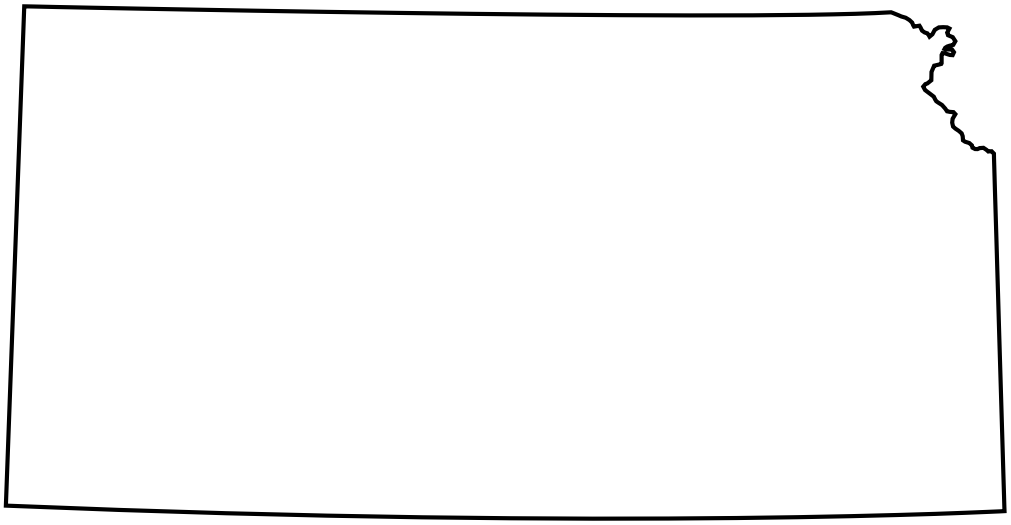
U.S. Department of the Interior
U.S. Geological Survey

Water Resources Data Kansas Water Year 2002

By J.E. Putnam and D.R. Schneider

Water-Data Report KS-02-1



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

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2003

PREFACE

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

This report is the culmination of a concerted effort by dedicated personnel of the U.S. Geological Survey who collected, compiled, analyzed, verified, and organized the data, and who typed, edited, and assembled the report. The authors had primary responsibility for assuring that the information contained herein is accurate, complete, and adheres to Geological Survey policy and established guidelines.

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13. ABSTRACT *(Maximum 200 words)*

Water-resources data for the 2002 water year for Kansas consist of records of stage, discharge, and water quality of streams; elevation and contents of lakes and reservoirs; and water levels of ground-water wells. This report contains records for water discharge at 149 complete-record gaging stations; elevation and contents at 20 lakes and reservoirs; water-quality records at 2 precipitation stations, water-level data at 18 observation wells; and records of specific conductance, pH, water temperature, dissolved oxygen, and turbidity at 11 gaging stations. Also included are discharge data for 26 high-flow partial-record stations, miscellaneous onsite water-quality data collected at 142 stations, and suspended-sediment concentration for 12 stations. These data represent that part of the National Water Information System collected by the U.S. Geological Survey in cooperation with local, State, and Federal agencies in Kansas.

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SURFACE-WATER STATIONS, IN DOWNSTREAM ORDER, FOR WHICH RECORDS ARE PUBLISHED IN THIS VOLUME

[Letters in parentheses () after station name designate type of data: (d) discharge, (c) chemical, (t) temperature, (e) elevation, and (s) sediment]

B L A N K P A G E

INTRODUCTION

The U.S. Geological Survey, in cooperation with local, State, and Federal agencies, collects a large amount of data pertaining to the water resources of Kansas each water year (October 1 to September 30). These data, accumulated during many water years, constitute a valuable database for developing an improved understanding of the water resources of the State. To make these data readily available to interested parties outside the Geological Survey, the data are published annually in this report series entitled “Water Resources Data - Kansas.” Historic and current streamflow, water-quality, and ground-water data also are available on the World Wide Web at: http://ks.water.usgs.gov/ and http://ks.water.usgs.gov/nwis/.

This report contains records for water discharge at 149 complete-record streamflow-gaging stations; complete records of elevation and contents at 20 lakes and reservoirs; water-quality records at 2 precipitation stations; water levels at 18 observation wells; and records of specific conductance, pH, water temperature, dissolved oxygen, and turbidity at 9 gaging stations and 2 lakes with water-quality monitors. Also included are discharge data for 26 high-flow partial-record streamflow-gaging stations, miscellaneous onsite water-quality data for 142 stations, and suspended-sediment concentration for 12 stations. Locations of complete-record surface-water stations, 2002 water year, are shown in figure 1. Locations of complete-record water-quality stations and suspended-sediment sample stations, 2002 water year, are shown in figure 2. Locations of high-flow partial-record streamflow-gaging stations, 2002 water year, are shown in figure 3. The number of ground-water-level observation wells per county, 2002 water year, are shown in figure 4.

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

Prior to introduction of this series and for several water years concurrent with it, water-resources data for Kansas were published in U.S. Geological Survey Water-Supply Papers. Data on stream discharge and stage and on lake or reservoir elevation and contents, through September 1960, were published annually under the title “Surface-Water Supply of the United States, Parts 6 and 7.” For the 1961 through 1970 water years, the data were published in two 5-year reports, 1961-65 and 1966-70. Data on chemical quality, temperature, and suspended sediment for the 1941 through 1970 water years were published annually under the title “Quality of Surface Waters of the United States,” and water levels for the 1935 through 1974 water years were published under the title “Ground-Water Levels in the United States.” The above-mentioned Water-Supply Papers may be consulted in the libraries of the principal cities in the United States or may be purchased from the Branch of Information Services, Federal Center, Box 25286, Denver, CO 80225.

Publications similar to this report are published annually by the Geological Survey for all States. These official Survey reports have an identification number consisting of the two-letter State abbreviation, the last two digits of the water year, and the volume number. For example, this volume is identified as “U.S. Geological Survey Water-Data Report KS-02-1.” For archiving and general distribution, the reports for the 1971-74 water years also are identified as water-data reports. These water-data reports are for sale in paper copy or in microfiche by the National Technical Information Service, U.S. Department of Commerce, 5285 Port Royal Road, Springfield, VA 22161.

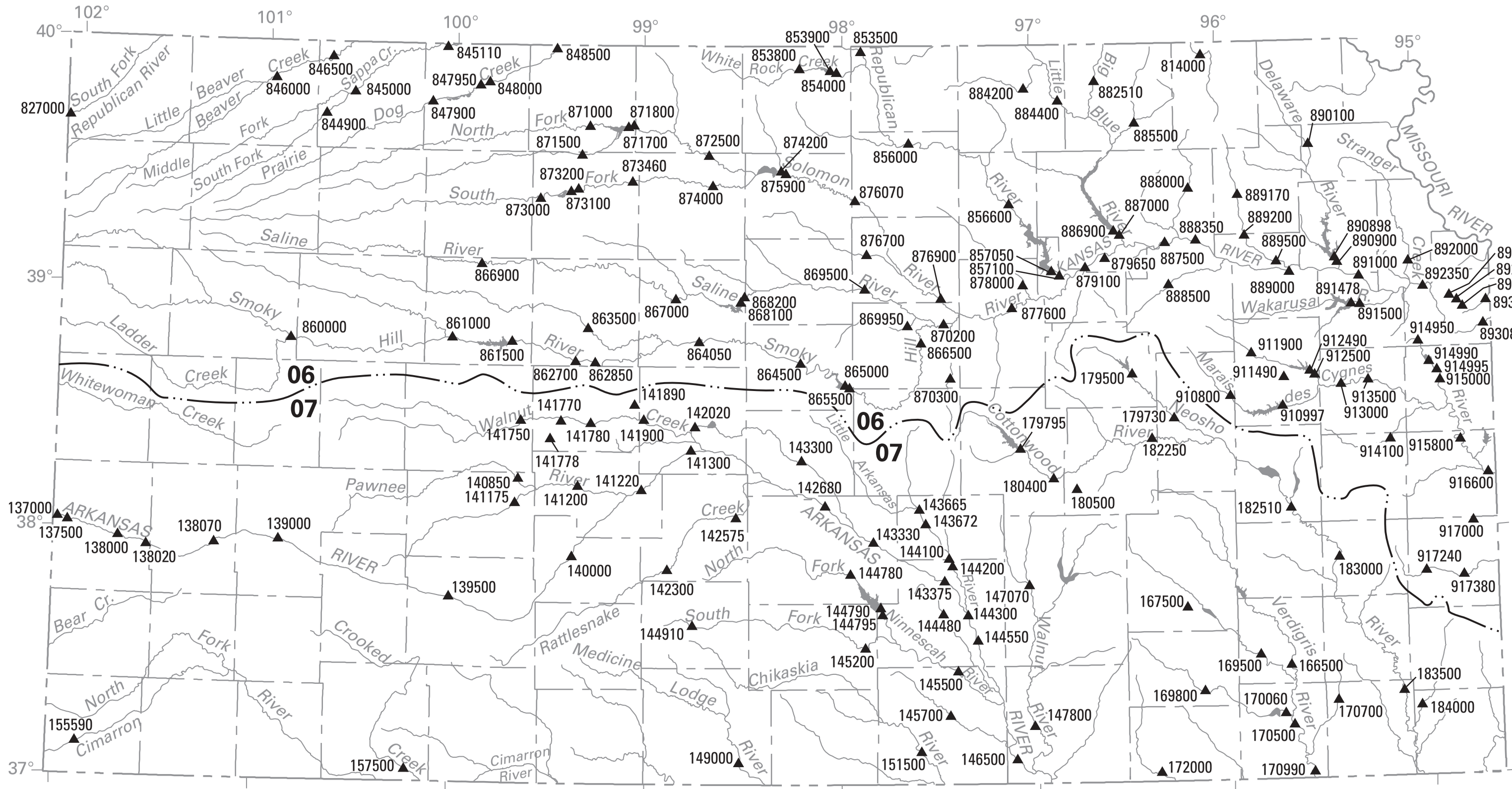
Additional information, including current prices, for ordering specific reports may be obtained from the District Chief at the address given on the back of the title page or by telephone (785) 842-9909.

COOPERATION

The U.S. Geological Survey and agencies of the State of Kansas have had cooperative agreements for the collection of water-resources records since 1895. Organizations that helped support this program through cooperative funding agreements with the Survey are: Kansas Water Office; Kansas Department of Transportation; Kansas Department of Agriculture, Division of Water Resources; city of Wichita; Kansas Department of Health and Environment; Arkansas River Compact Administration; Groundwater Management District number 5; Hillsdale Water Quality Project, Inc.; city of Hays; Johnson County Department of Public Works; city of Olathe; and city of Hutchinson.

The following Federal agencies assisted in the data-collection program by providing funds: U.S. Army Corps of Engineers and U.S. Department of the Interior, Bureau of Reclamation.

The U.S. Geological Survey, the Kansas Water Office, using State Water Plan Funds, and the U.S. Army Corps of Engineers provide the largest share of funds for operation of data-collection stations.



Base from U.S. Geological Survey digital data, 1:2,000,000, 1994
Albers Equal-Area Conic projection
Standard parallels 29°30' and 45°30', central meridian -96°00'

EXPLANATION

149000▲ **Complete-record station and number**—Includes complete-record streamflow-gaging stations and stations that measure elevation and contents of lakes and reservoirs

Note: Numbers are abbreviated versions of the complete identification numbers

Drainage basin

06 Missouri River Basin

07 Lower Mississippi River Basin

—··— **Basin boundary**

Figure 1. Location of complete-record surface-water stations, 2002 water year.

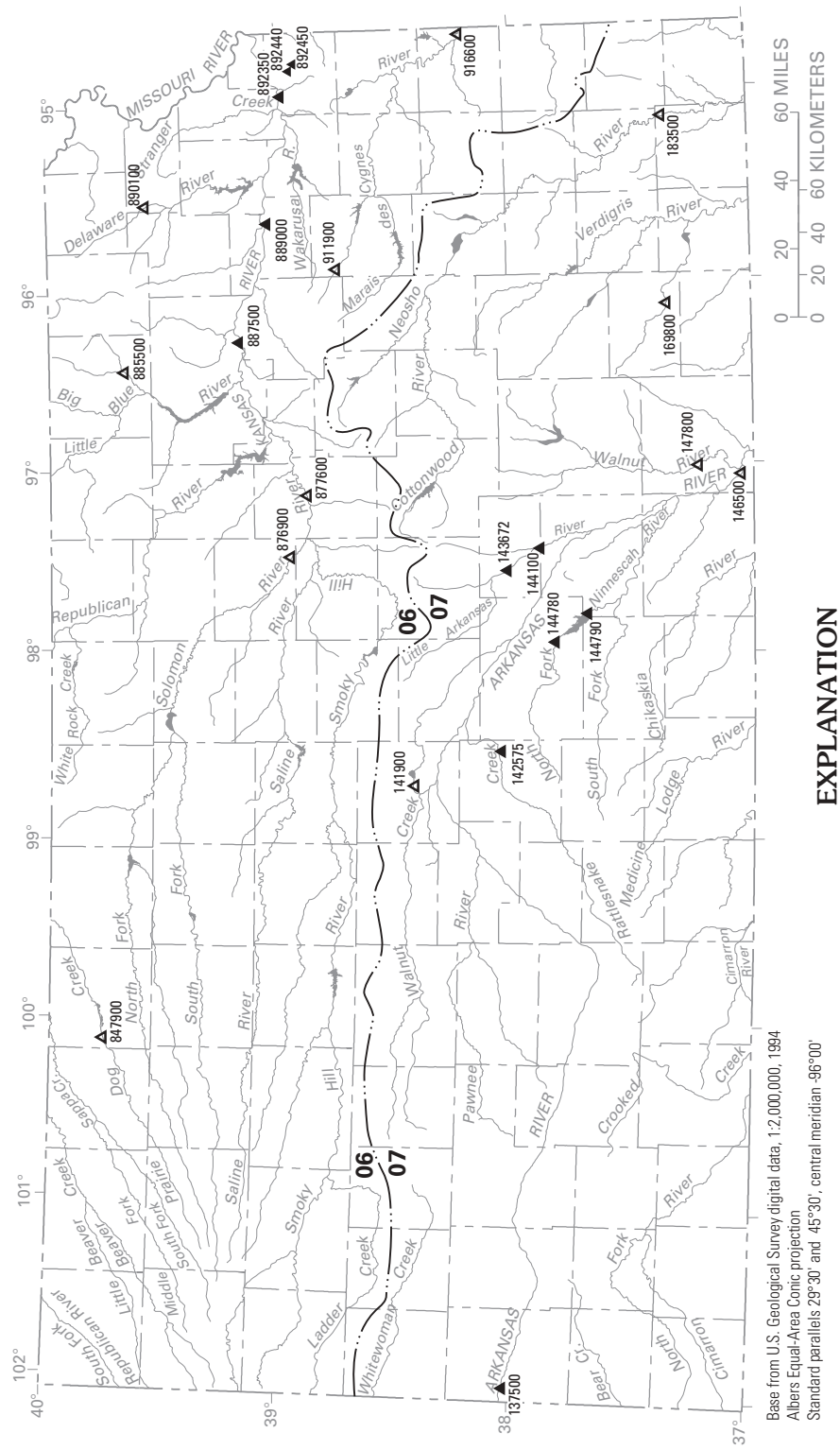


Figure 2. Location of complete-record water-quality stations and suspended-sediment sample stations, 2002 water year.

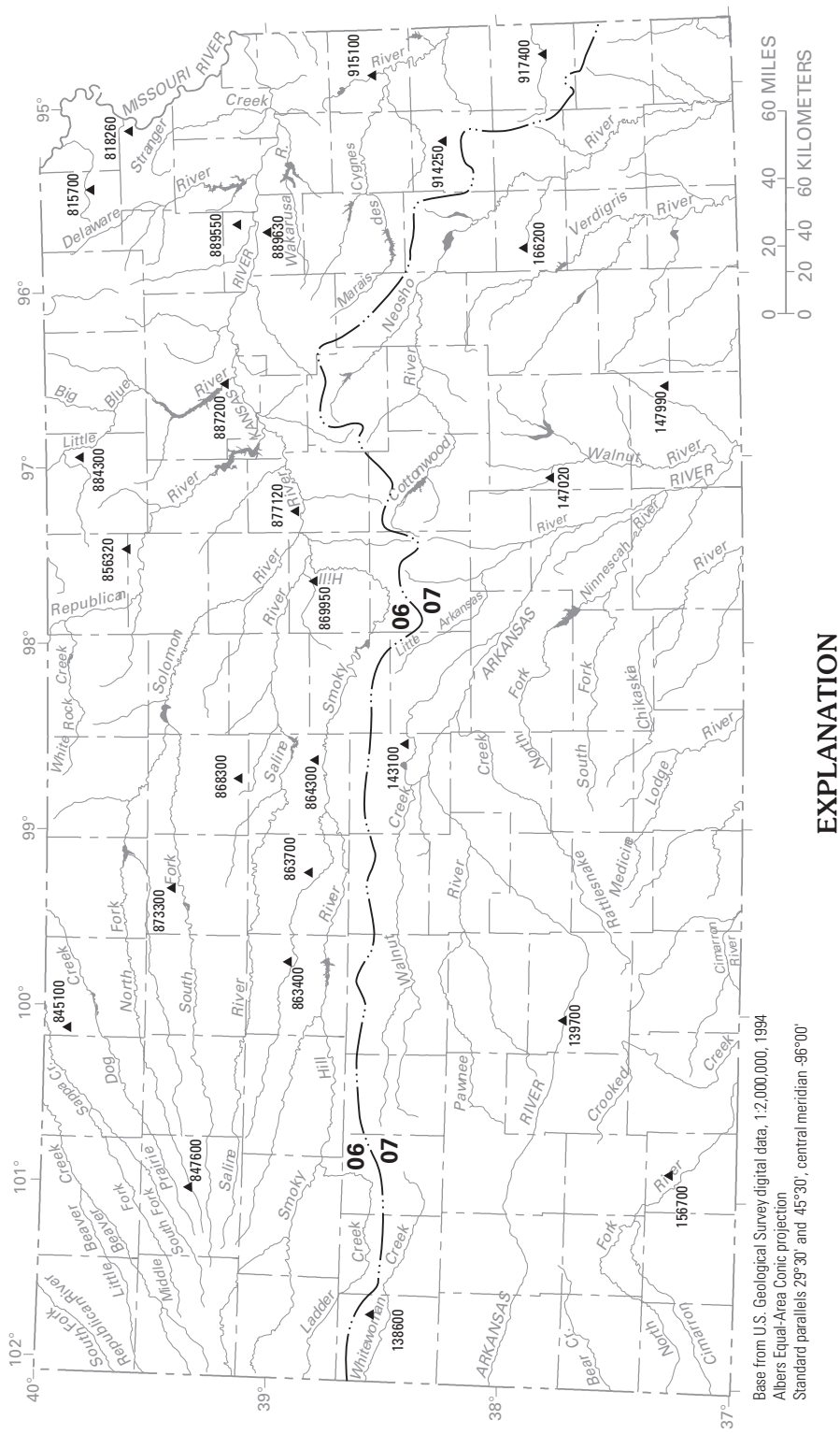


Figure 3. Location of high-flow partial-record streamflow-gaging stations, 2002 water year.

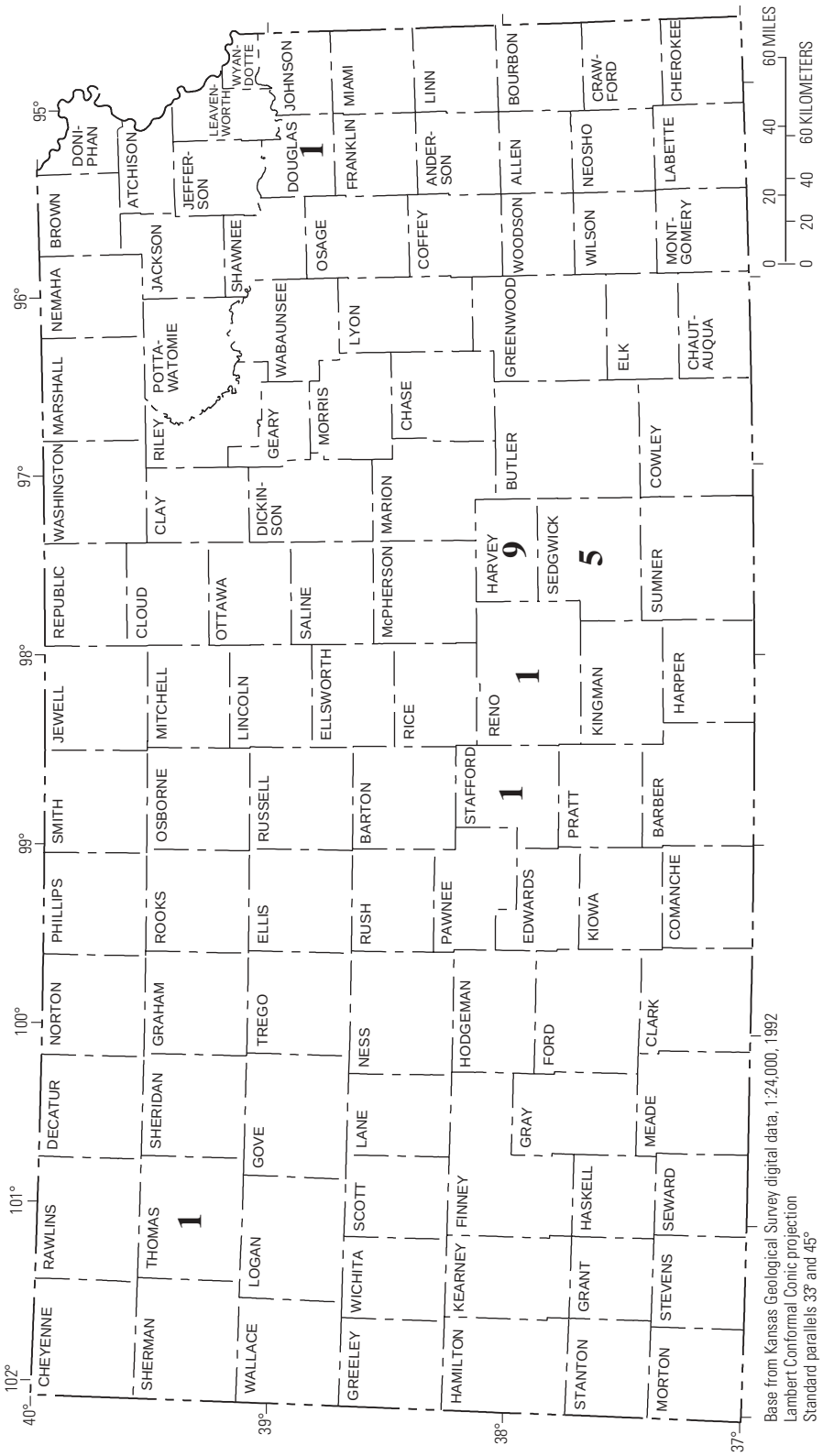


Figure 4. Number of ground-water-level observation wells per county, 2002 water year.

SUMMARY OF HYDROLOGIC CONDITIONS

Surface Water

Large spatial and temporal variations in streamflow characterize hydrologic conditions in Kansas. In the extreme southeastern part of the State, mean annual precipitation exceeds 40 in., and mean annual runoff exceeds 10 in. In the east, stream channels are deeply incised in wide, alluvial flood plains, and streamflow generally is perennial. In the extreme western part of the State, mean annual precipitation is less than 20 in., and mean annual runoff is less than 0.1 in. In western Kansas, streams generally have shallow, ill-defined channels, and streamflow generally is ephemeral.

Precipitation data from monthly reports of the National Weather Service for reporting areas in Kansas (fig. 5) are summarized in table 1. Precipitation during the 2002 water year was below normal across the entire State. Precipitation totals ranged from 51 percent of normal in northwest Kansas to 89 percent of normal in southeast Kansas. The largest departure from normal precipitation, 30.28 in., occurred in the fourth quarter (July-September) of the year. According to Mary Knapp, State Climatologist, the 2002 water year in Kansas was the seventh driest since precipitation record collection began in 1895. Northwest, west-central, and southwest Kansas ranked second driest, and southeast Kansas, the part of the State that generally receives the most precipitation, ranked thirty-fourth driest on record. Figure 6 shows a comparison of precipitation for water years 2000-02 with normal precipitation for the period 1961-90.

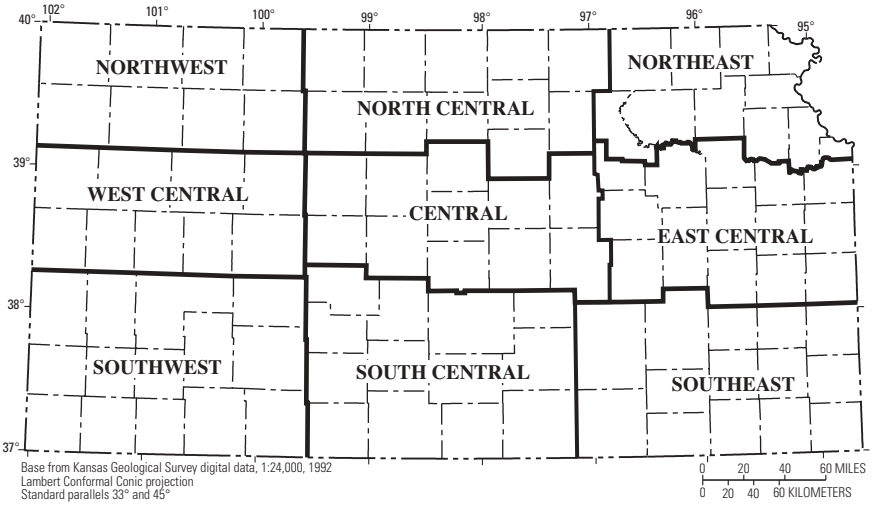


Figure 5. Reporting areas of the National Weather Service.

Table 1. Precipitation during 2002 water year and departure from normal

[All values are in inches. Period of record for normal, 1961-90. Source: U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Weather Service published reports]

Reporting area of State	First quarter (October-December)		Second quarter (January-March)		Third quarter (April-June)		Fourth quarter (July-September)		Water-year totals	
	Precipitation	Departure from normal	Precipitation	Departure from normal	Precipitation	Departure from normal	Precipitation	Departure from normal	Precipitation	Departure from normal
Northwest	1.90	-0.57	0.96	-1.38	3.48	-5.37	4.28	-2.90	10.62	-10.22
North central	2.06	-1.64	1.93	-1.32	7.74	-2.46	4.69	-4.87	16.42	-10.29
Northeast	2.93	-3.17	2.28	-1.86	11.14	-1.83	7.19	-5.01	23.54	-11.87
West central	0.66	-1.76	.94	-1.37	4.00	-3.82	5.00	-2.16	10.60	-9.11
Central	1.47	-2.95	2.09	-1.43	9.12	-1.46	5.73	-3.83	18.41	-9.67
East central	3.15	-3.63	3.00	-1.78	14.73	1.19	6.26	-5.49	27.14	-9.71
Southwest	.56	-1.76	.83	-1.32	3.53	-4.02	5.75	-1.29	10.67	-8.39
South central	1.02	-3.43	2.32	-1.19	11.38	1.22	7.62	-1.37	22.34	-4.77
Southeast	4.76	-3.14	3.85	-1.75	17.54	3.87	8.34	-3.36	34.49	-4.38

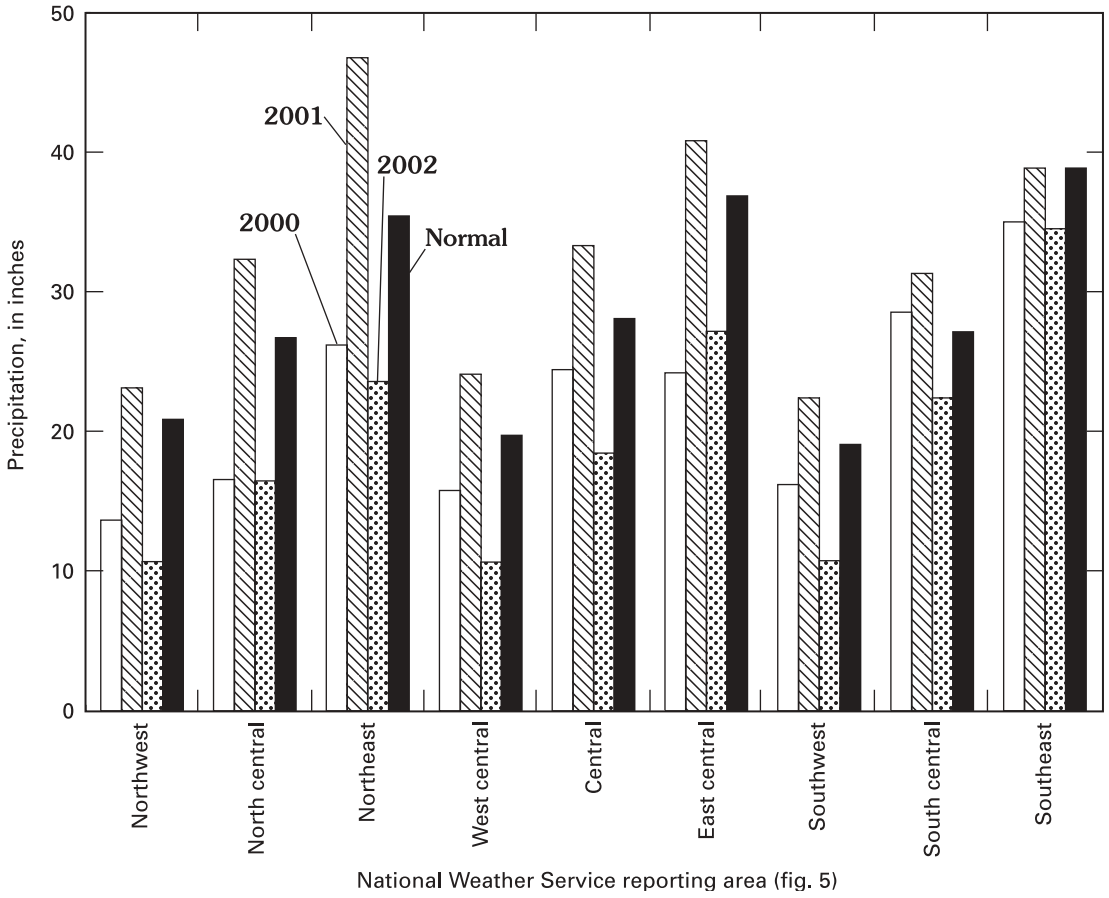


Figure 6. Precipitation for water years 2000-02 and normal precipitation (1961-90) for nine National Weather Service reporting areas in Kansas.

Drought conditions during the 2002 water year affected much of the State. The U.S. Drought Monitor reports drought information on the Internet at http://enso.unl.edu/monitor/monitor.html. The U.S. Department of Agriculture, the National Drought Mitigation Center (University of Nebraska-Lincoln), U.S. Department of Commerce (National Oceanic and Atmospheric Administration), and the U.S. Geological Survey contribute data and support for this information. According to the U.S. Drought Monitor, moderate drought conditions were prevalent through the first quarter of the 2002 water year (October-December) affecting the northern third of Kansas by the end of the quarter. By the end of the second quarter (January-March) severe drought conditions moved into southwest Kansas with much of the western half of the State abnormally dry. During the third quarter of the 2002 water year (April-June) the western third of the State was in moderate to severe drought conditions, and by the end of the quarter, abnormally dry conditions expanded into northeast Kansas. The fourth quarter of the 2002 water year (July-September) began with abnormally dry to severe conditions affecting all but southeast Kansas. Drought conditions in parts of northwest Kansas were considered severe to exceptional by the end of the fourth quarter, and drought conditions were moderate to severe across the northern half of the State with pockets of extreme to severe drought in northeast Kansas.

Below-normal precipitation and drought conditions throughout the State during the 2002 water year resulted in most streamflow-gaging stations flowing below normal for much of the year. Figure 7 shows the percentage of streamflow-gaging stations with more than 30 years of record of which the average daily streamflow for the previous 7 days was below normal. During typical climatic conditions, it can be expected that approximately 25 percent of the stations will experience below-normal conditions. This expected percentage is represented as a line on the graph. The graph indicated that the summer and fall were the drier times during the 2002 water year.

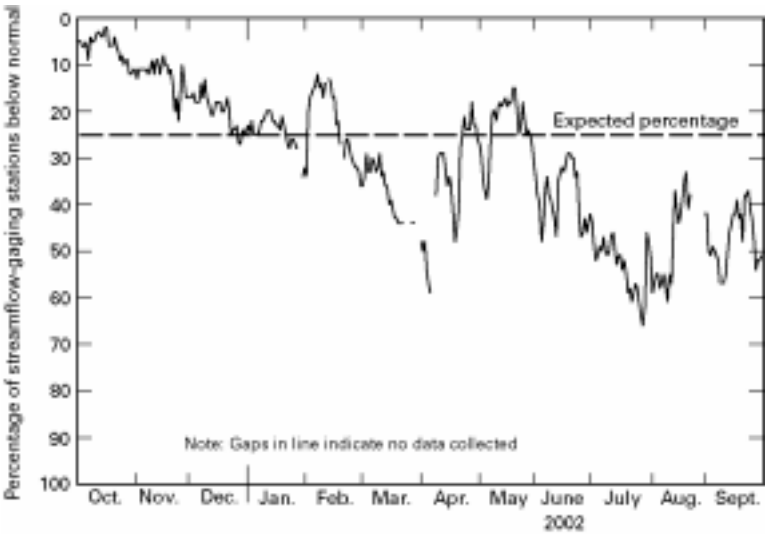


Figure 7. Percentage of streamflow-gaging stations at below-normal streamflow during the 2002 water year.

Monthly and annual mean streamflow during water year 2002 at 10 index streamflow-gaging stations are compared to long-term (reference period through previous water year) monthly and annual streamflow in figure 8. Annual mean streamflow during the 2002 water year was less than the long-term annual streamflow at all of the 10 index stations. Beaver Creek at Cedar Bluffs, station 06846500, flowed only 2 days during the 2002 water year. This station is located in northwest Kansas that received 51 percent of normal precipitation.

Drought conditions during the 2001 water year persisted into the 2002 water year, resulting in the monthly streamflow during 2002 water year being less than the long-term monthly streamflows with only a few exceptions. For example, monthly streamflows at station 06814000, Turkey Creek near Seneca, were greater than the long-term monthly streamflows in December and January. Streamflows at station 06884400, Little Blue River near Barnes, station 06911900, Dragoon Creek near Burlingame, and station 07184000, Lightning Creek near McCune, were greater than long-term monthly streamflows in May. Monthly streamflows at station 07144200, Little Arkansas River at Valley Center, and station 07149000, Medicine Lodge River near Kiowa, were greater than long-term monthly streamflows in June and August, respectively.

The dry conditions resulted in several record low streamflows during the 2002 water year. Table 2 shows record low streamflows at streamflow-gaging stations with greater than 36 years of record compared with previous record low streamflow. Many stations recorded near-record low streamflow. For example, station 06877600, Smoky Hill River near Enterprise, has been in operation since the 1935 water year. The lowest annual mean

streamflow for 2002 water year was 400.3 ft^3/s. The lowest annual mean streamflow recorded in 1956 was 293 ft^3/s.

Table 2. Record low streamflows at selected stations in Kansas, 2002 water year

[Streamflow values are given in cubic feet per second]

Station identification number and name		Period of record (water years)	Type of record	2002 water year	Previous low record (water year)	
06845000	Sappa Creek near Oberlin	1929-2002	lowest annual mean flow	0.036	0.64	(1972)
06856000	Republican River at Concordia	1946-2002	lowest daily mean flow	7.1	9.0	(1947)
06856600	Republican River at Clay Center	1918-2002	minimum monthly flow (Sept.)	11.9	22.3	(1956)
06879100	Kansas River at Fort Riley	1965-2002	minimum monthly flow (Sept.)	336	409	(1976)
07142300	Rattlesnake Creek near Macksville	1960-2002	minimum monthly flow (June)	3.27	4.08	(1968)
07157500	Crooked Creek near Englewood	1943-2002	minimum monthly flow (Apr.)	4.74	6.91	(1956)
07182510	Neosho River at Burlington	1966-2002	minimum monthly flow (Aug.)	44.3	45	(1976)

Kansas has established minimum desirable streamflow for many streams in the State. Table 3 lists the number of days that streamflow was less than the minimum desirable streamflow for selected stations. The Republican River at Clay Center, station 06856600, flowed below State minimum streamflow for nearly 80 percent of the days between March and September. The Arkansas River near Kinsley, station 07140000, and Rattlesnake Creek near Macksville, station 07142300, flowed below State minimum streamflow nearly the entire period of March through September. When streamflow is less than the State minimum desirable streamflow for 7 consecutive days, the Division of Water Resources, Kansas Department of Agriculture, begins administrative processes to curtail surface-water diversions for those with junior water rights.

Water levels in all reservoirs in the State were at conservation-pool or irrigation-pool elevation by the end of the 2002 water year except at Milford Lake near Junction City, station 06857050, and Perry Lake near Perry, station 06890898. The elevation for the top of conservation pool at Milford Lake is 1,144.4 ft. At the end of the 2002 water year Milford Lake elevation was 1,137.96 ft, about 6.5 ft below top of conservation pool. The minimum elevation recorded at Milford Lake during the 2002 water year was 1,137.95 ft, 0.71 ft from the lowest elevation recorded in February 1988. The elevation of Perry Lake at the end of 2002 water year was 886.25 ft, 5.25 ft below the top of the conservation pool elevation.

Data from the surface-water network, as well as information about selected stations, are available on the World Wide Web at:

http://ks.water.usgs.gov/

Table 3. Number of days of streamflow less than Kansas minimum desirable streamflow at selected streamflow-gaging stations, 2002 water year

Station identification number and name		Number of days less than Kansas minimum desirable streamflow						
		March	April	May	June	July	August	September
06856000	Republican River at Concordia	0	13	23	22	30	30	30
06856600	Republican River at Clay Center	0	30	25	22	31	31	30
06864500	Smoky Hill River at Ellsworth	0	0	0	10	31	7	18
06878000	Chapman Creek near Chapman	0	0	0	21	30	29	30
06882510	Big Blue River at Marysville	0	0	0	0	10	12	0
06884400	Little Blue River near Barnes	0	0	0	3	21	14	20
07140000	Arkansas River near Kinsley	31	30	31	30	31	31	30
07141300	Arkansas River at Great Bend	0	0	29	27	27	31	30
07142300	Rattlesnake Creek near Macksville	31	29	29	30	31	29	30
07143665	Little Arkansas River at Alta Mills	0	0	0	0	17	12	29
07144200	Little Arkansas River at Valley Center	0	0	0	0	16	16	30
07144910	South Fork Ninnescah River near Murdock	31	0	7	8	6	9	22
07147070	Whitewater River at Towanda	31	21	10	6	7	4	30
07183000	Neosho River near Iola	13	7	0	0	0	14	20
07183500	Neosho River near Parsons	7	0	0	0	0	12	22

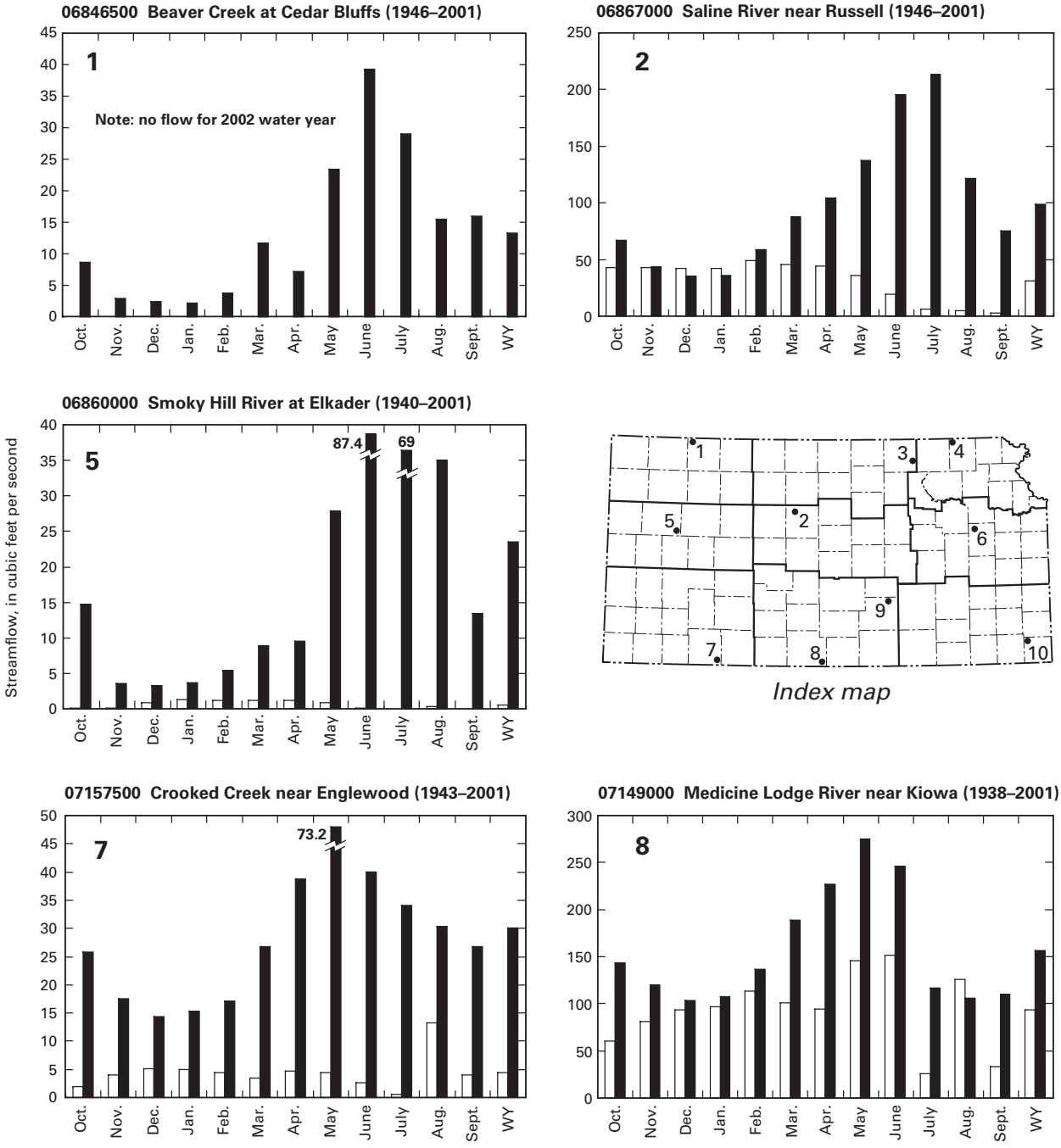


Figure 8. Comparison of 2002 water year monthly and annual mean streamflow to long-term mean of monthly and annual mean streamflow at selected streamflow-gaging stations.

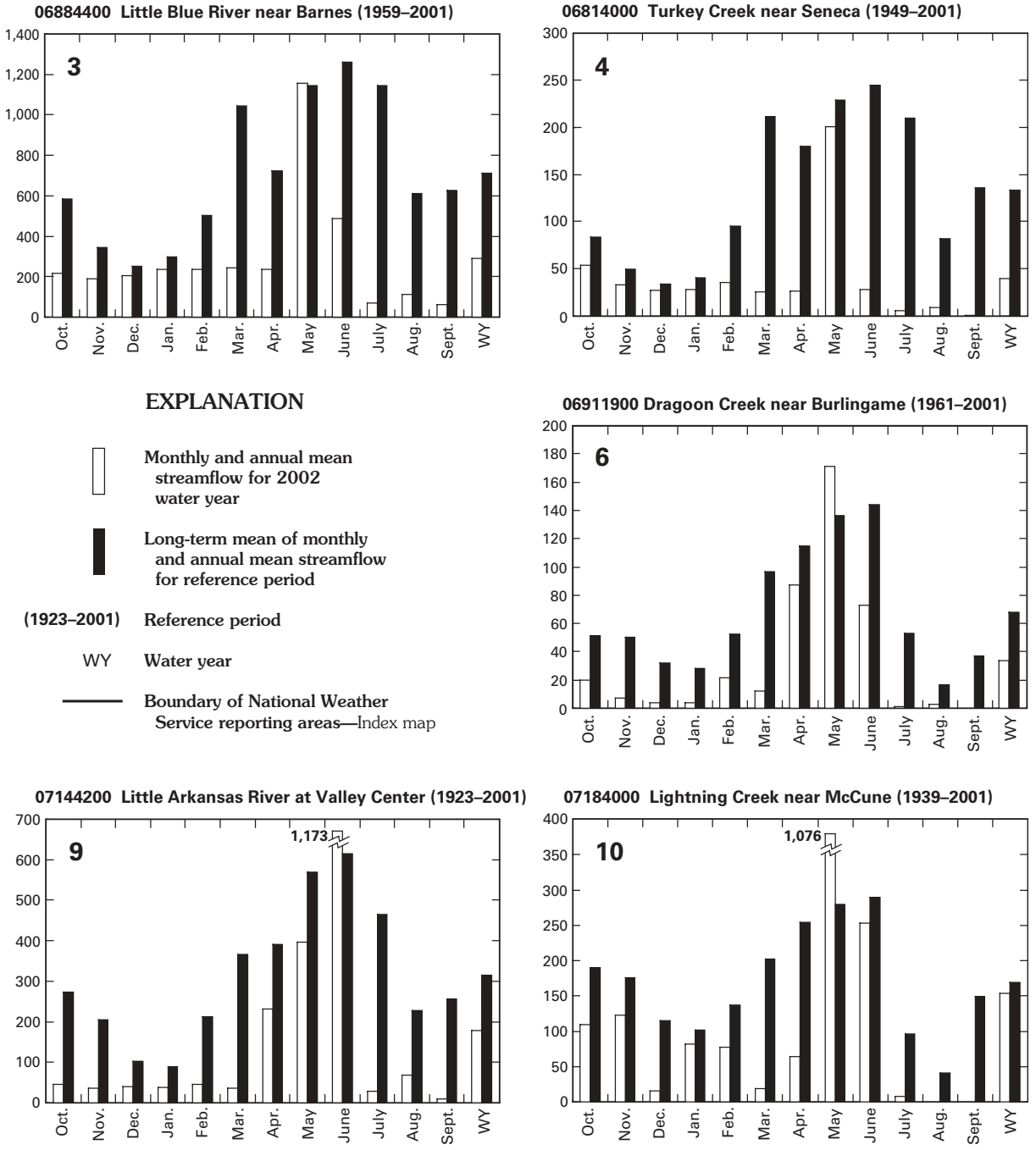


Figure 8. Comparison of 2002 water year monthly and annual mean streamflow to long-term mean of monthly and annual mean streamflow at selected streamflow-gaging stations--Continued.

Surface-Water Quality

Surface-water-quality data contained in this report include continuous records of specific conductance, pH, water temperature, dissolved oxygen, and turbidity collected at 11 stations (fig. 2) and suspended-sediment concentration data collected at 12 stations (fig. 2). Stream specific conductance and water temperature data are shown on pages 493 to 512 for miscellaneous stations. Conversion of degrees Celsius to degrees Fahrenheit is shown in table 4, and factors for conversion of chemical constituents in milligrams or micrograms per liter to milliequivalents per liter are shown in table 5.

Table 4. Conversion of degrees Celsius (^oC) to degrees Fahrenheit (^oF)[1]

[Temperature reported to nearest 0.5 ^oC]

^oC	^oF	^oC	^oF	^oC	^oF	^oC	^oF	^oC	^oF
0.0	32	10.0	50	20.0	68	30.0	86	40.0	104
0.5	33	10.5	51	20.5	69	30.5	87	40.5	105
1.0	34	11.0	52	21.0	70	31.0	88	41.0	106
1.5	35	11.5	53	21.5	71	31.5	89	41.5	107
2.0	36	12.0	54	22.0	72	32.0	90	42.0	108
2.5	36	12.5	54	22.5	72	32.5	90	42.5	108
3.0	37	13.0	55	23.0	73	33.0	91	43.0	109
3.5	38	13.5	56	23.5	74	33.5	92	43.5	110
4.0	39	14.0	57	24.0	75	34.0	93	44.0	111
4.5	40	14.5	58	24.5	76	34.5	94	44.5	112
5.0	41	15.0	59	25.0	77	35.0	95	45.0	113
5.5	42	15.5	60	25.5	78	35.5	96	45.5	114
6.0	43	16.0	61	26.0	79	36.0	97	46.0	115
6.5	44	16.5	62	26.5	80	36.5	98	46.5	116
7.0	45	17.0	63	27.0	81	37.0	99	47.0	117
7.5	45	17.5	63	27.5	81	37.5	99	47.5	117
8.0	46	18.0	64	28.0	82	38.0	100	48.0	118
8.5	47	18.5	65	28.5	83	38.5	101	48.5	119
9.0	48	19.0	66	29.0	84	39.0	102	49.0	120
9.5	49	19.5	67	29.5	85	39.5	103	49.5	121

[1] $^oC = 5/9 (^oF - 32)$ or $^oF = 9/5 (^oC) + 32$.

Table 5. Factors for conversion of chemical constituents in milligrams or micrograms per liter to milliequivalents per liter

Ion	Multiply by	Ion	Multiply by
Ammonia (NH_4^{+1})	0.05544	Nitrate (NO_3^{-1})	0.01613
Calcium (Ca^{+2})	.04990	Phosphate (PO_4^{-3})	.03159
Carbonate (CO_3^{-2})	.03333	Potassium (K^{+1})	.02557
Chloride (Cl^{-2})	.02821	Sodium (Na^{+1})	.04350
Hydrogen (H^{+1})	.99209	Sulfate (SO_4^{-2})	.02082
Magnesium (Mg^{+2})	.08226		

NOTE: Nitrate (N) x 4.427 = Nitrate (NO_3)
Phosphorus (P) x 3.066 = Phosphate (PO_4)

Included in this report are water-quality data recorded at 11 complete-record water-quality monitoring stations--Kansas River at Wamego (see pages 189-196), Kansas River at Topeka (see pages 205-212), Kansas River at DeSoto (see pages 236-243), Cedar Creek at Highway 56 at Olathe (see pages 246-253), Olathe Lake near Olathe (see pages 256-263), Arkansas River near Coolidge (see pages 311-314), Rattlesnake Creek near Zenith (see pages 356-363), Little Arkansas River at Highway 50 near Halstead (see pages 376-383), Little Arkansas River near Sedgwick (see pages 386-393), North Fork Ninnescah River above Cheney Reservoir (see pages 404-411), and Cheney Reservoir near Cheney (see pages 414-421). Complete records of specific conductance, pH, water temperature, dissolved oxygen, and turbidity are published except for the station on the Arkansas River near Coolidge where only specific conductance and water temperature data were collected during the 2002 water year. Maximum, minimum, and mean values for each sensor are published for these stations. The median daily value is published for pH because mean daily pH has been found to bias the results toward lower pH. Data for days when water-quality sensors were fouled by debris or accumulation of deposits are not published. If enough data were available, a mean daily value is estimated. Kansas water-quality standards established by the Kansas Department of Health and Environment have been established for pH (not less than 6.5 and not greater than 9.0) and for dissolved oxygen (not less than 5 mg/L). Table 6 shows days when the median daily pH or daily

mean dissolved oxygen exceeded these standards. A graph of mean daily dissolved oxygen for station 06892450, Olathe Lake near Olathe, is shown in figure 9. Data for water-quality stations, as well as information about surface-water stations, are available on the World Wide Web at:

http://ks.water.usgs.gov/Kansas/rtqw

Table 6. Days when median daily pH and mean daily dissolved oxygen exceeded Kansas water-quality standards at selected streamflow-gaging stations, 2002 water year

[mg/L, milligrams per liter]

Station identification number and name		Median daily pH greater than or equal to 9.0 or less than 6.5 standard units	Mean daily dissolved oxygen less than or equal to 5.0 mg/L
06887500	Kansas River at Wamego	Aug. 15, 20, Sept. 5	none
06889000	Kansas River at Topeka	none	none
06892350	Kansas River at DeSoto	none	none
06892440	Cedar Creek at Highway 56 at Olathe	none	Nov. 3-7
06892450	Olathe Lake near Olathe	none	June 13, 24, July 10, 11, 16-20, 22, Aug. 6, 27-30, Sept. 1, 3-6, 10, 15, 20, 27
07142575	Rattlesnake Creek near Zenith	none	June 12,13
07143672	Little Arkansas River at Highway 50 near Halstead	none	June 13,14,17,18
07144100	Little Arkansas River near Sedgwick	none	June 13
07144780	North Fork Ninnescah River above Cheney Reservoir	Oct. 1-8	none
07144790	Cheney Reservoir near Cheney	none	none

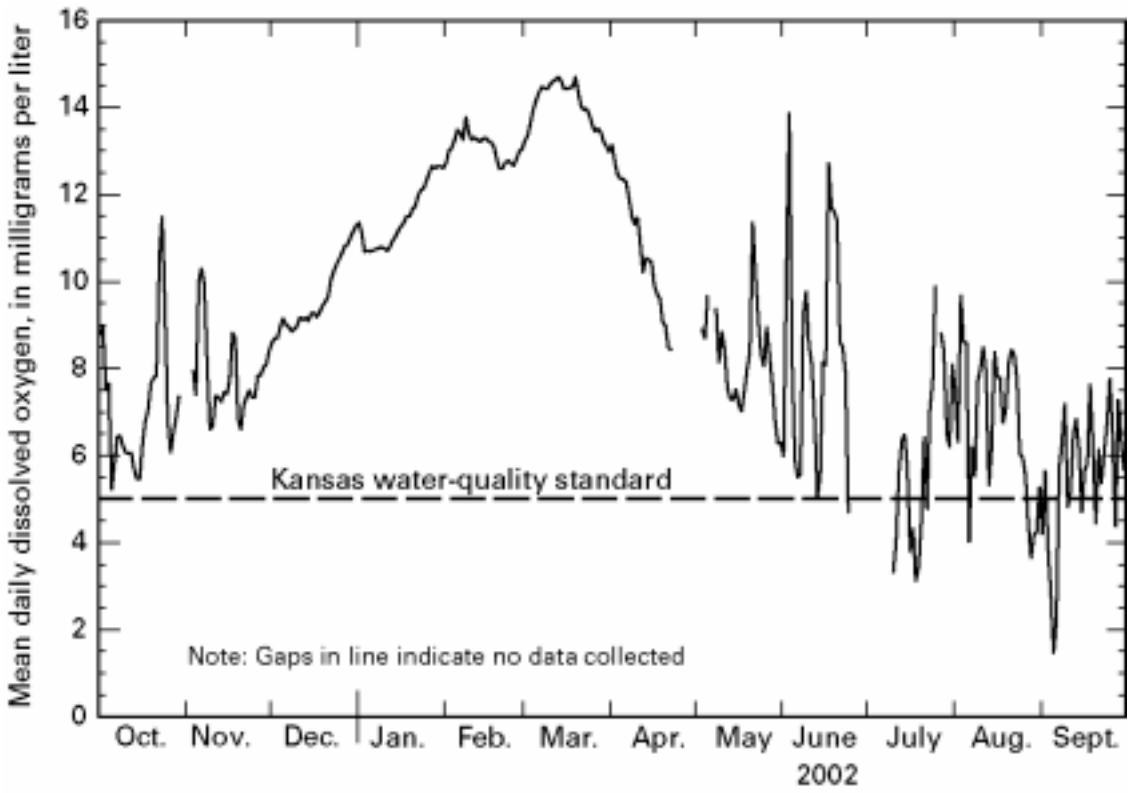


Figure 9. Mean daily dissolved oxygen for Olathe Lake near Olathe, 2002 water year.

Ground Water

Ground-water levels in Harvey County and Douglas County observation wells did not change substantially during the 2002 water year (fig. 10). The ground-water elevation at the Thomas County well (fig. 10) recorded in January 2002 was about 0.10 ft below that recorded in January 2001. By the end of the 2002 water year, the ground-water elevation at the Thomas County well was 137.02 ft, a new record low. Lack of significant precipitation in northwest Kansas during the 2002 water year and prior to the January 2002 measurement and the effects of regional ground-water pumpage, which has been occurring since the 1960s, contributed to the decrease in water level. Ground-water elevations are published for wells in the *Equus* Beds Ground Water Recharge Demonstration Project in Wichita and are shown beginning on page 515. Data for the project, as well as information about selected surface-water stations, are available on the World Wide Web at:

http://ks.water.usgs.gov/Kansas/equus

SPECIAL NETWORKS AND PROGRAMS

Hydrologic Benchmark Network is a network of 50 sites in small drainage basins around the country whose purpose is to provide consistent data on the streamflow representative of undeveloped watersheds nationwide, and to provide analyses on a continuing basis to compare and contrast conditions observed in basins more obviously affected by human activities. At 10 of these sites, water-quality information is being gathered on major ions and nutrients, primarily to assess the effects of acid deposition on stream chemistry. Additional information on the Hydrologic Benchmark Program can be found at http://water.usgs.gov/hbn/.

National Stream-Quality Accounting Network (NASQAN) monitors the water quality of large rivers within the Nation's largest river basins. From 1995 through 1999, a network of approximately 40 stations was operated in the Mississippi, Columbia, Colorado, and Rio Grande Basins. For the period 2000 through 2004, sampling was reduced to a few index stations on the Colorado and Columbia so that a network of 5 stations could be implemented on the Yukon River. Samples are collected with sufficient frequency that the flux of a wide range of constituents can be estimated. The objective of NASQAN is to characterize the water quality of these large rivers by measuring concentration and mass transport of a wide range of dissolved and suspended constituents, including nutrients, major ions, dissolved and sediment-bound heavy metals, common pesticides, and inorganic and organic forms of carbon. This information will be used (1) to describe the long-term trends and changes in concentration and transport of these constituents; (2) to test findings of the National Water-Quality Assessment Program (NAWQA); (3) to characterize processes unique to large-river systems such as storage and re-mobilization of sediments and associated contaminants; and (4) to refine existing estimates of off-continent transport of water, sediment, and chemicals for assessing human effects on the world's oceans and for determining global cycles of carbon, nutrients, and other chemicals. Additional information about the NASQAN Program can be found at http://water.usgs.gov/nasqan/.

The National Atmospheric Deposition Program/National Trends Network (NADP/NTN) provides continuous measurement and assessment of the chemical constituents in precipitation throughout the United States. As the lead Federal agency, the USGS works together with over 100 organizations to provide a long-term, spatial and temporal record of atmospheric deposition generated from a network of 225 precipitation chemistry monitoring sites. This long-term, nationally consistent monitoring program, coupled with ecosystem research, provides critical information toward a national scorecard to evaluate the effectiveness of ongoing and future regulations intended to reduce atmospheric emissions and subsequent impacts to the Nation's land and water resources. Reports and other information on the NADP/NTN Program, as well as all data from the individual sites, can be found at http://bqs.usgs.gov/acidrain/.

The National Water-Quality Assessment (NAWQA) Program of the U.S. Geological Survey is a long-term program with goals to describe the status and trends of water-quality conditions for a large, representative part of the Nation's ground- and surface-water resources; provide an improved understanding of the primary natural and human factors affecting these observed conditions and trends; and provide information that supports development and evaluation of management, regulatory, and monitoring decisions by other agencies.

Assessment activities are being conducted in 59 study units (major watersheds and aquifer systems) that represent a wide range of environmental settings nationwide and that account for a large percentage of the Nation's water use. A wide array of chemical constituents will be measured in ground water, surface water, streambed sediments, and fish tissues. The coordinated application of comparative hydrologic studies at a wide range of spatial and temporal scales will provide information for decision making by water-resources managers and a foundation for aggregation and comparison of findings to address water-quality issues of regional and national interest.

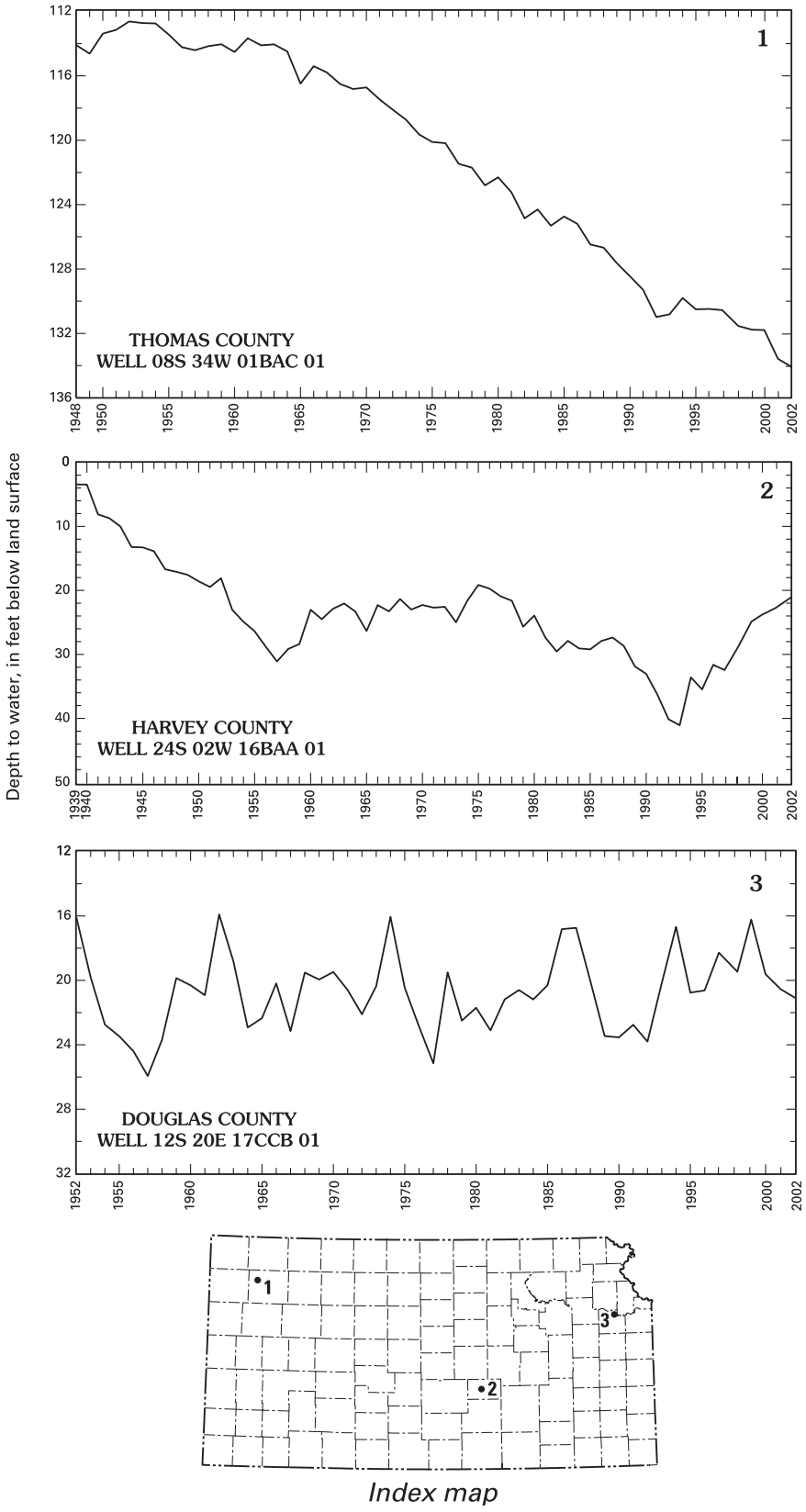


Figure 10. Water levels in selected water-level observation wells.

Communication and coordination between USGS personnel and other local, State, and Federal interests are critical components of the NAWQA Program. Each study unit has a local liaison committee consisting of representatives from key federal, State, and local water resources agencies, Indian nations, and universities in the study unit. Liaison committees typically meet semiannually to discuss their information needs, monitoring plans and progress, desired information products, and opportunities to collaborate efforts among the agencies. Additional information about the NAWQA Program can be found at http://water.usgs.gov/nawqa/.

