	10,500	320	654	364	376	2,670	470	7,000	1,650	134	3,290	125
16	4,300	312	597	372	368	2,050	425	3,500	1,270	132	2,060	132
17	3,420	304	537	416	364	1,640	403	1,660	1,010	120	553	130
18	2,750	292	500	1,900	352	1,370	398	1,070	822	116	600	125
19	2,170	300	490	6,300	348	1,180	389	810	708	113	450	120
20	1,660	389	448	6,060	340	1,050	485	2,890	614	109	300	118
21	1,270	553	457	3,580	774	966	1,060	5,110	526	104	250	113
22	1,000	1,060	466	2,760	2,260	918	5,790	2,560	466	100	148	107
23	834	966	452	2,350	2,320	876	6,010	2,860	416	96	315	104
24	708	672	559	1,790	1,600	870	1,220	5,320	389	92	575	108
25	614	537	1,240	1,320	1,290	828	750	9,600	356	91	268	107
26	559	461	2,410	1,080	978	804	608	10,100	336	90	180	106
27	3,500	421	1,380	966	810	816	515	5,770	320	87	165	107
28	3,070	389	954	888	756	792	480	2,460	300	81	1,130	119
29	3,520	368	780	822	-----	738	581	1,660	284	77	1,100	135
30	1,610	348	696	756	-----	678	1,700	1,260	268	73	699	130
31	1,150	-----	619	696	-----	625	-----	1,020	-----	71	403	-----
TOTAL	192,708	14,445	43,233	37,944	19,516	72,085	28,042	81,787	99,588	4,379	14,079	9,178
MEAN	6,216	482	1,395	1,224	697	2,325	935	2,638	3,320	141	454	306
MAX	42,900	1,060	7,840	6,300	2,320	16,600	6,010	10,100	15,000	260	3,290	1,780
MIN	299	292	320	350	340	443	389	475	268	71	71	104
AC-FT	382,200	28,650	85,750	75,260	38,710	143,000	55,620	162,200	197,500	8,690	27,930	18,200
CAL YR 1973	TOTAL 803,601		MEAN 2,202		MAX 42,900		MIN 24		AC-FT 1,594,000			
WTR YR 1974	TOTAL 616,984		MEAN 1,690		MAX 42,900		MIN 71		AC-FT 1,224,000			

PEAK DISCHARGE (BASE, 9,600 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
10-12	1300	33.80	46,000	06-07	1700	18.76	15,500
03-12	1100	20.03	17,000	06-10	1800	18.37	15,000
05-25	2300	14.73	10,700				

07149000 MEDICINE LODGE RIVER NEAR KIOWA, KS

LOCATION.--Lat 37°02'17", long 98°28'04", in SE¼SW¼ sec.36, T.34 S., R.11 W., Barber County, at downstream side of bridge on State Highway 14, 200 ft (61 m) downstream from the Atchison, Topeka and Santa Fe Railway Co. bridge, 1.5 mi (2.4 km) northeast of Kiowa, and at mile 22.2 (35.7 km).

DRAINAGE AREA.--903 mi² (2,340 km²).

PERIOD OF RECORD.--May 1895 to October 1896, October 1937 to September 1950, October 1954 to September 1955, June 1959 to current year. Published as Medicine River near Kiowa 1895-96. All figures of discharge above 2,000 ft³/s (57 m³/s) for June and July 1896, published in Eighteenth Annual Report of the Geological Survey (Part 4), have been found to be unreliable and should not be used.

GAGE.--Water-stage recorder. Datum of gage is 1,286.99 ft (392.275 m) above mean sea level (levels by Corps of Engineers). May 1895 to October 1896, nonrecording gage at site 2.0 mi (3.2 km) upstream at different datum. Feb. 11 to Mar. 2, 1938, nonrecording gage and Mar. 3, 1938, to Sept. 30, 1944, water-stage recorder at present site at datum 3.00 ft (0.914 m) higher. Oct. 1, 1944, to Sept. 30, 1950, and Oct. 1, 1954, to Sept. 30, 1955, water-stage recorder at present site and datum.

AVERAGE DISCHARGE.--29 years (1937-50, 1954-55, 1959-74), 141 ft³/s (3.993 m³/s), 102,200 acre-ft/yr (126 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 12,000 ft³/s (340 m³/s) Oct. 12, gage height, 12.10 ft (3.688 m); minimum observed, 5.7 ft³/s (0.161 m³/s) July 22.

Period of record: Maximum discharge, 16,000 ft³/s (453 m³/s) Oct. 22, 1941, gage height, 11.75 ft (3.581 m), present datum; maximum gage height, 12.10 ft (3.688 m) Oct. 12, 1973; no flow at times in most years.

Floods of May 8, 1922, and June 1957 reached stages of about 16 ft (4.9 m) and 15.5 ft (4.7 m), respectively, present site and datum, from the Atchison, Topeka and Santa Fe Railway Co. records and information by local resident.

REMARKS.--Records poor.

REVISIONS (WATER YEARS).--WSP 1117: Drainage area. WSP 1391: 1938(M), 1942(M). WSP 1921: Drainage area. See also PERIOD OF RECORD.

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	546	228	149	86	197	164	173	280	68	30	17	100
2	470	218	146	80	194	164	164	256	68	28	17	110
3	414	204	164	80	182	164	158	249	68	24	17	207
4	368	194	336	80	176	158	155	232	118	23	17	173
5	340	188	490	80	167	155	152	214	182	30	19	123
6	319	188	358	82	158	155	149	200	378	52	20	106
7	305	185	277	84	158	155	146	182	592	35	25	94
8	294	185	242	85	158	428	143	167	326	25	38	88
9	280	182	238	85	155	341	135	149	416	22	41	86
10	291	170	228	85	164	414	130	140	277	20	38	84
11	5,260	170	207	85	158	963	185	135	200	19	35	78
12	8,840	164	207	85	164	744	246	130	164	17	35	76
13	2,960	167	197	90	170	431	214	123	138	16	32	74
14	1,010	167	188	120	170	333	176	123	128	14	291	74
15	804	164	170	140	170	291	161	114	116	14	1,160	74
16	668	161	170	170	167	270	146	112	98	15	445	76
17	560	161	170	200	164	252	146	110	88	12	210	78
18	490	161	176	240	170	249	146	106	82	12	118	78
19	459	161	152	290	176	246	143	102	78	10	96	76
20	420	170	102	350	173	238	803	102	70	8.0	76	76
21	375	368	150	300	155	221	2,580	100	64	6.0	60	70
22	350	302	173	280	155	221	1,730	96	62	5.7	446	70
23	330	214	207	263	149	214	596	94	56	6.0	469	68
24	305	197	204	218	149	194	462	100	56	8.0	164	68
25	288	197	194	210	146	182	392	96	54	23	179	70
26	274	191	218	210	146	200	347	96	53	185	126	70
27	263	182	197	200	152	200	316	94	52	76	135	68
28	252	167	170	200	164	200	294	88	46	32	340	66
29	246	155	164	197	-----	191	298	82	41	25	256	68
30	235	149	155	194	-----	182	312	78	32	20	155	68
31	232	-----	106	197	-----	176	-----	72	-----	17	118	-----
TOTAL	28,248	5,710	6,305	5,066	4,607	8,496	11,198	4,222	4,171	829.7	5,195	2,617
MEAN	911	190	203	163	165	274	373	136	139	26.8	168	87.2
MAX	8,840	368	490	350	197	963	2,580	280	592	185	1,160	207
MIN	232	149	102	80	146	155	130	72	32	5.7	17	66
AC-FT	56,030	11,330	12,510	10,050	9,140	16,850	22,210	8,370	8,270	1,650	10,300	5,190

CAL YR 1973 TOTAL 129,212.10 MEAN 354 MAX 8,840 MIN .60 AC-FT 256,300
WTR YR 1974 TOTAL 86,664.70 MEAN 237 MAX 8,840 MIN 5.7 AC-FT 171,900

PEAK DISCHARGE (BASE, 3,700 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
10-12	0300	12.10	12,000	04-22	0100	9.60	3,900

ARKANSAS RIVER BASIN

07155590 CIMARRON RIVER NEAR ELKHART, KS

LOCATION.--Lat 37°07'30", long 101°53'50", in NW¼ sec.4, T.34 S., R.42 W., Morton County, Cimarron National Grasslands, on downstream side of bridge near left end on State Highway 27, 8.0 mi (12.9 km) north of Elkhart, and at mile 499.4 (803.5 km).

DRAINAGE AREA.--2,899 mi² (7,508 km²), of which 483 mi² (1,251 km²) do not contribute directly to surface runoff.

PERIOD OF RECORD.--April 1971 to current year.

GAGE.--Water-stage recorder. Datum of gage is 3,381.89 ft (1,030.800 m) above mean sea level.

EXTREMES.--Current year: Maximum discharge, 1,660 ft³/s (47.0 m³/s) Aug. 17, gage height, 4.36 ft (1.329 m); no flow most days.
Period of record: Maximum discharge, 5,100 ft³/s (144 m³/s) June 23, 1972, gage height, 7.45 ft (2.271 m), from rating curve extended above 400 ft³/s (11.3 m³/s); no flow most days.

REMARKS.--Records good except those for periods 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	8.0	0	.30	.10	.26	.04	.01	0	0		0	.70
2	4.0	0	.30	.10	.26	.02	.02	0	0		0	.17
3	3.5	0	.30	0	.19	0	.08	0	0		0	0
4	3.0	0	.30	0	.20	0	.05	0	0		0	0
5	3.0	0	.30	0	.24	0	.03	0	0		0	0
6	2.5	0	.20	0	.18	0	.02	0	.02		0	0
7	2.0	0	.20	0	.17	0	.01	0	0		0	0
8	1.5	0	.24	.01	.22	0	.01	0	5.1		0	0
9	1.5	0	.17	.05	.18	.26	0	0	.68		170	0
10	1.0	0	.15	.10	.22	.90	0	0	.06		268	0
11	1.0	0	.22	.10	.18	.70	0	0	0		427	0
12	1.0	0	.13	.10	.16	.40	0	0	0		103	0
13	1.0	0	.02	.10	.16	.34	.03	0	0		1.7	0
14	.50	0	.01	.15	.17	.30	.02	0	0		.06	0
15	.50	0	.01	.20	.16	.26	0	0	0		0	0
16	.50	0	.01	.30	.15	.22	0	0	0		0	0
17	.20	0	.01	.50	.15	.20	0	0	0		935	0
18	.10	0	.02	1.5	.13	.18	0	0	0		504	0
19	0	0	.10	.55	.08	.14	.01	0	0		180	0
20	0	0	.10	.50	.08	.14	.01	0	0		17	0
21	0	.10	.05	.32	.04	.14	0	0	0		.84	0
22	0	.10	.16	.34	.05	.15	0	0	0		.23	0
23	0	.10	.13	.34	.03	.14	0	0	0		.55	0
24	0	.10	.06	.34	.05	.10	0	1.4	0		.83	0
25	0	.10	0	.34	.07	.10	0	.37	0		.07	0
26	0	.20	.10	.28	.07	.12	.04	0	0		.03	0
27	0	.20	.12	.30	.06	.04	0	0	0		.05	0
28	0	.20	.15	.36	.04	.04	.01	0	0		.14	0
29	0	.30	.16	.45	-----	.02	0	0	0		0	0
30	0	.30	.12	.36	-----	.03	0	0	0		0	0
31	0	-----	.10	.30	-----	.01	-----	0	-----		2.7	-----
TOTAL	34.80	1.70	4.24	8.09	3.95	4.99	.35	1.77	5.86	0	2,611.20	.87
MEAN	1.12	.057	.14	.26	.14	.16	.012	.057	.20	0	84.2	.029
MAX	8.0	.30	.30	1.5	.26	.90	.08	1.4	5.1	0	935	.70
MIN	0	0	0	0	.03	0	0	0	0	0	0	0
AC-FT	69	3.4	8.4	16	7.8	9.9	.7	3.5	12	0	5,180	1.7

CAL YR 1973 TOTAL 7,143.14 MEAN 19.6 MAX 1,590 MIN 0 AC-FT 14,170

WTR YR 1974 TOTAL 2,677.82 MEAN 7.34 MAX 935 MIN 0 AC-FT 5,310

PEAK DISCHARGE (BASE, 1,000 CFS)

DATE TIME G.H.T. DISCHARGE

08-17 0300 4.36 1,660

ARKANSAS RIVER BASIN

143

07156010 NORTH FORK CIMARRON RIVER AT RICHFIELD, KS

LOCATION.--Lat 37°15'30", long 101°46'30", in SE½SE¼ sec.16, T.32 S., R.41 W., Morton County, at downstream side of bridge on State Highway 51, at Richfield, and at mile 85.8 (138.1 km).

DRAINAGE AREA.--463 mi² (1,199 km²).

PERIOD OF RECORD.--April 1971 to current year.

GAGE.--Water-stage recorder. Datum of gage is 3,343.5 ft (1,019.10 m) above mean sea level.

EXTREMES.--Current year: Maximum discharge, 444 ft³/s (12.6 m³/s) May 25, gage height, 8.98 ft (2.737 m); no flow most days.
Period of record: Maximum discharge, 5,900 ft³/s (167 m³/s) May 10, 1972, gage height, 14.30 ft (4.359 m), from rating curve extended above 2,100 ft³/s (59.5 m³/s), maximum gage height, 15.17 ft (4.624 m) Aug. 24, 1972; no flow most days.

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								0	.59	.72	62	.06
2								0	2.9	.40	11	0
3								0	6.1	.40	.85	.04
4								0	1.4	.07	.48	.12
5								0	2.7	.10	.18	0
6								0	.14	.05	.24	0
7								0	1.3	0	.20	0
8								0	91	0	.19	0
9								0	172	0	.09	0
10								0	13	0	0	0
11								0	.31	0	23	0
12								0	0	0	25	0
13								0	0	0	1.7	0
14								0	0	.08	.26	0
15								0	0	.16	.40	0
16								0	0	.04	0	0
17								0	0	.01	0	0
18								0	0	0	0	0
19								0	0	0	0	0
20								0	0	0	0	0
21								0	0	0	0	0
22								0	0	0	12	0
23								0	0	0	2.1	0
24								0	0	0	1.0	0
25								69	0	0	.14	0
26								.48	.06	0	.02	0
27								.05	.32	0	.01	0
28								0	.30	0	.18	0
29								0	.07	0	.03	0
30								0	.27	0	.20	0
31								0	-----	9.5	.08	-----
TOTAL	0	0	0	0	0	0	0	69.53	292.46	11.53	141.35	.22
MEAN	0	0	0	0	0	0	0	2.24	9.75	.37	4.56	.007
MAX	0	0	0	0	0	0	0	69	172	9.5	62	.12
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	0	0	0	0	0	0	138	580	23	280	.4

CAL YR 1973 TOTAL 393.43 MEAN 1.08 MAX 268 MIN 0 AC-FT 780
WTR YR 1974 TOTAL 515.09 MEAN 1.41 MAX 172 MIN 0 AC-FT 1,020

PEAK DISCHARGE (BASE, 150 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
05-25	0200	8.98	444	07-31	2400	7.35	274
06-08	1500	8.05	328				

07156100 SAND ARROYO CREEK NEAR JOHNSON, KS

LOCATION.--Lat 37°30'00", long 101°45'40", in SW 1/4 sec. 25, T.29 S., R.41 W., Stanton County, at bridge on State Highway 27, 4.3 mi (6.9 km) south of Johnson, and at mile 22.5 (36.2 km).

DRAINAGE AREA.--619 mi² (1,603 km²).

PERIOD OF RECORD.--April 1971 to current year. Prior to Oct. 1, 1972 published as "Sandy Arroyo Creek near Johnson".

GAGE.--Water-stage recorder. Datum of gage is 3,328.40 ft (1,014.496 m) above mean sea level.

EXTREMES.--Current year: Maximum discharge, 1.2 ft³/s (0.034 m³/s) June 8, gage height 3.54 ft (1.079 m); no flow most days.

Period of record: Maximum discharge, 452 ft³/s (12.8 m³/s) Sept. 24, 1973, gage height 6.33 ft (1.929 m); no flow most days.

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									0	0		
2									0	0		
3									0	0		
4									0	0		
5									0	0		
6									0	0		
7									0	0		
8									.06	0		
9									0	0		
10									0	0		
11									0	0		
12									0	0		
13									0	0		
14									0	0		
15									0	0		
16									0	0		
17									0	0		
18									0	0		
19									0	0		
20									0	0		
21									0	0		
22									0	0		
23									0	0		
24									0	0		
25									0	0		
26									0	0		
27									0	0		
28									0	0		
29									0	0		
30									0	0		
31									0	0		
TOTAL	0	0	0	0	0	0	0	0	.06	.05	0	0
MEAN	0	0	0	0	0	0	0	0	.002	.002	0	0
MAX	0	0	0	0	0	0	0	0	.06	.05	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	0	0	0	0	0	0	0	.1	.10	0	0
CAL YR 1973	TOTAL 31.00	MEAN .085	MAX 31	MIN 0	AC-FT 61							
WTR YR 1974	TOTAL 0.11	MEAN .0003	MAX .06	MIN 0	AC-FT .2							

PEAK DISCHARGE (BASE, 50 CFS).--NO PEAK ABOVE BASE.

ARKANSAS RIVER BASIN

145

07156220 BEAR CREEK NEAR JOHNSON, KS

LOCATION.--Lat 37°37'35", long 101°45'40", in NW¼SW¼ sec.12, T.28 S., R.41 W., Stanton County, at bridge on U.S. Highway 270, 3.5 mi (5.6 km) north of Johnson, and at mile 42.0 (67.6 km).

DRAINAGE AREA.--835 mi² (2,163 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 3,292.44 ft (1,003.536 m) above mean sea level.

AVERAGE DISCHARGE.--8 years, 5.56 ft³/s (0.157 m³/s), 4,030 acre-ft/yr (4.97 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 270 ft³/s (7.65 m³/s) June 8, gage height, 4.70 ft (1.433 m); no flow most days.
Period of record: Maximum discharge, 6,900 ft³/s (195 m³/s) May 11, 1972, gage height, 9.10 ft (2.774 m); no flow most days.

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									.62	0		
2									0	0		
3									0	0		
4									0	0		
5									0	0		
6									0	0		
7									0	0		
8									37	0		
9									.42	0		
10									0	0		
11									0	0		
12									0	0		
13									0	0		
14									0	0		
15									0	0		
16									0	0		
17									0	0		
18									0	0		
19									0	0		
20									0	0		
21									0	0		
22									0	0		
23									0	0		
24									1.9	0		
25									0	0		
26									0	0		
27									0	0		
28									0	0		
29									0	0		
30									0	0		
31		-----			-----		-----		-----	1.0		-----
TOTAL	0	0	0	0	0	0	0	0	39.94	1.0	0	0
MEAN	0	0	0	0	0	0	0	0	1.33	.032	0	0
MAX	0	0	0	0	0	0	0	0	37	1.0	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	0	0	0	0	0	0	0	79	2.0	0	0

CAL YR 1973 TOTAL 517.68 MEAN 1.42 MAX 371 MIN 0 AC-FT 1,030
WTR YR 1974 TOTAL 40.94 MEAN .11 MAX 37 MIN 0 AC-FT 81

PEAK DISCHARGE (BASE, 500 CFS).--NO PEAK ABOVE BASE.

ARKANSAS RIVER BASIN

07156900 CIMARRON RIVER NEAR FORGAN, OK

LOCATION.--Lat 37°00'45", long 100°29'39", in SE¼SE¼ sec.8, T.35 S., R.24 E., Meade County, Kans., near center of span on downstream side of pier of bridge on Kansas State Highway 23, 0.8 mi (1.3 km) north of Oklahoma-Kansas State line, 7.8 mi (12.6 km) north of Forgan, and at mile 375.7 (604.5 km).

DRAINAGE AREA.--8,536 mi² (22,108 km²), of which 4,316 mi² (11,178 km²) is probably noncontributing.

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

GAGE.--Water-stage recorder. Altitude of gage is 2,325 ft (708.7 m), from topographic map.

AVERAGE DISCHARGE.--9 years, 85.4 ft³/s (2.419 m³/s), 61,870 acre-ft/yr (76.3 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 440 ft³/s (12.5 m³/s) Aug. 24, gage height, 3.80 ft (1.158 m); minimum, 18 ft³/s (0.510 m³/s) Jan. 4.

Period of record: Maximum discharge, 21,200 ft³/s (600 m³/s) Oct. 20, 1965, gage height, 8.10 ft (2.469 m); minimum, 18 ft³/s (0.510 m³/s) Jan. 4, 1974.

REMARKS.--Records good except those for winter periods, which are fair. Extensive diversion for irrigation above station.

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	54	69	30	63	66	65	59	46	39	52	48
2	64	48	65	28	59	69	62	59	45	38	55	60
3	59	51	85	23	48	69	59	55	62	38	56	50
4	53	57	91	18	47	77	59	56	140	36	56	48
5	61	57	79	20	47	77	59	56	80	38	56	52
6	64	59	73	19	48	79	57	55	71	38	60	44
7	59	65	72	23	46	76	51	52	71	37	56	47
8	58	62	85	29	37	77	51	56	100	37	54	49
9	61	65	78	27	37	76	62	60	77	38	103	46
10	84	69	65	30	40	110	57	61	62	37	63	46
11	90	72	55	25	36	95	51	55	53	35	71	45
12	67	69	51	28	35	81	48	56	53	38	57	44
13	59	65	61	50	41	74	48	51	55	35	55	50
14	58	59	65	60	42	70	43	49	47	34	60	58
15	60	57	63	100	46	69	45	53	40	38	56	62
16	61	57	79	170	45	67	62	56	37	44	49	67
17	54	59	95	130	41	66	69	60	34	42	46	131
18	58	55	90	110	41	65	65	59	54	38	53	71
19	61	66	55	90	45	63	63	55	44	37	57	58
20	66	86	35	83	52	66	59	60	35	39	54	57
21	67	82	40	79	48	66	59	62	37	39	56	55
22	67	76	50	76	63	64	58	55	41	40	65	55
23	57	67	57	72	62	69	58	54	41	43	95	58
24	52	57	59	69	59	70	58	58	46	44	161	53
25	54	55	80	72	60	72	57	55	46	115	55	56
26	56	55	76	69	73	71	57	50	53	63	46	54
27	54	66	74	73	82	75	57	42	50	52	53	51
28	45	76	48	71	66	72	58	44	44	53	77	47
29	49	81	34	59	-----	65	59	44	41	55	48	48
30	55	52	32	58	-----	69	58	45	42	55	41	59
31	57	-----	25	60	-----	69	-----	45	-----	53	45	-----
TOTAL	1,876	1,899	1,986	1,851	1,409	2,254	1,714	1,677	1,647	1,368	1,911	1,669
MEAN	60.5	63.3	64.1	59.7	50.3	72.7	57.1	54.1	54.9	44.1	61.6	55.6
MAX	90	86	95	170	82	110	69	62	140	115	161	131
MIN	45	48	25	18	35	63	43	42	34	34	41	44
AC-FT	3,720	3,770	3,940	3,670	2,790	4,470	3,400	3,330	3,270	2,710	3,790	3,310

CAL YR 1973 TOTAL 28,051 MEAN 76.9 MAX 548 MIN 25 AC-FT 55,640

WTR YR 1974 TOTAL 21,261 MEAN 58.2 MAX 170 MIN 18 AC-FT 42,170

PEAK DISCHARGE (BASE, 3,000 CFS).--NO PEAK ABOVE BASE.

ARKANSAS RIVER BASIN

147

07157500 CROOKED CREEK NEAR NYE, KS

LOCATION.--Lat 37°02'02", long 100°11'55", in SE¼NW¼ sec.1, T.35 S., R.27 W., Meade County, on left bank at upstream side of county road bridge, 6.5 mi (10.5 km) east of Nye, and at mile 14.0 (22.5 km).

DRAINAGE AREA.--1,157 mi² (2,997 km²), of which 344 mi² (891 km²) is probably noncontributing.

PERIOD OF RECORD.--August 1942 to current year. Monthly discharge only for some periods, published in WSP 1311.

GAGE.--Water-stage recorder. Datum of gage is 2,163.79 ft (659.523 m) above mean sea level, unadjusted. Prior to Sept. 12, 1942, non-recording gage at same site and datum.

AVERAGE DISCHARGE.--32 years, 44.9 ft³/s (1.272 m³/s), 32,530 acre-ft/yr (40.1 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 438 ft³/s (12.4 m³/s) Aug. 13, gage height, 4.38 ft (1.335 m); no flow July 7-24.
Period of record: Maximum discharge, 13,600 ft³/s (385 m³/s) May 20, 1955, gage height, 8.01 ft (2.441 m); right-bank gage, from rating curve extended above 2,400 ft³/s (68.0 m³/s) on basis of contracted-opening measurement of peak flow at site 10 mi (16 km) upstream and a mean of slope-area measurement at gage site and discharge measurement at site 10 mi (16 km) upstream at gage height 7.59 ft (2.313 m); maximum stage, 9.00 ft (2.743 m) Aug. 31, 1963, at left-bank gage, 8.2 ft (2.50 m), floodmark, at right-bank gage; no flow at times in most years.

REMARKS.--Records good except those for winter periods, which are poor. Extensive diversion for irrigation above station. Records of suspended sediment loads for the water year 1974 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1117: Drainage area. WSP 1211: 1950. WSP 1311: 1949(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	240	25	25	10	33	22	26	16	5.2	1.0	1.6	31
2	210	24	25	10	31	23	26	17	5.2	.11	1.6	37
3	173	26	32	15	29	22	26	16	7.0	.05	1.6	30
4	130	26	40	17	30	23	24	16	24	.05	1.4	26
5	96	26	37	20	31	23	23	16	28	.30	1.9	25
6	80	25	37	20	29	23	23	16	16	.04	3.8	22
7	71	24	42	20	29	23	22	16	14	0	3.8	22
8	59	23	45	20	26	25	21	16	22	0	4.1	19
9	52	22	44	20	30	28	21	15	19	0	8.1	16
10	45	22	45	20	30	44	20	13	18	0	5.7	15
11	64	23	45	20	28	49	20	11	19	0	7.6	14
12	102	23	42	20	26	49	19	11	22	0	71	12
13	81	23	41	25	24	48	21	9.8	22	0	358	13
14	64	23	38	30	23	48	23	8.1	20	0	394	12
15	58	23	37	30	24	45	23	11	16	0	317	12
16	50	23	36	30	23	36	22	11	11	0	251	13
17	45	23	35	30	22	33	23	11	11	0	192	17
18	40	23	33	30	22	31	23	9.8	11	0	133	13
19	36	26	30	25	25	29	23	8.9	8.9	0	86	12
20	36	36	25	45	25	28	23	6.8	6.2	0	55	12
21	35	35	15	49	23	31	23	6.8	5.2	0	37	11
22	33	33	15	41	24	32	21	6.2	4.6	0	34	9.8
23	33	35	20	37	23	32	20	4.6	4.2	0	33	9.8
24	33	32	25	37	24	31	19	6.2	5.2	0	56	8.9
25	30	31	29	38	23	26	18	8.1	5.2	8.4	84	8.9
26	28	31	30	38	21	26	16	8.1	4.2	2.8	59	8.9
27	28	29	30	38	20	26	16	6.8	3.4	.72	42	8.1
28	28	29	31	37	19	28	17	6.2	2.5	.11	37	8.9
29	28	28	31	36	-----	29	17	4.6	1.6	1.7	37	8.1
30	28	26	30	38	-----	29	16	4.6	2.2	3.4	31	7.4
31	29	-----	20	37	-----	26	-----	4.2	-----	2.2	31	-----
TOTAL	2,065	798	1,010	883	717	968	635	321.8	343.8	20.88	2,379.2	462.8
MEAN	66.6	26.6	32.6	28.5	25.6	31.2	21.2	10.4	11.5	.67	76.7	15.4
MAX	240	36	45	49	33	49	26	17	28	8.4	394	37
MIN	28	22	15	10	19	22	16	4.2	1.6	0	1.4	7.4
AC-FT	4,100	1,580	2,000	1,750	1,420	1,920	1,260	638	682	41	4,720	918

CAL YR 1973 TOTAL 47,427.00 MEAN 130 MAX 3,350 MIN 1.4 AC-FT 94,070
WTR YR 1974 TOTAL 10,604.48 MEAN 29.1 MAX 394 MIN 0 AC-FT 21,030

PEAK DISCHARGE (BASE, 1,400 CFS).--NO PEAK ABOVE BASE.

ARKANSAS RIVER BASIN

07157740 CIMARRON RIVER NEAR BUTTERMILK, KS

LOCATION.--Lat 37°01'36", long 99°28'45", NW 1/4 sec. 3, T.35 S., R.20 W., Comanche County, Kans., near left abutment of county road bridge, 0.5 mi (0.8 km) from Bluff Creek, 2 mi (3.2 km) north of Kansas-Oklahoma State line, 11.5 mi (18.5 km) southwest of Buttermilk, and at mile 304.8 (490.4 km).

DRAINAGE AREA.--11,120 mi² (28,800 km²), of which 4,737 mi² (12,270 km²) is probably noncontributing.

PERIOD OF RECORD.--September 1973 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,704.57 ft (519.553 m) above mean sea level.

EXTREMES.--Current year: Maximum discharge, 1,300 ft³/s (36.8 m³/s) Oct. 11, gage height, 4.95 ft (1.509 m); no flow June 26 to Aug. 4.

Period of record: Maximum discharge, 6,690 ft³/s (189 m³/s) Sept. 26, 1973, gage height, 8.29 ft (2.527 m); no flow at times each year.

REMARKS.--Records fair. Extensive diversions for irrigation above station. Records of chemical analyses and of water temperatures for the current year are published in Part 2 of "Water Resources Data for Oklahoma."

September 1973 record not previously published:

Date	Discharge	Date	Discharge	Date	Discharge	Date	Discharge	Date	Discharge
1	0	7	53	13	1,880	19	281	25	981
2	0	8	131	14	1,050	20	281	26	3,660
3	0	9	142	15	520	21	281	27	1,800
4	150	10	60	16	315	22	250	28	981
5	172	11	40	17	315	23	195	29	520
6	72	12	715	18	281	24	609	30	315

Total 16,050 Mean 535 Max 3,360 Min 0 Ac-ft 31,840

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	315	83	130	170	157	80	88	18	1.0		0	70
2	301	80	130	150	154	79	88	18	.90		0	100
3	238	74	184	140	154	80	85	16	.80		0	300
4	205	71	626	120	154	77	73	16	2.0		0	200
5	150	75	416	110	154	70	81	16	3.6		1.0	120
6	121	89	278	130	153	76	91	17	49		280	75
7	103	96	249	150	142	82	66	19	117		22	50
8	88	100	226	200	120	98	67	18	111		12	50
9	70	99	199	180	128	121	70	15	110		980	48
10	205	100	170	150	149	440	62	12	111		150	43
11	1,020	97	172	130	139	599	52	10	71		70	40
12	570	97	185	120	124	337	43	7.9	45		50	32
13	329	94	178	110	113	300	36	7.4	41		15	31
14	250	85	164	100	115	265	30	6.3	30		12	28
15	190	85	153	100	112	216	29	5.2	20		130	26
16	162	79	151	110	113	182	27	5.5	14		115	26
17	142	79	203	120	116	165	27	5.1	9.8		100	30
18	138	94	175	120	103	154	26	4.8	6.5		85	35
19	130	143	172	130	91	153	28	4.0	4.0		70	35
20	127	428	137	170	106	155	308	2.5	2.8		50	38
21	118	362	183	250	107	151	291	1.7	2.0		30	38
22	115	300	141	200	102	158	130	1.3	.80		60	38
23	109	253	243	172	101	150	78	1.1	.40		130	35
24	94	219	279	159	89	146	52	2.0	.20		170	36
25	91	187	225	153	85	142	39	4.2	.18		300	44
26	91	171	201	152	105	130	31	3.7	0		250	44
27	88	168	224	138	105	130	26	3.0	0		130	44
28	88	153	196	148	83	121	22	2.5	0		300	44
29	88	140	189	145	-----	116	21	1.8	0		200	44
30	88	134	201	177	-----	104	20	1.4	0		100	44
31	85	-----	200	162	-----	98	-----	1.2	-----		80	-----
TOTAL	5,909	4,235	6,580	4,566	3,374	5,175	2,087	247.6	753.98	0	3,892.0	1,788
MEAN	191	141	212	147	121	167	69.6	7.99	25.1	0	126	59.6
MAX	1,020	428	626	250	157	599	308	19	117	0	980	300
MIN	70	71	130	100	83	70	20	1.1	0	0	0	.26
AC-FT	11,720	8,400	13,050	9,060	6,690	10,260	4,140	491	1,500	0	7,720	3,550

WTR YR 1974 TOTAL 38,607.58 MEAN 106 MAX 1,020 MIN 0 AC-FT 76,580

ARKANSAS RIVER BASIN

149

07157900 CAVALRY CREEK AT COLDWATER, KS

LOCATION.--Lat 37°16'00", long 99°20'40", in NE¼NE¼ sec.14, T.32 S., R.19 W., Comanche County, at downstream side of county highway bridge, 1.0 mi (1.6 km) west of Coldwater, and at mile 18.3 (29.4 km).

DRAINAGE AREA.--39 mi² (101 km²).

PERIOD OF RECORD.--Annual maximum, water years 1957-66. October 1966 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,016.474 ft (614.621 m) above mean sea level. Prior to October 1, 1966, crest-stage gage at present site and at datum 6.00 ft (1.829 m) lower. October 1, 1966, to September 30, 1969, water-stage recorder at present site and at datum 2.00 ft (0.610 m) higher.

AVERAGE DISCHARGE.--8 years, 3.49 ft³/s (0.0988 m³/s), 2,530 acre-ft/yr (3.12 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 872 ft³/s (24.7 m³/s) Oct. 11, gage height, 5.28 ft (1.609 m); no flow July 1-24.
Period of record: Maximum gage height, 10.68 ft (3.255 m), present datum, June 16, 1958 (discharge not determined). October 1966 to current year: Maximum discharge, 3,550 ft³/s (101 m³/s) Sept. 26, 1973, gage height, 9.40 ft (2.865 m), from rating curve extended above 840 ft³/s (23.8 m³/s); no flow July 1-24, 1974.

REMARKS.--Records fair. Records of suspended sediment loads for the water year 1974 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	1.8	12	.60	5.0	5.0	2.4	2.4	1.5	2.7	0	1.8	7.0
2	2.1	12	.60	4.0	5.0	2.4	2.4	1.5	4.0	0	1.5	38
3	2.1	12	149	3.0	5.0	2.9	2.4	1.5	4.7	0	1.5	11
4	2.4	12	149	4.0	5.0	2.9	2.4	1.5	9.0	0	1.2	7.0
5	2.4	11	27	4.0	5.0	2.9	2.4	1.5	5.0	0	2.2	5.0
6	2.4	11	7.0	4.0	4.0	2.7	2.4	1.5	5.2	0	2.7	4.0
7	2.4	10	6.0	4.0	2.7	2.7	2.4	1.5	1.5	0	2.4	3.0
8	2.4	10	5.0	3.0	2.7	3.0	2.4	1.5	2.1	0	2.4	3.0
9	2.4	6.0	5.0	3.0	2.7	4.0	2.4	1.5	2.1	0	4.1	2.7
10	40	4.0	5.0	3.0	2.7	54	2.7	1.5	1.8	0	2.4	2.4
11	467	4.0	5.0	3.0	2.7	54	2.7	1.5	1.5	0	2.1	2.1
12	60	4.0	4.0	3.0	2.4	11	2.7	1.5	1.5	0	2.1	2.1
13	18	3.0	4.0	3.0	2.4	9.0	2.7	1.8	2.4	0	1.8	2.1
14	10	3.0	3.0	3.0	2.7	8.0	2.7	1.8	1.8	0	2.4	1.5
15	9.0	3.0	3.0	4.0	2.7	6.0	2.4	2.1	1.5	0	2.1	1.5
16	8.0	2.7	2.7	4.0	2.7	4.0	2.4	2.4	.90	0	1.5	1.5
17	6.0	2.7	2.7	4.0	2.7	2.7	2.4	2.4	1.2	0	1.5	1.5
18	5.6	2.7	2.7	4.0	2.7	2.7	2.1	2.4	1.5	0	1.5	1.5
19	5.0	5.4	3.0	4.0	2.7	2.7	3.0	2.4	1.5	0	1.5	1.5
20	5.0	3.5	3.0	4.0	2.7	2.7	232	1.8	1.5	0	1.8	1.2
21	5.0	1.2	3.0	5.0	2.7	2.7	56	1.8	1.2	0	3.1	1.2
22	6.0	.90	3.0	5.0	2.7	2.7	6.2	2.1	1.5	0	4.0	1.2
23	7.0	.60	3.0	5.0	2.7	2.7	1.8	2.4	1.8	0	4.0	1.2
24	8.0	.60	4.0	5.0	2.4	2.7	1.2	1.8	1.5	0	6.8	1.2
25	8.0	.60	4.0	5.0	2.4	2.7	1.2	1.8	1.8	58	6.0	1.8
26	8.0	.60	4.0	5.0	2.4	2.7	1.2	1.5	2.1	4.0	5.0	1.8
27	8.0	.60	5.0	6.0	2.4	2.7	1.2	1.5	1.5	2.1	10	1.5
28	9.0	.60	5.0	6.0	2.4	2.7	1.2	1.8	.90	1.8	11	2.5
29	10	.60	4.0	6.0	-----	2.4	1.2	2.7	.30	1.8	9.0	2.1
30	12	.60	5.0	5.0	-----	2.4	1.5	2.1	.30	2.1	8.0	1.5
31	12	-----	5.0	5.0	-----	2.4	-----	2.4	-----	1.8	7.0	-----
TOTAL	747.0	140.90	432.30	131.0	86.3	211.5	352.1	57.0	66.30	71.6	114.4	115.6
MEAN	24.1	4.70	13.9	4.23	3.08	6.82	11.7	1.84	2.21	2.31	3.69	3.85
MAX	467	12	149	6.0	5.0	54	232	2.7	9.0	58	11	38
MIN	1.8	.60	.60	3.0	2.4	2.4	1.2	1.5	.30	0	1.2	1.2
AC-FT	1,480	279	857	260	171	420	698	113	132	142	227	229

CAL YR 1973 TOTAL 4,012.70 MEAN 11.0 MAX 1,180 MIN .60 AC-FT 7,960
WTR YR 1974 TOTAL 2,526.00 MEAN 6.92 MAX 467 MIN 0 AC-FT 5,010

PEAK DISCHARGE (BASE, 310 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
10-11	0900	5.28	872	04-20	0800	4.00	480
12-03	2200	3.70	420				

ARKANSAS RIVER BASIN

07157940 BLUFF CREEK NEAR BUTTERMILK, KS

LOCATION.--Lat 37°01'55", long 99°28'45", NW¼ sec.3, T.35 S., R.20 W., Comanche County, Kans., near left bank of county road bridge, 2.2 mi (3.5 km) north of Kansas-Oklahoma State line, 11.3 mi (18.2 km) southwest of Buttermilk, and at mile 0.3 (0.5 km).

DRAINAGE AREA.--657 mi² (1,702 km²), of which 76 mi² (197 km²) is probably noncontributing.

PERIOD OF RECORD.--September 1973 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,700.33 ft (518.261 m) above mean sea level.

EXTREMES.--Current year: Maximum discharge, 2,880 ft³/s (81.6 m³/s) Oct. 11, gage height 9.95 ft (3.033 m); minimum daily, 1.8 ft³/s (0.051 m³/s) July 11.

Period of record: Maximum discharge, 16,000 ft³/s (453 m³/s) Sept. 26, 1973, gage height, 14.35 ft (4.374 m); minimum daily, 1.8 ft³/s (0.051 m³/s) July 11, 1974.

REMARKS.--Records good. Records of chemical analyses and water temperature for the current year are published in Part 2 of "Water Resources Data for Oklahoma."

September 1973 record not previously published:

Date	Discharge	Date	Discharge	Date	Discharge	Date	Discharge	Date	Discharge
1	3.7	7	17	13	857	19	63	25	841
2	3.9	8	43	14	244	20	60	26	6,260
3	4.4	9	18	15	163	21	51	27	2,260
4	6.0	10	12	16	99	22	46	28	530
5	6.9	11	7.5	17	80	23	39	29	290
6	5.0	12	135	18	68	24	63	30	211

Total 12,487.4 Mean 416 Max 6,260 Min 3.7 Ac-ft 24,770

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	285	71	76	43	72	54	60	53	14	6.8	2.6	20
2	245	70	76	49	71	55	59	53	14	5.6	2.5	67
3	219	67	166	50	69	55	58	51	13	4.9	2.4	74
4	184	66	935	40	67	54	56	48	18	4.2	2.4	46
5	143	67	253	35	68	53	55	46	23	4.0	3.4	33
6	124	66	186	29	66	53	55	44	80	3.6	3.0	26
7	114	68	132	40	61	53	55	42	313	3.0	5.8	23
8	102	68	110	64	62	60	54	40	105	2.6	4.6	20
9	94	65	99	56	63	67	53	38	76	2.3	89	19
10	197	64	91	42	63	294	53	37	67	2.1	32	18
11	1,880	63	86	34	62	723	52	34	57	1.8	17	18
12	1,040	63	80	38	62	258	52	32	48	2.1	10	16
13	321	64	77	50	62	168	51	31	47	2.3	7.8	15
14	217	64	74	57	61	151	50	29	43	2.7	6.8	15
15	174	64	71	58	59	134	47	27	38	3.1	18	15
16	151	62	66	62	60	114	47	26	34	3.5	19	15
17	135	61	64	82	59	104	46	25	31	3.6	15	16
18	124	61	58	100	60	100	45	24	29	3.9	11	16
19	116	79	52	98	58	94	46	22	27	4.2	7.9	16
20	108	309	52	95	57	88	368	21	24	4.5	6.2	15
21	100	142	64	90	56	82	331	19	21	5.1	4.9	14
22	94	106	65	86	54	81	118	18	18	5.6	17	13
23	89	97	64	81	55	75	91	18	16	6.6	27	13
24	85	94	63	76	52	72	79	22	15	7.5	23	13
25	79	92	64	74	53	71	70	23	15	24	35	13
26	77	90	65	73	56	71	65	23	13	34	26	13
27	75	86	64	72	56	70	62	23	12	11	23	13
28	73	81	62	74	55	69	59	19	10	6.2	109	13
29	73	79	61	75	-----	65	58	17	8.7	4.1	52	15
30	73	77	60	76	-----	62	56	16	7.4	3.5	34	14
31	72	-----	49	74	-----	61	-----	14	-----	3.1	25	-----
TOTAL	6,863	2,506	3,485	1,973	1,699	3,511	2,351	935	1,237.1	181.5	669.3	637
MEAN	221	83.5	112	63.6	60.7	113	78.4	30.2	41.2	5.85	21.6	21.2
MAX	1,880	309	935	100	72	723	368	53	313	34	109	74
MIN	72	61	49	29	52	53	45	14	7.4	1.8	2.4	13
AC-FT	13,610	4,970	6,910	3,910	3,370	6,960	4,660	1,850	2,450	360	1,330	1,260

WTR YR 1974 TOTAL 26,047.9 MEAN 71.4 MAX 1,880 MIN 1.8 AC-FT 51,670

ARKANSAS RIVER BASIN

151

07165700 VERDIGRIS RIVER NEAR MADISON, KS

LOCATION.--Lat 38°08'15", long 96°06'05", in NW¼SW¼ sec.16, T.22 S., R.12 E., Greenwood County, on downstream side of bridge on State Highway 57, 1.5 mi (2.4 km) east of Madison, 3.0 mi (4.8 km) upstream from Halderman Creek, and at mile 321.9 (517.9 km).

DRAINAGE AREA.--181 mi² (469 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 1,034.51 ft (315.319 m) above mean sea level (levels by Corps of Engineers). Prior to Oct. 6, 1955, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--19 years, 126 ft³/s (3.57 m³/s), 91,290 acre-ft/yr (113 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 10,900 ft³/s (309 m³/s) Oct. 11, gage height, 22.57 ft (6.879 m); minimum, 0.52 ft³/s (.015 m³/s) July 29.

Period of record: Maximum discharge, 34,700 ft³/s (983 m³/s) July 16, 1958, gage height, 27.35 ft (8.336 m); no flow for many days in 1955-57, 1964, 1966, 1967.

Flood of July 11, 1951, reached a stage of 33.4 ft (10.18 m) from floodmark, discharge, 128,000 ft³/s (3,625 m³/s), on basis of slope-area measurement of peak flow.

REMARKS.--Records good.

COOPERATION.--Gage-height record and 24 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

REVISIONS.--WSP 1711: 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	1,190	71	69	108	84	118	58	59	47	12	.64	1,890
2	994	62	66	103	79	112	53	52	36	11	.60	2,560
3	711	55	65	96	73	107	50	47	31	9.8	.64	1,380
4	440	50	1,060	91	67	103	50	42	30	10	.66	1,080
5	289	47	802	89	67	95	49	39	31	10	.76	873
6	221	44	406	87	65	82	46	37	64	9.8	2.5	652
7	186	43	260	78	57	76	45	35	128	9.2	1.5	448
8	138	43	206	78	51	80	58	34	441	8.5	1.9	241
9	107	42	187	74	50	113	59	35	479	8.0	2.4	154
10	368	40	164	78	51	1,900	52	35	248	7.5	3.4	111
11	7,150	38	150	74	50	1,760	55	35	524	7.0	1.9	88
12	2,000	37	141	68	50	955	66	34	388	6.5	1.7	72
13	1,750	36	130	68	49	553	59	31	201	6.0	1.8	59
14	1,610	36	115	67	48	396	52	43	140	5.5	2.2	49
15	1,480	36	104	69	46	302	48	53	105	5.0	6.2	44
16	1,320	35	90	110	45	230	44	44	80	4.5	192	42
17	954	32	82	1,000	44	189	44	40	65	4.0	125	39
18	536	30	80	1,000	45	167	43	35	55	3.5	254	36
19	335	30	82	568	45	146	42	33	48	3.0	149	33
20	210	1,150	79	372	44	129	45	34	41	2.0	83	30
21	153	578	69	276	302	125	78	31	36	1.5	54	28
22	121	274	78	244	381	118	72	69	30	.70	38	27
23	102	183	81	196	245	111	59	89	26	.64	31	24
24	86	150	427	163	188	104	50	89	23	.64	27	23
25	75	128	348	142	151	108	45	67	21	.84	23	22
26	81	114	215	132	147	104	43	51	19	.67	21	20
27	366	102	174	120	143	96	42	44	18	.66	32	19
28	243	91	161	116	128	91	41	39	16	.60	541	19
29	134	81	148	112	-----	85	49	37	15	.52	530	18
30	100	75	132	105	-----	73	69	32	14	.60	202	17
31	83	-----	107	93	-----	63	-----	38	-----	.64	120	-----
TOTAL	23,533	3,733	6,278	5,977	2,795	8,691	1,566	1,383	3,400	150.81	2,450.80	10,098
MEAN	759	124	203	193	99.8	280	52.2	44.6	113	4.86	79.1	337
MAX	7,150	1,150	1,060	1,000	381	1,900	78	89	524	12	541	2,560
MIN	75	30	65	67	44	63	41	31	14	.52	.60	17
AC-FT	46,680	7,400	12,450	11,860	5,540	17,240	3,110	2,740	6,740	299	4,860	20,030

CAL YR 1973 TOTAL 115,033.10 MEAN 315 MAX 7,150 MIN 1.4 AC-FT 228,200
WTR YR 1974 TOTAL 70,055.61 MEAN 192 MAX 7,150 MIN .52 AC-FT 139,000

PEAK DISCHARGE (BASE, 5,000 CFS)

DATE TIME G.H.T. DISCHARGE

10-11 0630 22.57 10,900

ARKANSAS RIVER BASIN

07165900 TORONTO LAKE NEAR TORONTO, KS

LOCATION.--Lat 37°44'30", long 95°56'00", in NW¼SE¼ sec.36, T.26 S., R.13 E., Woodson County, in control tower of dam on Verdigris River, 4.0 mi (6.4 km) southeast of town of Toronto, and at mile 271.5 (436.8 km).

DRAINAGE AREA.--730 mi² (1,891 km²).

PERIOD OF RECORD.--March 1960 to current year. Prior to October 1971 published as "Toronto Reservoir".

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (levels by Corps of Engineers).

EXTREMES.--Current year: Maximum elevation, 924.80 ft (281.879 m) Oct. 13, contents, 143,300 acre-ft (177 hm³); minimum, 900.77 ft (274.555 m) Aug. 5, contents, 19,960 acre-ft (24.6 hm³).

Period of record: Maximum elevation, 928.35 ft (282.961 m) Sept. 16, 1961, contents, 170,000 acre-ft (210 hm³); minimum since conservation pool first reached, 897.25 ft (273.482 m) Mar. 30, 1967, contents, 13,480 acre-ft (16.6 hm³).

REMARKS.--Reservoir is formed by compacted earthfill dam. Storage began Mar. 15, 1960. Maximum pool is 311,200 acre-ft (384 hm³) at elevation 940.6 ft (286.69 m) consisting of the following: Minimum pool, 13,000 acre-ft (16.0 hm³) at elevation 897.0 ft (273.41 m); conservation pool, 10,290 acre-ft (12.7 hm³) between elevations 897.0 ft (273.41 m) and 901.5 ft (274.78 m); flood-control pool, 172,000 acre-ft (212 hm³) between elevations 901.5 ft (274.78 m) and 931.0 ft (283.77 m); uncontrolled storage, 115,900 acre-ft (143 hm³) between elevations 931.0 ft (283.78 m) and 940.6 ft (286.69 m). Reservoir is used for flood control and conservation. Figures given herein represent total contents.

COOPERATION.--Elevations and contents furnished by Corps of Engineers; records reviewed by Geological Survey.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey made by Corps of Engineers in 1966)

900	17,930	915	76,570
905	32,460	920	107,400
910	51,650	925	145,000

ELEVATION, IN FEET, AT 2400, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	918.12	904.10	904.10	904.92	902.63	901.37	903.32	905.63	902.33	902.22	900.94	909.08
2	917.09	903.49	903.31	904.78	902.29	901.42	902.40	905.31	902.08	902.09	900.90	915.08
3	915.95	902.97	903.04	904.48	901.93	901.68	902.00	904.85	901.84	902.05	900.85	916.76
4	914.56	902.42	906.82	904.03	901.73	901.90	901.67	904.37	902.33	901.99	900.80	917.10
5	913.35	901.96	908.81	903.57	901.70	902.07	901.64	903.86	902.21	901.91	900.84	916.75
6	912.83	901.80	909.17	903.10	901.64	902.10	901.62	903.31	905.70	901.85	900.92	915.91
7	911.95	901.79	909.14	902.62	901.62	901.95	901.75	902.73	906.26	901.78	900.91	914.78
8	910.90	901.77	908.92	902.10	901.58	902.51	901.70	902.16	907.94	901.72	900.89	913.56
9	909.72	901.74	908.67	901.90	901.55	903.37	901.72	901.83	911.96	901.68	900.90	912.19
10	909.12	901.70	908.35	901.87	901.52	910.48	901.73	901.72	912.59	901.64	900.87	910.74
11	921.14	901.67	908.04	901.83	901.51	914.78	901.80	901.69	913.12	901.61	900.86	909.15
12	924.43	901.65	907.74	901.77	901.52	915.91	901.92	901.58	913.40	901.58	900.84	907.56
13	924.80	901.68	907.33	901.72	901.52	916.42	902.03	901.48	913.19	901.55	900.81	906.28
14	924.48	901.73	906.95	901.69	901.52	916.48	901.98	905.63	912.85	901.52	900.79	905.40
15	923.72	901.73	906.57	901.72	901.52	916.24	902.02	905.64	912.38	901.50	900.79	904.50
16	922.69	901.72	906.12	901.82	901.52	915.92	902.00	905.08	911.88	901.45	900.79	903.58
17	921.53	901.72	905.70	902.93	901.50	915.58	901.97	904.40	911.16	901.42	900.94	902.57
18	920.19	901.72	905.31	906.15	901.67	915.10	901.97	903.72	910.23	901.40	901.03	902.02
19	918.68	901.82	904.84	907.72	901.73	914.31	901.96	903.15	909.27	901.37	901.17	901.98
20	917.04	908.39	904.49	908.13	901.79	913.65	902.19	902.68	908.27	901.34	901.26	901.92
21	915.27	909.57	904.32	907.95	903.47	912.87	902.41	902.36	907.24	901.31	901.30	901.84
22	913.38	909.39	904.13	908.10	904.68	912.17	902.27	901.99	906.16	901.28	901.37	901.75
23	911.37	909.10	904.07	907.74	904.72	911.39	901.88	901.87	905.02	901.23	901.41	901.70
24	909.24	908.65	904.70	907.09	904.45	910.61	901.64	901.91	903.80	901.19	901.42	901.74
25	907.20	908.11	905.18	906.34	904.12	909.84	901.61	901.97	903.16	901.17	901.41	901.74
26	906.22	907.53	905.27	905.55	903.54	909.07	901.57	901.95	903.02	901.14	901.40	901.72
27	907.53	906.94	905.24	904.63	902.78	908.22	901.57	901.90	902.87	901.10	901.52	901.75
28	907.88	906.28	905.25	904.07	901.96	907.37	901.87	901.84	902.70	901.07	903.17	902.06
29	907.47	905.60	905.20	903.74	-----	906.44	903.67	901.81	902.53	901.03	903.69	902.07
30	906.33	904.84	905.23	903.38	-----	905.48	905.57	902.10	902.39	900.98	903.66	902.06
31	905.08	-----	905.12	902.99	-----	904.42	-----	902.52	-----	900.94	903.78	-----
MEAN	914.49	904.12	906.04	904.21	902.28	909.07	902.12	903.00	907.00	901.49	901.36	906.84
MAX	924.80	909.57	909.17	908.13	904.72	916.48	905.57	905.64	913.40	902.22	903.78	917.10
MIN	905.08	901.65	903.04	901.69	901.50	901.37	901.57	901.48	901.84	900.94	900.79	901.70
(+)	32,730	31,930	32,860	26,140	23,100	30,540	34,360	24,750	24,370	20,410	28,490	23,390
(#)	-6,770	-800	+930	-6,720	-3,040	+7,440	+3,820	-9,610	-380	-3,960	+8,080	-5,100

CAL YR 1973 (#) -12,540

WTR YR 1974 (#) -77,110

+ CONTENTS IN ACRE-FEET, AT END OF MONTH.

CHANGE IN CONTENTS, IN ACRE-FEET.

ARKANSAS RIVER BASIN

153

07166000 VERDIGRIS RIVER NEAR COYVILLE, KS

LOCATION.--Lat 37°42'20", long 95°54'20", in SW¼SW¼ sec.8, T.27 S., R.14 E., Wilson County, on county highway bridge, 1.2 mi (1.9 km) upstream from Meadow Creek, 1.5 mi (2.4 km) northwest of Coyville, 2.5 mi (4.0 km) downstream from Pig Creek, and at mile 268.0 (431.2 km).

DRAINAGE AREA.--747 mi² (1,935 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 845.28 ft (257.64 m) above mean sea level (levels by Corps of Engineers). Prior to Jan 25, 1952, nonrecording gage and Jan. 26, 1952, to July 17, 1961, water-stage recorder, both 100 ft (30 m) upstream at same datum. July 18, 1961, to Jan. 28, 1962, nonrecording gage at present site and datum. Since Jan. 26, 1961, auxiliary nonrecording gage 3.2 mi (5.1 km) downstream.

AVERAGE DISCHARGE.--35 years, 512 ft³/s (14.5 m³/s), 370,900 acre-ft/yr (457 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 6,520 ft³/s (185 m³/s) Oct. 16, gage height, 25.92 ft (7.900 m); minimum, 6.2 ft³/s (0.18 m³/s) Mar. 6.

Period of record: Maximum discharge, 130,000 ft³/s (3.680 m³/s) July 12, 1951, gage height, 41.25 ft (12.573 m), from graph based on gage readings, from rating curve extended above 46,000 ft³/s (1,300 m³/s) on basis of slope-area measurement of peak flow; no flow at times in 1939-41, 1953-58.

REMARKS.--Records good. Flow regulated since Mar. 15, 1960 by Toronto Lake, 3.5 mi (5.6 km) upstream (see sta 07165900). Records of chemical analyses for the water year 1974 are published in Part 2 of this report.

COOPERATION.--Gage-height record, and 34 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

REVISIONS (WATER YEARS).--WSP 1117: Drainage area. WSP 1211: 1945(M), 1948(M). WSP 1241: 1941-42, 1943(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	5,390	2,110	1,570	500	904	1,310	2,060	572	525	275	19	1,300
2	5,320	1,230	1,550	500	815	240	1,580	1,090	517	193	19	597
3	5,240	1,020	1,150	800	809	11	991	1,080	514	100	25	108
4	5,140	1,010	1,680	1,110	593	9.8	636	1,060	711	100	25	960
5	4,420	855	641	1,100	350	10	210	1,050	933	99	26	2,470
6	3,490	434	592	1,050	299	109	128	1,050	1,820	99	29	3,550
7	3,270	174	848	996	252	402	129	1,040	252	99	26	4,220
8	3,150	175	1,140	984	238	592	129	1,030	164	77	26	4,170
9	3,090	174	1,130	635	222	1,190	129	743	86	35	26	4,090
10	2,340	175	1,120	259	221	2,790	129	255	71	35	25	4,000
11	2,550	175	1,110	258	202	1,280	136	256	137	34	25	3,900
12	843	141	1,100	258	177	100	136	255	589	31	25	3,800
13	2,500	96	1,090	258	176	69	131	183	1,210	20	25	3,010
14	4,550	97	1,090	222	176	733	129	342	1,330	20	25	1,750
15	5,880	100	1,080	182	165	1,600	129	563	1,490	20	26	1,720
16	6,490	99	1,070	189	148	1,580	129	1,430	1,480	20	25	1,700
17	6,480	98	1,060	370	149	1,570	129	1,410	1,850	19	25	1,670
18	6,390	99	1,050	899	180	1,920	129	1,390	2,350	19	25	1,080
19	6,270	99	1,050	1,220	226	2,400	129	1,370	2,320	19	25	172
20	6,130	1,710	800	1,180	161	2,380	283	1,060	2,290	19	26	172
21	6,000	985	530	1,580	323	2,360	252	662	2,250	19	25	172
22	5,840	1,740	534	2,230	637	2,350	392	658	2,210	19	25	171
23	5,670	1,760	550	2,200	1,070	2,320	762	492	2,170	20	36	125
24	5,510	2,130	703	2,160	1,060	2,300	501	181	2,130	19	21	58
25	4,920	1,710	563	2,130	1,050	2,300	168	173	1,250	19	21	58
26	3,070	1,670	551	2,100	1,340	2,250	151	172	279	19	21	58
27	1,260	1,650	550	2,070	1,680	2,220	130	171	278	19	26	57
28	132	1,630	551	1,590	1,650	2,190	132	170	277	19	464	135
29	1,050	1,610	545	1,000	-----	2,150	257	168	276	20	243	72
30	2,690	1,590	547	996	-----	2,130	291	182	276	21	525	61
31	2,650	-----	523	987	-----	2,090	-----	480	-----	26	601	-----
TOTAL	127,725	26,546	28,068	32,013	15,273	44,955.8	10,617	20,738	32,035	1,553	2,506	45,406
MEAN	4,120	885	905	1,033	545	1,450	354	669	1,068	50.1	80.8	1,514
MAX	6,490	2,130	1,680	2,230	1,680	2,790	2,060	1,430	2,350	275	601	4,220
MIN	132	96	523	182	148	9.8	128	168	71	19	19	57
AC-FT	253,300	52,650	55,670	63,500	30,290	89,170	21,060	41,130	63,540	3,080	4,970	90,060
CAL YR 1973	TOTAL 482,659.8		MEAN 1,322		MAX 6,490		MIN 9.2		AC-FT 957,400			
WTR YR 1974	TOTAL 387,435.8		MEAN 1,061		MAX 6,490		MIN 9.8		AC-FT 768,500			

ARKANSAS RIVER BASIN

07166500 VERDIGRIS RIVER NEAR ALTOONA, KS

LOCATION.--Lat 37°29'26", long 95°40'49", in SE¼NE¼SW¼ sec.29, T.29 S., R.16 E., Wilson County, on downstream side of highway bridge, 2.5 mi (4.0 km) southwest of Altoona, 2.5 mi (4.0 km) downstream from Big Cedar Creek, and at mile 227.9 (366.7 km).

DRAINAGE AREA.--1,138 mi² (2,947 km²).

PERIOD OF RECORD.--October 1938 to current year. Monthly discharge only for some periods, published in WSP 1311.

GAGE.--Water-stage recorder. Datum of gage is 780.18 ft (237.799 m) above mean sea level (levels by Corps of Engineers). Prior to Sept. 9, 1944, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--36 years, 722 ft³/s (20.45 m³/s), 523,100 acre-ft/yr (645 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 14,000 ft³/s (396 m³/s) Mar. 10, gage height, 24.74 ft (7.541 m); minimum, 2.9 ft³/s (.082 m³/s) Aug. 3.

Period of record: Maximum discharge, 71,000 ft³/s (2,010 m³/s) July 12, 1951, gage height, 31.09 ft (9.476 m); no flow at times in 1939-41, 1952-57.

REMARKS.--Records good. Considerable regulation since 1960 by Toronto Lake 43.6 mi (70.2 km) upstream (see sta 07165900). Diversion above station from Altoona Reservoir for municipal supply of Altoona.

COOPERATION.--Gage-height record and 25 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

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	4,820	2,550	1,620	616	1,060	1,650	2,060	2,110	675	256	12	3,140
2	4,950	1,750	1,590	700	934	1,030	2,010	993	563	254	5.8	6,210
3	4,900	1,090	1,700	699	869	341	1,330	1,220	691	240	37	4,030
4	4,810	970	5,720	926	846	173	998	1,140	2,700	156	32	569
5	4,700	956	6,050	1,040	540	144	555	1,090	2,410	125	28	1,520
6	4,040	742	1,390	1,100	391	134	280	1,060	5,320	112	38	2,650
7	3,680	386	894	1,100	339	187	208	1,030	7,410	104	50	3,480
8	3,230	226	1,160	1,080	302	486	207	1,020	2,320	94	50	3,880
9	3,040	222	1,290	1,300	290	5,050	205	1,010	4,760	90	44	3,860
10	2,950	218	1,250	1,000	279	12,100	199	696	1,170	61	44	3,790
11	4,020	215	1,220	540	278	13,700	216	305	601	45	41	3,710
12	6,690	214	1,200	400	263	9,000	273	296	495	42	38	3,620
13	2,150	196	1,170	330	242	1,080	263	294	921	42	37	3,500
14	3,020	150	1,130	310	238	550	222	1,550	1,260	36	36	2,490
15	4,340	157	1,100	290	234	1,380	203	1,790	1,430	29	43	1,720
16	5,240	230	1,070	266	226	1,810	198	974	1,490	25	43	1,700
17	5,760	176	1,040	523	210	1,730	196	1,440	1,460	23	41	1,670
18	5,890	157	1,050	3,240	361	1,690	194	1,400	1,990	22	45	1,640
19	5,860	150	1,080	5,130	2,120	2,190	192	1,360	2,260	22	47	750
20	5,770	4,810	1,010	3,260	787	2,430	203	1,330	2,230	21	46	216
21	5,660	8,100	785	2,410	777	2,430	1,800	910	2,190	22	39	197
22	5,530	2,630	653	2,720	2,650	2,480	718	1,020	2,150	24	35	195
23	5,410	1,910	708	2,930	1,480	2,450	581	994	2,110	23	45	192
24	5,260	3,500	3,860	2,440	1,340	2,380	793	726	2,070	21	166	177
25	5,090	3,260	2,140	2,280	1,200	2,470	483	326	2,030	21	83	120
26	4,560	2,000	942	2,210	1,170	2,450	245	305	926	21	50	110
27	3,970	1,840	807	2,160	1,580	2,330	231	280	342	22	44	105
28	1,900	1,820	782	2,180	1,690	2,270	204	253	289	20	71	710
29	370	1,740	736	1,520	-----	2,210	253	236	272	20	1,500	1,010
30	1,680	1,670	685	1,150	-----	2,150	2,250	227	260	20	462	308
31	2,600	-----	621	1,100	-----	2,100	-----	749	-----	18	535	-----
TOTAL	131,890	44,035	46,453	46,950	22,696	82,575	17,770	28,134	54,795	2,031	3,787.8	57,269
MEAN	4,255	1,468	1,498	1,515	811	2,664	592	908	1,827	65.5	122	1,909
MAX	6,690	8,100	6,050	5,130	2,650	13,700	2,250	2,110	7,410	256	1,500	6,210
MIN	370	150	621	266	210	134	192	227	260	18	5.8	105
AC-FT	261,600	87,340	92,140	93,130	45,020	163,800	35,250	55,800	108,700	4,030	7,510	113,600

CAL YR 1973 TOTAL 654,525.0 MEAN 1,793 MAX 8,790 MIN 10 AC-FT 1,298,000
WTR YR 1974 TOTAL 538,385.8 MEAN 1,475 MAX 13,700 MIN 5.8 AC-FT 1,068,000

PEAK DISCHARGE (BASE, 9,000 CFS)

DATE TIME G.HT. DISCHARGE
03-10 2300 24.74 14,000

ARKANSAS RIVER BASIN

155

07167000 FALL RIVER NEAR EUREKA, KS

LOCATION.--Lat 37°47'07", long 96°13'52", in NW¼SW¼ sec.17, T.26 S., R.11 E., Greenwood County, on left downstream side of bridge on State Highway 99, 3.0 mi (4.8 km) southeast of Eureka, 5.0 mi (8.0 km) downstream from Spring Creek, and at mile 76.3 (122.8 km).

DRAINAGE AREA.--307 mi² (795 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 988.50 ft (301.295 m) above mean sea level (levels by Corps of Engineers).

AVERAGE DISCHARGE.--28 years, 191 ft³/s (5.409 m³/s), 138,400 acre-ft/yr (171 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 25,100 ft³/s (711 m³/s) Oct. 11, gage height, 21.21 ft (6.465 m); minimum, 2.5 ft³/s (0.071 m³/s) Aug. 1, 3.

Period of record: Maximum discharge, 91,800 ft³/s (2,600 m³/s) June 29, 1951, gage height, 29.60 ft (9.022 m), from floodmark in gage house, from rating curve extended above 70,000 ft³/s (1,980 m³/s) on basis of slope-area measurement of peak flow; no flow at times in 1953-57, 1963-64, 1966.

Flood in 1923 reached a stage of 27.1 ft (8.260 m), from floodmarks, discharge, 70,000 ft³/s (1,980 m³/s).

REMARKS.--Records good.

COOPERATION.--Gage-height record and 25 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

REVISIONS (WATER YEARS).--WSP 1211: 1951.

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	344	179	150	200	212	266	131	320	197	33	2.9	2,630
2	230	160	145	220	203	260	137	219	132	29	4.7	2,530
3	182	143	145	180	192	258	145	195	107	28	3.2	1,040
4	157	130	2,180	190	175	249	145	160	509	26	3.1	739
5	135	129	1,250	160	172	244	151	138	874	24	3.8	442
6	136	123	660	160	169	242	151	121	2,700	23	16	231
7	164	121	560	150	156	246	158	118	1,070	23	20	189
8	146	122	510	140	137	255	165	139	1,770	21	13	158
9	128	117	470	130	132	286	185	176	4,300	19	21	121
10	185	109	420	130	134	3,920	176	140	1,200	18	21	102
11	14,900	104	370	120	130	4,270	200	131	814	17	14	85
12	3,250	104	331	120	126	1,460	255	125	536	14	11	74
13	2,720	108	305	110	123	913	226	121	338	13	9.3	61
14	2,300	112	266	110	119	683	201	1,000	262	12	8.7	54
15	1,860	107	246	112	122	564	184	549	225	12	375	47
16	1,130	106	216	163	122	470	186	292	189	12	111	46
17	781	106	192	1,600	127	391	181	224	163	13	33	46
18	516	129	192	1,600	138	343	154	182	147	12	251	48
19	306	142	204	840	143	277	147	168	134	9.8	45	49
20	180	1,300	198	577	135	226	132	180	113	8.1	20	45
21	137	701	160	481	667	228	164	142	92	7.3	15	45
22	122	408	150	669	846	225	143	117	76	7.0	16	40
23	112	326	170	557	528	210	111	233	68	5.7	14	36
24	103	301	613	435	412	186	90	572	60	5.4	16	38
25	97	268	552	386	349	215	76	285	54	5.5	17	44
26	97	242	376	343	344	202	69	360	52	5.1	14	49
27	1,060	224	305	313	328	181	62	239	48	5.4	13	50
28	480	204	279	282	292	164	59	186	43	4.2	235	64
29	300	175	262	275	-----	152	343	154	37	3.8	217	67
30	240	165	241	252	-----	135	514	134	38	3.8	89	56
31	211	-----	232	227	-----	126	-----	291	-----	3.2	54	-----
TOTAL	32,709	6,665	12,350	11,232	6,733	17,847	5,041	7,411	16,348	423.3	1,686.7	9,226
MEAN	1,055	222	398	362	240	576	168	239	545	13.7	54.4	308
MAX	14,900	1,300	2,180	1,600	846	4,270	514	1,000	4,300	33	375	2,630
MIN	97	104	145	110	119	126	59	117	37	3.2	2.9	36
AC-FT	64,880	13,220	24,500	22,280	13,350	35,400	10,000	14,700	32,430	840	3,350	18,300

CAL YR 1973 TOTAL 162,031.1 MEAN 444 MAX 14,900 MIN 1.1 AC-FT 321,400
WTR YR 1974 TOTAL 127,672.0 MEAN 350 MAX 14,900 MIN 2.9 AC-FT 253,200

PEAK DISCHARGE (BASE, 9,000 CFS)

DATE	TIME	G.H.T.	DISCHARGE	DATE	TIME	G.H.T.	DISCHARGE
10-11	0915	21.21	25,100	06-09	0200	16.15	10,900

ARKANSAS RIVER BASIN

07167500 OTTER CREEK AT CLIMAX, KS

LOCATION.--Lat 37°42'30", long 96°13'30", in SW¼SE¼ sec.8, T.27 S., R.11 E., Greenwood County, near right bank on downstream side of pier of bridge on State Highway 99, 0.5 mi (0.8 km) south of Climax, 5.2 mi (8.4 km) upstream from mouth, and 5.5 mi (8.8 km) downstream from South Branch.