EXPLANATION OF THE RECORDS

The surface-water and ground-water records published in this report are for the 2002 water year that began October 1, 2001, and ended September 30, 2002. A calendar of the water year is provided on the inside of the front cover. The records contain streamflow data, elevation and content data for lakes or reservoirs, water-quality data for surface- and ground-water and precipitation stations, and ground-water-level data. The locations of the stations where the data were collected are shown in figures 1-4 (see pages 2-5). The following sections of the introductory text are presented to provide users with a more detailed explanation of how the hydrologic data published in this report were collected, analyzed, computed, and arranged for presentation.

Station-Identification Numbers

Each data station in this report, whether stream site or well or precipitation site, is assigned a unique identification number. This number is unique in that it applies specifically to a given station and to no other. The number usually is assigned when a station is first established and is retained for that station indefinitely. The systems used by the U.S. Geological Survey to assign identification numbers for surface-water stations and for ground-water well sites differ, but both are based on geographic location. The “downstream order” system is used for complete-record and partial-record streamflow-gaging stations, and the “latitude-longitude” system is used for wells and, in Kansas, for streamflow-gaging stations where only miscellaneous measurements are made.

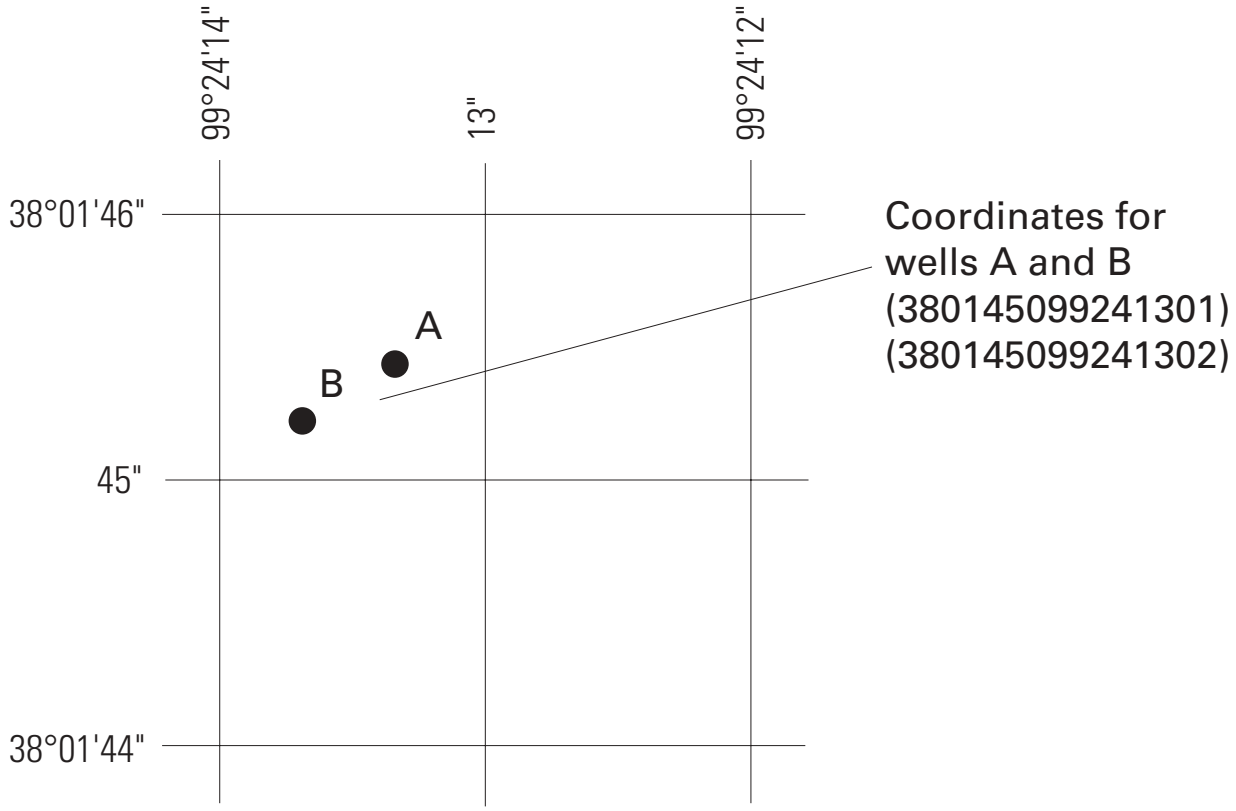
Downstream Order System

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

The station-identification number is assigned according to downstream order. In assigning station numbers, no distinction is made between partial-record streamflow-gaging stations and other stations; therefore, the station number for a partial-record streamflow-gaging station indicates downstream-order position in a list made up of both types of stations. Gaps are left in the series of numbers to allow for new stations that may be established; hence, the numbers are not consecutive. The complete eight-digit number for each station, such as 07144300, which appears just to the left of the station name, includes the two-digit part number “07” plus the six-digit downstream-order number “144300.” The part number designates the major river basin; for example, part “07” is the Lower Mississippi River Basin.

Latitude-Longitude System

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



Records of Elevation and Water Discharge

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

By contrast, partial records are obtained through discrete measurements without using a continuous stage-recording device and pertain only to a few flow characteristics, or perhaps only one. The nature of the partial record is indicated by table titles such as “High-flow partial records,” or “Low-flow partial records.” Records of miscellaneous discharge measurements or of measurements from special studies, such as low-flow seepage studies, may be considered as partial records, but they are presented separately in this report. Locations of all complete-record and partial-record streamflow-gaging stations for which data are given in this report are shown in figures 1 and 3 on pages 2 and 4, respectively.

Data Collection and Computation

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

Continuous records of stage are obtained with analog or electronic recorders that either record stage on paper charts or tapes or store the stage in electronic data loggers at selected intervals. Measurements of discharge

are made with current meters using methods adapted by the Geological Survey as a result of experience accumulated since 1880. These methods are described in standard textbooks, in Water-Supply Paper 2175, and the U.S. Geological Survey Techniques of Water-Resources Investigations (TWRI) Book 3, Chapters A1 through A19, and Book 8, Chapters A2 and B2. The methods are consistent with the American Society for Testing and Materials (ASTM) standards and generally follow the standards of the International Organization for Standards (ISO).

In computing discharge records, results of individual measurements are plotted against the corresponding stages, and stage-discharge relation curves are then constructed. From these curves, rating tables indicating the approximate discharge for any stage within the range of the measurements are prepared. If it is necessary to define extremes of discharge outside the range of the current-meter measurements, the curves are extended using: (1) logarithmic plotting; (2) velocity-area studies; (3) results of indirect measurements of peak discharge, such as slope-area or contracted-opening measurements, and computations of flow-over-dam or weirs; or (4) step-backwater techniques.

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

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

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

For some gaging stations there are periods when no gage-height record is obtained, or the recorded gage height is so faulty that it cannot be used to compute daily discharge or contents. This happens when the recorder stops or otherwise fails to operate properly, intakes or orifice lines are plugged, or for various other reasons. For such periods, the daily discharges are estimated from the recorded range in stage, previous or following record, discharge measurements, weather records, and comparison with other station records from the same or nearby basins. Likewise, daily contents may be estimated from operator's logs, previous or following record, inflow-outflow studies, and other information. Information explaining how estimated daily-discharge values are identified in station records is included in the next two sections, "Data Presentation" (REMARKS paragraph) and "Identifying Estimated Daily Discharge."

Data Presentation

Streamflow data in this report are presented in a format that is considerably different from the format in data reports prior to the 1991 water year. The major changes are that statistical characteristics of discharge now appear in tabular summaries following the water-year data table and less information is provided in the text or station manuscript above the table. These changes represent the results of a program to reformat the annual water-data report to meet current user needs and data preferences.

The records published for each complete-record streamflow-gaging station consist of four parts, the manuscript or station description; the data table of daily mean values of discharge for the current water year with summary data; a tabular statistical summary of monthly mean flow data for a designated period, by water year;

and a summary statistics table that includes statistical data of annual, daily, and instantaneous flows as well as data pertaining to annual runoff, 7-day low-flow minimums, and flow duration.

Station manuscript

The manuscript provides, under various headings, descriptive information, such as location, period of record, historical extremes outside the period of record, record accuracy, and other remarks pertinent to station operation and regulation. The following information, as appropriate, is provided with each complete record of discharge or lake content. Comments that follow clarify information presented under the various headings of the station description.

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

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

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

REVISED RECORDS.--Because of new information, published records occasionally are found to be incorrect, and revisions are printed in later reports. Listed under this heading are all the reports in which revisions have been published for the station and the water years to which the revisions apply. If a revision did not include daily, monthly, or annual figures of discharge, that fact is noted after the year dates as follows: “(M)” means revised, and “(P)” that only peak discharges were revised. If the drainage area has been revised, the report in which the most recently revised figure was first published is given.

GAGE.--The type of gage in current use, the datum of the current gage referred to NGVD of 1929 (see “Definition of Terms”), and a condensed history of the types, locations, and datums of previous gages is given under this heading.

REMARKS.--All periods of estimated daily discharge will be either identified by date in this paragraph of the station description for water-discharge stations or flagged in the daily discharge table. (See next section, “Identifying Estimated Daily Discharge.”) If a REMARKS paragraph is used to identify estimated record, the paragraph will begin with this information presented as the first entry. The paragraph is also used to present information relative to the accuracy of the records, to special methods of computation, and to conditions that affect natural flow at the station. In addition, information may be presented pertaining to mean discharge data for the period of record, to extreme data for the period of record and the current year, and, possibly, to other pertinent items. For reservoir stations, information is given on the dam forming the reservoir, the capacity, outlet works and spillway, and purpose and use of the reservoir.

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

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

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

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

Although rare, occasionally the records of a discontinued gaging station may need revision. Because, for these stations, there would be no current or, possibly, future station manuscript published to document the revision in a “Revised Records” entry, users of data for these stations who obtained the record from previously published data reports may wish to contact the Kansas District office of the Geological Survey (address given on the back of the title page of this report) to determine if the published records were ever revised after the station was discontinued. Of course, if the data for a discontinued station were obtained by computer retrieval, the data would be current, and there would be no need to check because any published revision of data is always accompanied by revision of the corresponding data in computer storage.

Manuscript information for lake or reservoir stations differs from that for streamflow-gaging stations in the nature of the “Remarks” and in the inclusion of a skeleton stage-capacity table when daily contents are given.

Headings for MEAN DISCHARGE, EXTREMES FOR PERIOD OF RECORD, AND EXTREMES FOR CURRENT YEAR have been deleted, and the information contained in these paragraphs, except for the listing of secondary instantaneous peak discharges in the EXTREMES FOR CURRENT YEAR paragraph, is now presented in the tabular summaries following the discharge table or in the REMARKS paragraph, as appropriate. No changes have been made to the data presentations of lake contents.

Data table of daily mean values

The daily table of discharge records for complete-record streamflow-gaging stations gives mean discharge for each day of the water year. In the monthly summary for the table, the line headed “TOTAL” gives the sum of the daily figures for each month, the line headed “MEAN” gives the average flow in cubic feet per second for the month, and the lines headed “MAX” and “MIN” give the maximum and minimum daily mean discharges, respectively, for each month. At some stations, monthly and (or) annual observed discharges are adjusted for reservoir storage or diversion, or diversion data or reservoir contents are given. These figures are identified by a symbol and corresponding footnote.

Statistics of monthly mean data

A tabular summary of the mean (line headed “MEAN”), maximum (line headed “MAX”), and minimum (line headed “MIN”) of monthly mean flows for each month for a designated period is provided below the mean values table. The water years of the first occurrence of the maximum and minimum monthly flows are provided immediately below those figures. The designated period will be expressed as “FOR WATER YEARS ____-____, BY WATER YEAR (WY),” and will list the first and last water years of the range of years selected from the PERIOD OF RECORD paragraph in the station manuscript. It will consist of all of the station record within the specified water years, inclusive, including complete months of record for partial water years, if any, and may coincide with the period of record for the station. The water years for which the statistics are computed will be consecutive, unless a break in the station record is indicated in the manuscript.

Summary statistics

A table titled “SUMMARY STATISTICS” follows the statistics of monthly mean data tabulation. This table consists of four columns, with the first column containing the line headings of the statistics being reported. The table provides a statistical summary of annual, daily, and instantaneous flows, not only for the current water year but also for the previous calendar year and for a designated period, as appropriate. The designated periods selected, “WATER YEARS ____-____,” will consist of all of the station record within the specified water years, inclusive, including complete months of record for partial water years, if any, and may coincide with the period of record for the station. The water years for which the statistics are computed will be consecutive, unless a break in the station record is indicated in the manuscript. All of the calculations for the statistical characteristics designated ANNUAL (see line headings below), except for the “ANNUAL 7-DAY MINIMUM” statistic, are calculated for the designated period using complete water years. The other statistical characteristics may be calculated using partial water years.

The date or water year, as appropriate, of the first occurrence of each statistic reporting extreme values of discharge is provided adjacent to the statistic. Repeated occurrences may be noted in the REMARKS paragraph of the manuscript or in footnotes. Because the designated period may not be the same as the station period of record published in the manuscript, occasionally the dates of occurrence listed for the daily and instantaneous extremes in the designated-period column may not be within the selected water years listed in the heading. When this occurs, it will be noted in the REMARKS paragraph or in footnotes. Selected streamflow-duration-curve statistics and runoff data are also given. Runoff data may be omitted if there is extensive regulation or diversion of flow in the drainage basin.

The following summary statistics data, as appropriate, are provided with each complete record of discharge. Comments to follow clarify information presented under the various line headings of the summary statistics table.

ANNUAL MEAN.--The arithmetic mean of the individual daily mean discharges for the year noted or for the designated period. At some stations the annual mean discharge is adjusted for reservoir storage or diversion. The adjusted figures are identified by a symbol and corresponding footnotes. At least 5 complete years of record must be available before this statistic is published for the designated period.

HIGHEST ANNUAL MEAN.--The maximum annual mean discharge occurring for the designated period.

LOWEST ANNUAL MEAN.--The minimum annual mean discharge occurring for the designated period.

HIGHEST DAILY MEAN.--The maximum daily mean discharge for the year or for the designated period.

LOWEST DAILY MEAN.--The minimum daily mean discharge for the year or for the designated period.

ANNUAL SEVEN-DAY MINIMUM.--The lowest mean discharge for 7 consecutive days for a calendar year or a water year. Note that most low-flow frequency analyses of annual 7-day minimum flows use a climatic year (April 1 to March 31). The date shown in the summary statistics table is the initial date of the 7-day period. (This value should not be confused with the 7-day, 10-year low-flow statistic.)

MAXIMUM PEAK FLOW.--The maximum instantaneous peak discharge occurring for the water year or for the designated period. Occasionally the maximum flow for a year may occur at midnight at the beginning or end of the year, on a recession from or rise toward a higher peak in the adjoining year. In this case, the maximum peak flow is given in the table and the maximum flow may be reported in a footnote or in the REMARKS paragraph in the manuscript.

MAXIMUM PEAK STAGE.--The maximum instantaneous peak stage occurring for the water year or for the designated period. Occasionally the maximum stage for a year may occur at midnight at the beginning or end of the year, on a recession from or rise toward a higher peak in the adjoining year. In this case, the maximum peak stage is given in the table and the maximum stage may be reported in a footnote or in the REMARKS paragraph in the manuscript. If the dates of occurrence of the maximum peak stage and maximum peak flow are different, the REMARKS paragraph in the manuscript or a footnote may be used to provide further information.

INSTANTANEOUS LOW FLOW.--The minimum instantaneous discharge occurring for the water year or for the designated period.

ANNUAL RUNOFF.--Indicates the total quantity of water in runoff for a drainage area for the year. Data reports may use any of the following units of measurement in presenting annual runoff data:

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

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

Inches (INCHES) indicates the depth to which the drainage area would be covered if all of the runoff for a given time period were uniformly distributed on it.

10 PERCENT EXCEEDS.--The discharge that is exceeded by 10 percent of the flow for the designated period.

50 PERCENT EXCEEDS.--The discharge that is exceeded by 50 percent of the flow for the designated period.

90 PERCENT EXCEEDS.--The discharge that is exceeded by 90 percent of the flow for the designated period.

Hydrograph

A hydrograph for the current water year follows the summary statistics table for most stations. Streamflow hydrographs are a semi-log plot of daily mean values in cubic feet per second, with days of no flow being blank. Lake hydrographs are a rectangular plot of elevations, in feet, at 2400 hours.

Data collected at partial-record streamflow-gaging stations follow the information for complete-record streamflow-gaging stations. Data for partial-record streamflow-gaging stations include the annual maximum stage and discharge at the high-flow partial-record streamflow-gaging stations. The tables of partial-record streamflow-gaging stations are followed by a listing of discharge measurements made at stations other than complete-record streamflow-gaging stations or partial-record streamflow-gaging stations. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are all measurements at miscellaneous stations.

Identifying Estimated Daily Discharge

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

Accuracy of the Records

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

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

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

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

Other Records Available

The U.S. Geological Survey collects precipitation data at many of the complete-record streamflow-gaging stations. These data are not published. For information about this precipitation data, contact the Kansas office of the Geological Survey (address given on the back of the title page of this report).

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

Information used in the preparation of the records in this publication, such as discharge-measurement notes, gage-height records, temperature measurements, and rating tables are on file in the Kansas office of the Geological Survey. Also, most of the daily mean discharges are in computer-readable form and have been analyzed statistically. Information on the availability of the unpublished information or on the results of statistical analyses of the published records may be obtained from the Kansas office of the Geological Survey (see address on back of the title page).

Records of Surface-Water Quality

Records of surface-water quality ordinarily are obtained at or near streamflow-gaging stations because interpretation of records of surface-water quality nearly always requires corresponding discharge data. Records of

surface-water quality in this report include continuous records of specific conductance, pH, temperature, dissolved oxygen, and turbidity, and miscellaneous onsite measurements of specific conductance and water temperature. Instruments used for turbidity measurements presented in this report conform to ISO 7027. Locations of all complete-record water-quality stations and suspended-sediment stations for which data are given in this report are shown in figure 2 on page 3. Methods used for operation, maintenance, record computation, and reporting are described by Wagner and others (2000) and are available on the World Wide Web at http://water.usgs.gov/pubs/wri/wri004252/

Classification of Records

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

A careful distinction needs to be made between “complete records” as used in this report and “continuous recordings,” which refers to a continuous graph or a series of discrete values recorded at short intervals in a data logger. Some records of water quality, such as specific conductance, pH, water temperature, dissolved oxygen, and turbidity are obtained through continuous recordings; and the miscellaneous water-quality samples are collected on about a 6-week schedule. Locations of stations for which water-quality data are given in this report are shown in figure 2 and are available on the World Wide Web at http://ks.water.usgs.gov/nwis and http://ks.water.usgs.gov/Kansas/rtqw

Accuracy of the Records

For each record, one accuracy rating is applied for measured physical properties at complete-record stations on a scale ranging from poor to excellent. The accuracy rating is based on data values recorded before any shifts or corrections are made, as described by Wagner and others (2000). Additional consideration also is given to the amount of publishable record and to the amount of data that have been corrected or shifted.

Table 7. Ratings for complete water-quality records

[≤, less than or equal to; ±, plus or minus value shown; °C, degree Celsius; > greater than; %, percent; mg/L, milligram per liter; unit, standard pH unit]

Measured physical property	Ratings			
	Excellent	Good	Fair	Poor
Specific conductance	≤ ± 3%	> ± 3 to 10%	> ± 10 to 15%	> ± 15%
pH	≤ ± 0.2 unit	> ± 0.2 to 0.5 unit	> ± 0.5 to 0.8 unit	> ± 0.8 unit
Water temperature	≤ ± 0.2 °C	> ± 0.2 to 0.5 °C	> ± 0.5 to 0.8 °C	> ± 0.8 °C
Dissolved oxygen	≤ ± 0.3 mg/L	> ± 0.3 to 0.5 mg/L	> ± 0.5 to 0.8 mg/L	> ± 0.8 mg/L
Turbidity	≤ ± 5%	> ± 5 to 10%	> ± 10 to 15%	> ± 15%

Arrangement of Records

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

Onsite Measurements and Sample Collection

In obtaining water-quality data, a major concern is assuring that the data obtained represent the in-situ quality of the water. To assure this, certain measurements, such as pH, water temperature, and dissolved oxygen, need to be made onsite when the samples are collected. To assure that measurements made in the laboratory also represent the in-situ water, carefully prescribed procedures need to be followed in collecting the samples, in treating the samples to prevent changes in quality pending analysis, and in shipping the samples to the laboratory. Procedures for onsite measurements and for collecting, treating, and shipping samples are given in TWRI Book 1, Chapter D2; Book 3, Chapters A1, A2, and A4; and Book 9, Chapters A1-A9.

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

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

Water Temperature

Water temperatures are measured at most of the water-quality stations. In addition, water temperatures are measured at the time of discharge measurements for streamflow-gaging stations. Conversions of degrees Celsius to degrees Fahrenheit are shown in table 4 (see page 12). Water temperatures measured at the time of water-discharge measurements are on file in the Kansas office of the Geological Survey. Large streams have small diurnal temperature changes; shallow streams may have a daily range of several degrees, and water temperatures may follow closely the changes in air temperature. Some streams may be affected by waste-heat discharges.

Sediment

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

Suspended-sediment samples were collected periodically at many verticals in the stream cross section. Although data collected periodically may represent conditions only at the time of observation, such data are useful in establishing seasonal relations between quality and streamflow and in predicting long-term sediment-discharge characteristics of the stream. Methods used in the computation of sediment records are described in TWRI Book 3, Chapters C1 and C3. These methods are consistent with ASTM standards and generally follow ISO standards.

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

Laboratory Measurements

Daily samples for specific conductance, pH, temperature, dissolved oxygen, and turbidity are analyzed locally. All other samples are analyzed in the Geological Survey laboratories in Denver, Colorado, or the sediment laboratory in Iowa City, Iowa. Methods used to analyze sediment samples and to compute sediment records are described in TWRI, Book 5, Chapter C1. Methods used by the Geological Survey laboratories are given in TWRI, Book 1, Chapter D2; Book 3, Chapter C2; and Book 5, Chapters A1, A3, A4, and A5. These methods are consistent with ASTM standards and generally follow ISO standards.

Data Presentation

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

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

LOCATION.--See "Data Presentation" under “Records of Elevation and Water Discharge”; same comments apply.

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

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

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

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

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

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

REVISIONS.--If errors in published water-quality records are discovered after publication, appropriate updates are made in the U.S. Geological Survey’s distributed data system, NWIS, and subsequently to its web-based national data system, NWISweb [http://water.usgs.gov/nwis/nwis]. Because the usual volume of updates makes it impractical to document individual changes in the State data-report series or elsewhere, potential users of U.S. Geological Survey water-quality data are encouraged to obtain all required data from NWIS or NWISweb to ensure the most recent updates. Updates to NWISweb are currently made on an annual basis.

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

Remark Codes

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

PRINTED OUTPUT	REMARK
E	Estimated value.
>	Actual value is known to be greater than the value shown.
<	Actual value is known to be less than the value shown.
M	Presence of material verified but not quantified.

NOTE.--Sample handling procedures at all National Trends Network stations were changed substantially on January 11, 1994, to reduce contamination from the sample shipping container. The data for samples before and after that date are different and not directly comparable. A tabular summary of the differences, based on a special intercomparison study, is available from the NADP Program Office, Illinois State Water Survey, 2204 Griffith Drive, Champaign, IL 61820-7495 (217-333-7873).

Records of Ground-Water Levels

Water-level data from a basic network of observation wells in the *Equus* Beds aquifer in Harvey and Sedgwick Counties are shown in this report. These data were collected for the *Equus* Beds Ground-Water Recharge Demonstration Project. Also shown in this report are water-level data for wells in Douglas, Harvey, Stafford, and Thomas Counties collected for the National Water Conditions report. Locations of ground-water wells for which data are given in this report are shown in figure 4 on page 5.

Data Collection and Computation

Each well is identified by means of (1) a 15-digit number that is based on latitude and longitude, and (2) a local number that is provided for local needs. See figure on page 17.

Water-level records are obtained from either direct measurements with a steel tape or from a water-stage recorder. Measurements of water levels are made in many types of wells under varying conditions, but the methods of measurement are standardized to the extent possible. The equipment and measuring techniques used at each observation well ensure that measurements are of consistent accuracy and reliability.

Tables of water-level data are shown beginning on page 513. Information describing the well location and physical characteristics is shown in the descriptive table headings above each data table.

The water-level measurements shown on page 513 are given in feet with reference to land-surface datum. Land-surface datum is a datum plane that is approximately at land surface at each well. If known, the elevation of the land-surface datum is given in the well description. The height of the measuring point above or below land-surface datum is given in each well description. Water levels in wells equipped with recording gages are reported every 5 days and at the end of each month or daily 1200-hour readings are shown in table form. The water-level measurements shown on pages 514-524 are given in sea-level elevations.

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

Data Presentation

Each well record consists of two parts, the well description and the table of water levels observed during the water year. The description of the well is presented either by descriptive table headings or by a narrative statement. A table of water levels follows the well description. Water levels are reported in feet below land-surface datum, and all taped measurements of water levels are listed. For wells equipped with recorders, only abbreviated tables are published--generally, only water levels for every fifth day at 1200 hours and at the end of the month. The highest and lowest water levels of the water year and their dates of occurrence are shown on a line below the abbreviated table.

ACCESS TO USGS WATER DATA

The U.S. Geological Survey provides near real-time stage and discharge data for many of the gaging stations equipped with the necessary telemetry, historic daily-mean and peak-flow discharge data, for most current or discontinued gaging stations as well as water-quality and ground-water data through the World Wide Web (WWW). These data may be accessed at:

http://ks.water.usgs.gov/nwis

Data can be provided in various machine-readable formats. Information about the availability of specific types of data or products, and user charges, can be obtained locally from the Kansas office of the Geological Survey (See address on the back of the title page).

Republican River at Concordia (station 06856000, operated by Kansas office of U.S. Geological Survey),
D.A. Hargadine measuring record low streamflow on September 12, 2002, 8.18 ft^3/s.
Photograph courtesy of B.L. Loving.

DEFINITION OF TERMS

Specialized technical terms related to streamflow, water-quality, and other hydrologic data, as used in this report, are defined below. Terms such as algae, water level, precipitation are used in their common everyday meanings, definitions of which are given in standard dictionaries. Not all terms defined in this alphabetical list apply to every State. See also table for converting inch/pound units to International System (SI) Units on the inside of the back cover.

Acid neutralizing capacity (ANC) is the equivalent sum of all bases or base-producing materials, solutes plus particulates, in an aqueous system that can be titrated with acid to an equivalence point. This term designates titration of an “unfiltered” sample (formerly reported as alkalinity).

Acre-foot (AC-FT, acre-ft) is a unit of volume, commonly used to measure quantities of water used or stored, equivalent to the volume of water required to cover 1 acre to a depth of 1 foot and equivalent to 43,560 cubic feet, 325,851 gallons, or 1,233 cubic meters. (See also “Annual runoff”)

Adenosine triphosphate (ATP) is an organic, phosphate-rich compound important in the transfer of energy in organisms. Its central role in living cells makes ATP an excellent indicator of the presence of living material in water. A measurement of ATP therefore provides a sensitive and rapid estimate of biomass. ATP is reported in micrograms per liter.

Algal growth potential (AGP) is the maximum algal dry weight biomass that can be produced in a natural water sample under standardized laboratory conditions. The growth potential is the algal biomass present at stationary phase and is expressed as milligrams dry weight of algae produced per liter of sample. (See also “Biomass” and “Dry weight”)

Alkalinity is the capacity of solutes in an aqueous system to neutralize acid. This term designates titration of a “filtered” sample.

Annual runoff is the total quantity of water that is discharged (“runs off”) from a drainage basin in a year. Data reports may present annual runoff data as volumes in acre-feet, as discharges per unit of drainage area in cubic feet per second per square mile, or as depths of water on the drainage basin in inches.

Annual 7-day minimum is the lowest mean value for any 7-consecutive-day period in a year. Annual 7-day minimum values are reported herein for the calendar year and the water year (October 1 through September 30). Most low-flow frequency analyses use a climatic year (April 1-March 31), which tends to prevent the low-flow period from being artificially split between adjacent years. The date shown in the summary statistics table is the initial date of the 7-day period. (This value should not be confused with the 7-day, 10-year low-flow statistic.)

Aroclor is the registered trademark for a group of poly-chlorinated biphenyls that were manufactured by the Monsanto Company prior to 1976. Aroclors are assigned specific 4-digit reference numbers dependent upon molecular type and degree of substitution of the biphenyl ring hydrogen atoms by chlorine atoms. The first two digits of a numbered aroclor represent the molecular type, and the last two digits represent the percentage weight of the hydrogen-substituted chlorine.

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

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

Aspect is the direction toward which a slope faces with respect to the compass.

Bacteria are microscopic unicellular organisms, typically spherical, rodlike, or spiral and threadlike in shape, often clumped into colonies. Some bacteria cause disease, whereas others perform an essential role in

nature in the recycling of materials; for example, by decomposing organic matter into a form available for reuse by plants.

Bankfull stage, as used in this report, is the stage at which a stream first overflows its natural banks formed by floods with 1- to 3-year recurrence intervals.

Base discharge (for peak discharge) is a discharge value, determined for selected stations, above which peak discharge data are published. The base discharge at each station is selected so that an average of about three peak flows per year will be published. (See also “Peak flow”)

Base flow is sustained flow of a stream in the absence of direct runoff. It includes natural and human-induced streamflows. Natural base flow is sustained largely by ground-water discharge.

Bedload is material in transport that is supported primarily by the streambed. In this report, bedload is considered to consist of particles in transit from the bed to an elevation equal to the top of the bedload sampler nozzle (ranging from 0.25 to 0.5 foot) that are retained in the bedload sampler. A sample collected with a pressure-differential bedload sampler also may contain a component of the suspended load.

Bedload discharge (tons per day) is the rate of sediment moving as bedload, reported as dry weight, that passes through a cross section in a given time. NOTE: Bedload discharge values in this report may include a component of the suspended-sediment discharge. A correction may be necessary when computing the total sediment discharge by summing the bedload discharge and the suspended-sediment discharge. (See also “Bedload,” “Dry weight,” “Sediment,” and “Suspended-sediment discharge”)

Bed material is the sediment mixture of which a stream-bed, lake, pond, reservoir, or estuary bottom is composed. (See also “Bedload” and “Sediment”)

Benthic organisms are the group of organisms inhabiting the bottom of an aquatic environment. They include a number of types of organisms, such as bacteria, fungi, insect larvae and nymphs, snails, clams, and crayfish. They are useful as indicators of water quality.

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

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

Biomass pigment ratio is an indicator of the total proportion of periphyton that are autotrophic (plants). This is also called the Autotrophic Index.

Blue-green algae (*Cyanophyta*) are a group of phytoplankton organisms having a blue pigment, in addition to the green pigment called chlorophyll. Blue-green algae often cause nuisance conditions in water. Concentrations are expressed as a number of cells per milliliter (cells/mL) of sample. (See also “Phytoplankton”)

Bottom material (See “Bed material”)

Bulk electrical conductivity is the combined electrical conductivity of all material within a doughnut-shaped volume surrounding an induction probe. Bulk conductivity is affected by different physical and chemical properties of the material including the dissolved solids content of the pore water and lithology and porosity of the rock.

Cells/volume refers to the number of cells of any organism that is counted by using a microscope and grid or counting cell. Many planktonic organisms are multicelled and are counted according to the number of contained cells per sample volume, and are generally reported as cells or units per milliliter (mL) or liter (L).

Cells volume (biovolume) determination is one of several common methods used to estimate biomass of algae in aquatic systems. Cell members of algae are frequently used in aquatic surveys as an indicator of algal production. However, cell numbers alone cannot represent true biomass because of considerable cell-size variation among the algal species. Cell volume (μm^3) is determined by obtaining critical cell measurements or cell dimensions (for example, length, width, height, or radius) for 20 to 50 cells of each important species to obtain an average biovolume per cell. Cells are categorized according to the correspondence of

their cellular shape to the nearest geometric solid or combinations of simple solids (for example, spheres, cones, or cylinders). Representative formulae used to compute biovolume are as follows:

$$\text{sphere } 4/3\ \pi r^3 \quad \text{cone } 1/3\ \pi r^2 h \quad \text{cylinder } \pi r^2 h.$$

pi (π) is the ratio of the circumference to the diameter of a circle; pi = 3.14159….

From cell volume, total algal biomass expressed as biovolume (μm^3/mL) is thus determined by multiplying the number of cells of a given species by its average cell volume and then summing these volumes for all species.

Cfs-day (See "Cubic foot per second-day")

Channel bars, as used in this report, are the lowest prominent geomorphic features higher than the channel bed.

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

Clostridium perfringens *(C. perfringens)* is a spore-forming bacterium that is common in the feces of human and other warmblooded animals. Clostridial spores are being used experimentally as an indicator of past fecal contamination and presence of microorganisms that are resistant to disinfection and environmental stresses. (See also "Bacteria")

Coliphages are viruses that infect and replicate in coliform bacteria. They are indicative of sewage contamination of water and of the survival and transport of viruses in the environment.

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

Confined aquifer is a term used to describe an aquifer containing water between two relatively impermeable bound-aries. The water level in a well tapping a confined aquifer stands above the top of the confined aquifer and can be higher or lower than the water table that may be present in the material above it. In some cases, the water level can rise above the ground surface, yielding a flowing well.

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

Continuous-record station is a site where data are collected with sufficient frequency to define daily mean values and variations within a day.

Control designates a feature in the channel that physically affects the water-surface elevation and thereby determines the stage-discharge relation at the gage. This feature may be a constriction of the channel, a bedrock outcrop, a gravel bar, an artificial structure, or a uniform cross section over a long reach of the channel.

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

Cubic foot per second (CFS, ft^3/s) is the rate of discharge representing a volume of 1 cubic foot passing a given point in 1 second. It is equivalent to approximately 7.48 gallons per second or approximately 449 gallons per minute, or 0.02832 cubic meters per second. The term "second-foot" sometimes is used synonymously with "cubic foot per second" but is now obsolete.

Cubic foot per second-day (CFS-DAY, Cfs-day, [$(ft^3/s)/d$]) is the volume of water represented by a flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, 1.98347 acre-feet, 646,317 gallons, or 2,446.6 cubic meters. The daily mean discharges reported in the daily value data tables are numerically equal to the daily volumes in cfs-days, and the totals also represent volumes in cfs-days.

Cubic foot per second per square mile [CFSM, $(ft^3/s)/mi^2$] is the average number of cubic feet of water flowing per second from each square mile of area drained, assuming the runoff is distributed uniformly in time and area. (See also "Annual runoff")

Daily mean suspended-sediment concentration is the time-weighted concentration of suspended sediment passing a stream cross section during a 24-hour day. (See also “Sediment” and “Suspended-sediment concentration”)

Daily-record station is a site where data are collected with sufficient frequency to develop a record of one or more data values per day. The frequency of data collection can range from continuous recording to periodic sample or data collection on a daily or near-daily basis.

Data collection platform (DCP) is an electronic instrument that collects, processes, and stores data from various sensors, and transmits the data by satellite data relay, line-of-sight radio, and/or landline telemetry.

Data logger is a microprocessor-based data acquisition system designed specifically to acquire, process, and store data. Data are usually downloaded from onsite data loggers for entry into office data systems.

Datum is a surface or point relative to which measurements of height and/or horizontal position are reported. A vertical datum is a horizontal surface used as the zero point for measurements of gage height, stage, or elevation; a horizontal datum is a reference for positions given in terms of latitude-longitude, State Plane coordinates, or UTM coordinates. (See also “Gage datum,” “Land-surface datum,” “National Geodetic Vertical Datum of 1929,” and “North American Vertical Datum of 1988”)

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

Diel is of or pertaining to a 24-hour period of time; a regular daily cycle.

Discharge, or **flow**, is the rate that matter passes through a cross section of a stream channel or other water body per unit of time. The term commonly refers to the volume of water (including, unless otherwise stated, any sediment or other constituents suspended or dissolved in the water) that passes a cross section in a stream channel, canal, pipeline, etc., within a given period of time (cubic feet per second). Discharge also can apply to the rate at which constituents, such as suspended sediment, bedload, and dissolved or suspended chemicals, pass through a cross section, in which cases the quantity is expressed as the mass of constituent that passes the cross section in a given period of time (tons per day).

Dissolved refers to that material in a representative water sample that passes through a 0.45-micrometer membrane filter. This is a convenient operational definition used by Federal and State agencies that collect water-quality data. Determinations of “dissolved” constituent concentrations are made on sample water that has been filtered.

Dissolved oxygen (DO) is the molecular oxygen (oxygen gas) dissolved in water. The concentration in water is a function of atmospheric pressure, temperature, and dissolved-solids concentration of the water. The ability of water to retain oxygen decreases with increasing temperature or dissolved-solids concentration. Photosynthesis and respiration by plants commonly cause diurnal variations in dissolved-oxygen concentration in water from some streams.

Dissolved-solids concentration in water is the quantity of dissolved material in a sample of water. It is determined either analytically by the “residue-on-evaporation” method, or mathematically by totaling the concentrations of individual constituents reported in a comprehensive chemical analysis. During the analytical determination, the bicarbonate (generally a major dissolved component of water) is converted to carbonate. In the mathematical calculation, the bicarbonate value, in milligrams per liter, is multiplied by 0.4926 to convert it to carbonate. Alternatively, alkalinity concentration (as mg/L $CaCO_3$) can be converted to carbonate concentration by multiplying by 0.60.

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

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

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

Drainage area of a stream at a specific location is that area upstream from the location, measured in a horizontal plane, that has a common outlet at the site for its surface runoff from precipitation that normally drains by gravity into a stream. Drainage areas given herein include all closed basins, or noncontributing areas, within the area unless otherwise specified.

Drainage basin is a part of the Earth's surface that contains a drainage system with a common outlet for its surface runoff. (See "Drainage area")

Dry mass refers to the mass of residue present after drying in an oven at 105 °C, until the mass remains unchanged. This mass represents the total organic matter, ash and sediment, in the sample. Dry-mass values are expressed in the same units as ash mass. (See also "Ash mass," "Biomass," and "Wet mass")

Dry weight refers to the weight of animal tissue after it has been dried in an oven at 65 ˚C until a constant weight is achieved. Dry weight represents total organic and inorganic matter in the tissue. (See also "Wet weight")

Embeddedness is the degree to which gravel-sized and larger particles are surrounded or enclosed by finer-sized particles. (See also "Substrate embeddedness class")

Enterococcus bacteria are commonly found in the feces of humans and other warmblooded animals. Although some strains are ubiquitous and not related to fecal pollution, the presence of enterococci in water is an indication of fecal pollution and the possible presence of enteric pathogens. Enterococcus bacteria are those bacteria that produce pink to red colonies with black or reddish-brown precipitate after incubation at 41 °C on mE agar (nutrient medium for bacterial growth) and subsequent transfer to EIA medium. Enterococci include *Streptococcus feacalis, Streptococcus feacium, Streptococcus avium,* and their variants. (See also "Bacteria")

EPT Index is the total number of distinct taxa within the insect orders Ephemeroptera, Plecoptera, and Trichoptera. This index summarizes the taxa richness within the aquatic insects that are generally considered pollution sensitive; the index usually decreases with pollution.

Escherichia coli *(E. coli)* are bacteria present in the intestine and feces of warmblooded animals. *E. coli* are a member species of the fecal coliform group of indicator bacteria. In the laboratory, they are defined as those bacteria that produce yellow or yellow-brown colonies on a filter pad saturated with urea substrate broth after primary culturing for 22 to 24 hours at 44.5 ˚C on mTEC medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample. (See also "Bacteria")

Estimated (E) concentration value is reported when an analyte is detected and all criteria for a positive result are met. If the concentration is less than the method detection limit (MDL), an 'E' code will be reported with the value. If the analyte is qualitatively identified as present, but the quantitative determination is substantially more uncertain, the National Water Quality Laboratory will identify the result with an 'E' code even though the measured value is greater than the MDL. A value reported with an 'E' code should be used with caution. When no analyte is detected in a sample, the default reporting value is the MDL preceded by a less than sign (<).

Euglenoids (*Euglenophyta*) are a group of algae that are usually free-swimming and rarely creeping. They have the ability to grow either photosynthetically in the light or heterotrophically in the dark. (See also "Phytoplankton")

Extractable organic halides (EOX) are organic compounds that contain halogen atoms such as chlorine. These organic compounds are semivolatile and extractable by ethyl acetate from air-dried streambed sediment. The ethyl acetate extract is combusted, and the concentration is determined by microcoulometric determination of the halides formed. The concentration is reported as micrograms of chlorine per gram of the dry weight of the streambed sediment.

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

Fecal streptococcal bacteria are present in the intestines of warmblooded animals and are ubiquitous in the environment. They are characterized as gram-positive, cocci bacteria that are capable of growth in brain-heart infusion broth. In the laboratory, they are defined as all the organisms that produce red or pink colonies within 48 hours at 35 °C plus or minus 1.0 °C on KF-streptococcus medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample. (See also “Bacteria”)

Fire algae (*Pyrrhophyta*) are free-swimming unicells characterized by a red pigment spot. (See also “Phytoplankton”)

Flow-duration percentiles are values on a scale of 100 that indicate the percentage of time for which a flow is not exceeded. For example, the 90th percentile of river flow is greater than or equal to 90 percent of all recorded flow rates.

Gage datum is a horizontal surface used as a zero point for measurement of stage or gage height. This surface usually is located slightly below the lowest point of the stream bottom such that the gage height is usually slightly greater than the maximum depth of water. Because the gage datum itself is not an actual physical object, the datum usually is defined by specifying the elevations of permanent reference marks such as bridge abutments and survey monuments, and the gage is set to agree with the reference marks. Gage datum is a local datum that is maintained independently of any national geodetic datum. However, if the elevation of the gage datum relative to the national datum (North American Vertical Datum of 1988 or National Geodetic Vertical Datum of 1929) has been determined, then the gage readings can be converted to elevations above the national datum by adding the elevation of the gage datum to the gage reading.

Gage height (G.H.) is the water-surface elevation, in feet above the gage datum. If the water surface is below the gage datum, the gage height is negative. Gage height often is used interchangeably with the more general term “stage,” although gage height is more appropriate when used in reference to a reading on a gage.

Gage values are values that are recorded, transmitted, and/or computed from a gaging station. Gage values typically are collected at 5-, 15-, or 30-minute intervals.

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

Gas chromatography/flame ionization detector (GC/FID) is a laboratory analytical method used as a screening technique for semivolatile organic compounds that are extractable from water in methylene chloride.

Geomorphic channel units, as used in this report, are fluvial geomorphic descriptors of channel shape and stream velocity. Pools, riffles, and runs are types of geomorphic channel units considered for National Water-Quality Assessment (NAWQA) Program habitat sampling.

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

Habitat, as used in this report, includes all nonliving (physical) aspects of the aquatic ecosystem, although living components like aquatic macrophytes and riparian vegetation also are usually included. Measurements of habitat are typically made over a wider geographic scale than are measurements of species distribution.

Habitat quality index is the qualitative description (level 1) of instream habitat and riparian conditions surrounding the reach sampled. Scores range from 0 to 100 percent with higher scores indicative of desirable habitat conditions for aquatic life. Index only applicable to wadable streams.

Hardness of water is a physical-chemical characteristic that commonly is recognized by the increased quantity of soap required to produce lather. It is computed as the sum of equivalents of polyvalent cations (primarily calcium and magnesium) and is expressed as the equivalent concentration of calcium carbonate ($CaCO_3$).

High tide is the maximum height reached by each rising tide. The high-high and low-high tides are the higher and lower of the two high tides, respectively, of each tidal day. *See NOAA web site: http://www.co-ops.nos.noaa.gov/tideglos.html*

Hilsenhoff's Biotic Index (HBI) is an indicator of organic pollution that uses tolerance values to weight taxa abundances; usually increases with pollution. It is calculated as follows:

$$HBI = sum\frac{(n)(a)}{N} ,$$

where *n* is the number of individuals of each taxon, *a* is the tolerance value of each taxon, and *N* is the total number of organisms in the sample.

Horizontal datum (See "Datum")

Hydrologic index stations referred to in this report are continuous-record gaging stations that have been selected as representative of streamflow patterns for their respective regions. Station locations are shown on index maps.

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

Inch (IN., in.), as used in this report, refers to the depth to which the drainage area would be covered with water if all of the runoff for a given time period were uniformly distributed on it. (See also "Annual runoff")

Instantaneous discharge is the discharge at a particular instant of time. (See also "Discharge")

Island, as used in this report, is a mid-channel bar that has permanent woody vegetation, is flooded once a year on average, and remains stable except during large flood events.

Laboratory reporting level (LRL) is generally equal to twice the yearly determined long-term method detection level (LT-MDL). The LRL controls false negative error. The probability of falsely reporting a nondetection for a sample that contained an analyte at a concentration equal to or greater than the LRL is predicted to be less than or equal to 1 percent. The value of the LRL will be reported with a "less than" (<) remark code for samples in which the analyte was not detected. The National Water Quality Laboratory (NWQL) collects quality-control data from selected analytical methods on a continuing basis to determine LT-MDLs and to establish LRLs. These values are reevaluated annually on the basis of the most current quality-control data and, therefore, may change. [Note: In several previous NWQL documents (NWQL Technical Memorandum 98.07, 1998), the LRL was called the nondetection value or NDV—a term that is no longer used.]

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

Latent heat flux (often used interchangeably with latent heat-flux density) is the amount of heat energy that converts water from liquid to vapor (evaporation) or from vapor to liquid (condensation) across a specified cross-sectional area per unit time. Usually expressed in watts per square meter.

Light-attenuation coefficient, also known as the extinction coefficient, is a measure of water clarity. Light is attenuated according to the Lambert-Beer equation:

$$I = I_o e^{-\lambda L} ,$$

where I_o is the source light intensity, I is the light intensity at length L (in meters) from the source, λ is the light-attenuation coefficient, and e is the base of the natural logarithm. The light-attenuation coefficient is defined as

$$\lambda = -\frac{1}{L}\log_e \frac{I}{I_o} .$$

Lipid is any one of a family of compounds that are insoluble in water and that make up one of the principal components of living cells. Lipids include fats, oils, waxes, and steroids. Many environmental contaminants such as organochlorine pesticides are lipophilic.

Long-term method detection level (LT-MDL) is a detection level derived by determining the standard deviation of a minimum of 24 method detection limit (MDL) spike sample measurements over an extended period of time. LT-MDL data are collected on a continuous basis to assess year-to-year variations in the LT-MDL. The LT-MDL controls false positive error. The chance of falsely reporting a concentration at or greater than the LT-MDL for a sample that did not contain the analyte is predicted to be less than or equal to 1 percent.

Low tide is the minimum height reached by each falling tide. The high-low and low-low tides are the higher and lower of the two low tides, respectively, of each tidal day. *See NOAA web site: http://www.co-ops.nos.noaa.gov/tideglos.html*

Macrophytes are the macroscopic plants in the aquatic environment. The most common macrophytes are the rooted vascular plants that usually are arranged in zones in aquatic ecosystems and restricted in the area by the extent of illumination through the water and sediment deposition along the shoreline.

Mean concentration of suspended sediment (Daily mean suspended-sediment concentration) is the time-weighted concentration of suspended sediment passing a stream cross section during a given time period. (See also “Daily mean suspended-sediment concentration” and “Suspended-sediment concentration”)

Mean discharge (MEAN) is the arithmetic mean of individual daily mean discharges during a specific period. (See also “Discharge”)

Mean high or **low tide** is the average of all high or low tides, respectively, over a specific period.

Mean sea level is a local tidal datum. It is the arithmetic mean of hourly heights observed over the National Tidal Datum Epoch. Shorter series are specified in the name; for example, monthly mean sea level and yearly mean sea level. In order that they may be recovered when needed, such datums are referenced to fixed points known as benchmarks. (See also “Datum”)

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

Membrane filter is a thin microporous material of specific pore size used to filter bacteria, algae, and other very small particles from water.

Metamorphic stage refers to the stage of development that an organism exhibits during its transformation from an immature form to an adult form. This developmental process exists for most insects, and the degree of difference from the immature stage to the adult form varies from relatively slight to pronounced, with many intermediates. Examples of metamorphic stages of insects are egg-larva-adult or egg-nymph-adult.

Method detection limit (MDL) is the minimum concentration of a substance that can be measured and reported with 99-percent confidence that the analyte concentration is greater than zero. It is determined from the analysis of a sample in a given matrix containing the analyte. At the MDL concentration, the risk of a false positive is predicted to be less than or equal to 1 percent.

Methylene blue active substances (MBAS) are apparent detergents. The determination depends on the formation of a blue color when methylene blue dye reacts with synthetic anionic detergent compounds.

Micrograms per gram (UG/G, µg/g) is a unit expressing the concentration of a chemical constituent as the mass (micrograms) of the element per unit mass (gram) of material analyzed.

Micrograms per kilogram (UG/KG, µg/kg) is a unit expressing the concentration of a chemical constituent as the mass (micrograms) of the constituent per unit mass (kilogram) of the material analyzed. One microgram per kilogram is equivalent to 1 part per billion.

Micrograms per liter (UG/L, µg/L) is a unit expressing the concentration of chemical constituents in water as mass (micrograms) of constituent per unit volume (liter) of water. One thousand micrograms per liter is equivalent to 1 milligram per liter. One microgram per liter is equivalent to 1 part per billion.

Microsiemens per centimeter (US/CM, µS/cm) is a unit expressing the amount of electrical conductivity of a solution as measured between opposite faces of a centimeter cube of solution at a specified temperature. Siemens is the International System of Units nomenclature. It is synonymous with mhos and is the reciprocal of resistance in ohms.

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

Minimum reporting level (MRL) is the smallest measured concentration of a constituent that may be reliably reported by using a given analytical method.

Miscellaneous site, miscellaneous station, or miscellaneous sampling site is a site where streamflow, sediment, and/or water-quality data or water-quality or sediment samples are collected once, or more often on a random or discontinuous basis to provide better areal coverage for defining hydrologic and water-quality conditions over a broad area in a river basin.

Most probable number (MPN) is an index of the number of coliform bacteria that, more probably than any other number, would give the results shown by the laboratory examination; it is not an actual enumeration. MPN is determined from the distribution of gas-positive cultures among multiple inoculated tubes.

Multiple-plate samplers are artificial substrates of known surface area used for obtaining benthic invertebrate samples. They consist of a series of spaced, hardboard plates on an eyebolt.

Nanograms per liter (NG/L, ng/L) is a unit expressing the concentration of chemical constituents in solution as mass (nanograms) of solute per unit volume (liter) of water. One million nanograms per liter is equivalent to 1 milligram per liter.

National Geodetic Vertical Datum of 1929 (NGVD of 1929) is a fixed reference adopted as a standard geodetic datum for elevations determined by leveling. It was formerly called “Sea Level Datum of 1929” or “mean sea level.” Although the datum was derived from the mean sea level at 26 tide stations**,** it does not necessarily represent local mean sea level at any particular place. *See NOAA web site: http://www.ngs.noaa.gov/faq.shtml#WhatVD29VD88* (See “North American Vertical Datum of 1988”)

Natural substrate refers to any naturally occurring immersed or submersed solid surface, such as a rock or tree, upon which an organism lives. (See also “Substrate”)

Nekton are the consumers in the aquatic environment and consist of large free-swimming organisms that are capable of sustained, directed mobility.

Nephelometric turbidity unit (NTU) is the measurement for reporting turbidity that is based on use of a standard suspension of formazin. Turbidity measured in NTU uses nephelometric methods that depend on passing specific light of a specific wavelength through the sample.

North American Vertical Datum of 1988 (NAVD 1988) is a fixed reference adopted as the official civilian vertical datum for elevations determined by Federal surveying and mapping activities in the United States. This datum was established in 1991 by minimum-constraint adjustment of the Canadian**,** Mexican, and United States first-order terrestrial leveling networks.

Open or **screened interval** is the length of unscreened opening or of well screen through which water enters a well, in feet below land surface.

Organic carbon (OC) is a measure of organic matter present in aqueous solution, suspension, or bottom sediment. May be reported as dissolved organic carbon (DOC), particulate organic carbon (POC), or total organic carbon (TOC).

Organic mass or **volatile mass** of a living substance is the difference between the dry mass and ash mass and represents the actual mass of the living matter. Organic mass is expressed in the same units as for ash mass and dry mass. (See also “Ash mass,” “Biomass,” and “Dry mass”)

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

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

Organochlorine compounds are any chemicals that contain carbon and chlorine. Organochlorine compounds that are important in investigations of water, sediment, and biological quality include certain pesticides and industrial compounds.

Parameter code is a 5-digit number used in the USGS computerized data system, National Water Information System (NWIS), to uniquely identify a specific constituent or property.

Partial-record station is a site where discrete measurements of one or more hydrologic parameters are obtained over a period of time without continuous data being recorded or computed. A common example is a crest-stage gage partial-record station at which only peak stages and flows are recorded.

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

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

Classification	Size (mm)	Method of analysis
Clay	>0.00024 - 0.004	Sedimentation
Silt	>0.004 - 0.062	Sedimentation
Sand	>0.062 - 2.0	Sedimentation/sieve
Gravel	>2.0 - 64.0	Sieve
Cobble	>64 - 256	Manual measurement
Boulder	>256	Manual measurement

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

Peak flow (peak stage) is an instantaneous local maximum value in the continuous time series of streamflows or stages, preceded by a period of increasing values and followed by a period of decreasing values. Several peak values ordinarily occur in a year. The maximum peak value in a year is called the annual peak; peaks lower than the annual peak are called secondary peaks. Occasionally, the annual peak may not be the maximum value for the year; in such cases, the maximum value occurs at midnight at the beginning or end of the year, on the recession from or rise toward a higher peak in the adjoining year. If values are recorded at a discrete series of times, the peak recorded value may be taken as an approximation of the true peak, which may occur between the recording instants. If the values are recorded with finite precision, a sequence of equal recorded values may occur at the peak; in this case, the first value is taken as the peak.

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

Percent shading is a measure of the amount of sunlight potentially reaching the stream. A clinometer is used to measure left and right bank canopy angles. These values are added together, divided by 180, and multiplied by 100 to compute percentage of shade.

Periodic-record station is a site where stage, discharge, sediment, chemical, physical, or other hydrologic measurements are made one or more times during a year but at a frequency insufficient to develop a daily record.

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

Pesticides are chemical compounds used to control undesirable organisms. Major categories of pesticides include insecticides, miticides, fungicides, herbicides, and rodenticides.

pH of water is the negative logarithm of the hydrogen-ion activity. Solutions with pH less than 7.0 standard units are termed “acidic,” and solutions with a pH greater than 7.0 are termed “basic.” Solutions with a pH of 7.0 are neutral. The presence and concentration of many dissolved chemical constituents found in water are affected, in part, by the hydrogen-ion activity of water. Biological processes including growth, distribution of organisms, and toxicity of the water to organisms also are affected, in part, by the hydrogen-ion activity of water.

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

Picocurie (PC, pCi) is one trillionth (1×10^{-12}) of the amount of radioactive nuclide represented by a curie (Ci). A curie is the quantity of radioactive nuclide that yields 3.7×10^{10} radioactive disintegrations per second (dps). A picocurie yields 0.037 dps, or 2.22 dpm (disintegrations per minute).

Plankton is the community of suspended, floating, or weakly swimming organisms that live in the open water of lakes and rivers. Concentrations are expressed as a number of cells per milliliter (cells/mL) of sample.

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

Polychlorinated naphthalenes (PCNs) are industrial chemicals that are mixtures of chlorinated naphthalene compounds. They have properties and applications similar to polychlorinated biphenyls (PCBs) and have been identified in commercial PCB preparations.

Pool, as used in this report, is a small part of a stream reach with little velocity, commonly with water deeper than surrounding areas.

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

Primary productivity (carbon method) is expressed as milligrams of carbon per area per unit time [mg C/(m^2/time)] for periphyton and macrophytes or per volume [mg C/(m^3/time)] for phytoplankton. The carbon method defines the amount of carbon dioxide consumed as measured by radioactive carbon (carbon-14). The carbon-14 method is of greater sensitivity than the oxygen light and dark bottle method and is preferred for use with unenriched water samples. Unit time may be either the hour or day, depending on the incubation period. (See also “Primary productivity”)

Primary productivity (oxygen method) is expressed as milligrams of oxygen per area per unit time [mg O/(m^2/time)] for periphyton and macrophytes or per volume [mg O/(m^3/time)] for phytoplankton. The oxygen method defines production and respiration rates as estimated from changes in the measured dissolved-oxygen concentration. The oxygen light and dark bottle method is preferred if the rate of primary production is sufficient for accurate measurements to be made within 24 hours. Unit time may be either the hour or day, depending on the incubation period. (See also “Primary productivity”)

Radioisotopes are isotopic forms of elements that exhibit radioactivity. Isotopes are varieties of a chemical element that differ in atomic weight but are very nearly alike in chemical properties. The difference arises because the atoms of the isotopic forms of an element differ in the number of neutrons in the nucleus; for example, ordinary chlorine is a mixture of isotopes having atomic weights of 35 and 37, and the natural mixture has an atomic weight of about 35.453. Many of the elements similarly exist as mixtures of isotopes, and a great many new isotopes have been produced in the operation of nuclear devices such as the cyclotron. There are 275 isotopes of the 81 stable elements, in addition to more than 800 radioactive isotopes.

Reach, as used in this report, is a length of stream that is chosen to represent a uniform set of physical, chemical, and biological conditions within a segment. It is the principal sampling unit for collecting physical, chemical, and biological data.

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

Recurrence interval, also referred to as return period, is the average time, usually expressed in years, between occurrences of hydrologic events of a specified type (such as exceedances of a specified high flow or nonexceedance of a specified low flow). The terms “return period” and “recurrence interval” do not imply regular cyclic occurrence. The actual times between occurrences vary randomly, with most of the times being less than the average and a few being substantially greater than the average. For example, the 100-year flood is the flow rate that is exceeded by the annual maximum peak flow at intervals whose average length is 100 years (that is, once in 100 years, on average); almost two-thirds of all exceedances of the 100-year flood occur less than 100 years after the previous exceedance, half occur less than 70 years after the previous exceedance, and about one-eighth occur more than 200 years after the previous exceedance. Similarly, the 7-day, 10-year low flow ($7Q_{10}$) is the flow rate below which the annual minimum 7-day-mean flow dips at intervals whose average length is 10 years (that is, once in 10 years, on average); almost two-thirds of the nonexceedances of the $7Q_{10}$ occur less than 10 years after the previous nonexceedance, half occur less than 7 years after, and about one-eighth occur more than 20 years after the previous nonexceedance. The recurrence interval for annual events is the reciprocal of the annual probability of occurrence. Thus, the 100-year flood has a 1-percent chance of being exceeded by the maximum peak flow in any year, and there is a 10-percent chance in any year that the annual minimum 7-day-mean flow will be less than the $7Q_{10}$.

Replicate samples are a group of samples collected in a manner such that the samples are thought to be essentially identical in composition.

Return period (See “Recurrence interval”)

Riffle, as used in this report, is a shallow part of the stream where water flows swiftly over completely or partially submerged obstructions to produce surface agitation.

River mileage is the curvilinear distance, in miles, measured upstream from the mouth along the meandering path of a stream channel in accordance with Bulletin No. 14 (October 1968) of the Water Resources Council and typically is used to denote location along a river.

Run, as used in this report, is a relatively shallow part of a stream with moderate velocity and little or no surface turbulence.

Runoff is the quantity of water that is discharged (“runs off”) from a drainage basin during a given time period. Runoff data may be presented as volumes in acre-feet, as mean discharges per unit of drainage area in cubic feet per second per square mile, or as depths of water on the drainage basin in inches. (See also “Annual runoff”)

Sea level, as used in this report, refers to one of the two commonly used national vertical datums (NGVD 1929 or NAVD 1988). See separate entries for definitions of these datums.

Sediment is solid material that originates mostly from disintegrated rocks; when transported by, suspended in, or deposited from water, it is referred to as “fluvial sediment.” Sediment includes chemical and biochemical precipitates and decomposed organic material, such as humus. The quantity, characteristics, and cause of the occurrence of sediment in streams are affected by environmental and land-use factors. Some major factors are topography, soil characteristics, land cover, and depth and intensity of pre-cipitation.

Sensible heat flux (often used interchangeably with latent sensible heat-flux density) is the amount of heat energy that moves by turbulent transport through the air across a specified cross-sectional area per unit time and goes to heating (cooling) the air. Usually expressed in watts per square meter.

Seven-day, 10-year low flow ($7Q_{10}$) is the discharge below which the annual 7-day minimum flow falls in 1 year out of 10 on the long-term average. The recurrence interval of the $7Q_{10}$ is 10 years; the chance that the annual 7-day minimum flow will be less than the $7Q_{10}$ is 10 percent in any given year. (See also “Annual 7-day minimum” and “Recurrence interval”)

Shelves, as used in this report, are streambank features extending nearly horizontally from the flood plain to the lower limit of persistent woody vegetation.

Sodium adsorption ratio (SAR) is the expression of relative activity of sodium ions in exchange reactions within soil and is an index of sodium or alkali hazard to the soil. Sodium hazard in water is an index that can be used to evaluate the suitability of water for irrigating crops.

Soil heat flux (often used interchangeably with soil heat-flux density) is the amount of heat energy that moves by conduction across a specified cross-sectional area of soil per unit time and goes to heating (or cooling) the soil. Usually expressed in watts per square meter.

Soil-water content is the water lost from the soil upon drying to constant mass at 105 °C; expressed either as mass of water per unit mass of dry soil or as the volume of water per unit bulk volume of soil.

Specific electrical conductance (conductivity) is a measure of the capacity of water (or other media) to conduct an electrical current. It is expressed in microsiemens per centimeter at 25 °C. Specific electrical conductance is a function of the types and quantity of dissolved substances in water and can be used for approximating the dissolved-solids content of the water. Commonly, the concentration of dissolved solids (in milligrams per liter) is from 55 to 75 percent of the specific conductance (in microsiemens). This relation is not constant from stream to stream, and it may vary in the same source with changes in the composition of the water.

Stable isotope ratio (per MIL) is a unit expressing the ratio of the abundance of two radioactive isotopes. Isotope ratios are used in hydrologic studies to determine the age or source of specific water, to evaluate mixing of different water, as an aid in determining reaction rates, and other chemical or hydrologic processes.

Stage (See “Gage height”)

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

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

Substrate is the physical surface upon which an organism lives.

Substrate embeddedness class is a visual estimate of riffle streambed substrate larger than gravel that is surrounded or covered by fine sediment (<2mm, sand or finer). Below are the class categories expressed as the percentage covered by fine sediment:

0	no gravel or larger substrate	3	26-50 percent
1	> 75 percent	4	5-25 percent
2	51-75 percent	5	< 5 percent

Surface area of a lake is that area (acres) encompassed by the boundary of the lake as shown on USGS topographic maps, or other available maps or photographs. Because surface area changes with lake stage, surface areas listed in this report represent those determined for the stage at the time the maps or photographs were obtained.

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

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

Suspended, recoverable is the amount of a given constituent that is in solution after the part of a representative suspended water-sediment sample that is retained on a 0.45-micrometer membrane filter has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all the particulate matter is not achieved by the digestion treatment, and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the sample. To achieve comparability of analytical data, equivalent digestion procedures are required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results. Determinations of "suspended, recoverable" constituents are made either by directly analyzing the suspended mate-rial collected on the filter or, more commonly, by difference, on the basis of determinations of (1) dissolved and (2) total recoverable concentrations of the constituent. (See also "Suspended")

Suspended sediment is the sediment maintained in suspension by the upward components of turbulent currents or that exists in suspension as a colloid. (See also "Sediment")

Suspended-sediment concentration is the velocity-weighted concentration of suspended sediment in the sampled zone (from the water surface to a point approximately 0.3 foot above the bed) expressed as milligrams of dry sediment per liter of water-sediment mixture (mg/L). The analytical technique uses the mass of all of the sediment and the net weight of the water-sediment mixture in a sample to compute the suspended-sediment concentration. (See also "Sediment" and "Suspended sediment")

Suspended-sediment discharge (tons/d) is the rate of sediment transport, as measured by dry mass or volume, that passes a cross section in a given time. It is calculated in units of tons per day as follows: concentration (mg/L) x discharge (ft^3/s) x 0.0027. (See also "Sediment," "Suspended sediment," and "Suspended-sediment concentration")

Suspended-sediment load is a general term that refers to a given characteristic of the material in suspension that passes a point during a specified period of time. The term needs to be qualified, such as "annual suspended-sediment load" or "sand-size suspended-sediment load," and so on. It is not synonymous with either suspended-sediment discharge or concentration. (See also "Sediment")

Suspended, total is the total amount of a given constituent in the part of a water-sediment sample that is retained on a 0.45-micrometer membrane filter. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. Knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to determine when the results should be reported as "suspended, total." Determinations of "suspended, total" constituents are made either by directly analyzing portions of the suspended material collected on the filter or, more commonly, by difference, on the basis of determinations of (1) dissolved and (2) total concentrations of the constituent. (See also "Suspended")

Suspended solids, total residue at 105 °C concentration is the concentration of inorganic and organic material retained on a filter, expressed as milligrams of dry material per liter of water (mg/L). An aliquot of the sample is used for this analysis.