DRAINAGE AREA.--129 mi² (334 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 977.76 ft (298.021 m) above mean sea level (levels by Corps of Engineers).

AVERAGE DISCHARGE.--28 years, 74.8 ft³/s (2.118 m³/s), 54,190 acre-ft/yr (66.8 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 22,800 ft³/s (646 m³/s) Oct. 11, gage height, 25.39 ft (7.739 m); minimum, 0.78 ft³/s (0.022 m³/s) July 30, 31.

Period of record: Maximum discharge, 44,000 ft³/s (1,250 m³/s) Sept. 13, 1961, gage height, 28.50 ft (8.687 m), from rating curve extended above 17,000 ft³/s (481 m³/s); no flow at times in 1953-57, 1963, 1964-68, 1971-73.

REMARKS.--Records good.

COOPERATION.--Gage-height record and 27 discharge measurements furnished by Corps of Engineers; records computed 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	76	68	54	59	59	62	49	94	55	9.1	1.5	1,140
2	60	59	51	59	58	60	45	72	44	8.5	1.4	1,270
3	50	51	54	55	54	59	42	65	40	8.1	1.1	271
4	42	47	1,820	53	50	54	40	52	122	7.4	1.0	97
5	35	45	425	51	49	51	37	46	691	6.4	1.2	62
6	72	42	200	50	47	48	35	41	3,340	6.0	2.9	48
7	74	41	144	46	43	46	34	37	402	6.3	3.8	51
8	45	41	127	45	39	47	37	388	503	5.8	3.4	48
9	36	41	117	42	37	286	37	93	1,240	5.0	3.6	35
10	39	40	97	42	37	4,690	33	63	225	5.0	3.3	28
11	8,540	33	86	42	35	2,330	43	55	146	4.9	2.2	25
12	543	30	82	37	35	368	73	50	112	4.5	1.6	22
13	274	29	75	35	33	250	48	38	86	4.4	1.3	19
14	184	28	66	36	32	190	41	669	72	4.0	1.2	17
15	139	29	61	40	29	150	37	134	60	3.4	1.9	15
16	109	29	55	58	27	130	37	73	50	3.0	3.6	16
17	88	29	51	1,190	27	110	38	57	43	2.9	12	17
18	78	29	50	1,200	27	100	36	49	38	2.8	119	17
19	70	32	50	454	32	90	35	44	34	2.7	25	16
20	63	1,680	49	290	31	79	46	38	29	2.4	9.5	15
21	58	330	49	257	423	89	81	32	24	2.0	4.8	13
22	53	162	48	209	309	102	56	29	21	1.7	3.3	12
23	50	120	51	178	156	97	44	131	18	1.5	2.7	10
24	47	110	338	131	107	85	39	127	15	1.3	1.9	11
25	43	95	198	115	82	138	37	186	14	1.2	1.6	14
26	57	84	106	104	84	117	35	333	13	1.2	1.4	14
27	1,520	76	90	93	78	88	34	109	12	1.2	1.7	13
28	241	72	86	85	68	75	36	70	12	1.3	324	32
29	129	64	77	82	-----	66	209	55	11	1.1	150	69
30	89	57	71	73	-----	55	208	79	9.6	.84	38	32
31	79	-----	67	67	-----	51	-----	223	-----	.91	21	-----
TOTAL	12,983	3,593	4,895	5,278	2,088	10,163	1,602	3,532	7,481.6	116.85	800.4	3,449
MEAN	419	120	158	170	74.6	328	53.4	114	249	3.77	25.8	115
MAX	8,540	1,680	1,820	1,200	423	4,690	209	669	3,340	9.1	324	1,270
MIN	35	28	48	35	27	46	33	29	9.6	.84	1.0	10
AC-FT	25,750	7,130	9,710	10,470	4,140	20,160	3,180	7,010	14,840	232	1,590	6,840

CAL YR 1973 TOTAL 67,911.39 MEAN 186 MAX 8,540 MIN 0 AC-FT 134,700
WTR YR 1974 TOTAL 55,981.85 MEAN 153 MAX 8,540 MIN .84 AC-FT 111,000

PEAK DISCHARGE (BASE, 5,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
10-11	0600	25.39	22,800	06-06	1145	19.72	8,440
03-11	0215	18.06	7,160				

07168000 FALL RIVER LAKE NEAR FALL RIVER, KS

LOCATION.--Lat 37°38'48", long 96°04'39", in NW¼NE¼ sec. 3, T.28 S., R.12 E., Greenwood County, in right bank control tower at dam on Fall River, 4.0 mi (6.4 km) northwest of town of Fall River, and at mile 54.2 (87.2 km).

DRAINAGE AREA.--585 mi² (1,515 km²).

PERIOD OF RECORD.--April 1949 to current year (monthly records only prior to October 1957). Prior to October 1971 published as "Fall River Reservoir".

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (levels by Corps of Engineers).

EXTREMES.--Current year: Maximum elevation, 966.30 ft (294.528 m) Oct. 14, contents, 97,340 acre-ft (120 hm³); minimum, 947.48 ft (288.791 m) Apr. 4, contents, 21,530 acre-ft (26.5 hm³).
Period of record: Maximum elevation, 987.18 ft (300.892 m) July 13, 1951, contents, 260,200 acre-ft (321 hm³); minimum, 933.08 ft (284.403 m) Feb. 3, 1955, contents, 3,110 acre-ft (3.83 hm³).

REMARKS.--Reservoir is formed by earthfill dam. Spillway is a concrete, gravity, ogee-weir type. Regulated storage began Apr. 20, 1949. Conservation pool stage, elevation, 948.5 ft (289.10 m) was first reached June 5, 1949. Elevation of top of dam, 996.5 ft (303.73 m); maximum design pool, 990.0 ft (301.75 m); flood-control pool level, 987.5 ft (300.99 m), capacity, 259,000 acre-ft (319 hm³); and conservation pool level, 948.5 ft (289.10 m), capacity, 23,940 acre-ft (29.5 hm³), of which 17,000 acre-ft (21.0 hm³) is for pollution abatement. Reservoir was designed for flood control and conservation. Figures given herein represent total contents.

COOPERATION.--Elevations and contents furnished by Corps of Engineers; records reviewed by Geological Survey.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey made by Corps of Engineers, revised in 1964)

945	16,470	960	65,040
950	27,890	965	90,190
955	43,990	970	118,500

ELEVATION, IN FEET, AT 2400, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	955.78	950.76	950.99	950.70	948.46	947.78	948.34	950.00	950.17	949.38	948.00	955.35
2	954.22	950.29	950.62	950.70	948.32	947.84	947.95	949.57	949.55	949.30	947.95	957.99
3	952.52	949.83	950.46	950.53	948.13	947.91	947.68	949.25	949.72	949.27	947.91	958.64
4	951.20	949.37	953.68	950.22	948.05	947.94	947.48	949.03	950.23	949.24	947.87	959.00
5	950.60	949.00	954.71	949.87	948.05	947.95	947.49	948.82	950.62	949.20	947.82	958.93
6	950.56	948.88	954.96	949.55	948.09	947.95	947.54	948.58	955.72	949.14	A	957.87
7	950.32	948.83	954.88	949.24	948.12	947.95	947.70	948.32	956.75	949.11		956.33
8	950.02	948.78	954.63	948.88	948.15	948.75	947.76	948.37	958.50	949.05		954.76
9	949.66	948.72	954.34	948.70	948.16	949.62	947.80	948.42	961.46	949.01		953.08
10	949.54	948.65	954.00	948.69	948.17	957.10	947.82	948.43	962.22	948.98		951.24
11	963.23	948.57	953.65	948.67	948.18	961.19	947.87	948.43	962.66	948.94	A	949.95
12	965.04	948.52	953.34	948.61	948.10	962.21	947.95	948.42	962.70	948.91	947.98	949.44
13	966.06	948.54	952.85	948.55	947.99	962.49	948.07	948.28	962.40	948.88	947.93	949.27
14	966.29	948.60	952.41	948.50	947.84	962.14	948.23	949.89	961.95	948.85	947.90	949.20
15	965.88	948.60	951.95	948.50	947.75	961.72	948.36	950.37	961.32	948.80	948.13	949.15
16	965.00	948.61	951.42	A	947.68	961.24	948.39	949.92	960.66	948.76	948.24	949.11
17	963.88	948.65	950.90	950.60	947.61	960.73	948.41	949.47	959.71	948.71	A	949.04
18	962.52	948.67	950.38	952.80	947.60	960.08	948.44	949.09	958.50	948.68	A	948.98
19	961.07	948.98	949.85	953.90	947.62	959.26	948.67	948.67	957.23	948.64	948.68	948.95
20	959.48	953.11	949.52	953.48	947.63	958.46	948.49	948.36	955.88	948.61	948.66	948.89
21	957.80	953.63	949.43	953.03	948.84	957.56	948.61	948.30	954.58	948.56	948.63	948.83
22	955.98	953.54	949.36	952.43	949.56	956.69	948.70	948.30	953.37	948.50	948.60	948.77
23	953.96	953.43	949.32	951.68	949.40	955.80	948.72	948.46	952.08	948.45	948.58	948.70
24	951.98	953.21	950.08	950.75	949.03	954.88	948.60	949.79	950.64	948.40	948.55	948.77
25	950.36	952.95	950.47	950.21	948.58	953.95	948.40	A	949.96	948.37	948.53	948.76
26	949.77	952.69	950.61	950.03	948.15	952.94	948.25		949.88	948.32	948.50	948.75
27	951.89	952.41	950.60	949.79	947.90	951.88	948.19		949.83	948.28	948.56	948.95
28	952.42	952.09	950.63	949.57	947.82	950.77	948.20		949.75	948.17	950.41	949.14
29	952.24	951.74	950.65	949.30	-----	949.86	948.91	A	949.63	948.12	950.64	949.20
30	951.71	951.37	950.68	949.02	-----	949.37	949.85	950.68	949.52	948.08	950.35	949.22
31	951.25	-----	950.70	948.70	-----	948.82	-----	950.69	-----	948.05	950.55	-----
MEAN	955.88	950.37	951.68		948.18	954.28	948.22		955.24	948.73		951.48
MAX	966.29	953.63	954.96	953.90	949.56	962.49	949.85	950.69	962.70	949.38	950.64	959.00
MIN	949.54	948.52	949.32	948.50	947.60	947.78	947.48	948.28	949.52	948.05	947.82	948.70
(+)	31,440	31,800	29,820	24,440	22,320	24,740	27,480	29,790	26,570	22,840	29,400	25,740
(#)	-21,270	+360	-1,980	-5,380	-2,120	+2,420	+2,740	+2,310	-3,220	-3,730	+6,560	-3,660

CAL YR 1973 (#) -13,610
WTR YR 1974 (#) -26,970

+ CONTENTS, IN ACRE-FEET, AT END OF MONTH.
CHANGE IN CONTENTS, IN ACRE-FEET.
A NO GAGE-HEIGHT RECORD.

ARKANSAS RIVER BASIN

07168500 FALL RIVER NEAR FALL RIVER, KS

LOCATION.--Lat 37°38'34", long 96°03'33", in SW¼NE¼ sec.2, T.28 S., R.12 E., Greenwood County, near left bank on downstream side of highway bridge, 0.3 mi (0.5 km) downstream from Fall River Dam, 2.5 mi (4.0 km) upstream from Salt Creek, 3.0 mi (4.8 km) northwest of town of Fall River, and at mile 53.9 (86.7 km).

DRAINAGE AREA.--585 mi² (1,515 km²).

PERIOD OF RECORD.--April 1904 to September 1905 (gage heights only) published as "at Fall River", May 1939 to current year. Monthly discharge only for May 1939, published in WSP 1311.

GAGE.--Water-stage recorder. Datum of gage is 898.44 ft (273.845 m) above mean sea level (levels by Corps of Engineers). Prior to Sept. 30, 1905, nonrecording gage at site 4.7 mi (7.6 km) downstream at datum 21.6 ft (6.58 m) lower. May 5, 1939, to June 12, 1946, nonrecording gage at present site and datum. June 13 to Aug. 26, 1946, nonrecording gage and Aug. 27, 1946, to Sept. 30, 1957, water-stage recorder, at site 3.1 mi (5.0 km) downstream at datum 12.79 ft (3.898 m) lower.

AVERAGE DISCHARGE.--35 years, 338 ft³/s (9.572 m³/s), 244,900 acre-ft/yr (302 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 4,370 ft³/s (124 m³/s) Oct. 15, gage height, 11.44 ft (3.487 m); minimum, 0.54 ft³/s (0.015 m³/s) Sept. 4, 5.

Period of record: Maximum discharge, 45,600 ft³/s (1,290 m³/s) Apr. 16, 1945, gage height, 31.15 ft (9.495 m), present site and datum; no flow at times in 1939-40, 1946, 1955, 1967.

Maximum stages known prior to 1906 (at site and datum used 1904-5), 39.0 ft (11.89 m) June 16, 1904; 37.3 ft (11.37 m) June 10, 1904; 35.7 ft (10.88 m) July 6, 1904; 35.6 ft (10.85 m) in 1869; 35.5 ft (10.82 m) in 1898.

REMARKS.--Records good. Flow regulated since 1949 by Fall River Lake, 0.3 mi (0.5 km) above station (see sta 07168000).

COOPERATION.--Gage-height record and 29 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

REVISIONS.--WSP 1147: 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	3,360	995	800	380	580	359	834	639	1,020	188	38	263
2	3,280	915	796	380	466	234	617	1,010	1,010	125	39	1.4
3	3,210	836	647	550	465	234	614	708	1,000	75	39	.7
4	2,250	830	538	700	299	234	365	475	1,000	74	39	.6
5	1,090	663	560	700	177	235	137	475	1,810	75	39	698
6	684	366	563	700	176	235	95	475	1,440	75	39	2,670
7	681	260	870	689	176	236	94	474	183	76	39	3,220
8	680	259	1,100	684	191	239	94	331	1.3	57	38	3,140
9	677	259	1,090	435	205	240	95	225	1.3	40	40	3,060
10	415	259	1,090	243	204	124	96	225	42	40	40	2,970
11	127	259	1,080	243	272	1.7	96	227	84	40	40	2,000
12	25	221	1,070	242	336	1.2	95	228	662	39	40	834
13	731	165	1,070	242	335	634	96	229	1,200	40	40	316
14	2,380	147	1,070	205	333	1,800	96	233	1,480	40	40	183
15	3,740	147	1,060	126	299	1,780	96	577	1,800	40	40	183
16	4,280	117	1,050	71	267	1,760	97	1,030	1,790	38	40	183
17	4,210	84	1,040	71	267	1,750	97	885	2,350	38	40	183
18	4,130	84	1,030	586	267	2,030	97	761	2,810	38	41	162
19	4,050	85	1,020	1,010	267	2,260	97	757	2,760	38	41	145
20	3,980	90	682	1,020	267	2,230	98	530	2,710	37	41	144
21	3,890	521	365	1,550	268	2,210	98	221	2,470	37	41	144
22	3,790	838	365	2,020	674	2,180	225	103	2,170	37	41	144
23	3,690	834	365	2,000	1,000	2,150	347	64	2,130	37	41	107
24	3,390	829	367	1,970	994	2,120	347	53	2,080	37	41	77
25	2,480	825	369	1,290	987	2,090	347	53	1,040	37	41	77
26	1,240	824	370	742	979	2,060	258	54	188	39	41	78
27	237	821	371	738	704	2,030	185	54	188	39	41	79
28	73	816	371	736	463	2,000	185	55	187	39	42	77
29	820	810	371	733	-----	1,560	185	161	186	38	245	77
30	1,190	804	371	729	-----	968	187	361	187	38	519	77
31	996	-----	375	724	-----	958	-----	699	-----	38	517	-----
TOTAL	65,776	14,963	22,286	22,509	11,918	36,942.9	6,370	12,372	35,979.6	1,629	2,403	21,293.7
MEAN	2,122	499	719	726	426	1,192	212	399	1,199	52.5	77.5	710
MAX	4,280	995	1,100	2,020	1,000	2,260	834	1,030	2,810	188	519	3,220
MIN	25	84	365	71	176	1.2	94	53	1.3	37	38	.60
AC-FT	130,500	29,680	44,200	44,650	23,640	73,280	12,630	24,540	71,370	3,230	4,770	42,240

CAL YR 1973 TOTAL 300,011.9 MEAN 822 MAX 4,690 MIN 2.2 AC-FT 595,100

WTR YR 1974 TOTAL 254,442.2 MEAN 697 MAX 4,280 MIN .60 AC-FT 504,700

07169500 FALL RIVER AT FREDONIA, KS

LOCATION.--Lat 37°30'30", long 95°50'00", in SW¼NW¼ sec.24, T.29 S., R.14 E., Wilson County, on downstream side of left pier of bridge on State Highway 96, 0.8 mi (1.3 km) upstream from Clear Creek, 1.0 mi (1.6 km) downstream from Salt Creek, 1.0 mi (1.6 km) south of Fredonia, and at mile 25.3 (40.7 km).

DRAINAGE AREA.--827 mi² (2,142 km²).

PERIOD OF RECORD.--October 1938 to current year. Monthly discharge only for October and November 1938, published in WSP 1311. Published as "near Fredonia" 1952-57.

GAGE.--Water-stage recorder. Datum of gage is 819.09 ft (249.659 m) above mean sea level (levels by Corps of Engineers). Prior to Dec. 21, 1949, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--36 years, 468 ft³/s (13.25 m³/s), 339,100 acre-ft/yr (418 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 14,300 ft³/s (405 m³/s) Mar. 10, gage height, 24.80 ft (7.559 m); minimum, 35 ft³/s (0.991 m³/s) July 30.

Period of record: Maximum discharge, 49,000 ft³/s (1,390 m³/s) Apr. 16, 1945, gage height, 36.17 ft (11.025 m); no flow at times in 1939-40.

Maximum stage known since at least 1904, that of Apr. 16, 1945.

REMARKS.--Records good. Considerable regulation since 1949 by Fall River Lake 28.9 mi (46.5 km) above (see sta 07168000) and during low flow by Fredonia City Water Reservoir 1.0 mi (1.6 km) upstream. Records of chemical analyses for the water year 1974 are published in Part 2 of this report.

COOPERATION.--Gage-height record and 24 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

REVISIONS (WATER YEARS).--WSP 1117: Drainage area. WSP 1341: 1939-40.

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	3,360	1,060	844	531	822	574	1,020	480	1,060	205	38	2,380
2	3,280	1,030	837	525	597	390	750	1,050	1,040	202	41	4,490
3	3,210	875	907	470	570	334	682	1,040	1,260	135	38	1,400
4	3,050	857	4,910	795	554	323	649	574	3,270	94	36	293
5	1,620	838	2,590	820	316	314	299	529	3,250	90	37	161
6	880	548	855	781	251	308	204	519	6,510	89	54	1,560
7	991	331	748	780	233	304	171	510	5,000	88	57	3,010
8	773	284	1,200	745	227	323	167	586	1,580	87	47	3,100
9	724	279	1,210	878	241	4,350	164	403	1,720	72	46	3,030
10	666	277	1,180	472	252	11,600	164	320	419	52	48	2,960
11	3,000	277	1,160	310	253	9,620	190	300	269	49	45	2,780
12	1,630	276	1,150	310	327	1,020	226	292	257	50	45	1,330
13	313	217	1,140	310	361	437	194	289	1,170	50	45	559
14	1,470	161	1,120	316	359	1,700	168	1,000	1,270	50	45	272
15	3,020	152	1,110	265	356	2,050	157	557	1,780	49	50	223
16	3,990	148	1,090	206	313	1,960	157	935	1,820	51	51	220
17	4,170	120	1,070	659	284	1,890	156	1,010	1,860	49	48	219
18	4,130	88	1,070	2,760	369	1,900	154	782	2,720	47	51	216
19	4,070	86	1,080	3,190	1,210	2,310	153	752	2,750	45	49	192
20	4,010	5,070	1,050	2,060	467	2,310	183	736	2,700	43	47	175
21	3,930	2,190	511	1,720	1,020	2,310	1,650	407	2,650	44	46	170
22	3,860	1,050	431	2,540	1,670	2,360	390	727	2,250	43	46	164
23	3,770	970	532	2,430	1,320	2,310	427	658	2,130	43	48	163
24	3,680	2,110	2,260	2,240	1,200	2,250	446	1,000	2,090	42	48	128
25	3,200	1,190	912	2,080	1,130	2,290	431	784	1,930	43	47	116
26	2,200	996	580	986	1,120	2,240	422	755	366	40	46	110
27	2,530	939	531	898	1,080	2,180	311	292	224	39	48	105
28	518	937	516	886	623	2,130	271	198	215	37	468	1,120
29	246	895	491	888	-----	2,070	359	154	210	36	2,160	1,190
30	1,410	862	472	863	-----	1,170	665	234	207	35	547	286
31	1,090	-----	448	844	-----	1,040	-----	1,590	-----	39	578	-----
TOTAL	74,791	25,113	34,005	33,558	17,525	66,367	11,380	19,463	53,977	2,038	5,000	32,122
MEAN	2,413	837	1,097	1,083	626	2,141	379	628	1,799	65.7	161	1,071
MAX	4,170	5,070	4,910	3,190	1,670	11,600	1,650	1,590	6,510	205	2,160	4,490
MIN	246	86	431	206	227	304	153	154	207	35	36	105
AC-FT	148,300	49,810	67,450	66,560	34,760	131,600	22,570	38,600	107,100	4,040	9,920	63,710

CAL YR 1973 TOTAL 426,445 MEAN 1,168 MAX 7,280 MIN 19 AC-FT 845,900
WTR YR 1974 TOTAL 375,339 MEAN 1,028 MAX 11,600 MIN 35 AC-FT 744,500

PEAK DISCHARGE (BASE, 8,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
03-10	2400	24.80	14,300	06-07	0200	19.40	9,420

ARKANSAS RIVER BASIN

07169800 ELK RIVER AT ELK FALLS, KS

LOCATION.--Lat 37°22'32", long 96°11'07", in SW¼SE¼ sec.3, T.31 S., R.11 E., Elk County, at downstream side of bridge on U.S. Highway 160 in Elk Falls, 2.0 mi (3.2 km) upstream from Wild Cat Creek, and at mile 57.5 (92.5 km).

DRAINAGE AREA.--220 mi² (570 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 897.300 ft (273.497 m) above mean sea level (levels by Corps of Engineers).

AVERAGE DISCHARGE.--7 years, 170 ft³/s (4,814 m³/s), 123,200 acre-ft/yr (152 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 14,500 ft³/s (411 m³/s) Mar. 10, gage height, 20.09 ft (6.123 m); minimum, 1.5 ft³/s (0.042 m³/s) July 29.

Period of record: Maximum discharge, 29,300 ft³/s (830 m³/s) Apr. 18, 1970, gage height, 27.48 ft (8.376 m); no flow at times in 1967, 1970-72.

REMARKS.--Records good.

COOPERATION.--Gage-height record and 27 discharge measurements furnished by Corps of Engineers; records computed 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	104	84	71	86	98	114	82	303	118	18	1.7	264
2	86	76	80	88	94	111	74	222	105	18	1.7	1,340
3	71	67	406	88	85	110	69	150	96	15	1.9	440
4	62	58	5,400	81	78	105	66	106	199	14	2.0	132
5	52	52	877	79	78	97	61	90	1,230	14	2.3	68
6	56	48	361	79	81	91	58	80	6,880	13	3.6	51
7	178	46	242	74	76	89	57	73	1,190	11	5.5	46
8	87	43	223	72	70	260	57	825	747	9.2	4.2	42
9	64	40	206	70	67	3,610	57	882	1,400	8.9	4.2	34
10	51	36	174	69	67	11,100	54	296	387	8.4	4.4	28
11	2,170	33	156	69	67	4,480	66	139	246	9.2	4.4	25
12	698	31	146	62	66	871	98	103	194	8.0	4.2	22
13	244	30	133	57	65	519	73	84	157	6.0	3.6	20
14	153	28	106	58	65	384	60	949	135	4.6	3.2	16
15	131	28	98	63	61	370	53	273	114	4.4	3.3	13
16	103	26	88	83	60	267	52	141	95	4.1	3.7	13
17	81	26	80	480	57	219	52	111	81	3.7	8.2	18
18	67	26	78	1,880	83	201	51	95	74	3.2	21	23
19	61	26	83	1,430	384	179	88	88	69	2.6	49	18
20	57	2,970	76	710	132	156	337	79	61	2.4	39	17
21	53	714	75	483	991	159	499	77	55	2.0	15	17
22	50	245	76	394	778	193	147	2,460	48	1.9	6.1	16
23	48	176	105	325	377	176	88	1,130	40	1.8	4.7	13
24	48	444	727	223	222	147	70	1,440	36	1.7	3.9	10
25	47	176	392	183	160	167	64	2,550	32	1.7	3.8	11
26	54	108	187	168	154	156	61	2,860	28	1.8	3.8	13
27	958	91	149	152	145	134	60	475	25	1.7	4.2	15
28	265	94	138	136	128	119	59	269	22	1.7	3,820	1,030
29	130	84	124	134	-----	111	152	194	22	1.5	560	413
30	101	73	109	120	-----	94	1,840	158	20	1.6	111	108
31	91	-----	103	109	-----	86	-----	134	-----	1.6	54	-----
TOTAL	6,421	5,979	11,269	8,105	4,789	24,875	4,605	16,836	13,906	196.7	4,757.6	4,276
MEAN	207	199	364	261	171	802	154	543	464	6.35	153	143
MAX	2,170	2,970	5,400	1,880	991	11,100	1,840	2,860	6,880	18	3,820	1,340
MIN	47	26	71	57	57	86	51	73	20	1.5	1.7	10
AC-FT	12,740	11,860	22,350	16,080	9,500	49,340	9,130	33,390	27,580	390	9,440	8,480

CAL YR 1973 TOTAL 102,832.11 MEAN 282 MAX 5,400 MIN .05 AC-FT 204,000
WTR YR 1974 TOTAL 106,015.30 MEAN 290 MAX 11,100 MIN 1.5 AC-FT 210,300

PEAK DISCHARGE (BASE, 4,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
10-11	1630	12.06	5,100	03-10	0745	20.09	14,500	05-25	1545	13.01	5,810
11-20	1230	12.71	5,580	04-30	1100	10.99	4,290	05-26	0315	15.03	7,430
12-04	1115	16.56	8,920	05-22	0915	13.82	6,460	06-06	1645	19.22	12,700
03-09	0400	11.14	4,400	05-24	0015	12.15	5,160	08-28	1345	16.91	9,300

07170050 ELK CITY LAKE NEAR INDEPENDENCE, KS

LOCATION.--Lat 37°16'39", long 95°46'37", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.9, T.32 S., R.15 E., Montgomery County, in gate tower of Elk City Dam, on Elk River, 5.0 mi (8.0 km) northwest of Independence, and at mile 8.7 (14.0 km).

DRAINAGE AREA.--634 mi² (1,642 km²).

PERIOD OF RECORD.--March 1966 to current year. Prior to October 1971 published as "Elk City Reservoir".

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (levels by Corps of Engineers).

EXTREMES.--Current year: Maximum elevation, 815.37 ft (248.525 m) Mar. 13, contents, 184,100 acre-ft (227 hm³); minimum, 791.83 ft (241.350 m) Feb. 6, contents, 34,040 acre-ft (42.0 hm³).

Period of record: Maximum elevation, 815.37 ft (248.525 m) Mar. 13, 1974, contents, 184,100 acre-ft (227 hm³); minimum since conservation pool first reached, 781.25 ft (238.125 m) Apr. 12, 1967, contents, 8,090 acre-ft (9.97 hm³).

REMARKS.--Reservoir is formed by compacted earthfill dam. Storage began Mar. 17, 1966. Total capacity 667,000 acre-ft (822 hm³), consisting of the following: Sedimentation, 1,100 acre-ft (1.36 hm³) below elevation 764.0 ft (232.87 m); conservation, 33,500 acre-ft (41.3 hm³) between elevations 764.0 ft (232.87 m) and 792.0 ft (241.40 m); flood control, 256,100 acre-ft (316 hm³) between elevations 792.0 ft (241.40 m) and 825.0 ft (251.46 m); uncontrolled storage, 376,300 acre-ft (464 hm³) between elevations 825.0 ft (251.46 m) and 843.7 ft (257.16 m). Reservoir is designed for flood control, pollution control, conservation and recreation. Figures given herein represent total contents.

COOPERATION.--Records furnished by Corps of Engineers; reviewed by Geological Survey.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey made in 1939 by Corps of Engineers)

790	27,930	805	100,800
795	46,240	810	137,500
800	70,290	815	180,700
		820	231,000

ELEVATION, IN FEET, AT 2400, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	797.54	796.33	799.85	A	792.01	792.27	792.56	795.08	793.91	793.43	792.92	795.65
2	796.80	796.18	799.57	A	791.95	792.32	792.33	795.00	793.96	793.43	792.88	797.18
3	796.34	796.16	799.28	A	791.89	792.33	792.18	794.62	794.02	793.42	792.85	798.24
4	796.23	796.14	802.70	794.44	791.90	792.29	792.12	794.06	794.16	793.41	792.83	797.99
5	796.22	796.13	805.07	793.59	791.87	792.28	792.14	793.43	795.84	793.41	792.84	797.09
6	796.24	796.13	805.21	792.70	791.85	792.24	792.20	792.75	801.78	793.41	792.94	796.30
7	796.27	796.12	804.90	792.24	791.87	792.22	792.20	792.28	805.52	793.40	792.96	795.67
8	796.35	796.11	804.46	792.18	791.92	792.35	792.19	792.45	808.31	793.39	792.96	795.00
9	796.37	796.09	803.98	792.24	791.94	796.50	792.22	793.56	808.46	793.38	793.05	794.60
10	796.38	796.11	803.49	792.29	791.96	807.13	792.23	794.27	808.78	793.35	793.05	794.64
11	798.20	796.11	802.99	792.32	792.00	813.62	792.36	794.20	808.90	793.33	793.05	794.65
12	799.50	796.15	802.46	792.35	792.02	815.20	792.38	794.04	808.88	793.30	793.05	794.65
13	799.57	796.15	801.87	792.37	792.04	815.37	792.48	A	808.64	793.30	793.05	794.63
14	799.26	796.16	801.02	792.38	792.06	815.15	792.48	A	808.12	793.29	793.04	794.63
15	798.63	796.14	799.76	792.32	792.07	814.93	792.51	794.20	807.32	793.28	793.05	794.64
16	797.67	796.14	798.44	792.29	792.09	814.54	792.51	794.03	806.45	793.28	793.05	794.66
17	796.70	796.15	797.02	793.14	792.15	813.90	792.52	793.82	805.33	793.26	793.06	794.67
18	796.27	796.15	795.50	794.99	792.55	812.89	792.53	793.66	803.85	793.25	793.05	794.68
19	796.25	796.23	793.94	796.73	793.69	811.69	792.55	793.49	802.35	793.23	793.01	794.74
20	796.25	799.31	792.84	797.32	793.77	810.37	792.72	793.37	800.75	793.23	793.00	794.76
21	796.22	800.85	792.62	797.23	794.61	809.07	794.23	793.37	799.19	793.22	793.00	794.76
22	796.19	800.80	792.60	796.96	795.66	807.68	794.12	795.99	797.63	793.16	792.99	794.77
23	796.15	800.62	792.98	796.46	795.40	806.28	793.29	797.64	795.97	793.15	792.98	794.77
24	796.11	800.92	795.09	795.68	794.95	804.80	792.80	800.07	794.13	793.13	792.97	794.82
25	796.07	801.15	795.63	794.78	794.41	803.28	792.61	800.60	793.38	793.12	792.95	794.83
26	796.07	801.03	795.82	793.86	793.85	801.65	792.47	801.76	793.38	793.10	792.94	794.85
27	797.15	800.83	795.91	792.86	793.23	799.90	792.35	800.80	793.40	793.06	792.98	794.86
28	797.58	800.63	795.94	792.38	792.59	797.98	792.19	798.64	793.40	793.03	793.33	795.56
29	797.50	800.40	795.96	792.33	-----	796.27	792.48	796.84	793.42	792.97	795.95	796.50
30	797.08	800.14	795.99	792.23	-----	794.98	794.29	795.40	793.39	792.96	796.01	796.57
31	796.64	-----	795.99	792.10	-----	793.60	-----	794.21	-----	792.95	795.58	-----
MEAN	796.96	797.79	798.67	792.80	792.80	803.07	792.61	800.42	793.25	793.27	795.38	
MAX	799.57	801.15	805.21	797.32	795.66	815.37	794.29	801.76	808.90	793.43	796.01	798.24
MIN	796.07	796.09	792.60	792.10	791.85	792.22	792.12	792.28	793.38	792.95	792.83	794.60
(+)	53,460	71,050	50,540	34,980	36,750	40,590	43,330	43,000	39,790	38,120	48,690	53,140
(#)	-7,610	+17,590	-20,510	-15,560	+1,770	+3,840	+2,740	-330	-3,210	-1,670	+10,570	+4,450

CAL YR 1973 (#) +2,910

WTR YR 1974 (#) -7,930

+ CONTENTS, IN ACRE-FEET, AT END OF MONTH.

CHANGE IN CONTENTS, IN ACRE-FEET.

A NO GAGE-HEIGHT RECORD.

LOCATION.--Lat 37°16'46", long 95°46'53", in NW¼SW¼ sec.9, T.32 S., R.15 E., Montgomery County, near left bank, 600 ft (183 m) below Elk City Dam, and at mile 8.6 (13.8 km).

PERIOD OF RECORD.--October 1965 to current year. Prior to October 1971, published as "below Elk City Reservoir".

AVERAGE DISCHARGE.--9 years, 373 ft³/s (10.56 m³/s), 270,200 acre-ft/yr (333 hm³/yr).

Period of record: Maximum discharge, 7,900 ft³/s (224 m³/s), June 5, 1969, gage height, 27.96 ft (8.522 m); no flow at times in 1966, 1967, 1977.

COOPERATION.--Gage-height record and 36 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,840	803	910	301	366	856	2,000	906	727	4.3	2.5	473
2	1,820	305	904	301	290	237	519	1,440	99	2.6	2.4	13
3	1,130	100	1,400	1,100	289	238	348	1,440	99	3.2	2.4	13
4	319	98	680	1,990	254	237	181	1,430	100	3.3	2.4	1,070
5	79	91	7.0	1,690	226	237	72	1,410	440	3.2	2.3	2,380
6	78	71	634	1,680	136	237	87	1,380	430	3.2	2.3	1,900
7	78	68	1,500	955	77	236	84	899	40	3.4	2.2	1,460
8	77	66	1,890	250	77	206	84	349	.6	3.5	2.1	1,450
9	77	44	1,880	142	77	160	84	234	.6	3.5	2.1	814
10	77	30	1,860	69	79	80	82	484	55	3.5	2.8	12
11	30	30	1,850	70	85	8.0	83	700	111	3.5	3.5	11
12	4.1	30	1,840	70	86	5.0	83	697	655	3.4	3.7	11
13	637	29	1,830	70	86	480	83	694	1,150	3.3	3.7	11
14	1,090	29	2,560	170	86	2,010	81	699	2,180	3.3	4.1	11
15	1,760	30	3,410	239	85	2,700	80	704	3,200	3.5	3.7	11
16	2,340	30	3,350	239	85	2,700	78	702	3,200	3.1	6.7	11
17	2,330	29	3,290	246	83	3,470	75	564	4,020	2.8	7.1	12
18	1,060	29	3,240	714	77	4,990	75	450	4,900	2.8	6.6	12
19	122	28	3,200	1,060	230	5,980	76	450	4,830	2.8	5.9	11
20	121	29	2,190	1,050	490	5,870	77	336	4,760	2.8	6.1	9.5
21	121	587	573	1,630	497	5,770	79	159	4,340	2.8	6.2	8.7
22	120	950	293	2,250	1,030	5,680	917	550	3,680	2.8	6.2	9.3
23	119	927	290	2,210	1,460	5,610	1,700	2,100	3,610	2.8	6.0	10
24	119	930	300	2,190	1,450	5,490	1,090	3,400	3,560	2.8	6.0	9.3
25	80	930	302	2,170	1,430	5,390	469	3,400	1,510	2.8	6.0	9.4
26	55	930	302	2,140	1,420	5,300	401	3,400	8.5	2.8	5.9	10
27	55	930	302	2,120	1,410	5,180	347	5,300	8.5	2.8	5.9	11
28	56	926	302	1,270	1,400	5,080	347	6,720	8.5	2.8	5.9	12
29	579	918	302	473	-----	4,170	347	5,090	8.4	2.7	5.9	11
30	1,050	913	302	471	-----	2,780	351	3,350	7.9	2.6	444	286
31	1,050	-----	302	471	-----	2,740	-----	2,800	-----	2.5	1,040	-----
TOTAL	18,473.1	10,910	41,995.0	29,801	13,361	84,127.0	10,380	52,237	47,739.0	95.2	1,612.6	10,072.2
MEAN	596	364	1,355	961	477	2,714	346	1,685	1,591	3.07	52.0	336
MAX	2,340	950	3,410	2,250	1,460	5,980	2,000	6,720	4,900	4.3	1,040	2,380
MIN	4.1	28	7.0	69	77	5.0	72	159	.60	2.5	2.1	8.7
AC-FT	36,640	21,640	83,300	59,110	26,500	166,900	20,590	103,600	94,690	189	3,200	19,980
CAL YR 1973	TOTAL 309,565.2		MEAN 848	MAX 6,250	MIN 2.1	AC-FT 614,000						
WTR YR 1974	TOTAL 320,803.1		MEAN 879	MAX 6,720	MIN .60	AC-FT 636,300						

07170500 VERDIGRIS RIVER AT INDEPENDENCE, KS

LOCATION.--Lat 37°13'26", long 95°40'43", in NW¼NE¼NE¼ sec.32, T.32 S., R.16 E., Montgomery County, near right bank at downstream side of bridge on U.S. Highway 160, 1.0 mi (1.6 km) east of Independence, 3.6 mi (5.8 km) downstream from Elk River, and at mile 194.3 (312.6 km).

DRAINAGE AREA.--2,892 mi² (7,490 km²).

PERIOD OF RECORD.--August 1895 to September 1904 (monthly figures only, published in WSP 1311), October 1921 to current year.

GAGE.--Water-stage recorder. Datum of gage is 716.63 ft (218.429 m) above mean sea level. Aug. 2, 1895, to Nov. 30, 1903, nonrecording gage at former milldam 5.0 mi (8.0 km) downstream and 2.5 mi (4.0 km) northwest of Liberty, at datum about 4.00 ft (1.219 m) lower. Apr. 20 to Sept. 25, 1904, nonrecording gage at Myrtle Street highway bridge 0.8 mi (1.3 km) upstream at different datum. Nov. 14, 1921, to Sept. 30, 1929, nonrecording gage at Myrtle Street bridge at datum 0.87 ft (0.265 m) higher than present datum. Oct. 1, 1929, to Dec. 25, 1933, nonrecording gage at present site and datum.

AVERAGE DISCHARGE.--62 years, 1,657 ft³/s (46.93 m³/s), 1,200,000 acre-ft/yr (1.48 km³/yr).

EXTREMES.--Current year: Maximum discharge, 35,600 ft³/s (1,010 m³/s) Mar. 11, gage height, 39.53 ft (12.049 m); minimum, 42 ft³/s (1.19 m³/s) Aug. 4.

Period of record: Maximum discharge, 117,000 ft³/s (3,310 m³/s) Apr. 17, 1945, gage height, 47.28 ft (14.411 m); maximum gage height, 47.60 ft (14.508 m) May 19, 1943; no flow at times in 1932, 1934, 1936, 1939-40, 1953-55.

Maximum stage known since at least 1885, that of May 19, 1943.

REMARKS.--Records good. Flow regulated since 1949 by Fall River Lake (see sta 07168000) and since 1960 by Toronto Lake (see sta 07165900). Since 1966, some regulation by Elk City Lake (see sta 07170050). Records of chemical analyses for the water year 1974 are published in Part 2 of this report.

COOPERATION.--Gage-height record and 25 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

REVISIONS (WATER YEARS).--WSP 977: 1922, 1927-29. WSP 1117: Drainage area. WSP 1341: 1923-25(M), 1939.

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	10,100	4,890	3,850	1,360	2,730	3,830	5,940	5,110	3,660	464	49	4,300
2	10,600	4,040	3,770	1,590	2,390	2,680	4,030	3,430	2,000	452	48	9,970
3	10,200	2,670	4,310	2,200	2,020	1,410	3,210	4,120	1,860	432	44	11,600
4	8,840	2,160	15,200	3,710	1,940	982	2,260	3,820	5,030	285	44	3,780
5	7,840	2,100	15,600	3,810	1,700	816	1,720	3,370	11,400	200	59	3,510
6	6,330	1,910	7,760	4,000	1,060	771	844	3,270	15,300	188	79	4,780
7	5,130	1,290	3,650	3,360	868	753	593	2,930	23,500	184	108	6,900
8	4,770	708	4,240	2,330	763	959	509	2,140	17,800	178	114	8,570
9	4,200	593	4,880	2,270	731	7,450	496	1,980	8,320	175	122	8,500
10	4,040	552	4,790	1,990	732	26,000	486	1,810	5,080	163	115	7,240
11	6,420	539	4,700	1,020	728	34,400	532	1,520	1,330	114	100	7,040
12	10,500	534	4,640	906	734	31,700	656	1,360	1,330	93	93	6,380
13	6,840	526	4,580	903	792	19,100	675	1,360	2,450	88	90	4,930
14	4,310	429	4,860	891	786	4,230	557	2,040	4,640	87	85	3,940
15	7,470	352	6,060	999	770	7,400	486	4,850	6,190	90	88	2,270
16	10,800	377	5,980	946	758	7,680	473	2,230	6,740	80	102	2,030
17	12,500	414	5,890	2,180	682	7,460	462	3,290	7,110	72	102	2,000
18	12,600	334	5,830	5,780	904	8,480	455	3,060	8,740	69	112	1,960
19	10,800	291	5,890	10,200	5,960	10,100	448	2,820	10,100	64	104	1,710
20	10,600	7,400	4,620	9,610	3,780	11,000	455	2,690	10,100	59	100	628
21	10,400	14,400	2,880	7,280	2,360	11,000	1,920	2,210	9,780	60	96	395
22	10,100	10,600	1,620	7,590	6,260	11,000	3,730	3,230	8,780	61	91	374
23	9,930	4,580	2,130	9,120	5,570	11,000	2,800	4,580	8,210	60	91	366
24	9,680	6,060	8,670	7,970	4,750	10,700	2,830	8,830	8,020	60	106	368
25	9,300	10,700	7,100	7,380	4,340	10,600	1,800	6,390	6,690	56	189	321
26	8,420	5,430	2,930	6,740	4,210	10,700	1,260	6,650	3,190	57	126	250
27	8,690	4,460	2,150	5,900	4,310	10,300	1,050	5,840	726	59	105	231
28	6,060	4,410	2,000	5,420	4,480	10,000	871	7,090	507	58	136	2,160
29	1,640	4,150	1,900	4,050	-----	9,470	885	6,100	483	55	2,140	3,830
30	2,550	3,960	1,780	3,110	-----	7,300	1,990	3,950	469	51	2,550	1,610
31	5,190	-----	1,680	2,910	-----	6,370	-----	4,820	-----	50	2,230	-----
TOTAL	246,850	100,859	155,940	127,525	67,108	295,641	44,423	116,890	199,535	4,164	9,618	111,943
MEAN	7,963	3,362	5,030	4,114	2,397	9,537	1,481	3,771	6,651	134	310	3,731
MAX	12,600	14,400	15,600	10,200	6,260	34,400	5,940	8,830	23,500	464	2,550	11,600
MIN	1,640	291	1,620	891	682	753	448	1,360	469	50	44	231
AC-FT	489,600	200,100	309,300	252,900	133,100	586,400	88,110	231,900	395,800	8,260	19,080	222,000

CAL YR 1973 TOTAL 1,693,274 MEAN 4,639 MAX 22,400 MIN 32 AC-FT 3,359,000
WTR YR 1974 TOTAL 1,480,496 MEAN 4,056 MAX 34,400 MIN 44 AC-FT 2,937,000

PEAK DISCHARGE (BASE, 14,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
11-21	2015	24.46	15,600	03-11	1900	39.53	35,600
12-04	1400	27.98	16,500	06-07	0830	32.83	24,200

ARKANSAS RIVER BASIN

07170700 BIG HILL CREEK NEAR CHERRYVALE, KS

LOCATION.--Lat 37°16'00", long 95°28'05", in SE¼SE¼ sec.7, T.32 S., R.18 E., Labette County, on right downstream abutment of bridge on county road, 4.3 mi (6.9 km) east of Cherryvale, and at mile 32.5 (52.3 km).

DRAINAGE AREA.--37 mi² (96 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 795.93 ft (242.599 m) above mean sea level (levels by Corps of Engineers). Prior to May 6, 1958, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--17 years, 25.6 ft³/s (0.725 m³/s), 18,550 acre-ft/yr (22.9 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 13,000 ft³/s (368 m³/s) Mar. 10, gage height, 19.87 ft (6.056 m), from rating curve extended above 4,800 ft³/s (136 m³/s); no flow for many days.

Period of record: Maximum discharge, 13,000 ft³/s (368 m³/s) Mar. 10, 1974, gage height, 19.87 ft (6.056 m), from rating curve extended above 4,800 ft³/s (136 m³/s); no flow at times in most years.

A flood in 1951 reached a stage of 18.92 ft (5.767 m), from information by local residents.

REMARKS.--Records fair.

COOPERATION.--Gage-height record, 32 discharge measurements and 2 observations of no flow furnished by Corps of Engineers; records computed 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	14	9.9	20	13	18	16	8.3	33	9.3	1.2	0	282
2	10	7.5	17	13	16	15	7.5	16	7.1	.95	0	67
3	7.7	6.0	91	12	13	15	6.7	12	17	.74	0	40
4	7.4	4.5	1,530	10	11	13	6.3	8.8	128	.68	0	15
5	11	5.1	145	9.9	11	11	6.1	7.1	644	.50	0	7.1
6	3.1	4.3	50	9.8	10	11	5.9	6.1	1,800	.45	0	5.3
7	3.4	3.9	34	8.5	8.5	9.8	6.0	5.4	1,530	.29	0	3.6
8	2.6	3.9	27	6.7	7.3	8.9	6.0	5.7	90	.13	0	2.7
9	1.4	4.8	22	6.5	6.7	161	5.7	8.4	63	.07	.02	2.2
10	.98	4.5	18	5.6	6.5	4,690	5.6	7.8	28	.04	.90	2.0
11	305	3.0	15	3.7	6.4	1,090	6.7	7.0	19	.03	.96	1.6
12	126	2.7	14	2.4	6.4	74	8.7	6.5	17	0	.96	1.1
13	144	2.4	13	2.1	6.4	50	8.9	5.9	13	0	.62	.07
14	34	2.4	12	2.2	6.2	42	6.8	16	11	.02	.40	0
15	19	2.2	10	3.0	5.8	424	5.8	13	9.1	.05	1.8	0
16	13	1.8	8.4	29	5.5	78	5.6	5.5	7.6	.02	2.3	0
17	8.0	1.8	6.6	408	5.4	38	5.3	4.1	6.1	0	1.2	0
18	4.7	1.5	6.6	410	53	31	5.0	3.7	5.2	0	.83	0
19	2.9	1.6	49	158	546	24	5.1	3.8	4.7	0	.29	.70
20	1.7	747	38	74	59	21	6.6	3.9	4.1	0	.13	2.2
21	1.3	129	34	48	85	21	15	4.2	3.7	0	.01	2.5
22	1.3	32	33	52	172	23	13	15	3.2	0	0	4.3
23	1.4	22	173	63	51	21	7.7	32	3.0	0	0	3.9
24	1.5	291	1,000	33	29	18	6.1	72	2.8	0	0	3.3
25	2.3	548	92	26	21	20	5.3	80	2.4	0	0	3.9
26	151	87	40	27	21	20	4.7	163	2.2	0	0	8.5
27	446	67	28	45	20	16	4.6	25	1.9	0	0	5.9
28	49	98	23	83	18	14	4.5	13	1.6	0	0	35
29	23	38	19	59	-----	12	15	9.0	1.5	0	0	54
30	17	26	17	31	-----	11	72	6.7	1.3	0	0	13
31	13	-----	16	23	-----	9.4	-----	15	-----	0	0	-----
TOTAL	1,426.68	2,158.8	3,601.6	1,677.4	1,225.1	7,008.1	276.5	614.6	4,436.8	5.17	10.42	566.87
MEAN	46.0	72.0	116	54.1	43.8	226	9.22	19.8	148	.17	.34	18.9
MAX	446	747	1,530	410	546	4,690	72	163	1,800	1.2	2.3	282
MIN	.98	1.5	6.6	2.1	5.4	8.9	4.5	3.7	1.3	0	0	0
AC-FT	2,830	4,280	7,140	3,330	2,430	13,900	548	1,220	8,800	10	21	1,120

CAL YR 1973 TOTAL 24,734.19 MEAN 67.8 MAX 1,530 MIN 0 AC-FT 49,060
WTR YR 1974 TOTAL 23,008.04 MEAN 63.0 MAX 4,690 MIN 0 AC-FT 45,640

PEAK DISCHARGE (BASE, 1,200 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-04	0445	16.27	2,470	06-05	0515	14.44	1,230
12-24	0415	16.03	2,230	06-06	1330	17.54	4,080
03-10	1730	19.87	13,000	06-07	0215	17.62	4,240

07172000 CANEY RIVER NEAR ELGIN, KS

LOCATION.--Lat 37°00'13", long 96°18'54", in NW¼NW¼SE¼ sec.16, T.35 S., R.10 E., Chautauqua County, at county highway bridge, 2 mi (3 km) west of Elgin, and at mile 117.8 (189.5 km).

DRAINAGE AREA.--445 mi² (1,153 km²).

PERIOD OF RECORD.--October 1938 to current year. Monthly discharge only for some periods, published in WSP 1311.

GAGE.--Water-stage recorder. Datum of gage is 763.32 ft (232.660 m) above mean sea level (levels by Corps of Engineers). Prior to Sept. 13, 1961, at site 300 ft (91.4 m) downstream at same datum.

AVERAGE DISCHARGE.--36 years, 232 ft³/s (6,570 m³/s), 168,100 acre-ft/yr (207 hm³/yr)..

EXTREMES.--Current year: Maximum discharge, 20,600 ft³/s (583 m³/s) Mar. 10, gage height, 21.23 ft (6.471 m); minimum, 0.51 ft³/s (0.014 m³/s) Aug. 5, 6.

Period of record: Maximum discharge, 62,000 ft³/s (1,760 m³/s) Sept. 13, 1961, gage height, 34.70 ft (10.577 m), from floodmarks; no flow at times.

REMARKS.--Records good.

COOPERATION.--Gage-height record and 17 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

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	62	78	133	124	211	286	184	656	414	38	2.2	54
2	51	60	121	137	194	268	168	2,370	329	33	1.5	159
3	43	51	447	127	173	257	160	945	263	30	1.2	442
4	36	45	4,960	115	157	232	147	557	224	28	.93	179
5	30	39	1,630	111	146	205	135	420	356	27	.69	93
6	28	37	751	109	139	185	129	341	5,550	23	.86	59
7	41	34	499	101	126	165	125	288	5,560	21	2.1	43
8	28	33	377	94	118	155	121	243	3,190	18	6.0	32
9	25	31	324	88	114	2,810	112	213	2,120	17	19	23
10	24	31	267	96	116	16,700	106	367	1,220	14	19	16
11	500	29	233	117	110	9,290	136	334	878	12	23	12
12	198	28	210	113	106	4,080	197	270	661	11	18	9.7
13	176	28	187	101	107	3,590	173	213	485	9.6	13	7.4
14	130	26	164	104	103	2,980	144	485	389	8.3	10	4.4
15	101	23	145	119	97	3,020	123	433	324	7.4	85	3.3
16	77	23	129	693	95	1,680	112	272	264	7.6	275	2.9
17	62	22	116	1,750	94	1,180	107	213	209	7.6	102	2.7
18	52	23	113	1,730	240	934	103	175	178	7.4	140	2.2
19	47	23	113	1,450	668	716	103	150	158	7.4	63	2.0
20	42	2,910	102	905	359	549	125	125	138	6.4	40	2.1
21	37	608	109	689	1,310	484	687	106	116	4.1	25	2.9
22	31	348	106	684	2,030	451	399	375	97	3.8	15	2.4
23	27	273	169	633	954	401	276	366	81	3.8	11	1.8
24	25	687	422	480	634	343	219	2,760	71	3.4	8.5	1.3
25	22	762	338	403	468	322	189	1,960	64	3.2	7.8	1.4
26	19	303	286	366	405	303	172	5,230	59	3.1	6.0	1.5
27	254	230	250	330	358	277	158	1,780	54	3.1	4.7	1.5
28	265	233	225	314	318	267	150	1,190	51	3.2	419	370
29	182	175	203	312	-----	245	322	900	46	3.1	407	149
30	136	149	186	274	-----	215	732	709	43	3.3	202	90
31	103	-----	172	242	-----	196	-----	545	-----	3.0	95	-----
TOTAL	2,854	7,342	13,487	12,911	9,950	52,786	6,014	24,991	23,592	370.8	2,023.48	1,770.5
MEAN	92.1	245	435	416	355	1,703	200	806	786	12.0	65.3	59.0
MAX	500	2,910	4,960	1,750	2,030	16,700	732	5,230	5,560	38	419	442
MIN	19	22	102	88	94	155	103	106	43	3.0	.69	1.3
AC-FT	5,660	14,560	26,750	25,610	19,740	104,700	11,930	49,570	46,790	735	4,010	3,510

CAL YR 1973 TOTAL 187,008.88 MEAN 512 MAX 8,420 MIN 0 AC-FT 370,900
WTR YR 1974 TOTAL 158,091.78 MEAN 433 MAX 16,700 MIN .69 AC-FT 313,600

PEAK DISCHARGE (BASE, 6,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
11-20	0400	10.35	7,180	05-26	0230	12.56	9,610
12-04	1030	9.81	6,580	06-06	2245	17.22	15,200
03-10	1415	21.23	20,600				

07179400 COUNCIL GROVE LAKE NEAR COUNCIL GROVE, KS

LOCATION.--Lat 38°40'45", long 96°30'25", in NE¼NE¼ sec.10, T.16 S., R.8 E., Morris County, in control tower near right end of Council Grove Dam on Neosho River, 1.0 mi (1.6 km) northwest of Council Grove, and at mile 449.7 (723.6 km).

DRAINAGE AREA.--246 mi² (637 km²).

PERIOD OF RECORD.--October 1964 to current year. Prior to October 1971 published as "Council Grove Reservoir".

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (levels by Corps of Engineers).

EXTREMES.--Current year: Maximum elevation, 1,283.59 ft (391.238 m) Oct. 15, contents, 87,760 acre-ft (108 hm³); minimum, 1,269.26 ft (386.870 m) Sept. 29, contents, 36,220 acre-ft (44.7 hm³).

Period of record: Maximum elevation, 1,283.72 ft (391.278 m) July 11, 1969, contents, 88,340 acre-ft (109 hm³); minimum since conservation pool first filled, 1,265.79 ft (385.813 m) Mar. 30, 1967, contents, 27,300 acre-ft (33.7 hm³).

REMARKS.--Reservoir is formed by compacted earthfill dam. The spillway is a limited service, uncontrolled, emergency type having a width of 500 ft (152.4 m). The outlet works consist of a cut and cover conduit 17 ft (5.2 m) in diameter. Regulated storage began October 9, 1964. Maximum pool, 376,900 acre-ft (465 hm³) at elevation 1,320.0 ft (402.34 m); top of flood control pool, 114,300 acre-ft (141 hm³) at elevation 1,289.0 ft (392.89 m); and top of conservation pool, 38,300 acre-ft (47.2 hm³) at elevation 1,270.0 ft (387.10 m). The reservoir is used for flood control, conservation, and related beneficial water uses. Figures given herein represent total contents.

COOPERATION.--Records furnished by Corps of Engineers; reviewed by Geological Survey.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on a survey made in 1939 by Corps of Engineers)

1,265	25,470	1,280	72,420
1,270	38,310	1,285	94,280
1,275	53,920		

ELEVATION, IN FEET, AT 2400, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,279.45	1,271.09	1,270.40	1,269.90	1,270.08	1,271.44	1,272.55	1,272.65	1,274.09	1,270.06	1,269.55	1,269.55
2	1,278.14	1,270.92	1,270.42	1,269.78	1,270.12	1,271.50	1,272.52	1,272.65	1,274.03	1,269.97	1,269.52	1,269.64
3	1,276.80	1,270.59	1,270.64	1,269.66	1,270.17	1,271.57	1,272.59	1,272.64	1,273.97	1,270.02	1,269.47	1,269.64
4	1,275.34	1,270.26	1,274.02	1,269.61	1,270.22	1,271.62	1,272.55	1,272.63	1,273.93	1,270.02	1,269.44	1,269.64
5	1,273.77	1,269.91	1,274.27	1,269.61	1,270.30	1,271.63	1,272.53	1,272.65	1,273.95	1,270.02	1,269.43	1,269.63
6	1,272.25	1,269.73	1,273.15	1,269.63	1,270.32	1,271.66	1,272.49	1,272.65	1,274.12	1,269.99	1,269.46	1,269.62
7	1,271.62	1,269.75	1,271.48	1,269.65	1,270.34	1,271.74	1,272.58	1,272.65	1,274.12	1,269.97	1,269.46	1,269.62
8	1,271.34	1,269.76	1,270.07	1,269.70	1,270.39	1,271.93	1,272.56	1,272.66	1,276.83	1,269.95	1,269.45	1,269.62
9	1,271.06	1,269.76	1,269.63	1,269.72	1,270.41	1,272.08	1,272.54	1,272.65	1,279.34	1,269.92	1,269.46	1,269.62
10	1,272.32	1,269.76	1,269.85	1,269.74	1,270.45	1,272.58	1,272.54	1,273.99	1,279.35	1,269.91	1,269.48	1,269.59
11	1,282.97	1,269.77	1,269.92	1,269.75	1,270.48	1,272.80	1,272.58	1,273.74	1,279.35	1,269.89	1,269.45	1,269.59
12	1,283.33	1,269.78	1,269.98	1,269.74	1,270.53	1,272.88	1,272.60	1,273.35	1,279.14	1,269.89	1,269.43	1,269.60
13	1,283.46	1,269.80	1,269.93	1,269.72	1,270.56	1,272.94	1,272.60	1,273.72	1,278.88	1,269.87	1,269.45	1,269.56
14	1,283.53	1,269.84	1,269.87	1,269.71	1,270.60	1,273.01	1,272.57	1,274.79	1,278.48	1,269.87	1,269.45	1,269.55
15	1,283.59	1,269.85	1,269.76	1,269.71	1,270.62	1,273.08	1,272.55	1,274.71	1,277.88	1,269.88	1,269.44	1,269.54
16	1,283.58	1,269.82	1,269.63	1,269.78	1,270.65	1,273.08	1,272.55	1,274.40	1,277.26	1,269.86	1,269.44	1,269.54
17	1,283.52	1,269.82	1,269.53	1,270.28	1,270.68	1,273.05	1,272.51	1,274.16	1,276.63	1,269.83	1,269.57	1,269.53
18	1,283.43	1,269.83	1,269.52	1,270.91	1,270.76	1,273.07	1,272.51	1,274.21	1,275.98	1,269.82	1,269.57	1,269.52
19	1,283.38	1,269.91	1,269.53	1,270.69	1,270.76	1,273.05	1,272.50	1,274.27	1,275.33	1,269.80	1,269.52	1,269.50
20	1,283.31	1,270.20	1,269.54	1,270.70	1,270.78	1,273.03	1,272.65	1,274.29	1,274.64	1,269.78	1,269.49	1,269.49
21	1,283.20	1,270.25	1,269.58	1,270.45	1,270.95	1,272.98	1,277.72	1,274.29	1,273.94	1,269.77	1,269.50	1,269.46
22	1,283.14	1,270.28	1,269.62	1,270.02	1,270.93	1,272.97	1,277.66	1,274.27	1,273.27	1,269.75	1,269.51	1,269.43
23	1,282.86	1,270.34	1,269.67	1,269.67	1,271.01	1,272.95	1,276.90	1,274.30	1,272.54	1,269.72	1,269.51	1,269.38
24	1,282.14	1,270.34	1,270.12	1,269.57	1,271.02	1,272.90	1,275.92	1,274.30	1,271.79	1,269.68	1,269.52	1,269.36
25	1,280.93	1,270.37	1,270.28	1,269.55	1,271.03	1,272.85	1,274.93	1,274.33	1,271.04	1,269.68	1,269.52	1,269.36
26	1,279.52	1,270.38	1,270.37	1,269.66	1,271.08	1,272.62	1,274.17	1,274.32	1,270.59	1,269.68	1,269.51	1,269.35
27	1,277.94	1,270.42	1,270.39	1,269.74	1,271.25	1,272.48	1,273.75	1,274.27	1,270.48	1,269.65	1,269.54	1,269.32
28	1,276.36	1,270.41	1,270.29	1,269.82	1,271.36	1,272.50	1,273.28	1,274.25	1,270.39	1,269.64	1,269.53	1,269.30
29	1,274.71	1,270.40	1,270.20	1,269.90	-----	1,272.53	1,272.98	1,274.23	1,270.27	1,269.62	1,269.51	1,269.28
30	1,273.03	1,270.40	1,270.12	1,269.99	-----	1,272.53	1,272.77	1,274.21	1,270.17	1,269.59	1,269.47	1,269.27
31	1,271.56	-----	1,270.02	1,270.02	-----	1,272.56	-----	1,274.14	-----	1,269.58	1,269.46	-----
MEAN	1,283.76	1,270.12	1,270.38	1,269.88	1,270.64	1,272.50	1,273.50	1,273.75	1,274.73	1,269.83	1,269.49	1,269.50
MAX	1,283.59	1,271.09	1,274.27	1,270.91	1,271.36	1,273.08	1,277.72	1,274.79	1,279.35	1,270.06	1,269.57	1,269.64
MIN	1,271.06	1,269.73	1,269.52	1,269.55	1,270.08	1,271.44	1,272.49	1,272.63	1,270.17	1,269.58	1,269.43	1,269.27
(+)	42,910	39,470	38,370	38,370	42,310	45,990	46,640	51,050	38,800	37,110	36,780	36,250
(#)	-32,260	-3,440	-1,100	0	+3,940	+3,680	+650	+4,410	-12,250	-1,690	-330	-530

CAL YR 1973 (#) -17,340

WTR YR 1974 (#) -38,920

+ CONTENTS, IN ACRE-FEET, AT END OF MONTH.

CHANGE IN CONTENTS, IN ACRE-FEET.

LOCATION.--Lat 38°39'54", long 96°29'38", in NE¼ sec.14, T.16 S., R.8 E., Morris County, on downstream side of center pier of highway bridge at city water plant in north part of Council Grove, 300 ft (91 m) downstream from Mozler Creek, 1.0 mi (1.6 km) upstream from Elm Creek, 1.7 mi (2.7 km) downstream from Council Grove Lake, and at mile 448.0 (721 km).

PERIOD OF RECORD.--October 1938 to current year.

AVERAGE DISCHARGE.--36 years, 127 ft³/s (3.597 m³/s), 92,010 acre-ft/yr (113 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 3,130 ft³/s (88.6 m³/s) Oct. 26, gage height, 14.38 ft (4.383 m); maximum gage height, 16.61 ft (5.063 m) Oct. 11, backwater from Elm Creek; minimum discharge, 5.8 ft³/s (0.16 m³/s) July 13-22, 24-28.
Period of record: Maximum discharge, 121,000 ft³/s (3,430 m³/s) July 11, 1951, gage height, 35.5 ft (10.82 m); 36.29 ft (11.061 m), top of surge in gage house; 37.97 ft (11.573 m), floodmark at water plant and in wire-weight gage box at upstream side of bridge, from rating curve extended above 36,000 ft³/s (1,020 m³/s) on basis of slope-area measurement of peak flow; maximum discharge since closure of Council Grove Dam in 1964, 6,600 ft³/s (187 m³/s) June 26, 1969; no flow at times in 1938-41, 1947-48, 1954-57, 1963-64.
Maximum stage known, that of July 11, 1951. Flood in 1903 reached a stage of 37.3 ft (11.37 m) at water plant, from information by Corps of Engineers.

REMARKS.--Records good. Flow completely regulated by Council Grove Lake since 1964 (see sta 07179400). Records of chemical analyses for the water year 1974 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1117: Drainage area. WSP 1341: 1939-40(M), 1942.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2,830	731	38	240	11	11	33	274	90	145	9.5	11
2	2,750	304	39	240	10	11	25	96	86	88	9.3	11
3	2,690	531	40	240	10	11	27	70	87	19	9.7	9.4
4	2,620	528	97	140	11	11	35	47	60	19	10	9.3
5	2,560	528	515	35	11	11	36	47	26	19	11	9.3
6	2,510	279	2,120	35	10	11	36	46	29	19	11	9.4
7	1,170	39	2,830	35	10	12	36	47	27	18	11	9.3
8	530	38	2,390	35	10	12	37	48	35	18	10	9.1
9	526	36	991	35	10	12	37	49	35	11	10	9.2
10	460	35	45	35	10	17	37	250	342	7.0	10	9.3
11	25	36	124	60	10	14	38	720	619	6.5	10	9.2
12	20	36	248	80	10	13	37	716	617	6.2	10	9.2
13	69	36	249	80	10	13	37	420	616	6.0	10	9.0
14	112	36	249	85	10	13	38	50	904	6.0	10	8.9
15	112	37	249	85	9.8	31	38	395	1,200	6.0	11	9.1
16	181	37	249	87	9.8	88	39	737	1,190	6.0	10	9.2
17	276	37	249	90	10	88	39	520	1,190	6.0	12	9.4
18	275	37	169	404	10	88	40	73	1,180	6.0	10	9.3
19	275	37	43	897	10	88	40	72	1,170	6.0	10	9.4
20	276	45	44	900	10	88	45	84	1,160	6.0	10	9.8
21	277	36	44	895	11	89	50	85	1,150	6.0	10	10
22	274	35	43	892	11	88	496	87	1,140	6.0	9.8	10
23	652	36	42	694	11	89	1,530	88	1,130	6.0	9.5	10
24	1,670	36	45	284	11	90	1,780	87	1,130	6.0	9.8	10
25	2,600	36	43	124	11	168	1,760	88	1,120	6.2	9.8	10
26	3,110	35	42	11	11	448	1,350	87	651	6.0	9.6	10
27	3,060	35	103	11	11	270	909	87	148	5.9	10	10
28	2,990	35	237	11	11	33	903	87	146	5.9	9.8	10
29	2,920	35	237	11	-----	33	657	87	146	6.3	9.7	10
30	2,850	35	239	11	-----	33	437	88	145	6.4	9.7	11
31	2,340	-----	240	10	-----	33	-----	89	-----	7.1	9.7	-----
TOTAL	43,010	3,777	12,293	6,792	290.6	2,017	10,602	5,721	17,569	491.5	311.9	289.8
MEAN	1,387	126	397	219	10.4	65.1	353	185	586	15.9	10.1	9.66
MAX	3,110	731	2,830	900	11	448	1,780	737	1,200	145	12	11
MIN	20	35	38	10	9.8	11	25	46	26	5.9	9.3	8.9
AC-FT	85,310	7,490	24,380	13,470	576	4,000	21,030	11,350	34,850	975	619	575
CAL YR 1973	TOTAL 162,967.1	MEAN 446	MAX 3,240	MIN 7.6	AC-FT 323,200							
WTR YR 1974	TOTAL 103,164.8	MEAN 283	MAX 3,110	MIN 5.9	AC-FT							

07179730 NEOSHO RIVER NEAR AMERICUS, KS

LOCATION.--Lat 38°28'01", long 96°15'01", in SW¼SW¼NE¼ sec.24, T.18 S., R.10 E., Lyon County, near right bank, 0.1 mi (0.16 km) below Ruggles Dam, 2.0 mi (3.2 km) south of Americus, 12.5 mi (20.1 km) upstream from Allen Creek, and 24.0 mi (38.6 km) upstream from Cottonwood River.

DRAINAGE AREA.--622 mi² (1,610 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 1,106.99 ft (337.411 m) above mean sea level (levels by Corps of Engineers). Prior to Aug. 8, 1963, water-stage recorder at site 0.4 mi (0.6 m) upstream at present datum.

AVERAGE DISCHARGE.--11 years, 337 ft³/s (9.544 m³/s), 244,200 acre-ft/yr (301 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 10,200 ft³/s (289 m³/s) Oct. 11, gage height, 27.74 ft (8.455 m); minimum, 3.7 ft³/s (0.10 m³/s) Sept. 28.