Synoptic studies are short-term investigations of specific water-quality conditions during selected seasonal or hydro-logic periods to provide improved spatial resolution for critical water-quality conditions. For the period and conditions sampled, they assess the spatial distribution of selected water-quality conditions in relation to causative factors, such as land use and contaminant sources.

Taxa (Species) richness is the number of species (taxa) present in a defined area or sampling unit.

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

Kingdom:	Animal
Phylum:	Arthropoda
Class:	Insecta
Order:	Ephemeroptera
Family:	Ephemeridae
Genus:	*Hexagenia*
Species:	*Hexagenia limbata*

Thalweg is the line formed by connecting points of minimum streambed elevation (deepest part of the channel).

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

Time-weighted average is computed by multiplying the number of days in the sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the total number of days. A time-weighted average represents the composition of water resulting from the mixing of flow proportionally to the duration of the concentration.

Tons per acre-foot (T/acre-ft) is the dry mass (tons) of a constituent per unit volume (acre-foot) of water. It is computed by multiplying the concentration of the constituent, in milligrams per liter, by 0.00136.

Tons per day (T/DAY, tons/d) is a common chemical or sediment discharge unit. It is the quantity of a substance in solution, in suspension, or as bedload that passes a stream section during a 24-hour period. It is equivalent to 2,000 pounds per day, or 0.9072 metric tons per day.

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

Total coliform bacteria are a particular group of bacteria that are used as indicators of possible sewage pollution. This group includes coliforms that inhabit the intestine of warmblooded animals and those that inhabit soils. They are characterized as aerobic or facultative anaerobic, gram-negative, nonspore-forming, rod-shaped bacteria that ferment lactose with gas formation within 48 hours at 35 °C. In the laboratory, these bacteria are defined as all the organisms that produce colonies with a golden-green metallic sheen within 24 hours when incubated at 35 °C plus or minus 1.0 °C on M-Endo medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 milliliters of sample. (See also “Bacteria”)

Total discharge is the quantity of a given constituent, measured as dry mass or volume, that passes a stream cross section per unit of time. When referring to constituents other than water, this term needs to be qualified, such as “total sediment discharge,” “total chloride discharge,” and so on.

Total in bottom material is the amount of a given constituent in a representative sample of bottom material. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to judge when the results should be reported as “total in bottom material.”

Total length (fish) is the straight-line distance from the anterior point of a fish specimen’s snout, with the mouth closed, to the posterior end of the caudal (tail) fin, with the lobes of the caudal fin squeezed together.

Total load refers to all of a constituent in transport. When referring to sediment, it includes suspended load plus bed load.

Total organism count is the number of organisms collected and enumerated in any particular sample. (See also “Organism count/volume”)

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

Total sediment discharge is the mass of suspended-sediment plus bed-load transport, measured as dry weight, that passes a cross section in a given time. It is a rate and is reported as tons per day. (See also “Bedload,” “Bedload discharge,” “Sediment,” “Suspended sediment,” and “Suspended-sediment concentration”)

Total sediment load or **total load** is the sediment in transport as bedload and suspended-sediment load. The term may be qualified, such as “annual suspended-sediment load” or “sand-size suspended-sediment load,” and so on. It differs from total sediment discharge in that load refers to the material, whereas discharge refers to the quantity of material, expressed in units of mass per unit time. (See also “Sediment,” “Suspended-sediment load,” and “Total load”)

Transect, as used in this report, is a line across a stream perpendicular to the flow and along which measurements are taken, so that morphological and flow characteristics along the line are described from bank to bank. Unlike a cross section, no attempt is made to determine known elevation points along the line.

Turbidity is the reduction in the transparency of a solution due to the presence of suspended and some dissolved substances. The measurement technique records the collective optical properties of the solution that cause light to be scattered and attenuated rather than transmitted in straight lines; the higher the intensity of scattered or attenuated light, the higher the value of the turbidity. Turbidity is expressed in nephelometric turbidity units (NTU). Depending on the method used, the turbidity units as NTU can be defined as the intensity of light of a specified wavelength scattered or attenuated by suspended particles or absorbed at a method specified angle, usually 90 degrees, from the path of the incident light. Currently approved methods for the measurement of turbidity in the USGS include those that conform to U.S. EPA Method 180.1, ASTM D1889-00, and ISO 7027. Measurements of turbidity by these different methods and different instruments are unlikely to yield equivalent values.

Ultraviolet (UV) absorbance (absorption) at 254 or 280 nanometers is a measure of the aggregate concentration of the mixture of UV absorbing organic materials dissolved in the analyzed water, such as lignin, tannin, humic substances, and various aromatic compounds. UV absorbance (absorption) at 254 or 280 nanometers is measured in UV absorption units per centimeter of pathlength of UV light through a sample.

Unconfined aquifer is an aquifer whose upper surface is a water table free to fluctuate under atmospheric pressure. (See “Water-table aquifer”)

Vertical datum (See “Datum”)

Volatile organic compounds (VOCs) are organic compounds that can be isolated from the water phase of a sample by purging the water sample with inert gas, such as helium, and subsequently analyzed by gas chromatography. Many VOCs are human-made chemicals that are used and produced in the manufacture of paints, adhesives, petroleum products, pharmaceuticals, and refrigerants. They are often components of fuels, solvents, hydraulic fluids, paint thinners, and dry cleaning agents commonly used in urban settings. VOC contamination of drinking-water supplies is a human health concern because many are toxic and are known or suspected human carcinogens.

Water table is that surface in a ground-water body at which the water pressure is equal to the atmospheric pressure.

Water-table aquifer is an unconfined aquifer within which the water table is found.

Water year in USGS reports dealing with surface-water supply is the 12-month period October 1 through September 30. The water year is designated by the calendar year in which it ends and which includes 9 of the 12 months. Thus, the year ending September 30, 2002, is called the “2002 water year.”

WDR is used as an abbreviation for “Water-Data Report” in the REVISED RECORDS paragraph to refer to State annual hydrologic-data reports. (WRD was used as an abbreviation for “Water-Resources Data” in reports published prior to 1976.)

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

Wet mass is the mass of living matter plus contained water. (See also “Biomass” and “Dry mass”)

Wet weight refers to the weight of animal tissue or other substance including its contained water. (See also “Dry weight”)

WSP is used as an acronym for “Water-Supply Paper” in reference to previously published reports.

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

DISCONTINUED STREAMFLOW-GAGING STATIONS

The following complete-record streamflow-gaging stations in Kansas have been discontinued, converted to partial-record streamflow-gaging stations, or are now operated by other Federal agencies prior to the 2002 water year. Daily streamflow or stage records were collected and published for the period of record shown for each station.

[Letters in parentheses () after station name designates type of data: (d) discharge, mi^2, square miles.]

Station number	Station name	Drainage area (mi^2)	Period of record
	Wolf River Basin		
06815600	Wolf River near Hiawatha, KS (d)	41.00	1961-70
06818200	Doniphan Creek at Doniphan, KS (d)	4.15	1960-70
	Kansas River Basin		
06827000	South Fork Republican River near CO-KS St Line, KS (d)	1,860.00	1946-56
06844700	South Fork Sappa Creek near Brewster, KS (d)	74.00	1968-87
06845000	Sappa Creek near Oberlin, KS (d)	1,063.00	1929-32 1944-72
06846000	Beaver Creek at Ludell, KS (d)	1,460.00	1929-32 1946-53
06846300	Beaver Creek at Herndon, KS (d)	1,535.00	1963-69
06854500	Republican River at Scandia, KS (d)	22,903.00	1919-25 1928-44 1951-72
06855000	West Buffalo Creek near Jewell, KS (d)	15.20	1934-38
06855500	West Buffalo Creek at Jewell, KS (d)	16.80	1935-38
06855800	Buffalo Creek near Jamestown, KS (d)	330.00	1959-90
06855900	Wolf Creek near Concordia, KS (d)	56.00	1962-81
06857000	Republican River at Milford, KS (d)	24,900.00	1895-05 1951-64
06858000	Rose Creek near Wallace, KS (d)	28.50	1946-53
06858500	North Fork Smoky Hill River near McAllaster, KS (d)	670.00	1947-53 1959-84
06859500	Ladder Creek below Chalk Creek near Scott City, KS (d)	1,460.00	1951-79
06860500	Hackberry Creek near Gove, KS (d)	426.00	1947-53
06862000	Smoky Hill River at Cedar Bluff Dam, KS (d)	5,530.00	1952-90
06862500	Smoky Hill River near Ellis, KS (d)	5,630.00	1942-52
06863000	Smoky Hill River at Pfeifer, KS (d)	6,033.00	1929-32
06863300	Big Creek near Ogallah, KS (d)	297.00	1956-68
06863900	North Fork Big Creek near Victoria, KS (d)	54.00	1962-87
06863990	Big Creek near Russell, KS (d)	824.00	1963-64
06864000	Smoky Hill River near Russell, KS (d)	6,965.00	1940-74
06866000	Smoky Hill River at Lindsborg, KS (d)	8,110.00	1930-65
06867500	Paradise Creek near Paradise, KS (d)	212.00	1946-53 1963-74
06868000	Saline River near Wilson, KS (d)	1,900.00	1929-63
06868400	Wolf Creek near Lucas, KS (d)	163.00	1959-71
06868500	Wolf Creek near Sylvan Grove, KS (d)	261.00	1946-53
06868700	NB Spillman Creek near Ash Grove, KS (d)	26.10	1962-71
06870500	Smoky Hill River near New Cambria, KS (d)	1,980.00	1949-53
06871900	Deer Creek near Phillipsburg, KS (d)	65.00	1967-81
06872300	Middle Beaver Creek near Smith Center, KS (d)	71.00	1961-70
06873500	South Fork Solomon River at Alton, KS (d)	1,720.00	1919-25 1928-32 1942-57
06873700	Kill Creek near Bloomington, KS (d)	52.00	1963-81
06874500	East Limestone Creek near Ionia, KS (d)	25.60	1934-38
06875000	Elm Creek near Ionia, KS (d)	22.70	1934-38

DISCONTINUED STREAMFLOW-GAGING STATIONS--Continued

Station number	Station name	Drainage area (mi^2)	Period of record
	Kansas River Basin--Continued		
06875500	East Limestone Creek at Ionia, KS (d)	51.60	1934-35
06875800	Limestone Creek near Glen Elder, KS (d)	210.00	1965-71
06876000	Solomon River at Beloit, KS (d)	5,530.00	1929-65
06876440	Solomon River near Minneapolis, KS (d)	6,060.00	1978-83
06877000	Smoky Hill River at Solomon, KS (d)	8,830.00	1919-21 1923-34
06877500	Turkey Creek near Abilene, KS (d)	143.00	1959-65
06878500	Lyon Creek near Woodbine, KS (d)	230.00	1954-74
06879000	Smoky Hill River at Junction City, KS (d)	19,900.00	1952-57
06879200	Clark Creek near Junction City, KS (d)	200.00	1958-65
06879500	Kansas River at Ogden, KS (d)	45,240.00	1917-26 1927-51
06882500	Big Blue River at Hull, KS (d)	4,540.00	1919-25 1928-40
06884500	Little Blue River at Waterville, KS (d)	3,509.00	1922-25 1928-58
06885000	Snipe Creek near Beattie, KS (d)	18.00	1954-58
06886000	Big Blue River at Randolph, KS (d)	9,100.00	1918-60
06886500	Fancy Creek at Winkler, KS (d)	174.00	1954-71
06888000	Vermillion Creek near Wamego, KS (d)	243.00	1936-46 1954-72
06888300	Rock Creek near Louisville, KS (d)	128.00	1959-65
06888925	Unnamed Creek near Kansas Museum of History, Topeka, KS (d)	3.56	1995-98
06889100	Soldier Creek near Goff, KS (d)	2.06	1964-87
06889120	Soldier Creek near Bancroft, KS (d)	10.50	1964-88
06889140	Soldier Creek near Soldier, KS (d)	16.90	1964-98
06889160	Soldier Creek near Circleville, KS (d)	49.30	1964-01
06889180	Soldier Creek near St. Clere, KS (d)	80.00	1964-81
06889580	Shunganunga Creek at Southwest 29th Street, Topeka, KS (d)	14.10	1979-81 1994-96
06889610	South Branch Shunganunga Creek at Southwest 37th Street, Topeka, KS (d)	11.60	1979-81 1994-96
06889700	Shunganunga Creek at Rice Road, Topeka, KS (d)	60.30	1979-83 1993-96
06890000	Little Delaware River near Horton, KS (d)	19.00	1954-61 1962-65 1977-78
06890400	Delaware River near Arrington, KS (d)	738.00	1965-69
06890500	Delaware River at Valley Falls, KS (d)	922.00	1922-67
06890600	Rock Creek near Meriden, KS (d)	22.00	1963-70
06891483	Wakarusa River below Clinton Dam, KS (d)	412.00	1973-80
06891486	West Branch Yankee Tank Creek near Lawrence, KS (d)	1.85	1969-73
06891488	East Branch Yankee Tank Creek near Lawrence, KS (d)	1.35	1969-73
06891490	Yankee Tank Creek near Lawrence, KS (d)	3.90	1969-73
06892490	Cedar Creek near Cedar Junction, KS (d)	38.90	1965-68
06892500	Kansas River at Bonner Springs, KS (d)	59,928.00	1917-73
06893350	Tomahawk Creek near Overland Park, KS (d)	23.90	1974-82
	Osage River Basin		
06911000	Marais des Cygnes River at Melvern, KS (d)	351.00	1940-74
06912000	Switzler Creek at Burlingame, KS (d)	26.30	1954-61
06914000	Pottawatomie Creek near Garnett, KS (d)	334.00	1939-01
06914500	Pottawatomie Creek at Lane, KS (d)	513.00	1929-32
06914960	Rock Creek near Wellsville, KS (d)	15.90	1993-96

DISCONTINUED STREAMFLOW-GAGING STATIONS--Continued

Station number	Station name	Drainage area (mi^2)	Period of record
	Osage River Basin--Continued		
06915977	North Sugar Creek below La Cygne Lake, KS (d)	56.67	1979-82
06915988	North Sugar Creek near Trading Post, KS (d)	72.13	1981-81
06916000	Marais des Cygnes River at Trading Post, KS (d)	2,880.00	1929-58
06916500	Big Sugar Creek at Farlinville, KS (d)	198.00	1929-32 1949-58 1959-70
06917500	Marmaton River near Fort Scott, KS (d)	408.00	1921-25 1929-71
	Arkansas River Basin		
07138062	Arkansas River below Amazon Dv, KS (d)	26,099.00	1978-83
07138065	Arkansas River at Lakin, KS (d)	27,838.00	1978-83
07138650	White Woman Creek near Leoti, KS (d)	750.00	1967-86
07138660	White Woman Creek 4.2 miles S of Leoti, KS (d)	834.00	1979-80
07139800	Mulberry Creek near Dodge City, KS (d)	73.80	1968-90
07170500	Arkansas River at Larned, KS (d)	31,750.00	1922-40
07140700	Guzzlers Gulch near Ness City, KS (d)	58.20	1961-81
07142015	Walnut Creek near Heizer, KS (d)	1,486.00	1974-78
07142620	Rattlesnake Creek near Raymond, KS (d)	1,167.00	1960-98
07142800	Arkansas River at Hutchinson, KS (d)	37,869.00	1895-05
07142860	Cow Creek near Claflin, KS (d)	43.00	1967-81
07142900	Blood Creek near Boyd, KS (d)	61.00	1962-80
07143400	Arkansas River near Wichita, KS (d)	39,072.00	1922-35
07143600	Little Arkansas River near Little River, KS (d)	71.00	1960-72
07144000	East Emma Creek near Halstead, KS (d)	58.00	1963-71
07144601	North Fork Ninnescah River at Arlington, KS (d)	322.00	1996-00
07144660	Silver Creek near Arlington, KS (d)	194.00	1996-00
07144680	Goose Creek near Arlington, KS (d)	46.60	1996-00
07144730	Red Rock Creek near Pretty Prairie, KS (d)	53.20	1996-00
07144800	North Fork Ninnescah River near Cheney, KS (d)	930.00	1951-64
07144850	South Fork South Fork Ninnescah River near Pratt, KS (d)	21.00	1961-80
07146570	Cole Creek near DeGraff, KS (d)	30.00	1961-80
07146623	Walnut River below El Dorado Lake, KS (d)	247.00	1981-90
07146830	Walnut River at Highway 54 east of El Dorado, KS (d)	350.00	1981-98
07146895	Walnut River at Augusta, KS (d)	452.00	1982-85
07146990	Whitewater River 3 miles S of Potwin, KS (d)	162.00	1968-69
07147050	WB Whitewater River near Furley, KS (d)	88.00	1968-69
07147060	WB Whitewater River near Benton, KS (d)	177.00	1968-69
07147100	Whitewater River at Augusta, KS (d)	456.00	1951-55
07147600	Timber Creek near Wilmot, KS (d)	63.00	1962-68
07147900	Walnut River near Arkansas City, KS (d)	1,952.00	1902-03
07156010	North Fork Cimarron River at Richfield, KS (d)	463.00	1971-86
07156100	Sand Arroyo Creek near Johnson, KS (d)	619.00	1971-86
07156220	Bear Creek near Johnson, KS (d)	835.00	1966-98
07156225	Bear Creek 9 miles NE of Johnson, KS (d)	879.00	1979-80
07156500	Cimarron River near Satanta, KS (d)	7,345.00	1942-46
07156800	Cimarron River near Liberal, KS (d)	8,254.00	1896-96 1938-42
07157740	Cimarron River near Buttermilk, KS (d)	11,120.00	1973-79
07157900	Cavalry Creek at Coldwater, KS (d)	39.00	1967-82
07157940	Bluff Creek near Buttermilk, KS (d)	657.00	1973-80

DISCONTINUED STREAMFLOW-GAGING STATIONS--Continued

Station number	Station name	Drainage area (mi^2)	Period of record
	Arkansas River Basin--Continued		
07165700	Verdigris River near Madison, KS (d)	181.00	1956-76
07165750	Verdigris River near Virgil, KS (d)	312.00	1989-98
07166000	Verdigris River near Coyville, KS (d)	747.00	1939-98
07167000	Fall River near Eureka, KS (d)	307.00	1947-76
07168500	Fall River near Fall River, KS (d)	585.00	1939-90
07170000	Elk River near Elk City, KS (d)	575.00	1939-69
07171600	Caney river near Cedar Vale, KS (d)	208.00	1989-98
07173300	Middle Caney Creek at Sedan, KS (d)	119.00	1989-98
07173500	Bee Creek near Havana, KS (d)	11.00	1955-58
07179600	Four Mile Creek near Council Grove, KS (d)	55.00	1963-72
07179710	Neosho River near Dunlap, KS (d)	528.00	1985
07180000	Cottonwood River near Marion, KS (d)	329.00	1939-68
07180200	Cottonwood River at Marion, KS (d)	502.00	1984-99
07181000	Cottonwood River at Elmdale, KS (d)	1,045.00	1923-32
07181500	Middle Creek near Elmdale, KS (d)	92.00	1939-50
07182000	Cottonwood River at Cottonwood Falls, KS (d)	1,327.00	1932-71
07182400	Neosho River at Strawn, KS (d)	2,933.00	1949-63
07183100	Owl Creek near Piqua, KS (d)	177.00	1959-70
07183200	Neosho River near Chanute, KS (d)	4,195.00	1963-75
07184300	Cherry Creek near Hallowell, KS (d)	90.00	1976-82
07184500	Labette Creek near Oswego, KS (d)	211.00	1939-45
07186040	Cow Creek near Weir, KS (d)	170.00	1976-82

DISCONTINUED WATER-QUALITY STREAMFLOW-GAGING STATIONS

The following complete-record water-quality streamflow-gaging stations in Kansas have been discontinued prior to the 2002 water year. Records of specific conductance, pH, temperature, dissolved oxygen, or sediment were collected and published for the record shown for each station. Discontinued stations for which periodic records of water quality are available from the U.S. Geological Survey office in Lawrence, Kansas, are not included in this list.

[mi^2, square miles]

Station number	Station name	Drainage area (mi^2)	Type of record[1]	Period of record
	Kansas River Basin			
06827000	South Fork Republican River near CO-KS St Line, KS	1,860.00	Sed.	1948-49
06845000	Sappa Creek near Oberlin, KS	1,063.00	Sed.	1962-64
				1967-69
06846500	Beaver Creek at Cedar Bluffs, KS	1,618.00	Temp., Sed.	1961-69
06847950	Keith Sebelius Lake near Norton, KS	683.00	Temp., S.C., pH, D.O.	1970-82
06848000	Prairie Dog Creek at Norton, KS	684.00	Temp., Sed.	1947-52
06853500	Republican River near Hardy, NE	22,401.00	S.C.	1956-57
06854000	White Rock Creek at Lovewell, KS	345.00	Temp.	1950-54
06854500	Republican River at Scandia, KS	22,903.00	Temp., S.C., Sed.	1957-58
				1968-70
06856600	Republican River at Clay Center, KS	24,542.00	NASQAN	1973-93
06857000	Republican River at Milford, KS	249.00	Temp., S.C.	1955-58
06861500	Cedar Bluff Res near Ellis, KS	5,530.00	Temp., S.C., pH, D.O.	1962-82
06862500	Smoky Hill River near Ellis, KS	5,630.00	Sed.	1947-50
06862700	Smoky Hill River near Schoenchen, KS	5,750.00	S.C.	1965-70
06863300	Big Creek near Ogallah, KS	297.00	Temp., S.C., Sed.	1955-62
06866900	Saline River near WaKeeney, KS	696.00	Temp., S.C., Sed.	1955-59
06867000	Saline River near Russell, KS	1,502.00	Temp., S.C., Sed.	1946-51
				1964-70
06867500	Paradise Creek near Paradise, KS	212.00	Temp., S.C., Sed.	1948-51
				1964-66
06868000	Saline River near Wilson, KS	1,900.00	Temp., S.C.	1948-51
06868500	Wolf Creek near Sylvan Grove, KS	261.00	Temp., Sed.	1947-50
06869500	Saline River at Tescott, KS	2,820.00	Temp., S.C., Sed.	1949-53
				1958-75
06870200	Smoky Hill River at New Cambria, KS	1,730.00	Temp., S.C., Cl., Sed.	1962-68
				1973-82
06871800	North Fork Solomon River at Kirwin, KS	1,367.00	Temp., Sed.	1950-52
06872500	North Fork Solomon River at Portis, KS	2,315.00	MRB	1962-96
06873500	South Fork Solomon River at Alton, KS	1,720.00	Temp., Sed.	1946-52
06874000	South Fork Solomon River at Osborne, KS	2,012.00	NASQAN	1962-94
06876000	Solomon River at Beloit, KS	5,530.00	Temp., S.C., Sed.	1948-52
				1957-58
06876440	Solomon River near Minneapolis, KS	6,060.00	Temp., S.C., pH, D.O.	1978-83
06876900	Solomon River at Niles, KS	6,770.00	Temp., S.C., Cl., Sed.	1957-82
06877500	Turkey Creek near Abilene, KS	143.00	Sed.	1958-59
06877600	Smoky Hill River at Enterprise, KS	19,260.00	Temp., S.C., Cl., Sed.	1957-82
			NASQAN	1956-95
06878000	Chapman Creek near Chapman, KS	300.00	Sed.	1958-59
06878500	Lyon Creek near Woodbine, KS	230.00	Sed.	1958-59
06879200	Clark Creek near Junction City, KS	200.00	Sed.	1958-59
06879650	Kings Creek near Manhattan, KS	4.09	Benchmark	1980-96
06884400	Little Blue River near Barnes, KS	3,324.00	Temp., S.C., pH, D.O.	1976-90

DISCONTINUED WATER-QUALITY STREAMFLOW-GAGING STATIONS--Continued

Station number	Station name	Drainage area (mi^2)	Type of record[1]	Period of record
	Kansas River Basin--Continued			
06887000	Big Blue River near Manhattan, KS	9,640.00	NASQAN	1956-58 1962-86
06887500	Kansas River at Wamego, KS	5,280.00	Temp., S.C., Sed.	1956-75
06888000	Vermillion Creek near Wamego, KS	243.00	Temp.	1958-63
06889000	Kansas River at Topeka, KS	56,720.00	Temp., S.C.	1955-58
06889610	South Branch Shunganunga Creek at SW 37th St, Topeka, KS	11.60	D.O.	1980-81
06889700	Shunganunga Creek at Rice Rd, Topeka, KS	58.70	D.O.	1980-81
06890000	Little Delaware River near Horton, KS	19.00	Temp., S.C.	1977-78
06890500	Delaware River at Valley Falls, KS	922.00	Sed.	1957-59
06891490	Yankee Tank Creek near Lawrence, KS	3.90	Temp., S.C.	1970-73
06891500	Wakarusa River near Lawrence, KS	425.00	Sed.	1958-59
06892000	Stranger Creek near Tonganoxie, KS	406.00	Sed.	1957-59
06892350	Kansas River at DeSoto, KS	59,756.00	NASQAN	1975-86
06892500	Kansas River at Bonner Springs, KS	59,928.00	Temp., S.C.	1961-63
	Osage River Basin			
06913500	Marais des Cygnes River near Ottawa, KS	1,250.00	Temp., S.C.	1961-68
06915988	North Sugar Creek near Trading Post, KS	72.13	Temp., S.C.	1980-81
	Arkansas River Basin			
07137500	Arkansas River near Coolidge, KS	25,410.00	NASQAN	1964-68 1970-73 1975-95
07139500	Arkansas River at Dodge City, KS	30,600.00	NASQAN	1974-77
07140000	Arkansas River near Kinsley, KS	31,066.00	Temp., Sed.	1960-75
07141900	Walnut Creek at Albert, KS	1,410.00	Temp., Sed.	1963-75
07142620	Rattlesnake Creek near Raymond, KS	1,167.00	S.C.	1969-70
07143330	Arkansas River near Hutchinson, KS	38,910.00	Temp., S.C., Sed.	1960-76
07144200	Little Arkansas River at Valley Center, KS	1,327.00	Temp., Sed.	1957-61
07144550	Arkansas River at Derby, KS	40,830.00	Temp., S.C	1969-76
07144800	North Fork Ninnescah River near Cheney, KS	930.00	Temp.	1950-51
07145200	South Fork Ninnescah River near Murdock, KS	650.00	Temp., S.C.	1950-73
07145500	Ninnescah River near Peck, KS	2,129.00	Temp.	1951
07146500	Arkansas River at Arkansas City, KS	43,713.00	NASQAN	1952-88
07146990	Whitewater River 3 miles S of Potwin, KS	162.00	S.C.	1967-69
07147050	West Branch Whitewater River near Furley, KS	88.00	S.C.	1967-69
07147060	West Branch Whitewater River near Benton, KS	177.00	S.C.	1967-69
07147070	Whitewater River at Towanda, KS	426.00	Temp., S.C.	1961-69
07147800	Walnut River at Winfield, KS	1,880.00	Temp., S.C., Sed.	1961-75
07148600	Medicine Lodge River at Sun City, KS	335.00	Temp., S.C., Cl.	1954-79 1987-99
07149000	Medicine Lodge River near Kiowa, KS	903.00	Temp., S.C., Cl.	1954-55 1973-79
07151300	Chikaskia River near Spivey, KS	315.00	Temp., S.C., Cl.	1988-99
07151500	Chikaskia River near Corbin, KS	794.00	Temp., Sed.	1962-65
07157500	Crooked Creek near Nye, KS	1,157.00	Temp.	1946-47
07157740	Cimarron River near Buttermilk, KS	1,120.00	Temp., S.C., Cl.	1973-79
07157940	Bluff Creek near Buttermilk, KS	657.00	Temp., Cl.	1973-79
07170500	Verdigris River at Independence, KS	2,892.00	Temp., S.C.	1961-68
07183500	Neosho River near Parsons, KS	4,905.00	NASQAN	1962-94
07184070	Deer Creek near Hallowell, KS	7.00	Temp., S.C.	1977-79
07184100	Lightning Creek near Oswego, KS	250.00	Temp., S.C.	1977-79
07184220	Cherry Creek near West Mineral, KS	27.00	Temp., S.C.	1977
07184240	Little Cherry Creek near West Mineral, KS	34.00	Temp., S.C.	1977

DISCONTINUED WATER-QUALITY STREAMFLOW-GAGING STATIONS--Continued

Station number	Station name	Drainage area (mi^2)	Type of record[1]	Period of record
	Arkansas River Basin--Continued			
07184300	Cherry Creek near Hallowell, KS	90.00	Temp., S.C.	1977-79
07186010	Second Cow Creek at Pittsburg, KS	60.00	Temp., S.C.	1977-79
07186040	Cow Creek near Weir, KS	170.00	Temp., S.C.	1977-80
07186050	Brush Creek near Weir, KS	30.00	Temp., S.C.	1977-79

[1]Type of record: Temp. (temperature), S.C. (specific conductance), D.O. (dissolved oxygen), Cl. (chloride), Sed. (sediment), Benchmark, MRB (Missouri River Basin), NASQAN (National Stream Quality Accounting Network).

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

The USGS publishes a series of manuals titled the "Techniques of Water-Resources Investigations" that describe procedures for planning and conducting specialized work in water-resources investigations. The material in these manuals is grouped under major subject headings called books and is further divided into sections and chapters. For example, section A of book 3 (Applications of Hydraulics) pertains to surface water. Each chapter then is limited to a narrow field of the section subject matter. This publication format permits flexibility when revision or printing is required.

Manuals in the Techniques of Water-Resources Investigations series, which are listed below, are available online at http://water.usgs.gov/pubs/twri/. Printed copies are available for sale from the USGS, Information Services, Box 25286, Federal Center, Denver, Colorado 80225 (an authorized agent of the Superintendent of Documents, Government Printing Office). Please telephone "1-888-ASK-USGS" for current prices, and refer to the title, book number, section number, chapter number, and mention the "U.S. Geological Survey Techniques of Water-Resources Investigations." Other products can be viewed online at http://www.usgs.gov/sales.html, or ordered by telephone or by FAX to (303)236-4693. Order forms for FAX requests are available online at http://mac.usgs.gov/isb/pubs/forms/. Prepayment by major credit card or by a check or money order payable to the "U.S. Geological Survey" is required.

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Section D. Water Quality

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1-D2. *Guidelines for collection and field analysis of ground-water samples for selected unstable constituents*, by W.W. Wood: USGS–TWRI book 1, chap. D2. 1976. 24 p.

Book 2. Collection of Environmental Data

Section D. Surface Geophysical Methods

2-D1. *Application of surface geophysics to ground-water investigations,* by A.A. R. Zohdy, G.P. Eaton, and D.R. Mabey: USGS–TWRI book 2, chap. D1. 1974. 116 p.

2-D2. *Application of seismic-refraction techniques to hydrologic studies,* by F.P. Haeni: USGS–TWRI book 2, chap. D2. 1988. 86 p.

Section E. Subsurface Geophysical Methods

2-E1. *Application of borehole geophysics to water-resources investigations,* by W.S. Keys and L.M. MacCary: USGS–TWRI book 2, chap. E1. 1971. 126 p.

2-E2. *Borehole geophysics applied to ground-water investigations,* by W.S. Keys: USGS–TWRI book 2, chap. E2. 1990. 150 p.

Section F. Drilling and Sampling Methods

2-F1. *Application of drilling, coring, and sampling techniques to test holes and wells*, by Eugene Shuter and W.E. Teasdale: USGS–TWRI book 2, chap. F1. 1989. 97 p.

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Section A. Surface-Water Techniques

3-A1. *General field and office procedures for indirect discharge measurements,* by M.A. Benson and Tate Dalrymple: USGS–TWRI book 3, chap. A1. 1967. 30 p.

3-A2. *Measurement of peak discharge by the slope-area method,* by Tate Dalrymple and M.A. Benson: USGS–TWRI book 3, chap. A2. 1967. 12 p.

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3-A7. *Stage measurement at gaging stations,* by T.J. Buchanan and W.P. Somers: USGS–TWRI book 3, chap. A7. 1968. 28 p.

3-A8. *Discharge measurements at gaging stations,* by T.J. Buchanan and W.P. Somers: USGS–TWRI book 3, chap. A8. 1969. 65 p.

3-A9. *Measurement of time of travel in streams by dye tracing,* by F.A. Kilpatrick and J.F. Wilson, Jr.: USGS–TWRI book 3, chap. A9. 1989. 27 p.

3-Al0. *Discharge ratings at gaging stations,* by E.J. Kennedy: USGS–TWRI book 3, chap. A10. 1984. 59 p.

3-A11. *Measurement of discharge by the moving-boat method,* by G.F. Smoot and C.E. Novak: USGS–TWRI book 3, chap. A11. 1969. 22 p.

3-A12. *Fluorometric procedures for dye tracing*, Revised, by J.F. Wilson, Jr., E.D. Cobb, and F.A. Kilpatrick: USGS–TWRI book 3, chap. A12. 1986. 34 p.

3-A13. *Computation of continuous records of streamflow*, by E.J. Kennedy: USGS–TWRI book 3, chap. A13. 1983. 53 p.

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3-A15. *Computation of water-surface profiles in open channels,* by Jacob Davidian: USGS–TWRI book 3, chap. A15. 1984. 48 p.

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3-A18. *Determination of stream reaeration coefficients by use of tracers,* by F.A. Kilpatrick, R.E. Rathbun, Nobuhiro Yotsukura, G.W. Parker, and L.L. DeLong: USGS–TWRI book 3, chap. A18. 1989. 52 p.

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3-A20. *Simulation of soluable waste transport and buildup in surface waters using tracers*, by F.A. Kilpatrick: USGS–TWRI book 3, chap. A20. 1993. 38 p.

3-A21 *Stream-gaging cableways,* by C. Russell Wagner: USGS–TWRI book 3, chap. A21. 1995. 56 p.

Section B. Ground-Water Techniques

3-B1. *Aquifer-test design, observation, and data analysis,* by R.W. Stallman: USGS–TWRI book 3, chap. B1. 1971. 26 p.

3-B2. *Introduction to ground-water hydraulics, a programed text for self-instruction*, by G.D. Bennett: USGS–TWRI book 3, chap. B2. 1976. 172 p.

3-B3. *Type curves for selected problems of flow to wells in confined aquifers*, by J.E. Reed: USGS–TWRI book 3, chap. B3. 1980. 106 p.

3-B4. *Regression modeling of ground-water flow,* by R.L. Cooley and R.L. Naff: USGS–TWRI book 3, chap. B4. 1990. 232 p.

3-B4. *Supplement 1. Regression modeling of ground-water flow --Modifications to the computer code for nonlinear regression solution of steady-state ground-water flow problems,* by R.L. Cooley: USGS–TWRI book 3, chap. B4. 1993. 8 p.

3-B5. *Definition of boundary and initial conditions in the analysis of saturated ground-water flow systems—An introduction*, by O.L. Franke, T.E. Reilly, and G.D. Bennett: USGS–TWRI book 3, chap. B5. 1987. 15 p.

3-B6. *The principle of superposition and its application in ground-water hydraulics,* by T.E. Reilly, O.L. Franke, and G.D. Bennett: USGS–TWRI book 3, chap. B6. 1987. 28 p.

3-B7. *Analytical solutions for one-, two-, and three-dimensional solute transport in ground-water systems with uniform flow,* by E.J. Wexler: USGS–TWRI book 3, chap. B7. 1992. 190 p.

3-B8. *System and boundary conceptualization in ground-water flow simulation,* by T.E. Reilly: USGS–TWRI book 3, chap. B8. 2001. 29 p.

Section C. Sedimentation and Erosion Techniques

3-C1. *Fluvial sediment concepts,* by H.P. Guy: USGS–TWRI book 3, chap. C1. 1970. 55 p.

3-C2. *Field methods for measurement of fluvial sediment*, by T.K. Edwards and G.D. Glysson: USGS–TWRI book 3, chap. C2. 1999. 89 p.

3-C3. *Computation of fluvial-sediment discharge,* by George Porterfield: USGS–TWRI book 3, chap. C3. 1972. 66 p.

Book 4. Hydrologic Analysis and Interpretation

Section A. Statistical Analysis

4-A1. *Some statistical tools in hydrology*, by H.C. Riggs: USGS–TWRI book 4, chap. A1. 1968. 39 p.

4-A2. *Frequency curves,* by H.C. Riggs: USGS–TWRI book 4, chap. A2. 1968. 15 p.

4-A3. *Statistical methods in water resources,* by D.R. Helsel and R.M. Hirsch: USGS–TWRI book 4, chap. A3. 1991. Available only online at http://water.usgs.gov/pubs/twri/twri4a3/. (Accessed August 30, 2002.)

Section B. Surface Water

4-B1. *Low-flow investigations,* by H.C. Riggs: USGS–TWRI book 4, chap. B1. 1972. 18 p.

4-B2. *Storage analyses for water supply*, by H.C. Riggs and C.H. Hardison: USGS–TWRI book 4, chap. B2. 1973. 20 p.

4-B3. *Regional analyses of streamflow characteristics,* by H.C. Riggs: USGS–TWRI book 4, chap. B3. 1973. 15 p.

Section D. Interrelated Phases of the Hydrologic Cycle

4-D1. *Computation of rate and volume of stream depletion by wells*, by C.T. Jenkins: USGS–TWRI book 4, chap. D1. 1970. 17 p.

Book 5. Laboratory Analysis

Section A. Water Analysis

5-A1. *Methods for determination of inorganic substances in water and fluvial sediments,* by M.J. Fishman and L.C. Friedman, editors: USGS–TWRI book 5, chap. A1. 1989. 545 p.

5-A2. *Determination of minor elements in water by emission spectroscopy,* by P.R. Barnett and E.C. Mallory, Jr.: USGS–TWRI book 5, chap. A2. 1971. 31 p.

5-A3. *Methods for the determination of organic substances in water and fluvial sediments*, edited by R.L. Wershaw, M.J. Fishman, R.R. Grabbe, and L.E. Lowe: USGS–TWRI book 5, chap. A3. 1987. 80 p.

5-A4. *Methods for collection and analysis of aquatic biological and microbiological samples,* by L.J. Britton and P.E. Greeson, editors: USGS–TWRI book 5, chap. A4. 1989. 363 p.

5-A5. *Methods for determination of radioactive substances in water and fluvial sediments,* by L.L. Thatcher, V.J. Janzer, and K.W. Edwards: USGS–TWRI book 5, chap. A5. 1977. 95 p.

5-A6. *Quality assurance practices for the chemical and biological analyses of water and fluvial sediments,* by L.C. Friedman and D.E. Erdmann: USGS–TWRI book 5, chap. A6. 1982. 181 p.

Section C. Sediment Analysis

5-C1. *Laboratory theory and methods for sediment analysis*, by H.P. Guy: USGS–TWRI book 5, chap. C1. 1969. 58 p.

Book 6. Modeling Techniques

Section A. Ground Water

6-A1. *A modular three-dimensional finite-difference ground-water flow model*, by M.G. McDonald and A.W. Harbaugh: USGS–TWRI book 6, chap. A1. 1988. 586 p.

6-A2. *Documentation of a computer program to simulate aquifer-system compaction using the modular finite-difference ground-water flow model,* by S.A. Leake and D.E. Prudic: USGS–TWRI book 6, chap. A2. 1991. 68 p.

6-A3. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 1: Model Description and User's Manual,* by L.J. Torak: USGS–TWRI book 6, chap. A3. 1993. 136 p.

6-A4. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 2: Derivation of finite-element equations and comparisons with analytical solutions,* by R.L. Cooley: USGS–TWRI book 6, chap. A4. 1992. 108 p.

6-A5. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 3: Design philosophy and programming details,* by L.J. Torak: USGS–TWRI book 6, chap. A5, 1993. 243 p.

6-A6. *A coupled surface-water and ground-water flow model (MODBRANCH) for simulation of stream-aquifer interaction*, by Eric D. Swain and Eliezer J. Wexler: USGS–TWRI book 6, chap. A5,1996. 125 p.

6-A7. *User's guide to SEAWAT: A computer program for simulation of three-dimensional variable-density ground-water flow,* by Weixing Guo and Christian D. Langevin: USGS–TWRI book 6, chap. A7,2002. 77 p.

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7-C2. *Computer model of two-dimensional solute transport and dispersion in ground water*, by L.F. Konikow and J.D. Bredehoeft: USGS–TWRI book 7, chap. C2. 1978. 90 p.

7-C3. *A model for simulation of flow in singular and interconnected channels,* by R.W. Schaffranek, R.A. Baltzer, and D.E. Goldberg: USGS–TWRI book 7, chap. C3. 1981. 110 p.

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Book 9. Handbooks for Water-Resources Investigations

Section A. National Field Manual for the Collection of Water-Quality Data

9-A1. *National Field Manual for the Collection of Water-Quality Data: Preparations for Water Sampling*, by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS–TWRI book 9, chap. A1. 1998. 47 p.

9-A2. *National Field Manual for the Collection of Water-Quality Data: Selection of Equipment for Water Sampling*, edited by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS–TWRI book 9, chap. A2. 1998. 94 p.

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9-A4. *National Field Manual for the Collection of Water-Quality Data: Collection of Water Samples*, edited by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS–TWRI book 9, chap. A4. 1999. 156 p.

9-A5. *National Field Manual for the Collection of Water-Quality Data: Processing of Water Samples*, edited by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS–TWRI book 9, chap. A5. 1999, 149 p.

9-A6. *National Field Manual for the Collection of Water-Quality Data: Field Measurements*, edited by F.D. Wilde and D.B. Radtke: USGS–TWRI book 9, chap. A6. 1998. Variously paginated.

9-A7. *National Field Manual for the Collection of Water-Quality Data: Biological Indicators*,edited by D.N. Myers and F.D. Wilde: USGS–TWRI book 9, chap. A7. 1997 and 1999. Variously paginated.

9-A8. *National Field Manual for the Collection of Water-Quality Data: Bottom-material samples*, by D.B. Radtke: USGS–TWRI book 9, chap. A8. 1998. 48 p.

9-A9. *National Field Manual for the Collection of Water-Quality Data: Safety in Field Activities*, by S.L. Lane and R.G. Fay: USGS–TWRI book 9, chap. A9. 1998. 60 p.

Other Reports

Horowitz, A.J., Demas, C.R., Fitzgerald, K.K., Miller, T.L., and Rickert, D.A., 1994, U.S. Geological Survey protocol for collection and processing of surface-water samples for the subsequent determination of inorganic constituents in filtered water: U.S. Geological Survey Open-File Report 94-539, 57 p.

Wagner, R.J., Mattraw, H.C., Ritz, G.F., and Smith, B.A., 2000, Guidelines and standard procedures for ontinous water-quality monitors: site selection, field operation, calibration, record computation, and reporting: U.S. Geological Survey Water-Resources Investigations Report 00-4252, 53 p.

BIG NEMAHA RIVER BASIN

06814000 TURKEY CREEK NEAR SENECA, KS

LOCATION.--Lat 39°56'52", long 96°06'30", in SW $^{1}/_{4}$ NW $^{1}/_{4}$ SW $^{1}/_{4}$ sec.20, T.1 S., R.12 E., Nemaha County, Hydrologic Unit 10240007, on left bank at downstream side of county highway bridge, 2.0 mi downstream from Clear Creek, 5.0 mi upstream from Big Nemaha River, and 8.0 mi northwest of Seneca.

DRAINAGE AREA.--276 mi^{2}.

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

GAGE.--Water-stage recorder. Datum of gage is 1,037.53 ft above NGVD of 1929. Prior to Oct. 19, 1956, water-stage recorder (occasional operation only) and nonrecording gage on former channel 400 ft south of present site at present datum. Oct. 19, 1956, to June 15, 1957, nonrecording gage at highway bridge 1.2 mi upstream at different datum. June 16, 1957, to Mar. 27, 1958, nonrecording gage at present site and datum.

REMARKS.--Records good except those periods of daily discharges, Apr. 1-16, and May 8-11, which are fair, and those for estimated daily discharges, which are poor. Satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,100 ft^{3}/s and maximum (*):

Date	Time	Discharge (ft^{3}/s)	Gage height (ft)	Date	Time	Discharge (ft^{3}/s)	Gage height (ft)
May 12	0545	*2,550	*12.96	No peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	63	40	31	e22	e20	e20	22	35	64	7.3	2.0	1.4
2	61	35	30	e22	e20	e15	21	31	56	6.9	1.8	0.96
3	58	32	30	e25	e25	e15	19	26	50	6.9	2.0	0.88
4	56	32	30	e25	e25	e15	19	23	48	7.2	1.3	0.82
5	69	31	29	e25	e30	e20	19	22	46	7.8	1.5	0.78
6	69	32	27	e27	e35	e25	19	544	40	7.5	1.6	0.75
7	59	33	28	e27	e45	e30	19	314	37	6.6	1.4	0.73
8	55	32	27	e27	51	35	24	96	34	6.2	1.3	0.76
9	62	30	28	e27	52	33	31	72	32	5.5	1.4	0.69
10	62	31	28	e27	51	32	26	62	31	5.6	1.4	0.67
11	46	30	28	e30	43	38	24	65	42	6.1	1.5	0.75
12	42	30	34	e30	53	32	22	1390	49	6.5	2.1	0.73
13	46	32	36	e30	40	30	20	329	45	6.2	2.4	0.99
14	51	33	34	e30	46	29	19	127	34	5.5	3.6	1.2
15	76	32	31	30	44	26	19	83	27	5.1	2.5	1.5
16	119	30	30	36	39	25	18	72	25	4.6	43	0.88
17	70	29	28	30	36	23	17	63	23	4.4	158	0.64
18	52	30	28	31	35	23	16	58	21	4.0	25	0.71
19	47	29	28	34	39	23	17	54	19	3.8	10	0.73
20	e52	28	27	34	46	25	19	53	17	3.7	8.4	0.81
21	e48	29	27	36	39	23	26	50	16	3.2	4.2	0.69
22	e48	29	28	37	33	19	28	48	15	3.0	2.8	0.66
23	e46	31	23	34	31	24	25	51	13	2.8	3.1	0.60
24	e45	45	e23	27	30	24	23	87	12	2.7	2.0	0.52
25	e42	50	e20	29	28	28	19	484	11	2.7	1.9	0.73
26	e41	45	e20	36	e25	26	18	206	11	4.2	1.7	0.55
27	e42	34	e20	30	e20	28	30	547	9.7	8.4	1.8	0.52
28	34	32	e21	29	e20	27	108	718	9.1	14	1.6	0.56
29	35	31	e21	20	---	29	62	296	8.6	7.2	1.5	0.65
30	37	32	e21	e15	---	28	44	126	8.2	3.4	1.4	0.64
31	47	---	e22	e15	---	24	---	81	---	2.4	1.2	---
MEAN	54.19	32.97	27.03	28.29	35.75	25.61	26.43	200.4	28.45	5.529	9.529	0.783
MAX	119	50	36	37	53	38	108	1390	64	14	158	1.5
MIN	34	28	20	15	20	15	16	22	8.2	2.4	1.2	0.52
AC-FT	3330	1960	1660	1740	1990	1570	1570	12320	1690	340	586	47

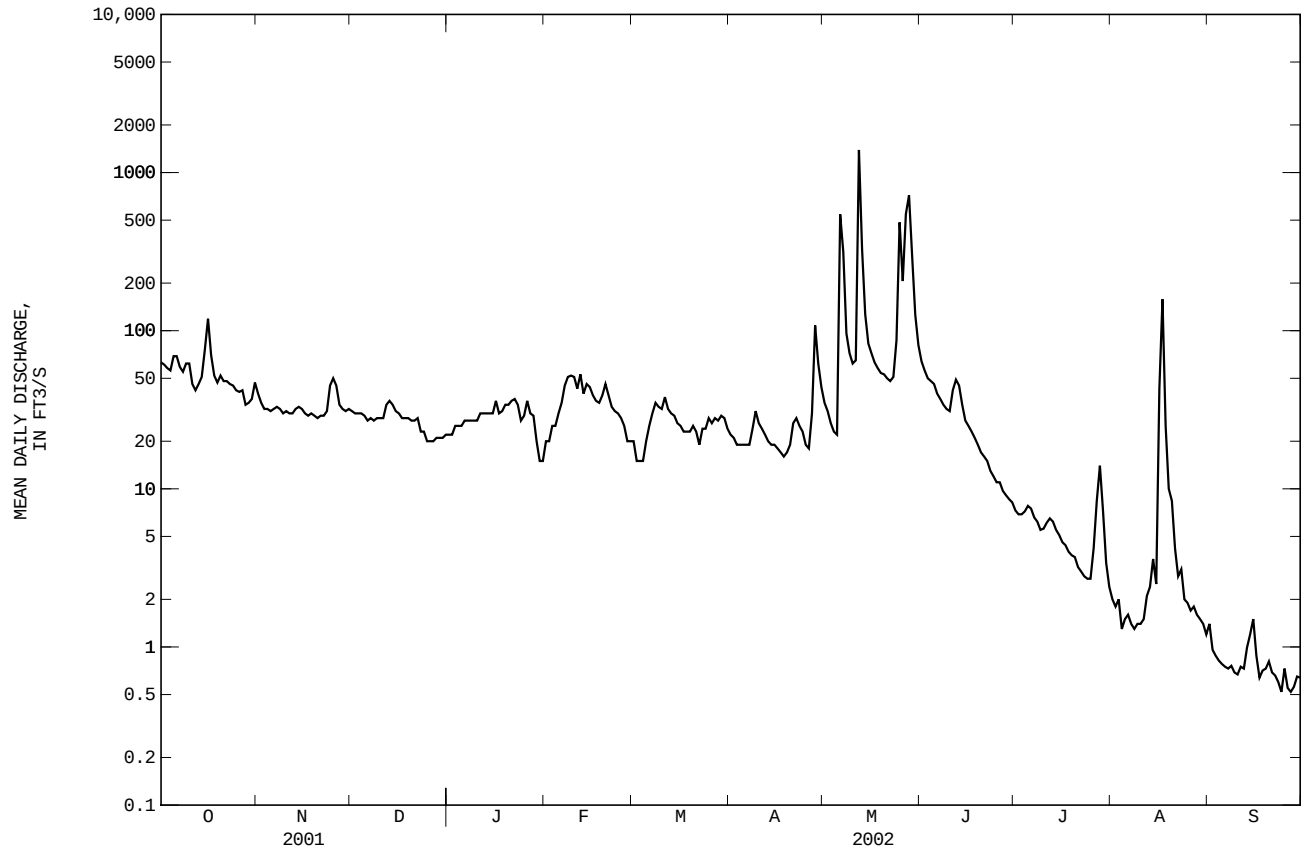
06814000 TURKEY CREEK NEAR SENECA, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	83.04	49.00	33.47	40.39	93.67	206.8	176.8	228.2	240.6	205.6	80.43	133.1
MAX	1050	419	206	310	372	1297	1079	1354	2067	3193	914	1057
(WY)	1974	1999	1974	1962	1982	1979	1984	1995	1951	1993	1954	1958
MIN	0.000	0.000	0.000	0.000	0.018	0.065	0.28	2.43	2.75	0.92	1.48	0.000
(WY)	1957	1957	1957	1957	1957	1957	1956	1989	1977	1989	1988	1956

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1949 - 2002	
ANNUAL MEAN	227.6		39.81		129.4	
HIGHEST ANNUAL MEAN					547	1993
LOWEST ANNUAL MEAN					3.24	1956
HIGHEST DAILY MEAN	6850	Sep 17	1390	May 12	16700	Oct 11 1973
LOWEST DAILY MEAN	0.75	Jan 1	0.52	Sep 24	0.00	Jul 28 1956
ANNUAL SEVEN-DAY MINIMUM	1.7	Jan 1	0.59	Sep 23	0.00	Aug 21 1956
MAXIMUM PEAK FLOW			2550	May 12	21400	Oct 11 1973
MAXIMUM PEAK STAGE			12.96	May 12	24.77	Oct 11 1973
INSTANTANEOUS LOW FLOW			0.45	Sep 24	0.00	Jul 28 1956
ANNUAL RUNOFF (AC-FT)	164700		28820		93760	
10 PERCENT EXCEEDS	468		57		203	
50 PERCENT EXCEEDS	39		27		22	
90 PERCENT EXCEEDS	3.5		1.5		2.0	

e Estimated



06827000 SOUTH FORK REPUBLICAN RIVER NEAR COLORADO-KANSAS STATE LINE, KS

LOCATION.--Lat 39°40'20", long 102°00'40", in NE 1/4 SE $^{1}/_{4}$ SE $^{1}/_{4}$ sec.27, T.4 S., R.42 W., Cheyenne County, Hydrologic Unit 10250003, on left bank near downstream wingwall of bridge on county road, 2 mi downstream from CO-KS state line, 0.3 mi downstream from Cowpe Creek, 5 mi downstream from Beaver Creek and 15 mi southwest of St. Francis and at mile 41.7.

DRAINAGE AREA.--1,860 mi^2.

PERIOD OF RECORD.--June 1945 to September 1956. June 2002 to September 2002.

GAGE.--Water-stage recorder. Datum of gage is 3467.10 ft above NGVD of 1929. June 6, 1945, to Sept. 30, 1956, stilling well gage at same location, gage datum 3,469.98 ft above NGVD of 1929.

REMARKS.--Records fair. Natural flow affected by Bonny Lake (about 10 mi upstream), ground-water withdrawals, and diversions from Hale Ponds (about 5 mi upstream). Satellite telemeter at station.

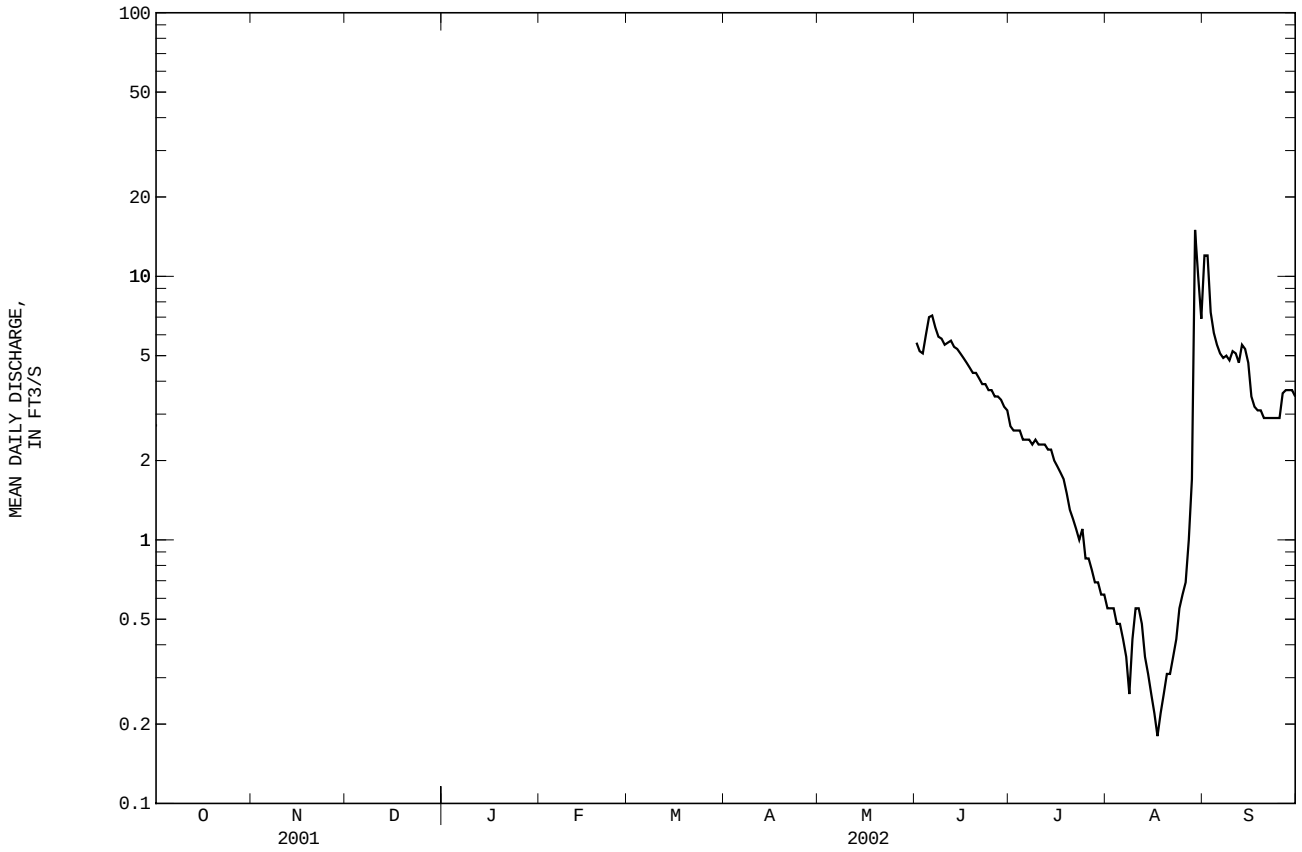
DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	5.6	2.7	0.55	12
2	---	---	---	---	---	---	---	---	5.2	2.6	0.55	12
3	---	---	---	---	---	---	---	---	5.1	2.6	0.55	7.3
4	---	---	---	---	---	---	---	---	6.0	2.6	0.48	6.1
5	---	---	---	---	---	---	---	---	7.0	2.4	0.48	5.5
6	---	---	---	---	---	---	---	---	7.1	2.4	0.42	5.1
7	---	---	---	---	---	---	---	---	6.4	2.4	0.36	4.9
8	---	---	---	---	---	---	---	---	5.9	2.3	0.26	5.0
9	---	---	---	---	---	---	---	---	5.8	2.4	0.42	4.8
10	---	---	---	---	---	---	---	---	5.5	2.3	0.55	5.2
11	---	---	---	---	---	---	---	---	5.6	2.3	0.55	5.1
12	---	---	---	---	---	---	---	---	5.7	2.3	0.48	4.7
13	---	---	---	---	---	---	---	---	5.4	2.2	0.36	5.5
14	---	---	---	---	---	---	---	---	5.3	2.2	0.31	5.3
15	---	---	---	---	---	---	---	---	5.1	2.0	0.26	4.7
16	---	---	---	---	---	---	---	---	4.9	1.9	0.22	3.5
17	---	---	---	---	---	---	---	---	4.7	1.8	0.18	3.2
18	---	---	---	---	---	---	---	---	4.5	1.7	0.22	3.1
19	---	---	---	---	---	---	---	---	4.3	1.5	0.26	3.1
20	---	---	---	---	---	---	---	---	4.3	1.3	0.31	2.9
21	---	---	---	---	---	---	---	---	4.1	1.2	0.31	2.9
22	---	---	---	---	---	---	---	---	3.9	1.1	0.36	2.9
23	---	---	---	---	---	---	---	---	3.9	1.0	0.42	2.9
24	---	---	---	---	---	---	---	---	3.7	1.1	0.55	2.9
25	---	---	---	---	---	---	---	---	3.7	0.85	0.62	2.9
26	---	---	---	---	---	---	---	---	3.5	0.85	0.69	3.6
27	---	---	---	---	---	---	---	---	3.5	0.77	1.0	3.7
28	---	---	---	---	---	---	---	---	3.4	0.69	1.7	3.7
29	---	---	---	---	---	---	---	---	3.2	0.69	15	3.7
30	---	---	---	---	---	---	---	---	3.1	0.62	10	3.5
31	---	---	---	---	---	---	---	---	---	0.62	6.9	---
MEAN	---	---	---	---	---	---	---	---	4.847	1.722	1.462	4.723
MAX	---	---	---	---	---	---	---	---	7.1	2.7	15	12
MIN	---	---	---	---	---	---	---	---	3.1	0.62	0.18	2.9
AC-FT	---	---	---	---	---	---	---	---	288	106	90	281

06827000 SOUTH FORK REPUBLICAN RIVER NEAR COLORADO-KANSAS STATE LINE, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	26.56	33.51	29.15	31.41	38.09	40.92	50.89	52.80	51.32	33.74	23.67	13.63
MAX	50.0	54.2	52.7	58.1	76.5	78.0	107	123	163	124	114	50.5
(WY)	1956	1947	1949	1947	1948	1951	1952	1947	1955	1946	1949	1949
MIN	9.16	13.5	12.0	13.6	13.7	14.2	16.0	11.7	4.85	1.60	1.46	2.89
(WY)	1954	1953	1953	1951	1953	1956	1956	1956	2002	1952	2002	1954



06844900 SOUTH FORK SAPPA CREEK NEAR ACHILLES, KS

LOCATION.--Lat 39°40'37", long 100°43'18", in SW $^1/_4$ SW $^1/_4$ NW $^1/_4$ sec.29, T.4 S., R.30 W., Decatur County, Hydrologic Unit 10250010, on right bank at downstream side of county highway bridge, 5.5 mi southeast of Achilles, 14 mi southwest of Oberlin, and 18.5 mi upstream from confluence with North Fork.

DRAINAGE AREA.--446 mi^2, of which 68 mi^2 is probably noncontributing.