Period of record: Maximum discharge, 10,900 ft³/s (309 m³/s) June 27, 1969, gage height, 28.30 ft (8.626 m); no flow at times.

REMARKS.--Records good. Flow moderately regulated since 1964 by Council Grove Lake (see sta 07179400). Low flow occasionally regulated by Ruggles Dam 0.1 mi (0.16 km) 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	3,520	2,480	148	468	223	205	149	847	192	212	14	84
2	3,220	835	161	491	214	174	145	442	186	208	15	358
3	3,030	574	173	461	204	167	145	287	179	150	17	190
4	2,910	761	2,700	449	191	154	129	231	184	80	17	99
5	2,820	749	4,970	347	189	141	135	195	160	72	19	61
6	2,790	742	1,770	223	189	133	131	180	200	65	27	49
7	2,760	446	2,650	191	172	130	145	174	455	60	27	44
8	1,440	198	3,010	203	160	183	145	170	360	52	26	41
9	1,010	182	2,580	187	159	249	187	165	2,810	48	27	38
10	1,160	170	1,270	198	159	777	144	180	1,380	46	27	34
11	7,120	169	434	196	154	1,290	147	821	741	35	25	31
12	8,080	167	470	203	157	478	149	847	1,080	27	24	29
13	1,600	178	574	238	149	319	139	803	868	24	21	26
14	1,020	161	530	238	145	266	130	5,010	823	23	21	25
15	863	161	501	237	140	243	125	5,290	1,130	20	28	24
16	749	147	472	246	135	235	124	1,190	1,310	20	27	25
17	770	149	458	550	133	272	123	1,190	1,280	21	28	24
18	824	157	454	2,070	143	271	125	838	1,270	18	33	23
19	792	140	369	2,490	135	259	124	400	1,270	16	36	22
20	755	1,490	204	1,720	132	246	179	300	1,260	16	30	21
21	731	1,270	239	2,070	160	239	2,360	300	1,250	16	26	19
22	716	406	222	1,460	227	242	713	300	1,230	16	25	19
23	688	267	220	1,300	241	235	890	300	1,220	16	23	19
24	1,220	251	469	943	235	231	1,710	250	1,210	16	22	18
25	2,190	225	941	611	245	234	1,870	250	1,200	15	23	14
26	2,840	206	402	414	185	336	1,840	250	1,180	16	20	6.6
27	3,060	190	302	303	204	556	1,320	250	600	15	21	4.3
28	3,060	186	349	284	256	371	1,000	250	227	16	34	8.1
29	3,000	176	474	277	-----	168	998	232	220	15	27	16
30	2,960	168	457	258	-----	158	1,140	212	215	14	24	16
31	2,910	-----	411	242	-----	151	-----	203	-----	14	22	-----
TOTAL	70,608	13,401	28,384	19,568	5,036	9,113	16,661	22,357	25,690	1,382	756	1,388.0
MEAN	2,278	447	916	631	180	294	555	721	856	44.6	24.4	46.3
MAX	8,080	2,480	4,970	2,490	256	1,290	2,360	5,290	2,810	212	36	358
MIN	688	140	148	187	132	130	123	165	160	14	14	4.3
AC-FT	140,100	26,580	56,300	38,810	9,990	18,080	33,050	44,350	50,960	2,740	1,500	2,750

CAL YR 1973 TOTAL 371,385.0 MEAN 1,017 MAX 9,740 MIN 33 AC-FT 736,600
WTR YR 1974 TOTAL 214,344.0 MEAN 587 MAX 8,080 MIN 4.3 AC-FT 425,200

PEAK DISCHARGE (REGULATED) ABOVE 4,000 CFS

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
10-11	2300	27.74	10,200	05-14	2400	27.58	9,940
12-05	0700	24.33	6,250	06-09	2000	20.27	4,010

ARKANSAS RIVER BASIN

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07179794 MARION LAKE NEAR MARION, KS

LOCATION.--Lat 38°22'20", long 97°04'55", in NE¼ sec. 27, T.19 S., R.3 E., Marion County, on top of dam on Cottonwood River, 3.0 mi (4.8 km) northwest of Marion, and at mile 126.7 (203.9 km).

DRAINAGE AREA.--200 mi² (518 km²).

PERIOD OF RECORD.--February 1968 to current year. Prior to October 1971 published as "Marion Reservoir".

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (levels by Corps of Engineers).

EXTREMES.--Current year: Maximum elevation, 1,356.66 ft (413.510 m) Oct. 13, contents, 130,600 acre-ft (161 hm³); minimum, 1,349.32 ft (411.273 m) Sept. 30, contents, 79,510 acre-ft (98.0 hm³).

Period of record: Maximum elevation, 1,356.66 ft (413.510 m) Oct. 13, 1973, contents, 130,600 acre-ft (161 hm³); minimum since first filled, 1,348.62 ft (411.059 m) Sept. 14, 1970, contents, 75,480 acre-ft (93.1 hm³).

REMARKS.--Reservoir is formed by compacted earthfill dam. Regulated storage began Feb. 26, 1968. Total capacity, 188,100 acre-ft (232 hm³) consisting of the following: Dead storage, 740 acre-ft (.912 hm³) below elevation 1,320.0 ft (402.34 m); conservation, 85,860 acre-ft (106 hm³) between elevations 1,320.0 ft (402.34 m) and 1,350.5 ft (411.63 m); flood control, 59,900 acre-ft (73.9 hm³) between elevations 1,350.5 ft (411.63 m) and 1,358.5 ft (414.07 m); uncontrolled storage, 41,600 acre-ft (51.3 hm³) between elevations 1,358.5 ft (414.07 m) and 1,362.8 ft (415.38 m). Reservoir is used for flood control, water quality control, water supply, recreation, and fish and wildlife conservation. Figures given herein represent total contents.

COOPERATION.--Records furnished by Corps of Engineers.

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

1,345	56,460	1,355	117,500
1,350	83,540	1,360	160,500

ELEVATION, IN FEET, AT 2400, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,354.52	1,353.32	1,350.71	1,350.62	1,350.46	1,350.62	1,350.55	1,350.52	1,351.03	1,350.38	1,349.75	1,349.63
2	1,354.40	1,353.11	1,350.67	1,350.49	1,350.45	1,350.62	1,350.48	1,350.52	1,350.98	1,350.33	1,349.70	1,349.66
3	1,354.30	1,352.93	1,350.80	1,350.49	1,350.44	1,350.63	1,350.59	1,350.49	1,350.95	1,350.39	1,349.65	1,349.64
4	1,354.01	1,352.75		1,350.49	1,350.43	1,350.67	1,350.57	1,350.48	1,350.94	1,350.40	1,349.62	1,349.62
5	1,353.61	1,352.53		1,350.49	1,350.47	1,350.65	1,350.55	1,350.49	1,350.90	1,350.39	1,349.69	1,349.59
6	1,353.38	1,352.35		1,350.53	1,350.46	1,350.67	1,350.43	1,350.47	1,351.03	1,350.37	1,349.73	1,349.56
7	1,353.27	1,352.18		1,350.53	1,350.45	1,350.68	1,350.64	1,350.47	1,350.99	1,350.35	1,349.75	1,349.61
8	1,353.11	1,351.99		1,350.57	1,350.44	1,350.82	1,350.60	1,350.46	1,351.73	1,350.32	1,349.75	1,349.62
9	1,352.97	1,351.80		1,350.55	1,350.45	1,350.88	1,350.53	1,350.45	1,352.54	1,350.30	1,349.82	1,349.60
10	1,353.60	1,351.59		1,350.57	1,350.45	1,351.05		1,350.44	1,352.55	1,350.27	1,349.84	1,349.58
11	1,356.43	1,351.40		1,350.60	1,350.44	1,351.16		1,350.48	1,352.57	1,350.22	1,349.82	1,349.59
12	1,356.55	1,351.05		1,350.60	1,350.47	1,351.16		1,350.42	1,352.57	1,350.21	1,349.81	1,349.57
13	1,356.62	1,350.66	1,351.01	1,350.61	1,350.46	1,351.16		1,350.62	1,352.62	1,350.19	1,349.77	1,349.55
14	1,356.61	1,350.49	1,351.02	1,350.62	1,350.46	1,351.18		1,350.67	1,352.60	1,350.18	1,349.76	1,349.53
15	1,356.62	1,350.49	1,350.99	1,350.65	1,350.46	1,351.25		1,350.62	1,352.42	1,350.16	1,349.75	1,349.52
16	1,356.54	1,350.44	1,350.90	1,350.67	1,350.47	1,351.22		1,350.68	1,352.23	1,350.12	1,349.79	1,349.54
17	1,356.42	1,350.47	1,350.89	1,350.90	1,350.45	1,351.18		1,350.63	1,352.04	1,350.10	1,349.77	1,349.53
18	1,356.31	1,350.48	1,350.89	1,351.06	1,350.54	1,351.21	1,350.55	1,350.67	1,351.90	1,350.08	1,349.78	1,349.52
19	1,356.21	1,350.52	1,350.88	1,351.00	1,350.49	1,351.18	1,350.51	1,352.89	1,351.71	1,350.05	1,349.71	1,349.49
20	1,356.08	1,350.58	1,350.83	1,350.93	1,350.54	1,351.17	1,352.47	1,352.98	1,351.58	1,350.04	1,349.70	1,349.48
21	1,355.94	1,350.62	1,350.82	1,350.85	1,350.58	1,351.12	1,352.97	1,352.98	1,351.53	1,350.03	1,349.73	1,349.47
22	1,355.85	1,350.65	1,350.80	1,350.77	1,350.54	1,351.13	1,353.04	1,352.65	1,351.30	1,349.99	1,349.74	1,349.44
23	1,355.70	1,350.67	1,350.78	1,350.65	1,350.60	1,351.11	1,352.92	1,352.28	1,351.10	1,349.95	1,349.72	1,349.40
24	1,355.61	1,350.70	1,351.07	1,350.53	1,350.60	1,351.05	1,352.54	1,351.95	1,350.90	1,349.91	1,349.72	1,349.38
25	1,355.48	1,350.70	1,351.38	1,350.47	1,350.57	1,350.99	1,352.09	1,351.74	1,350.72	1,349.90	1,349.74	1,349.40
26	1,355.43	1,350.70	1,351.51	1,350.47	1,350.54	1,350.87	1,351.67	1,351.54	1,350.59	1,349.89	1,349.74	1,349.38
27	1,355.31	1,350.77	1,351.42	1,350.48	1,350.58	1,350.75	1,351.43	1,351.25	1,350.52	1,349.86	1,349.72	1,349.37
28	1,354.98	1,350.75	1,351.30	1,350.48	1,350.62	1,350.65	1,351.20	1,351.14	1,350.48	1,349.82	1,349.70	1,349.36
29	1,354.49	1,350.74	1,351.11	1,350.48	-----	1,350.55	1,350.96	1,351.14	1,350.47	1,349.80	1,349.70	1,349.33
30	1,354.05	1,350.73	1,351.00	1,350.47	-----	1,350.56	1,350.67	1,351.12	1,350.44	1,349.78	1,349.68	1,349.32
31	1,353.58	-----	1,350.80	1,350.47	-----	1,350.56	-----	1,351.04	-----	1,349.75	1,349.64	-----
MEAN	1,355.10	1,351.27		1,350.62	1,350.50	1,350.92		1,351.11	1,351.46	1,350.11	1,349.74	1,349.51
MAX	1,356.62	1,353.32	1,351.51	1,351.06	1,350.62	1,351.25	1,353.04	1,352.98	1,352.62	1,350.40	1,349.84	1,349.66
MIN	1,352.97	1,350.44	1,350.67	1,350.47	1,350.43	1,350.55	1,350.43	1,350.42	1,350.44	1,349.75	1,349.62	1,349.32
(+)	107,000	88,010	88,450	86,400	87,330	86,960	87,640	89,960	86,220	82,050	81,390	79,510
(#)	-7,700	-18,990	+440	-2,050	+930	-370	+680	+2,320	-3,740	-4,170	-660	-1,880

CAL YR 1973 (#) -3,160

WTR YR 1974 (#) -35,190

+ CONTENTS, IN ACRE-FEET, AT END OF MONTH.

CHANGE IN CONTENTS, IN ACRE-FEET.

A NO GAGE-HEIGHT RECORD.

07179795 COTTONWOOD RIVER BELOW MARION LAKE, KS

LOCATION.--Lat 38°22'00", long 97°05'00", in SE¼ sec.27, T.19 S., R.3 E., Marion County, on left bank, 0.25 mi (0.40 km) below outlet of dam, 1.6 mi (2.6 km) upstream from South Fork Cottonwood River, 3.0 mi (4.8 km) northwest of Marion, and at mile 126.5 (203.5 km).

DRAINAGE AREA.--200 mi² (520 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 1,296.57 ft (395.195 m) above mean sea level. Prior to Oct. 1, 1972, published as "below Marion Reservoir".

AVERAGE DISCHARGE.--6 years, 100 ft³/s (2.832 m³/s), 72,450 acre-ft/yr (89.3 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 1,790 ft³/s (50.7 m³/s) Oct. 28, gage height, 12.24 ft (3.731 m); maximum gage height, 20.48 ft (6.242 m) Apr. 20 (backwater); minimum discharge, 2.2 ft³/s (0.062 m³/s) June 20, 21.
Period of record: Maximum discharge, 3,390 ft³/s (96.0 m³/s) June 13, 1971; no flow part of day June 15, 1973.

REMARKS.--Records good. Flow completely regulated by Marion Lake 0.25 mi (0.40 km) upstream (see sta 07179794). Records of chemical analyses for the water year 1974 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	714	1,160	101	714	99	11	25	521	85	5.8	10	6.5
2	710	749	102	503	99	11	26	104	83	5.8	9.8	6.8
3	710	746	102	59	99	12	15	49	83	5.8	9.7	7.0
4	1,050	740	105	60	63	12	7.5	8.7	95	5.8	9.2	6.8
5	1,450	744	104	11	33	12	7.2	8.4	110	5.5	9.5	6.7
6	833	744	102	10	33	12	7.3	8.7	85	5.8	9.4	6.7
7	565	740	101	10	33	12	7.2	9.0	83	6.2	9.0	6.7
8	565	734	101	10	33	13	7.5	9.0	84	6.4	9.0	6.6
9	565	732	101	10	33	12	7.5	9.3	85	6.4	10	6.7
10	565	732	101	10	33	13	7.8	9.6	85	6.2	8.8	6.7
11	170	729	140	10	33	12	8.2	9.2	85	6.1	7.8	6.5
12	4.0	1,080	184	9.9	33	12	8.4	9.0	85	6.1	7.8	6.6
13	58	1,420	186	9.8	21	12	9.2	13	87	6.1	7.5	6.6
14	108	619	186	10	11	13	11	10	374	5.8	7.8	6.5
15	108	13	186	10	11	41	11	8.9	651	6.1	7.5	6.4
16	328	13	185	10	10	101	11	8.8	648	6.1	7.5	6.4
17	592	13	183	10	11	101	13	8.2	645	6.4	7.9	6.4
18	588	13	181	228	10	102	14	7.7	645	6.1	9.0	6.5
19	585	13	171	539	10	101	15	7.8	645	5.8	9.0	6.9
20	588	13	101	539	10	101	19	7.2	404	5.6	9.0	7.0
21	588	13	151	539	11	101	26	389	290	5.6	8.9	7.1
22	585	13	151	543	11	102	41	1,220	636	5.6	8.7	7.0
23	588	13	151	537	11	101	482	1,420	632	5.8	8.4	7.0
24	587	13	161	539	11	102	1,390	1,250	631	6.4	8.6	6.9
25	585	13	163	274	11	371	1,690	928	629	6.7	8.1	6.7
26	586	13	164	99	11	576	1,340	924	328	6.7	7.8	8.0
27	588	13	354	99	11	551	1,000	920	62	6.4	7.8	6.7
28	1,310	13	714	100	11	550	1,000	443	5.7	7.0	7.8	7.2
29	1,750	13	716	99	-----	292	996	85	5.7	7.0	7.8	7.5
30	1,720	47	714	99	-----	24	990	85	5.8	7.7	7.8	7.5
31	1,700	-----	715	99	-----	25	-----	85	-----	9.7	7.3	-----
TOTAL	21,443.0	11,911	6,877	5,799.7	806	3,511	9,192.8	8,575.5	8,372.2	194.5	264.2	204.6
MEAN	692	397	222	187	28.8	113	306	277	279	6.27	8.52	6.82
MAX	1,750	1,420	716	714	99	576	1,690	1,420	651	9.7	10	8.0
MIN	4.0	13	101	9.8	10	11	7.2	7.2	5.7	5.5	7.3	6.4
AC-FT	42,530	23,630	13,640	11,500	1,600	6,960	18,230	17,010	16,610	386	524	406
CAL YR 1973	TOTAL	114,626.6	MEAN	314	MAX	1,750	MIN	2.0	AC-FT	227,400		
WTR YR 1974	TOTAL	77,151.5	MEAN	211	MAX	1,750	MIN	4.0	AC-FT	153,000		

ARKANSAS RIVER BASIN

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07180400 COTTONWOOD RIVER NEAR FLORENCE, KS

LOCATION.--Lat 38°14'10", long 96°52'37", in NW¼SW¼ sec.10, T.21 S., R.5 E., Marion County, at downstream side of county highway bridge 0.4 mi (0.6 km) upstream from Martin Creek, 2.5 mi (4.0 km) east of Florence, 3.3 mi (5.3 km) downstream from Doyle Creek and at mile 102.4 (164.8 km).

DRAINAGE AREA.--754 mi² (1,950 km²).

PERIOD OF RECORD.--June 1961 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,231.49 ft (375.358 m) above mean sea level. Since Aug. 10, 1965, auxiliary water-stage recorder 2.8 mi (4.5 km) downstream at datum 1,219.49 ft (371.701 m) above mean sea level.

AVERAGE DISCHARGE.--13 years, 343 ft³/s (9.714 m³/s), 248,500 acre-ft/yr (306 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 28,600 ft³/s (810 m³/s) Apr. 21, gage height, 26.61 ft (8.111 m); minimum, 42 ft³/s (1.19 m³/s) Sept. 24-26.

Period of record: Maximum discharge, 46,400 ft³/s (1,310 m³/s) June 10, 1965, gage height, 27.57 ft (8.403 m); minimum, 5.5 ft³/s (0.16 m³/s) Oct. 11, 1964.

Maximum stage known since at least 1872, 32.5 ft (9.91 m) July 11, 1951 from information by local residents.

REMARKS.--Records fair. Flow moderately regulated since 1968 by Marion Lake 24 mi (39 km) upstream (see sta 07179794).

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	999	1,790	191	976	280	242	185	940	256	108	56	69
2	919	730	211	1,060	277	188	179	330	249	103	56	204
3	850	714	214	570	270	179	179	295	242	100	56	197
4	872	714	718	650	252	167	167	214	242	108	58	116
5	1,900	706	1,510	458	220	167	155	200	263	161	60	76
6	1,650	702	782	270	207	167	143	191	309	113	110	67
7	773	702	462	190	194	167	140	182	319	98	131	74
8	758	694	340	191	185	239	146	176	1,300	88	93	83
9	749	686	418	180	182	400	143	173	6,750	85	88	74
10	776	682	490	170	185	958	140	170	4,290	85	140	62
11	10,000	682	375	165	185	2,000	158	167	546	80	128	56
12	20,300	738	418	165	179	1,000	207	164	830	78	85	52
13	3,610	1,490	430	155	182	500	179	158	389	76	74	50
14	602	1,380	375	150	173	300	152	1,630	382	71	67	50
15	482	218	337	150	167	270	137	882	682	71	69	50
16	407	167	319	300	164	295	128	242	666	71	74	50
17	674	164	309	700	161	298	122	197	654	69	69	50
18	674	164	305	1,000	158	295	122	179	646	67	69	50
19	658	173	305	2,000	161	291	116	2,950	630	67	67	50
20	646	277	235	1,500	164	284	3,430	4,660	618	64	64	48
21	630	344	270	1,000	161	281	19,000	434	235	64	62	48
22	622	211	277	830	170	274	3,950	1,000	562	62	69	48
23	610	176	280	718	164	274	582	3,110	590	62	71	46
24	602	176	500	630	170	274	1,290	6,230	586	58	69	42
25	594	182	1,660	598	170	302	1,970	1,810	586	58	69	42
26	594	164	478	340	167	594	1,900	1,150	550	60	69	44
27	622	155	382	322	207	590	1,120	1,080	218	60	64	48
28	786	152	670	316	295	554	1,060	886	152	60	85	50
29	2,040	146	718	310	-----	566	1,050	312	119	58	83	46
30	2,020	143	714	300	-----	225	1,040	284	113	56	74	46
31	1,980	-----	718	291	-----	188	-----	267	-----	56	69	-----
TOTAL	59,399	15,422	15,411	16,655	5,450	12,529	39,290	30,663	23,974	2,417	2,398	1,988
MEAN	1,916	514	497	537	195	404	1,310	989	799	78.0	77.4	66.3
MAX	20,300	1,790	1,660	2,000	295	2,000	19,000	6,230	6,750	161	140	204
MIN	407	143	191	150	158	167	116	158	113	56	56	42
AC-FT	117,800	30,590	30,570	33,040	10,810	24,850	77,930	60,820	47,550	4,790	4,760	3,940
CAL YR 1973	TOTAL 348,567		MEAN 955		MAX 20,300		MIN 49		AC-FT 691,400			
WTR YR 1974	TOTAL 225,596		MEAN 618		MAX 20,300		MIN 42		AC-FT 447,500			

PEAK DISCHARGE (REGULATED) ABOVE 3,300 CFS

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
10-12	0800	26.54	27,600	05-24	0400	18.57	7,020
04-21	0800	26.61	28,600	06-10	0400	19.30	7,300
05-20	0500	17.60	6,600				

07180500 CEDAR CREEK NEAR CEDAR POINT, KS

LOCATION.--Lat 38°11'55", long 96°49'22", in NE¼SE¼NE¼ sec.25, T.21 S., R.5 E., Chase County, on upstream end of right abutment of highway bridge, 4.0 mi (6.4 km) south of Cedar Point, and at mile 9.4 (15.1 km).

DRAINAGE AREA.--110 mi² (285 km²).

PERIOD OF RECORD.--October 1938 to current year. Monthly discharge only for some periods, published in WSP 1311.

GAGE.--Water-stage recorder. Datum of gage is 1,262.50 ft (384.810 m) above mean sea level (levels by Corps of Engineers). Prior to Sept. 28, 1944, nonrecording gage at downstream side of present bridge at same datum.

AVERAGE DISCHARGE.--36 years, 55.2 ft³/s (1.563 m³/s), 39,990 acre-ft/yr (49.3 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 8,820 ft³/s (250 m³/s) Oct. 11, gage height, 18.48 ft (5.633 m); minimum, 4.5 ft³/s (0.127 m³/s) July 29.

Period of record: Maximum discharge, 52,400 ft³/s (1,480 m³/s) June 29, 1951, gage height, 23.70 ft (7.224 m), from rating curve extended above 7,500 ft³/s (212 m³/s) on basis of contracted-opening and flow-over-road measurement of peak discharge; no flow at times.

Maximum stage since at least 1856, that of June 29, 1951. Flood in July 1929 reached a stage of 24.63 ft (7.507 m) from flood-marks on house on left bank where flood in 1951 reached a stage of 25.7 ft (7.83 m).

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

REVISIONS (WATER YEARS).--WSP 1211: 1944(M). WSP 1341: 1940-41, 1942(M), 1943, 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	66	30	22	42	49	60	43	39	35	17	6.4	18
2	52	29	22	40	49	40	44	39	32	17	6.4	282
3	42	27	25	39	46	40	42	37	31	16	6.4	105
4	36	27	371	38	44	35	42	34	31	16	5.7	33
5	32	26	188	37	45	35	41	33	30	18	6.0	23
6	31	25	150	37	44	30	43	33	39	18	9.6	20
7	31	25	83	38	38	30	41	32	40	18	10	20
8	29	26	77	36	37	50	48	32	117	17	8.8	18
9	27	25	168	36	37	200	44	32	873	16	14	16
10	57	23	95	36	37	1,000	41	32	114	15	17	15
11	4,430	23	78	36	36	400	48	33	70	14	12	14
12	280	23	74	36	36	150	62	31	54	13	8.4	14
13	138	23	71	36	35	120	45	29	53	13	7.2	12
14	99	23	62	35	34	100	41	327	47	13	6.9	12
15	83	23	55	39	33	88	38	73	42	13	7.4	12
16	70	22	50	43	33	76	38	45	37	12	8.7	12
17	63	22	48	180	32	70	38	37	36	11	9.7	12
18	56	22	49	580	33	68	37	32	34	10	11	11
19	52	23	52	282	33	66	37	110	33	9.6	9.6	10
20	45	88	48	155	32	61	163	66	31	9.6	8.4	10
21	42	50	45	136	34	60	179	38	28	8.4	9.4	9.6
22	37	34	45	97	35	58	65	34	27	7.6	21	9.2
23	36	27	47	82	35	58	54	759	25	7.6	9.5	8.8
24	34	26	343	69	35	56	48	242	24	7.2	8.2	8.4
25	32	25	134	66	35	56	45	95	23	6.4	8.2	9.2
26	32	25	76	65	35	54	43	74	22	6.0	7.4	9.2
27	44	25	63	63	35	52	42	59	22	6.8	10	9.2
28	42	23	59	61	50	50	41	50	21	6.0	30	9.2
29	35	22	56	60	-----	47	44	43	20	5.7	18	8.8
30	33	22	55	54	-----	44	43	40	18	5.4	13	8.8
31	32	-----	47	51	-----	43	-----	37	-----	5.7	11	-----
TOTAL	6,118	834	2,758	2,605	1,057	3,297	1,580	2,597	2,009	359.0	325.3	759.4
MEAN	197	27.8	89.0	84.0	37.8	106	52.7	83.8	67.0	11.6	10.5	25.3
MAX	4,430	88	371	580	50	1,000	179	759	873	18	30	282
MIN	27	22	22	35	32	30	37	29	18	5.4	5.7	8.4
AC-FT	12,140	1,650	5,470	5,170	2,100	6,540	3,130	5,150	3,980	712	645	1,510

CAL YR 1973 TOTAL 42,064.5 MEAN 115 MAX 4,430 MIN 3.9 AC-FT 83,430
WTR YR 1974 TOTAL 24,298.7 MEAN 66.6 MAX 4,430 MIN 5.4 AC-FT 48,200

PEAK DISCHARGE (BASE, 3,600 CFS)

DATE	TIME	G.H.T.	DISCHARGE
10-11	1000	18.48	8,820

ARKANSAS RIVER BASIN

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07182250 COTTONWOOD RIVER NEAR PLYMOUTH, KS

LOCATION.--Lat 38°23'51", long 96°21'21", in NE¼NE¼SE¼ sec.13, T.19 S., R.9 E., Chase County, at downstream side of county highway bridge, 0.8 mi (1.3 km) downstream from Buckeye Creek, 1.5 mi (2.4 km) southwest of Plymouth, and at mile 39.2 (63.1 km).

DRAINAGE AREA.--1,740 mi² (4,510 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 1,109.04 ft (338.035 m) above mean sea level.

AVERAGE DISCHARGE.--11 years, 937 ft³/s (26.54 m³/s), 678,900 acre-ft/yr (837 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 34,400 ft³/s (974 m³/s) Oct. 11, gage height, 34.72 ft (10.583 m); minimum, 116 ft³/s (3.29 m³/s) Aug. 1.

Period of record: Maximum discharge, 57,500 ft³/s (16.30 m³/s) June 5, 1965, gage height, 35.70 ft (10.881 m); minimum, 8.7 ft³/s (0.25 m³/s) Oct. 21, 1964.

Maximum stage known since at least 1903, 37.8 ft (11.52 m) July 11, 1951, from information by local residents.

REMARKS.--Records good. Flow partially regulated by Marion Lake 87.3 mi (140.5 km) upstream since 1968. (See sta 07179794.) Records of chemical analyses for the water year 1974 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	4,480	2,540	524	1,460	955	894	644	1,840	759	356	121	3,990
2	2,470	2,460	526	1,740	922	810	616	1,720	694	340	125	5,560
3	2,120	1,710	573	1,980	884	716	600	1,110	666	323	122	2,320
4	1,860	1,290	3,600	1,880	854	665	595	830	667	309	121	1,030
5	1,700	1,250	6,600	1,290	840	631	582	735	643	301	121	653
6	2,440	1,230	4,400	1,200	800	608	556	667	766	327	129	502
7	2,620	1,220	2,830	1,050	770	590	546	635	875	322	143	478
8	1,690	1,220	1,920	971	750	661	622	615	1,060	281	190	410
9	1,430	1,190	1,730	930	720	843	615	606	9,040	260	199	369
10	1,900	1,180	1,800	929	700	4,300	570	602	9,190	244	177	341
11	23,400	1,170	1,750	891	674	6,860	603	613	7,580	231	177	305
12	26,000	1,160	1,520	844	670	4,910	707	575	4,340	218	232	267
13	19,300	1,160	1,460	837	664	2,370	664	543	1,890	209	184	247
14	17,200	1,670	1,380	804	645	1,510	633	3,530	1,240	201	144	230
15	9,470	1,940	1,210	786	628	1,300	562	4,140	1,050	192	2,640	220
16	2,440	1,040	1,050	812	609	1,160	537	2,330	1,260	182	971	210
17	1,670	548	972	1,920	599	1,080	523	915	1,300	176	304	201
18	1,690	508	951	4,840	597	1,070	517	706	1,250	170	701	201
19	1,720	493	946	5,270	605	1,010	509	2,120	1,210	166	209	197
20	1,610	1,820	887	4,390	596	956	788	3,190	1,160	158	167	192
21	1,520	1,210	868	3,420	626	923	7,260	4,490	1,100	156	144	180
22	1,440	1,010	838	2,650	911	894	11,100	2,780	770	148	168	171
23	1,380	781	865	2,200	830	863	13,900	1,440	795	139	159	160
24	1,310	697	1,670	1,840	804	850	7,610	2,900	991	131	143	154
25	1,260	641	2,380	1,610	746	840	2,290	5,110	982	132	139	154
26	1,360	628	2,830	1,520	731	826	2,550	4,830	970	132	130	151
27	2,440	605	1,740	1,220	730	1,090	2,650	2,190	948	133	127	151
28	1,610	587	1,200	1,110	821	1,160	2,160	1,790	627	136	407	150
29	1,430	565	1,350	1,100	-----	1,110	1,890	1,610	451	127	430	146
30	2,200	540	1,520	1,040	-----	1,080	2,000	1,000	377	125	244	141
31	2,560	-----	1,460	1,010	-----	811	-----	816	-----	125	200	-----
TOTAL	145,720	34,063	53,350	53,544	20,681	43,391	65,399	56,978	54,651	6,450	9,468	19,481
MEAN	4,701	1,135	1,721	1,727	739	1,400	2,180	1,838	1,822	208	305	649
MAX	26,000	2,540	6,600	5,270	955	6,860	13,900	5,110	9,190	356	2,640	5,560
MIN	1,260	493	524	786	596	590	509	543	377	125	121	141
AC-FT	289,000	67,560	105,800	106,200	41,020	86,070	129,700	113,000	108,400	12,790	18,780	38,640

CAL YR 1973 TOTAL 885,732 MEAN 2,427 MAX 26,000 MIN 82 AC-FT 1,757,000
WTR YR 1974 TOTAL 563,176 MEAN 1,543 MAX 26,000 MIN 121 AC-FT 1,117,000

PEAK DISCHARGE (BASE, 4,900 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
10-11	2000	34.72	34,400	05-14	2200	24.49	6,240
12-05	0500	26.22	7,130	05-26	0100	23.41	5,700
01-18	2300	23.41	5,700	06-09	2300	30.75	10,600
03-11	1300	26.38	7,230	08-15	1800	23.96	5,980
04-23	1300	32.65	14,200	09-01	2300	26.56	7,340

ARKANSAS RIVER BASIN

07182450 JOHN REDMOND RESERVOIR NEAR BURLINGTON, KS

LOCATION.--Lat 38°14'15", long 95°46'05", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.9, T.21 S., R.15 E., Coffey County, on the dam on Neosho River, 3,300 ft (1,000 m) southwest of spillway, 3.0 mi (4.8 km) north of Burlington, and at mile 343.7 (553.0 km).

DRAINAGE AREA.--3,015 mi² (7,809 km²).

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

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (levels by Corps of Engineers). Prior to Sept. 9, 1964, nonrecording gage at same site and datum.

EXTREMES.--Current year: Maximum elevation, 1,066.81 ft (325.164 m) Oct. 16, contents, 607,500 acre-ft (749 hm³); minimum, 1,035.97 ft (315.764 m) Feb. 4, contents, 56,220 acre-ft (69.3 hm³).
Period of record: Maximum elevation, 1,066.81 ft (325.164 m) Oct. 16, 1973, contents, 607,500 acre-ft (749 hm³); minimum since pool first filled, 1,035.72 ft (315.687 m) Dec. 29, 1969, contents, 54,300 acre-ft (67.0 hm³).

REMARKS.--Reservoir is formed by compacted earthfill dam. The spillway is a gate-controlled, concrete chute type structure. Filling began Sept. 7, 1963; regulated storage began Sept. 1, 1964. Maximum pool, 873,910 acre-ft (1,080 hm³) at elevation 1,074.5 ft (327.51 m); top of flood control pool, 644,600 acre-ft (795 hm³) at elevation 1,068.0 ft (325.53 m); and top of conservation pool, 56,450 acre-ft (69.6 hm³) at elevation 1,036.0 ft (315.77 m). Reservoir is designed for flood control, water quality control, recreation, fish and wildlife, and future water supply. Figures given herein represent total contents.