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

GAGE.--Water-stage recorder. Datum of gage is 2,722.42 ft above NGVD of 1929.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Natural flow affected by ground-water withdrawals. Satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb 12	0100	*0.09	*4.96	No peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	e0.01	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	e0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	e0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.01	0.00	e0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	e0.01	0.0	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	e0.02	0.0	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	e0.01	e0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.01	e0.01	e0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.01	e0.01	0.01	0.0	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.01	e0.02	0.04	0.01	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	e0.01	e0.02	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	e0.01	e0.02	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	e0.01	e0.01	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	e0.01	e0.01	0.02	0.0	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	e0.01	e0.01	0.02	0.0	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.01	e0.01	0.02	0.0	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.02	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.01	e0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.02	e0.02	0.02	0.0	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.02	e0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.02	e0.03	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	e0.01	e0.02	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.02	e0.01	e0.02	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	e0.01	e0.03	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.0	e0.01	e0.02	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	e0.01	e0.01	e0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	e0.01	e0.01	e0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	e0.01	e0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	e0.01	0.0	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	e0.01	e0.00	---	0.00	---	0.00	---	0.00	0.00	---
MEAN	0.000	0.001	0.009	0.011	0.013	0.004	0.000	0.000	0.000	0.000	0.000	0.000
MAX	0.00	0.02	0.02	0.03	0.04	0.02	0.00	0.00	0.00	0.00	0.00	0.00
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.04	0.6	0.7	0.7	0.2	0.00	0.00	0.00	0.00	0.00	0.00

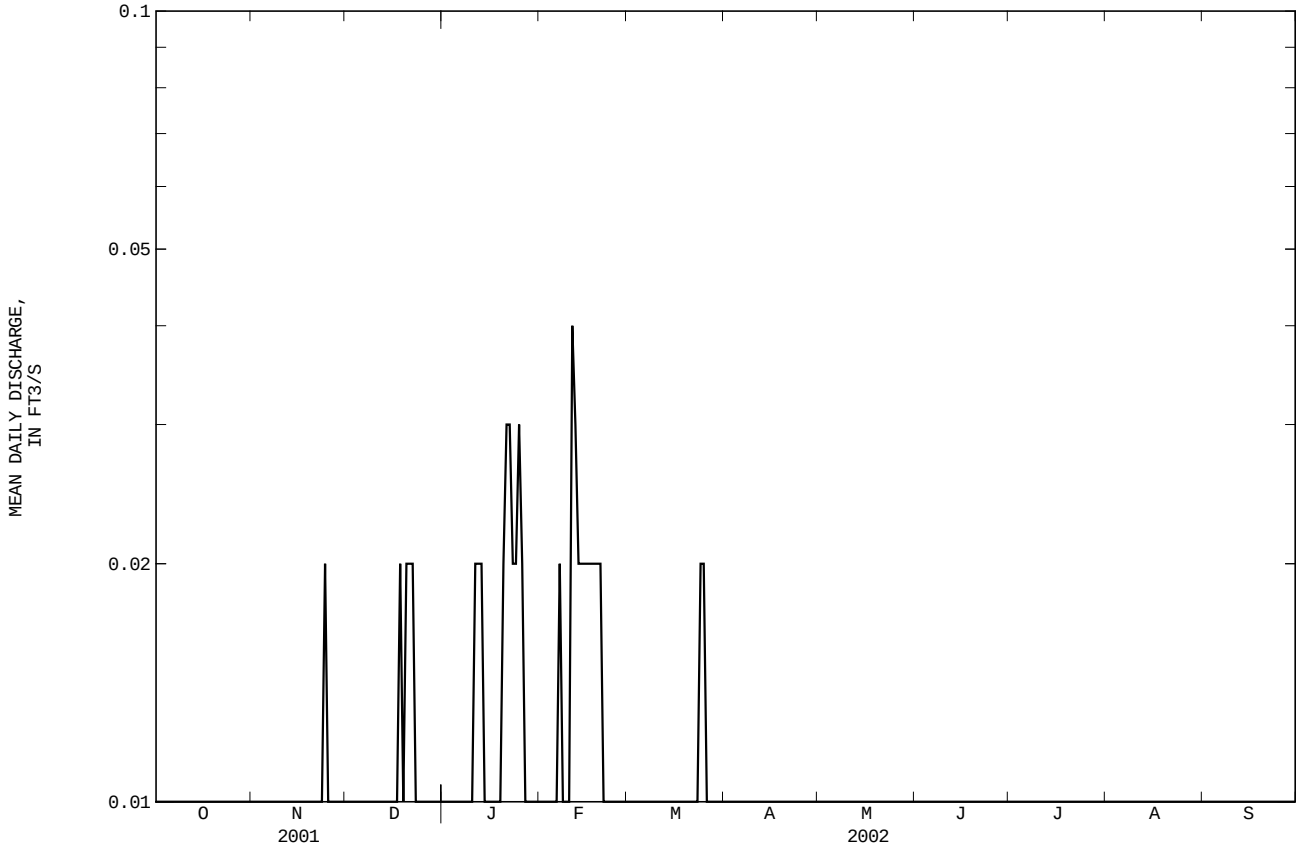
06844900 SOUTH FORK SAPPA CREEK NEAR ACHILLES, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.945	0.200	0.193	0.309	0.946	7.281	1.455	3.986	11.90	6.881	3.560	1.643
MAX	37.9	3.78	2.48	2.78	16.4	243	20.0	31.9	200	116	36.9	33.2
(WY)	1966	1966	1966	1993	1963	1960	1971	1981	1975	1982	1975	1965
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1960	1960	1960	1960	1961	1961	1961	1964	1980	1961	1961	1960

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1960 - 2002	
ANNUAL MEAN	0.943		0.003		3.287	
HIGHEST ANNUAL MEAN					27.8	1960
LOWEST ANNUAL MEAN					0.003	2002
HIGHEST DAILY MEAN	132	May 29	0.04	Feb 11	3060	Jun 19 1975
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 1	0.00	Oct 1 1959
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 1	0.00	Oct 1 1959
MAXIMUM PEAK FLOW			0.09	Feb 12	5310	Jun 19 1975
MAXIMUM PEAK STAGE			4.96	Feb 12	11.90	Jun 15 1996
INSTANTANEOUS LOW FLOW			0.00	Oct 1	.00	many days
ANNUAL RUNOFF (AC-FT)	683		2.2		2380	
10 PERCENT EXCEEDS	0.61		0.01		2.1	
50 PERCENT EXCEEDS	0.01		0.00		0.00	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

e Estimated



06845000 SAPPA CREEK NEAR OBERLIN, KS

LOCATION.--Lat 39°48'45", long 100°32'00", in NW $^1/_4$ NW $^1/_4$ NW $^1/_4$ sec.12, T.3 S., R.29 W., Decatur County, Hydrologic Unit 10250011, on left bank at downstream side of State Highway 83 bridge, 1.1 mi south of intersection of Highways 36 and 83, 3.0 mi downstream from confluence of North and South Forks, and at mile 133.6.

DRAINAGE AREA.--1,086 mi^2, of which 163 mi^2 is probably noncontributing.

PERIOD OF RECORD.--October 1928 to September 1932. June 1944 to September 1972. October 1995 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1340: 1929(M), 1931, 1944(M), 1947(M), 1949, 1951(M), 1953(M).

GAGE.--Water-stage recorder. Elevation of gage 2,540 ft above NGVD of 1929, from topographic map. Mar. 18, 1929, to June 30, 1932, staff gage at site 3.3 mi downstream at datum 2,522.98 ft above NGVD of 1929, June 22, 1944, to June 15, 1945, wire-weight gage 150 ft downsteam of previous site at datum 2.20 ft lower. Jan. 16, 1945, to Sept. 30, 1955, water-stage recorder and concrete control 100 ft above previous wire-weight gage site at datum 2,522.50 ft above NGVD of 1929. Oct. 1, 1955, to May 21, 1958, and Jan. 5 to May 15, 1959, wire-weight gage at present site at different datum. May 20, 1959, to Sept. 30, 1972, water-stage recorder at site 3.7 miles upstream at datum 2,562.07 ft above NGVD of 1929.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Natural flow affected by ground-water withdrawals. Satellite telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,600 ft^3/sec July 16, 1944, (gage height 15.28 ft, site and datum then in use, from floodmark), from rating curve extended above 4,200 ft^3/sec on basis of peak flow over dam; no flow at times.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 200 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jun 15	1800	*12	*6.86	No peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.0	0.03	e0.03	e0.02	e0.03	e0.03	0.03	0.11	0.00	0.00	0.00	0.00
2	0.0	0.03	e0.03	e0.02	e0.03	e0.02	0.02	0.07	0.00	0.01	0.00	0.00
3	0.0	0.03	e0.04	e0.02	e0.03	e0.02	0.02	0.06	0.00	0.02	0.00	0.00
4	0.02	0.03	0.04	e0.03	e0.03	e0.04	0.02	0.06	0.05	0.01	0.00	0.00
5	0.02	0.03	0.05	e0.03	e0.03	e0.04	0.02	0.07	0.02	0.01	0.00	0.00
6	0.02	0.03	0.03	e0.04	e0.03	e0.04	0.02	0.06	0.02	0.0	0.00	0.00
7	0.02	0.04	0.03	e0.05	e0.03	e0.03	0.02	0.06	0.00	0.00	0.00	0.00
8	0.02	0.04	0.03	e0.06	e0.04	e0.02	0.02	0.06	0.00	0.01	0.00	0.00
9	0.03	0.03	0.03	e0.07	e0.04	e0.02	0.02	0.03	0.00	0.0	0.00	0.00
10	0.02	0.04	0.03	e0.07	0.03	e0.03	0.02	0.00	0.00	0.0	0.00	0.00
11	0.03	0.04	0.03	e0.07	e0.03	e0.05	0.02	0.47	0.03	0.01	0.00	0.00
12	0.03	0.04	0.05	e0.06	0.03	0.07	0.03	0.02	0.00	0.02	0.00	0.00
13	0.03	0.04	0.03	e0.05	0.03	0.07	0.02	0.05	0.01	0.02	0.00	0.00
14	0.02	0.04	0.03	e0.03	0.03	0.11	0.02	0.04	0.01	0.02	0.00	0.00
15	0.05	0.03	0.03	e0.03	0.03	0.07	0.02	0.02	2.6	0.00	0.00	0.00
16	0.03	0.03	0.03	e0.02	0.03	0.05	0.02	0.0	0.30	0.00	0.00	0.00
17	0.02	0.04	0.03	e0.02	0.04	0.03	0.02	0.0	0.03	0.00	0.00	0.00
18	0.03	0.03	0.04	e0.02	0.04	0.03	0.02	0.01	0.02	0.00	0.00	0.00
19	0.02	0.03	0.03	e0.03	0.05	0.03	0.02	0.02	0.01	0.00	0.00	0.00
20	0.03	0.03	0.03	e0.03	0.04	0.03	0.03	0.02	0.01	0.00	0.00	0.00
21	0.03	0.03	0.04	e0.03	0.04	0.02	0.03	0.02	0.02	0.00	0.00	0.00
22	0.03	0.04	0.03	e0.05	0.04	0.02	0.03	0.01	0.0	0.00	0.00	0.00
23	0.03	0.10	0.03	e0.06	0.04	0.03	0.03	0.01	0.00	0.00	0.00	0.00
24	0.02	0.10	e0.03	e0.06	0.04	0.03	0.03	0.22	0.0	0.00	0.00	0.00
25	0.03	0.05	e0.03	e0.05	0.02	0.03	0.03	0.07	0.0	0.00	0.00	0.00
26	0.03	0.05	e0.03	e0.05	e0.02	0.03	0.05	0.03	0.02	0.00	0.00	0.00
27	0.03	0.04	e0.03	e0.04	e0.03	0.04	0.07	0.02	0.02	0.00	0.00	0.00
28	0.03	e0.03	e0.03	e0.03	e0.03	0.12	0.05	0.33	0.02	0.00	0.00	0.00
29	0.03	e0.03	e0.03	0.02	---	0.09	0.11	0.47	0.0	0.00	0.00	0.00
30	0.03	e0.03	e0.02	e0.02	---	0.05	0.14	0.05	0.00	0.00	0.00	0.00
31	0.03	---	e0.02	e0.03	---	0.05	---	0.01	---	0.00	0.00	---
MEAN	0.025	0.039	0.032	0.039	0.033	0.043	0.033	0.080	0.106	0.004	0.000	0.000
MAX	0.05	0.10	0.05	0.07	0.05	0.12	0.14	0.47	2.6	0.02	0.00	0.00
MIN	0.00	0.03	0.02	0.02	0.02	0.02	0.02	0.00	0.00	0.00	0.00	0.00
AC-FT	1.5	2.3	2.0	2.4	1.8	2.7	2.0	4.9	6.3	0.3	0.00	0.00

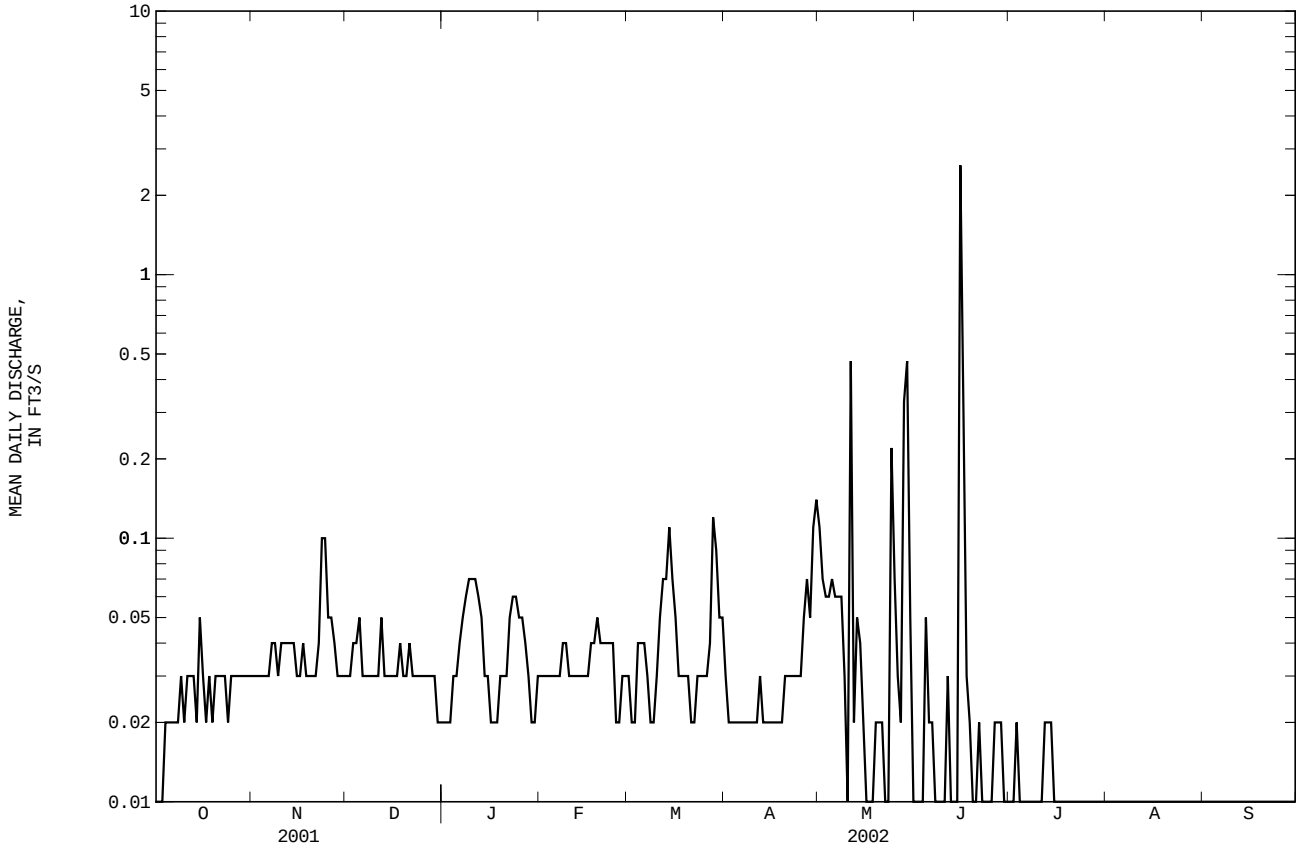
06845000 SAPPA CREEK NEAR OBERLIN, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	16.22	2.853	2.206	1.700	5.087	14.70	5.477	20.51	38.01	44.69	19.56	12.19
MAX	356	33.5	16.8	9.68	31.7	403	28.3	189	235	594	148	197
(WY)	1947	1947	1947	1931	1949	1960	1931	1957	1957	1944	1949	1951
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.000	0.000
(WY)	1954	1955	1956	1955	1956	1956	1956	1956	1956	2002	1963	1953

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1929 - 2002	
ANNUAL MEAN	1.100		0.036		14.30	
HIGHEST ANNUAL MEAN					84.2	1951
LOWEST ANNUAL MEAN					0.036	2002
HIGHEST DAILY MEAN	102	May 30	2.6	Jun 15	5100	Mar 21 1960
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 1	0.00	Aug 29 1947
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Jul 15	0.00	Jan 31 1949
MAXIMUM PEAK FLOW			12	Jun 15	1850	Jun 15 1996
MAXIMUM PEAK STAGE			6.86	Jun 15	18.16	Jun 15 1996
INSTANTANEOUS LOW FLOW			0.00	Oct 1	0.00	Mar 25 1996
ANNUAL RUNOFF (AC-FT)	796		26		10360	
10 PERCENT EXCEEDS	1.0		0.05		17	
50 PERCENT EXCEEDS	0.03		0.03		0.50	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

e Estimated



06845110 SAPPA CREEK NEAR LYLE, KS

LOCATION.--Lat 40°00'00", long 99°59'35", in NE $^{1}/_{4}$ NE $^{1}/_{4}$ NW $^{1}/_{4}$ sec.2, T.01 S., R.24 W., Norton County, Hydrologic Unit 10250011, on right bank at upstream side of county highway bridge, 11.5 mi north and 5.5 mi west of Norton, on Kansas-Nebraska State line, and at mile 66.4.

DRAINAGE AREA.--1,488 mi^2.

PERIOD OF RECORD.--October 1995 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 2,240 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Natural flow affected by ground-water withdrawals and return flow from irrigated areas. Satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 250 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb 22	2300	*10	*5.01	No peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.5	2.8	2.8	3.5	e5.2	e7.2	6.6	3.1	3.4	0.58	0.22	0.10
2	1.3	1.6	2.9	3.5	5.7	e7.2	6.2	3.0	3.4	0.60	0.23	0.09
3	1.2	1.3	e2.9	3.4	6.0	e7.3	6.2	3.0	3.8	0.62	0.22	0.09
4	1.0	2.1	e3.0	4.0	6.2	7.3	6.0	2.8	3.6	0.60	0.20	0.09
5	0.39	2.2	e3.0	2.9	6.3	e7.3	6.2	2.6	3.8	0.50	0.19	0.09
6	0.66	2.3	e3.0	2.7	6.3	e7.2	6.1	2.3	3.7	0.40	0.15	0.09
7	0.76	2.5	e3.1	e2.9	6.2	e6.8	6.4	2.2	3.7	0.54	0.15	0.08
8	0.80	2.4	e3.1	3.1	5.5	e6.4	6.2	2.4	3.4	0.37	0.13	0.08
9	0.82	2.3	e3.1	3.3	5.1	e6.2	6.2	2.3	2.8	0.40	0.25	0.09
10	0.86	2.5	e3.1	3.2	e4.7	e6.3	6.1	1.9	2.2	0.43	0.18	0.10
11	0.90	2.5	e3.1	e3.3	e4.7	e6.0	5.8	3.4	2.2	0.46	0.13	0.10
12	0.85	2.4	e3.2	e3.6	e4.8	e6.0	5.9	3.9	2.1	0.42	0.15	0.10
13	0.92	2.5	e3.2	e3.8	e5.0	e6.0	5.6	3.5	2.0	0.58	0.20	0.12
14	0.96	2.5	e3.2	e3.9	e5.2	e6.0	5.4	3.0	1.6	0.63	0.20	0.14
15	0.85	2.5	e3.2	e3.8	e5.3	e6.0	4.9	2.4	1.4	0.69	0.14	0.13
16	1.0	2.7	e3.2	e3.6	e5.7	e6.3	4.5	2.7	1.6	0.71	0.13	0.12
17	1.1	2.7	e3.2	e3.5	e6.0	e6.6	4.1	2.8	2.3	0.64	0.12	0.11
18	1.2	3.0	e3.2	e3.5	6.6	6.8	3.9	2.7	2.0	0.71	0.13	0.11
19	1.1	3.1	e3.2	e3.5	6.8	6.9	3.8	3.1	1.8	0.67	0.14	0.12
20	1.6	2.8	e3.3	e3.5	6.8	6.7	3.5	2.7	1.7	0.45	0.16	0.11
21	1.4	2.9	e3.3	e3.5	6.7	6.7	3.6	2.4	1.6	0.33	0.10	0.10
22	0.94	2.7	e3.4	e3.4	6.5	6.2	3.5	2.2	1.5	0.35	0.09	0.10
23	0.66	3.0	e3.4	e3.3	7.0	6.4	3.3	2.2	1.3	0.24	0.11	0.11
24	0.44	3.9	e3.6	e3.3	e6.8	6.6	3.3	2.2	1.0	0.36	0.09	0.11
25	0.79	4.1	e3.6	e3.2	e7.0	6.5	2.6	2.7	0.97	0.17	0.13	0.11
26	0.84	3.8	3.7	e3.2	7.0	6.2	2.6	2.9	0.95	0.11	0.13	0.11
27	0.99	e3.7	4.0	e3.3	e7.0	6.9	3.0	3.0	1.2	0.21	0.13	0.13
28	1.3	3.4	4.0	e3.4	6.7	6.8	3.1	3.0	1.1	0.15	0.11	0.12
29	1.6	2.9	4.2	e3.8	---	6.6	3.3	3.1	0.75	0.15	0.10	0.13
30	1.7	2.8	4.0	4.3	---	6.8	3.2	3.2	0.62	0.15	0.10	0.11
31	1.8	---	3.5	e4.8	---	6.9	---	3.2	---	0.21	0.10	---
MEAN	1.040	2.730	3.313	3.484	6.029	6.616	4.703	2.771	2.116	0.433	0.149	0.106
MAX	1.8	4.1	4.2	4.8	7.0	7.3	6.6	3.9	3.8	0.71	0.25	0.14
MIN	0.39	1.3	2.8	2.7	4.7	6.0	2.6	1.9	0.62	0.11	0.09	0.08
AC-FT	64	162	204	214	335	407	280	170	126	27	9.1	6.3

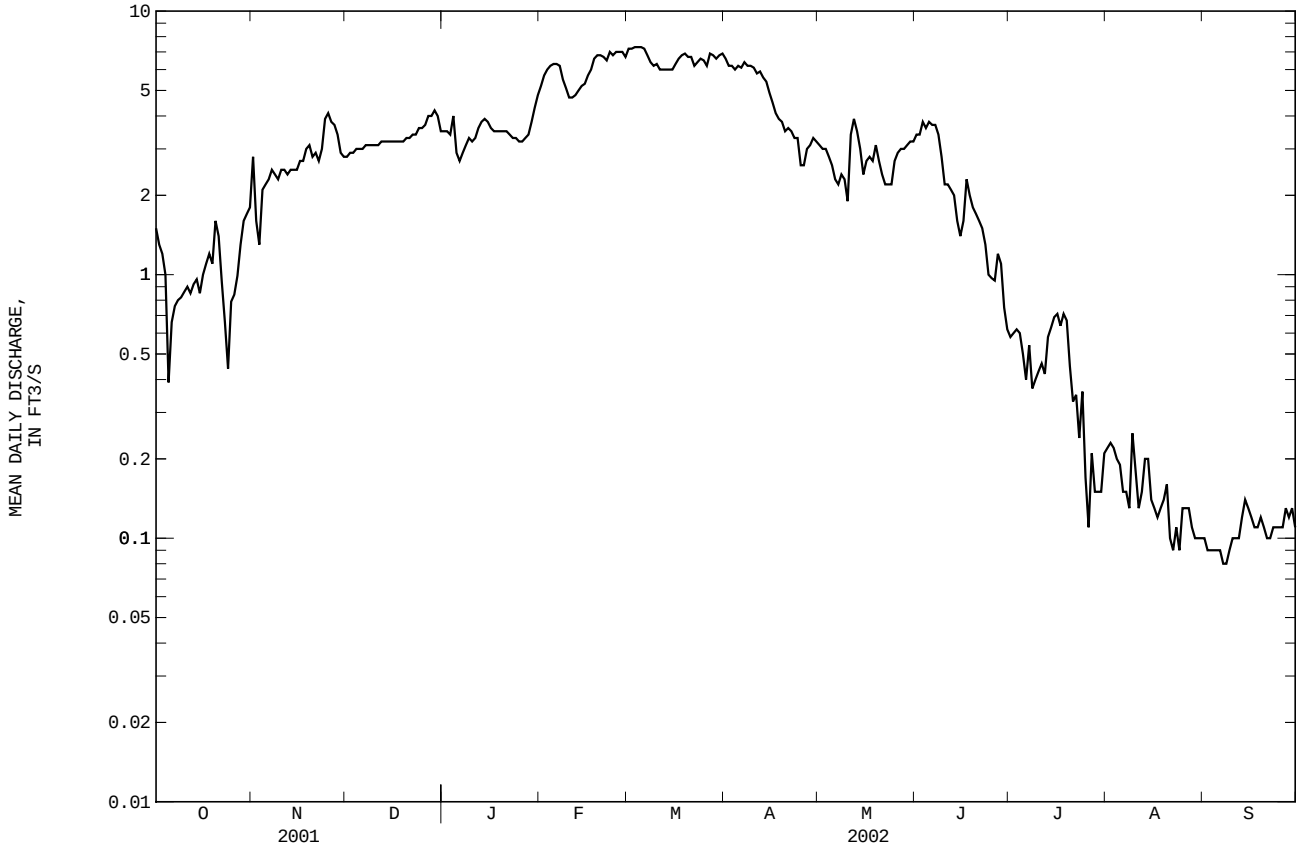
06845110 SAPPA CREEK NEAR LYLE, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	6.364	9.951	10.28	11.01	13.63	15.06	14.42	15.05	32.10	15.43	21.56	7.790
MAX	21.1	26.8	28.8	28.0	29.3	28.7	27.9	24.6	153	53.7	77.9	34.2
(WY)	1997	1997	1997	1997	1997	1997	1997	1997	1996	1996	1996	1996
MIN	1.04	2.73	0.73	2.72	3.54	6.62	4.70	2.77	2.12	0.43	0.15	0.11
(WY)	2002	2002	2001	2001	2001	2002	2002	2002	2002	2002	2002	2002

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1996 - 2002	
ANNUAL MEAN	6.141		2.768		14.38	
HIGHEST ANNUAL MEAN					33.2	1996
LOWEST ANNUAL MEAN					2.77	2002
HIGHEST DAILY MEAN	67	Mar 9	7.3	Mar 3	642	Jun 23 1996
LOWEST DAILY MEAN	0.38	Jan 1	0.08	Sep 7	0.08	Sep 7 2002
ANNUAL SEVEN-DAY MINIMUM	0.74	Oct 5	0.09	Sep 2	0.09	Sep 2 2002
MAXIMUM PEAK FLOW			10	Feb 22	786	Jun 23 1996
MAXIMUM PEAK STAGE			5.01	Feb 22	17.46	Jun 23 1996
INSTANTANEOUS LOW FLOW			0.06	Sep 8	0.06	Sep 8 2002
ANNUAL RUNOFF (AC-FT)	4450		2000		10410	
10 PERCENT EXCEEDS	11		6.3		28	
50 PERCENT EXCEEDS	3.1		2.8		9.0	
90 PERCENT EXCEEDS	1.1		0.13		1.1	

e Estimated



06846000 BEAVER CREEK AT LUDELL, KS

LOCATION.--Lat 39°50'53", long 100°57'40", in SE $^1/_4$ NW $^1/_4$ SW $^1/_4$ sec.30, T.2 S., R.32 W., Rawlins County, Hydrologic Unit 10250014 on left bank at downstream side of bridge on county highway, 0.5 mi south of Ludell, and 10.5 mi downstream from Little Beaver Creek, and at mile 147.8.

DRAINAGE AREA.--1,411 mi^2.

PERIOD OF RECORD.--March 1929 to June 1932, September 1945 to September 1953, annual maximum, 1961-1988. October 1995 to current year. Monthy discharge only for some periods, published in WSP 1310.

GAGE.--Water-stage recorder. Datum of gage is 2,753.93 ft above NGVD of 1929. March 1929 to June 1932 staff gage at railroad bridge 120 ft upstream from present site at datum 1.7 ft higher. September 1945 to October 1946 wire-weight gage on bridge 35 ft upstream from present site at same datum, and October 1946 to September 1953 water-stage recorder at same site and datum. August 1961 to September 1988 crest-stage gage at same site and datum.

REMARKS.--Records good. Natural flow affected by Atwood City Lake, ground-water withdrawals, diversions upstream for irrigation, and return flow from irrigated areas. Satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Aug 27	1700	*1,060	*10.69	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

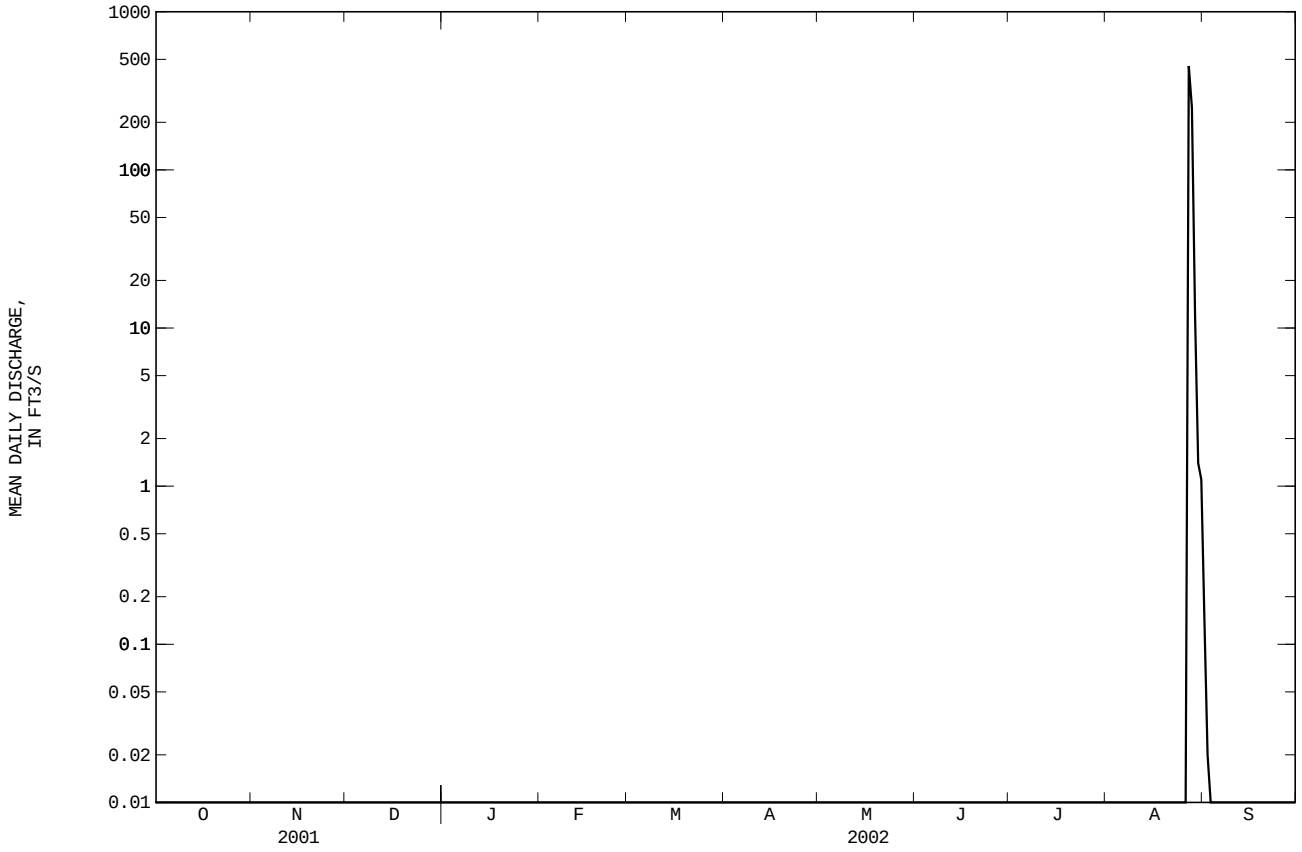
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	454	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	247	0.00
29	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	12	0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	1.4	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	1.1	---
MEAN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	23.08	0.005
MAX	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	454	0.14
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1420	0.3

06846000 BEAVER CREEK AT LUDELL, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	5.422	3.623	3.091	2.996	5.541	7.836	8.843	14.20	36.50	30.37	20.28	22.71
MAX	45.3	19.5	13.7	13.2	17.1	23.8	32.0	53.0	344	321	93.1	212
(WY)	1947	1947	1947	1952	1952	1949	1949	1949	1951	1951	1996	1951
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1999	1996	2001	2001	2001	2001	2001	2002	2002	2002	2000	1953

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1930 - 2002	
ANNUAL MEAN	0.451		1.961		13.67	
HIGHEST ANNUAL MEAN					84.6	1951
LOWEST ANNUAL MEAN					0.45	2001
HIGHEST DAILY MEAN	72	May 29	454	Aug 27	2000	Jul 13 1951
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 1	0.00	Nov 11 1945
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 1	0.00	Nov 11 1945
MAXIMUM PEAK FLOW			1060	Aug 27	3800	May 24 1965
MAXIMUM PEAK STAGE			10.69	Aug 27	11.37	May 24 1965
INSTANTANEOUS LOW FLOW			0.00	Oct 1	.00	most years
ANNUAL RUNOFF (AC-FT)	326		1420		9900	
10 PERCENT EXCEEDS	0.00		0.00		20	
50 PERCENT EXCEEDS	0.00		0.00		2.9	
90 PERCENT EXCEEDS	0.00		0.00		0.00	



06846500 BEAVER CREEK AT CEDAR BLUFFS, KS

LOCATION.--Lat 39°59'06", long 100°33'35", in NW 1/4 NE 1/4 sec.10, T.1 S., R.29 W., Decatur County, Hydrologic Unit 10250014, on right bank at downstream side of bridge on U.S. Highway 83, 0.2 mi north of Cedar Bluffs, 1.0 mi south of Kansas-Nebraska State line, and at mile 107.4.

DRAINAGE AREA.--1,618 mi^2, of which 294 mi^2 is probably noncontributing.

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

REVISED RECORDS.--WSP 1510: 1947, 1950-51.

GAGE.--Water-stage recorder. Datum of gage is 2,520.33 ft above NGVD of 1929. Prior to Aug. 19, 1971, at site 0.1 mi upstream at same datum. Aug. 19, 1971, to July 12, 1972, at site 0.8 mi downstream at datum 5.00 ft lower.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in July 1944 reached a stage of 18.16 ft, from floodmark.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 300 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jul 25	2000	*1.2	*3.04	No peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.0	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.0	0.00	0.00	0.00	0.0	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43	0.00	0.00
27	0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00
28	0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	e0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
MEAN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.025	0.000	0.000
MAX	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43	0.00	0.00
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.5	0.00	0.00

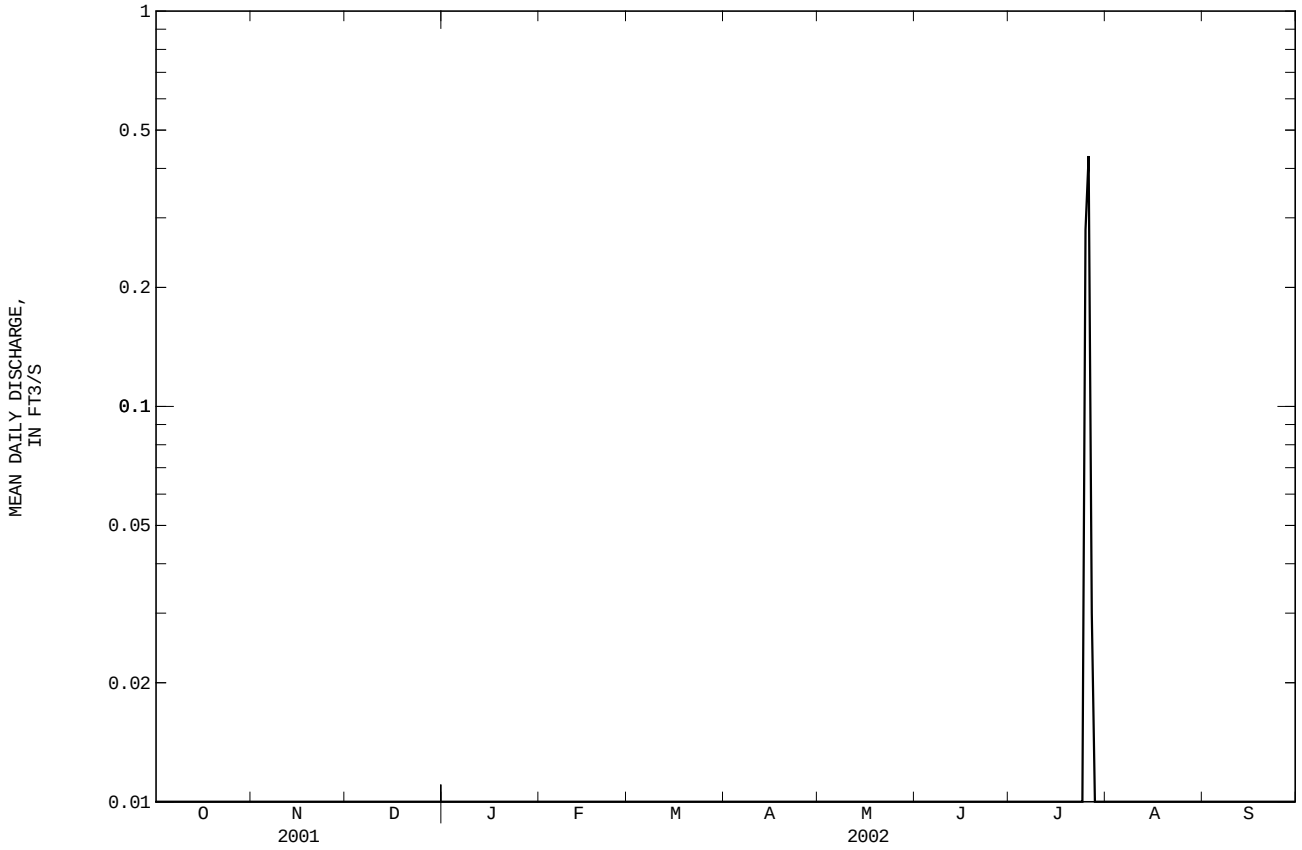
06846500 BEAVER CREEK AT CEDAR BLUFFS, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	8.517	2.810	2.410	2.096	3.695	11.30	6.934	22.58	37.28	28.57	14.98	15.43
MAX	231	39.6	30.4	28.4	28.1	369	61.7	432	278	391	146	421
(WY)	1947	1966	1966	1966	1966	1960	1960	1957	1960	1951	1962	1951
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1954	1955	1955	1955	1956	1955	1955	1955	1979	1980	1955	1953

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1946 - 2002	
ANNUAL MEAN	0.150		0.002		13.11	
HIGHEST ANNUAL MEAN					106	1951
LOWEST ANNUAL MEAN					0.000	1991
HIGHEST DAILY MEAN	17	Sep 17	0.43	Jul 26	4560	Jun 11 1960
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 1	0.00	Sep 3 1946
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 1	0.00	Sep 23 1947
MAXIMUM PEAK FLOW			1.2	Jul 25	127	Sep 17 2001
MAXIMUM PEAK STAGE			3.04	Jul 25	18.71	Jun 11 1960
INSTANTANEOUS LOW FLOW			0.00	Oct 1	.00	most years
ANNUAL RUNOFF (AC-FT)	109		1.5		9500	
10 PERCENT EXCEEDS	0.00		0.00		22	
50 PERCENT EXCEEDS	0.00		0.00		0.00	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

e Estimated



06847900 PRAIRIE DOG CREEK ABOVE KEITH SEBELIUS LAKE, KS

LOCATION.--Lat 39°46'13", long 100°06'00", in SE $^1/_4$ SE $^1/_4$ sec.23, T.3 S., R.25 W., Norton County, Hydrologic Unit 10250015, on right bank 50 ft downstream from county highway bridge, 4.0 mi east of Clayton, and at mile 90.4.

WATER-DISCHARGE RECORDS

DRAINAGE AREA.--590 mi^2.

PERIOD OF RECORD.--June 1962 to current year. Prior to Dec. 28, 1980, published as Prairie Dog Creek above Norton Reservoir.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 2,334.94 ft above NGVD of 1929. Prior to Sept. 30, 1974, at datum 2.00 ft higher.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Diversions for irrigation upstream from station. Satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum known flood since at least 1944, 65,500 ft^3/sec May 28, 1953, at site 9.4 mi downstream, based on contracted-opening measurement of peak flow.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 700 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb 10	1500	*10	*3.88	No peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.7	2.9	3.8	3.5	e3.7	3.7	5.3	4.9	2.6	0.10	0.0	0.00
2	1.6	2.9	3.8	3.2	e3.8	e4.0	5.3	4.8	2.3	0.10	0.0	0.00
3	1.5	2.8	4.0	3.5	e4.0	e4.5	5.0	4.9	2.1	0.10	0.0	0.00
4	1.5	2.9	3.8	3.8	4.2	e5.4	5.0	4.8	2.4	0.08	0.0	0.00
5	1.5	3.0	4.0	4.5	4.4	5.6	5.1	4.8	2.6	0.08	0.0	0.00
6	1.7	3.1	3.7	4.6	4.6	6.1	5.2	4.8	2.4	0.09	0.0	0.00
7	1.9	3.1	3.7	4.1	4.8	5.9	5.4	4.6	2.2	0.07	0.0	0.00
8	2.0	3.1	3.6	4.6	5.3	5.6	5.6	4.7	1.8	0.07	0.0	0.00
9	1.9	3.1	3.6	5.2	5.5	4.8	5.1	4.4	1.6	0.06	0.0	0.00
10	1.7	3.1	3.7	4.9	4.1	5.2	4.9	4.2	1.5	0.04	0.0	0.00
11	1.6	3.3	4.0	4.2	5.0	e5.4	5.0	4.7	1.7	0.03	0.0	0.00
12	1.8	3.2	3.9	4.8	5.6	5.6	5.1	4.5	1.4	0.04	0.0	0.00
13	2.0	3.4	3.7	4.8	4.7	5.5	5.1	4.0	1.3	0.07	0.00	0.00
14	2.1	3.4	3.7	4.3	5.6	5.4	5.3	3.9	1.3	0.05	0.00	0.00
15	2.1	3.4	4.2	3.6	5.0	5.2	5.3	3.8	1.4	0.03	0.00	0.00
16	2.0	3.3	3.9	4.2	5.0	4.9	5.2	3.8	1.4	0.01	0.00	0.00
17	2.0	3.3	3.6	4.4	4.9	5.1	4.9	3.9	2.0	0.0	0.00	0.00
18	2.1	3.4	4.2	3.7	5.2	5.1	4.9	3.8	1.5	0.0	0.00	0.00
19	2.2	3.2	3.6	4.5	5.3	5.1	4.9	3.7	1.2	0.0	0.00	0.00
20	2.3	3.2	3.7	4.2	5.1	5.0	4.7	3.7	0.96	0.0	0.00	0.00
21	2.3	3.4	4.1	4.2	5.0	4.8	4.8	3.5	0.82	0.0	0.00	0.00
22	2.3	3.5	4.2	4.7	4.9	4.6	4.8	3.3	0.69	0.0	0.00	0.00
23	2.3	4.0	e4.0	4.8	5.1	5.2	4.7	3.3	0.56	0.0	0.00	0.00
24	2.1	4.4	3.7	3.7	5.2	5.2	4.8	3.7	0.42	0.0	0.00	0.00
25	2.0	4.0	e4.0	4.3	4.4	5.0	4.6	4.1	0.34	0.0	0.00	0.00
26	2.1	3.6	e4.0	5.2	4.5	4.9	4.7	4.0	0.30	0.0	0.00	0.00
27	2.2	e3.4	4.1	5.0	4.6	5.2	4.9	3.5	0.23	0.0	0.00	0.00
28	2.5	3.2	4.1	4.3	5.0	5.2	4.9	3.2	0.18	0.0	0.00	0.00
29	2.7	3.4	3.5	3.8	---	5.2	4.8	3.1	0.13	0.0	0.00	0.00
30	2.7	3.8	3.5	e3.7	---	5.1	4.9	3.1	0.10	0.0	0.00	0.00
31	2.8	---	3.6	e3.6	---	5.1	---	2.8	---	0.0	0.00	---
MEAN	2.039	3.327	3.839	4.255	4.804	5.116	5.007	4.010	1.314	0.033	0.000	0.000
MAX	2.8	4.4	4.2	5.2	5.6	6.1	5.6	4.9	2.6	0.10	0.00	0.00
MIN	1.5	2.8	3.5	3.2	3.7	3.7	4.6	2.8	0.10	0.00	0.00	0.00
AC-FT	125	198	236	262	267	315	298	247	78	2.0	0.00	0.00

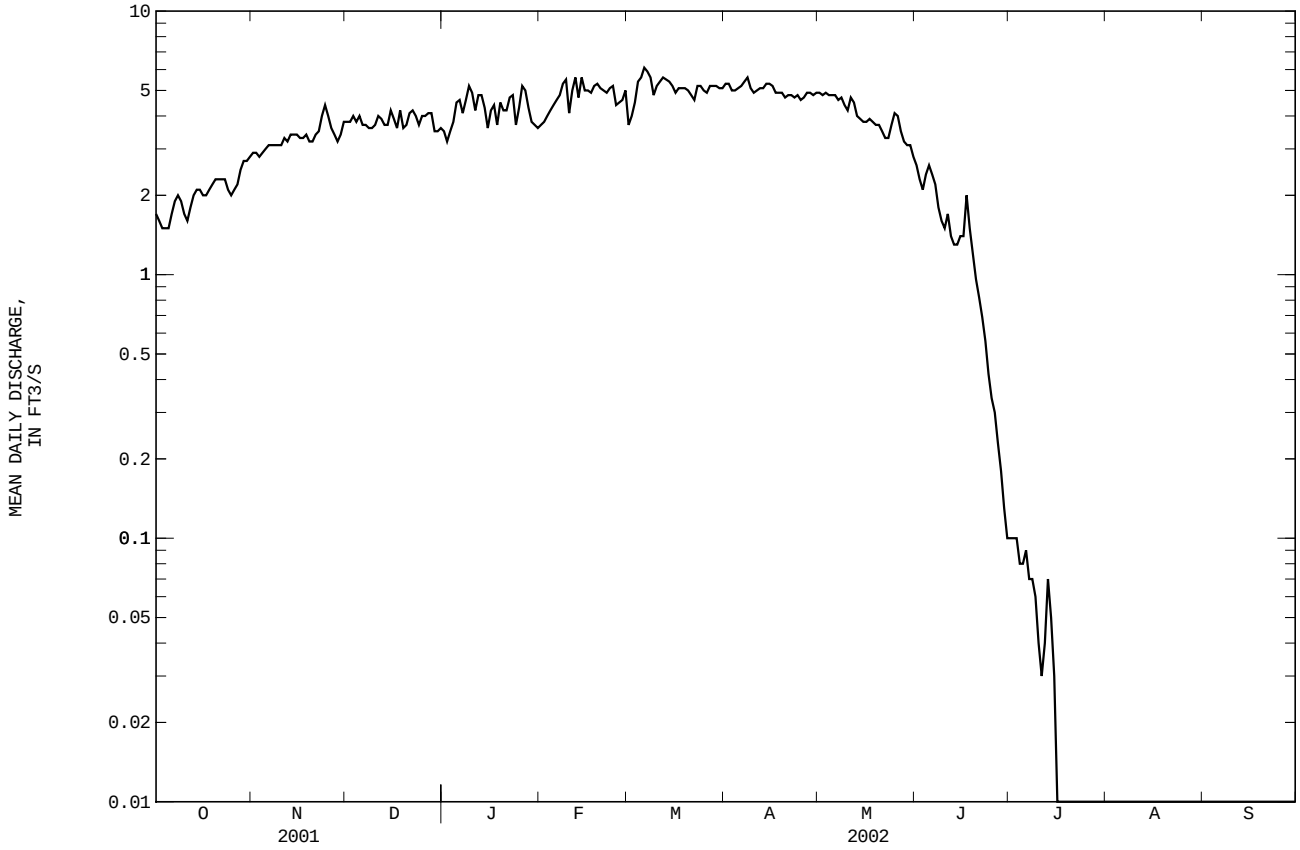
06847900 PRAIRIE DOG CREEK ABOVE KEITH SEBELIUS LAKE, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	4.525	2.371	2.569	2.784	5.238	8.930	6.120	9.536	26.25	15.70	10.92	11.34
MAX	106	14.8	12.2	10.4	19.8	129	31.8	33.0	280	81.0	83.0	163
(WY)	1966	1966	1997	1997	1966	1993	1971	1977	1996	1965	1992	1965
MIN	0.000	0.000	0.000	0.000	0.000	0.058	0.076	0.69	0.48	0.000	0.000	0.000
(WY)	1965	1965	1981	1981	1981	1982	1982	1992	1992	1991	1980	1964

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1963 - 2002	
ANNUAL MEAN	7.732		2.800		8.855	
HIGHEST ANNUAL MEAN					42.1	1965
LOWEST ANNUAL MEAN					0.27	1981
HIGHEST DAILY MEAN	267	May 31	6.1	Mar 6	3150	Jun 24 1996
LOWEST DAILY MEAN	0.16	Jul 22	0.00	Jul 17	0.00	Jun 26 1963
ANNUAL SEVEN-DAY MINIMUM	0.28	Jul 17	0.00	Jul 17	0.00	Jun 26 1963
MAXIMUM PEAK FLOW			10	Feb 10	8880	Sep 6 1972
MAXIMUM PEAK STAGE			3.88	Feb 10	14.81	Sep 6 1972
INSTANTANEOUS LOW FLOW			0.00	Jul 16	.00	many years
ANNUAL RUNOFF (AC-FT)	5600		2030		6410	
10 PERCENT EXCEEDS	12		5.1		11	
50 PERCENT EXCEEDS	3.7		3.4		2.1	
90 PERCENT EXCEEDS	0.84		0.00		0.00	

e Estimated



06847900 PRAIRIE DOG CREEK ABOVE KEITH SEBELIUS LAKE, KS--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964-70, 2000 to current year.

REMARKS.--Sediment samples are collected only at selected flow conditions.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)
NOV						
15...	1620	3.5	--	--	87	.82
FEB						
20...	1320	5.2	860	6.0	15	.21

06847950 KEITH SEBELIUS LAKE NEAR NORTON, KS

LOCATION.--Lat 39°48'27", long 99°56'04", in SW $^1/_4$ NE $^1/_4$ sec.8, T.3 S., R.23 W., Norton County, Hydrologic Unit 10250015, in control tower near left end of Norton Dam on Prairie Dog Creek, 3.0 mi southwest of Norton, and at mile 74.9.

DRAINAGE AREA.--683 mi^2.

PERIOD OF RECORD.--October 1964 to current year. Prior to Dec. 28, 1980, published as "Norton Reservoir near Norton."

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929 (levels by Bureau of Reclamation).

REMARKS.--Reservoir is formed by compacted earthfill dam. Storage began Oct. 6, 1964. Total capacity, 193,023 acre-ft, consisting of the following: Sedimentation, 2,920 acre-ft below elevation 2,275.5 ft; conservation pool, 33,010 acre-ft, between elevations 2,275.5 ft and 2,304.3 ft; flood-control pool, 98,800 acre-ft, between elevations 2,304.3 ft and 2,331.4 ft; and surcharge pool, 58,280 acre-ft, between eleva-tions 2,331.4 ft and 2,341.0 ft. Reservoir is used for flood control and irrigation in Almena Unit, Missouri River Basin project. Figures given herein represent total contents. Satellite telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 2,306.58 ft Feb. 25, 1997, contents, 41,160 acre-ft; minimum elevation since conservation pool was first filled, 2,275.82 ft Nov. 27, 28, 1981, Jan. 24, 30, 31, 1982 contents, 3,050 acre-ft.

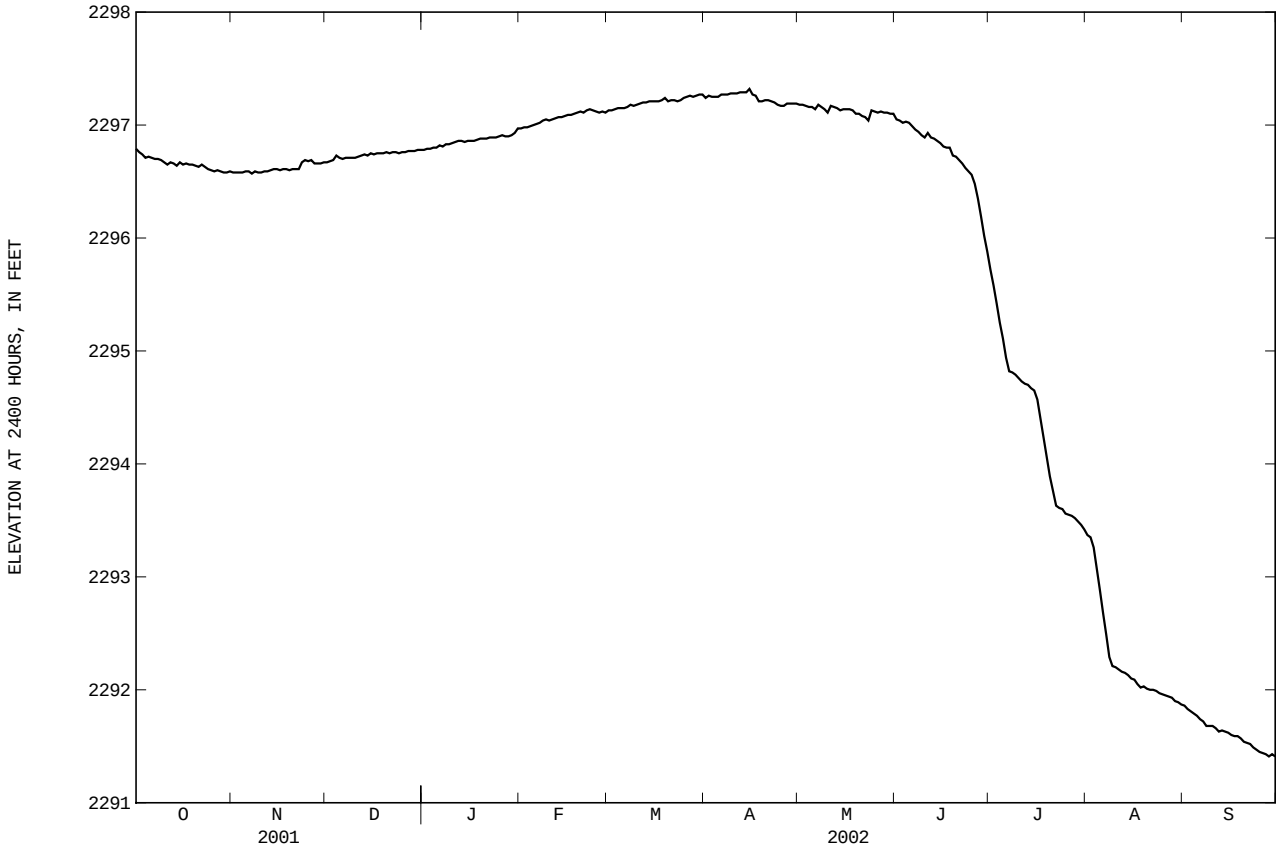
EXTREMES FOR CURRENT YEAR.--Maximum elevation, 2,297.33 ft Mar. 27, contents, 21,420 acre-ft; minimum elevation 2,291.41 ft Sept. 28, contents, 13,230 acre-ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on field survey of Bureau of Reclamation in 1955, revised in 1965)
(Effective date October 1, 1965 to September 30, 2001)

2,290	13,200	2,296	20,830
2,292	15,460	2,298	23,980
2,294	17,960		

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on field survey of Bureau of Reclamation in 2000)
(Effective date October 1, 2001, to September 30, 2002)

2,290	11,640	2,296	19,360
2,292	13,930	2,298	22,500
2,294	16,500		



06847950 KEITH SEBELIUS LAKE NEAR NORTON, KS--Continued

ELEVATION, in FT (NGVD), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2296.79	2296.58	2296.67	2296.78	2296.97	2297.13	2297.24	2297.18	2297.05	2295.72	2293.37	2291.86
2	2296.76	2296.58	2296.68	2296.79	2296.98	2297.13	2297.26	2297.18	2297.04	2295.58	2293.35	2291.83
3	2296.74	2296.58	2296.69	2296.79	2296.98	2297.14	2297.25	2297.17	2297.02	2295.42	2293.26	2291.81
4	2296.71	2296.58	2296.73	2296.80	2296.99	2297.15	2297.25	2297.16	2297.03	2295.25	2293.07	2291.79
5	2296.72	2296.59	2296.71	2296.80	2297.00	2297.15	2297.25	2297.16	2297.02	2295.11	2292.88	2291.77
6	2296.71	2296.59	2296.70	2296.82	2297.01	2297.15	2297.27	2297.14	2296.99	2294.94	2292.68	2291.74
7	2296.70	2296.57	2296.71	2296.81	2297.02	2297.16	2297.27	2297.18	2296.96	2294.82	2292.49	2291.72
8	2296.70	2296.59	2296.71	2296.83	2297.04	2297.18	2297.27	2297.16	2296.94	2294.81	2292.29	2291.68
9	2296.69	2296.58	2296.71	2296.83	2297.05	2297.17	2297.28	2297.14	2296.91	2294.79	2292.21	2291.68
10	2296.67	2296.58	2296.71	2296.84	2297.04	2297.18	2297.28	2297.11	2296.89	2294.76	2292.20	2291.68
11	2296.65	2296.59	2296.72	2296.85	2297.05	2297.19	2297.28	2297.17	2296.93	2294.73	2292.18	2291.66
12	2296.67	2296.59	2296.73	2296.86	2297.06	2297.20	2297.29	2297.16	2296.89	2294.71	2292.16	2291.63
13	2296.66	2296.60	2296.74	2296.86	2297.07	2297.20	2297.29	2297.15	2296.88	2294.70	2292.15	2291.64
14	2296.64	2296.61	2296.73	2296.85	2297.07	2297.21	2297.29	2297.13	2296.86	2294.67	2292.13	2291.63
15	2296.67	2296.61	2296.75	2296.86	2297.08	2297.21	2297.32	2297.14	2296.84	2294.65	2292.10	2291.62
16	2296.65	2296.60	2296.74	2296.86	2297.09	2297.21	2297.27	2297.14	2296.81	2294.57	2292.09	2291.60
17	2296.66	2296.61	2296.75	2296.86	2297.09	2297.21	2297.26	2297.14	2296.80	2294.40	2292.05	2291.59
18	2296.65	2296.61	2296.75	2296.87	2297.10	2297.22	2297.21	2297.13	2296.80	2294.23	2292.02	2291.59
19	2296.65	2296.60	2296.75	2296.88	2297.11	2297.24	2297.21	2297.10	2296.73	2294.06	2292.03	2291.57
20	2296.64	2296.61	2296.76	2296.88	2297.12	2297.21	2297.22	2297.10	2296.72	2293.89	2292.01	2291.54
21	2296.63	2296.61	2296.75	2296.88	2297.11	2297.22	2297.22	2297.08	2296.69	2293.76	2292.00	2291.53
22	2296.65	2296.61	2296.76	2296.89	2297.13	2297.22	2297.21	2297.07	2296.66	2293.63	2292.00	2291.52
23	2296.63	2296.67	2296.76	2296.89	2297.14	2297.21	2297.20	2297.04	2296.62	2293.61	2291.99	2291.49
24	2296.61	2296.69	2296.75	2296.89	2297.13	2297.22	2297.18	2297.13	2296.59	2293.60	2291.97	2291.47
25	2296.60	2296.68	2296.76	2296.90	2297.12	2297.24	2297.17	2297.12	2296.56	2293.56	2291.96	2291.45
26	2296.59	2296.69	2296.76	2296.91	2297.11	2297.25	2297.17	2297.11	2296.48	2293.55	2291.95	2291.44
27	2296.60	2296.66	2296.77	2296.90	2297.12	2297.26	2297.19	2297.12	2296.35	2293.54	2291.94	2291.43
28	2296.59	2296.66	2296.77	2296.90	2297.11	2297.25	2297.19	2297.11	2296.19	2293.52	2291.93	2291.41
29	2296.58	2296.66	2296.77	2296.91	---	2297.26	2297.19	2297.11	2296.02	2293.49	2291.90	2291.43
30	2296.58	2296.67	2296.78	2296.93	---	2297.27	2297.19	2297.10	2295.88	2293.46	2291.89	2291.41
31	2296.59	---	2296.78	2296.97	---	2297.27	---	2297.10	---	2293.42	2291.87	---
MEAN	2296.66	2296.61	2296.74	2296.86	2297.07	2297.20	2297.24	2297.13	2296.74	2294.35	2292.26	2291.61
MAX	2296.79	2296.69	2296.78	2296.97	2297.14	2297.27	2297.32	2297.18	2297.05	2295.72	2293.37	2291.86
MIN	2296.58	2296.57	2296.67	2296.78	2296.97	2297.13	2297.17	2297.04	2295.88	2293.42	2291.87	2291.41
(+)	22,260	20,380	20,550	20,850	21,070	21,320	21,200	21,060	19,180	15,730	13,770	13,230
(#)	+1,690	-1,880	+170	+300	+220	+250	-120	-140	-1,880	-3,450	-1,960	-540

CAL YR 2001 ..... (#) -810
WTR YR 2002 ..... (#) -7,340

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

NOTE.--Calendar year and water year contents computed using capacity table effective October 1, 2001.

06848000 PRAIRIE DOG CREEK AT NORTON, KS

LOCATION.--Lat 39°48'36", long 99°55'18", in NW $^{1}/_{4}$ NW $^{1}/_{4}$ sec.9, T.3 S., R.23 W., Norton County, Hydrologic Unit 10250015, on left bank 0.9 mi downstream from Norton Dam, 2.0 mi southwest of Norton, and at mile 74.0.

DRAINAGE AREA.--684 mi^2.