COOPERATION.--Records furnished by Corps of Engineers; reviewed by Geological Survey.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey by Corps of Engineers, computed in 1963)

1,035	49,000	1,055	312,200
1,040	91,750	1,060	422,100
1,045	148,800	1,065	553,900
1,050	221,800	1,070	710,200

ELEVATION, IN FEET, AT 2400, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,061.08	1,057.39	1,038.50	1,036.72	1,036.10	1,036.11	1,036.81	1,037.12	1,038.03	1,037.83	1,037.76	1,040.36
2	1,061.25	1,056.64	1,038.21	1,036.29	1,036.07	1,036.16	1,036.48	1,037.32	1,037.95	1,037.71	1,037.80	1,041.92
3	1,060.74	1,055.68	1,038.10	1,036.18	1,036.01	1,036.21	1,036.68	1,037.46	1,037.85	1,037.71	1,037.74	1,043.30
4	1,060.13	1,054.63	1,037.29	1,036.43	1,036.13	1,036.24	1,036.50	1,037.50	1,037.83	1,037.78	1,037.72	1,043.64
5	1,059.52	1,053.52	1,041.18	1,036.66	1,036.51	1,036.21	1,036.49	1,037.45	1,037.83	1,037.82	1,037.74	1,043.10
6	1,059.08	1,052.40	1,042.97	1,036.77	1,036.77	1,036.20	1,036.50	1,037.34	1,038.00	1,037.80	1,037.74	1,042.20
7	1,058.54	1,051.18	1,043.79	1,036.80	1,036.88	1,036.14	1,036.72	1,037.22	1,038.05	1,037.77	1,037.71	1,041.17
8	1,057.90	1,049.90	1,044.27	1,036.69	1,036.84	1,036.10	1,036.70	1,037.13	1,038.64	1,037.73	1,037.73	1,040.12
9	1,057.09	1,048.50	1,044.55	1,036.40	1,036.80	1,036.16	1,036.76	1,037.02	1,039.79	1,037.70	1,037.76	1,039.30
10	1,056.59	1,047.03	1,044.63	1,036.12	1,036.82	1,037.86	1,036.80	1,036.90	1,041.53	1,037.71	1,037.80	1,039.06
11	1,059.50	1,045.44	1,044.55	1,035.98	1,036.90	1,040.47	1,036.94	1,036.89	1,042.96	1,037.70	1,037.80	1,039.05
12	1,061.48	1,043.76	1,044.34	1,036.00	1,037.01	1,042.20	1,037.04	1,036.90	1,043.94	1,037.71	1,037.82	1,039.06
13	1,064.87	1,042.35	1,044.07	1,036.03	1,037.10	1,043.27	1,037.20	1,037.00	1,044.40	1,037.74	1,037.82	1,039.00
14	1,066.05	1,041.29	1,043.86	1,036.06	1,037.16	1,043.73	1,037.20	1,037.38	1,044.16	1,037.77	1,037.85	1,038.96
15	1,066.60	1,040.44	1,043.62	1,036.11	1,037.21	1,043.68	1,037.29	1,038.60	1,043.53	1,037.80	1,037.93	1,038.93
16	1,066.81	1,039.86	1,043.26	1,036.17	1,037.16	1,043.40	1,037.28	1,039.60	1,042.96	1,038.80	1,038.42	1,038.90
17	1,066.40	1,039.40	1,042.96	1,036.36	1,037.04	1,043.10	1,037.29	1,039.17	1,042.46	1,037.80	1,038.83	1,038.87
18	1,065.70	1,039.13	1,042.52	1,036.93	1,037.10	1,042.86	1,037.30	1,038.39	1,042.00	1,037.80	1,038.86	1,038.86
19	1,065.05	1,038.92	1,041.85	1,037.66	1,036.96	1,042.56	1,037.32	1,037.82	1,041.54	1,037.81	1,039.02	1,038.84
20	1,064.34	1,040.70	1,041.61	1,038.48	1,036.90	1,042.36	1,037.32	1,037.70	1,041.10	1,037.81	1,039.05	1,038.83
21	1,063.59	1,041.79	1,040.80	1,039.17	1,037.35	1,041.96	1,037.59	1,037.90	1,040.64	1,037.82	1,039.10	1,038.79
22	1,062.82	1,041.90	1,040.02	1,039.73	1,037.36	1,041.72	1,038.81	1,038.03	1,040.18	1,037.81	1,039.10	1,038.76
23	1,062.00	1,041.57	1,039.33	1,039.70	1,037.24	1,041.41	1,039.13	1,037.74	1,039.69	1,037.79	1,039.10	1,038.74
24	1,061.21	1,041.10	1,038.85	1,039.38	1,036.85	1,041.10	1,039.16	1,037.28	1,039.19	1,037.78	1,039.13	1,038.72
25	1,060.38	1,040.60	1,038.64	1,038.85	1,036.50	1,040.59	1,039.42	1,037.39	1,038.74	1,037.79	1,039.14	1,038.71
26	1,059.89	1,040.14	1,038.53	1,038.27	1,036.13	1,039.77	1,038.63	1,037.92	1,038.51	1,037.80	1,039.16	1,038.70
27	1,059.87	1,039.71	1,038.34	1,037.65	1,036.04	1,039.00	1,038.10	1,038.01	1,038.44	1,037.79	1,039.35	1,038.70
28	1,059.78	1,039.23	1,038.10	1,037.00	1,036.06	1,038.40	1,037.44	1,037.71	1,038.26	1,037.80	1,039.59	1,038.72
29	1,059.35	1,038.98	1,037.74	1,036.33	-----	1,037.95	1,037.11	1,037.80	1,038.12	1,037.78	1,039.59	1,038.74
30	1,058.70	1,038.75	1,037.44	1,036.07	-----	1,037.57	1,037.06	1,038.09	1,037.94	1,037.76	1,039.50	1,038.76
31	1,058.05	-----	1,037.14	1,036.10	-----	1,037.23	-----	1,038.10	-----	1,037.77	1,039.39	-----
MEAN	1,061.43	1,044.73	1,041.07	1,037.07	1,036.75	1,039.60	1,037.37	1,037.67	1,040.14	1,037.81	1,038.49	1,039.69
MAX	1,066.81	1,057.39	1,044.63	1,039.73	1,037.36	1,043.73	1,039.42	1,039.60	1,044.40	1,038.80	1,039.59	1,043.64
MIN	1,056.59	1,038.95	1,037.14	1,035.98	1,036.01	1,036.10	1,036.48	1,036.89	1,037.83	1,037.70	1,037.71	1,038.70
(+)	376,800	79,790	65,650	57,230	56,920	66,400	64,980	73,920	72,500	71,020	85,810	79,890
(#)	-53,600	-297,010	-14,140	-8,420	-310	+9,480	-1,420	+8,940	-1,420	-1,480	+14,790	-5,920
CAL YR 1973 (#) -11,860											
WTR YR 1974 (#) -350,510											

+ CONTENTS, IN ACRE-FEET, AT END OF MONTH.
CHANGE IN CONTENTS, IN ACRE-FEET.

175

LOCATION.--Lat 38°11'40", long 95°44'10", in SE¼NW¼ sec.26, T.21 S., R.15 E., Coffey County, at downstream side of highway bridge at Burlington, 0.3 mi (0.5 km) upstream from Rock Creek, and at mile 338.4 (554.5 km). Records include flow of Rock Creek.

PERIOD OF RECORD.--June 1961 to current year.

GAGE.--Water-stage recorder. Datum of gage is 983.56 ft (299.789 m) above mean sea level.

AVERAGE DISCHARGE.--13 years, 1,669 ft³/s (47.27 m³/s), 1,209,000 acre-ft/yr (1,490 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 14,300 ft³/s (405 m³/s) Oct. 11, gage height, 24.29 ft (7.404 m); minimum, 5.6 ft³/s (0.16 m³/s) Sept. 30.

Period of record: Maximum discharge, 26,200 ft³/s (742 m³/s) Sept. 13, 1961, gage height, 31.53 ft (9.610 m); minimum daily, 1.1 ft³/s (.031 m³/s) Sept. 16, 17, 19, 20, 1963.

REMARKS.--Records good. Flow completely regulated by John Redmond Reservoir 5.3 mi (8.5 km) upstream since 1963 (see sta 07182450).
Records of chemical analyses for the water year 1974 are published in Part 2 of this report.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12,800	13,000	2,060	3,360	1,570	1,020	2,900	3,010	1,280	1,210	66	1,520
2	12,800	12,900	2,010	3,160	1,560	1,030	1,920	2,220	1,270	851	64	1,400
3	12,600	13,100	1,980	2,110	1,550	1,050	1,070	1,850	1,260	666	63	91
4	12,500	13,200	2,450	996	829	1,050	1,080	1,500	1,030	220	63	1,280
5	12,400	13,400	2,410	1,030	44	1,040	796	1,510	795	144	64	4,070
6	12,900	13,000	2,630	1,060	40	1,040	553	1,480	820	464	71	6,940
7	12,900	12,800	3,230	1,080	569	1,040	554	1,370	816	464	66	6,560
8	12,500	12,600	3,810	1,570	1,140	1,030	563	1,270	836	460	65	6,110
9	12,200	12,700	3,880	2,090	1,150	1,040	562	1,250	914	321	66	4,420
10	12,100	12,800	3,920	2,000	857	849	562	1,230	1,940	172	66	1,560
11	6,760	12,600	3,900	1,460	546	184	578	1,230	3,260	168	65	454
12	2,640	12,400	3,870	851	552	158	588	1,220	3,350	130	62	450
13	3,180	10,700	3,820	851	558	155	590	954	3,480	65	62	445
14	11,100	8,240	3,740	851	562	917	601	654	4,540	65	64	442
15	12,200	6,750	3,700	851	695	2,540	599	2,610	6,120	65	66	442
16	12,700	5,330	3,640	858	1,110	3,610	600	6,400	5,710	64	67	439
17	13,400	3,830	3,580	1,190	1,100	3,550	604	6,510	5,540	64	76	392
18	13,300	2,300	4,350	3,200	1,090	3,400	603	6,180	5,390	65	67	282
19	13,100	1,380	5,950	5,060	1,090	3,280	604	4,370	5,220	66	66	280
20	13,000	1,850	2,570	5,420	1,070	3,230	609	3,140	5,060	65	64	280
21	13,100	1,510	6,240	5,770	1,170	3,180	620	3,190	4,890	65	64	280
22	13,100	3,080	5,400	6,350	2,050	3,100	2,560	4,070	4,740	65	63	280
23	12,900	4,130	5,100	6,240	2,990	3,050	7,950	4,920	4,610	64	64	274
24	12,900	4,030	5,030	6,070	2,910	2,980	10,600	4,290	4,440	64	64	248
25	12,900	3,840	4,800	5,860	2,750	4,230	10,900	2,980	4,290	64	65	247
26	12,800	3,720	4,670	5,580	2,600	5,450	9,750	3,120	3,380	64	65	244
27	9,510	3,500	4,420	5,270	1,700	5,140	7,610	4,650	2,400	63	128	248
28	7,380	3,330	3,850	4,930	1,010	4,880	7,180	4,450	2,160	63	381	193
29	10,500	2,150	3,740	4,560	-----	4,020	5,440	2,020	1,570	62	435	12
30	12,600	2,110	3,600	2,960	-----	3,150	3,740	869	1,550	63	1,040	5.9
31	13,100	-----	3,500	1,570	-----	3,000	-----	1,020	-----	64	1,030	-----
TOTAL	357,870	226,280	117,850	94,208	34,862	73,393	82,876	85,537	92,661	6,490	4,712	39,888.9
MEAN	11,540	7,543	3,802	3,039	1,245	2,368	2,763	2,759	3,089			

ARKANSAS RIVER BASIN

07183000 NEOSHO RIVER NEAR IOLA, KS

LOCATION.--Lat 37°53'27", long 95°25'50", in SW¼NE¼ sec.9, T.25 S., R.18 E., Allen County, on left bank 1.0 mi (1.6 km) downstream from Elm Creek, 3.0 mi (4.8 km) southwest of Iola, and at mile 284.4 (457.6 km).

DRAINAGE AREA.--3,818 mi² (9,889 km²).

PERIOD OF RECORD.--August 1895 to December 1903 (published as "at Iola"), October 1917 to current year. Monthly discharge only for some periods, published in WSP 1311. Figures of daily discharge for August 1895 to January 1898, published in previous reports, have been found to be unreliable and should not be used.

GAGE.--Water-stage recorder. Datum of gage is 914.77 ft (278.822 m) above mean sea level (levels by Corps of Engineers). Prior to Oct. 1, 1917, nonrecording gage at tailgate of flume at milldam, 4.8 mi (7.7 km) upstream at datum 12.2 ft (3.72 m) higher.

AVERAGE DISCHARGE.--65 years, 1,718 ft³/s (48.65 m³/s), 1,245,000 acre-ft/yr (1,540 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 26,800 ft³/s (759 m³/s) Oct. 12, gage height, 25.49 ft (7.769 m); minimum, 64 ft³/s (1.81 m³/s) July 24, 25.

Period of record: Maximum discharge, 436,000 ft³/s (12,300 m³/s) July 13, 1951, gage height, 43.0 ft (13.11 m), from floodmark, from rating curve extended above 84,000 ft³/s (2,380 m³/s) on basis of slope-area measurement of peak flow; no flow at times in 1936, 1956.

Maximum stage known since at least 1855, 43.0 ft (13.11 m) July 13, 1951, from information by local newspaper.

REMARKS.--Records good. Considerable regulation since 1963 by John Redmond Reservoir 59.3 mi (95.4 km) upstream (see sta 07182450).

REVISIONS (WATER YEARS).--WSP 1037: 1918-24, 1926-29, 1935(M). WSP 1117: Drainage area. WSP 1311: 1895-98. WSP 1391: 1896(M), 1899, 1901-2(M), 1903-4. See also PERIOD OF RECORD.

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	10,500	13,200	2,350	4,190	1,950	1,300	2,990	5,750	1,100	1,470	79	7,650
2	13,300	13,100	2,270	3,720	1,870	1,270	2,850	3,150	1,290	1,080	86	18,800
3	13,100	13,100	2,240	3,670	1,810	1,270	1,710	2,560	1,280	842	85	17,300
4	12,700	13,200	8,630	2,260	1,730	1,250	1,240	1,940	1,280	645	81	2,940
5	12,400	13,300	12,300	1,300	749	1,240	1,220	1,690	1,150	306	79	2,260
6	12,700	13,400	4,450	1,300	319	1,220	910	1,650	2,130	147	119	5,310
7	14,700	13,100	3,270	1,300	258	1,200	711	1,600	2,030	426	128	6,590
8	13,900	12,900	3,750	1,300	692	1,330	734	1,460	3,230	448	102	6,180
9	12,700	12,700	3,990	2,050	1,290	5,180	742	1,360	7,510	440	99	5,730
10	12,200	12,800	4,020	3,150	1,300	14,400	766	1,320	2,700	351	93	3,490
11	20,000	12,800	4,000	3,380	994	19,800	781	1,320	3,420	202	90	1,330
12	26,400	12,700	3,960	2,780	758	5,760	816	1,300	4,640	192	87	591
13	23,900	12,300	3,900	1,800	754	1,450	813	1,270	3,580	185	84	539
14	9,490	10,300	3,830	1,500	745	945	775	4,860	3,460	121	83	515
15	11,800	7,440	3,750	1,220	736	1,680	742	3,230	5,220	100	90	502
16	12,500	6,370	3,690	1,150	907	3,150	724	4,190	5,670	93	92	513
17	13,000	4,530	3,620	1,670	1,230	3,660	710	6,280	5,390	92	108	500
18	13,500	3,710	3,560	8,010	1,290	3,590	706	6,200	5,240	89	121	462
19	13,500	1,950	5,010	12,800	2,520	3,380	702	5,780	5,080	88	161	358
20	13,300	10,400	4,650	9,620	1,650	3,300	773	3,620	4,930	85	192	346
21	13,100	15,100	3,660	8,100	1,800	3,270	2,050	3,060	4,760	83	138	334
22	13,200	4,170	6,060	8,880	4,770	3,250	1,280	3,110	4,590	83	103	324
23	13,200	4,320	5,440	10,200	3,960	3,210	4,240	4,360	4,450	78	194	318
24	13,100	11,300	10,700	7,040	3,600	3,130	8,770	4,730	4,300	78	155	316
25	13,100	5,580	8,010	6,360	3,140	3,200	10,400	3,720	4,120	76	99	296
26	13,000	4,290	5,510	6,010	2,930	5,190	10,700	2,950	3,950	82	92	287
27	17,900	3,940	5,010	5,810	2,800	5,450	8,830	3,120	2,720	80	167	282
28	13,600	3,930	4,530	5,810	1,740	5,090	7,230	5,000	2,310	81	7,580	371
29	9,010	3,230	4,200	5,680	-----	4,780	9,760	3,670	1,890	77	11,100	319
30	11,200	2,450	4,050	4,820	-----	3,600	12,900	1,670	1,520	78	2,120	168
31	12,800	-----	3,750	2,690	-----	3,130	-----	962	-----	79	1,300	-----
TOTAL	428,800	271,610	148,160	139,570	48,292	119,675	97,575	96,882	104,940	8,277	25,107	84,921
MEAN	13,830	9,054	4,779	4,502	1,725	3,860	3,253	3,125	3,498	267	810	2,831
MAX	26,400	15,100	12,300	12,800	4,770	19,800	12,900	6,280	7,510	1,470	11,100	18,800
MIN	9,010	1,950	2,240	1,150	258	945	702	962	1,100	76	79	168
AC-FT	850,500	538,700	293,900	276,800	95,790	237,400	193,500	192,200	208,100	16,420	49,800	168,400
CAL YR 1973	TOTAL 2,229,329		MEAN 6,108		MAX 26,400		MIN 77		AC-FT 4,422,000			
WTR YR 1974	TOTAL 1,573,809		MEAN 4,312		MAX 26,400		MIN 76		AC-FT 3,122,000			

PEAK DISCHARGE (REGULATED) ABOVE 10,000 CFS

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
10-07	1600	16.82	15,200	11-24	0800	15.63	13,600	03-11	0400	21.98	21,900
10-12	1400	25.49	26,800	12-05	0400	16.63	14,900	04-26	1700	13.58	10,800
10-18	1700	15.61	13,600	12-24	1200	14.61	12,300	04-30	1100	17.17	15,600
10-27	2200	20.51	20,000	01-19	1000	15.46	13,400	08-29	0100	17.84	16,500
11-01	1600	15.41	13,300	01-23	0200	14.39	11,900	09-03	0100	21.15	20,800
11-21	0500	19.05	18,100								

ARKANSAS RIVER BASIN

177

07183200 NEOSHO RIVER NEAR CHANUTE, KS

LOCATION.--Lat 37°43'49", long 95°26'26", in NW¼NE¼ sec.4, T.27 S., R.18 E., Neosho County, at downstream side of bridge on U.S. Highway 169, 2.4 mi (3.9 km) upstream from Village Creek, 2.7 mi (4.3 km) north of Chanute, and at mile 271.1 (436.2 km).

DRAINAGE AREA.--4,195 mi² (10,865 km²), includes that of Village Creek.

PERIOD OF RECORD.--October 1962 to September 1974 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 887.94 ft (270.644 m) above mean sea level.

AVERAGE DISCHARGE.--12 years, 2,356 ft³/s (66.72 m³/s), 1,707,000 acre-ft/yr (2,100 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 31,800 ft³/s (901 m³/s) Oct. 13, gage height, 29.19 ft (8.897 m); minimum, 45 ft³/s (1.27 m³/s) July 31, Aug. 3.

Period of record: Maximum discharge, 41,600 ft³/s (1,180 m³/s) Apr. 20, 1970, gage height, 32.09 ft (9.781 m); minimum, 0.20 ft³/s (0.006 m³/s) Sept. 25, 1963.

Maximum stage known since at least 1855, 40.9 ft (12.47 m) July 13, 1951, from information by Corps of Engineers.

REMARKS.--Records good. Considerable regulation since 1963 by John Redmond Reservoir 72.6 mi (116.8 km) upstream (see sta 07182450).

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	9,470	12,700	2,630	3,920	2,200	1,470	3,220	10,300	1,350	1,590	52	7,650
2	12,900	12,800	2,530	3,690	1,900	1,400	3,100	5,300	1,430	1,300	48	19,500
3	12,900	12,600	2,480	3,630	1,900	1,380	2,280	3,000	1,410	881	48	22,600
4	12,500	12,700	8,970	2,710	1,800	1,340	1,360	2,390	1,630	757	52	10,600
5	12,200	12,800	16,400	1,430	900	1,300	1,320	1,940	1,700	423	59	2,620
6	12,300	12,900	8,380	1,490	580	1,280	1,100	1,860	3,950	184	92	5,010
7	14,400	12,800	3,880	1,410	405	1,270	783	1,780	4,800	297	155	6,930
8	14,400	12,500	3,920	1,440	511	1,290	766	1,660	3,890	454	123	6,540
9	12,600	12,300	4,290	1,820	1,370	8,290	772	1,510	10,800	449	103	6,090
10	12,000	12,200	4,290	2,760	1,410	20,600	824	1,470	5,510	417	97	4,300
11	17,400	12,400	4,260	3,030	1,220	27,200	865	1,450	3,870	250	86	2,000
12	26,200	12,200	4,220	2,500	826	18,800	919	1,430	6,700	191	88	800
13	31,300	12,100	4,140	1,540	798	3,040	894	1,410	4,320	189	83	600
14	20,400	10,600	4,080	1,460	784	1,440	842	5,580	3,810	153	85	564
15	11,500	8,160	3,990	1,400	774	1,650	801	6,090	4,920	101	119	548
16	12,200	6,710	3,900	1,400	831	3,190	777	3,890	5,930	83	115	584
17	12,400	5,320	3,840	2,020	1,270	3,930	763	6,410	5,620	80	131	575
18	12,900	4,040	3,780	8,850	1,460	3,860	763	6,460	5,450	80	179	545
19	13,000	2,700	4,740	15,500	4,290	3,690	750	6,080	5,290	76	250	426
20	12,800	9,880	5,230	13,300	2,470	3,540	787	4,230	5,130	73	467	384
21	12,600	19,800	3,170	9,920	2,110	3,510	2,950	3,290	4,960	70	323	361
22	12,600	11,800	5,750	9,140	6,450	3,540	2,410	3,300	4,780	66	152	349
23	12,700	4,590	5,850	11,700	4,880	3,500	3,130	4,230	4,630	62	1,040	336
24	12,600	11,200	13,600	7,960	4,090	3,410	8,020	4,920	4,490	62	405	338
25	12,500	9,910	11,100	6,600	3,500	3,490	10,100	4,210	4,310	62	194	329
26	12,500	5,270	6,370	6,300	3,230	5,090	10,400	3,160	4,160	62	138	315
27	16,700	4,440	5,440	6,100	3,090	5,790	9,310	3,230	3,230	62	135	309
28	18,400	4,260	5,070	6,000	2,220	5,410	7,470	4,770	2,480	59	6,990	593
29	9,260	3,960	4,570	5,900	-----	5,070	9,080	4,250	2,200	56	15,900	1,110
30	10,300	2,820	4,440	5,200	-----	4,160	15,500	2,250	1,650	56	6,560	425
31	12,100	-----	4,050	3,200	-----	3,410	-----	1,150	-----	48	2,010	-----
TOTAL	438,030	288,460	169,360	153,320	57,269	156,340	102,056	113,000	124,400	8,693	36,279	103,331
MEAN	14,130	9,615	5,463	4,946	2,045	5,043	3,402	3,645	4,147	280	1,170	3,444
MAX	31,300	19,800	16,400	15,500	6,450	27,200	15,500	10,300	10,800	1,590	15,900	22,600
MIN	9,260	2,700	2,480	1,400	405	1,270	750	1,150	1,350	48	48	309
AC-FT	868,800	572,200	335,900	304,100	113,600	310,100	202,400	224,100	246,700	17,240	71,960	205,000
CAL YR 1973	TOTAL 2,521,061 MEAN 6,907 MAX 31,300 MIN 95 AC-FT 5,001,000											
WTR YR 1974	TOTAL 1,750,538 MEAN 4,796 MAX 31,300 MIN 48 AC-FT 3,472,000											

PEAK DISCHARGE (REGULATED) ABOVE 12,000 CFS

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
10-13	1400	29.19	31,800	12-05	0900	21.07	17,100	03-11	1400	27.65	27,800
10-28	0600	23.37	20,600	12-24	1600	20.15	15,700	04-30	1500	21.26	17,400
11-21	1200	23.19	20,300	01-19	1400	20.20	15,800	08-29	0700	21.59	17,900
11-24	1700	19.20	14,300	01-23	0700	18.08	12,600	09-03	1300	25.15	23,200

ARKANSAS RIVER BASIN

07183500 NEOSHO RIVER NEAR PARSONS, KS

LOCATION.--Lat 37°18'30", long 95°06'40", in NW¼NE¼ sec.33, T.31 S., R.21 E., Labette County, on right bank 150 ft (46 m) downstream from dam of Kansas Army Ammunition Plant, 8 mi (13 km) southeast of Parsons, and at mile 201.4 (324.1 km).

DRAINAGE AREA.--4,905 mi² (12,704 km²).

PERIOD OF RECORD.--October 1921 to current year. Monthly discharge only October 1921, published in WSP 1311.

GAGE.--Water-stage recorder. Datum of gage is 810.25 ft (246.964 m) above mean sea level (levels by Corps of Engineers). Prior to Oct. 1, 1929, nonrecording gage at bridge 2.2 mi (3.5 km) upstream at datum 0.04 ft (0.012 m) lower. Oct. 1, 1929, to Feb. 7, 1935, nonrecording gage, and Feb. 8, 1935, to Dec. 7, 1966, water-stage recorder at bridge 2.7 mi (4.3 km) upstream at present datum.

AVERAGE DISCHARGE.--53 years, 2,555 ft³/s (72.36 m³/s), 1,851,000 acre-ft/yr (2.28 km³/yr).

EXTREMES.--Current year: Maximum discharge, 43,200 ft³/s (1,220 m³/s) Mar. 11, gage height, 23.68 ft (7.218 m); minimum, 72 ft³/s (2.04 m³/s) Aug. 3-5.

Period of record: Maximum discharge, 410,000 ft³/s (11,600 m³/s) July 14, 1951, gage height, 40.20 ft (12.25 m), from floodmark in gage well at site 2.7 mi (4.3 km) upstream; no flow at times in 1934, 1936, 1939, 1955-57.

REMARKS.--Records good. Flow moderately regulated by John Redmond Reservoir 142.3 mi (229.0 km) upstream since 1963 (see sta 07182450). Small diversion by the Kansas Army Ammunition Plant. Records of chemical analyses for the water year 1974 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 807: 1922-23. WSP 1391: 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	25,200	12,300	3,040	3,820	3,600	2,430	3,590	16,400	1,480	1,640	80	8,790
2	16,500	13,000	2,780	4,190	2,540	1,770	3,360	11,800	1,460	1,560	82	18,600
3	13,300	13,100	2,680	4,280	2,350	1,660	3,170	5,190	1,430	1,300	75	21,500
4	13,300	13,000	11,000	4,210	2,220	1,620	2,240	3,210	1,520	956	73	22,200
5	12,900	13,100	20,700	3,970	2,160	1,580	1,480	2,460	4,200	840	72	15,800
6	12,500	13,100	19,700	2,840	1,660	1,510	1,380	2,030	8,380	580	86	3,560
7	12,700	13,300	9,760	2,160	886	1,460	1,220	1,910	22,100	359	92	5,570
8	14,400	13,100	4,370	1,700	600	1,430	932	1,820	13,900	250	100	6,770
9	14,800	12,800	4,420	1,520	530	5,970	875	1,680	6,640	443	181	6,460
10	13,300	12,600	4,610	1,300	1,180	25,200	864	1,550	10,700	480	169	5,970
11	13,500	12,600	4,540	2,100	1,480	40,200	898	1,490	5,370	460	134	4,010
12	17,900	12,700	4,490	2,400	1,430	39,900	978	1,460	5,550	351	122	1,930
13	22,700	12,500	4,400	2,280	1,110	33,000	1,060	1,420	6,710	250	112	904
14	24,700	12,300	4,320	1,550	990	20,700	1,030	1,890	4,570	219	106	718
15	26,100	10,700	4,230	1,440	956	7,180	956	7,550	4,060	214	154	664
16	22,300	7,850	4,120	1,660	944	5,010	898	5,770	5,340	175	127	644
17	14,000	6,510	4,040	2,840	932	5,060	864	4,540	5,940	133	152	674
18	12,900	5,020	3,970	8,100	1,340	5,080	829	6,410	5,680	112	339	685
19	13,300	3,950	4,350	18,700	10,200	4,650	840	6,410	5,490	103	251	683
20	13,400	4,640	6,030	19,200	8,120	4,280	806	5,970	5,320	99	298	638
21	13,200	16,500	5,330	16,500	3,880	4,080	1,060	4,030	5,160	94	511	540
22	13,000	20,400	4,080	11,700	6,140	4,060	3,420	3,410	4,990	92	542	496
23	12,900	14,700	6,390	12,200	7,810	4,070	2,310	3,560	4,790	87	315	450
24	13,000	7,180	15,800	12,500	5,600	3,940	4,010	4,590	4,640	86	1,050	430
25	13,000	16,200	20,800	8,420	4,590	3,880	8,370	5,100	4,490	86	625	431
26	13,000	12,100	14,800	7,300	3,910	4,070	10,300	4,360	4,320	83	365	435
27	14,000	5,960	7,040	7,460	3,600	5,620	10,700	3,340	4,140	83	223	398
28	17,400	5,310	5,910	7,450	3,420	6,020	9,190	3,390	3,080	83	453	1,540
29	18,800	5,000	5,400	7,880	-----	5,640	7,510	4,950	2,450	81	8,300	5,910
30	12,000	4,080	5,020	6,860	-----	5,270	10,700	4,040	2,120	79	14,700	2,240
31	10,800	-----	4,590	5,680	-----	4,240	-----	2,650	-----	79	6,750	-----
TOTAL	480,800	325,600	222,710	194,210	84,178	260,580	95,840	134,380	166,020	11,457	36,639	139,640
MEAN	15,510	10,850	7,184	6,265	3,006	8,406	3,195	4,335	5,534	370	1,182	4,655
MAX	26,100	20,400	20,800	19,200	10,200	40,200	10,700	16,400	22,100	1,640	14,700	22,200
MIN	10,800	3,950	2,680	1,300	530	1,430	806	1,420	1,430	79	72	398
AC-FT	953,700	645,800	441,700	385,200	167,000	516,900	190,100	266,500	329,300	22,720	72,670	277,000
CAL YR 1973	TOTAL 3,017,410 MEAN 8,267 MAX 29,800 MIN 94 AC-FT 5,985,000											
WTR YR 1974	TOTAL 2,152,054 MEAN 5,896 MAX 40,200 MIN 72 AC-FT 4,269,000											

PEAK DISCHARGE (REGULATED) ABOVE 15,000 CFS

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
10-01	0500	20.81	26,300	12-05	2000	18.77	21,500	05-01	1500	16.22	17,100
10-15	1600	20.91	26,600	12-25	1100	18.67	21,300	06-07	1600	19.60	23,300
10-29	1000	17.70	19,500	01-19	1200	18.24	20,500	08-30	1000	15.26	15,500
11-22	1800	18.44	20,900	03-11	2400	23.68	43,200	09-04	2100	19.24	22,500
11-25	1700	16.19	17,000								

ARKANSAS RIVER BASIN

179

07184000 LIGHTNING CREEK NEAR MCCUNE, KS

LOCATION.--Lat 37°16'54", long 95°01'56", in NE¼NE¼ sec.7, T.32 S., R.22 E., Cherokee County, at downstream side of highway bridge, 5.0 mi (8.0 km) south of McCune, 13.0 mi (20.9 km) southeast of Parsons, and at mile 12.6 (20.3 km).

DRAINAGE AREA.--197 mi² (510 km²).

PERIOD OF RECORD.--October 1938 to September 1946, October 1959 to current year.

GAGE.--Water-stage recorder. Datum of gage is 818.10 ft (249.357 m) above mean sea level (levels by Corps of Engineers). Prior to Mar. 10, 1945, nonrecording gage and Mar. 10, 1945, to Sept. 30, 1946, water-stage recorder at present site and datum. Oct. 1, 1959, to May 26, 1960, water-stage recorder 100 ft (30 m) downstream at present datum.

AVERAGE DISCHARGE.--23 years, 143 ft³/s (4.050 m³/s), 103,600 acre-ft/yr (128 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 21,600 ft³/s (612 m³/s) Mar. 11, gage height, 17.65 ft (5.380 m), from rating curve extended above 15,000 ft³/s (425 m³/s); no flow July 31 to Aug. 7.
Period of record: Maximum discharge, 23,000 ft³/s (651 m³/s) May 19, 1943, gage height, 17.81 ft (5.428 m), from rating curve extended above 15,000 ft³/s (425 m³/s); no flow at times in most years.

REMARKS.--Records good.