PERIOD OF RECORD.--October 1943 to September 2002 (discontinued). Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1310: 1944(M).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 2,237.38 ft above NGVD of 1929 (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 downstream at datum 19.47 ft lower. Oct. 1, 1961, to Apr. 19, 1965, water-stage recorder at site 0.5 mi upstream at datum 3.82 ft lower. Apr. 20, 1965, to Sept. 30, 1974, water-stage recorder at same site at datum 2.00 ft higher.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow completely regulated since 1964 by Keith Sebelius Lake (station 06847950), 0.9 mi upstream. Satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.40	0.18	e0.28	0.27	0.29	0.31	0.29	0.34	0.15	89	0.08	0.01
2	0.36	0.20	e0.28	0.28	0.33	0.41	0.26	0.29	0.15	90	0.04	0.02
3	0.34	0.23	e0.28	0.27	0.34	0.34	0.27	0.32	0.14	103	40	0.01
4	0.37	0.26	e0.28	0.33	0.34	0.28	0.29	0.32	0.21	102	97	0.01
5	0.40	0.21	e0.28	0.40	0.34	0.35	0.31	0.31	0.24	102	98	0.00
6	0.39	0.22	e0.30	0.39	0.35	0.34	0.40	0.31	0.21	100	98	0.00
7	0.39	e0.24	e0.27	0.35	0.38	0.33	0.36	0.26	0.12	79	98	0.21
8	0.40	e0.29	0.22	0.41	0.39	0.35	0.59	0.28	0.09	2.0	97	0.07
9	0.42	e0.30	0.22	0.41	0.42	0.34	0.77	0.17	0.10	0.38	78	0.00
10	0.37	e0.27	0.23	0.36	0.34	0.31	0.85	0.17	0.11	0.21	2.8	0.00
11	0.39	e0.25	0.23	0.33	0.40	0.36	0.48	0.48	0.17	0.13	1.1	0.00
12	0.48	e0.23	0.27	0.34	0.37	0.36	0.39	0.27	0.13	0.10	0.70	0.00
13	0.53	0.24	0.25	0.33	0.33	0.37	0.37	0.25	0.13	0.08	0.28	0.00
14	0.46	0.24	0.25	0.31	0.33	0.34	0.36	0.13	0.09	0.09	0.18	0.01
15	0.56	0.24	0.27	0.30	0.32	0.51	0.36	0.18	0.10	0.09	0.15	0.0
16	0.51	0.25	0.24	0.47	0.33	0.30	0.32	0.15	0.14	25	0.08	0.00
17	0.40	0.26	0.24	0.37	0.33	0.29	0.25	0.23	0.11	87	0.05	0.00
18	0.40	0.24	0.29	0.33	0.38	0.62	0.34	0.19	0.11	88	0.05	0.00
19	0.44	e0.28	0.25	0.34	0.32	0.35	0.26	0.21	0.07	88	0.06	0.00
20	0.34	e0.28	0.25	0.40	0.31	0.31	0.26	0.22	0.04	88	0.05	0.0
21	0.34	e0.28	0.29	0.35	0.29	0.30	0.35	0.19	0.06	88	0.04	0.00
22	0.33	e0.28	0.25	0.37	0.27	0.26	0.32	0.20	0.04	73	0.04	0.0
23	0.34	e0.28	0.21	0.37	0.31	0.29	0.28	0.16	0.0	1.9	0.05	0.02
24	0.31	e0.28	0.20	0.35	0.29	0.31	0.30	0.60	0.0	0.41	0.06	0.01
25	0.27	e0.28	0.21	0.35	0.24	0.30	0.26	0.55	0.00	0.29	0.06	0.03
26	0.28	e0.28	0.24	0.39	0.22	0.33	0.31	0.44	41	0.13	0.05	0.00
27	0.27	e0.28	0.31	0.33	0.19	0.30	0.44	0.32	93	0.08	0.09	0.03
28	0.25	e0.28	0.37	0.23	0.27	0.29	0.36	0.30	102	0.08	0.03	0.07
29	0.27	e0.28	0.30	0.23	---	0.26	0.33	0.29	100	0.06	0.03	0.05
30	0.29	e0.28	0.28	0.23	---	0.25	0.34	0.26	89	0.07	0.03	0.04
31	0.25	---	0.25	0.29	---	0.28	---	0.20	---	0.06	0.0	---
MEAN	0.373	0.257	0.261	0.338	0.322	0.334	0.369	0.277	14.26	38.97	19.75	0.020
MAX	0.56	0.30	0.37	0.47	0.42	0.62	0.85	0.60	102	103	98	0.21
MIN	0.25	0.18	0.20	0.23	0.19	0.25	0.25	0.13	0.00	0.06	0.00	0.00
AC-FT	23	15	16	21	18	21	22	17	848	2400	1210	1.2

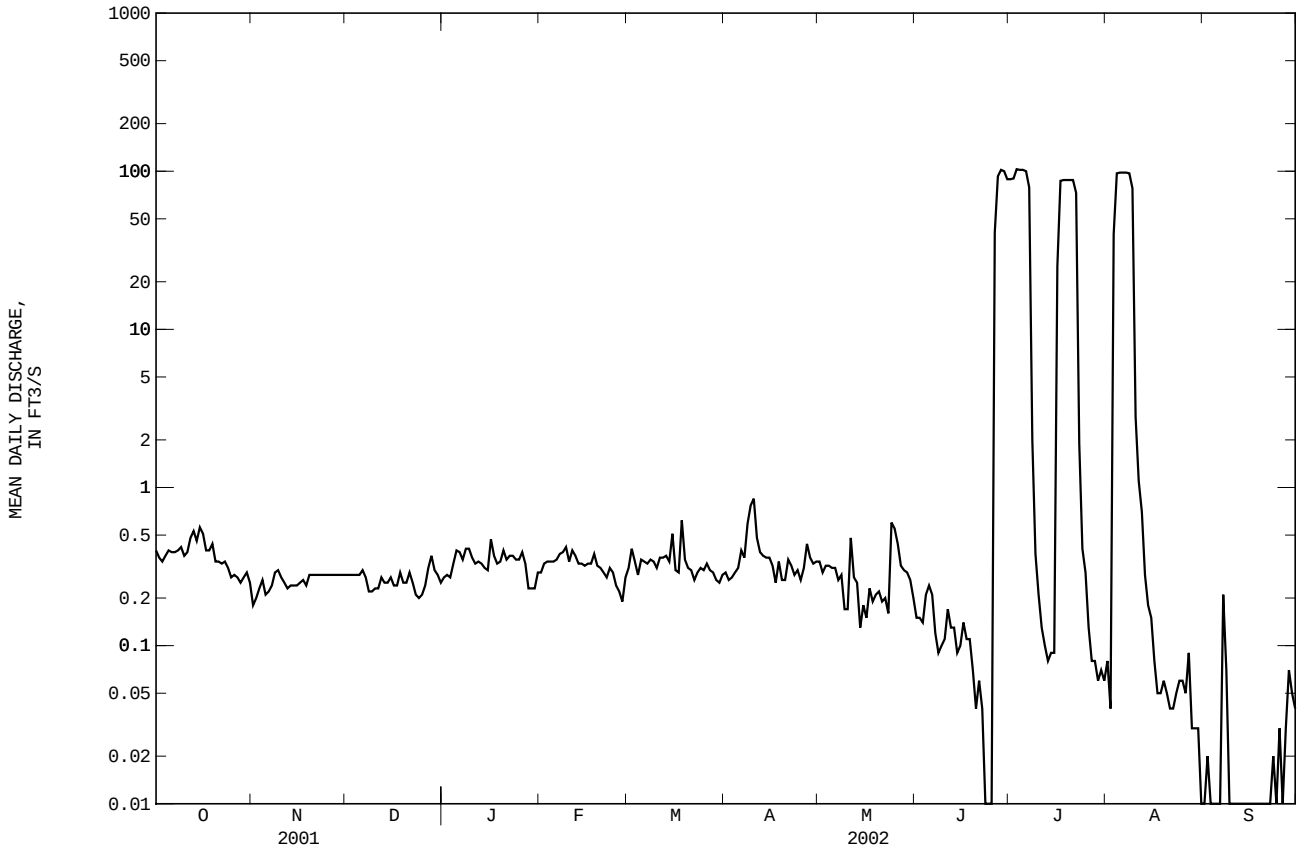
06848000 PRAIRIE DOG CREEK AT NORTON, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	10.13	2.460	2.145	2.235	5.763	9.355	6.264	24.20	46.78	64.63	24.73	10.69
MAX	466	36.3	18.2	20.3	78.1	265	89.3	438	656	648	390	385
(WY)	1947	1947	1947	1947	1949	1960	1944	1953	1957	1951	1950	1951
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1979	1957	1965	1965	1965	1965	1965	1965	1981	1981	1982	1978

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1944 - 2002	
ANNUAL MEAN	6.375		6.371		16.68	
HIGHEST ANNUAL MEAN					145	1951
LOWEST ANNUAL MEAN					0.019	1983
HIGHEST DAILY MEAN	86	Aug 8	103	Jul 3	9650	May 28 1953
LOWEST DAILY MEAN	0.12	Jun 26	0.00	Jun 23	0.00	Sep 4 1954
ANNUAL SEVEN-DAY MINIMUM	0.17	Jun 22	0.00	Sep 15	0.00	Sep 21 1954
MAXIMUM PEAK FLOW			110	Jun 29	37500	May 28 1953
MAXIMUM PEAK STAGE			5.98	Jun 29	25.60	May 28 1953
INSTANTANEOUS LOW FLOW			0.00	Jun 23	.00	most years
ANNUAL RUNOFF (AC-FT)	4620		4610		12080	
10 PERCENT EXCEEDS	1.9		0.57		24	
50 PERCENT EXCEEDS	0.40		0.28		0.42	
90 PERCENT EXCEEDS	0.24		0.04		0.00	

e Estimated



06848500 PRAIRIE DOG CREEK NEAR WOODRUFF, KS

LOCATION.--Lat 39°59'09", long 99°28'39", in NW $^{1}/_{4}$ NW $^{1}/_{4}$ sec.9, T.1 S., R.19 W., Phillips County, Hydrologic Unit 10250015, on left bank at downstream side of bridge on U.S. Highway 383, 1.0 mi south of Kansas-Nebraska State line, 2.5 mi west of Woodruff, and at mile 26.5.

DRAINAGE AREA.--1,007 mi^2.

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 above NGVD of 1929. See WSP 1919 for history of changes prior to Oct. 7, 1955.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow regulated to some extent since 1964 by Keith Sebelius Lake (station 06847950), 48.4 mi upstream, and by irrigation development upstream from station. Satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.3	5.0	8.4	e9.0	e9.0	e7.0	8.9	5.9	4.0	e3.0	0.00	0.00
2	2.3	5.2	7.9	e9.1	e9.0	e8.0	8.1	5.7	3.0	3.3	0.00	0.00
3	2.2	6.2	8.1	e9.2	e9.0	9.9	7.5	5.9	3.6	2.6	0.00	0.00
4	2.2	5.6	8.0	e9.2	e9.0	13	14	6.0	3.7	5.9	0.00	0.00
5	1.9	6.2	8.6	e9.2	e9.1	14	13	5.3	2.9	7.2	0.21	0.00
6	2.0	6.1	8.3	e9.1	e9.2	13	10	4.9	3.7	e5.0	0.28	0.00
7	2.2	5.7	7.7	e9.0	e9.3	12	7.8	3.7	3.6	e3.0	0.60	0.00
8	2.4	6.0	7.8	e8.9	e9.4	e11	7.0	4.1	3.6	e2.0	1.3	0.00
9	2.6	6.1	8.1	e8.9	e9.5	e11	6.8	4.1	3.4	e1.0	3.8	0.00
10	2.4	6.2	7.9	e8.8	e9.6	13	6.7	3.2	3.2	e0.50	3.6	0.00
11	2.4	6.2	7.7	e9.0	e9.8	13	6.6	4.4	3.3	0.32	0.87	0.00
12	2.4	6.8	7.7	12	e9.9	13	6.3	5.1	3.1	0.49	0.06	0.00
13	2.5	7.3	7.5	12	e10	12	6.1	5.5	3.1	0.25	0.00	0.00
14	2.6	7.2	7.8	12	e10	11	6.2	12	3.4	0.30	0.00	0.00
15	3.2	6.9	e7.7	e10	e10	11	6.2	5.8	3.6	0.10	0.00	0.00
16	3.3	6.7	7.5	e10	e10	11	6.0	4.9	4.3	0.02	0.00	0.00
17	3.1	6.9	7.3	e9.0	e10	9.5	5.1	4.7	5.9	0.00	0.00	0.00
18	2.9	6.8	7.6	e9.0	e10	8.2	4.8	4.6	7.5	0.0	0.00	0.00
19	3.1	6.8	7.9	e9.0	10	7.3	4.5	4.6	5.5	0.71	0.00	0.00
20	2.9	6.5	e7.9	e9.0	11	7.2	3.8	4.5	3.7	1.3	0.00	0.00
21	2.9	6.7	e7.9	e9.3	11	7.0	4.6	4.6	1.9	2.6	0.00	0.00
22	2.7	6.7	e7.8	e9.8	9.8	6.6	5.1	4.3	0.72	2.7	0.00	0.00
23	2.8	7.0	e7.8	e9.8	8.2	6.9	5.9	4.1	3.8	1.6	0.00	0.00
24	2.5	8.2	e7.8	e9.8	8.2	6.9	6.5	4.3	0.91	1.3	0.00	0.00
25	2.5	8.5	e7.8	e9.8	7.8	6.9	6.2	4.7	0.35	0.26	0.00	0.00
26	4.0	8.5	e7.9	11	e7.4	7.0	6.3	5.0	0.20	0.12	0.00	0.00
27	12	8.1	e8.0	10	e7.2	7.2	6.8	7.0	0.79	0.09	0.00	0.00
28	7.4	e7.5	e8.3	e9.5	e7.0	7.2	6.6	5.6	e1.0	0.01	0.00	0.00
29	5.3	e7.5	e8.6	e9.3	---	7.0	6.5	5.1	e2.0	0.00	0.00	0.00
30	4.5	8.4	e8.9	e9.1	---	6.9	6.1	4.5	e2.5	0.00	0.00	0.00
31	4.4	---	e9.0	e9.0	---	12	---	4.2	---	0.00	0.00	---
MEAN	3.287	6.783	7.974	9.606	9.264	9.571	6.867	5.106	3.076	1.473	0.346	0.000
MAX	12	8.5	9.0	12	11	14	14	12	7.5	7.2	3.8	0.00
MIN	1.9	5.0	7.3	8.8	7.0	6.6	3.8	3.2	0.20	0.00	0.00	0.00
AC-FT	202	404	490	591	515	589	409	314	183	91	21	0.00

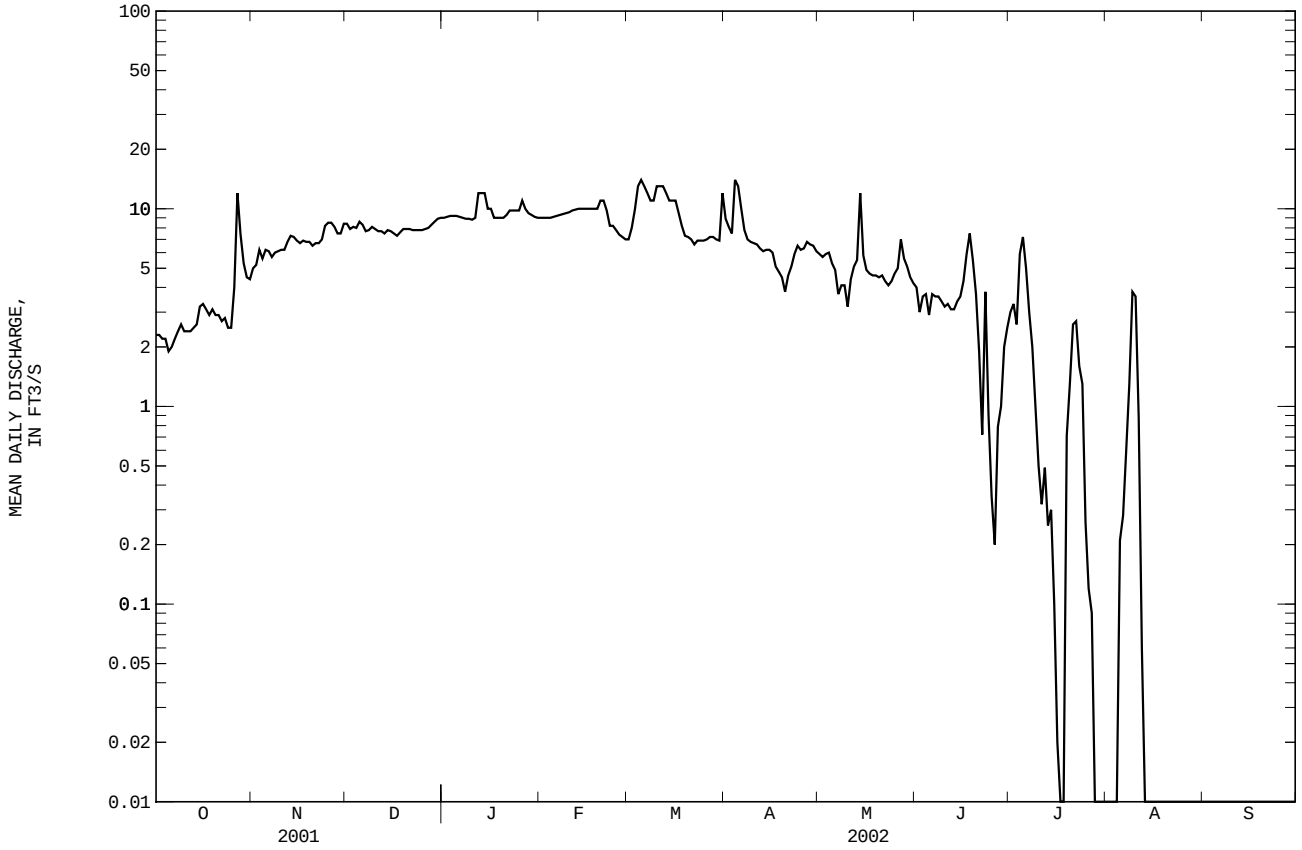
06848500 PRAIRIE DOG CREEK NEAR WOODRUFF, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	19.04	6.562	5.469	5.505	15.96	17.69	10.20	42.49	85.49	61.28	34.15	22.68
MAX	429	56.5	26.0	22.5	230	240	36.6	422	1041	1070	430	402
(WY)	1947	1931	1947	1931	1932	1960	1952	1949	1947	1951	1950	1951
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1955	1956	1956	1956	1957	1957	1985	1992	1984	1984	1959	1960

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1929 - 2002	
ANNUAL MEAN	13.70		5.259		26.52	
HIGHEST ANNUAL MEAN					208	1951
LOWEST ANNUAL MEAN					0.051	1991
HIGHEST DAILY MEAN	569	Jul 5	14	Mar 5	9700	Jun 23 1947
LOWEST DAILY MEAN	1.9	Oct 5	0.00	Jul 17	0.00	Oct 29 1945
ANNUAL SEVEN-DAY MINIMUM	2.2	Oct 1	0.00	Jul 29	0.00	Oct 5 1948
MAXIMUM PEAK FLOW			19	May 14	15000	Jun 23 1947
MAXIMUM PEAK STAGE			3.42	May 14	21.04	Jun 23 1947
INSTANTANEOUS LOW FLOW			0.00	Jul 16	.00	most years
ANNUAL RUNOFF (AC-FT)	9920		3810		19210	
10 PERCENT EXCEEDS	24		9.9		27	
50 PERCENT EXCEEDS	7.7		5.8		4.2	
90 PERCENT EXCEEDS	3.0		0.00		0.00	

e Estimated



06853500 REPUBLICAN RIVER NEAR HARDY, NE

LOCATION.--Lat 39°59'33", long 97°55'53", in NE $^{1}/_{4}$ NE $^{1}/_{4}$ SE $^{1}/_{4}$ sec.1, T.1 S., R.6 W., in Kansas, Republic County, Hydrologic Unit 10250016, on right bank at upstream side of county highway bridge, 1.2 mi southwest of Hardy, NE, and at mile 141.2.

DRAINAGE AREA.--22,401 mi^2, of which about 7,500 mi^2 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.

REVISED RECORDS.--WSP 806: Drainage area. WSP 1006: 1941. WSP 1340: 1905(M), 1907-09, 1912, 1914-15, 1931. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder. Datum of gage is 1,501.46 ft above NGVD of 1929. Prior to May 19, 1932, nonrecording gage at site at Bostwick, 20 mi upstream at different datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Natural flow affected by irrigation development upstream from station and by storage in reservoirs in Colorado, Kansas, and Nebraska. Considerable regulation since 1952 by Harlan County Lake (station 06849000). Satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stages since at least 1895, that of June 2, 1935, and 17.00 ft June 24, 1947, discharge, 100,000 ft^3/s, based on records for upstream stations.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	50	140	139	e130	e115	e140	146	48	81	e34	35	21
2	49	149	154	e130	e122	e130	145	48	69	e33	23	19
3	47	141	166	e130	e130	e128	134	47	58	e60	19	17
4	45	138	167	e132	e132	e140	121	46	52	e90	16	17
5	46	139	160	e135	e133	e160	130	46	61	e80	18	14
6	47	140	156	e136	e133	e160	133	49	58	e100	15	15
7	48	141	152	e140	e134	e150	136	74	46	57	14	15
8	47	140	148	e145	e137	e140	152	61	40	58	13	14
9	51	134	146	e155	e150	136	125	48	35	52	16	14
10	50	134	145	e161	159	161	81	43	34	43	26	15
11	51	136	145	e167	167	e180	71	51	42	41	53	15
12	50	138	146	184	192	e184	67	56	128	41	57	15
13	53	140	145	184	194	e182	62	57	89	49	34	42
14	51	143	145	181	190	177	57	48	102	68	39	38
15	64	144	147	161	187	167	55	43	92	68	46	24
16	67	142	149	138	180	161	52	44	77	57	32	21
17	62	141	147	133	176	154	49	46	64	44	17	19
18	58	139	145	137	174	152	48	39	44	35	16	18
19	55	136	145	142	175	151	44	40	43	40	20	18
20	53	133	144	146	172	148	47	42	33	34	20	18
21	51	134	144	149	167	144	56	40	35	23	18	17
22	50	137	148	e149	163	137	53	39	67	24	26	17
23	51	143	142	e149	162	137	56	55	39	22	23	17
24	49	159	130	e152	161	141	53	66	31	30	25	16
25	47	172	138	154	158	140	45	134	32	26	34	16
26	47	172	e144	172	108	139	45	99	46	22	27	16
27	48	160	e147	175	e140	158	56	181	35	22	75	17
28	110	146	e146	166	e144	153	55	180	e33	30	104	17
29	128	135	e144	153	---	154	51	180	e39	81	36	17
30	137	133	e138	138	---	148	48	238	e37	101	26	16
31	136	---	e134	94	---	142	---	131	---	68	23	---
MEAN	61.23	142.6	146.6	149.0	155.5	151.4	79.10	74.81	54.73	49.45	30.52	18.50
MAX	137	172	167	184	194	184	152	238	128	101	104	42
MIN	45	133	130	94	108	128	44	39	31	22	13	14
AC-FT	3760	8490	9020	9160	8640	9310	4710	4600	3260	3040	1880	1100

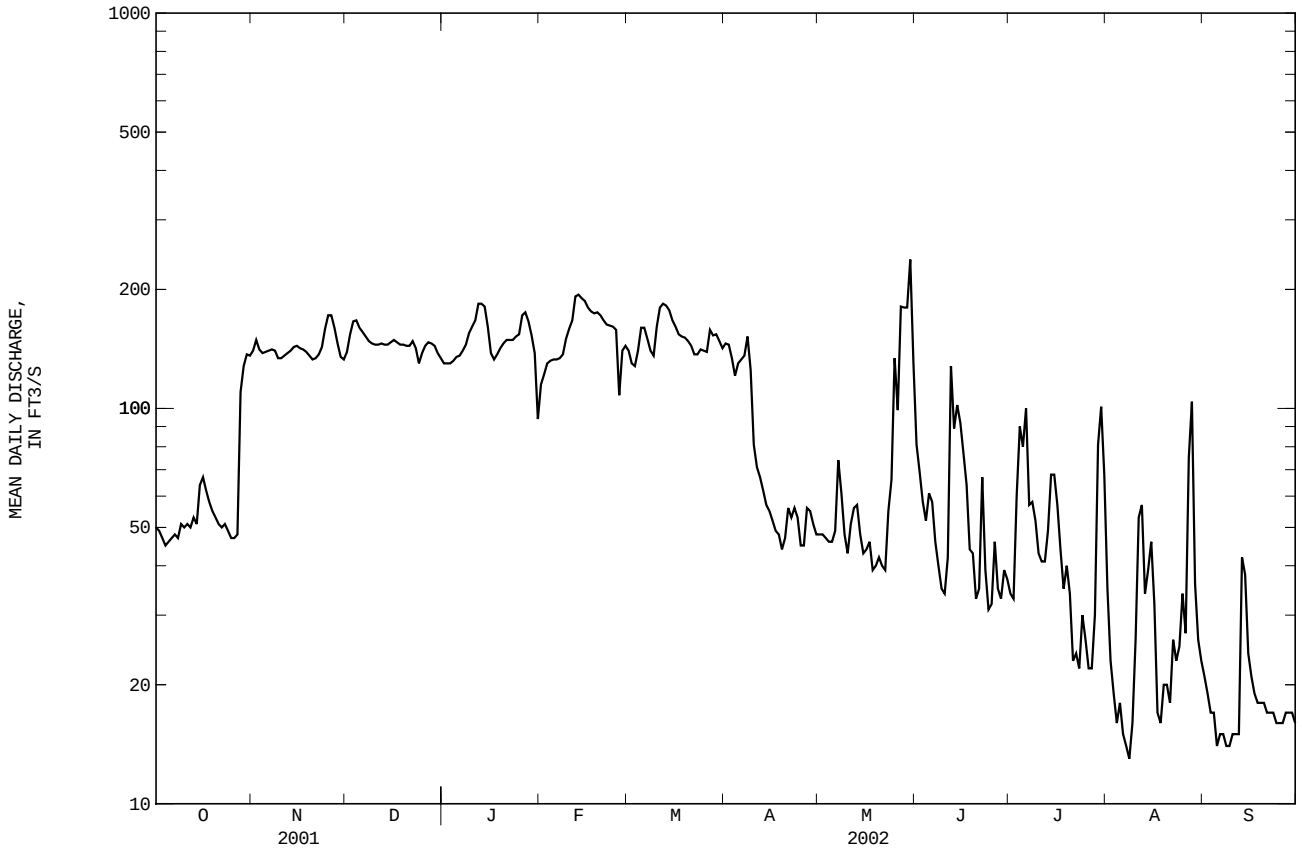
06853500 REPUBLICAN RIVER NEAR HARDY, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	273.6	227.6	198.0	189.0	295.5	414.4	437.3	482.4	485.4	509.9	309.8	311.0
MAX	1970	1308	928	636	968	1584	2415	2523	2031	3210	1800	1455
(WY)	1966	1994	1994	1966	1966	1993	1960	1960	1960	1993	1962	1973
MIN	17.2	22.3	24.3	33.7	27.0	66.5	39.1	29.6	46.5	49.5	30.5	15.3
(WY)	1992	1992	2001	1992	1992	1991	1991	1992	1992	2002	2002	1991

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1958 - 2002	
ANNUAL MEAN	246.0		92.49		344.6	
HIGHEST ANNUAL MEAN					800	1960
LOWEST ANNUAL MEAN					72.5	1991
HIGHEST DAILY MEAN	3830	May 5	238	May 30	15000	Oct 1 1983
LOWEST DAILY MEAN	20	Jan 2	13	Aug 8	4.8	Aug 3 1991
ANNUAL SEVEN-DAY MINIMUM	29	Jan 1	15	Sep 5	9.0	Jun 26 1992
MAXIMUM PEAK FLOW			385	May 27	225000	Jun 2 1935
MAXIMUM PEAK STAGE			3.66	May 27	19.40	Jun 2 1935
INSTANTANEOUS LOW FLOW			12	Aug 8	0.00	Aug 9 1934
ANNUAL RUNOFF (AC-FT)	178100		66960		249700	
10 PERCENT EXCEEDS	467		161		767	
50 PERCENT EXCEEDS	141		80		167	
90 PERCENT EXCEEDS	43		20		60	

e Estimated



06853800 WHITE ROCK CREEK NEAR BURR OAK, KS

LOCATION.--Lat 39°53'55", long 98°15'05", in SE $^1/_4$ NE $^1/_4$ NE $^1/_4$ sec.7, T.2 S., R.8 W., Jewell County, Hydrologic Unit 10250016, on left bank at upstream side of county highway bridge, 3.5 mi northeast of Burr Oak, and at mile 35.4.

DRAINAGE AREA.--227 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is 1,601.5 ft above NGVD of 1929 (levels by Bureau of Reclamation).

REMARKS.--Records good except those for estimated daily discharges, which are poor. Satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum known stage since at least 1869, 32.6 ft July 9, 1950, from floodmark 300 ft downstream and information by local resident.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 27	1900	*167	*5.01	No peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.3	5.8	7.1	5.3	8.9	11	15	14	12	0.56	0.95	0.02
2	2.2	5.7	7.5	4.5	10	10	15	14	10	0.46	0.41	0.0
3	2.0	5.6	8.4	4.4	11	12	14	13	8.5	0.41	0.21	0.00
4	2.0	6.1	9.0	4.6	11	12	13	13	7.0	0.40	0.12	0.00
5	2.0	5.4	9.7	5.4	12	12	13	13	6.4	0.33	0.06	0.0
6	2.3	5.8	9.8	6.5	12	e12	13	12	5.8	0.32	0.05	0.0
7	2.1	5.9	9.7	7.3	13	e12	13	12	5.2	0.29	0.03	0.0
8	2.0	6.0	9.5	8.4	13	e13	14	13	4.6	0.26	0.02	0.00
9	2.0	6.3	9.3	9.6	e13	13	15	12	4.1	0.25	0.05	0.00
10	2.1	5.8	9.3	11	13	14	15	12	3.7	0.25	0.04	0.00
11	2.3	5.9	9.4	10	13	14	15	13	4.4	0.18	0.05	0.02
12	2.1	5.7	e9.4	12	15	14	14	12	8.8	0.14	0.05	0.03
13	2.7	6.6	e9.6	12	13	16	14	12	5.2	0.16	0.10	0.15
14	2.9	7.0	9.8	12	15	16	13	12	4.2	0.16	0.07	0.07
15	3.5	6.7	10	9.9	15	15	13	12	3.4	0.16	0.12	0.05
16	4.4	6.5	9.9	11	16	14	13	12	3.3	0.15	0.18	0.03
17	3.5	6.7	10	11	17	13	13	11	3.0	0.16	0.14	0.03
18	3.4	6.7	10	9.8	18	13	13	11	2.7	0.14	0.09	0.04
19	3.8	6.1	10	11	18	13	12	11	2.5	0.12	0.09	0.03
20	3.7	6.3	9.7	10	17	13	12	11	2.2	0.10	0.08	0.03
21	3.5	6.2	e9.7	10	15	12	13	11	2.0	0.08	0.08	0.03
22	3.3	6.4	e9.6	11	14	12	12	11	1.7	0.10	0.15	0.03
23	3.5	7.3	e9.6	11	14	12	13	13	1.4	0.08	0.08	0.03
24	4.1	9.6	9.6	10	e13	12	13	17	1.1	0.08	0.06	0.03
25	4.1	9.3	9.5	11	e12	13	13	35	0.91	0.08	0.05	0.03
26	3.8	e8.8	8.5	12	e11	14	13	21	0.90	0.07	0.04	0.03
27	3.7	e8.3	8.5	12	11	14	14	81	0.80	0.07	0.04	0.04
28	3.9	e7.8	8.4	11	12	15	14	127	0.76	0.22	0.04	0.05
29	4.3	7.4	8.2	e8.7	---	16	14	56	0.70	9.5	0.04	0.05
30	4.7	7.2	7.3	e8.2	---	17	14	21	0.61	4.4	0.04	0.05
31	5.5	---	6.2	e8.5	---	16	---	15	---	2.5	0.02	---
MEAN	3.152	6.697	9.103	9.326	13.43	13.39	13.50	21.06	3.929	0.715	0.115	0.029
MAX	5.5	9.6	10	12	18	17	15	127	12	9.5	0.95	0.15
MIN	2.0	5.4	6.2	4.4	8.9	10	12	11	0.61	0.07	0.02	0.00
MED	3.4	6.3	9.5	10	13	13	13	13	3.4	0.16	0.06	0.03
AC-FT	194	398	560	573	746	823	803	1300	234	44	7.0	1.7

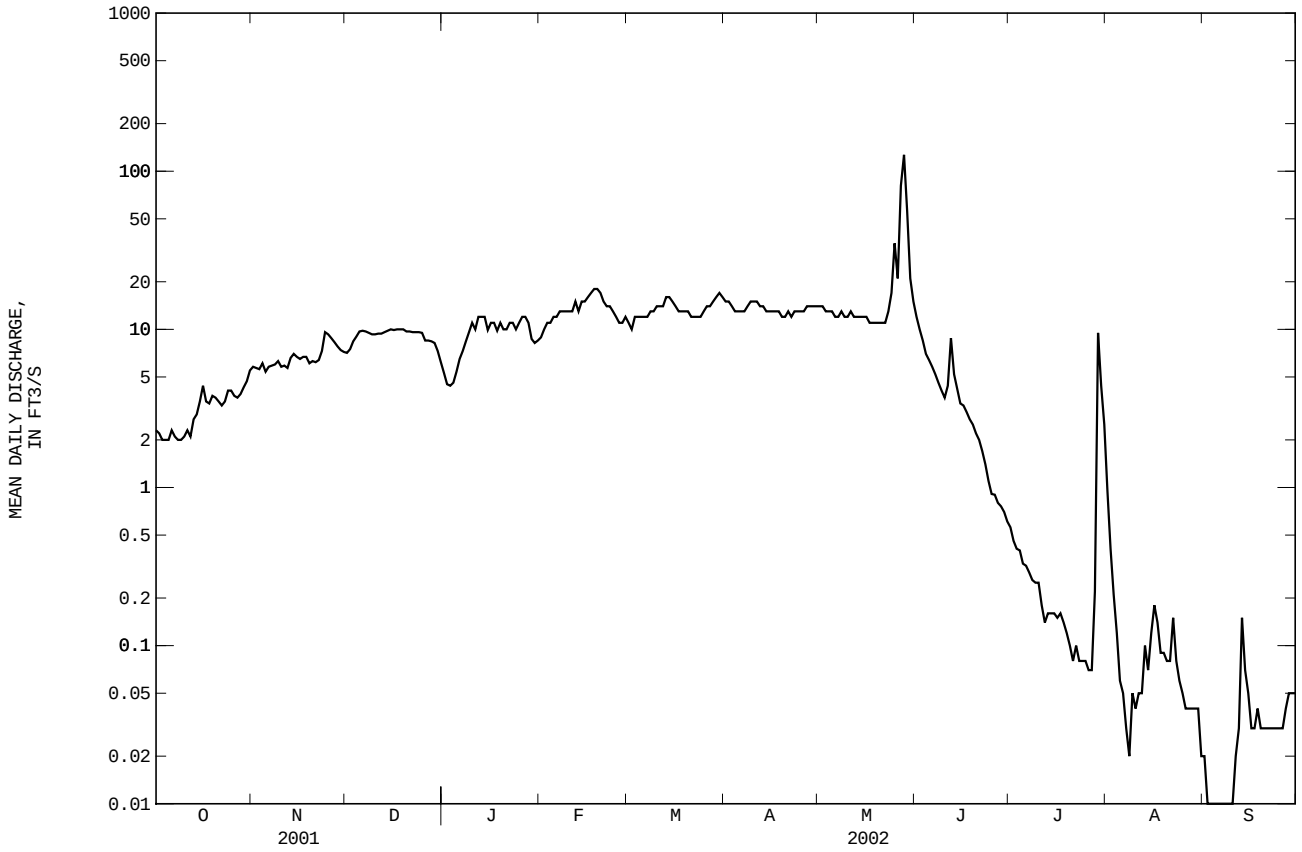
06853800 WHITE ROCK CREEK NEAR BURR OAK, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	17.51	11.46	8.259	12.41	22.55	38.54	30.76	44.06	49.98	50.05	20.67	32.23
MAX	319	120	43.5	125	143	318	236	174	257	658	166	519
(WY)	1974	1997	1994	1962	1993	1993	1987	1985	1961	1993	1993	1973
MIN	0.000	0.084	0.21	0.32	0.94	0.75	0.89	0.91	2.11	0.20	0.007	0.000
(WY)	1967	1969	1969	1969	1972	1968	1967	1968	2000	1991	1959	1991

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1958 - 2002	
ANNUAL MEAN	31.79		7.845		28.22	
HIGHEST ANNUAL MEAN					136	1993
LOWEST ANNUAL MEAN					4.93	1968
HIGHEST DAILY MEAN	1530	May 5	127	May 28	6000	Sep 3 1973
LOWEST DAILY MEAN	1.8	Jan 1	0.00	Sep 2	0.00	Oct 4 1957
ANNUAL SEVEN-DAY MINIMUM	2.1	Oct 3	0.00	Sep 2	0.00	Oct 16 1957
MAXIMUM PEAK FLOW			167	May 27	15800	Sep 3 1973
MAXIMUM PEAK STAGE			5.01	May 27	25.06	Sep 3 1973
INSTANTANEOUS LOW FLOW			0.00	Aug 9	.00	many years
ANNUAL RUNOFF (AC-FT)	23020		5680		20440	
10 PERCENT EXCEEDS	44		14		39	
50 PERCENT EXCEEDS	7.4		7.4		6.0	
90 PERCENT EXCEEDS	2.7		0.05		0.42	

e Estimated



06853900 LOVEWELL RESERVOIR NEAR LOVEWELL, KS

LOCATION.--Lat 39°53'04", long 98°01'41", in NW $^{1}/_{4}$ NE $^{1}/_{4}$ NE $^{1}/_{4}$ sec.18, T.2 S., R.6 W., Jewell County, Hydrologic Unit 10250016, at south end of Lovewell Dam on White Rock Creek, 3 mi northwest of Lovewell, and at mile 19.3.

DRAINAGE AREA.--345 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929 (levels by Bureau of Reclamation). From June 15, 1960, to May 6, 1975, water-stage recorder at north end of dam at same datum.

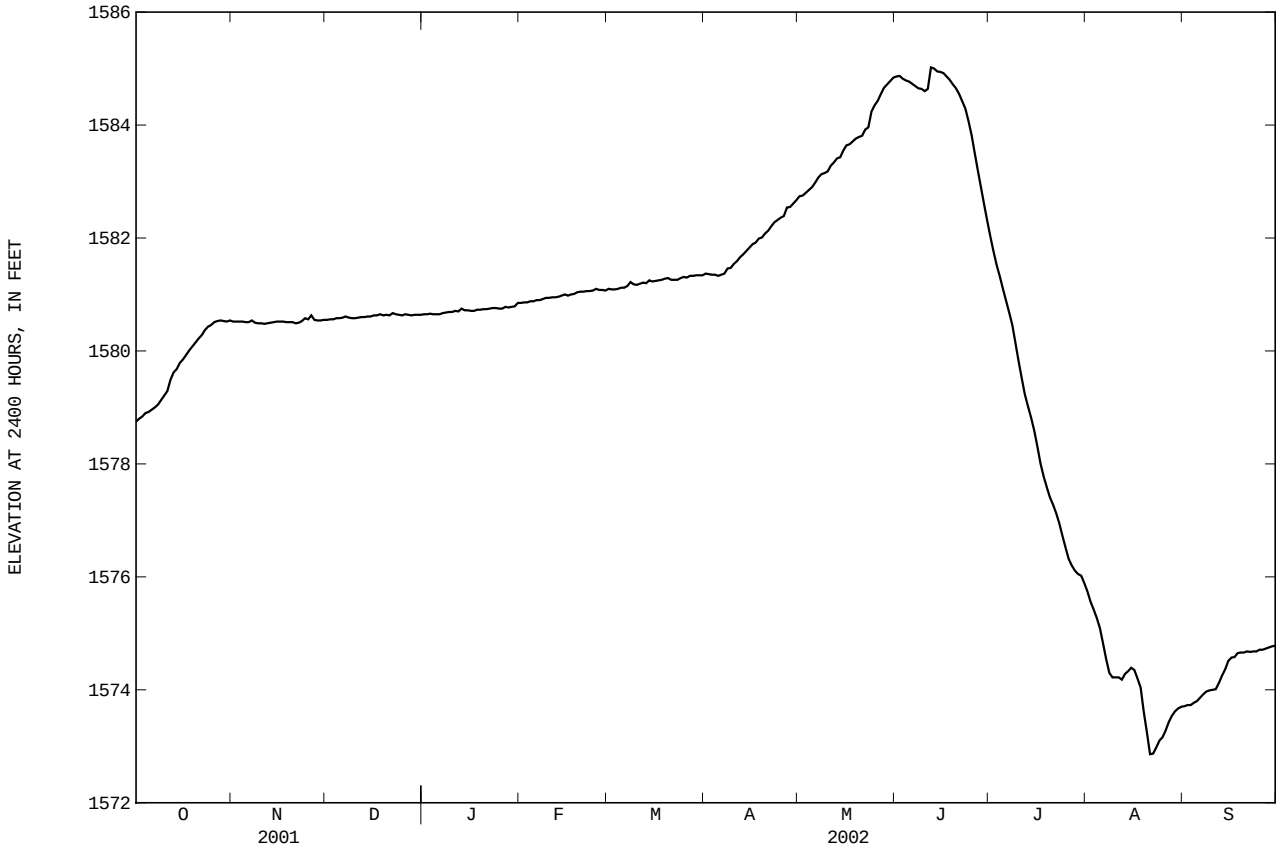
REMARKS.--Reservoir is formed by earthfill dam. Closure was made May 29, 1957. Irrigation pool elevation was first reached on May 19, 1958. Total capacity of 180,300 acre-ft consists of the following: Dead storage, 1,660 acre-ft below elevation 1,562.07 ft; irrigation pool, 34,010 acre-ft between elevations 1,562.07 ft and 1,582.6 ft; flood-control pool, 50,460 acre-ft between elevations 1,582.6 ft and 1,595.3 ft; and surcharge pool, 94,170 acre-ft between elevations 1,595.3 ft and 1,610.3 ft. 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 through lower Courtland Canal. Figures given herein represent total contents. Satellite telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 1,595.38 ft July 22, 1993, contents, 92,560 acre-ft; minimum contents since irrigation pool was first reached, 13,300 acre-ft Aug. 22, 2002, elevation 1,572.77; minimum elevation, 1,570.21 ft Aug. 21, 1991.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 1,585.04 ft June 13, contents, 43,400 acre-ft; minimum elevation, 1,572.77 ft Aug. 22, contents, 13,300 acre-ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Computed by Bureau of Reclamation on basis of resurvey made in 1995)

1,572	12,100	1,580	28,410
1,574	15,370	1,582	33,900
1,576	19,150	1,584	40,000
1,578	23,500	1,586	40,700



06853900 LOVEWELL RESERVOIR NEAR LOVEWELL, KS--Continued

ELEVATION, in FT (NGVD), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1578.75	1580.52	1580.55	1580.65	1580.85	1581.10	1581.37	1582.74	1584.86	1582.02	1575.74	1573.71
2	1578.80	1580.52	1580.56	1580.65	1580.86	1581.09	1581.36	1582.75	1584.87	1581.76	1575.56	1573.73
3	1578.84	1580.52	1580.56	1580.66	1580.86	1581.09	1581.35	1582.80	1584.82	1581.52	1575.42	1573.73
4	1578.90	1580.52	1580.58	1580.65	1580.88	1581.10	1581.35	1582.85	1584.79	1581.32	1575.27	1573.77
5	1578.92	1580.51	1580.58	1580.65	1580.88	1581.12	1581.33	1582.90	1584.77	1581.10	1575.09	1573.80
6	1578.96	1580.51	1580.59	1580.65	e1580.90	1581.12	1581.35	1582.98	1584.73	1580.89	1574.82	1573.86
7	1579.00	1580.54	1580.61	1580.67	e1580.90	1581.15	1581.37	1583.07	1584.69	1580.68	1574.54	1573.92
8	1579.05	1580.50	1580.59	1580.68	e1580.92	1581.22	1581.46	1583.13	1584.65	1580.46	1574.30	1573.97
9	1579.13	1580.49	1580.58	1580.69	e1580.94	1581.18	1581.47	1583.15	1584.64	1580.14	1574.22	1573.99
10	1579.21	1580.49	1580.58	1580.69	e1580.94	1581.17	1581.54	1583.18	1584.60	1579.82	1574.22	1574.00
11	1579.29	1580.48	1580.59	1580.71	1580.95	1581.19	1581.59	1583.28	1584.64	1579.52	1574.22	1574.01
12	1579.49	1580.49	1580.60	1580.70	1580.95	1581.21	1581.66	1583.34	1585.02	1579.23	1574.18	1574.12
13	1579.62	1580.50	1580.60	1580.75	1580.96	1581.20	1581.71	1583.41	1585.00	1579.02	1574.28	1574.25
14	1579.68	1580.51	1580.61	1580.72	1580.98	1581.25	1581.77	1583.43	1584.95	1578.82	1574.33	1574.36
15	1579.79	1580.52	1580.61	1580.72	1581.00	1581.23	1581.83	1583.55	1584.94	1578.59	1574.39	1574.51
16	1579.85	1580.52	1580.63	1580.71	1580.98	1581.24	1581.89	1583.64	1584.92	1578.31	1574.35	1574.57
17	1579.93	1580.52	1580.63	1580.71	1581.00	1581.25	1581.92	1583.66	1584.86	1578.01	1574.20	1574.58
18	1580.01	1580.51	1580.65	1580.73	1581.01	1581.26	1581.99	1583.71	1584.80	1577.78	1574.04	1574.65
19	1580.08	1580.51	1580.63	1580.73	1581.04	1581.28	1582.01	1583.76	1584.72	1577.59	1573.61	1574.66
20	1580.15	1580.51	1580.64	1580.74	1581.05	1581.29	1582.08	1583.79	1584.65	1577.41	1573.25	1574.66
21	1580.22	1580.49	1580.63	1580.74	1581.05	1581.26	1582.13	1583.81	1584.55	1577.28	1572.86	1574.68
22	1580.28	1580.50	1580.67	1580.75	1581.06	1581.26	1582.21	1583.92	1584.42	1577.13	1572.87	1574.67
23	1580.37	1580.53	1580.65	1580.76	1581.06	1581.26	1582.28	1583.96	1584.29	1576.95	1572.98	1574.68
24	1580.43	1580.58	1580.64	1580.76	1581.07	1581.29	1582.32	1584.24	1584.07	1576.73	1573.10	1574.68
25	1580.46	1580.56	1580.63	1580.75	1581.10	1581.31	1582.36	1584.35	1583.82	1576.52	1573.16	1574.71
26	1580.51	1580.63	1580.65	1580.75	1581.08	1581.30	1582.39	1584.43	1583.50	1576.32	1573.28	1574.71
27	1580.53	1580.55	1580.64	1580.78	1581.08	1581.33	1582.54	1584.55	1583.19	1576.20	1573.43	1574.73
28	1580.54	1580.54	1580.63	1580.77	1581.07	1581.33	1582.55	1584.66	1582.89	1576.11	1573.54	1574.75
29	1580.53	1580.54	1580.64	1580.78	---	1581.34	1582.61	1584.72	1582.59	1576.05	1573.62	1574.77
30	1580.52	1580.55	1580.64	1580.79	---	1581.34	1582.67	1584.78	1582.30	1576.02	1573.67	1574.78
31	1580.54	---	1580.64	1580.85	---	1581.34	---	1584.84	---	1575.89	1573.70	---
MEAN	1579.75	1580.52	1580.61	1580.72	1580.98	1581.23	1581.88	1583.66	1584.38	1578.56	1574.07	1574.33
MAX	1580.54	1580.63	1580.67	1580.85	1581.10	1581.34	1582.67	1584.84	1585.02	1582.02	1575.74	1574.78
MIN	1578.75	1580.48	1580.55	1580.65	1580.85	1581.09	1581.33	1582.74	1582.30	1575.89	1572.86	1573.71
(+)	29,830	29,860	30,100	30,670	31,270	32,020	35,880	42,740	34,780	18,930	14,850	16,780
(#)	+4,670	+30	+240	+570	+600	+750	+3,860	+6,860	-7,960	-15,850	-4,080	+1,930

CAL YR 2001 ..... (#) +2,410
WTR YR 2002 ..... (#) -8,380

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

e Estimated

06854000 WHITE ROCK CREEK AT LOVEWELL, KS

LOCATION.--Lat 39°53'10", long 98°01'20", in NW $^{1}/_{4}$ NW $^{1}/_{4}$ NE $^{1}/_{4}$ sec.17, T.2 S., R.6 W., Jewell County, Hydrologic Unit 10250016, on right bank 1,400 ft east of Lovewell Dam, 2.5 mi northwest of Lovewell, and at mile 18.8.

DRAINAGE AREA.--345 mi^{2}.

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

REVISED RECORDS.--WSP 1340: 1946-47, 1949-50(P).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1,531.52 ft above NGVD of 1929 (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 downstream at datum 1,513.95 ft above NGVD of 1929 (levels by U.S. Army Corps of Engineers). 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 downstream at datum 1,519.53 ft above NGVD of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow completely regulated since 1957 by Lovewell Reservoir (station 06853900), 0.5 mi upstream. Large flows from the Republican River enter Lovewell Reservoir from upper Courtland Canal. Figures of flow do not include diversion immediately upstream from station into lower Courtland Canal. Satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since 1870, that of July 10, 1950, from information by local residents.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.09	0.26	0.13	e0.19	e0.14	e0.18	0.25	0.36	0.45	0.29	0.14	0.05
2	0.11	0.34	0.14	e0.19	e0.14	e0.18	0.32	0.26	0.28	0.31	0.12	0.04
3	0.10	0.56	0.16	e0.19	e0.14	e0.19	0.37	0.21	0.57	0.32	0.08	0.03
4	0.13	0.54	0.20	e0.19	e0.15	e0.21	0.45	0.19	1.1	0.29	0.05	0.03
5	0.17	0.34	0.22	0.19	e0.16	e0.21	0.45	0.20	0.59	0.28	0.04	0.02
6	0.23	0.32	0.19	0.19	e0.16	e0.21	0.38	0.21	0.54	0.28	0.03	0.02
7	0.26	0.29	0.20	0.18	e0.16	0.22	0.31	0.27	0.52	0.28	0.03	0.02
8	0.22	0.37	0.23	0.18	e0.17	e0.21	0.45	0.52	0.49	0.32	0.03	0.02
9	0.46	0.37	0.25	0.17	e0.18	e0.21	0.23	0.30	0.48	0.58	0.09	0.0
10	0.42	0.23	0.29	0.15	0.19	0.23	0.19	0.27	0.47	0.94	0.11	0.01
11	0.29	0.20	0.24	0.14	0.20	0.23	0.18	0.40	0.62	0.62	0.08	0.01
12	0.34	0.27	0.23	0.14	0.20	0.23	0.20	0.36	0.88	0.19	0.08	0.01
13	0.50	0.23	0.23	0.15	0.20	0.25	0.18	0.29	0.57	0.13	0.23	0.20
14	e0.33	0.20	0.26	0.15	0.20	0.26	0.17	0.26	0.48	0.12	0.09	0.16
15	e0.50	0.15	0.28	0.14	0.19	0.22	0.17	0.25	0.55	0.17	0.05	0.13
16	e0.48	0.12	0.31	0.15	0.19	0.23	0.15	0.25	0.55	0.40	0.05	0.11
17	e0.44	0.11	0.38	0.14	0.18	0.25	0.14	0.26	0.66	0.17	0.04	0.11
18	e0.23	0.11	0.30	0.15	0.18	0.30	0.15	0.23	1.2	0.15	0.05	0.10
19	0.27	0.13	0.26	0.17	0.18	0.30	0.20	0.25	1.0	0.13	0.12	0.10
20	0.24	0.14	0.26	0.17	0.17	0.25	0.28	0.26	0.82	0.12	0.20	0.09
21	0.22	0.13	0.27	0.17	0.17	e0.24	0.39	0.25	0.77	0.09	0.08	0.08
22	0.21	0.12	0.28	0.17	0.17	e0.23	0.46	0.31	0.79	0.14	0.05	0.07
23	0.22	0.12	0.23	e0.14	0.17	0.23	0.25	0.42	0.90	0.20	0.04	0.07
24	0.22	0.16	0.22	0.17	e0.17	0.19	0.18	0.70	1.2	0.25	0.04	0.07
25	0.23	0.11	0.23	0.17	e0.16	e0.16	0.14	0.54	1.0	0.39	0.03	0.06
26	0.23	0.12	0.23	0.16	e0.16	0.15	0.16	0.29	1.4	0.27	0.10	0.06
27	0.24	e0.08	e0.23	e0.15	e0.17	0.17	0.27	0.28	0.89	0.15	0.10	0.06
28	0.27	e0.09	e0.22	e0.14	e0.18	0.18	0.22	0.24	0.42	0.11	0.08	0.06
29	0.28	e0.10	e0.21	e0.14	---	0.23	0.21	0.26	0.34	0.12	0.27	0.05
30	0.29	e0.12	e0.20	e0.14	---	0.29	0.23	0.33	0.30	0.11	0.23	0.04
31	0.28	---	e0.19	e0.14	---	0.28	---	0.39	---	0.09	0.08	---
MEAN	0.274	0.214	0.235	0.162	0.172	0.223	0.258	0.310	0.694	0.258	0.091	0.063
MAX	0.50	0.56	0.38	0.19	0.20	0.30	0.46	0.70	1.4	0.94	0.27	0.20
MIN	0.09	0.08	0.13	0.14	0.14	0.15	0.14	0.19	0.28	0.09	0.03	0.00
AC-FT	17	13	14	9.9	9.6	14	15	19	41	16	5.6	3.7

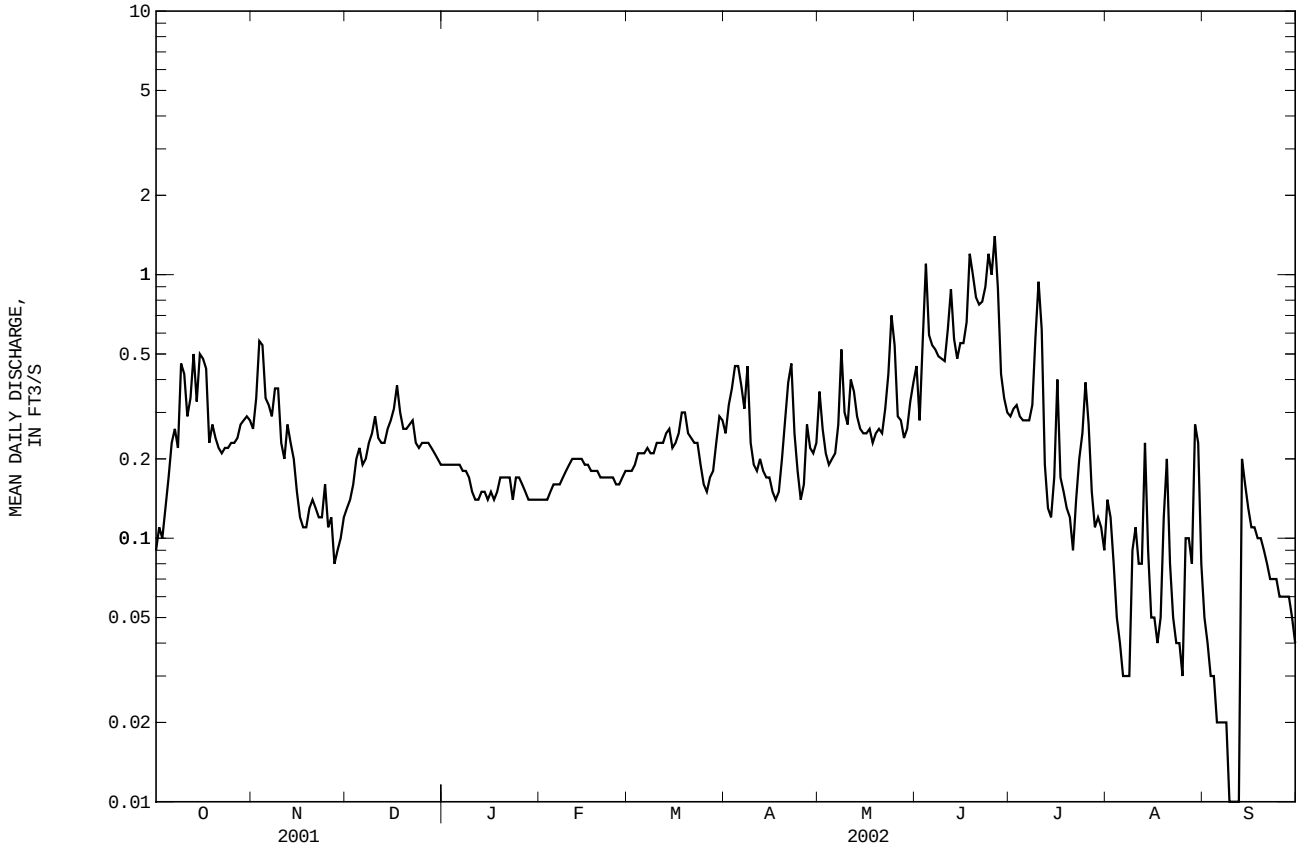
06854000 WHITE ROCK CREEK AT LOVEWELL, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	42.35	18.36	8.612	8.348	24.47	29.77	50.29	47.77	93.28	60.35	31.01	49.06
MAX	972	486	110	117	282	379	848	370	856	925	724	377
(WY)	1974	1974	1974	1987	1949	1993	1987	1987	1951	1950	1993	1973
MIN	0.000	0.000	0.000	0.000	0.000	0.031	0.054	0.056	0.14	0.11	0.037	0.041
(WY)	1949	1956	1956	1956	1957	1985	1983	1988	1988	2000	2000	2000

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1946 - 2002	
ANNUAL MEAN	12.85		0.246		38.43	
HIGHEST ANNUAL MEAN					208	1993
LOWEST ANNUAL MEAN					0.11	2000
HIGHEST DAILY MEAN	123	Jun 16	1.4	Jun 26	16700	Jul 10 1950
LOWEST DAILY MEAN	0.02	Apr 20	0.00	Sep 9	0.00	Aug 21 1948
ANNUAL SEVEN-DAY MINIMUM	0.03	Apr 19	0.01	Sep 6	0.00	Aug 21 1948
MAXIMUM PEAK FLOW			3.3	Jun 26	23300	Jul 10 1950
MAXIMUM PEAK STAGE			1.50	Jun 26	21.62	Jul 10 1950
INSTANTANEOUS LOW FLOW			0.00	Sep 8	.00	many years
ANNUAL RUNOFF (AC-FT)	9300		178		27840	
10 PERCENT EXCEEDS	105		0.46		58	
50 PERCENT EXCEEDS	0.30		0.20		0.26	
90 PERCENT EXCEEDS	0.11		0.08		0.05	

e Estimated



06856000 REPUBLICAN RIVER AT CONCORDIA, KS

LOCATION.--Lat 39°35'18", long 97°39'30", in SW $^{1}/_{4}$ SW $^{1}/_{4}$ NE $^{1}/_{4}$ sec.28, T.5 S., R.3 W., Cloud County, Hydrologic Unit 10250017, on right bank at upstream side of bridge on U.S. Highway 81, 1.0 mi north of Concordia, 4.9 mi downstream from Buffalo Creek, and at mile 98.5.

DRAINAGE AREA.--23,560 mi^2, of which about 7,500 mi^2 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 1951 are contained in reports of U.S. Weather Bureau.

REVISED RECORDS.--WSP 1340: 1946-47.

GAGE.--Water-stage recorder. Datum of gage is 1,328.62 ft above NGVD of 1929. Apr. 25, 1946, to Mar. 3, 1983, at site about 100 ft downstream, datum 5.0 ft higher. Apr. 11, 1983, to Sept. 30, 1987, at present site, at datum 5.0 ft higher. June 22, 1998, gage moved for bridge construction to right bank on downstream side of bridge, at same datum.

REMARKS.--Records good except those for low-flow periods and estimated daily discharges, which are poor. Natural flow affected by irrigation development upstream from station and by storage in seven reservoirs in Colorado, Nebraska, and Kansas. Considerable regulation since 1952 by Harlan County Lake (station 06849000). Flow was affected by bridge construction May, 1998 to June, 1999. Satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since at least 1895, about 23 ft June 2, 1935, present site and datum, from information by U.S. Weather Bureau, discharge, about 207,000 ft^3/sec, on basis of records for stations upstream. Flood of June 21, 1915, reached a stage of 19.1 ft, present site and datum, from information by U.S. Weather Bureau, discharge, about 60,000 ft^3/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	155	170	190	201	271	175	189	94	377	118	141	46
2	142	170	192	e210	229	235	189	91	243	116	98	33
3	133	173	196	e215	241	212	193	88	174	120	87	26
4	124	181	204	e220	289	238	186	86	133	133	71	20
5	121	176	210	220	300	245	182	82	113	133	62	17
6	116	177	204	229	319	219	170	79	109	137	57	12
7	112	179	199	242	332	245	177	77	110	129	48	11
8	109	180	197	241	322	253	188	78	91	120	54	8.9
9	110	181	193	252	302	248	203	89	74	123	54	7.8
10	118	182	192	248	463	193	203	82	66	114	60	7.2
11	132	182	190	251	250	252	163	85	75	113	68	7.1
12	119	184	192	245	244	264	137	96	84	104	67	8.6
13	140	186	193	243	259	256	123	86	378	90	128	56
14	124	191	192	278	275	243	118	81	432	93	151	77
15	129	194	190	258	263	226	109	76	266	95	105	70
16	150	194	193	248	237	215	104	73	198	104	93	52
17	150	192	193	211	221	211	100	77	160	120	84	36
18	140	191	192	198	215	205	99	73	130	125	73	29
19	127	188	191	213	219	205	91	71	104	120	84	25
20	118	186	188	206	211	203	92	70	91	98	82	25
21	111	185	190	203	206	198	103	68	79	87	110	21
22	108	185	190	203	202	190	105	64	62	72	112	17
23	107	190	191	207	199	193	105	67	50	66	98	17
24	106	201	197	208	199	193	101	219	65	68	64	15
25	104	204	149	205	192	199	95	912	60	64	53	13
26	101	212	138	197	211	198	90	928	56	62	49	12
27	99	219	141	194	201	184	105	801	72	76	54	12
28	97	211	172	202	200	206	108	894	108	92	157	13
29	105	199	176	196	---	202	106	866	109	83	123	12
30	143	193	182	207	---	197	98	644	108	105	121	11
31	161	---	193	256	---	194	---	553	---	132	71	---
MEAN	122.9	188.5	187.4	222.8	252.6	216.0	134.4	246.8	139.2	103.6	86.42	23.92
MAX	161	219	210	278	463	264	203	928	432	137	157	77
MIN	97	170	138	194	192	175	90	64	50	62	48	7.1
AC-FT	7560	11220	11520	13700	14030	13280	8000	15170	8290	6370	5310	1420

06856000 REPUBLICAN RIVER AT CONCORDIA, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	535.0	359.1	283.2	277.6	463.7	704.1	690.8	856.5	1195	1199	628.1	629.0
MAX	5033	1725	1229	1003	1354	2766	4009	3458	8464	10740	3521	4143
(WY)	1974	1947	1994	1974	1949	1993	1987	1949	1947	1993	1950	1951
MIN	14.5	34.0	26.7	37.8	59.9	94.2	75.9	49.5	139	42.6	52.2	23.9
(WY)	1992	1992	2001	1957	2001	1992	1991	1956	2002	1954	1955	2002

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1946 - 2002	
ANNUAL MEAN	434.6		160.1		648.6	
HIGHEST ANNUAL MEAN					2339	1951
LOWEST ANNUAL MEAN					117	1991
HIGHEST DAILY MEAN	4640	May 6	928	May 26	55200	Jun 25 1947
LOWEST DAILY MEAN	20	Jan 1	7.1	Sep 11	7.1	Sep 11 2002
ANNUAL SEVEN-DAY MINIMUM	34	Jan 1	8.9	Sep 6	8.9	Sep 6 2002
MAXIMUM PEAK FLOW			1990	May 25	75000	Jun 25 1947
MAXIMUM PEAK STAGE			8.11	May 25	14.90	Jun 25 1947
INSTANTANEOUS LOW FLOW			6.5	Sep 9	6.5	Sep 9 2002
ANNUAL RUNOFF (AC-FT)	314600		115900		469900	
10 PERCENT EXCEEDS	1000		245		1390	
50 PERCENT EXCEEDS	249		143		288	
90 PERCENT EXCEEDS	55		57		90	

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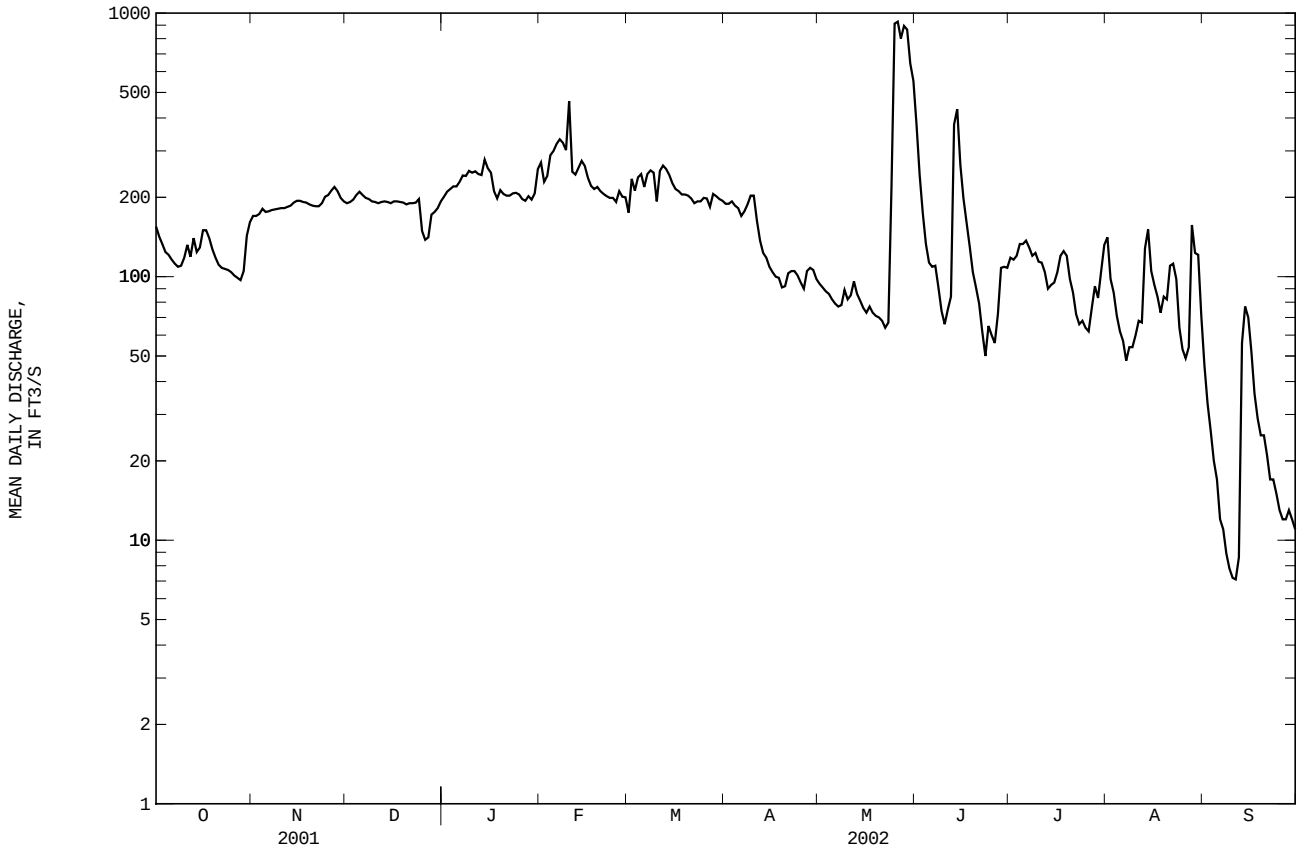


06856600 REPUBLICAN RIVER AT CLAY CENTER, KS

LOCATION.--Lat 39°21'20", long 97°07'34", in SW $^{1}/_{4}$ NW $^{1}/_{4}$ SW $^{1}/_{4}$ sec.17, T.8 S., R.3 E., Clay County, Hydrologic Unit 10250017, on right bank at downstream side of bridge on Kansas Highway 15, 1.0 mi south of Clay Center, 4.0 mi downstream from Five Creeks, and at mile 38.2.

DRAINAGE AREA.--24,542 mi^2, of which about 7,500 mi^2 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.

REVISED RECORDS.--WSP 806: Drainage area. WSP 1006: 1941. WSP 1310: 1922. WSP 1340: 1929, 1933-34.

GAGE.--Water-stage recorder. Datum of gage is 1,159.21 ft above NGVD of 1929. See WSP 1919 for history of changes prior to Sept. 23, 1949. Sept. 23, 1949 to July 21, 1987, at site 200 ft downstream at same datum.

REMARKS.--Records good except those for low flow in September and estimated daily discharges, which are poor. Natural flow affected by irrigation development upstream from station and by reservoirs in Colorado, Nebraska, and Kansas. Flow moderately regulated since 1952 by Harlan County Lake (station 06849000). Satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since at least 1895, 26.2 ft 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, site and datum then in use, from information by U.S. Weather Bureau.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	223	159	231	251	368	285	238	163	686	86	42	46
2	200	177	226	267	294	283	237	154	579	77	46	37
3	185	186	228	289	285	240	226	146	431	80	55	22
4	178	191	226	307	315	227	222	138	338	76	48	17
5	170	195	237	316	304	271	223	151	272	72	34	15
6	163	202	236	316	296	264	223	159	228	81	30	13
7	156	202	237	325	280	276	223	144	199	93	26	11
8	149	200	233	351	276	280	233	133	181	95	20	9.7
9	144	197	231	363	323	293	231	125	172	88	21	8.7
10	141	199	232	335	312	270	231	124	161	80	23	7.5
11	143	202	229	286	290	278	240	172	153	81	22	6.5
12	145	202	232	340	322	266	239	275	147	81	28	7.4
13	164	207	235	340	328	297	211	189	169	79	69	9.0
14	167	212	235	332	332	310	188	168	231	75	37	15
15	188	214	234	322	349	300	176	143	325	63	42	7.3
16	196	218	236	328	357	287	171	133	383	55	52	6.8
17	202	219	236	301	343	271	162	132	290	60	85	14
18	217	221	237	298	328	265	168	117	229	59	49	16
19	223	218	237	288	333	270	183	112	186	64	49	22
20	195	213	236	262	329	259	184	108	157	65	37	12
21	179	215	235	271	319	252	175	106	140	59	59	10
22	167	216	237	275	304	244	170	99	124	53	42	7.5
23	159	221	231	275	297	240	168	95	107	50	39	6.7
24	153	237	221	269	290	240	165	120	90	46	44	5.9
25	146	245	168	264	283	242	156	130	79	44	44	4.9
26	140	238	e170	272	395	240	151	212	75	42	36	4.1
27	137	238	e190	275	307	243	160	1330	75	40	27	3.7
28	133	240	203	272	314	245	157	1510	66	76	22	3.5
29	135	245	e230	263	---	230	153	1620	64	59	20	3.4
30	133	240	e240	284	---	239	157	1050	73	54	22	2.9
31	133	---	e250	422	---	240	---	904	---	49	40	---
MEAN	166.6	212.3	227.1	301.9	316.9	262.8	194.0	327.8	213.7	67.16	39.03	11.85
MAX	223	245	250	422	395	310	240	1620	686	95	85	46
MIN	133	159	168	251	276	227	151	95	64	40	20	2.9
AC-FT	10240	12630	13960	18560	17600	16160	11550	20160	12710	4130	2400	705

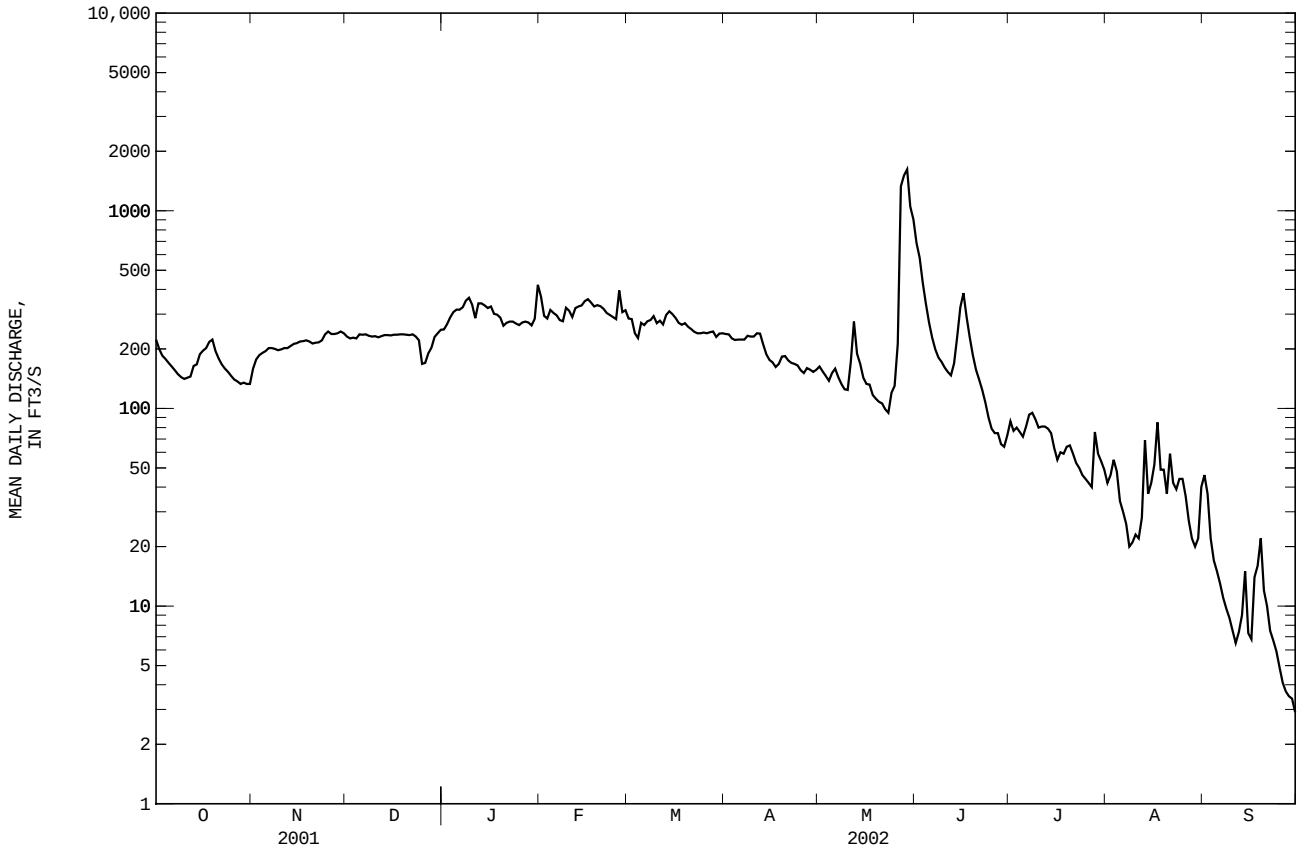
06856600 REPUBLICAN RIVER AT CLAY CENTER, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1918 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	664.2	470.0	389.3	389.6	662.8	963.6	1045	1402	2128	1652	917.0	938.5
MAX	7749	2293	1583	1615	2688	4795	5797	7170	11320	21590	4594	4920
(WY)	1974	1947	1994	1974	1993	1987	1987	1945	1935	1993	1993	1951
MIN	7.64	39.0	37.1	28.0	73.4	79.0	92.1	51.6	138	42.5	13.4	11.9
(WY)	1992	1992	2001	1957	1992	1992	1954	1992	1988	1954	1934	2002

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1918 - 2002	
ANNUAL MEAN	600.9		194.5		968.9	
HIGHEST ANNUAL MEAN					3724	1993
LOWEST ANNUAL MEAN					191	1991
HIGHEST DAILY MEAN	8370	Jun 6	1620	May 29	103000	Jun 3 1935
LOWEST DAILY MEAN	28	Jan 1	2.9	Sep 30	1.0	Aug 9 1934
ANNUAL SEVEN-DAY MINIMUM	40	Jan 1	4.1	Sep 24	1.9	Aug 7 1934
MAXIMUM PEAK FLOW			2080	May 28	195000	Jun 3 1935
MAXIMUM PEAK STAGE			10.17	May 28	25.74	Jun 3 1935
INSTANTANEOUS LOW FLOW			2.3	Sep 30	0.00	Aug 10 1934
ANNUAL RUNOFF (AC-FT)	435000		140800		701900	
10 PERCENT EXCEEDS	1420		315		2000	
50 PERCENT EXCEEDS	300		195		462	
90 PERCENT EXCEEDS	75		27		128	

e Estimated



06857050 MILFORD LAKE NEAR JUNCTION CITY, KS

LOCATION.--Lat 39°04'40", long 96°53'30", in SE $^{1}/_{4}$ sec.20, T.11 S., R.5 E., Geary County, Hydrologic Unit 10250017, in control tower of dam on Republican River, 5.0 mi northwest of Junction City, and at mile 7.7.

DRAINAGE AREA.--24,880 mi^2, 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 NGVD of 1929 (levels by U.S. Army Corps of Engineers).

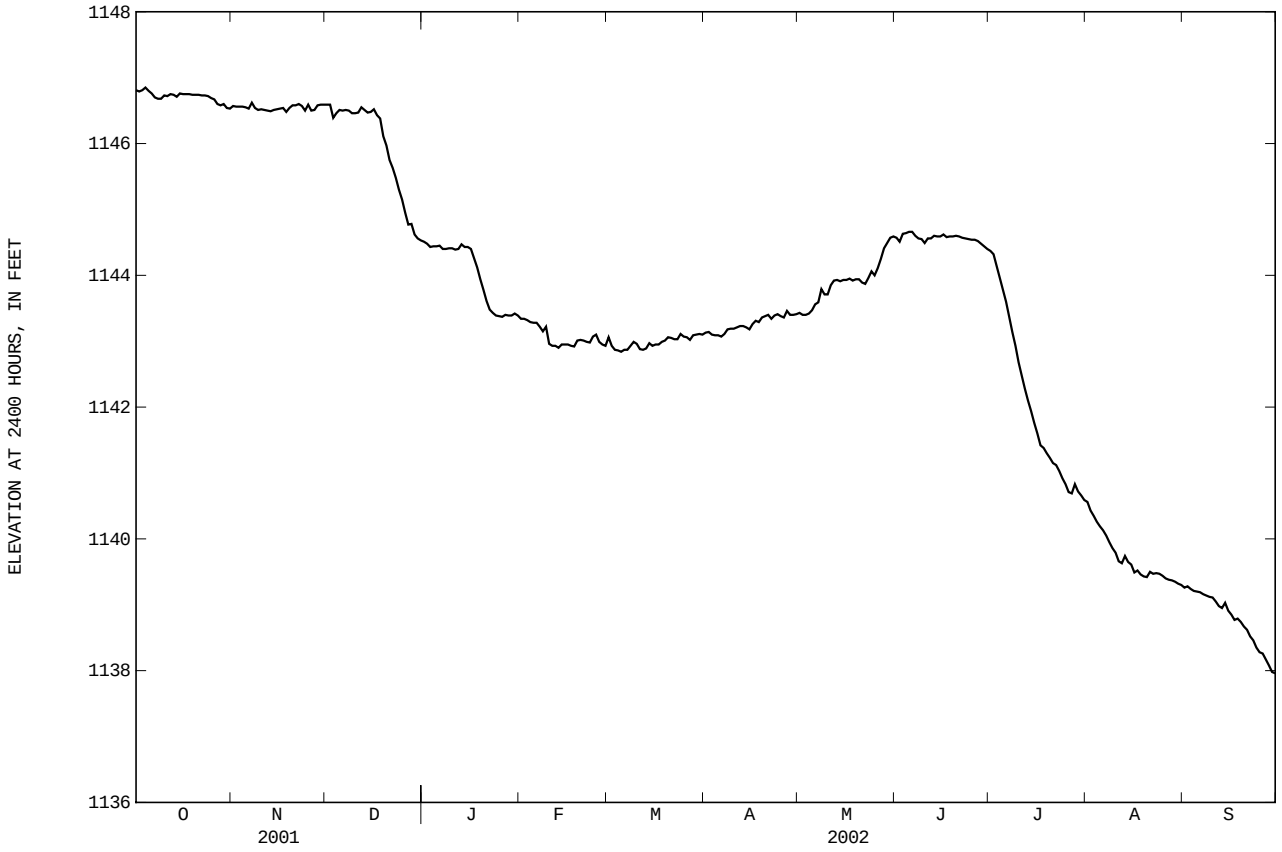
REMARKS.--Reservoir is formed by compacted earthfill dam. Storage began Jan. 16, 1967. Conservation pool elevation was reached July 15, 1967. Total capacity, 1,380,000 acre-ft below elevation 1,182.0 ft. Crest of uncontrolled spillway is at elevation 1,176.2 ft. Storage capacity of 673,600 acre-ft above elevation 1,144.4 ft is provided for flood control. Storage capacity of 415,400 acre-ft below elevation 1,144.4 ft is provided for conservation and recreation. Figures given herein represent total contents. Satellite telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 1,181.94 ft July 25, 1993, contents, 1,346,000 acre-ft; minimum elevation since conservation pool first filled, 1,137.24 ft Feb. 26, 1988, contents, 287,400 acre-ft.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 1,146.88 ft Oct. 5, contents, 429,600 acre-ft; minimum elevation, 1,137.95 ft Sept. 30, contents, 296,700 acre-ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Computed by U.S. Army Corps of Engineers in 1982 from topographic maps)

1,135	259,400	1,145	398,400
1,140	324,400	1,150	485,500



06857050 MILFORD LAKE NEAR JUNCTION CITY, KS--Continued

ELEVATION, in FT (NGVD), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1146.81	1146.57	1146.59	1144.51	1143.34	1143.06	1143.13	1143.43	1144.57	1144.37	1140.56	1139.26
2	1146.79	1146.56	1146.59	1144.48	1143.34	1142.93	1143.14	1143.40	1144.51	1144.32	1140.43	1139.28
3	1146.81	1146.56	1146.39	1144.43	1143.32	1142.87	1143.10	1143.40	1144.63	1144.14	1140.35	1139.24
4	1146.85	1146.56	1146.46	1144.44	1143.29	1142.86	1143.09	1143.42	1144.64	1143.96	1140.26	1139.21
5	1146.80	1146.55	1146.51	1144.44	1143.28	1142.84	1143.09	1143.47	1144.66	1143.78	1140.19	1139.20
6	1146.76	1146.53	1146.50	1144.45	1143.28	1142.87	1143.07	1143.56	1144.66	1143.60	1140.13	1139.19
7	1146.70	1146.62	1146.51	1144.40	1143.22	1142.87	1143.11	1143.59	1144.60	1143.37	1140.05	1139.16
8	1146.68	1146.54	1146.50	1144.40	1143.15	1142.93	1143.18	1143.79	1144.56	1143.14	1139.95	1139.14
9	1146.68	1146.51	1146.46	1144.41	1143.22	1142.99	1143.19	1143.71	1144.55	1142.93	1139.86	1139.12
10	1146.73	1146.52	1146.46	1144.41	1142.96	1142.96	1143.19	1143.71	1144.49	1142.68	1139.79	1139.11
11	1146.72	1146.51	1146.47	1144.39	1142.93	1142.88	1143.21	1143.85	1144.56	1142.48	1139.66	1139.05
12	1146.75	1146.50	1146.55	1144.40	1142.93	1142.87	1143.23	1143.92	1144.56	1142.28	1139.63	1138.98
13	1146.74	1146.49	1146.51	1144.47	1142.90	1142.89	1143.23	1143.93	1144.60	1142.10	1139.74	1138.95
14	1146.71	1146.51	1146.47	1144.43	1142.95	1142.97	1143.21	1143.91	1144.59	1141.94	1139.65	1139.03
15	1146.76	1146.52	1146.48	1144.43	1142.95	1142.93	1143.18	1143.93	1144.59	1141.76	1139.61	1138.91
16	1146.75	1146.53	1146.52	1144.40	1142.95	1142.95	1143.26	1143.93	1144.62	1141.60	1139.49	1138.85
17	1146.75	1146.54	1146.43	1144.26	1142.93	1142.95	1143.31	1143.95	1144.58	1141.42	1139.52	1138.77
18	1146.75	1146.48	1146.38	1144.12	1142.92	1142.99	1143.29	1143.92	1144.59	1141.38	1139.46	1138.79
19	1146.74	1146.54	1146.11	1143.94	1143.01	1143.01	1143.36	1143.94	1144.59	1141.30	1139.43	1138.74
20	1146.74	1146.58	1145.97	1143.78	1143.02	1143.06	1143.38	1143.94	1144.60	1141.23	1139.42	1138.67
21	1146.74	1146.58	1145.75	1143.61	1143.01	1143.05	1143.40	1143.89	1144.59	1141.15	1139.50	1138.62
22	1146.73	1146.60	1145.63	1143.48	1142.99	1143.03	1143.34	1143.87	1144.57	1141.12	1139.47	1138.52
23	1146.73	1146.57	1145.48	1143.43	1142.98	1143.03	1143.39	1143.96	1144.56	1141.03	1139.48	1138.46
24	1146.72	1146.50	1145.30	1143.39	1143.07	1143.11	1143.41	1144.06	1144.55	1140.92	1139.47	1138.35
25	1146.69	1146.59	1145.15	1143.38	1143.10	1143.07	1143.38	1144.00	1144.54	1140.83	1139.44	1138.28
26	1146.67	1146.50	1144.95	1143.37	1142.99	1143.06	1143.36	1144.11	1144.54	1140.71	1139.40	1138.26
27	1146.60	1146.51	1144.77	1143.40	1142.95	1143.02	1143.46	1144.25	1144.52	1140.69	1139.38	1138.17
28	1146.58	1146.58	1144.78	1143.39	1142.93	1143.09	1143.40	1144.41	1144.48	1140.83	1139.37	1138.08
29	1146.60	1146.59	1144.62	1143.39	---	1143.10	1143.40	1144.49	1144.44	1140.72	1139.35	1137.98
30	1146.54	1146.59	1144.56	1143.42	---	1143.11	1143.41	1144.57	1144.40	1140.66	1139.32	1137.96
31	1146.53	---	1144.53	1143.39	---	1143.10	---	1144.59	---	1140.59	1139.30	---
MEAN	1146.71	1146.54	1145.95	1144.02	1143.07	1142.98	1143.26	1143.90	1144.57	1142.03	1139.70	1138.78
MAX	1146.85	1146.62	1146.59	1144.51	1143.34	1143.11	1143.46	1144.59	1144.66	1144.37	1140.56	1139.28
MIN	1146.53	1146.48	1144.53	1143.37	1142.90	1142.84	1143.07	1143.40	1144.40	1140.59	1139.30	1137.96
(+)	423,700	424,700	390,900	373,300	366,400	368,900	373,600	391,800	388,800	332,600	314,800	296,800
(#)	-5,400	+1,000	-33,800	-17,600	-6,900	+2,500	+4,700	+18,200	-3,000	-56,200	-17,800	-18,000

CAL YR 2001 ..... (#) +18,400
WTR YR 2002 ..... (#) -132,300

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

06857100 REPUBLICAN RIVER BELOW MILFORD DAM, KS

LOCATION.--Lat 39°04'15", long 96°52'00", Geary County, Hydrologic Unit 10250017, Fort Riley Military Reservation, on right bank at downstream side of bridge on U.S. Highway 77, 1.7 mi downstream from Milford Dam, 2.5 mi northwest of Junction City, and at mile 6.0.

DRAINAGE AREA.--24,890 mi^2, of which a large area is noncontributing.

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

GAGE.--Water-stage recorder. Datum of gage is 1,045.70 ft above NGVD of 1929 (U.S. Army Corps of Engineers bench mark). Prior to Nov. 20, 1997, at datum 6.8 ft higher. Gage temporarily moved on Nov. 20, 1997 2.2 mi downstream during replacement of U.S. Highway 77 bridge.

REMARKS.--Records good except those for estimated daily discharge, which are poor. Flow completely regulated since 1967 by Milford Lake (station 06857050), 1.7 mi upstream. Satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	533	194	195	292	288	255	177	140	601	112	375	63
2	202	203	195	286	288	256	174	72	598	399	375	63
3	248	203	195	283	288	e260	175	e55	119	1410	382	62
4	246	203	195	280	287	e258	175	e54	138	1430	381	62
5	242	203	195	276	286	251	175	e53	253	1430	379	61
6	233	203	195	274	283	250	177	e54	250	1550	377	60
7	231	203	194	271	502	250	175	e55	250	1830	377	60
8	230	203	194	268	993	251	180	e54	250	1780	375	60
9	201	203	194	265	997	253	175	e55	250	1720	374	60
10	159	203	194	262	983	250	177	e55	220	1700	374	75
11	156	202	195	261	664	248	175	e54	127	1680	370	176
12	154	203	194	259	284	248	174	e53	120	1440	374	179
13	152	203	193	257	275	215	175	e54	121	1200	384	179
14	152	202	193	253	273	170	176	53	115	1190	368	182
15	156	201	194	253	270	176	177	43	114	1140	315	177
16	151	200	191	432	268	182	176	43	112	1060	284	197
17	151	199	635	1250	268	180	172	44	111	1310	315	228
18	178	198	1460	1500	267	181	173	43	110	399	317	247
19	224	196	1470	1490	264	179	173	43	108	393	234	271
20	221	197	1470	1470	262	177	171	43	107	364	80	263
21	220	196	1480	1460	259	176	171	43	106	358	83	263
22	219	197	1480	1450	259	177	168	43	105	351	109	265
23	217	197	1470	926	259	177	168	43	105	445	124	266
24	213	196	1470	342	258	177	164	47	103	514	124	267
25	212	195	1480	311	257	177	164	45	103	416	123	267
26	212	195	1470	304	259	178	166	44	105	393	123	266
27	211	193	1470	301	254	183	167	69	112	389	120	265
28	211	195	1040	297	254	180	162	165	112	384	112	266
29	210	195	554	293	---	178	163	479	112	210	72	265
30	211	195	537	293	---	178	162	547	112	299	66	265
31	209	---	434	290	---	176	---	565	---	319	64	---
MEAN	211.8	199.2	678.3	530.6	369.6	208.0	171.9	103.5	171.6	890.8	255.8	179.3
MAX	533	203	1480	1500	997	260	180	565	601	1830	384	271
MIN	151	193	191	253	254	170	162	43	103	112	64	60
AC-FT	13020	11850	41710	32630	20530	12790	10230	6370	10210	54770	15730	10670

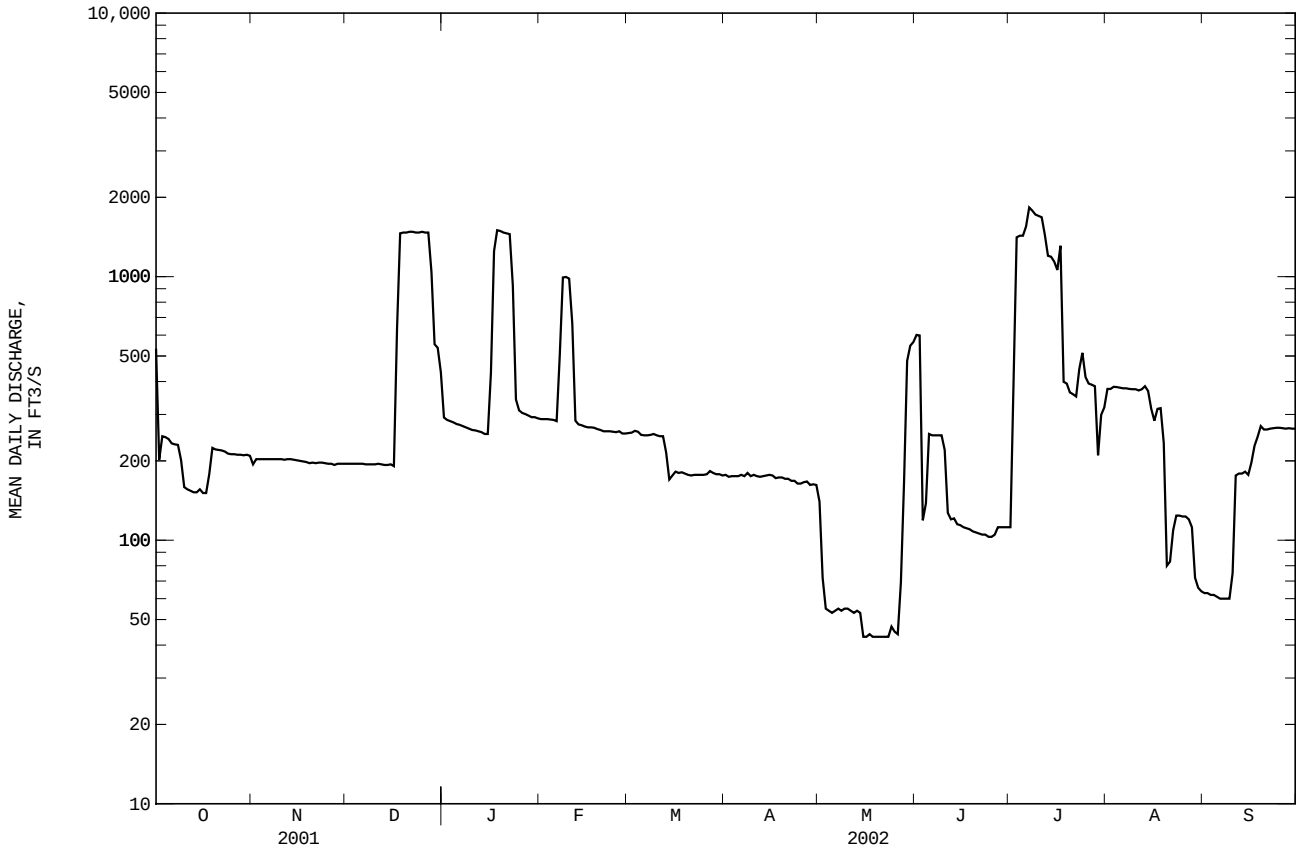
06857100 REPUBLICAN RIVER BELOW MILFORD DAM, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	795.3	728.1	794.3	389.6	598.3	897.9	1024	1305	1256	1439	1181	742.3
MAX	5272	7732	2315	1492	2617	3324	6071	8283	7770	9746	15420	7785
(WY)	1974	1974	1974	1974	1974	1973	1987	1987	1995	1993	1993	1993
MIN	30.2	20.3	9.63	43.8	15.1	22.8	30.8	28.6	37.5	40.1	101	59.7
(WY)	1996	1995	1995	1997	1997	1997	1992	1992	1992	1989	2000	1984

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1968 - 2002	
ANNUAL MEAN	660.8		332.2		931.6	
HIGHEST ANNUAL MEAN					4027	1993
LOWEST ANNUAL MEAN					229	1991
HIGHEST DAILY MEAN	3700	Mar 22	1830	Jul 7	33300	Jul 26 1993
LOWEST DAILY MEAN	27	Aug 26	43	May 15	3.2	Sep 18 1985
ANNUAL SEVEN-DAY MINIMUM	28	Aug 16	43	May 15	8.9	Jan 21 1997
MAXIMUM PEAK FLOW			2540	Jul 17	33700	Jul 26 1993
MAXIMUM PEAK STAGE			7.42	Jul 17	22.10	Jun 22 1964
INSTANTANEOUS LOW FLOW			37	May 11	2.7	Sep 18 1985
ANNUAL RUNOFF (AC-FT)	478400		240500		674900	
10 PERCENT EXCEEDS	2000		769		2300	
50 PERCENT EXCEEDS	251		203		336	
90 PERCENT EXCEEDS	65		71		55	

e Estimated



06860000 SMOKY HILL RIVER AT ELKADER, KS

LOCATION.--Lat 38°47'33", long 100°51'19", in NE $^1/_4$ SE $^1/_4$ sec.34, T.14 S., R.32 W., Logan County, Hydrologic Unit 10260003, on right bank at downstream side of bridge on U.S. Highway 83, 22.3 mi south of Oakley, 0.1 mi downstream from Ladder Creek, and at mile 409.9.

DRAINAGE AREA.--3,555 mi^2.

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

REVISED RECORDS.--WSP 1310: 1941(M), 1947(M), 1949(M). WSP 1510: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,622.62 ft above NGVD of 1929. Prior to Oct. 1, 1986, water-stage recorder at site 100 ft downstream and at datum 2.00 ft higher and Oct. 1, 1986, to Sept. 30, 1995, water-stage recorder at site 100 ft downstream at same datum.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1937, 15.2 ft May 30, 1938, from floodmark, discharge, 71,000 ft^3/sec, on basis of slope-area measurement of peak flow, present datum.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 700 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 24	0815	*22	*4.98	No peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.01	0.09	e0.10	e0.70	0.89	0.62	0.78	0.56	0.17	0.00	0.00	0.03
2	0.01	0.10	e0.20	e0.74	0.71	e0.60	0.78	0.35	0.12	0.00	0.00	0.03
3	0.00	0.14	0.61	e0.76	e0.80	e0.60	1.1	0.25	0.12	0.00	0.00	0.0
4	0.00	0.14	0.91	e0.90	e0.90	0.80	0.90	0.21	0.15	0.00	0.00	0.00
5	0.0	0.14	1.1	1.3	e1.2	1.1	0.68	0.19	0.59	0.03	0.00	0.00
6	0.02	0.14	1.2	1.6	e1.5	1.6	1.0	0.19	0.22	0.03	0.00	0.00
7	0.04	0.14	2.2	1.6	1.7	1.6	1.4	0.20	0.11	0.02	0.00	0.00
8	0.09	0.13	1.2	1.7	2.0	1.6	4.7	0.23	0.07	e0.00	0.00	0.00
9	0.09	0.14	0.73	2.0	2.0	1.2	2.9	0.20	0.05	e0.00	0.00	0.00
10	0.08	0.14	0.66	2.1	1.6	1.2	1.6	0.22	0.06	e0.00	0.00	0.04
11	0.08	0.13	0.50	1.8	1.3	1.2	1.9	0.33	0.06	e0.00	0.00	0.02
12	0.09	0.14	e1.0	1.6	1.2	4.3	2.7	0.30	0.18	e0.00	0.00	0.0
13	0.09	0.14	e1.2	1.7	1.9	1.8	1.8	0.31	0.16	e0.00	0.00	0.02
14	0.09	0.14	e1.0	1.5	1.4	0.95	1.2	0.28	0.14	e0.00	0.00	0.03
15	0.10	0.14	0.70	1.4	1.3	0.59	0.77	0.29	0.13	e0.00	0.00	0.0
16	0.09	0.14	0.46	1.1	2.1	0.52	1.1	0.36	0.13	e0.00	0.00	0.0
17	0.09	0.14	2.5	1.0	0.96	0.56	1.2	0.37	0.12	e0.00	0.00	0.00
18	0.09	0.14	1.4	1.3	0.80	0.92	1.7	0.34	0.11	e0.00	0.00	0.00
19	0.09	0.12	0.58	0.97	2.1	1.4	1.2	0.33	0.08	e0.00	0.00	0.0
20	0.09	0.16	0.36	0.96	1.7	1.0	0.73	0.35	0.10	e0.00	0.00	0.00
21	0.09	0.27	0.34	1.2	1.0	0.59	0.80	0.35	0.08	e0.00	0.00	0.00
22	0.10	0.21	0.88	1.3	0.62	0.57	0.57	0.34	0.06	e0.00	0.00	0.00
23	0.10	0.19	1.2	1.4	0.44	1.2	0.41	0.30	0.05	0.00	0.00	0.00
24	0.09	0.18	1.9	1.4	e0.45	1.1	0.31	9.0	0.05	0.00	0.36	0.00
25	0.09	0.16	0.92	1.3	e0.45	1.4	0.21	3.9	0.04	0.00	0.05	0.00
26	0.09	e0.15	0.72	1.2	e0.48	1.1	0.21	2.1	0.07	0.00	2.2	0.00
27	0.09	e0.11	e0.72	1.6	e0.50	0.84	0.30	1.6	0.06	0.00	5.6	0.00
28	0.10	e0.10	e0.70	1.8	0.56	0.92	0.36	0.93	0.04	0.00	0.26	0.00
29	0.10	e0.10	e0.70	1.4	---	1.4	0.57	0.52	0.02	0.00	0.10	0.00
30	0.09	e0.10	e0.70	1.0	---	1.0	0.75	0.36	0.0	0.00	0.06	0.00
31	0.13	---	e0.70	0.82	---	1.2	---	0.24	---	0.00	0.04	---
MEAN	0.075	0.142	0.906	1.327	1.163	1.145	1.154	0.823	0.111	0.003	0.280	0.006
MAX	0.13	0.27	2.5	2.1	2.1	4.3	4.7	9.0	0.59	0.03	5.6	0.04
MIN	0.00	0.09	0.10	0.70	0.44	0.52	0.21	0.19	0.00	0.00	0.00	0.00
AC-FT	4.6	8.4	56	82	65	70	69	51	6.6	0.2	17	0.3

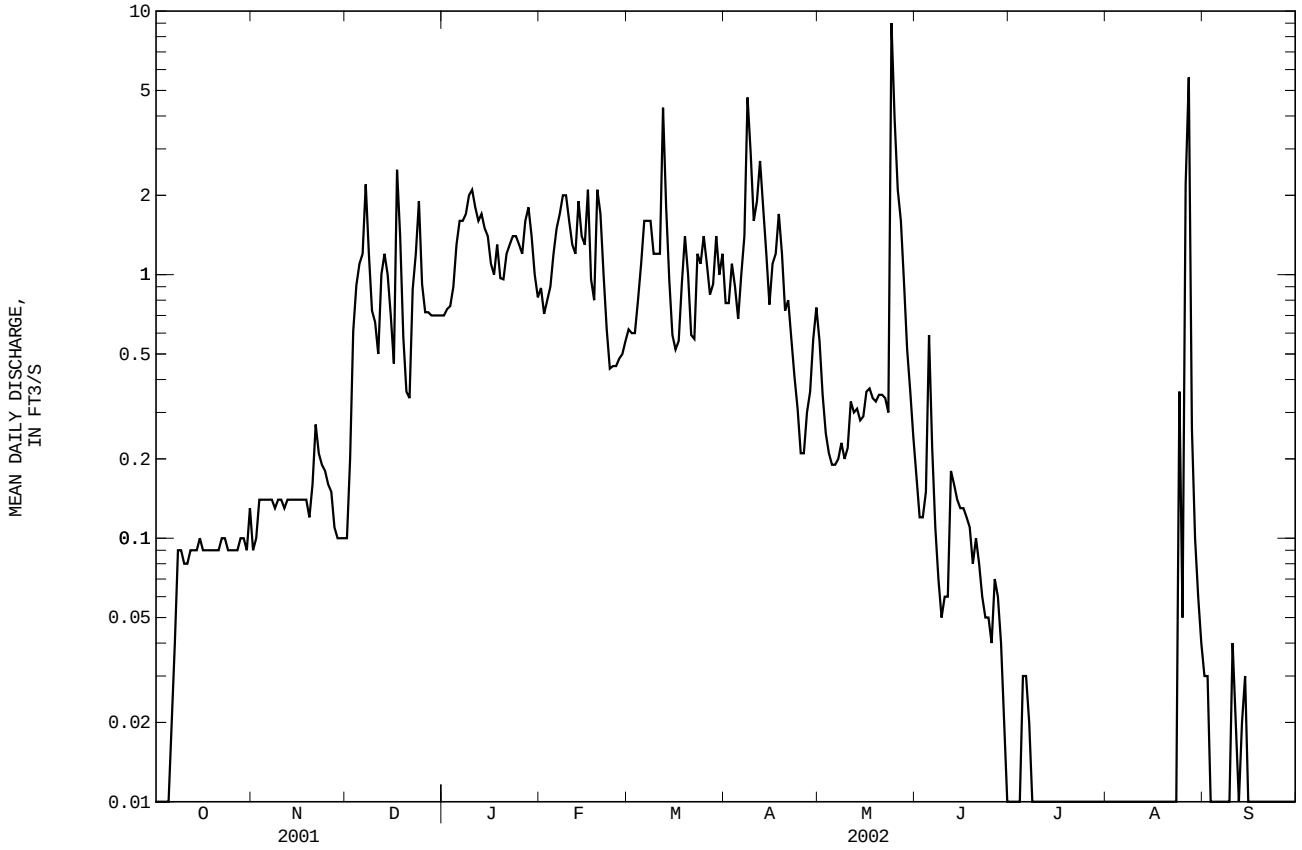
06860000 SMOKY HILL RIVER AT ELKADER, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	14.31	3.480	3.251	3.692	5.396	8.797	9.441	27.49	86.03	67.93	34.49	13.14
MAX	624	34.3	25.6	30.1	25.4	158	111	387	2410	992	580	158
(WY)	1947	1952	1952	1952	1942	1960	1942	1957	1951	1957	1950	1949
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1940	1940	1940	1940	1986	1986	1986	1986	1986	1954	1970	1943

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1940 - 2002	
ANNUAL MEAN	4.955		0.592		23.20	
HIGHEST ANNUAL MEAN					290	1951
LOWEST ANNUAL MEAN					0.000	1986
HIGHEST DAILY MEAN	692	Jul 27	9.0	May 24	13700	Jun 11 1951
LOWEST DAILY MEAN	0.00	Jun 26	0.00	Oct 3	0.00	Oct 1 1939
ANNUAL SEVEN-DAY MINIMUM	0.00	Jul 8	0.00	Jul 8	0.00	Oct 1 1939
MAXIMUM PEAK FLOW			22	May 24	22300	Aug 23 1969
MAXIMUM PEAK STAGE			4.98	May 24	11.02	Jun 17 1955
INSTANTANEOUS LOW FLOW			0.00	Oct 1	.00	most years
ANNUAL RUNOFF (AC-FT)	3590		429		16810	
10 PERCENT EXCEEDS	2.0		1.6		21	
50 PERCENT EXCEEDS	0.48		0.21		1.4	
90 PERCENT EXCEEDS	0.03		0.00		0.00	

e Estimated



06861000 SMOKY HILL RIVER NEAR ARNOLD, KS

LOCATION.--Lat 38°48'31", long 100°01'13", in SW $^1/_4$ NW $^1/_4$ sec.29, T.14 S., R.24 W., Trego County, Hydrologic Unit 10260003, on left bank near downstream side of county highway bridge, 7.0 mi upstream from headwaters of Cedar Bluff Reservoir, 12 mi north of Arnold, and at mile 356.2.

DRAINAGE AREA.--5,220 mi^2, 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 above NGVD of 1929. See WSP 1919 for history of changes prior to Sept. 30, 1961.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Natural flow affected by ground-water withdrawals and return flow from irrigated areas. Satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 30, 1938, reached a stage of about 19 ft, present site and datum, from information by local resident.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,800 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jul 28	2000	*200	*2.89	No peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	4.2	3.6	3.3	e3.4	e3.8	3.8	3.0	1.1	0.45	1.1	1.4
2	9.5	4.0	3.6	3.1	e3.4	e3.9	3.8	2.9	1.0	0.45	1.0	1.2
3	8.8	4.0	3.7	3.5	e3.4	e4.1	3.3	2.9	1.1	0.43	0.93	1.1
4	8.3	4.0	3.9	3.4	e3.4	e4.5	3.2	3.0	1.1	0.42	0.82	0.99
5	8.0	4.0	4.0	3.8	e3.5	5.1	3.2	2.8	1.1	0.44	0.76	0.90
6	7.5	3.9	3.7	3.6	e3.6	4.8	3.3	2.7	1.0	0.42	0.71	0.83
7	7.1	e3.9	3.7	3.5	e3.9	4.8	3.5	2.6	0.96	0.37	0.67	0.75
8	7.3	e3.9	3.8	4.0	e4.3	4.9	4.6	2.7	0.92	0.36	0.63	0.71
9	7.2	3.7	3.8	4.1	e4.6	5.0	4.7	2.5	0.87	0.36	0.65	0.69
10	6.6	3.5	3.8	4.2	4.9	4.5	4.3	2.4	0.79	0.32	0.65	0.78
11	6.4	3.7	4.0	4.0	6.3	4.3	4.1	2.5	0.76	0.32	0.61	0.69
12	6.3	3.7	4.3	4.1	6.3	4.2	3.9	2.4	0.76	0.32	0.59	0.65
13	6.3	3.8	4.2	4.1	6.5	4.3	4.5	2.4	26	0.34	0.71	0.68
14	5.6	3.6	4.2	4.3	5.7	4.4	4.8	2.4	8.7	0.34	0.65	0.65
15	5.8	3.5	4.4	4.5	5.3	4.1	4.6	2.2	1.7	0.33	0.60	0.59
16	5.5	3.3	4.2	3.6	5.0	3.9	4.2	2.2	1.2	0.32	0.57	0.56
17	5.4	3.3	4.0	3.6	5.2	4.0	3.7	2.2	1.1	0.30	0.58	0.53
18	5.5	3.4	4.2	3.4	5.1	4.0	3.3	2.2	0.96	0.30	0.63	0.54
19	5.3	3.1	3.9	4.7	5.1	3.7	3.2	2.1	0.87	0.29	0.69	0.56
20	5.2	3.1	3.9	3.8	4.9	3.6	3.2	1.9	0.79	0.28	0.69	0.52
21	5.1	3.3	e3.8	3.8	4.7	3.4	3.3	2.0	0.72	0.31	0.57	0.48
22	5.0	3.4	e3.7	4.0	4.4	3.3	3.1	1.9	0.67	0.50	0.51	0.46
23	4.9	3.7	3.6	4.1	4.5	3.5	3.1	1.8	0.62	0.39	0.48	0.46
24	4.7	4.0	3.7	3.8	4.7	3.9	3.1	2.5	0.57	0.35	4.1	0.46
25	4.2	3.6	3.7	3.6	4.2	3.9	2.8	4.9	0.55	0.31	9.2	0.42
26	4.3	3.6	3.7	4.1	e4.0	3.8	2.6	2.0	0.53	0.27	1.4	0.44
27	4.3	3.0	e3.7	4.3	e3.8	3.9	3.1	1.6	0.53	0.26	2.0	0.46
28	4.4	3.1	e3.6	4.2	e3.8	4.0	3.0	1.4	0.52	33	94	0.43
29	4.2	3.3	3.5	3.7	---	3.9	2.9	1.4	0.48	20	45	0.39
30	4.1	3.6	e3.4	e3.5	---	3.8	3.0	1.3	0.47	1.8	3.9	0.36
31	4.2	---	e3.3	e3.5	---	3.8	---	1.2	---	1.3	1.8	---
MEAN	6.032	3.607	3.826	3.845	4.568	4.100	3.573	2.323	1.948	2.118	5.716	0.656
MAX	10	4.2	4.4	4.7	6.5	5.1	4.8	4.9	26	33	94	1.4
MIN	4.1	3.0	3.3	3.1	3.4	3.3	2.6	1.2	0.47	0.26	0.48	0.36
AC-FT	371	215	235	236	254	252	213	143	116	130	351	39

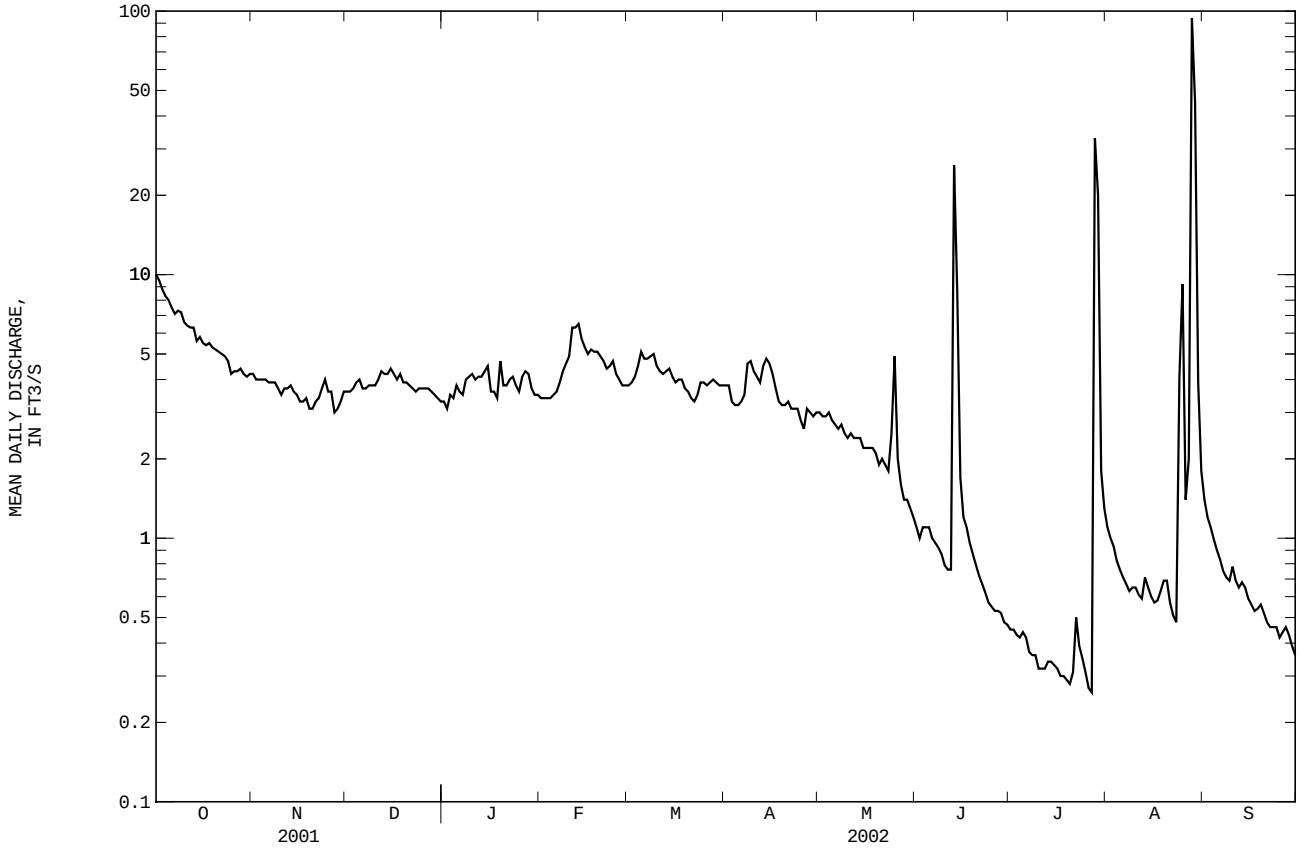
06861000 SMOKY HILL RIVER NEAR ARNOLD, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	16.96	7.498	5.889	6.330	10.27	21.82	16.95	66.77	174.2	99.33	52.85	31.81
MAX	317	55.0	42.5	57.4	99.2	584	116	934	4331	965	452	353
(WY)	1966	1997	1951	1952	1966	1960	1958	1957	1951	1951	1960	1957
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.080	0.013	0.048	0.060	0.030
(WY)	1989	1990	1989	1989	1989	1989	1989	1968	1985	1988	1978	1956

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1951 - 2002	
ANNUAL MEAN	15.96		3.529		42.64	
HIGHEST ANNUAL MEAN					550	1951
LOWEST ANNUAL MEAN					0.33	1988
HIGHEST DAILY MEAN	559	Sep 14	94	Aug 28	14200	Jun 12 1951
LOWEST DAILY MEAN	0.64	Jul 11	0.26	Jul 27	0.00	Jul 30 1952
ANNUAL SEVEN-DAY MINIMUM	1.1	Jun 27	0.30	Jul 15	0.00	Sep 9 1952
MAXIMUM PEAK FLOW			200	Jul 28	23800	Jun 11 1951
MAXIMUM PEAK STAGE			2.89	Jul 28	12.57	Jun 11 1951
INSTANTANEOUS LOW FLOW			0.22	Jul 19	.00	most years
ANNUAL RUNOFF (AC-FT)	11550		2560		30890	
10 PERCENT EXCEEDS	26		5.1		46	
50 PERCENT EXCEEDS	3.7		3.5		2.4	
90 PERCENT EXCEEDS	1.8		0.48		0.01	

e Estimated



06861500 CEDAR BLUFF RESERVOIR NEAR ELLIS, KS

LOCATION.--Lat 38°47'24", long 99°43'13", in NE $^{1}/_{4}$ SW $^{1}/_{4}$ sec.36, T.14 S., R.22 W., Trego County, Hydrologic Unit 10260003, in control house structure of outlet works conduit at dam on Smoky Hill River, 18 mi southwest of Ellis, and at mile 333.7.

DRAINAGE AREA.--5,530 mi^2, approximately.

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

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929 (levels by Bureau of Reclamation). Prior to Aug. 20, 1960, nonrecording mercury-column gage at same site and datum.

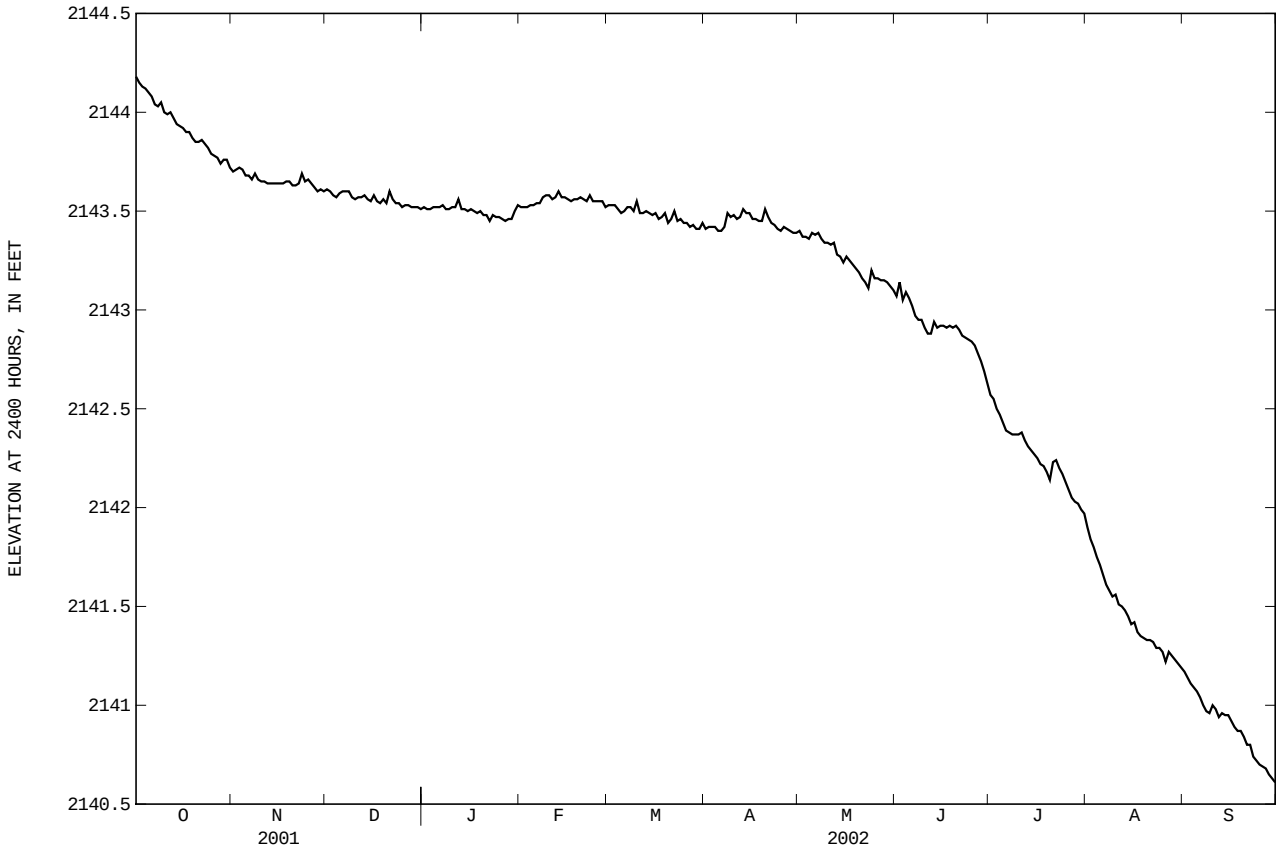
REMARKS.--Reservoir is formed by compacted earthfill dam. Storage began Nov. 13, 1950. Dam was completed in 1951. Total capacity, 870,400 acre-ft, consisting of the following: Dead storage, 8,260 acre-ft below elevation 2,090 ft, sill of trashrack structure; irrigation pool, 176,800 acre-ft between elevations 2,090 ft and 2,144 ft; flood-control pool, 191,900 acre-ft between elevations 2,144 ft and 2,166 ft, crest of uncontrolled spillway and uncontrolled storage, 493,400 acre-ft between elevations 2,166 ft and 2,200 ft. Reservoir is used to store water for flood control, irrigation of 6,600 acres, and recreation. Figures given herein represent total contents. Satellite telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 2,154.90 ft July 2, 1951, July 4, 5, 1957, contents, 269,400 acre-ft; minimum elevation since irrigation pool was first filled, 2,092.20 ft Sept. 28, 1992, contents, 10,450 acre-ft.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 2,144.21 ft Oct. 1, contents, 186,500 acre-ft; minimum elevation, 2,140.61 ft Sept. 30, contents, 150,100 acre-ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(capacity table placed in use October 1951)

2,140	146,300	2,145	199,100



06861500 CEDAR BLUFF RESERVOIR NEAR ELLIS, KS--Continued

ELEVATION, in FT (NGVD), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2144.18	2143.70	2143.61	2143.52	2143.52	2143.53	2143.41	2143.40	2143.07	2142.57	2141.90	2141.17
2	2144.15	2143.71	2143.60	2143.51	2143.52	2143.53	2143.42	2143.37	2143.14	2142.55	2141.84	2141.14
3	2144.13	2143.72	2143.58	2143.51	2143.52	2143.53	2143.42	2143.37	2143.05	2142.50	2141.80	2141.11
4	2144.12	2143.71	2143.57	2143.52	2143.53	2143.51	2143.42	2143.36	2143.09	2142.47	2141.75	2141.09
5	2144.10	2143.68	2143.59	2143.52	2143.53	2143.49	2143.40	2143.39	2143.06	2142.43	2141.71	2141.07
6	2144.08	2143.68	2143.60	2143.52	2143.54	2143.50	2143.40	2143.38	2143.02	2142.39	2141.66	2141.04
7	2144.04	2143.66	2143.60	2143.53	2143.54	2143.52	2143.42	2143.39	2142.97	2142.38	2141.61	2141.00
8	2144.03	2143.69	2143.60	2143.51	2143.57	2143.52	2143.49	2143.36	2142.95	2142.37	2141.58	2140.97
9	2144.05	2143.66	2143.57	2143.51	2143.58	2143.50	2143.47	2143.34	2142.95	2142.37	2141.55	2140.96
10	2144.00	2143.65	2143.56	2143.52	2143.58	2143.55	2143.48	2143.34	2142.91	2142.37	2141.56	2141.00
11	2143.99	2143.65	2143.57	2143.52	2143.56	2143.49	2143.46	2143.33	2142.88	2142.38	2141.51	2140.98
12	2144.00	2143.64	2143.57	2143.56	2143.57	2143.49	2143.47	2143.34	2142.88	2142.34	2141.50	2140.94
13	2143.97	2143.64	2143.58	2143.51	2143.60	2143.50	2143.51	2143.28	2142.94	2142.31	2141.48	2140.96
14	2143.94	2143.64	2143.56	2143.51	2143.57	2143.49	2143.49	2143.27	2142.91	2142.29	2141.45	2140.95
15	2143.93	2143.64	2143.55	2143.50	2143.57	2143.48	2143.49	2143.24	2142.92	2142.27	2141.41	2140.95
16	2143.92	2143.64	2143.58	2143.51	2143.56	2143.49	2143.46	2143.27	2142.92	2142.25	2141.42	2140.92
17	2143.90	2143.64	2143.55	2143.50	2143.55	2143.46	2143.46	2143.25	2142.91	2142.22	2141.37	2140.89
18	2143.90	2143.65	2143.54	2143.49	2143.56	2143.47	2143.45	2143.23	2142.92	2142.21	2141.35	2140.87
19	2143.87	2143.65	2143.56	2143.50	2143.56	2143.49	2143.45	2143.21	2142.91	2142.18	2141.34	2140.87
20	2143.85	2143.63	2143.54	2143.48	2143.57	2143.44	2143.51	2143.19	2142.92	2142.14	2141.33	2140.84
21	2143.85	2143.63	2143.60	2143.48	2143.56	2143.46	2143.47	2143.16	2142.90	2142.23	2141.33	2140.80
22	2143.86	2143.64	2143.56	2143.45	2143.55	2143.50	2143.44	2143.14	2142.87	2142.24	2141.32	2140.80
23	2143.84	2143.69	2143.54	2143.48	2143.58	2143.45	2143.43	2143.11	2142.86	2142.20	2141.29	2140.74
24	2143.82	2143.65	2143.54	2143.47	2143.55	2143.46	2143.41	2143.20	2142.85	2142.17	2141.29	2140.72
25	2143.79	2143.66	2143.52	2143.47	2143.55	2143.44	2143.40	2143.16	2142.84	2142.13	2141.27	2140.70
26	2143.78	2143.64	2143.53	2143.46	2143.55	2143.44	2143.42	2143.16	2142.82	2142.09	2141.22	2140.69
27	2143.77	2143.62	2143.53	2143.45	2143.55	2143.42	2143.41	2143.15	2142.78	2142.05	2141.27	2140.68
28	2143.74	2143.60	2143.52	2143.46	2143.52	2143.43	2143.40	2143.15	2142.74	2142.03	2141.25	2140.65
29	2143.76	2143.61	2143.52	2143.46	---	2143.41	2143.39	2143.14	2142.69	2142.02	2141.23	2140.63
30	2143.76	2143.60	2143.52	2143.50	---	2143.41	2143.39	2143.12	2142.63	2141.99	2141.21	2140.61
31	2143.72	---	2143.51	2143.53	---	2143.44	---	2143.10	---	2141.97	2141.19	---
MEAN	2143.93	2143.65	2143.56	2143.50	2143.55	2143.48	2143.44	2143.26	2142.91	2142.26	2141.45	2140.89
MAX	2144.18	2143.72	2143.61	2143.56	2143.60	2143.55	2143.51	2143.40	2143.14	2142.57	2141.90	2141.17
MIN	2143.72	2143.60	2143.51	2143.45	2143.52	2143.41	2143.39	2143.10	2142.63	2141.97	2141.19	2140.61
(+)	183,200	182,400	181,800	169,200	169,200	168,600	168,300	166,300	163,200	158,800	153,800	150,100
(#)	-,3100	-800	-600	-12,600	0	-600	-300	-2,000	-3,100	-4,400	-5,000	-3,700

CAL YR 2001 ..... (#) +3,700
WTR YR 2002 ..... (#) -36,200

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

06862700 SMOKY HILL RIVER NEAR SCHOENCHEN, KS

LOCATION.--Lat 38°42'44", long 99°22'53", in SE $^{1}/_{4}$ SW $^{1}/_{4}$ SE $^{1}/_{4}$ sec.25, T.15 S., R.19 W., Ellis County, Hydrologic Unit 10260006, on right bank, 2.25 mi west of Schoenchen, and at mile 311.1.