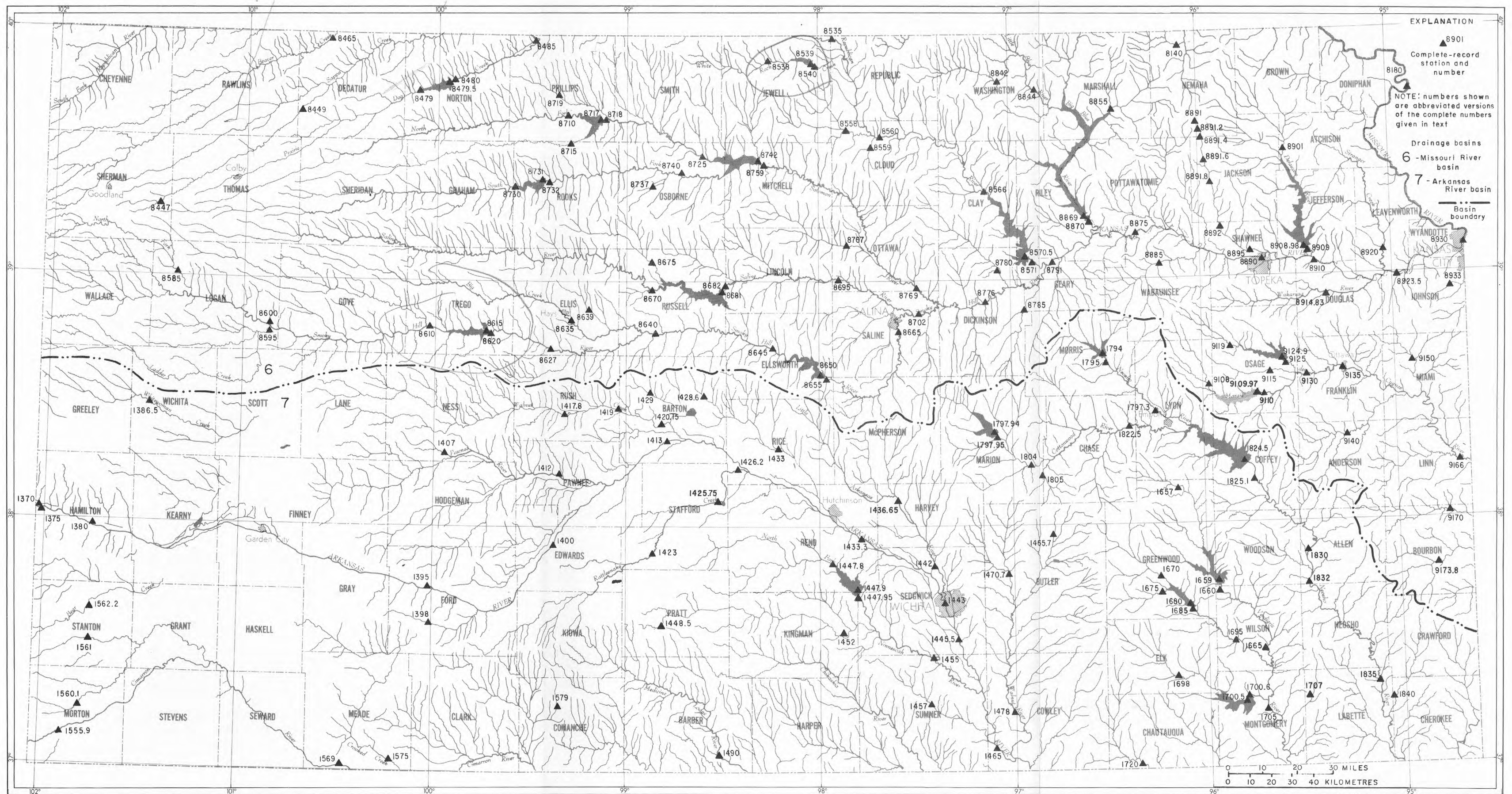
DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	118	19	93	60	90	46	28	92	367	2.6	0	596
2	60	14	69	50	69	39	24	92	99	2.4	0	1,940
3	36	11	60	43	55	37	20	38	43	2.1	0	1,600
4	25	7.7	1,820	39	45	34	18	26	36	2.3	0	366
5	20	6.5	4,350	36	40	31	16	20	980	2.4	0	127
6	17	6.0	1,950	34	38	27	15	18	2,040	2.3	0	62
7	16	5.5	258	33	33	24	14	14	7,470	1.9	0	38
8	21	5.5	128	29	29	22	15	12	4,880	1.6	.01	27
9	15	5.3	93	28	26	94	15	10	1,110	1.1	.23	19
10	10	5.3	78	28	24	4,780	15	9.3	228	.56	.30	14
11	10	4.8	65	25	23	15,100	16	8.3	127	.83	.11	11
12	247	4.4	56	20	23	4,300	18	7.3	211	.68	.06	8.2
13	2,040	4.3	50	18	23	857	19	6.2	170	.29	.07	6.5
14	1,070	4.1	44	18	22	236	17	6.2	83	.15	.16	5.1
15	213	3.3	39	21	21	1,130	14	24	54	.09	.26	4.1
16	100	3.7	34	201	20	1,780	14	87	37	.07	.26	4.1
17	58	4.1	29	1,370	19	364	13	34	27	.07	.30	3.9
18	37	4.1	28	1,870	45	176	13	18	21	.15	33	3.7
19	29	3.5	483	1,140	1,340	120	12	13	17	.29	55	5.2
20	23	453	563	349	1,230	84	12	9.0	14	.31	55	85
21	16	1,360	323	237	454	76	12	6.5	12	.32	30	46
22	14	493	227	204	1,130	103	13	6.2	9.7	.28	12	21
23	11	144	270	280	438	107	13	12	7.7	.15	198	11
24	9.0	353	2,340	185	163	83	13	47	5.6	.09	49	8.2
25	7.1	2,510	2,860	111	92	91	11	90	4.7	.07	14	8.1
26	6.4	2,660	826	143	68	101	9.5	361	4.2	.07	6.3	6.3
27	20	818	209	521	60	83	8.5	162	4.0	.06	3.9	5.3
28	51	426	143	516	53	61	8.2	60	3.7	.04	97	78
29	103	297	107	739	-----	49	8.9	33	3.4	.02	302	1,100
30	48	152	85	258	-----	40	19	21	3.0	.01	104	536
31	27	-----	70	138	-----	33	-----	263	-----	0	48	-----
TOTAL	4,477.5	9,788.1	17,750	8,744	5,673	30,108	444.1	1,606.0	18,072.0	23.30	1,008.96	6,745.7
MEAN	144	326	573	282	203	971	14.8	51.8	602	.75	32.5	225
MAX	2,040	2,660	4,350	1,870	1,340	15,100	28	361	7,470	2.6	302	1,940
MIN	6.4	3.3	28	18	19	22	8.2	6.2	3.0	0	0	3.7
AC-FT	8,880	19,410	35,210	17,340	11,250	59,720	881	3,190	35,850	46	2,000	13,380

CAL YR 1973 TOTAL 125,533.54 MEAN 344 MAX 4,350 MIN 0 AC-FT 249,000
WTR YR 1974 TOTAL 104,440.66 MEAN 286 MAX 15,100 MIN 0 AC-FT 207,200

PEAK DISCHARGE (BASE, 1,800 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
10-13	1700	13.48	2,290	02-19	2400	12.31	1,950
11-26	0600	15.32	3,040	03-11	0800	17.65	21,600
12-05	1200	16.02	5,460	03-16	0300	13.76	2,380
12-25	1100	15.38	3,110	06-07	1400	16.62	9,480
01-18	1600	12.28	1,940	09-02	2300	13.00	2,150



As the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the Geological Survey collects limited streamflow data at sites other than stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are usable in low-flow or flood-flow analyses, depending on the type of data collected.

Records collected at partial-record stations are presented in three tables. 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 stage and discharge for indicated times at flood hydrograph stations.

Low-flow partial-record stations

Measurements of streamflow in the area covered by this report made at low-flow, partial-record stations are given in the following table. Most of these measurements were made during periods of base flow when streamflow is primarily from ground-water storage. These measurements, when correlated with the simultaneous discharge of a nearby stream where continuous records are available, will give a picture of the low-flow potentiality of stream. The column headed "Period of record" shows the water years in which measurements were made at the same, or practically the same, site.

Discharge measurements made at low-flow partial-record stations during water year 1974

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Measurements	
					Date	Discharge (cfs)
Arkansas River basin						
07141240	Pickere1 Creek near Larned, Kans.	Lat 38°11'15", long 98°59'04", in NW¼NW¼NW¼ sec.33, T.21 S., R.15 W., Pawnee County, at bridge on county highway, 6 miles east of Larned, and at mile 2.0.	139	1971-74	12-13-73 2- 5-74 7- 2-74	5.10 .95 .12
07142200	Rattlesnake Creek near Haviland, Kans.	Lat 37°42'52", long 99°10'29", in SW¼NW¼NW¼ sec.10, T.27 S., R.17 W., Kiowa County, at county bridge, 4 miles west and 7 miles north of Haviland.	363	1967-74	12-12-73 2- 5-74 7- 2-74	26.9 18.2 11.0
07142270	Rattlesnake Creek Tributary near Hopewell, Kans.	Lat 37°50'33", long 98°59'09", in SE¼NE¼SE¼ sec.29, T.25 S., R.15 W., Stafford County, at bridge on county highway, 2.5 miles northeast of Hopewell, and at mile 0.2.	163	1971-74	12-12-73 2- 6-74 7- 2-74	2.72 1.04 .27
07142540	Wild Horse Creek near St. John, Kans.	Lat 38°03'39", long 98°45'52", in SW¼NW¼SW¼ sec.9, T.23 S., R.13 W., Stafford County, at bridge on county highway, 1 mile west of U.S. Highway 281, 3.5 miles north of St. John, and at mile 2.2.	125	1971-74	12-13-73 2- 6-74 7- 2-74	22.1 15.3 1.83
07142570	Rattlesnake Creek above Little Salt Marsh near Hudson, Kans.	Lat 38°05'13", long 98°34'52", in SW¼SW¼SW¼ sec.31, T.22 S., R.11 W., Stafford County, at bridge on county highway, 4 miles southeast of Hudson, and at mile 30.5.	1,032	1971-74	7- 2-74	50.2
07142650	Peace Creek near Sylvia, Kans.	Lat 38°04'34", long 98°26'18", in SW¼NW¼SW¼ sec.4, T.23 S., R.10 W., Reno County, at bridge on county highway, 8.5 miles north-west of Sylvia, and at mile 17.2.	92.0	1971-74	12-13-73 2- 6-74 7- 2-74	9.70 4.74 1.15
07142670	Peace Creek near Sterling, Kans.	Lat 38°08'43", long 98°15'13", in SW¼SW¼SW¼ sec.7, T.22 S., R.8 W., Reno County, at bridge on county highway, 4.5 miles south-west of Sterling, and at mile 2.8.	136	1971-74	12-14-73 2- 9-74 7- 2-74	22.7 14.5 4.92
07142740	Salt Creek near Hutchinson, Kans.	Lat 38°04'23", long 98°02'11", in SW¼SE¼SE¼ sec.1, T.23 S., R.7 W., Reno County, at bridge on county road, 6 miles west of Hutchinson, and at mile 6.5.	103	1971-74	12-14-73 2- 9-74 7- 2-74	12.5 10.6 6.80
07144590	North Fork Ninnescah River near Sylvia, Kans.	Lat 37°55'59", long 98°24'36", in NW¼NW¼NW¼ sec.27, T.24 S., R.10 W., Reno County, at county bridge, 1 mile south of Sylvia.	208	1968-74	12-14-73 2- 8-74 7- 2-74	39.6 39.9 9.73
07144620	North Fork Ninnescah River above Silver Creek near Arlington, Kans.	Lat 37°51'09", long 98°09'30", in NW¼NW¼NW¼ sec.25, T.25 S., R.8 W., Reno County, at bridge on county highway, 3 miles south-east of Arlington, and at mile 44.7.	504	1971-74	12-15-73 2- 8-74 7- 2-74	83.5 69.1 21.3
07144640	Silver Creek near Langdon, Kans.	Lat 37°47'54", long 98°19'59", in SW¼SW¼NW¼ sec.8, T.26 S., R.9 W., Reno County, at bridge on county highway, 4 miles south-west of Langdon, and at mile 15.7.	103	1971-74	12-15-73 2- 8-74 7- 2-74	14.2 9.49 1.01
07144660	Silver Creek near Arlington, Kans.	Lat 37°50'30", long 98°11'47", in NE¼SE¼SE¼ sec.28, T.25 S., R.8 W., Reno County, at bridge on State Highway 14, 4 miles south of Arlington, and at mile 3.9.	194	1971-74	12-15-74 2- 8-74 7- 2-74	34.7 27.6 2.77

Discharge measurements made at low-flow partial-record stations during water year 1974--continued

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Measurements	
					Date	Discharge (cfs)
Arkansas River basin--continued						
07144680	Goose Creek near Arlington, Kans.	Lat 37°49'24", long 98°11'32", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.4, T.26 S., R.8 W., Reno County, at bridge on State Highway 14, 5 miles south of Arlington, and at mile 0.8.	46.6	1971-74	12-15-73 2- 8-74 7- 2-74	9.43 7.68 1.96
07144740	Red Rock Creek near Castleton, Kans.	Lat 37°53'55", long 98°00'35", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.5, T.25 S., R.6 W., Reno County, at bridge on county highway, 3 miles northwest of Castleton, and at mile 2.8.	61.2	1971-74	12-14-73 2- 7-74 7- 2-74	4.96 3.35 .94
07144890	South Fork Ninnescah River at Pratt, Kans.	Lat 37°38'03", long 98°44'15", in NW $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.3, T.28 S., R.13 W., Pratt County, at bridge on U.S. Highway 281, at Pratt, and at mile 136.4.	97.1	1971-74	12-10-73 2- 7-74 7- 2-74	16.5 15.7 11.1
07145130	South Fork Ninnescah River near Calista, Kans.	Lat 37°38'45", long 98°17'12", in SW $\frac{1}{4}$ SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.34, T.27 S., R.9 W., Kingman County, at bridge on U.S. Highway 54, 0.5 mile northwest of Calista, and at mile 103.2.	374	1971-74	2- 7-74 7- 2-74	145 77.0
07145220	Smoots Creek near Murdock, Kans.	Lat 37°38'13", long 97°54'06", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.6, T.28 S., R.5 W., Kingman County, at bridge on county highway, 2.5 miles northeast of Murdock, and at mile 6.6.	142	1971-74	12- 3-73 2- 7-74 7- 2-74	19.0 24.1 2.08
07148200	Mule Creek near Wilmore, Kans.	Lat 37°16'55", long 99°02'34", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.3, T.32 S., R.16 W., Comanche County, at bridge on U.S. Highway 160, 10 miles southeast of Wilmore.	129	1954-74	12-11-73 2- 5-74 7- 2-74	22.7 17.7 5.57
07148580	Turkey Creek near Croft, Kans.	Lat 37°29'52", long 98°56'56", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.27, T.29 S., R.15 W., Pratt County, at bridge on county highway, 2.5 miles east of Croft, and at mile 9.6.	26.7	1971-74	12-12-73 2- 5-74 7- 2-74	4.91 4.89 2.91
07148600	Medicine Lodge River at Sun City, Kans.	Lat 37°22'13", long 98°54'53", in NW $\frac{1}{4}$ SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.2, T.31 S., R.15 W., Barber County, at bridge, 0.5 mile south of Sun City.	335	1954-74	12-11-73 2- 5-74 7- 2-74	82.7 63.2 19.8
07148900	Elm Creek at Medicine Lodge, Kans.	Lat 37°16'25", long 98°34'28", in NW $\frac{1}{4}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.12, T.32 S., R.12 W., at bridge on U.S. Highway 160 at Medicine Lodge.	167	1955-74	12-11-73 2- 5-74 7- 2-74	50.7 45.7 15.7
07151200	Chikaskia River near Zenda, Kans.	Lat 37°28'23", long 98°16'55", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.34, T.29 S., R.9 W., Kingman County, at bridge on county highway, 2 miles north of Zenda, and at mile 127.7.	89.9	1971-74	12-11-73 2- 4-74 7- 2-74	37.6 30.5 10.6
07151290	Sand Creek near Zenda, Kans.	Lat 37°24'41", long 98°16'55", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.27, T.30 S., R.9 W., Kingman County, at bridge on county highway, 2 miles south of Zenda, and at mile 5.9.	136	1971-74	12-11-73 2- 4-74 7- 2-74	16.7 13.2 4.35

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

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Annual maximum		
					Date	Gage height (feet)	Dis-charge (cfs)
Big Nemaha River basin							
06813700	Tennessee Creek tributary near Seneca, Kans.	Lat 39°48'46", long 96°02'44", in SE¼SW¼ sec.2, T.3 S., R.12 E., Nemaha County, above culvert on county highway, 1.8 mi (2.9 km) southeast of Seneca.	0.90	1957-74	6- 9-74	16.84	400
Wolf River basin							
06815700	Buttermilk Creek near Willis, Kans.	Lat 39°45'16", long 95°27'02", in SW¼SW¼ sec.30, T.3 S., R.18 E., Brown County, at downstream side of county highway bridge, 3.6 mi (5.8 km) northeast of Willis. Published as "South Branch Wolf Creek tributary" 1957-60, as "South Fork Wolf River tributary" 1961.	3.74	1957-74	10-11-73	16.78	2,200
White Clay Creek basin							
06818260	White Clay Creek at Atchison, Kans.	Lat 39°33'33", long 95°07'38", in SW¼NE¼ sec.1, T.6 S., R.20 E., Atchison County, on right bank at center of highway bridge, on 10th Street in Atchison and at 0.15 mi (0.24 km) downstream from Brewery Creek.	13.1	1972-74	10-11-73	13.39	1,350
Kansas River basin							
06844800	South Fork Sappa Creek tributary near Goodland, Kans.	Lat 39°19'14", long 101°37'57", in NW¼NW¼ sec.36, T.8 S., R.39 W., Sherman County, below culvert on county highway, 4.5 mi (7.2 km) southeast of Goodland.	4.98	1957-74	6- 8-74	11.47	23
06845100	Long Branch Draw near Norcatur, Kans.	Lat 39°54'06", long 100°10'43", in SW¼SW¼ sec.6, T.2 S., R.25 W., Decatur-Norton County line, on downstream side of county highway bridge, 4.7 mi (7.6 km) north of Norcatur.	31.7	1957-74	8- 9-74	12.14	23
06846000	Beaver Creek at Ludell, Kans.	Lat 39°50'50", long 100°57'30", in NW¼SW¼ sec.30, T.2 S., R.32 W., Rawlins County, at downstream side of bridge on county highway, 120 ft (37 m) downstream from Chicago, Burlington, and Quincy Railway Co. bridge, 0.5 mi (0.8 km) south of Ludell and 9.6 mi (15.4 km) downstream from Little Beaver Creek. Prior to June 30, 1932, at site 120 ft (37 m) upstream and at datum 1.7 ft (0.5 m) higher.	1,460	1930-32†, 1946-53†, 1961-74	6- 9-74	11.65	1,300
06846200	Beaver Creek tributary near Ludell, Kans.	Lat 39°48'53", long 100°52'19", in SE¼SE¼ sec.2, T.3 S., R.32 W., Rawlins County, at downstream end of culvert on U.S. Highway 36, 5.4 mi (8.7 km) southeast of Ludell.	10.2	1957-74	7- 9-74	10.92	29
06847600	Prairie Dog Creek tributary at Colby, Kans.	Lat 39°23'28", long 101°02'43", in SW¼NW¼NE¼ sec.6, T.8 S., R.33 W., Thomas County, at downstream side of bridge on Franklin Avenue in Colby. Prior to Mar. 31, 1971, at site 0.3 mi (0.5 km) upstream and at same datum.	7.53	1957-74	4-19-71 6-26-72 7-29-73 8-13-74	10.19 11.98 11.23 13.43	e70 e320 e180 750

† Operated as a continuous-record gaging station.

e Not previously published.

DISCHARGE AT PARTIAL-RECORD STATIONS

Annual maximum discharge at crest-stage partial-record stations--continued

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Annual maximum		
					Date	Gage height (feet)	Dis-charge (cfs)
Kansas River basin--continued							
06848200	Prairie Dog Creek tributary near Norton, Kans.	Lat 39°51'15", long 99°53'17", in NW¼NW¼ sec.26, T.2 S., R.23 W., Norton County, at downstream side of bridge on U.S. Highway 283, 1.6 mi (2.6 km) north of Norton.	1.02	1957-74	8- 9-74	10.78	36
06856100	West Creek near Talmo, Kans.	Lat 39°40'00", long 97°36'48", in NW¼NW¼ sec.36, T.4 S., R.3 W., Republic County, at downstream side of county highway bridge, 2.5 mi (4.0 km) southwest of Talmo. Published as "West Salt Creek" 1957-71.	42.0	1957-74	10-11-73	21.58	4,100
06856320	Elk Creek at Clyde, Kans.	Lat 39°35'40", long 97°23'49", in NW¼NE¼ sec.26, T.5 S., R.1 W., Cloud County, at downstream side of Chicago, Rock Island Railroad bridge in Clyde and 2.8 mi (4.5 km) upstream from mouth.	73	1970-74	10-11-73	13.19	3,000
06856800	Moll Creek near Green, Kans.	Lat 39°22'48", long 97°00'28", in NE¼NW¼ sec.8, T.8 S., R.4 E., Clay County, at down-stream side of bridge on U.S. Highway 24, 3.3 mi (5.3 km) southwest of Green. Prior to July 15, 1965, at site 60 ft (18 m) upstream at same datum.	3.60	1957-74	10-11-73	15.90	510
06858700	North Fork Smoky Hill River tribu-tary near Winona, Kans.	Lat 39°01'51", long 101°17'07", in NE¼NW¼ sec.11, T.12 S., R.36 W., Logan County, 600 ft (183 m) downstream from culvert on U.S. Highway 40, 3.0 mi (4.8 km) southwest of Winona. Prior to Apr. 15, 1958, at site 700 ft (213 m) upstream and datum 11.00 ft (3.35 m) higher. Apr. 15, 1958, to July 31, 1963, at culvert on U.S. Highway 40 at datum 10.0 ft (3.05 m) higher. Records for 1957-61 discredited.	1.13	1957-74	7-24-74	9.84	23
06860500	Hackberry Creek near Gove, Kans.	Lat 38°57'15", long 100°29'05", in SW¼NE¼ sec.1, T.13 S., R.29 W., Gove County, near right bank at downstream side of bridge on State Highway 23, 0.5 mi (0.8 km) south of Gove.	426	1948-53†, 1960-74	8-13-74	5.25	350
06863000	Smoky Hill River at Pfeifer, Kans.	Lat 38°42'51", long 99°09'10", in SW¼SW¼ sec.30, T.15 S., R.16 W., Ellis County, near right bank on downstream side of county highway bridge, 1.0 mi (1.6 km) northeast of Pfeifer.	6,033	1929-32†, 1970-74	10-11-73	7.00	2,100
06863400	Big Creek tributary near Ogallah, Kans.	Lat 38°56'00", long 99°44'33", in NW¼SW¼ sec.11, T.13 S., R.22 W., Trego County, at downstream side of bridge on State Highway 147, 4.0 mi (6.4 km) southwest of Ogallah.	4.81	1957-74	1974	--	0
06863700	Big Creek tributary near Hays, Kans.	Lat 38°51'08", long 99°14'48", in SE¼NE¼ sec.7, T.14 S., R.17 W., Ellis County, at downstream side of culvert on old U.S. High-way 40 at Toulon, 4.7 mi (7.6 km) southeast of Hays.	6.19	1957-74	10-11-73	11.30	140
06864300	Smoky Hill River tributary at Dorrance, Kans.	Lat 38°50'52", long 98°35'44", in NW¼SE¼ sec.12, T.14 S., R.12 W., Russell County, at downstream end of culvert on old U.S. Highway 40 at Dorrance.	5.39	1957-74	10-11-73	13.30	420

† Operated as a continuous-record gaging station.

Annual maximum discharge at crest-stage partial-record stations--continued

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Annual maximum		
					Date	Gage height (feet)	Dis-charge (cfs)
Kansas River basin--continued							
06864700	Spring Creek near Kanopolis, Kans.	Lat 38°44'23", long 98°10'07", in NW¼NW¼ sec.24, T.15 S., R.8 W., Ellsworth County, at downstream end of culvert on old U.S. Highway 40, 2.2 mi (3.5 km) northwest of Kanopolis.	9.84	1957-74	5-18-74	15.84	2,400
06866490	Dry Creek at Mentor, Kans.	Lat 38°44'11", long 97°36'46", in SW¼NW¼ sec.24, T.15 S., R.3 W., Saline County, near right bank at downstream side of bridge on U.S. Highway 81, 0.6 mi (1.0 km) southwest of Mentor and 1.7 mi (2.7 km) upstream from mouth.	37	1970-74	10-11-73	24.83	(+)
06866800	Saline River tributary at Collyer, Kans.	Lat 39°02'46", long 100°07'36", in SW¼SW¼ sec.32, T.11 S., R.25 W., Trego County, at downstream side of county highway bridge, 0.7 mi (1.1 km) northwest of Collyer.	3.13	1957-74	f9-27-72 6- 4-74	fa 10.65	<10 28
06867800	Cedar Creek tributary near Bunker Hill, Kans.	Lat 38°56'03", long 98°42'45", in NW¼SE¼ sec.12, T.13 S., R.13 W., Russell County, above culvert on county highway, 4.5 mi (7.2 km) northwest of Bunker Hill.	.99	1957-74	10-11-73	10.40	90
06868300	Coon Creek tributary near Luray, Kans.	Lat 39°10'30", long 98°42'02", in NW¼NE¼ sec.19, T.10 S., R.12 W., Osborne County, at downstream side of county highway bridge, 4.4 mi (7.1 km) northwest of Luray.	6.53	1957-74	f9-25-73 8- 9-74	19.72 19.65	1,400 1,300
06868400	Wolf Creek near Lucas, Kans.	Lat 39°03'30", long 98°33'10", in NW¼NW¼ sec.33, T.11 S., R.11 W., Russell County, at downstream side of highway bridge, 1.2 mi (1.9 km) west of Lucas, 4.0 mi (6.4 km) upstream from East Fork, and 15 mi (24 km) upstream from mouth.	163	1960-71 [†] , 1972-74	11-20-73	24.44	2,600
06868700	North Branch Spillman Creek near Ash Grove, Kans.	Lat 39°09'08", long 98°23'45", in NE¼SE¼ sec.26, T.10 S., R.10 W., Lincoln County, at downstream side of bridge on State Highway 181, 2.0 mi (3.2 km) upstream from mouth and 2.2 mi (3.5 km) west of Ash Grove.	26.1	1962-71 [†] , 1972-74	10-11-73	17.58	3,720
06868900	Bullfoot Creek tributary near Lincoln, Kans.	Lat 38°58'27", long 98°09'03", in SW¼SW¼ sec.30, T.12 S., R.7 W., Lincoln County, at downstream side of bridge on State Highway 14, 4.6 mi (7.4 km) south of Lincoln. Published as "Elkhorn Creek tributary" 1957-70.	2.64	1957-74	10-11-73	c14.7	450
06869950	Mulberry Creek near Salina, Kans.	Lat 38°50'40", long 97°40'05", in SE¼SE¼ sec.8, T.14 S., R.3 W., Saline County, at left downstream pier of bridge on county highway, 2.0 mi (3.2 km) downstream from Spring Creek, 2.0 mi (3.2 km) west of Salina and 9.0 mi (14 km) upstream from mouth.	250	1961-74	10-11-73	27.09	7,200
06872100	Middle Cedar Creek at Kensington, Kans.	Lat 39°45'21", long 99°02'04", in NE¼NE¼ sec.32, T.3 S., R.15 W., Smith County, at downstream side of bridge on old U.S. Highway 36, 0.5 mi (0.8 km) south of Kensington.	58.9	1957-74	10-11-73	20.49	1,300
06872600	Oak Creek at Bellaire, Kans.	Lat 39°47'54", long 98°40'00", in NW¼NW¼ sec.15, T.3 S., R.12 W., Smith County, at downstream side of bridge at Bellaire. Prior to Sept. 8, 1965, at same site at datum 2.18 ft (0.66 m) lower.	4.75	1957-74	10-11-73	15.03	170

[†] Operated as a continuous-record gaging station.

(+) Discharge not determined.

a Peak stage did not reach bottom of pipe.

c From floodmark.

f Corrected.

DISCHARGE AT PARTIAL-RECORD STATIONS

Annual maximum discharge at crest-stage partial-record stations--continued

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (cfs)
Kansas River basin--continued							
06873300	Ash Creek tributary near Stockton, Kans.	Lat 39°26'15", long 99°22'16", in SE¼SW¼ sec.18, T.7 S., R.18 W., Rooks County, at upstream end of culvert on old U.S. Highway 24, 5.3 mi (8.5 km) west of Stockton.	.89	1957-74	1974	a	<5
06873800	Kill Creek tributary near Bloomington, Kans.	Lat 39°23'58", long 98°50'26", in NE¼SE¼ sec.35, T.7 S., R.14 W., Osborne County, at upstream end of culvert on county highway, 4.8 mi (7.7 km) southwest of Bloomington.	1.45	1957-74	10-11-73	14.38	250
06874500	East Limestone Creek near Ionia, Kans.	Lat 39°41'52", long 98°20'19", in NE¼NW¼ sec.21, T.4 S., R.9 W., Jewell County, at downstream side of county highway bridge, 2.5 mi (4.0 km) northeast of Ionia. Prior to Oct. 1, 1956, at same site and datum 6.2 ft (1.9 m) higher.	25.6	1934-38†, 1957-74	f9-26-73 10-11-73	f22.54 21.54	2,100 1,800
06875800	Limestone Creek near Glen Elder, Kans.	Lat 39°32'18", long 98°18'58", in NE¼NW¼NW¼ sec.15, T.6 S., R.9 W., Mitchell County, 150 ft (46 m) downstream from highway bridge, 2.0 mi (3.2 km) north of Glen Elder, and 7.4 mi (11.9 km) upstream from mouth.	210	1965-71†, 1972-74	10-12-73	(+)	g5,500
06876200	Middle Pipe Creek near Miltonvale, Kans.	Lat 39°21'00", long 97°34'08", in NE¼NW¼ sec.20, T.8 S., R.2 W., Cloud County, at downstream side of county highway bridge, 6.0 mi (9.6 km) west of Miltonvale.	10.2	1957-74	10-11-73	20.39	1,800
06877120	Mud Creek at Abilene, Kans.	Lat 38°55'47", long 97°13'39", in NE¼NE¼ sec.17, T.13 S., R.2 E., Dickinson County, at downstream side of bridge on old U.S. Highway 40 on north edge of Abilene.	87	1970-74	10-11-73	15.77	7,500
06877200	West Turkey Creek near Elmo, Kans.	Lat 38°40'04", long 97°10'18", in SE¼SE¼ sec.11, T.16 S., R.2 E., Dickinson County, at downstream end of county highway bridge, 3.0 mi (4.8 km) southeast of Elmo. Published as "East Turkey Creek" 1957-70.	26.6	1957-74	6- 4-74	c20.1	2,200
06877400	Turkey Creek tributary near Elmo, Kans.	Lat 38°40'57", long 97°11'04", in SW¼SW¼ sec.2, T.16 S., R.2 E., Dickinson County, at downstream end of bridge on State Highway 4, 2.3 mi (3.7 km) east of Elmo. Published as "East Turkey Creek tributary" 1957-70.	2.48	1957-74	10-11-73	13.36	400
06877500	Turkey Creek near Abilene, Kans.	Lat 38°48'22", long 97°10'53", in W¼ sec.26, T.14 S., R.2 E., Dickinson County, at downstream side of bridge immediately below mouth of West Branch Turkey Creek, 8.0 mi (13 km) south of Abilene.	143	1958-65†, 1966-74	10-11-73	25.00	7,000
06879200	Clark Creek near Junction City, Kans.	Lat 39°00'28", long 96°44'20", in W¼ sec.14, T.12 S., R.6 E., Geary County, at upstream side of bridge on State Highway 57, 5.0 mi (8.0 km) southeast of Junction City, 7.5 mi (12.1 km) upstream from Humboldt Creek.	200	1957-65†, 1966-74	10-11-73	18.54	11,000
06879700	Wildcat Creek at Riley, Kans.	Lat 39°17'34", long 96°49'50", in SW¼SW¼ sec.1, T.9 S., R.5 E., Riley County, at downstream side of bridge on U.S. Highway 77 at Riley. Published as "Wild Cat Creek" 1957-64.	14.0	1957-74	10-11-73	19.18	1,900
06879820	Wildcat Creek at Manhattan, Kans.	Lat 39°11'05", long 96°36'37", in NW¼SE¼NE¼ sec.14, T.10 S., R.7 E., Riley County, on downstream side of bridge on State Highway 113 in Manhattan, and 5.5 miles above mouth.	74	1974	10-11-73	22.43	6,850

‡ Operated as a continuous-record gaging station.

(+) Not determined.

a Peak stage did not reach bottom of pipe.

c From floodmark.

f Corrected.

g Estimated.

Annual maximum discharge at crest-stage partial-record stations--continued

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (cfs)
Kansas River basin--continued							
06884100	Mulberry Creek tributary near Haddam, Kans.	Lat 39°48'49", long 97°17'56", in NE¼NE¼ sec.10, T.3 S., R.1 E., Washington County, above culvert on U.S. Highway 36, 3.0 mi (4.8 km) south of Haddam. Published as "Mill Creek tributary" 1957-71.	1.64	1957-74	9-26-73 10-11-73	f(+) 19.20	f(+) 1,200
06884300	Mill Creek tributary near Washington, Kans.	Lat 39°48'48", long 97°00'30", in SW¼SW¼ sec.5, T.3 S., R.4 E., Washington County, at downstream end of culvert on U.S. Highway 36, 2.2 mi (3.5 km) east of Washington.	3.20	1957-74	10-11-73	18.42	1,700
06884900	Robidoux Creek at Beattie, Kans.	Lat 39°51'48", long 96°25'47", in SW¼NE¼ sec.20, T.2 S., R.9 E., Marshall County, at downstream side of county highway bridge, 0.8 mi (1.3 km) northwest of Beattie.	40.0	1957-74	10-11-73	c18.9	(+)
06886500	Fancy Creek at Winkler, Kans.	Lat 39°28'20", long 96°49'55", in NW¼NE¼SE¼ sec.2, T.7 S., R.5 E., Riley County, at downstream side of county highway bridge, 0.2 mi (0.3 km) downstream from Otter Creek, 0.4 mi (0.6 km) south of Winkler, and at mile 13.2 (km 21.2).	174	1953-71*, 1972-74	10-11-73	(+)	(+)
06887200	Cedar Creek near Manhattan, Kans.	Lat 39°15'31", long 96°33'48", in NE¼NE¼ sec.19, T.9 S., R.8 E., Pottawatomie County, at downstream side of county highway bridge, 5.5 mi (8.8 km) north of Manhattan.	13.4	1957-74	10-11-73	17.94	2,400
06887600	Kansas River tributary near Wamego, Kans.	Lat 39°10'28", long 96°15'45", in SE¼SE¼ sec.14, T.10 S., R.10 E., Wabaunsee County, at upstream end of culvert on county highway, 3.0 mi (4.8 km) southeast of Wamego.	.83	1951, 1957-74	10-11-73	13.67	380
06888000	Vermillion Creek near Wamego, Kans.	Lat 39°21'00", long 96°13'10", in NE¼NW¼NW¼ sec.20, T.8 S., R.11 E., Pottawatomie County, at highway bridge, 1.0 mi (1.6 km) upstream from Indian Creek, 14 mi (23 km) northeast of Wamego, and at mile 15.8 (25.4 km).	243	1936-46*, 1954-72*, 1972-74	6- 9-74	27.86	10,000
06888030	Vermillion Creek near Louisville, Kans.	Lat 39°16'42", long 96°14'34", in NW¼SE¼SE¼ sec.12, T.9 S., R.10 E., Pottawatomie County, on left bank 1.3 mi (2.1 km) upstream from Adams Creek, 4.0 mi (6.4 km) northeast of Louisville.	297	1970-74	10-11-73	36.46	(+)
06888300	Rock Creek near Louisville, Kans.	Lat 39°15'53", long 96°22'47", on west line of SE¼ sec.14, T.9 S., R.9 E., Pottawatomie County, at downstream side of highway bridge, 4.0 mi (6.0 km) west of Louisville.	128	1958-65*, 1966-74	10-11-73	33.16	12,000
06888600	Dry Creek near Maple Hill, Kans.	Lat 39°03'06", long 96°01'14", in SE¼NE¼ sec.36, T.11 S., R.12 E., Wabaunsee County, at downstream side of county highway bridge, 2.1 mi (3.4 km) southeast of Maple Hill.	15.6	1957-74	6- 9-74	12.54	1,300
06888900	Blacksmith Creek tributary near Valencia, Kans.	Lat 39°01'20", long 95°50'06", in SW¼NW¼ sec.11, T.12 S., R.14 E., Shawnee County, at downstream side of county highway bridge, 4.3 mi (6.9 km) southeast of Valencia.	1.31	1957-74	12- 4-73	11.43	160
06889550	Indian Creek near Topeka, Kans.	Lat 39°07'27", long 95°39'05", in SE¼SE¼NE¼ sec.5, T.11 S., R.16 E., Shawnee County, 3.0 mi (5.0 km) north of Topeka and 2.7 mi (4.3 km) upstream from Soldier Creek (new channel).	9.72	1970-74	5-17-74	16.67	2,000

* Operated as a continuous-record gaging station.

(+) Not determined.

c From floodmark.

f Corrected.

Annual maximum discharge at crest-stage partial-record stations--continued

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (cfs)
Kansas River basin--continued							
06889600	South Branch Shunganunga Creek near Pauline, Kans.	Lat 38°58'44", long 95°42'35", in SE¼NE¼ sec.26, T.12 S., R.15 E., Shawnee County, at downstream side of county highway bridge, 1.7 mi (2.7 km) northwest of Pauline.	3.84	1957-74	10-11-73	12.84	760
06889630	Shunganunga Creek at Topeka, Kans.	Lat 39°01'54", long 95°40'57", in SE¼SW¼ sec.6, T.12 S., R.16 E., Shawnee County, on downstream side of bridge on U.S. Highway 75, 700 ft (213 m) north of 21st Street in Topeka.	34	1970-74	12- 4-73	12.64	2,300
06890300	Spring Creek near Wetmore, Kans.	Lat 39°38'12", long 95°50'43", in NE¼NE¼ sec.9, T.5 S., R.14 E., Nemaha County, at upstream side of county highway bridge, 1.8 mi (2.9 km) northwest of Wetmore.	21.0	1957-74	10-11-73	20.43	2,800
06890560	Rock Creek 6 miles north Meriden, Kans.	Lat 39°17'19", long 95°34'57", in SE¼SW¼ sec.1, T.9 S., R.16 E., Jefferson County, at downstream side of stone arch bridge on county road, 7.0 mi (11.3 km) northwest of Meriden.	1.89	1964-74	10-11-73	12.26	440
06890700	Slough Creek tributary near Oskaloosa, Kans.	Lat 39°12'05", long 95°18'09", in NE¼NW¼ sec.9, T.10 S., R.19 E., Jefferson County, above culvert on State Highway 16, 1.1 mi (1.8 km) southeast of Oskaloosa.	.83	1957-74	10-11-73	15.93	390
06890800	Slough Creek near Oskaloosa, Kans.	Lat 39°13'25", long 95°20'12", in SW¼NE¼ sec.31, T.9 S., R.19 E., Jefferson County, at downstream side of bridge on State Highway 92, 1.3 mi (2.1 km) northwest of Oskaloosa.	31.0	1957-74	9- 1-74	13.41	3,200
06891050	Stone House Creek at Williamstown, Kans.	Lat 39°04'00", long 95°20'09", on east line sec.30, T.11 S., R.19 E., Jefferson County, at downstream side of bridge on U.S. Highway 24, 0.1 mi (0.2 km) north of Williamstown.	12.9	1963-74	10-11-73	4.58	1,200
06891650	Naismith Creek at Lawrence, Kans.	Lat 38°56'03", long 95°15'08", in NE¼NE¼SW¼ sec.12, T.13 S., R.19 E., Douglas County, at downstream side of 27th Street bridge in Lawrence, and 6.0 mi (9.7 km) above mouth.	1.54	1974	10-11-73	14.20	(+)
06893080	Blue River near Stanley, Kans.	Lat 38°48'45", long 94°40'31", in SW¼SW¼SE¼ sec.19, T.14 S., R.25 E., Johnson County, at downstream (northbound) side of bridge on U.S. Highway 69, 3.0 mi (4.8 km) south of Stanley.	46	1970-74	6- 9-74	16.83	7,500
06893250	Indian Creek near Overland Park, Kans.	Lat 38°54'45", long 94°43'24", in NW¼NW¼NW¼ sec.23, T.13 S., R.24 E., Johnson County, at right bank, on downstream side of bridge on Morse Road, 2.5 mi (4.0 km) southwest of Overland Park.	14.8	1970-74	10-11-73	21.00	3,300
06893350	Tomahawk Creek near Overland Park, Kans.	Lat 38°54'47", long 94°37'54", in NE¼NE¼NE¼ sec.21, T.13 S., R.25 E., Johnson County, on left bank at bridge on 119th Street, 1.4 mi (2.3 km) south of Overland Park.	23.9	1970-74	6- 9-74	18.22	3,600
Osage River basin							
06912300	Dragoon Creek tributary near Lyndon, Kans.	Lat 38°41'33", long 95°41'06", in NW¼NW¼ sec.6, T.16 S., R.16 E., Osage County, at downstream side of bridge on U.S. Highway 75, 5.8 mi (9.3 km) north of Lyndon.	3.76	1957-74	5-14-74	14.56	1,700
06913600	Rock Creek near Ottawa, Kans.	Lat 38°33'15", long 95°16'02", in SW¼SW¼ sec.24, T.17 S., R.19 E., Franklin County, at downstream side of bridge on U.S. Highway 59, 3.7 mi (6.0 km) south of Ottawa.	10.2	1957-74	10-11-73	18.51	2,600

(+) Not determined.

Annual maximum discharge at crest-stage partial-record stations--continued

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (cfs)
Osage River basin--continued							
06913700	Middle Creek near Princeton, Kans.	Lat 38°28'39", long 95°15'08", in SE½SE¼ sec.13, T.18 S., R.19 E., Franklin County, at downstream side of bridge on U.S. Highway 59, 1.3 mi (2.1 km) southeast of Princeton.	52.0	1957-74	10-11-73	24.98	5,900
06914250	South Fork Pottawatomie Creek tributary near Garnett, Kans.	Lat 38°14'00", long 95°14'52", in NW½SE¼ sec.7, T.21 S., R.20 E., Anderson County, above culvert on U.S. Highway 59, 3.1 mi (5.0 km) south of Garnett.	.35	1963-74	10-11-73	13.48	410
06914500	Pottawatomie Creek at Lane, Kans.	Lat 38°26'38", long 95°05'02", in SW½NW¼ sec.34, T.18 S., R.21 E., Franklin County, at downstream side of highway bridge at Lane.	513	1929-32†, 1961-74	9-14-61 11-16-61 3- 9-63 6- 6-64 9- 5-65 4-12-66 6-16-67 8-10-68 7- 2-69 10-11-73	e33.9 e23.63 e19.3 e22.19 e25.70 e19.88 e24.00 e22.52 e27.08 31.65	e75,000 e8,000 e4,500 e5,700 e10,000 e5,000 e6,600 e5,500 e14,000 50,000
06915100	Big Bull Creek at Paola, Kans.	Lat 38°34'36", long 94°53'44", in NW½NW¼ sec.17, T.17 S., R.23 E., Miami County, on downstream side of bridge on county highway (extension of Peoria St.), 0.5 mi (0.8 km) west of Paola and 9.0 mi (14.5 km) upstream from mouth.	230	1970-74	10-11-73	25.18	39,000
06916700	Middle Creek near Kincaid, Kans.	Lat 38°03'24", long 95°11'15", in W½SW¼ sec.11, T.23 S., R.20 E., Anderson County, at downstream side of county highway bridge, 2.5 mi (4.0 km) southwest of Kincaid.	2.02	1957-74	10-11-73	14.50	810
06917100	Marmaton River tributary near Bronson, Kans.	Lat 37°54'20", long 95°05'43", in NW½NW¼ sec.3, T.25 S., R.21 E., Allen County, at downstream side of culvert on U.S. Highway 54 and 1.5 mi (2.4 km) northwest of Bronson. Prior to Oct. 1, 1967, at site 50 ft (15 m) downstream at same datum.	.88	1957-74	3-10-74	14.76	360
06917400	Marmaton River tributary near Fort Scott, Kans.	Lat 37°47'26", long 94°47'47", in SW½SW¼ sec.9, T.26 S., R.24 E., Bourbon County, at downstream side of county highway bridge, 6.0 mi (10 km) southwest of Fort Scott.	2.80	1957-74	3-10-74	15.63	1,500
Arkansas River basin							
07138600	Whitewoman Creek tributary near Selkirk, Kans.	Lat 38°31'30", long 101°37'16", in SW½SW¼ sec.34, T.17 S., R.39 W., Greeley County, at downstream side of county highway bridge, 5.6 mi (9.0 km) northwest of Selkirk.	38.0 (7.59)	1957-74	8-10-74	10.64	82
07138800	Lion Creek tributary near Modoc, Kans.	Lat 38°28'48", long 101°01'00", in NW½NE¼ sec.22, T.18 S., R.34 W., Scott County, below culvert on State Highway 96, 1.2 mi (1.9 km) southeast of Modoc.	7.00 (1.19)	1957-74	6- 8-74	11.69	170
07139700	Arkansas River tributary near Dodge City, Kans.	Lat 37°42'52", long 100°00'53", in SE½NE¼ sec.11, T.27 S., R.25 W., Ford County, at downstream side of culvert on U.S. Highway 283, 2.6 mi (4.2 km) south of Dodge City. Prior to Mar. 1, 1959, above culvert 175 ft (53 m) north of present site and at same datum. Records for 1957-58 discredited.	8.66	1957-74	6- 6-74	13.49	370
07140300	Whitewoman Creek near Bellefont, Kans.	Lat 37°55'26", long 99°38'31", in SW½NW¼ sec.33, T.24 S., R.21 W., Hodgeman County, at downstream side of county highway bridge, 3.5 mi (5.6 km) northeast of Bellefont.	14.0	1957-74	10-11-73	13.57	740

† Operated as a continuous-record gaging station.

e Not previously published.

Note.--Figures of drainage area in parentheses show approximate contributing area included in total area.

DISCHARGE AT PARTIAL-RECORD STATIONS

Annual maximum discharge at crest-stage partial-record stations--continued

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (cfs)
Arkansas River basin--continued							
07140600	Pawnee River tributary near Kalvesta, Kans.	Lat 38°03'42", long 100°21'00", in S½SW¼ sec.12, T.23 S., R.28 W., Finney County, at downstream side of bridge on U.S. Highway 156, 3.4 mi (5.5 km) west of Kalvesta.	6.89	1957-74	1974	--	0
07141400	South Fork Walnut Creek tributary near Dighton, Kans.	Lat 38°28'58", long 100°24'54", in SE¼SE¼ sec.16, T.18 S., R.28 W., Lane County, at culvert on State Highway 96, 2.8 mi (4.5 km) east of Dighton. Until Sept. 5, 1958, at downstream side of existing culvert at same site and datum 0.42 ft (0.13 m) higher. Until Sept. 30, 1965, at downstream side of present culvert and same datum. Presently 10 ft (3 m) upstream from present retaining wall upstream from present culvert.	.81	1957-74	1974	--	0
07141600	Long Branch Creek near Ness City, Kans.	Lat 38°27'01", long 99°52'50", in NE¼NE¼ sec.32, T.18 S., R.23 W., Ness County, below bridge on State Highway 96, 1.2 mi (1.9 km) east of Ness City.	28.0	1957-74	10-11-73	13.75	380
07141800	Otter Creek near Rush Center, Kans.	Lat 38°24'16", long 99°18'26", in NW¼NW¼ sec.15, T.19 S., R.18 W., Rush County, at downstream side of bridge on U.S. Highway 183, 4.3 mi (6.9 km) south of Rush Center. Prior to Oct. 1, 1965, at site 100 ft (30 m) downstream at present datum.	17.0	1957-74	10-11-73	12.76	120
07142100	Rattlesnake Creek tributary near Mullinville, Kans.	Lat 37°35'11", long 99°25'17", in SE¼SW¼ sec.20, T.28 S., R.19 W., Kiowa County, at downstream end of culvert on U.S. Highway 54, 2.9 mi (4.7 km) east of Mullinville.	10.3	1957-74	10-11-73	11.65	480
07142500	Spring Creek near Dillwyn, Kans.	Lat 37°57'24", long 98°50'27", in SE¼SE¼ sec.15, T.24 S., R.14 W., Stafford County, at downstream side of bridge on U.S. Highway 50, 2.2 mi (3.5 km) southeast of Dillwyn.	14.3	1957-74	10-11-73	13.02	400
07142700	Salt Creek near Partridge, Kans.	Lat 38°02'22", long 98°05'13", in SW¼NW¼ sec.22, T.23 S., R.7 W., Reno County, at downstream side of county highway bridge, 5.0 mi (8.0 km) north of Partridge.	85.0 (72.0)	1957-74	10-11-73	19.86	4,000
07143100	Little Cheyenne Creek tributary near Claflin, Kans.	Lat 38°27'25", long 98°32'08", in NE¼SE¼ sec.28, T.18 S., R.11 W., Barton County, at culvert on county highway, 4.7 mi (7.7 km) south of Claflin. Published as "Cheyenne Creek tributary" 1957-70.	1.48	1957-74	5-19-74	12.70	140
07143200	Plum Creek near Holyrood, Kans.	Lat 38°35'53", long 98°25'27", in SW¼SW¼ sec.3, T.17 S., R.10 W., Ellsworth County, at downstream side of county highway bridge, 1.2 mi (1.9 km) northwest of Holyrood.	19.0	1957-74	5-19-74	17.60	4,000
07143500	Little Arkansas River near Geneseo, Kans.	Lat 38°27'24", long 98°05'24", in NW¼SW¼ sec.27, T.18 S., R.7 W., Rice County, at downstream side of county highway bridge, 5.5 mi (8.8 km) southeast of Geneseo.	25.0	1957-74	5-19-74	22.00	1,500
07143600	Little Arkansas River near Little River, Kans.	Lat 38°24'50", long 98°01'00", in NW¼SW¼ sec.8, T.19 S., R.6 W., Rice County, at downstream side of county highway bridge, and 1.0 mi (1.6 km) northwest of Little River.	71	1960-71*, 1972-74	10-11-73	c18.8	9,000
07144900	South Fork Ninnescah River tributary near Pratt, Kans.	Lat 38°40'30", long 98°43'23", NE¼NE¼ sec.27, T.27 S., R.13 W., Pratt County, at downstream end of culvert on county highway, 2.4 mi (3.9 km) northeast of Pratt.	1.48	1957-74	4-20-74	14.62	800

* Operated as a continuous-record gaging station.

c. From floodmark.

Note.--Figures of drainage area in parentheses show approximate contributing area included in total area.

Annual maximum discharge at crest-stage partial-record stations--continued

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Annual maximum		
					Date	Gage height (feet)	Dis-charge (cfs)
Arkansas River basin--continued							
07145300	Clear Creek near Garden Plain, Kans.	Lat 37°39'48", long 97°39'22", in NE¼NW¼ sec.33, T.27 S., R.3 W., Sedgwick County, at downstream side of bridge on U.S. Highway 54, 1.5 mi (2.4 km) northeast of Garden Plain.	5.03	1957-74	10-11-73	13.46	680
07145800	Antelope Creek tributary near Dalton, Kans.	Lat 37°16'34", long 97°17'01", in SW¼SE¼ sec.11, T.32 S., R.1 E., Sumner County, upstream from culvert on U.S. Highway 160, 0.8 mi (1.3 km) northwest of Dalton. Published as "Avon Creek tributary" 1957-70.	.41	1957-74	3-31-73 10-11-73	f13.65 14.30	f120 170
07146700	West Branch Walnut River tributary near DeGraff, Kans.	Lat 37°57'19", long 96°51'04", in NE¼NW¼ sec.23, T.24 S., R.5 E., Butler County, at downstream side of county highway bridge, 2.0 mi (3.2 km) southeast of DeGraff.	11.0	1957-74	5-25-74	16.02	1,300
07147020	Whitewater River tributary near Towanda, Kans.	Lat 37°51'03", long 97°03'37", in NE¼NE¼ sec.26, T.25 S., R.3 E., Butler County, at culvert on county highway, 5.0 mi (8.0 km) northwest of Towanda.	.17	1963-74	3-10-73 1974	13.10 a	f90 <5
07147200	Dry Creek tributary near Augusta, Kans.	Lat 37°40'47", long 97°01'50", in S¼SE¼ sec.19, T.27 S., R.4 E., Butler County, at downstream end of culvert on U.S. Highway 54, 2.8 mi (4.5 km) west of Augusta. Published as "Indianola Creek tributary" 1957-63.	.90	1957-74	10-11-73	10.66	160
07147990	Cedar Creek tributary near Cambridge, Kans.	Lat 37°19'19", long 96°37'33", on east line sec.26, T.31 S., R.7 E., Cowley County, at downstream side of bridge on U.S. Highway 160, 0.5 mi (0.8 km) upstream from Cedar Creek and 2.1 mi (3.4 km) northeast of Cambridge. Published as "Grouse Creek tributary" 1961-63.	2.41	1961-74	5-23-74	12.55	560
07148100	Grouse Creek near Dexter, Kans.	Lat 37°13'38", long 96°42'44", in NW¼NW¼ sec.31, T.32 S., R.7 E., Cowley County, on right bank at downstream side of county highway bridge, 3.2 mi (5.1 km) north of Dexter.	170	1960-74	3-10-74	20.45	7,000
07148700	Dog Creek near Deerhead, Kans.	Lat 37°16'50", long 98°52'24", in NW¼NW¼ sec.8, T.32 S., R.14 W., Barber County, above culvert on U.S. Highway 160, 3.5 mi (5.6 km) northeast of Deerhead.	5.31	1957-74	7-25-74	12.94	210
07148800	Medicine Lodge River tributary near Medicine Lodge, Kans.	Lat 37°18'42", long 98°35'20", in N¼NE¼ sec.35, T.31 S., R.12 W., Barber County, on right bank at downstream side of county highway bridge, 2.8 mi (4.5 km) northwest of Medicine Lodge. Prior to June 23, 1960, at site 0.5 mi (0.8 km) downstream and at datum 3.86 ft (1.18 m) lower.	2.04	1957-74	10-11-73	15.84	1,600
07151600	Rush Creek near Harper, Kans.	Lat 37°15'12", long 98°04'47", in NE¼NE¼ sec.21, T.32 S., R.7 W., Harper County, at downstream side of county highway bridge, 3.5 mi (5.6 km) southwest of Harper.	12.0	1957-74	f9-26-73 7-25-74	f16.10 15.80	f2,900 2,500
07155900	North Fork Cimarron River tributary near Elkhart, Kans.	Lat 37°11'27", long 101°53'54", in NW¼SW¼ sec.9, T.33 S., R.42 W., Morton County, at downstream side of culvert on State Highway 27, 13.0 mi (20.9 km) north of Elkhart.	75 (10.0)	1957-74	1974	--	0

a Peak stage did not reach bottom of pipe.

f Corrected.

Note.--Figures of drainage area in parentheses show approximate contributing area included in total area.

DISCHARGE AT PARTIAL-RECORD STATIONS

195

Annual maximum discharge at crest-stage partial-record stations--continued

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Annual maximum		
					Date	Gage height (feet)	Dis-charge (cfs)
Arkansas River basin--continued							
07171800	Cedar Creek tributary near Hooser, Kans.	Lat 37°06'27", long 96°34'27", in SW¼NE¼ sec.7, T.34 S., R.8 E., Cowley County, above culvert on U.S. Highway 166, 3.9 mi (6.3 km) southeast of Hooser.	.56	1957-74	1974	a	<10
07171900	Grant Creek near Wauneta, Kans.	Lat 37°06'34", long 96°23'55", in SE¼NE¼ sec.10, T.34 S., R.9 E., Chautauqua County, at upstream side of county highway bridge, 1.1 mi (1.8 km) southwest of Wauneta.	20.0	1957-74	6- 6-74	16.81	3,600
07179600	Four Mile Creek near Council Grove, Kans.	Lat 38°35'59", long 96°29'54", in NW¼SW¼ sec.2, T.17 S., R.8 E., Morris County, at downstream side of bridge on State Highways 13 and 57, 3.3 mi (5.3 km) south of Council Grove and at mile 4.4 (km 7.1).	55.0	1963-71†, 1972-74	5-14-74	18.88	13,000
07180300	Spring Creek tributary near Florence, Kans.	Lat 38°11'00", long 96°54'49", in W¼NW¼ sec.32, T.21 S., R.5 E., Marion County, above culvert on U.S. Highway 77, 4.1 mi (6.6 km) southeast of Florence.	.55	1957-74	10-11-73	13.90	210
07181500	Middle Creek near Elmdale, Kans.	Lat 38°23'36", long 96°43'04", in SE¼SW¼ sec.13, T.19 S., R.6 E., Chase County, at downstream side of county highway bridge, 4.0 mi (6.4 km) northwest of Elmdale and at mile 8.2 (km 13.2).	92.0	1939-50†, 1960-74	10-11-73	18.22	18,000
07182520	Rock Creek at Burlington, Kans.	Lat 38°11'46", long 95°45'24", in NW¼NW¼ sec.27, T.21 S., R.15 E., Coffey County, at downstream side of culvert on county highway at west city limit of Burlington. Prior to Mar. 18, 1960, at downstream side of county highway bridge (now removed) at the same site and datum.	8.27	1957-74	10-11-73	20.98	3,400
07182600	North Big Creek near Burlington, Kans.	Lat 38°06'37", long 95°45'26", in NW¼NW¼ sec.27, T.22 S., R.15 E., Coffey County, at downstream side of county highway bridge, 5.9 mi (9.5 km) southwest of Burlington.	46.0	1957-74	10-11-73	22.39	6,600
07183800	Limestone Creek near Beulah, Kans.	Lat 37°24'12", long 94°53'16", in NE¼SE¼ sec.28, T.30 S., R.23 E., Crawford County, at downstream side of county highway bridge, 4.0 mi (6.4 km) southwest of Beulah.	12.0	1957-74	3-10-74	19.82	7,500
07184500	Labette Creek near Oswego, Kans.	Lat 37°11'30", long 95°11'30", in NW¼NW¼ sec.11, T.33 S., R.20 E., Labette County, at downstream side of bridge on U.S. Highway 96, 2.0 mi (3.2 km) upstream from St. Louis - San Francisco Railway bridge, 5.0 mi (8.0 km) northwest of Oswego and at mile 18.8 (km 30.2).	211	1939-45†, 1961-74	3-10-74	21.59	17,000
07184600	Fly Creek near Faulkner, Kans.	Lat 37°06'15", long 94°56'21", in NW¼NW¼ sec.7, T.34 S., R.23 E., Cherokee County, at upstream side of county highway bridge, 3.8 mi (6.1 km) east of Faulkner.	27.0	1957-74	3-10-74	22.51	5,400

* Operated as a continuous-record gaging station.

a Peak stage did not reach bottom of pipe.

DISCHARGE AT PARTIAL-RECORD STATIONS

Flood hydrograph stations

The following table contains stage and discharge for indicated times at flood hydrograph stations. Records of stage above the elevation of the base discharge are obtained from a water-stage recorder. The base is selected so that an average of about three floods a year can be presented. A stage-discharge relation for each gage is developed from discharge measurements made by indirect measurements of peak discharge or by current meter. The maximum discharge for each water year is given although it may not be above the base.

KANSAS RIVER BASIN

06870300 GYPSUM CREEK NEAR GYPSUM, KS

LOCATION.--Lat 38°39'11", long 97°25'10", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.15, T.16 S., R.1 W., Saline County, 3.5 mi (5.6 km) south of Gypsum, and 22.7 mi (36.5 km) upstream from mouth. DRAINAGE AREA.--120 mi² (311 km²), approximately. PERIOD OF RECORD.--October 1954 to September 1971, continuous record. October 1971 to current year, flood hydrograph record.

GAGE HEIGHT, IN FEET, AND DISCHARGE, IN CUBIC FEET PER SECOND, AT INDICATED TIME, 1974 WATER YEAR

DATE	HOUR	GAGE HEIGHT	DIS- CHARGE	DATE	HOUR	GAGE HEIGHT	DIS- CHARGE
OCT. 10	1900	13.20	509	APR. 20	1600	14.61	662
	2100	15.00	730		1800	15.28	814
	2400	16.42	1,260		2000	15.91	1,010
OCT. 11					2200	16.58	1,340
	0300	17.30	1,780		2400	16.82	1,460
	0600	18.92	3,680	APR. 21	0100	16.83	1,460
	0900	20.17	7,120		0400	16.52	1,310
	1200	20.24	7,620		0600	15.86	994
	1500	20.30	8,100		0800	15.05	745
	1800	20.15	7,000		1000	13.77	557
	2100	19.45	4,700		1200	12.35	450
	2400	18.15	2,590				
OCT. 12	0300	17.10	1,620	MAY 18	2100	12.70	474
	0600	16.01	1,060		2200	15.80	970
	0900	14.67	670		2300	16.75	1,420
	1200	13.25	512		2400	16.95	1,520
	1500	12.05	428	MAY 19	0200	17.10	1,620
DEC. 24	0400	12.10	432		0400	17.16	1,670
	0600	14.13	593		0600	17.45	1,890
	0900	15.25	805		0700	17.80	2,200
	1200	16.00	1,050		0900	19.55	4,900
	1500	16.62	1,360		1100	19.75	5,300
	1700	16.67	1,380		1400	19.55	4,900
	1800	16.62	1,360		1800	18.87	3,600
	2100	16.18	1,140		2100	18.00	2,400
	2400	15.00	730		2400	17.17	1,680
DEC. 25	0400	12.40	453	MAY 20	0300	15.90	1,010
APR. 20	1300	12.65	470		0600	14.15	595
	1400	13.68	548		0900	12.30	446

PEAK DISCHARGE (BASE, 650 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
10-11	1500	20.30	8,100	04-21	0100	16.83	1,460
12-24	1700	16.67	1,380	05-19	1100	19.75	5,300

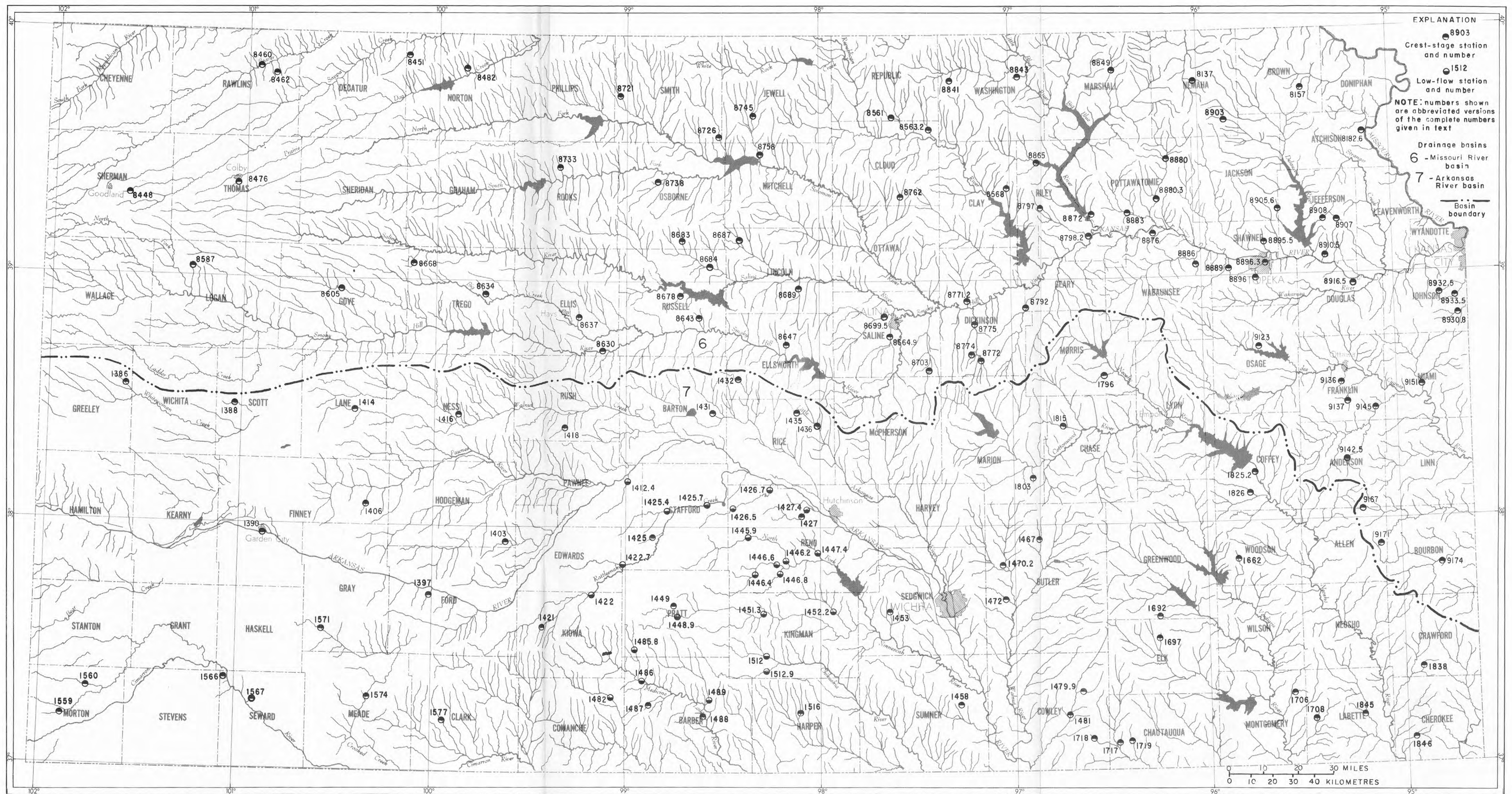


Figure 2.--Map of Kansas showing location of partial-record stations, 1974 water year.

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Accuracy of data	5	Chapman Creek near Chapman	63
Achilles, South Fork Sappa Creek near	11	Cheney, Cheney Reservoir near	131
Acre-foot, definition of	1	Cheney Dam, North Fork Ninnescah River at	132
Ada, Salt Creek near	60	Cheney Reservoir, North Fork Ninnescah River above	130
Albert, Walnut Creek at	115	Cheney Reservoir near Cheney	131
Alta Mills, Little Arkansas River at	124	Cherry Creek near Cherryvale	194
Altoona, Verdigris River near	154	Cherryvale, Big Hill Creek near	164
Americus, Neosho River near	168	Chikaski River near Zenda	184
Antelope Creek tributary near Dalton	193	Cimarron River, near Buttermilk near Elkhart	148
Arkansas City, Arkansas River at	137	near Forgan, OK	146
Arkansas River, at Arkansas City at Derby	137	North Fork, at Richfield	143
at Dodge City	129	tributary near Elkhart	193
at Garden City	108	tributary near Richfield	194
at Great Bend	196	tributary near Moscow	194
at Syracuse	113	tributary near Satanta	194
at Wichita	106	Circleville, Soldier Creek near	77
near Coolidge	127, 128	Clafin, Cow Creek near	120
near Hutchinson	105	Clark Creek near Junction City	188
near Kinsley	123	Clay Center, Republican River at	24
tributary near Dodge City	110	Clear Creek near Garden Plain	193
Arkansas River basin, crest-stage partial-record stations in	191-195	Climax, Otter Creek at	156
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Ash Creek tributary near Stockton	188	Concordia, Republican River at Wolf Creek near	23
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Bear Creek near Johnson	145	Coolidge, Arkansas River near Frontier ditch near	105
Beaver Creek, at Cedar Bluffs at Ludell	12	Coon Creek tributary near Luray	104
tributary near Ludell	185	Cooperation	187
Big Blue River near Manhattan	70	Cottonwood River, below Marion Lake near Florence	170
Big Bull Creek, at Paola	191	near Plymouth	171
near Hillsdale	100	Council Grove, Council Grove Lake near Neosho River at	173
Big Creek, near Hays	34	Council Grove Lake near Council Grove	166
North Fork near Victoria	35	Cow Creek, near Clafin near Lyons	120
tributary near Hays	186	Coyville, Verdigris River near	122
tributary near Ogallah	186	Crest-stage partial-record stations	153
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Gaging-station records in	8	tributary at Meade	147
Black Vermillion River near Frankfort	68	Cubic feet per second per square mile, definition of	194
Blacksmith Creek tributary near Valencia	189	Cubic foot per second, definition of	2
Blood Creek near Boyd	121	Deer Creek near Phillipsburg	51
Bloomington, Kill Creek near	56	DeGraff, Cole Creek near	138
Blue River basin, gaging-station records in	89	Delaware River, below Perry Dam near Muscotah	83
Blue River near Stanley	190	Delia, Soldier Creek near	81
Bluff Creek near Buttermilk	150	Derby, Arkansas River at	79
Bow Creek near Stockton	48	DeSoto, Kansas River at	129
Boyd, Blood Creek near	121	Discharge, definition of	87
Brewster, South Fork Sappa Creek near	10	Dodge City, Arkansas River at Mulberry Creek near	2
Buffalo Creek near Jamestown	21	Dog Creek near Deerhead	108
Bullfoot Creek tributary near Lincoln	187	Draughton Creek, near Burlingame tributary near Lyndon	109
Burlingame, Dragoon Creek near	94	Drainage area, definition of	193
Burlington, John Redmond Reservoir near Neosho River at	174	Dry Creek at Mentor	2
Burr Oak, White Rock Creek near	175	Dry Creek near Maple Hill	187
Buttermilk, Bluff Creek near	18	Dry Creek tributary near Augusta	189
Cimarron River near	150	East Limestone Creek near Ionia	193
Buttermilk Creek near Willis	148	Elgin, Caney River near	188
Caney River near Elgin	185	Elk City Lake, Elk River below	165
Cavalry Creek at Coldwater	165	Elk City Lake near Independence	162
Cedar Bluff Dam, Smoky Hill River at	32	Elk Creek at Clyde	161
Cedar Bluff Reservoir near Ellis	31	Elk Falls, Elk River at	186
Cedar Bluffs, Beaver Creek at	12	Elk River, at Elk Falls	160
Cedar Creek near Cedar Point	172	below Elk City Lake	160
Cedar Creek near Manhattan	189	Elkader, Smoky Hill River at	162
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Cedar Creek tributary near Cambridge	193		
Cedar Creek tributary near Hooser	195		
Cedar Point, Cedar Creek near	172		
Cfs-day, definition of	1		
Chanute, Neosho River near	177		
Chapman, Chapman Creek near	63		

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Fall River Lake near Fall River	157	John Redmond Reservoir near Burlington	174
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Flood-hydrograph stations	196	Toronto Lake near Toronto	152
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Fly Creek near Faulkner	195	Cedar Bluff Reservoir near Ellis	31
Forgan, OK, Cimarron River near	146	Kanopolis Lake near Kanopolis	38
Fort Riley, Kansas River at	65	Kirwin Reservoir at Kirwin	49
Four Mile Creek near Council Grove	195	Lovewell Reservoir near Lovewell	19
Frankfort, Black Vermillion River near	68	Milford Lake near Junction City	25
Fredonia, Fall River at	159	Norton Reservoir near Norton	14
Frontier ditch near Coolidge	104	Perry Lake near Perry	82
Fulton, Little Osage River at	102	Tuttle Creek Lake near Manhattan	69
		Wacanda Lake at Glen Elder	58
Gage height, definition of	2	Webster Reservoir near Stockton	54
Gaging station, definition of	2	Wilson Lake near Wilson	43
Garnett, Pottawatomie Creek near	99	Osage River basin	
Glade, North Fork Solomon River at	47	Pomona Lake near Quenemo	95
Glen Elder, Solomon River near	59	Langley, Smoky Hill River near	39
Wacanda Lake at	58	Larned, Pawnee River near	112
Goff, Soldier Creek near	74	Lecompton, Kansas River at	84
Goose Creek near Arlington	184	Leoti, Whitewoman Creek near	107
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Hillsdale, Big Bull Creek near	100	Long Branch Creek near Ness City	192
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		White Rock Creek at	20
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Peck, Minnescah River near	135	at Ellsworth	37
Perry, Perry Lake near	82	at Enterprise	62
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Perry Lake near Perry	82	near Arnold	30
Phillipsburg, Deer Creek near	51	near Langley	39
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