DRAINAGE AREA.--5,750 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is 1,922.48 ft above NGVD of 1929. July 1964 to February 1985, water-stage recorder at site 1.2 mi upstream at different datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow mostly regulated since 1950 by Cedar Bluff Reservoir (station 06861500), 21.4 mi upstream. Natural flow also affected by ground-water withdrawals, diversions for irrigation, and return flow from irrigated areas. Satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	8.7	e11	e10	10	e10	8.7	7.8	3.1	e0.08	2.6	0.63
2	14	8.4	e11	9.3	12	e10	8.6	7.7	2.9	0.07	1.9	0.57
3	13	8.2	11	10	11	e10	8.5	7.3	2.6	0.06	11	0.49
4	13	8.6	11	11	11	e10	8.7	7.1	2.4	0.05	18	0.45
5	13	8.6	11	12	12	e10	9.0	7.0	2.4	0.04	21	0.42
6	12	8.2	10	11	12	e10	9.4	7.1	2.0	0.03	23	0.43
7	12	8.0	10	10	12	e10	9.6	6.9	1.6	0.01	24	0.30
8	11	8.4	10	11	13	e10	11	7.0	1.2	0.01	26	0.28
9	11	9.1	10	11	13	8.8	12	6.3	0.89	0.01	30	0.29
10	11	9.4	10	11	12	9.6	11	6.1	0.66	0.0	21	0.37
11	11	9.8	10	11	12	9.5	10	6.1	0.61	0.00	12	0.40
12	10	11	10	11	13	9.2	9.2	5.9	0.95	0.0	8.5	0.36
13	10	11	10	11	12	9.2	9.6	5.6	1.1	0.00	7.3	0.42
14	10	11	11	11	11	9.1	9.7	5.5	1.4	0.00	6.0	0.83
15	10	11	11	10	11	8.9	9.2	5.1	1.5	0.00	4.7	0.59
16	9.9	11	10	10	11	8.7	8.8	4.9	2.0	0.00	4.0	0.67
17	9.7	11	10	11	11	8.7	8.2	5.3	1.6	0.00	3.5	0.61
18	9.6	11	10	9.3	11	8.8	8.2	4.9	1.4	0.00	3.2	0.58
19	9.4	10	10	10	11	9.4	8.2	4.8	1.1	0.00	2.8	0.56
20	9.6	11	10	10	10	9.2	9.6	4.6	1.3	0.00	2.6	0.58
21	9.5	11	10	10	10	8.7	9.8	4.3	1.2	0.00	2.3	0.49
22	9.3	11	10	11	10	8.6	9.3	4.2	0.91	0.00	1.5	0.48
23	9.3	12	9.5	11	10	8.8	8.9	4.2	0.77	0.00	1.0	0.38
24	9.0	13	9.0	11	10	9.0	8.4	4.8	0.67	0.00	1.3	0.35
25	8.7	12	9.3	10	9.9	9.0	7.9	5.4	0.65	0.00	1.3	0.31
26	8.8	12	10	11	e10	8.9	7.7	4.9	0.71	0.00	1.3	0.35
27	8.8	11	11	11	e10	8.7	8.3	4.7	0.56	0.34	1.2	0.38
28	8.8	10	10	10	10	8.7	8.7	4.3	0.19	11	1.1	0.34
29	8.7	10	9.9	9.7	---	8.7	7.9	4.0	0.12	23	0.96	0.32
30	8.5	e11	9.9	9.3	---	8.7	7.8	3.7	e0.11	8.5	0.83	0.27
31	8.7	---	11	9.8	---	8.7	---	3.5	---	4.2	0.72	---
MEAN	10.36	10.21	10.21	10.46	11.10	9.213	9.063	5.516	1.287	1.529	7.955	0.450
MAX	14	13	11	12	13	10	12	7.8	3.1	23	30	0.83
MIN	8.5	8.0	9.0	9.3	9.9	8.6	7.7	3.5	0.11	0.00	0.72	0.27
AC-FT	637	608	628	643	617	566	539	339	77	94	489	27

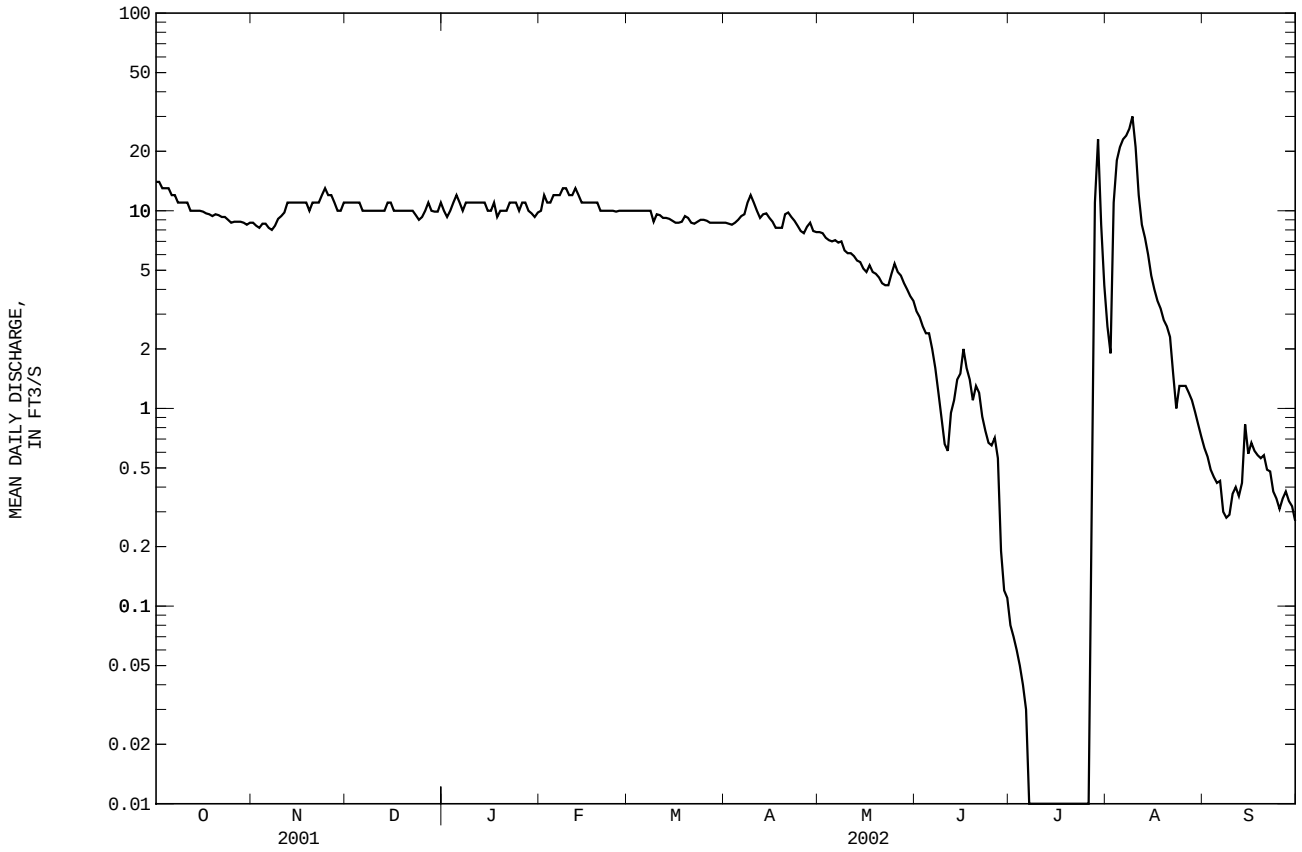
06862700 SMOKY HILL RIVER NEAR SCHOENCHEN, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	10.99	15.50	10.33	10.88	16.43	27.02	26.74	21.86	41.28	51.80	32.43	14.06
MAX	70.9	122	39.8	53.2	71.0	226	188	102	495	710	332	97.3
(WY)	1974	1966	1974	1974	1966	1979	1998	1999	1970	1993	1998	2001
MIN	0.000	0.000	0.000	0.11	0.39	0.38	0.094	0.31	0.45	0.11	0.000	0.000
(WY)	1992	1984	1992	1992	1992	1992	1989	1989	1991	1983	1983	1983

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1965 - 2002	
ANNUAL MEAN	23.25		7.272		23.32	
HIGHEST ANNUAL MEAN					83.5	1993
LOWEST ANNUAL MEAN					0.49	1991
HIGHEST DAILY MEAN	1720	Sep 18	30	Aug 9	11000	Jul 21 1993
LOWEST DAILY MEAN	0.14	Sep 1	0.00	Jul 10	0.00	Jul 4 1983
ANNUAL SEVEN-DAY MINIMUM	0.28	Aug 10	0.00	Jul 10	0.00	Jul 4 1983
MAXIMUM PEAK FLOW			34	Jul 29	20400	Jun 14 1970
MAXIMUM PEAK STAGE			3.23	Jul 29	16.55	Jul 21 1993
INSTANTANEOUS LOW FLOW			0.00	Jul 9	.00	at times
ANNUAL RUNOFF (AC-FT)	16830		5260		16890	
10 PERCENT EXCEEDS	23		11		29	
50 PERCENT EXCEEDS	10		8.8		11	
90 PERCENT EXCEEDS	1.1		0.34		0.37	

e Estimated



06862850 SMOKY HILL RIVER BELOW SCHOENCHEN, KS

LOCATION.--Lat 38°42'46", long 99°17'30", in SW $^{1}/_{4}$ SW $^{1}/_{4}$ SE $^{1}/_{4}$ sec.26, T.15 S., R.18 W., Ellis County, Hydrologic Unit 10260006, on right bank, 1.5 mi upstream from Big Timber Creek, 2.1 mi east of Schoenchen, and at mile 304.9.

DRAINAGE AREA.--5,810 mi^2.

PERIOD OF RECORD.--October 1981 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,885.17 ft above NGVD of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow mostly regulated since 1950 by Cedar Bluff Reservoir (station 06861500), 28.8 mi upstream. Natural flow also affected by ground-water withdrawals, diversions for irrigation, and return flow from irrigated areas. Satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	10	11	e11	e12	e11	8.8	8.3	3.8	0.12	0.63	0.17
2	15	10	11	e11	e13	e11	8.2	7.5	3.6	0.11	0.21	0.15
3	14	10	11	e11	e13	e11	8.0	7.5	3.5	0.08	0.07	0.12
4	13	11	11	e12	e14	e11	8.5	7.5	3.4	0.08	2.1	0.10
5	13	11	11	12	e15	e11	8.6	7.9	3.1	0.07	8.3	0.09
6	13	10	10	e12	e15	e11	9.4	7.9	2.8	0.05	12	0.08
7	12	10	10	e12	e14	e11	10	8.1	2.4	0.03	16	0.07
8	12	9.3	9.9	12	14	11	12	8.6	2.1	0.02	18	0.06
9	12	10	10	11	14	e10	13	7.3	1.5	0.02	24	0.07
10	11	10	10	11	14	e10	12	6.9	1.2	0.0	25	0.08
11	11	11	10	11	e13	10	11	7.3	0.99	0.00	14	0.07
12	11	11	10	10	e13	10	11	6.4	1.3	0.00	8.9	0.06
13	10	11	10	10	13	10	11	6.4	1.3	0.0	7.7	0.09
14	10	10	11	9.9	12	9.8	11	6.7	1.4	0.00	5.8	0.11
15	10	10	11	9.7	11	9.0	10	6.7	1.6	0.00	4.6	0.08
16	10	9.8	11	10	11	8.6	9.7	6.6	1.6	0.00	3.4	0.06
17	10	9.7	11	9.9	11	8.6	8.3	7.2	1.5	0.00	2.9	0.03
18	10	9.2	11	e10	11	9.0	7.7	6.6	1.4	0.00	2.8	0.02
19	9.7	8.0	10	e10	11	10	7.2	6.3	1.1	0.00	2.6	0.03
20	9.9	8.7	10	e10	11	10	7.3	6.2	3.2	0.00	2.3	0.02
21	10	9.1	11	e10	10	9.0	8.9	6.0	1.7	0.00	1.9	0.00
22	10	9.6	11	e10	10	9.0	8.9	6.1	1.2	0.00	1.5	0.00
23	10	10	11	10	11	9.8	8.5	5.8	0.95	0.00	1.1	0.00
24	9.6	10	e10	9.4	10	9.7	8.0	6.6	0.68	0.00	1.2	0.00
25	9.2	9.7	e10	9.2	10	9.4	7.3	8.1	0.47	0.00	0.89	0.00
26	9.2	9.4	e11	9.7	e11	8.7	7.3	8.5	0.37	0.00	0.79	0.00
27	9.5	9.1	e11	9.2	e11	9.2	9.0	8.1	0.32	0.00	0.59	0.00
28	9.8	e10	e11	8.9	e11	9.0	8.4	7.1	0.26	0.05	0.40	0.00
29	9.8	e11	e10	9.6	---	8.9	8.5	5.8	0.18	0.03	0.32	0.00
30	10	e12	e10	e10	---	8.5	8.4	5.0	0.14	1.1	0.26	0.00
31	10	---	e11	e11	---	7.9	---	4.2	---	1.2	0.28	---
MEAN	10.96	9.987	10.55	10.40	12.11	9.745	9.197	6.942	1.635	0.095	5.501	0.052
MAX	16	12	11	12	15	11	13	8.6	3.8	1.2	25	0.17
MIN	9.2	8.0	9.9	8.9	10	7.9	7.2	4.2	0.14	0.00	0.07	0.00
AC-FT	674	594	648	640	672	599	547	427	97	5.9	338	3.1

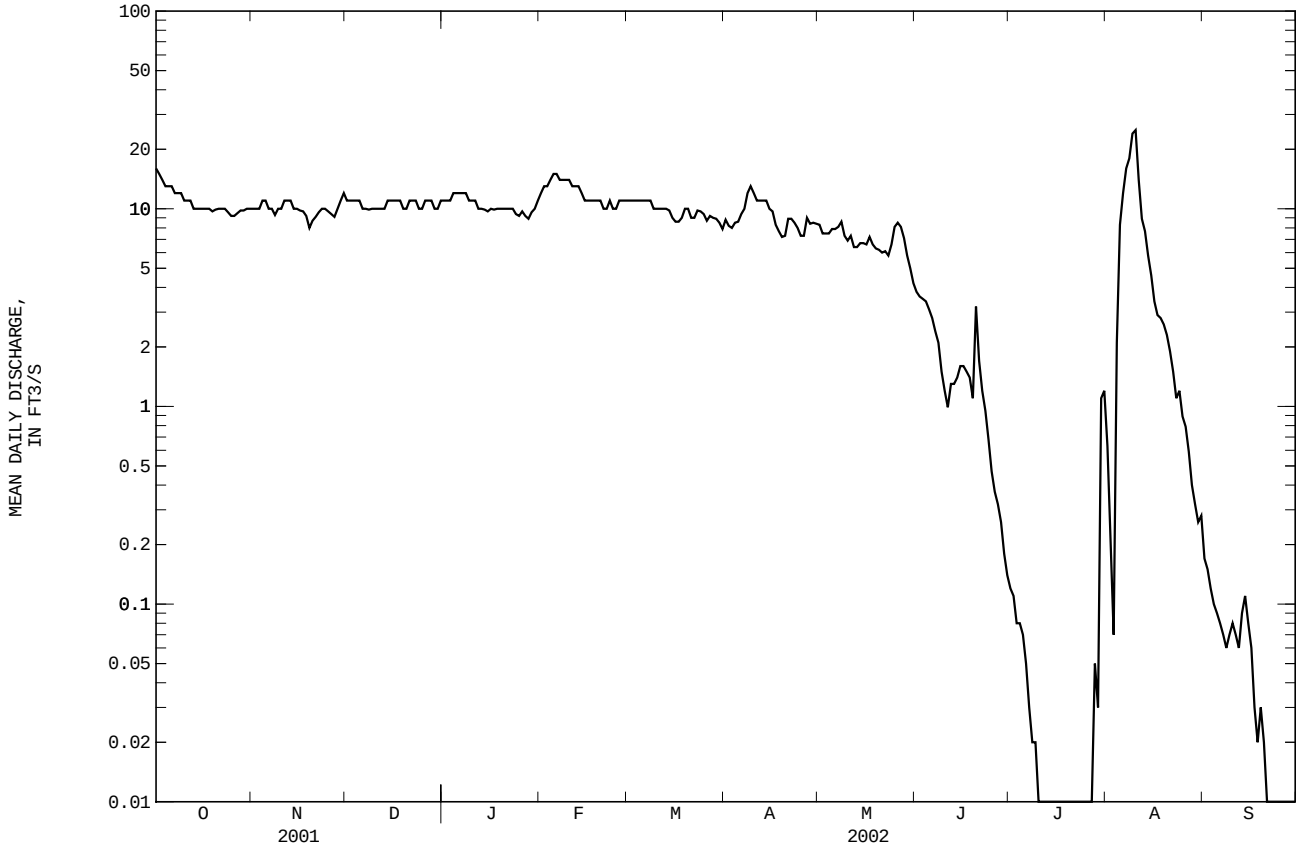
06862850 SMOKY HILL RIVER BELOW SCHOENCHEN, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.785	8.228	5.213	5.062	9.675	18.65	31.56	23.67	20.08	54.92	39.17	13.11
MAX	20.8	83.9	17.4	18.7	44.0	118	234	107	140	784	266	122
(WY)	1994	1997	1999	1999	1999	1993	1987	1999	1996	1993	1998	2001
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1982	1984	1984	1984	1984	1985	1985	1985	1985	1988	1983	1983

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1982 - 2002	
ANNUAL MEAN	29.73		7.247		19.51	
HIGHEST ANNUAL MEAN					94.4	1993
LOWEST ANNUAL MEAN					0.001	1991
HIGHEST DAILY MEAN	2210	Sep 18	25	Aug 10	12000	Jul 21 1993
LOWEST DAILY MEAN	0.10	Sep 1	0.00	Jul 10	0.00	Oct 1 1981
ANNUAL SEVEN-DAY MINIMUM	0.15	Aug 26	0.00	Jul 10	0.00	Oct 1 1981
MAXIMUM PEAK FLOW			28	Aug 9	20500	Jul 21 1993
MAXIMUM PEAK STAGE			2.76	Aug 9	17.60	Jul 21 1993
INSTANTANEOUS LOW FLOW			0.00	Jul 7	.00	most years
ANNUAL RUNOFF (AC-FT)	21520		5250		14140	
10 PERCENT EXCEEDS	34		12		24	
50 PERCENT EXCEEDS	11		9.2		2.5	
90 PERCENT EXCEEDS	1.2		0.04		0.00	

e Estimated



06863500 BIG CREEK NEAR HAYS, KS

LOCATION.--Lat 38°51'08", long 99°19'05", in NE $^1/_4$ SE $^1/_4$ NE $^1/_4$ sec.9, T.14 S., R.18 W., Ellis County, Hydrologic Unit 10260007, on right bank near downstream side of U. S. Highway 183 bridge, 0.6 mi south of intersection with Highway 183 alternate (bypass) in Hays, and at mile 44.9.

DRAINAGE AREA.--549 mi^2.

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

REVISED RECORDS.--WSP 1340: 1947-48(P).

GAGE.--Water-stage recorder. Elevation of gage is 1,953.88 ft above NGVD of 1929. Prior to Nov. 20, 1947, nonrecording gage, and Nov. 20, 1947, to Aug. 22, 1965, water-stage recorder and concrete control at site 0.7 mi downstream at datum 1,955.13 ft above NGVD of 1929. From Aug. 23, 1965, to Sept. 30, 1998, at site 13.2 mi downstream at datum 1,915 ft above mean NGVD of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Natural flow affected by ground-water withdrawals, many small diversions upstream from station, and return flow from irrigated areas. Satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 700 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Aug 13	0345	*265	*8.93	No peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	22	21	21	e19	19	19	18	11	2.2	1.1	0.48
2	35	22	21	e20	e20	e19	19	18	10	2.2	0.91	0.36
3	33	21	21	e20	e20	e20	18	18	9.9	2.1	0.90	0.43
4	31	21	21	23	e20	e22	17	18	10	1.9	0.62	0.50
5	29	21	22	23	e20	25	17	20	10	2.0	0.40	0.46
6	28	21	21	22	e20	24	18	19	10	2.3	0.24	0.54
7	29	21	21	e21	e20	24	18	18	9.9	2.3	0.14	0.22
8	31	20	20	e21	e20	22	33	18	9.4	1.8	0.12	0.15
9	32	20	19	21	e21	e21	23	17	8.7	1.4	32	0.18
10	27	20	20	22	e22	20	24	17	8.3	1.1	4.6	0.56
11	25	20	21	e21	25	21	22	18	7.8	1.2	6.9	0.57
12	25	20	21	21	24	19	e22	17	7.5	1.0	27	0.80
13	25	20	21	21	24	20	e21	17	7.3	1.0	55	6.9
14	24	21	21	21	25	20	e21	16	7.3	1.0	5.7	7.0
15	26	21	22	21	24	20	e21	e17	23	1.0	2.1	3.8
16	23	20	22	21	23	20	21	e18	10	1.0	1.5	3.2
17	23	20	22	20	23	19	20	17	8.5	0.93	1.3	2.5
18	23	20	21	e20	22	19	20	14	9.9	0.84	1.2	2.2
19	22	20	21	e20	22	21	19	13	8.2	0.75	1.7	1.8
20	23	20	21	e20	e22	19	23	13	8.9	0.62	1.5	1.6
21	22	20	21	21	21	18	22	13	6.5	0.49	1.9	1.4
22	22	20	21	e21	21	18	19	12	5.9	7.4	1.9	1.3
23	22	23	e20	21	20	18	19	12	5.4	0.44	1.8	1.2
24	22	23	e19	21	21	20	21	25	4.4	0.78	1.5	1.1
25	22	22	e18	21	21	20	18	15	3.8	0.87	1.1	1.0
26	21	23	e18	21	19	20	18	15	3.4	0.55	0.84	1.0
27	21	22	e19	20	e19	21	21	15	3.1	1.4	0.61	1.1
28	21	20	21	21	18	20	19	14	2.9	26	0.75	1.1
29	20	19	e21	e20	---	20	19	14	2.5	5.8	0.89	1.2
30	21	21	e21	e18	---	20	18	13	2.3	1.7	0.75	1.1
31	22	---	e21	e18	---	19	---	12	---	1.4	0.69	---
MEAN	25.35	20.80	20.65	20.74	21.29	20.26	20.33	16.16	7.860	2.435	5.086	1.525
MAX	36	23	22	23	25	25	33	25	23	26	55	7.0
MIN	20	19	18	18	18	18	17	12	2.3	0.44	0.12	0.15
AC-FT	1560	1240	1270	1280	1180	1250	1210	994	468	150	313	91

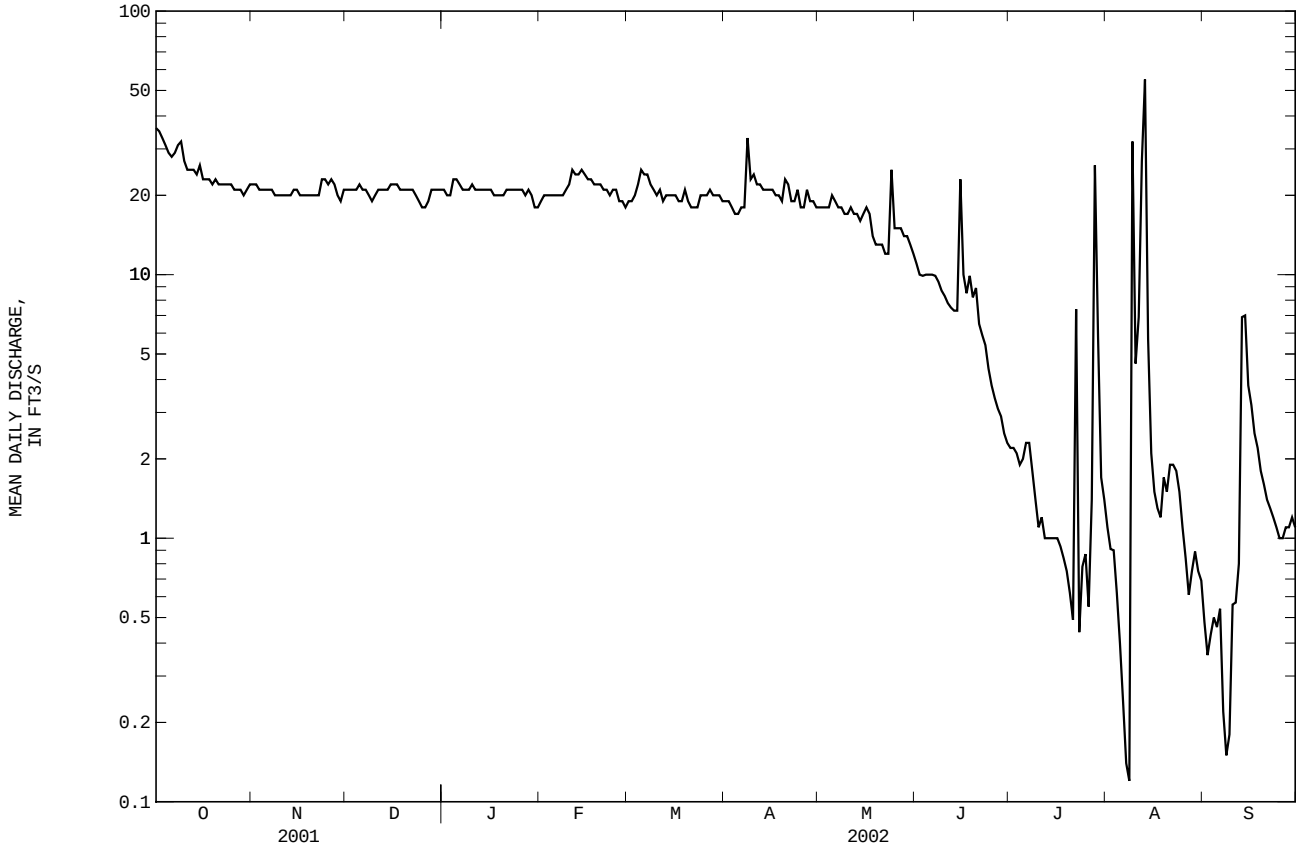
06863500 BIG CREEK NEAR HAYS, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	22.05	12.57	9.628	10.19	15.06	23.44	26.86	47.71	98.32	64.24	44.09	22.45
MAX	465	115	36.7	59.7	113	173	298	520	1805	606	266	189
(WY)	1947	1997	1998	1974	1949	1960	1987	1995	1951	1993	1950	1957
MIN	0.55	1.33	0.36	1.21	1.46	1.26	2.10	2.05	1.74	1.04	0.97	0.52
(WY)	1948	1957	1957	1957	1955	1957	1954	1956	1956	1980	1955	1953

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1947 - 2002	
ANNUAL MEAN	43.79		15.19		33.11	
HIGHEST ANNUAL MEAN					238	1951
LOWEST ANNUAL MEAN					3.05	1991
HIGHEST DAILY MEAN	963	Sep 19	55	Aug 13	10600	Jun 17 1957
LOWEST DAILY MEAN	6.7	Aug 31	0.12	Aug 8	0.00	Feb 12 1948
ANNUAL SEVEN-DAY MINIMUM	7.2	Aug 26	0.35	Sep 3	0.00	Feb 12 1948
MAXIMUM PEAK FLOW			265	Aug 13	22400	Jun 17 1957
MAXIMUM PEAK STAGE			8.93	Aug 13	29.00	Jul 21 1993
INSTANTANEOUS LOW FLOW			0.11	Aug 7	.00	at times
ANNUAL RUNOFF (AC-FT)	31710		10990		23990	
10 PERCENT EXCEEDS	70		23		38	
50 PERCENT EXCEEDS	20		19		8.2	
90 PERCENT EXCEEDS	12		1.0		1.9	

e Estimated



06864050 SMOKY HILL RIVER NEAR BUNKER HILL, KS

LOCATION.--Lat 38°47'38", long 98°46'50", in NW $^{1}/_{4}$ SW $^{1}/_{4}$ NW $^{1}/_{4}$ sec.33, T.14 S., R.13 W., Russell County, Hydrologic Unit 10260006, on left bank at downstream side of county highway bridge, 0.5 mi upstream from Sellens Creek, 6.5 mi southwest of Bunker Hill, and at mile 261.6.

DRAINAGE AREA.--7,075 mi^2.

PERIOD OF RECORD.--October 1939 to current year. Prior to October 1974, published as "near Russell."

REVISED RECORDS.--WSP 1340: 1941-42(M), 1944-45(M), 1950(P).

GAGE.--Water-stage recorder. Datum of gage is 1,668.46 ft above NGVD of 1929. Prior to Sept. 11, 1940, nonrecording gage and Sept. 11, 1940, to Sept. 30, 1974, water-stage recorder at site 4.7 mi upstream at datum, 1,689.05 ft above NGVD of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow moderately regulated since 1950 by Cedar Bluff Reservoir (station 06861500), 72.1 mi upstream. Natural flow affected by ground-water withdrawals, diversions for irrigation, and return flow from irrigated areas. Satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 30, 1938, reached a stage of about 29.0 ft, from floodmarks, discharge, about 70,000 ft^3/s, from rating curve extended above 37,500 ft^3/s, site and datum of 1939-74.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	151	61	e54	e55	e41	e48	45	48	34	11	14	6.9
2	134	60	55	e52	e43	49	43	46	31	10	9.4	6.3
3	119	60	57	e52	e45	e49	43	44	28	10	7.0	5.7
4	109	59	56	e57	e48	e49	43	44	28	9.4	5.4	5.3
5	111	59	56	63	e50	e50	42	43	27	8.7	4.1	5.0
6	102	59	54	e62	e52	e52	42	55	26	8.5	3.3	5.1
7	97	59	54	e50	e53	e53	42	47	25	8.0	2.5	5.0
8	93	57	53	e59	e54	e52	49	45	24	7.4	2.2	4.7
9	91	58	55	e57	e55	50	63	42	23	6.8	8.8	4.6
10	89	57	55	e54	e56	e52	64	40	22	6.1	23	4.6
11	88	57	55	51	e57	e55	61	40	22	5.6	17	4.6
12	83	58	55	e51	e57	59	55	41	21	5.6	32	4.7
13	81	59	56	e51	e56	54	54	40	21	5.9	374	5.4
14	79	58	56	51	e56	53	52	39	21	5.4	308	19
15	78	58	58	50	e55	51	52	37	30	4.8	164	85
16	80	58	57	e49	e55	51	51	53	321	4.6	63	20
17	78	58	57	49	e56	50	46	62	102	4.2	33	16
18	76	58	57	47	e57	50	45	53	92	4.3	24	12
19	71	56	57	e48	57	53	44	46	46	4.5	20	11
20	70	56	57	48	56	52	46	43	31	3.8	17	10
21	69	56	58	48	55	50	51	39	26	2.9	14	8.9
22	70	56	58	e49	55	51	48	35	22	5.2	13	7.6
23	68	57	58	e49	54	49	53	33	22	4.8	11	6.8
24	65	56	52	e50	53	48	49	37	20	4.2	11	6.3
25	63	56	e52	50	e50	48	45	43	17	6.9	10	5.8
26	62	56	e54	e50	e47	48	45	41	16	7.8	9.4	5.4
27	62	55	e57	e48	45	48	54	251	16	6.1	9.1	5.5
28	61	e52	e58	e43	e46	47	58	91	14	6.9	8.5	5.4
29	61	e52	e58	e40	---	46	49	52	13	9.2	8.0	5.1
30	62	e53	e57	38	---	46	50	43	11	8.5	7.4	4.6
31	62	---	e56	e39	---	44	---	37	---	20	6.9	---
MEAN	83.39	57.13	55.87	50.32	52.29	50.23	49.47	51.94	38.40	7.003	40.00	10.08
MAX	151	61	58	63	57	59	64	251	321	20	374	85
MIN	61	52	52	38	41	44	42	33	11	2.9	2.2	4.6
AC-FT	5130	3400	3440	3090	2900	3090	2940	3190	2280	431	2460	600

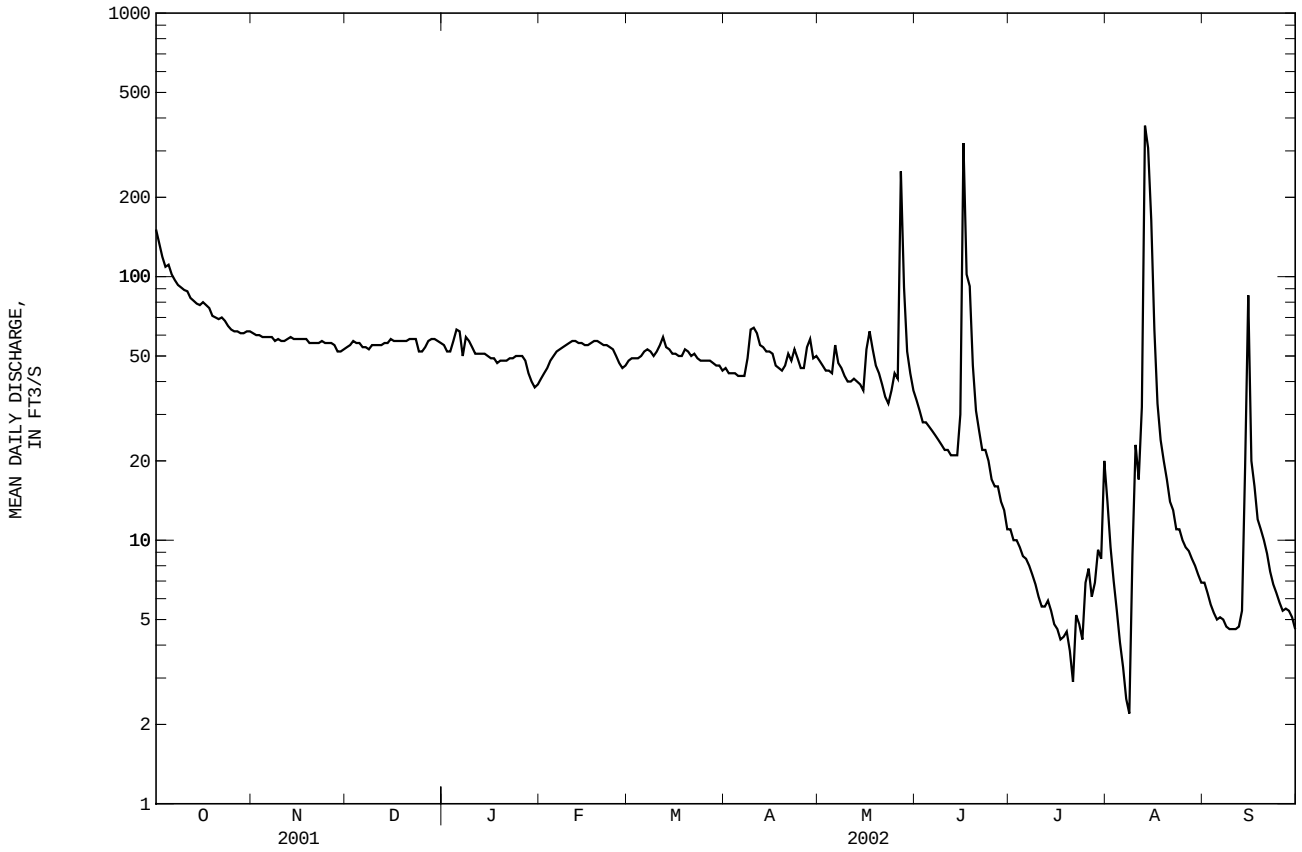
06864050 SMOKY HILL RIVER NEAR BUNKER HILL, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	100.2	54.03	37.93	38.30	72.85	138.9	166.7	215.2	379.1	359.8	241.1	172.9
MAX	1774	455	276	349	716	1094	1970	1624	4415	3716	3157	1519
(WY)	1947	1997	1974	1974	1949	1979	1987	1951	1951	1993	1950	1951
MIN	0.78	2.27	2.00	1.65	4.83	8.83	5.50	5.29	10.3	1.85	0.57	0.34
(WY)	1984	1940	1940	1940	1940	1992	1940	1989	1983	1983	1983	1983

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1940 - 2002	
ANNUAL MEAN	205.7		45.53		165.1	
HIGHEST ANNUAL MEAN					1004	1951
LOWEST ANNUAL MEAN					11.4	1983
HIGHEST DAILY MEAN	5500	Sep 19	374	Aug 13	28400	Jul 22 1993
LOWEST DAILY MEAN	19	Sep 1	2.2	Aug 8	0.00	Jan 29 1940
ANNUAL SEVEN-DAY MINIMUM	20	Aug 28	4.2	Jul 15	0.00	Sep 11 1955
MAXIMUM PEAK FLOW			698	Aug 13	39500	May 23 1951
MAXIMUM PEAK STAGE			5.62	Aug 13	27.14	Jul 22 1993
INSTANTANEOUS LOW FLOW			1.6	Aug 8	.00	at times
ANNUAL RUNOFF (AC-FT)	149000		32960		119600	
10 PERCENT EXCEEDS	345		63		269	
50 PERCENT EXCEEDS	59		49		37	
90 PERCENT EXCEEDS	33		6.0		7.5	

e Estimated



06864500 SMOKY HILL RIVER AT ELLSWORTH, KS

LOCATION.--Lat 38°43'36", long 98°14'00", in SW $^{1}/_{4}$ SW $^{1}/_{4}$ SE $^{1}/_{4}$ sec.20, T.15 S., R.8 W., Ellsworth County, Hydrologic Unit 10260006, on left bank at downstream side of bridge on Kansas Highway 14 in Ellsworth, 2.0 mi downstream from Turkey Creek, and at mile 213.7.

DRAINAGE AREA.--7,580 mi^2, approximately.

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

REVISED RECORDS.--WSP 796-B: 1903. WSP 806: Drainage area. WSP 1176: 1923. WSP 1440: 1895-1905, 1919, 1921, 1929-30(M), 1936-37(M).

GAGE.--Water-stage recorder. Datum of gage is 1,509.02 ft above NGVD of 1929. Prior to Oct. 31, 1905, nonrecording gage at present site at datum 1.61 ft higher. July 23, 1918, to July 4, 1925, and Aug. 1, 1928, to Nov. 29, 1939, nonrecording gage at present site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow moderately regulated since 1950 by Cedar Bluff Reservoir (station 06861500), 120 mi upstream. Natural flow also affected by ground-water withdrawals, diversions for irrigation, and return flow from irrigated areas. Satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in August 1927 reached a stage of 25.7 ft, from floodmarks, discharge, 44,800 ft^3/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	219	91	86	e100	77	e64	66	70	61	24	14	13
2	203	88	87	e94	91	64	66	68	53	24	15	12
3	189	88	89	e92	108	e65	64	65	48	25	18	9.8
4	179	88	88	e86	109	e68	63	64	47	23	14	8.9
5	183	90	91	e88	117	e72	63	64	52	21	12	8.0
6	170	89	88	e90	99	e77	63	64	48	21	11	7.2
7	160	88	86	e92	101	e83	65	64	44	20	9.8	6.5
8	150	86	84	e92	104	93	70	69	41	e20	9.2	5.7
9	145	85	83	e90	115	90	77	62	38	e18	17	5.3
10	139	85	83	e90	111	83	80	60	37	e17	21	5.4
11	134	86	83	e90	105	77	80	63	57	e16	19	5.1
12	132	86	84	e90	98	77	83	102	636	e16	40	6.1
13	127	88	85	91	97	81	76	68	134	16	605	9.5
14	121	90	86	93	97	77	75	58	67	15	575	21
15	122	89	87	87	93	74	73	54	96	15	373	26
16	119	91	86	85	93	71	70	69	419	14	231	31
17	115	90	85	83	90	71	70	66	236	13	142	54
18	111	89	85	82	88	75	72	71	176	13	90	37
19	108	88	85	80	87	94	65	70	117	13	71	33
20	107	86	85	78	84	84	67	65	97	12	55	30
21	106	86	85	83	81	76	76	61	75	11	47	25
22	105	86	85	80	79	72	71	55	61	12	38	21
23	104	87	83	80	78	71	70	52	52	12	32	19
24	101	88	73	82	77	71	68	66	45	11	29	17
25	96	87	58	83	75	70	67	67	40	11	25	15
26	93	84	107	81	58	68	65	58	36	9.8	22	14
27	91	84	136	79	e60	69	78	57	33	9.5	20	14
28	91	82	e130	81	67	68	85	135	30	21	18	14
29	90	78	e110	77	---	68	77	152	28	19	16	13
30	89	79	e100	71	---	66	74	93	26	19	15	12
31	90	---	e97	49	---	66	---	71	---	17	13	---
MEAN	128.7	86.73	89.68	84.48	90.68	74.35	71.30	71.06	97.67	16.40	84.42	16.62
MAX	219	91	136	100	117	94	85	152	636	25	605	54
MIN	89	78	58	49	58	64	63	52	26	9.5	9.2	5.1
AC-FT	7910	5160	5510	5190	5040	4570	4240	4370	5810	1010	5190	989

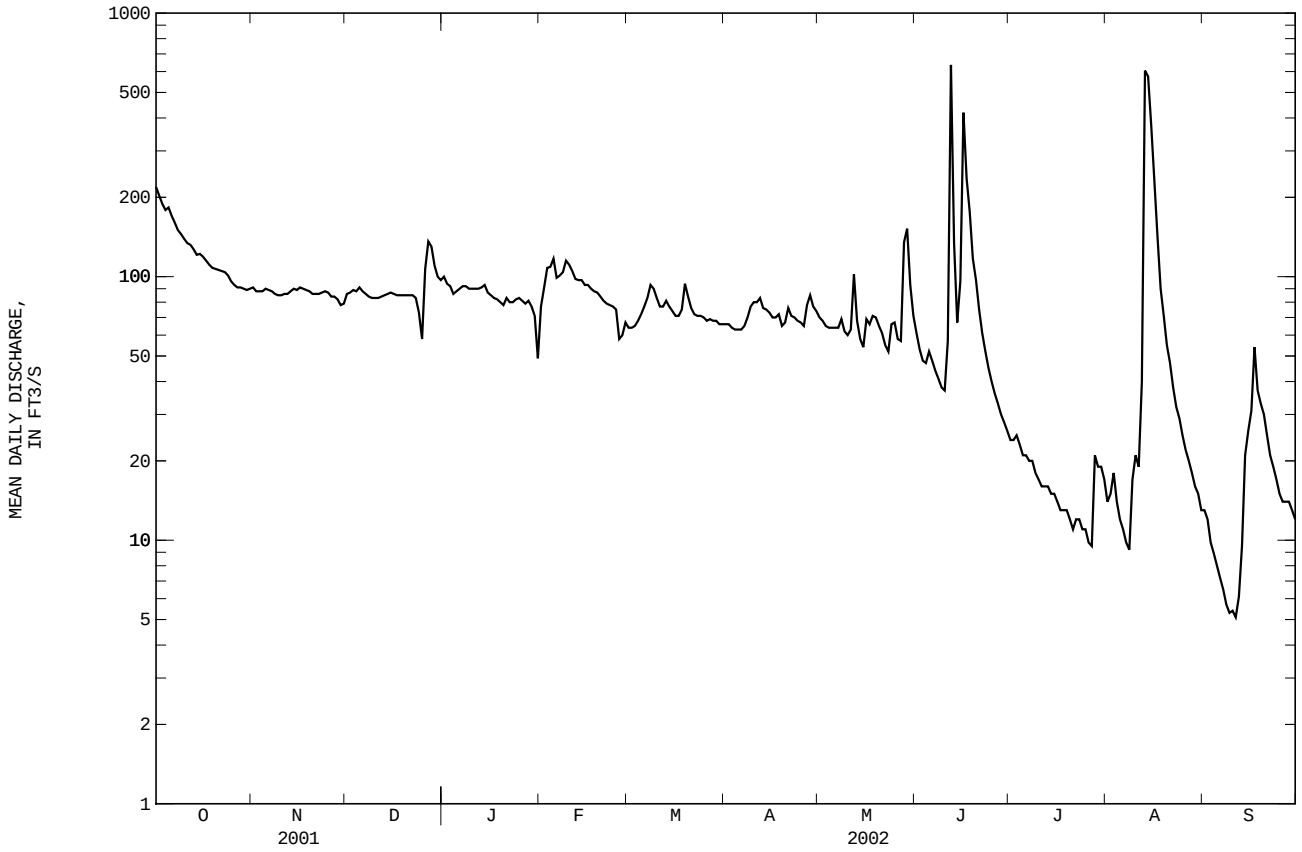
06864500 SMOKY HILL RIVER AT ELLSWORTH, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1896 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	152.1	86.48	58.40	57.20	91.97	178.4	228.9	387.7	569.5	479.0	315.5	260.3
MAX	1769	662	598	662	1099	2039	2709	2700	6270	5846	3300	2144
(WY)	1947	1997	1974	1974	1993	1973	1987	1903	1951	1993	1950	1951
MIN	5.06	9.30	7.94	4.32	5.29	16.4	11.0	11.4	24.2	5.10	4.16	1.68
(WY)	1922	1989	1899	1937	1899	1935	1923	1899	1988	1901	1983	1956

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1896 - 2002	
ANNUAL MEAN	360.4		75.97		239.5	
HIGHEST ANNUAL MEAN					1377	1951
LOWEST ANNUAL MEAN					29.1	1983
HIGHEST DAILY MEAN	6720	Apr 22	636	Jun 12	41800	Jun 1 1938
LOWEST DAILY MEAN	39	Sep 3	5.1	Sep 11	0.60	Sep 28 1956
ANNUAL SEVEN-DAY MINIMUM	44	Aug 28	5.9	Sep 6	1.0	Sep 25 1956
MAXIMUM PEAK FLOW			1330	Jun 12	61000	Jun 1 1938
MAXIMUM PEAK STAGE			5.81	Jun 12	27.20	Jun 1 1938
INSTANTANEOUS LOW FLOW			4.7	Sep 11	0.00	Sep 28 1956
ANNUAL RUNOFF (AC-FT)	260900		55000		173500	
10 PERCENT EXCEEDS	668		110		415	
50 PERCENT EXCEEDS	98		75		61	
90 PERCENT EXCEEDS	60		14		16	

e Estimated



06865000 KANOPOLIS LAKE NEAR KANOPOLIS, KS

LOCATION.--Lat 38°36'25", long 97°58'02", in SE $^{1}/_{4}$ NW $^{1}/_{4}$ NE $^{1}/_{4}$ sec.3, T.17 S., R.6 W., Ellsworth County, Hydrologic Unit 10260006, in con-trol tower at dam on Smoky Hill River, 12 mi southeast of Kanopolis, 25 mi southwest of Salina, and at mile 183.7.

DRAINAGE AREA.--7,857 mi^2.

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 NGVD of 1929 (levels by U.S. Army Corps of Engineers).

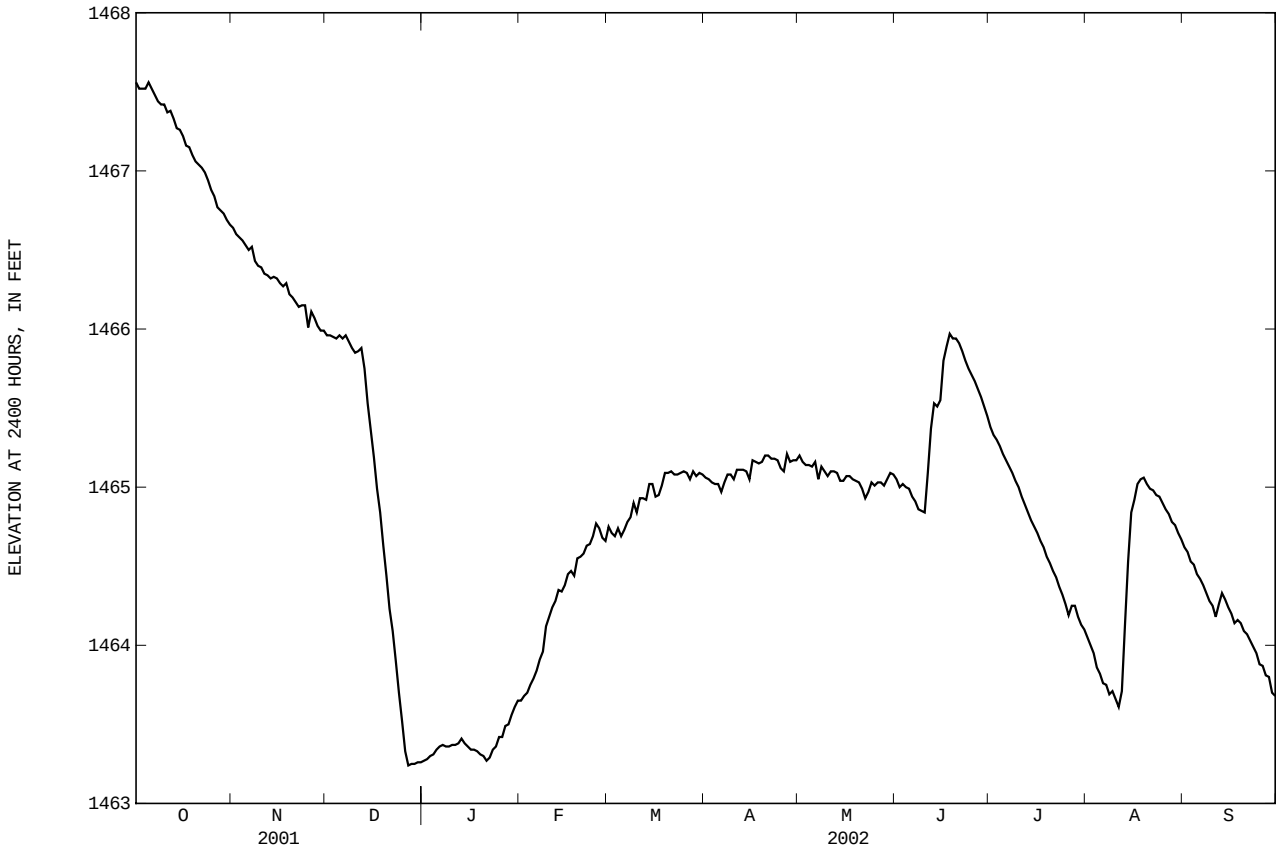
REMARKS.--Reservoir is formed by earthfill dam. Storage began Feb. 17, 1948, and dam was completed in same year. Current conservation pool elevation first reached July 1948. Capacity, 425,700 acre-ft between elevations 1,415 ft, sill of outlet gage and 1,508 ft. Crest of uncontrolled spillway is at elevation 1,507 ft. Storage capacity of 356,700 acre-ft above elevation 1,463 ft is provided for flood control. Storage capacity of 55,200 acre-ft below elevation 1,463 ft is provided for conservation and recreation. Inflow partly regulated by Cedar Bluff Reservoir (station 06861500). Figures given herein represent total contents. Satellite telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 1,506.98 ft July 14, 1951, contents, 435,100 acre-ft; minimum elevation since conservation pool was first filled, 1,453.50 ft Sept. 30, 1988, contents, 29,870 acre-ft.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 1,467.69 ft Oct. 1, contents, 74,710 acre-ft; minimum elevation, 1,463.20 ft Dec. 28, contents, 56,500 acre-ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey made in 1971 by U.S. Army Corps of Engineers and revised in 1982)

1,460	45,990	1,470	85,690
1,465	63,280		



06865000 KANOPOLIS LAKE NEAR KANOPOLIS, KS--Continued

ELEVATION, in FT (NGVD), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1467.56	1466.64	1465.96	1463.27	1463.65	1464.75	1465.06	1465.20	1465.05	1465.38	1464.05	1464.62
2	1467.52	1466.60	1465.96	1463.28	1463.68	1464.71	1465.05	1465.16	1465.00	1465.33	1464.00	1464.59
3	1467.52	1466.58	1465.95	1463.30	1463.70	1464.69	1465.03	1465.14	1465.02	1465.30	1463.95	1464.53
4	1467.52	1466.56	1465.94	1463.31	1463.75	1464.74	1465.02	1465.14	1465.00	1465.26	1463.86	1464.51
5	1467.56	1466.53	1465.96	1463.34	1463.79	1464.69	1465.02	1465.13	1464.99	1465.21	1463.82	1464.45
6	1467.52	1466.50	1465.94	1463.36	1463.84	1464.73	1464.97	1465.16	1464.94	1465.17	1463.76	1464.42
7	1467.48	1466.52	1465.96	1463.37	1463.91	1464.78	1465.03	1465.05	1464.91	1465.13	1463.75	1464.38
8	1467.44	1466.43	1465.92	1463.36	1463.96	1464.81	1465.08	1465.13	1464.86	1465.09	1463.69	1464.33
9	1467.42	1466.40	1465.88	1463.36	1464.12	1464.90	1465.08	1465.10	1464.85	1465.04	1463.71	1464.28
10	1467.42	1466.39	1465.85	1463.37	1464.18	1464.84	1465.05	1465.07	1464.84	1465.00	1463.66	1464.25
11	1467.37	1466.35	1465.86	1463.37	1464.24	1464.93	1465.11	1465.10	1465.09	1464.94	1463.61	1464.18
12	1467.38	1466.34	1465.88	1463.38	1464.28	1464.93	1465.11	1465.10	1465.37	1464.89	1463.71	1464.26
13	1467.33	1466.32	1465.75	1463.41	1464.35	1464.92	1465.11	1465.09	1465.53	1464.84	1464.13	1464.33
14	1467.27	1466.33	1465.53	1463.38	1464.34	1465.02	1465.10	1465.04	1465.51	1464.79	1464.53	1464.29
15	1467.26	1466.32	1465.36	1463.36	1464.38	1465.02	1465.05	1465.04	1465.55	1464.75	1464.84	1464.24
16	1467.22	1466.29	1465.19	1463.34	1464.45	1464.94	1465.17	1465.07	1465.80	1464.71	1464.92	1464.20
17	1467.16	1466.27	1464.99	1463.34	1464.47	1464.95	1465.16	1465.07	1465.89	1464.66	1465.02	1464.14
18	1467.15	1466.29	1464.84	1463.33	1464.44	1465.01	1465.15	1465.05	1465.97	1464.62	1465.05	1464.16
19	1467.10	1466.22	1464.63	1463.31	1464.55	1465.09	1465.16	1465.04	1465.94	1464.56	1465.06	1464.14
20	1467.06	1466.20	1464.44	1463.30	1464.56	1465.09	1465.20	1465.03	1465.94	1464.52	1465.02	1464.09
21	1467.04	1466.17	1464.23	1463.27	1464.58	1465.10	1465.20	1464.99	1465.91	1464.47	1464.99	1464.07
22	1467.02	1466.14	1464.09	1463.29	1464.63	1465.08	1465.18	1464.93	1465.86	1464.43	1464.98	1464.03
23	1466.99	1466.15	1463.90	1463.34	1464.64	1465.08	1465.18	1464.97	1465.80	1464.37	1464.95	1463.99
24	1466.94	1466.15	1463.70	1463.36	1464.69	1465.09	1465.17	1465.03	1465.75	1464.32	1464.94	1463.95
25	1466.88	1466.01	1463.52	1463.42	1464.77	1465.10	1465.12	1465.01	1465.71	1464.26	1464.90	1463.88
26	1466.84	1466.11	1463.33	1463.42	1464.74	1465.09	1465.10	1465.03	1465.67	1464.19	1464.86	1463.87
27	1466.77	1466.07	1463.24	1463.49	1464.68	1465.05	1465.21	1465.03	1465.62	1464.25	1464.83	1463.81
28	1466.75	1466.02	1463.25	1463.50	1464.66	1465.10	1465.16	1465.01	1465.57	1464.25	1464.78	1463.80
29	1466.73	1465.99	1463.25	1463.56	---	1465.07	1465.17	1465.05	1465.51	1464.18	1464.76	1463.70
30	1466.69	1465.99	1463.26	1463.61	---	1465.09	1465.17	1465.09	1465.45	1464.13	1464.71	1463.68
31	1466.66	---	1463.26	1463.65	---	1465.08	---	1465.08	---	1464.10	1464.67	---
MEAN	1467.18	1466.30	1464.87	1463.38	1464.29	1464.95	1465.11	1465.07	1465.43	1464.71	1464.44	1464.17
MAX	1467.56	1466.64	1465.96	1463.65	1464.77	1465.10	1465.21	1465.20	1465.97	1465.38	1465.06	1464.62
MIN	1466.66	1465.99	1463.24	1463.27	1463.65	1464.69	1464.97	1464.93	1464.84	1464.10	1463.61	1463.68
(+)	70,160	67,310	56,710	58,130	61,950	63,600	63,960	63,600	65,090	59,800	61,990	58,240
(#)	-4,550	-2,850	-10,600	+1,420	+3,820	+1,650	+360	-360	+1,490	-5,290	+2,190	-3,750

CAL YR 2001 ..... (#) -1,090
WTR YR 2002 ..... (#) -16,470

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

06865500 SMOKY HILL RIVER NEAR LANGLEY, KS

LOCATION.--Lat 38°36'38", long 97°57'04", in SW $^{1}/_{4}$ SW $^{1}/_{4}$ SE $^{1}/_{4}$ sec.35, T.16 S., R.6 W., Ellsworth County, Hydrologic Unit 10260008, on left bank at downstream side of county highway bridge, 0.8 mi downstream from Kanopolis Dam, 5.0 mi north of Langley, and at mile 182.9.

DRAINAGE AREA.--7,857 mi^{2}.

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

REVISED RECORDS.--WSP 1310: 1942(M).

GAGE.--Water-stage recorder. Datum of gage is 1,395.66 ft above NGVD of 1929 (U.S. Army Corps of Engineers bench mark). Prior to Apr. 1, 1952, water-stage recorder at datum 7.00 ft higher. Apr. 1, 1952, to Oct. 1, 1973, water-stage recorder at datum 5.00 ft higher.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow completely regulated since 1948 by Kanopolis Lake (station 06865000), 0.8 mi upstream. Satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in June 1938 reached a stage of 33.9 ft, present datum, from information by U.S. Army Corps of Engineers, discharge, about 45,000 ft^{3}/s by extension of subsequent rating curve above 16,000 ft^{3}/s and correlation of peak flow at adjacent stations.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	501	147	105	43	e19	48	64	72	68	81	53	48
2	238	146	104	43	e18	48	64	71	66	79	53	52
3	195	143	104	43	18	e48	63	70	65	77	55	53
4	193	142	104	43	20	48	63	69	65	75	53	52
5	199	141	105	43	20	47	63	68	63	73	52	51
6	199	139	104	44	21	48	62	69	62	71	53	49
7	196	137	104	70	23	49	63	67	60	69	54	50
8	196	133	102	102	25	52	65	67	59	68	52	52
9	192	131	102	102	29	56	66	66	57	66	52	51
10	191	130	101	102	31	53	66	65	56	64	52	49
11	188	128	100	102	32	54	66	65	60	62	51	48
12	185	127	101	102	33	55	67	66	83	59	50	52
13	183	125	309	102	35	55	67	65	93	56	38	57
14	181	124	452	103	36	56	68	65	96	55	36	57
15	180	122	442	103	37	56	67	64	94	53	50	56
16	178	120	432	102	38	56	67	65	103	52	58	55
17	174	118	424	102	39	56	69	66	112	53	62	54
18	171	118	415	102	40	57	70	65	115	52	64	53
19	169	117	406	102	42	61	70	65	115	54	65	52
20	166	115	398	102	44	62	71	65	114	54	68	52
21	165	113	392	102	44	63	74	65	112	52	72	51
22	165	112	386	70	45	63	73	63	109	50	69	49
23	165	114	379	22	47	63	73	63	107	51	68	48
24	163	115	374	23	47	63	73	64	104	53	65	50
25	160	113	369	24	48	63	73	65	101	55	63	52
26	158	112	363	24	48	63	72	65	99	52	62	51
27	155	111	197	24	47	63	74	64	96	53	60	49
28	153	108	44	26	47	64	73	64	91	56	59	48
29	151	107	43	22	---	63	73	65	88	56	54	48
30	148	106	43	e18	---	64	73	68	85	56	50	47
31	147	---	43	e18	---	64	---	69	---	55	49	---
MEAN	187.3	123.8	230.5	65.48	34.75	56.81	68.40	66.13	86.60	60.06	56.19	51.20
MAX	501	147	452	103	48	64	74	72	115	81	72	57
MIN	147	106	43	18	18	47	62	63	56	50	36	47
AC-FT	11510	7370	14180	4030	1930	3490	4070	4070	5150	3690	3460	3050

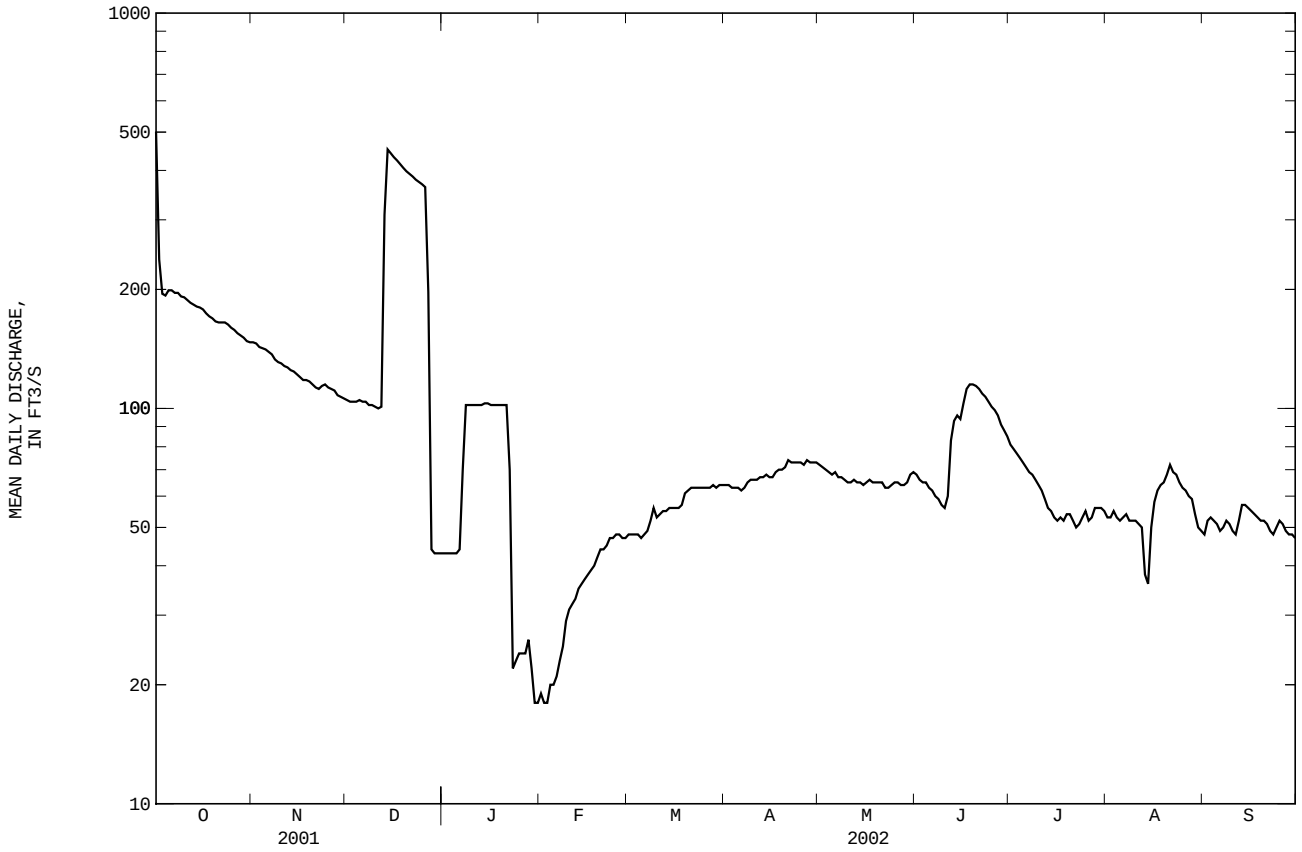
06865500 SMOKY HILL RIVER NEAR LANGLEY, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	293.4	163.3	134.3	75.44	143.7	186.4	313.9	362.2	553.8	482.6	492.2	389.7
MAX	3004	2139	1682	428	1254	1341	2310	2639	2932	3660	3716	3376
(WY)	1952	1974	1974	1974	1993	1973	1960	1987	1995	1951	1993	1951
MIN	15.1	12.8	8.62	7.65	6.96	5.84	8.47	8.79	14.7	21.9	29.8	16.4
(WY)	1981	1992	1992	1992	1992	1989	1989	1989	1989	1989	1980	1980

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1949 - 2002	
ANNUAL MEAN	371.0		91.15		299.8	
HIGHEST ANNUAL MEAN					1392	1951
LOWEST ANNUAL MEAN					23.6	1989
HIGHEST DAILY MEAN	2510	Jun 10	501	Oct 1	6720	Jul 26 1993
LOWEST DAILY MEAN	20	Sep 12	18	Jan 30	1.0	Oct 19 1966
ANNUAL SEVEN-DAY MINIMUM	31	Jan 1	19	Jan 30	4.6	Mar 20 1989
MAXIMUM PEAK FLOW			638	Oct 1	21800	Oct 20 1941
MAXIMUM PEAK STAGE			6.06	Oct 1	32.20	Oct 20 1941
INSTANTANEOUS LOW FLOW			16	Jan 29	0.40	Jan 23 1948
ANNUAL RUNOFF (AC-FT)	268600		65990		217200	
10 PERCENT EXCEEDS	1020		165		800	
50 PERCENT EXCEEDS	171		65		79	
90 PERCENT EXCEEDS	45		43		25	

e Estimated



06866500 SMOKY HILL RIVER NEAR MENTOR, KS

LOCATION.--Lat 38°42'39", long 97°34'16", in NW $^{1}/_{4}$ NE $^{1}/_{4}$ NW $^{1}/_{4}$ sec.32, T.15 S., R.2 W., Saline County, Hydrologic Unit 10260008, on right bank at upstream side of State highway bridge, 2.0 mi southeast of Mentor, and at mile 114.0.

DRAINAGE AREA.--8,340 mi^2.

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

REVISED RECORDS.--WSP 1440: 1924, 1927-28, 1929(M), 1932(M). WSP 1919: 1960.

GAGE.--Water-stage recorder. Elevation of gage is 1,269.00 ft above NGVD of 1929, from topographic map. Prior to June 30, 1932, nonrecording gage at site 10 mi upstream at datum 20.9 ft 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 west on former channel, at present datum. June 27, 1959, to Sept. 8, 1959, nonrecording gage at present site and datum. Sept. 9, 1959, to Mar. 6, 2002, water-stage recorder at site 11.8 mi downstream at different datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Considerable regulation since 1948 by Kanopolis Lake (station 06865000), 82.0 mi upstream. Diversions upstream from station for irrigation. Satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Greatest known flood at Salina, 7.5 mi downstream occurred in 1844; second greatest known flood, May 29, 1903, reached a stage of 26.5 ft near Mentor, from floodmarks, site and datum of 1923-32.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	643	166	142	183	e60	e60	90	99	80	77	43	42
2	629	168	142	212	e56	e56	90	97	79	79	35	39
3	488	166	142	227	e54	e52	87	95	78	74	28	41
4	317	163	143	207	e52	119	87	95	77	69	26	38
5	280	161	144	202	e48	119	89	93	79	66	23	38
6	272	159	141	210	e50	142	88	92	81	69	23	40
7	252	157	141	204	e52	e110	86	101	78	64	20	40
8	236	159	139	191	54	84	92	115	75	61	21	40
9	220	155	133	168	71	82	101	95	73	57	23	40
10	217	156	129	209	77	80	98	87	72	53	34	43
11	212	155	127	197	60	86	95	87	71	51	41	43
12	e220	155	137	188	65	85	92	306	452	49	47	44
13	e215	153	138	186	62	86	90	176	355	41	51	47
14	e212	153	127	187	60	87	90	114	182	42	57	52
15	e207	154	211	181	62	84	90	97	129	40	58	54
16	e201	153	396	182	62	83	86	110	133	40	44	57
17	e195	154	422	181	59	85	84	100	369	39	43	54
18	194	150	435	180	56	85	95	100	215	37	52	53
19	191	147	434	180	70	89	369	95	152	31	58	51
20	190	144	433	181	69	88	277	90	129	30	57	51
21	188	146	429	181	70	90	886	87	118	25	57	51
22	185	146	428	179	63	88	475	86	111	25	54	47
23	182	147	429	183	64	90	177	84	104	27	56	45
24	180	150	428	179	72	93	130	82	101	30	58	45
25	177	144	430	131	e68	90	110	89	96	25	62	46
26	177	145	e405	87	e64	89	104	91	93	24	59	47
27	176	146	e385	77	e60	93	109	87	89	26	54	48
28	174	141	e360	76	e66	94	131	84	83	29	54	49
29	174	141	354	68	---	92	111	85	78	35	49	48
30	169	142	e270	e65	---	90	103	82	77	43	50	47
31	165	---	188	e62	---	90	---	81	---	48	48	---
MEAN	243.2	152.5	269.7	165.9	61.64	89.06	153.7	102.6	130.3	45.35	44.68	46.00
MAX	643	168	435	227	77	142	886	306	452	79	62	57
MIN	165	141	127	62	48	52	84	81	71	24	20	38
AC-FT	14950	9080	16590	10200	3420	5480	9150	6310	7750	2790	2750	2740

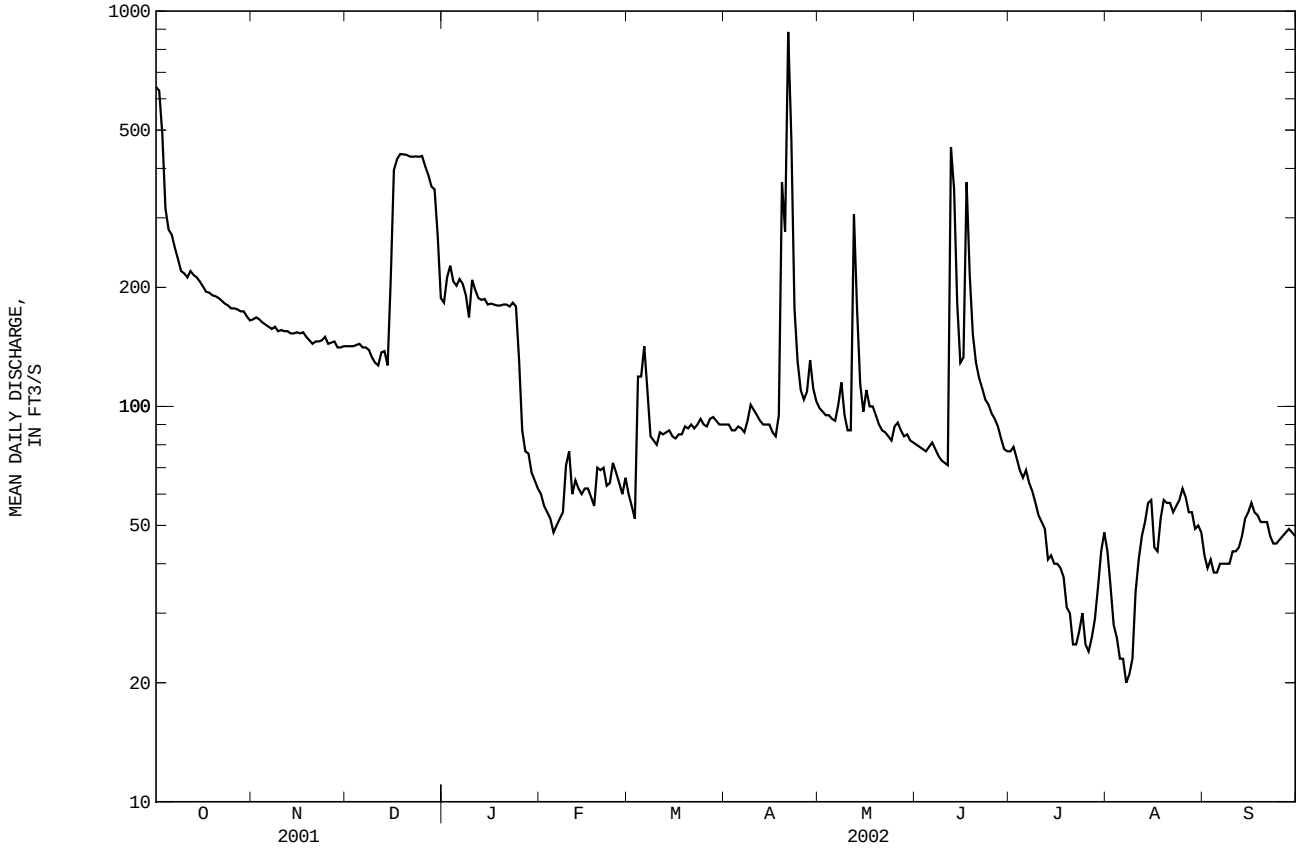
06866500 SMOKY HILL RIVER NEAR MENTOR, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1925 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	357.0	220.9	170.6	123.6	204.5	314.3	396.1	506.5	711.3	595.5	610.4	453.0
MAX	3093	2063	1942	621	1459	2671	2756	2873	3590	5417	4226	3414
(WY)	1952	1974	1974	1974	1993	1973	1973	1987	1995	1951	1993	1951
MIN	20.5	22.1	13.0	14.3	20.3	16.0	17.1	22.2	52.5	27.9	12.6	35.5
(WY)	1992	1992	1992	1992	1992	1992	1989	1992	1988	1968	1989	1991

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1925 - 2002	
ANNUAL MEAN	448.5		126.0		394.2	
HIGHEST ANNUAL MEAN					1781	1993
LOWEST ANNUAL MEAN					35.6	1989
HIGHEST DAILY MEAN	3190	Jun 21	886	Apr 21	18500	Jul 13 1951
LOWEST DAILY MEAN	44	Jan 1	20	Aug 7	1.4	Aug 10 1989
ANNUAL SEVEN-DAY MINIMUM	51	Feb 8	23	Aug 3	2.3	Aug 8 1989
MAXIMUM PEAK FLOW			1310	Apr 21	25500	Aug 17 1927
MAXIMUM PEAK STAGE			9.23	Apr 21	26.20	Aug 17 1927
INSTANTANEOUS LOW FLOW			18	Aug 7	1.0	Aug 10 1989
ANNUAL RUNOFF (AC-FT)	324700		91200		285600	
10 PERCENT EXCEEDS	1000		215		1010	
50 PERCENT EXCEEDS	230		90		130	
90 PERCENT EXCEEDS	72		43		40	

e Estimated



06866900 SALINE RIVER NEAR WAKEENEY, KS

LOCATION.--Lat 39°06'22", long 99°52'10", in NW $^1/_4$ SW $^1/_4$ SW $^1/_4$ sec.10, T.11 S., R.23 W., Trego County, Hydrologic Unit 10260009, on left bank at downstream side of bridge on U.S. Highway 283, 1 mi upstream from Trego Creek, and 5 mi north of WaKeeney.

DRAINAGE AREA.--696 mi^2.

PERIOD OF RECORD.--October 1955 to September 1966, October 1981 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,217.46 ft above NGVD of 1929. Oct. 1, 1955, to May 22, 1958, wire-weight and crest-stage gages and May 23, 1958, to Sept. 30, 1966, water-stage recorder at same site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Natural flow affected by ground-water withdrawals, diversion for irrigation, and return flow from irrigated areas. Satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since at least 1879, about 27 ft in July 1950, from information by local resident.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.7	4.3	5.8	e6.8	e7.1	8.4	9.2	8.0	3.0	0.14	0.00	0.12
2	7.2	4.1	5.9	e6.8	e7.1	e8.4	9.3	7.9	2.7	0.12	0.00	0.11
3	6.5	4.1	6.1	e7.2	e7.2	e8.7	8.6	7.9	2.5	0.10	0.00	0.08
4	6.1	4.1	6.2	e7.9	e7.4	e9.2	8.4	7.8	2.5	0.08	0.00	0.09
5	5.8	4.3	6.3	e8.6	e7.8	e9.5	8.4	7.6	2.5	0.08	0.00	0.10
6	e5.8	4.4	6.0	e8.9	e8.9	e9.5	8.6	7.4	2.7	0.10	0.00	0.09
7	e5.8	4.4	6.0	9.0	e9.2	e8.9	8.9	7.3	2.1	0.07	0.00	0.09
8	e5.3	4.5	5.9	e9.2	e9.2	e8.6	10	7.1	1.9	0.06	0.00	0.09
9	e5.0	4.4	5.9	9.2	e9.0	e8.3	11	7.0	1.6	0.04	0.28	0.09
10	4.9	4.9	6.3	9.2	9.1	e8.2	11	6.8	1.4	0.02	0.29	0.12
11	4.6	4.5	6.5	8.4	9.2	e8.3	10	6.9	1.2	0.0	0.10	0.12
12	4.5	4.7	6.7	e8.2	e9.2	e8.7	9.8	6.5	1.0	0.01	0.06	0.12
13	4.7	4.9	6.6	8.5	e9.4	9.4	10	6.2	1.1	0.04	0.47	0.57
14	4.7	4.9	6.8	8.5	9.8	9.5	11	6.2	1.2	0.07	0.31	0.18
15	4.5	4.9	7.0	7.7	9.5	9.2	11	5.9	1.2	0.03	0.15	0.13
16	4.3	4.8	6.7	7.8	9.0	9.0	11	5.8	1.0	0.02	0.07	0.13
17	4.2	4.8	5.0	e7.0	9.2	9.0	9.4	5.6	0.87	0.0	0.05	0.13
18	4.5	4.9	e5.6	6.7	9.4	9.0	9.0	5.5	0.80	0.0	0.12	0.13
19	4.8	4.7	e6.2	7.8	9.0	8.8	8.5	5.2	0.70	0.01	0.32	0.11
20	4.3	4.6	7.2	7.7	8.9	8.7	8.2	5.0	0.64	0.0	0.29	0.09
21	4.2	4.9	7.1	8.9	8.6	8.6	8.3	4.8	0.63	0.0	0.14	0.06
22	3.8	5.0	e6.7	8.9	8.3	8.3	8.4	4.3	0.49	0.03	0.06	0.00
23	3.8	5.3	6.6	9.6	8.4	8.4	8.2	4.8	0.42	0.04	0.02	0.0
24	3.7	5.8	e6.6	8.7	8.6	8.8	8.3	4.5	0.34	0.00	0.05	0.02
25	3.5	5.8	e6.8	8.1	8.5	8.8	7.7	4.3	0.28	0.00	0.06	0.0
26	3.6	6.1	e7.0	e8.0	e8.4	8.8	7.7	4.5	0.24	0.00	0.04	0.01
27	4.0	5.8	e7.0	8.7	e8.6	9.1	7.9	4.6	0.25	0.00	0.07	0.03
28	3.6	5.9	e6.9	8.6	e8.3	9.2	8.0	4.3	0.20	0.00	0.15	0.03
29	3.8	6.1	e6.8	7.9	---	9.3	7.8	3.9	0.15	0.00	0.10	0.03
30	3.7	6.0	e6.7	7.2	---	9.3	7.8	3.7	0.14	0.01	0.13	0.02
31	4.3	---	e6.7	e7.1	---	9.2	---	3.4	---	0.0	0.18	---
MEAN	4.748	4.930	6.439	8.155	8.654	8.874	9.047	5.829	1.192	0.035	0.113	0.096
MAX	7.7	6.1	7.2	9.6	9.8	9.5	11	8.0	3.0	0.14	0.47	0.57
MIN	3.5	4.1	5.0	6.7	7.1	8.2	7.7	3.4	0.14	0.00	0.00	0.00
AC-FT	292	293	396	501	481	546	538	358	71	2.1	7.0	5.7

06866900 SALINE RIVER NEAR WAKEENEY, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1956 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	10.75	4.843	4.738	5.283	9.859	19.19	12.03	41.46	42.40	50.04	27.98	15.52
MAX	180	22.6	18.6	20.1	92.1	335	53.7	359	680	441	303	104
(WY)	1966	1994	1994	1962	1966	1960	1998	1995	1957	1993	1961	1993
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1957	1957	1957	1957	1957	1991	1991	1991	1991	1966	1991	1956

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1956 - 2002	
ANNUAL MEAN	12.25		4.823		20.44	
HIGHEST ANNUAL MEAN					98.8	1957
LOWEST ANNUAL MEAN					0.000	1991
HIGHEST DAILY MEAN	557	Jul 28	11	Apr 9	8010	Jun 17 1957
LOWEST DAILY MEAN	0.33	Jul 22	0.00	Jul 11	0.00	Oct 28 1955
ANNUAL SEVEN-DAY MINIMUM	0.39	Jul 19	0.00	Jul 31	0.00	Aug 23 1956
MAXIMUM PEAK FLOW			12	Apr 10	13000	Jun 17 1957
MAXIMUM PEAK STAGE			2.44	Apr 10	19.40	Jun 17 1957
INSTANTANEOUS LOW FLOW			0.00	Jul 10	.00	most years
ANNUAL RUNOFF (AC-FT)	8870		3490		14810	
10 PERCENT EXCEEDS	14		9.1		24	
50 PERCENT EXCEEDS	6.2		5.3		2.8	
90 PERCENT EXCEEDS	1.7		0.03		0.00	

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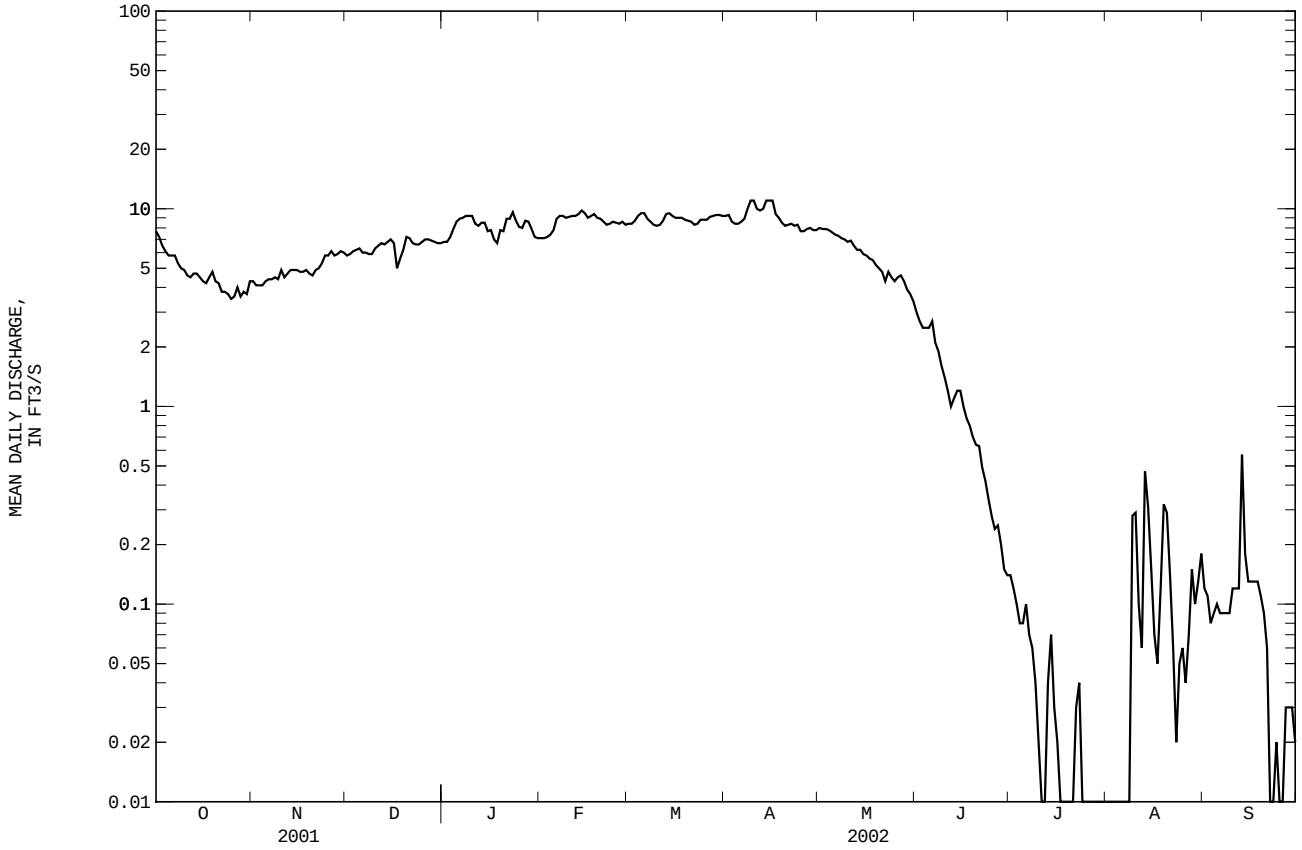

06867000 SALINE RIVER NEAR RUSSELL, KS

LOCATION.--Lat 38°58'00", long 98°51'20", in SW $^1/_4$ SW $^1/_4$ NW $^1/_4$ sec.35, T.12 S., R.14 W., Russell County, Hydrologic Unit 10260009, on left bank at downstream side of bridge on U.S. Highway 281, 2.0 mi downstream from Salt Creek, 5.0 mi north of Russell, and at mile 190.6.

DRAINAGE AREA.--1,502 mi^2.

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

REVISED RECORDS.--WSP 1919: 1960. WDR KS-92-1: 1988-89 (M), 1990-91 (M).

GAGE.--Water-stage recorder. Datum of gage is 1,551.59 ft above NGVD of 1929. Prior to Jan. 22, 1946, nonrecording gage at same site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Low flow partially regulated at times by irrigation. Satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jun 16	2300	*64	*4.67	No peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	59	39	e44	e38	e37	e36	43	42	25	9.3	2.8	2.7
2	56	39	e44	e38	e39	e37	42	41	23	9.3	2.7	2.5
3	53	39	e46	e38	e42	e39	41	41	22	8.9	2.6	2.4
4	50	39	48	e39	e44	e42	41	41	21	8.4	2.4	2.3
5	49	40	46	e40	e46	e50	41	43	22	8.0	2.3	2.2
6	47	40	45	e40	e49	e50	41	49	21	7.7	2.2	2.1
7	45	41	45	e41	e53	e49	42	40	20	7.4	2.2	1.9
8	44	40	44	e43	e56	e45	46	41	19	7.1	2.2	1.8
9	45	40	44	e43	e58	e44	48	41	18	6.8	6.4	1.8
10	43	41	44	e41	e58	e47	48	39	17	6.5	8.2	1.9
11	42	41	43	e40	e57	54	48	39	16	6.2	8.8	1.9
12	40	42	43	e42	e56	51	49	38	16	6.3	7.1	1.9
13	41	43	43	e42	e55	50	48	36	18	6.3	16	3.2
14	40	43	43	e42	e54	50	48	34	24	6.3	12	7.4
15	42	44	43	e42	54	49	47	32	24	6.0	8.2	7.4
16	41	44	43	e42	53	48	46	36	37	5.7	6.6	4.8
17	40	44	43	e42	52	47	45	38	45	5.5	5.6	3.8
18	40	45	43	e42	51	46	44	33	29	5.3	5.2	3.3
19	39	44	43	e43	50	48	43	30	23	5.0	5.1	3.1
20	39	44	43	45	50	46	45	31	20	4.8	5.1	2.9
21	39	44	42	45	49	44	47	29	18	4.4	5.1	2.6
22	39	45	42	47	47	44	45	29	15	5.3	4.5	2.4
23	39	46	41	47	47	44	43	28	14	5.0	4.3	2.3
24	39	47	38	47	46	44	42	30	13	4.9	4.2	2.3
25	38	48	e38	45	46	45	41	34	12	4.5	4.0	2.1
26	37	49	e38	47	44	45	41	34	12	4.1	3.7	2.1
27	38	46	e38	46	37	44	45	40	12	4.2	3.5	2.2
28	38	42	e38	46	e35	44	44	37	11	5.4	3.4	2.2
29	38	e42	e38	e40	---	43	42	32	10	6.7	3.2	2.0
30	39	e43	e38	e37	---	43	42	29	9.5	5.0	3.1	1.8
31	39	---	e38	e36	---	43	---	26	---	3.6	2.9	---
MEAN	42.52	42.80	42.23	42.13	48.75	45.52	44.27	35.90	19.55	6.126	5.019	2.777
MAX	59	49	48	47	58	54	49	49	45	9.3	16	7.4
MIN	37	39	38	36	35	36	41	26	9.5	3.6	2.2	1.8
MED	40	43	43	42	50	45	44	36	18	6.0	4.2	2.3
AC-FT	2610	2550	2600	2590	2710	2800	2630	2210	1160	377	309	165

06867000 SALINE RIVER NEAR RUSSELL, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	65.24	43.20	35.15	36.03	58.43	86.35	102.1	135.5	198.2	207.0	118.7	73.83
MAX	1077	238	174	206	453	561	969	1617	3011	3737	1257	778
(WY)	1947	1997	1974	1974	1949	1960	1987	1995	1951	1993	1950	1951
MIN	1.05	0.96	1.92	2.28	1.97	2.49	3.29	4.06	8.82	1.69	1.45	0.94
(WY)	1992	1991	1991	1992	1992	1992	1992	1992	1989	1991	1991	1991

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1946 - 2002	
ANNUAL MEAN	104.8		31.37		97.48	
HIGHEST ANNUAL MEAN					561	1951
LOWEST ANNUAL MEAN					5.25	1991
HIGHEST DAILY MEAN	2240	Jun 9	59	Oct 1	23400	Jul 22 1993
LOWEST DAILY MEAN	24	Sep 13	1.8	Sep 8	0.10	Aug 11 1964
ANNUAL SEVEN-DAY MINIMUM	26	Sep 9	1.9	Sep 6	0.27	Aug 7 1964
MAXIMUM PEAK FLOW			64	Jun 16	41500	Jul 21 1993
MAXIMUM PEAK STAGE			4.67	Jun 16	25.73	Jul 21 1993
INSTANTANEOUS LOW FLOW			1.6	Sep 8	0.00	Aug 11 1964
ANNUAL RUNOFF (AC-FT)	75850		22710		70620	
10 PERCENT EXCEEDS	193		48		163	
50 PERCENT EXCEEDS	55		40		32	
90 PERCENT EXCEEDS	38		3.3		4.8	

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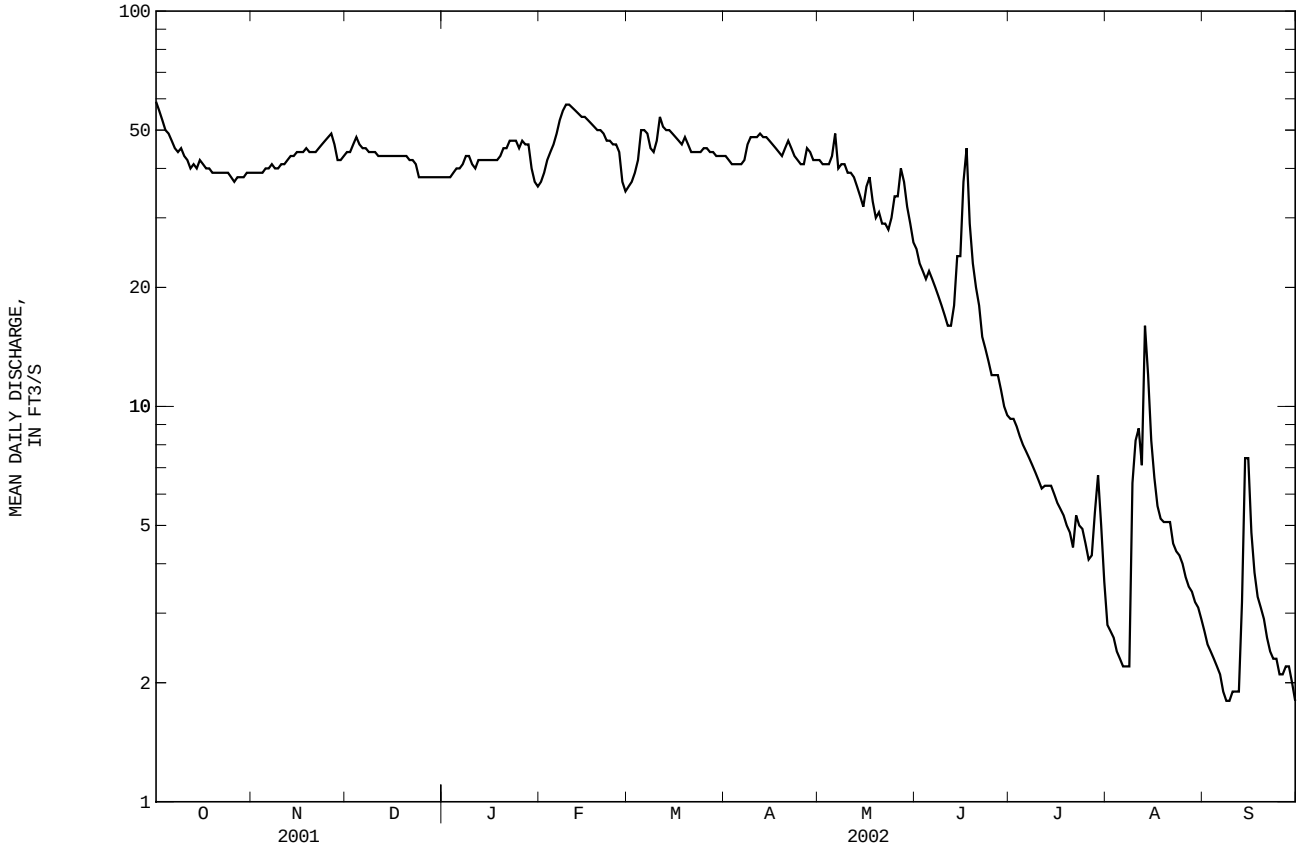


06868100 WILSON LAKE NEAR WILSON, KS

LOCATION.--Lat 38°58'00", long 98°29'35", in NE $^{1}/_{4}$ NW $^{1}/_{4}$ SE $^{1}/_{4}$ sec.36, T.12 S., R.11 W., Russell County, Hydrologic Unit 10260009, in the control tower near right end of Wilson Dam on the Saline River, 10 mi north of Wilson, and at mile 153.9.

DRAINAGE AREA.--1,917 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929 (levels by U.S. Army Corps of Engineers).

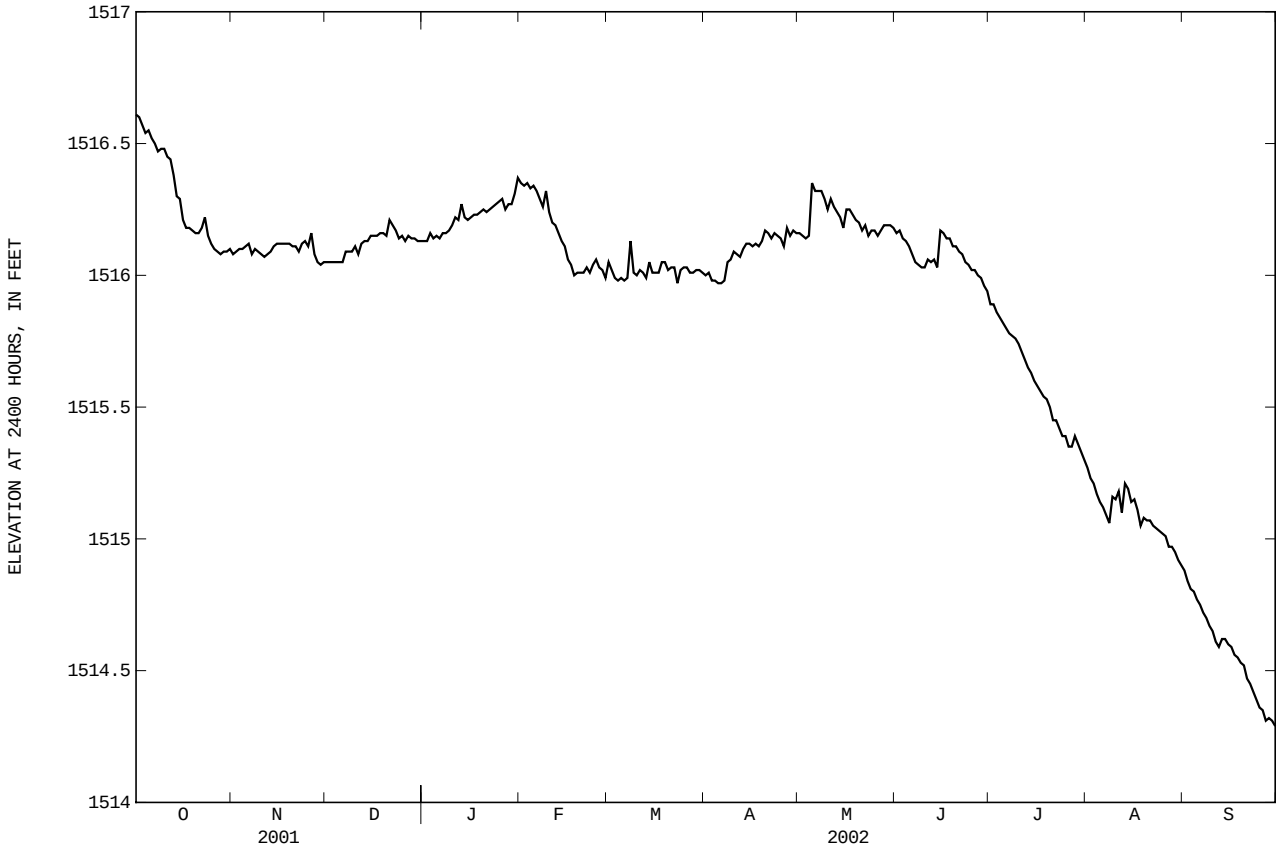
REMARKS.--Reservoir is formed by earthfill dam. Storage began Dec. 29, 1964. Total capacity, 1,667,000 acre-ft below elevation 1,587.5 ft, consisting of 1,420 acre-ft of dead storage below elevation 1,450 ft; conservation pool, 241,100 acre-ft between elevation 1,450 ft and 1,516 ft; flood-control pool, 1,245,000 acre-ft between 1,516 ft and 1,582 ft, crest of spillway; and surcharge capacity of 179,500 acre-ft between 1,582 ft and 1,587.5 ft. Figures given herein represent total contents. Satellite telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 1,548.23 ft Aug. 6, 1993, contents, 663,600 acre-ft; minimum elevation since conservation pool first filled, 1,493.59 ft Dec. 26, 1966, contents, 91,500 acre-ft.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 1,516.65 ft Oct. 1, contents, 248,400 acre-ft; minimum elevation, 1,514.27 ft Sept. 30, contents, 227,200 acre-ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on field survey by U.S. Army Corps of Engineers during July 1984)

1,514	224,900	1,516	242,500
1,515	233,600	1,517	251,700



06868100 WILSON LAKE NEAR WILSON, KS--Continued

ELEVATION, in FT (NGVD), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1516.61	1516.08	1516.05	1516.13	1516.35	1516.05	1516.00	1516.16	1516.16	1515.89	1515.27	1514.88
2	1516.60	1516.09	1516.05	1516.13	1516.34	1516.02	1516.01	1516.15	1516.17	1515.89	1515.23	1514.84
3	1516.57	1516.10	1516.05	1516.16	1516.35	1515.99	1515.98	1516.14	1516.14	1515.86	1515.21	1514.81
4	1516.54	1516.10	1516.05	1516.14	1516.33	1515.98	1515.98	1516.15	1516.13	1515.84	1515.17	1514.80
5	1516.55	1516.11	1516.05	1516.15	1516.34	1515.99	1515.97	1516.35	1516.11	1515.82	1515.14	1514.77
6	1516.52	1516.12	1516.05	1516.14	1516.32	1515.98	1515.97	1516.32	1516.08	1515.80	1515.12	1514.75
7	1516.50	1516.08	1516.09	1516.16	1516.29	1515.99	1515.98	1516.32	1516.05	1515.78	1515.09	1514.72
8	1516.47	1516.10	1516.09	1516.16	1516.26	1516.13	1516.05	1516.32	1516.04	1515.77	1515.06	1514.70
9	1516.48	1516.09	1516.09	1516.17	1516.32	1516.01	1516.06	1516.29	1516.03	1515.76	1515.16	1514.67
10	1516.48	1516.08	1516.11	1516.19	1516.24	1516.00	1516.09	1516.25	1516.03	1515.74	1515.15	1514.65
11	1516.45	1516.07	1516.08	1516.22	1516.20	1516.02	1516.08	1516.29	1516.06	1515.71	1515.18	1514.61
12	1516.44	1516.08	1516.12	1516.21	1516.19	1516.01	1516.07	1516.26	1516.05	1515.68	1515.10	1514.59
13	1516.38	1516.09	1516.13	1516.27	1516.16	1515.99	1516.10	1516.24	1516.06	1515.65	1515.21	1514.62
14	1516.30	1516.11	1516.13	1516.22	1516.13	1516.05	1516.12	1516.22	1516.03	1515.63	1515.19	1514.62
15	1516.29	1516.12	1516.15	1516.21	1516.11	1516.01	1516.12	1516.18	1516.17	1515.60	1515.14	1514.60
16	1516.21	1516.12	1516.15	1516.22	1516.06	1516.01	1516.11	1516.25	1516.16	1515.58	1515.15	1514.59
17	1516.18	1516.12	1516.15	1516.23	1516.04	1516.01	1516.12	1516.25	1516.14	1515.56	1515.11	1514.56
18	1516.18	1516.12	1516.16	1516.23	1516.00	1516.05	1516.11	1516.23	1516.14	1515.54	1515.05	1514.55
19	1516.17	1516.12	1516.16	1516.24	1516.01	1516.05	1516.13	1516.21	1516.11	1515.53	1515.08	1514.53
20	1516.16	1516.11	1516.15	1516.25	1516.01	1516.02	1516.17	1516.20	1516.11	1515.50	1515.07	1514.52
21	1516.16	1516.11	1516.21	1516.24	1516.01	1516.03	1516.16	1516.17	1516.09	1515.45	1515.07	1514.47
22	1516.18	1516.09	1516.19	1516.25	1516.03	1516.03	1516.14	1516.19	1516.08	1515.45	1515.05	1514.45
23	1516.22	1516.12	1516.17	1516.26	1516.01	1515.97	1516.16	1516.15	1516.05	1515.42	1515.04	1514.42
24	1516.15	1516.13	1516.14	1516.27	1516.04	1516.02	1516.15	1516.17	1516.04	1515.39	1515.03	1514.39
25	1516.12	1516.11	1516.15	1516.28	1516.06	1516.03	1516.14	1516.17	1516.02	1515.39	1515.02	1514.36
26	1516.10	1516.16	1516.13	1516.29	1516.03	1516.03	1516.11	1516.15	1516.02	1515.35	1515.01	1514.35
27	1516.09	1516.08	1516.15	1516.25	1516.02	1516.01	1516.18	1516.17	1516.00	1515.35	1514.97	1514.31
28	1516.08	1516.05	1516.14	1516.27	1515.99	1516.01	1516.15	1516.19	1515.99	1515.39	1514.97	1514.32
29	1516.09	1516.04	1516.14	1516.27	---	1516.02	1516.17	1516.19	1515.96	1515.36	1514.95	1514.31
30	1516.09	1516.05	1516.13	1516.31	---	1516.02	1516.16	1516.19	1515.94	1515.33	1514.92	1514.29
31	1516.10	---	1516.13	1516.37	---	1516.01	---	1516.18	---	1515.30	1514.90	---
MEAN	1516.31	1516.10	1516.12	1516.22	1516.15	1516.02	1516.09	1516.22	1516.07	1515.59	1515.09	1514.57
MAX	1516.61	1516.16	1516.21	1516.37	1516.35	1516.13	1516.18	1516.35	1516.17	1515.89	1515.27	1514.88
MIN	1516.08	1516.04	1516.05	1516.13	1515.99	1515.97	1515.97	1516.14	1515.94	1515.30	1514.90	1514.29
(+)	243,400	243,000	243,700	245,900	242,400	242,600	244,000	244,200	242,000	236,200	232,700	227,400
(#)	-5,000	-400	+700	+2,200	-3,500	+200	+1,400	+200	-2,200	-5,800	-3,500	-5,300

CAL YR 2001 ..... (#) +12,800
WTR YR 2002 ..... (#) -21,000

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

06868200 SALINE RIVER AT WILSON DAM, KS

LOCATION.--Lat 38°58'35", long 98°29'20", in NE $^{1}/_{4}$ SW $^{1}/_{4}$ SE $^{1}/_{4}$ sec.25, T.12 S., R.11 W., Russell County, Hydrologic Unit 10260010, on right bank 0.5 mi downstream from outlet of Wilson Dam, 9.0 mi upstream from Wolf Creek, 10 mi north of Wilson, and at mile 153.4.

DRAINAGE AREA.--1,917 mi^{2}.

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

GAGE.--Water-stage recorder. Elevation of gage is 1,437 ft above NGVD of 1929, from topographic map. Prior to May 12, 1965, water-stage recorder at site 1.5 mi downstream at different datum. Satellite telemeter at station.

REMARKS.--Records good. Flow completely regulated since 1964 by Wilson Lake (station 06868100), 0.5 mi upstream.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

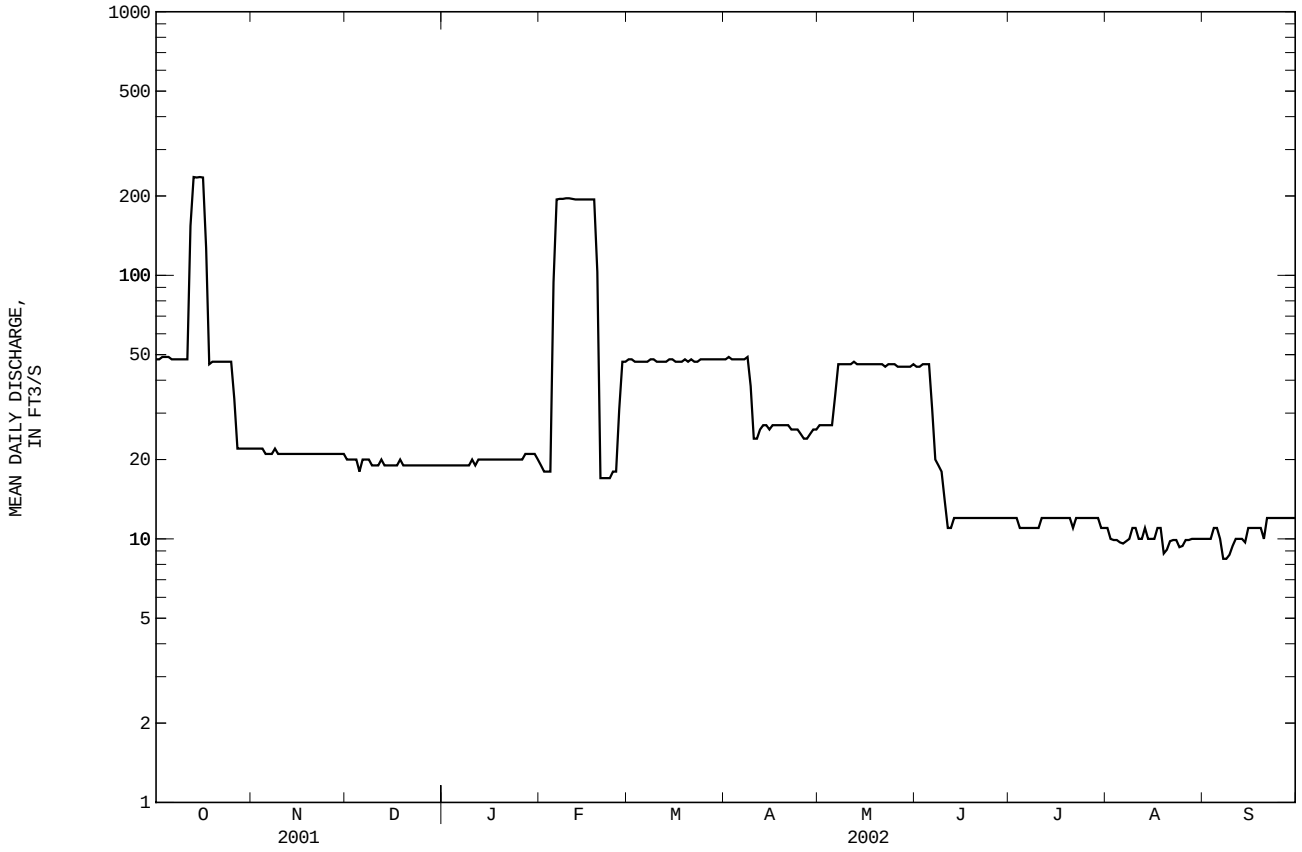
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	48	22	20	19	19	48	48	27	45	12	11	10
2	48	22	20	19	18	48	49	27	45	12	10	10
3	49	22	20	19	18	47	48	27	46	12	9.9	10
4	49	22	20	19	18	47	48	27	46	11	9.9	11
5	49	21	18	19	94	47	48	27	46	11	9.7	11
6	48	21	20	19	194	47	48	35	31	11	9.6	10
7	48	21	20	19	195	47	48	46	20	11	9.8	8.4
8	48	22	20	19	195	48	49	46	19	11	10	8.4
9	48	21	19	19	196	48	38	46	18	11	11	8.7
10	48	21	19	20	196	47	24	46	14	11	11	9.4
11	48	21	19	19	195	47	24	46	11	12	10	10
12	154	21	20	20	194	47	26	47	11	12	10	10
13	236	21	19	20	194	47	27	46	12	12	11	10
14	235	21	19	20	194	48	27	46	12	12	10	9.7
15	236	21	19	20	194	48	26	46	12	12	10	11
16	235	21	19	20	194	47	27	46	12	12	10	11
17	127	21	19	20	194	47	27	46	12	12	11	11
18	46	21	20	20	194	47	27	46	12	12	11	11
19	47	21	19	20	103	48	27	46	12	12	8.8	11
20	47	21	19	20	17	47	27	46	12	12	9.1	10
21	47	21	19	20	17	48	27	46	12	11	9.8	12
22	47	21	19	20	17	47	26	45	12	12	9.9	12
23	47	21	19	20	17	47	26	46	12	12	9.9	12
24	47	21	19	20	18	48	26	46	12	12	9.3	12
25	47	21	19	20	18	48	25	46	12	12	9.4	12
26	34	21	19	20	31	48	24	45	12	12	9.9	12
27	22	21	19	21	47	48	24	45	12	12	9.9	12
28	22	21	19	21	47	48	25	45	12	12	10	12
29	22	21	19	21	---	48	26	45	12	12	10	12
30	22	21	19	21	---	48	26	45	12	11	10	12
31	22	---	19	20	---	48	---	46	---	11	10	---
MEAN	73.32	21.17	19.26	19.81	108.1	47.52	32.27	42.42	18.93	11.68	10.03	10.72
MAX	236	22	20	21	196	48	49	47	46	12	11	12
MIN	22	21	18	19	17	47	24	27	11	11	8.8	8.4
AC-FT	4510	1260	1180	1220	6010	2920	1920	2610	1130	718	617	638

06868200 SALINE RIVER AT WILSON DAM, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	59.61	63.86	90.84	73.07	62.67	58.98	111.6	121.7	143.8	108.3	112.0	64.21
MAX	1557	1508	1636	1341	703	774	1444	1107	1143	1401	1226	1233
(WY)	1994	1994	1994	1994	1974	1993	1973	1987	1987	1995	1993	1993
MIN	3.53	2.43	5.07	3.35	4.15	2.10	2.97	3.15	3.57	3.27	3.60	4.80
(WY)	1968	1968	1966	1965	1965	1968	1967	1967	1967	1967	1967	1967

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1964 - 2002	
ANNUAL MEAN	111.4		34.15		89.36	
HIGHEST ANNUAL MEAN					641	1994
LOWEST ANNUAL MEAN					5.36	1967
HIGHEST DAILY MEAN	1570	Jun 16	236	Oct 13	2920	Apr 14 1973
LOWEST DAILY MEAN	8.7	Jan 2	8.4	Sep 7	1.0	Aug 3 1964
ANNUAL SEVEN-DAY MINIMUM	8.8	Jan 1	9.3	Sep 6	1.2	Jun 1 1968
MAXIMUM PEAK FLOW			239	Oct 12	3320	Apr 6 1973
MAXIMUM PEAK STAGE			5.15	Oct 12	18.84	Apr 6 1973
INSTANTANEOUS LOW FLOW			3.7	Dec 5	0.00	Nov 8 1978
ANNUAL RUNOFF (AC-FT)	80680		24730		64740	
10 PERCENT EXCEEDS	269		48		189	
50 PERCENT EXCEEDS	21		20		17	
90 PERCENT EXCEEDS	11		10		5.2	



06869500 SALINE RIVER AT TESCOTT, KS

LOCATION.--Lat 39°00'15", long 97°52'26", in NE $^{1}/_{4}$ SE $^{1}/_{4}$ SE $^{1}/_{4}$ sec.16, T.12 S., R.5 W., Ottawa County, Hydrologic Unit 10260010, on right bank at downstream side of county highway bridge, 0.5 mi south of Tescott, 0.5 mi upstream from Dry Creek, and at mile 68.5.

DRAINAGE AREA.--2,820 mi^{2}.

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

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

GAGE.--Water-stage recorders. Datum of gage is 1,265.34 ft above NGVD of 1929. Prior to Nov. 23, 1934, nonrecording gage at present site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Some diurnal fluctuation caused by power plants upstream from station. Diversions upstream from station for irrigation. Flow moderately regulated since 1964 by Wilson Lake (station 06868100), 85.4 mi upstream. Satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--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, from information by local residents.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	77	61	60	67	e60	69	89	63	68	e24	20	15
2	77	60	61	65	e60	e69	90	61	62	24	20	15
3	74	62	64	65	66	e70	86	61	59	23	18	15
4	75	62	64	66	73	100	85	60	57	24	18	15
5	76	63	64	64	72	113	84	62	56	24	17	15
6	75	64	63	66	70	113	86	84	56	24	16	14
7	75	66	62	68	67	110	86	257	55	23	16	14
8	75	67	60	70	141	102	90	128	55	24	15	14
9	75	62	58	68	259	89	93	91	53	24	16	15
10	76	61	59	70	247	97	95	90	41	23	17	15
11	74	61	60	69	243	86	94	83	36	22	18	14
12	73	62	60	67	242	98	89	146	36	22	17	14
13	75	64	61	62	243	96	73	196	52	22	22	16
14	76	64	61	62	242	92	66	103	52	21	25	18
15	208	65	61	61	240	90	66	78	43	21	62	18
16	249	65	61	61	239	89	66	76	42	21	50	18
17	250	64	61	60	237	88	66	173	58	21	39	17
18	254	62	61	60	238	89	66	130	57	20	38	16
19	242	61	61	61	241	95	64	92	89	20	27	15
20	141	59	61	64	241	98	64	79	91	20	22	16
21	88	59	61	63	231	98	101	76	53	20	20	16
22	84	60	61	61	138	92	79	71	39	19	19	15
23	83	62	61	63	83	89	76	69	34	19	18	15
24	80	63	59	62	95	89	70	68	31	19	17	15
25	80	64	e58	61	86	89	65	69	29	19	16	15
26	78	62	e59	61	72	89	62	72	28	19	17	15
27	79	61	61	61	70	89	63	71	28	18	17	15
28	80	60	65	60	66	89	67	68	e27	20	17	15
29	79	60	69	61	---	89	71	68	e26	20	17	15
30	70	60	66	e59	---	89	67	67	e25	20	18	15
31	62	---	66	e58	---	88	---	67	---	19	15	---
MEAN	105.2	62.20	61.58	63.42	155.8	91.71	77.30	92.87	47.93	21.26	22.06	15.33
MAX	254	67	69	70	259	113	101	257	91	24	62	18
MIN	62	59	58	58	60	69	62	60	25	18	15	14
AC-FT	6470	3700	3790	3900	8650	5640	4600	5710	2850	1310	1360	912

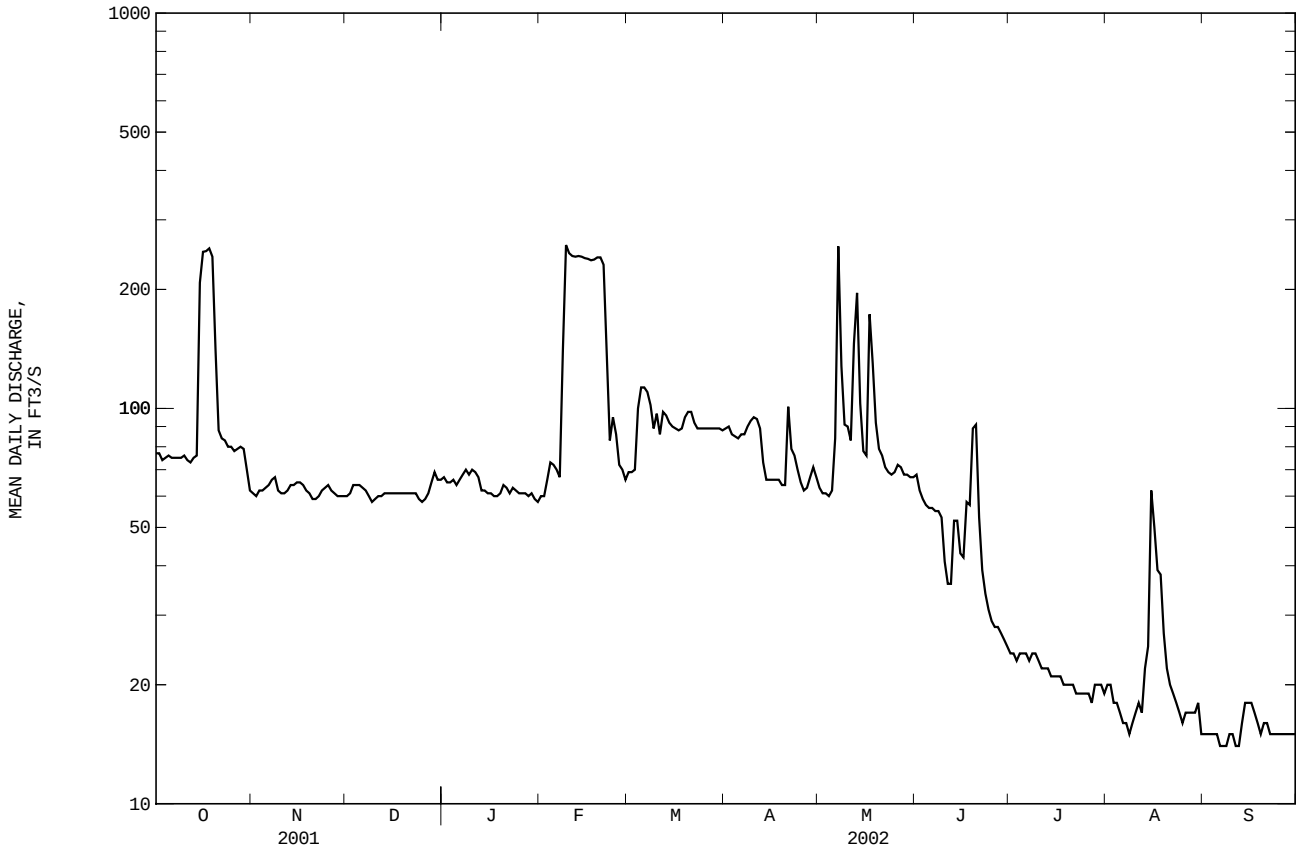
06869500 SALINE RIVER AT TESCOTT, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1920 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	144.0	101.0	94.85	90.56	114.9	163.6	230.5	362.8	506.0	425.6	256.6	227.3
MAX	1650	1639	1736	1540	984	1698	2445	2054	6756	6589	2363	2131
(WY)	1994	1994	1994	1994	1974	1960	1973	1961	1951	1951	1928	1951
MIN	4.77	5.60	6.16	2.32	12.5	8.74	10.5	8.44	12.2	11.6	7.13	5.83
(WY)	1925	1925	1935	1925	1938	1935	1968	1967	1966	1966	1924	1924

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1920 - 2002	
ANNUAL MEAN	224.6		67.52		224.2	
HIGHEST ANNUAL MEAN					1590	1951
LOWEST ANNUAL MEAN					19.8	1966
HIGHEST DAILY MEAN	1810	Jun 7	259	Feb 9	47600	Jul 13 1951
LOWEST DAILY MEAN	30	Feb 10	14	Sep 6	0.00	Jan 22 1935
ANNUAL SEVEN-DAY MINIMUM	35	Feb 9	14	Sep 6	1.9	Dec 5 1934
MAXIMUM PEAK FLOW			324	May 7	61400	Jul 13 1951
MAXIMUM PEAK STAGE			8.60	May 7	30.14	Jul 23 1993
INSTANTANEOUS LOW FLOW			14	Sep 5	.00	1935,1936
ANNUAL RUNOFF (AC-FT)	162600		48880		162400	
10 PERCENT EXCEEDS	644		98		435	
50 PERCENT EXCEEDS	75		62		58	
90 PERCENT EXCEEDS	43		17		15	

e Estimated



06869950 MULBERRY CREEK NEAR SALINA, KS

LOCATION.--Lat 38°50'40", long 97°40'05", in SW $^{1}/_{4}$ SW $^{1}/_{4}$ sec.9, T.14 S., R.3 W., Saline County, Hydrologic Unit 10260010, on left bank at downstream side of bridge on county highway bridge, 2.0 mi downstream from Spring Creek, 2.0 mi west of Salina, and at mile 9.0.

DRAINAGE AREA.--261 mi^2.

PERIOD OF RECORD.--Annual maximum, water year 1961-2001. March 2002 to September 2002.

GAGE.--Water-stage recorders. Datum of gage is 1,208.48 ft above NGVD of 1929. Prior to Mar. 1, 2002, nonrecording gage at present site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

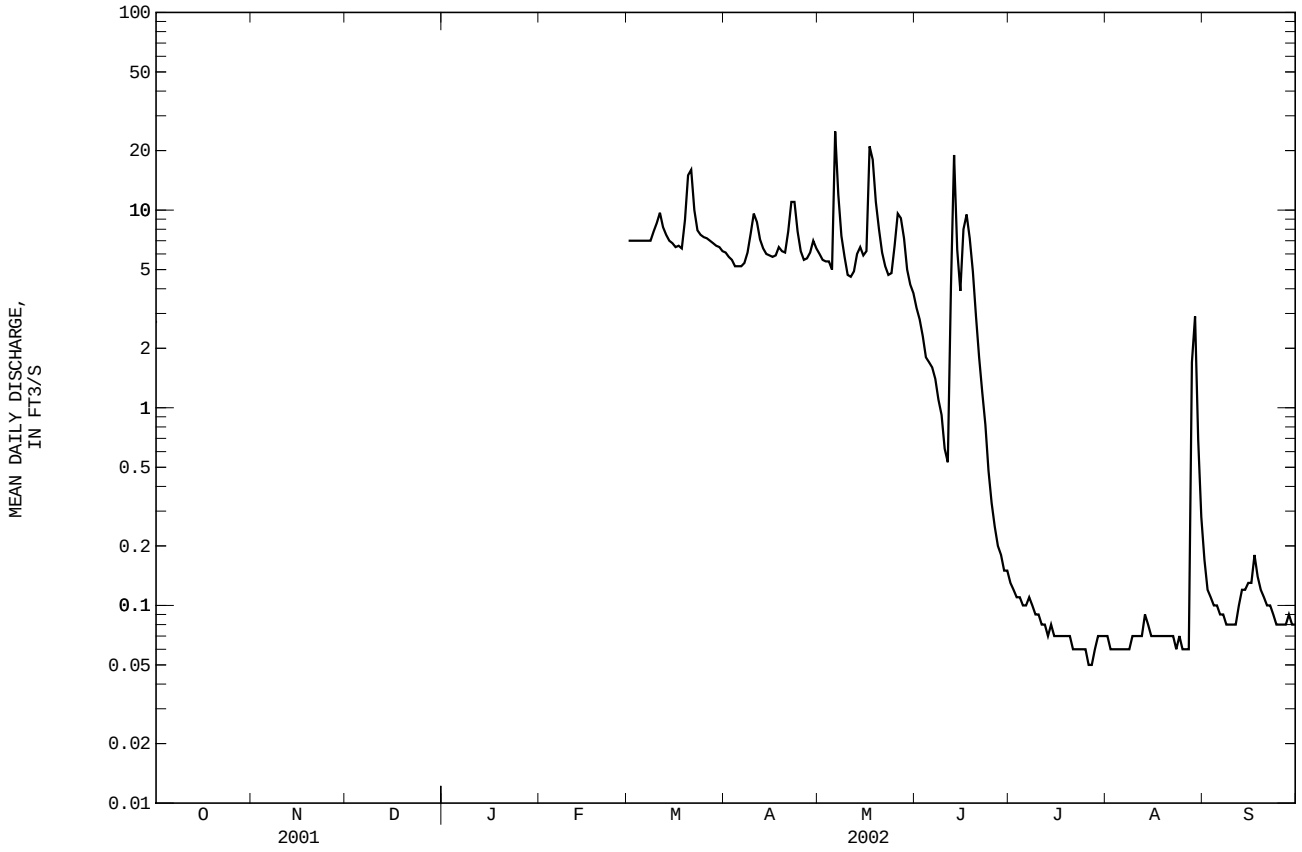
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	e7.0	6.1	6.0	3.2	0.13	0.07	0.17
2	---	---	---	---	---	e7.0	5.8	5.6	2.8	0.12	0.06	0.12
3	---	---	---	---	---	e7.0	5.6	5.5	2.3	0.11	0.06	0.11
4	---	---	---	---	---	e7.0	5.2	5.5	1.8	0.11	0.06	0.10
5	---	---	---	---	---	e7.0	5.2	5.0	1.7	0.10	0.06	0.10
6	---	---	---	---	---	e7.0	5.2	25	1.6	0.10	0.06	0.09
7	---	---	---	---	---	e7.0	5.4	12	1.4	0.11	0.06	0.09
8	---	---	---	---	---	e7.0	6.1	7.4	1.1	0.10	0.06	0.08
9	---	---	---	---	---	7.8	7.6	5.8	0.92	0.09	0.07	0.08
10	---	---	---	---	---	8.6	9.6	4.7	0.62	0.09	0.07	0.08
11	---	---	---	---	---	9.7	8.7	4.6	0.53	0.08	0.07	0.08
12	---	---	---	---	---	8.2	7.1	4.9	4.1	0.08	0.07	0.10
13	---	---	---	---	---	7.5	6.4	6.0	19	0.07	0.09	0.12
14	---	---	---	---	---	7.0	6.0	6.5	6.3	0.08	0.08	0.12
15	---	---	---	---	---	6.8	5.9	5.9	3.9	0.07	0.07	0.13
16	---	---	---	---	---	6.5	5.8	6.2	8.0	0.07	0.07	0.13
17	---	---	---	---	---	6.6	5.9	21	9.5	0.07	0.07	0.18
18	---	---	---	---	---	6.4	6.5	18	7.2	0.07	0.07	0.14
19	---	---	---	---	---	8.9	6.2	11	4.9	0.07	0.07	0.12
20	---	---	---	---	---	15	6.1	8.0	2.9	0.07	0.07	0.11
21	---	---	---	---	---	16	7.8	6.1	1.8	0.06	0.07	0.10
22	---	---	---	---	---	10	11	5.2	1.2	0.06	0.07	0.10
23	---	---	---	---	---	7.9	11	4.7	0.82	0.06	0.06	0.09
24	---	---	---	---	---	7.5	7.8	4.8	0.48	0.06	0.07	0.08
25	---	---	---	---	---	7.3	6.2	6.6	0.33	0.06	0.06	0.08
26	---	---	---	---	---	7.2	5.6	9.6	0.25	0.05	0.06	0.08
27	---	---	---	---	---	7.0	5.7	9.1	0.20	0.05	0.06	0.08
28	---	---	---	---	---	6.8	6.1	7.2	0.18	0.06	1.7	0.09
29	---	---	---	---	---	6.6	7.0	5.0	0.15	0.07	2.9	0.08
30	---	---	---	---	---	6.5	6.4	4.2	0.15	0.07	0.69	0.08
31	---	---	---	---	---	6.2	---	3.8	---	0.07	0.28	---
MEAN	---	---	---	---	---	7.871	6.700	7.771	2.978	0.079	0.238	0.104
MAX	---	---	---	---	---	16	11	25	19	0.13	2.9	0.18
MIN	---	---	---	---	---	6.2	5.2	3.8	0.15	0.05	0.06	0.08
AC-FT	---	---	---	---	---	484	399	478	177	4.9	15	6.2

06869950 MULBERRY CREEK NEAR SALINA, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2002 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	---	---	---	---	---	7.871	6.700	7.771	2.978	0.079	0.238	0.104
MAX	---	---	---	---	---	7.87	6.70	7.77	2.98	0.079	0.24	0.10
(WY)	---	---	---	---	---	2002	2002	2002	2002	2002	2002	2002
MIN	---	---	---	---	---	7.87	6.70	7.77	2.98	0.079	0.24	0.10
(WY)	---	---	---	---	---	2002	2002	2002	2002	2002	2002	2002

e Estimated



06870200 SMOKY HILL RIVER AT NEW CAMBRIA, KS

LOCATION.--Lat 38°51'49", long 97°28'58", in NE $^{1}/_{4}$ NE $^{1}/_{4}$ SE $^{1}/_{4}$ sec.1, T.14 S., R.2 W., Saline County, Hydrologic Unit 10260008, on left bank at downstream side of county highway bridge, 1.0 mi southeast of New Cambria, 10.1 mi upstream from Gypsum Creek, about 18.1 mi upstream from Solomon River, and at mile 86.6.

DRAINAGE AREA.--11,730 mi^2, approximately.

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

GAGE.--Water-stage recorder. Datum of gage is 1,160.19 ft above NGVD of 1929. Prior to Mar. 27, 1963, nonrecording gage and Mar. 27, 1963, to July 5, 1977, water-stage recorder at site 2.7 mi downstream at datum 2.23 ft lower.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Natural flow moderately regulated since 1948 by Kanopolis Lake (station 06865000), 97.7 mi upstream, and slightly regulated since 1964 by Wilson Lake (station 06868100) and by numerous diversions upstream from station. Satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	674	280	223	e280	e155	e160	190	192	167	116	63	64
2	661	267	222	e270	e165	e145	184	186	166	117	56	57
3	598	262	222	e260	e170	e140	184	180	163	117	50	50
4	447	261	224	265	175	e160	186	175	161	112	41	50
5	416	257	227	242	181	201	183	175	159	107	39	47
6	389	255	221	242	194	222	182	177	156	e101	36	45
7	365	255	217	236	195	241	182	187	155	e98	34	46
8	351	247	216	234	190	238	190	216	152	e96	33	46
9	343	247	216	212	189	233	205	317	149	e93	31	46
10	334	248	213	244	255	224	202	227	146	90	35	47
11	329	246	211	249	344	206	201	195	143	86	45	48
12	326	242	211	250	331	211	198	200	147	83	52	51
13	329	242	217	248	332	204	196	365	467	82	67	60
14	324	241	214	244	326	205	190	318	316	74	72	65
15	332	241	226	236	320	206	181	287	222	70	77	69
16	336	239	421	230	321	202	172	239	232	68	80	71
17	417	241	473	237	321	199	173	234	237	66	84	74
18	449	238	479	227	319	201	174	212	345	64	114	74
19	449	232	478	232	319	219	178	265	244	62	106	68
20	449	230	476	226	319	216	418	243	218	56	107	70
21	432	229	475	229	318	214	407	208	209	52	105	65
22	367	228	468	241	315	213	820	191	219	47	93	62
23	320	229	464	237	300	207	389	183	185	42	83	56
24	307	229	459	232	243	201	265	191	161	44	79	54
25	300	228	440	215	200	199	221	215	151	47	80	52
26	295	226	e420	191	185	195	204	191	143	43	81	50
27	295	224	e380	184	e160	195	203	197	137	38	75	52
28	293	221	e360	179	e165	197	204	193	131	42	74	56
29	287	221	e350	177	---	193	209	182	125	64	74	56
30	291	222	e320	e170	---	191	195	176	119	60	71	52
31	294	---	e300	e165	---	188	---	171	---	58	65	---
MEAN	380.6	240.9	324.0	228.5	250.2	200.8	236.2	215.7	190.8	74.03	67.81	56.77
MAX	674	280	479	280	344	241	820	365	467	117	114	74
MIN	287	221	211	165	155	140	172	171	119	38	31	45
AC-FT	23400	14340	19920	14050	13900	12350	14060	13270	11360	4550	4170	3380

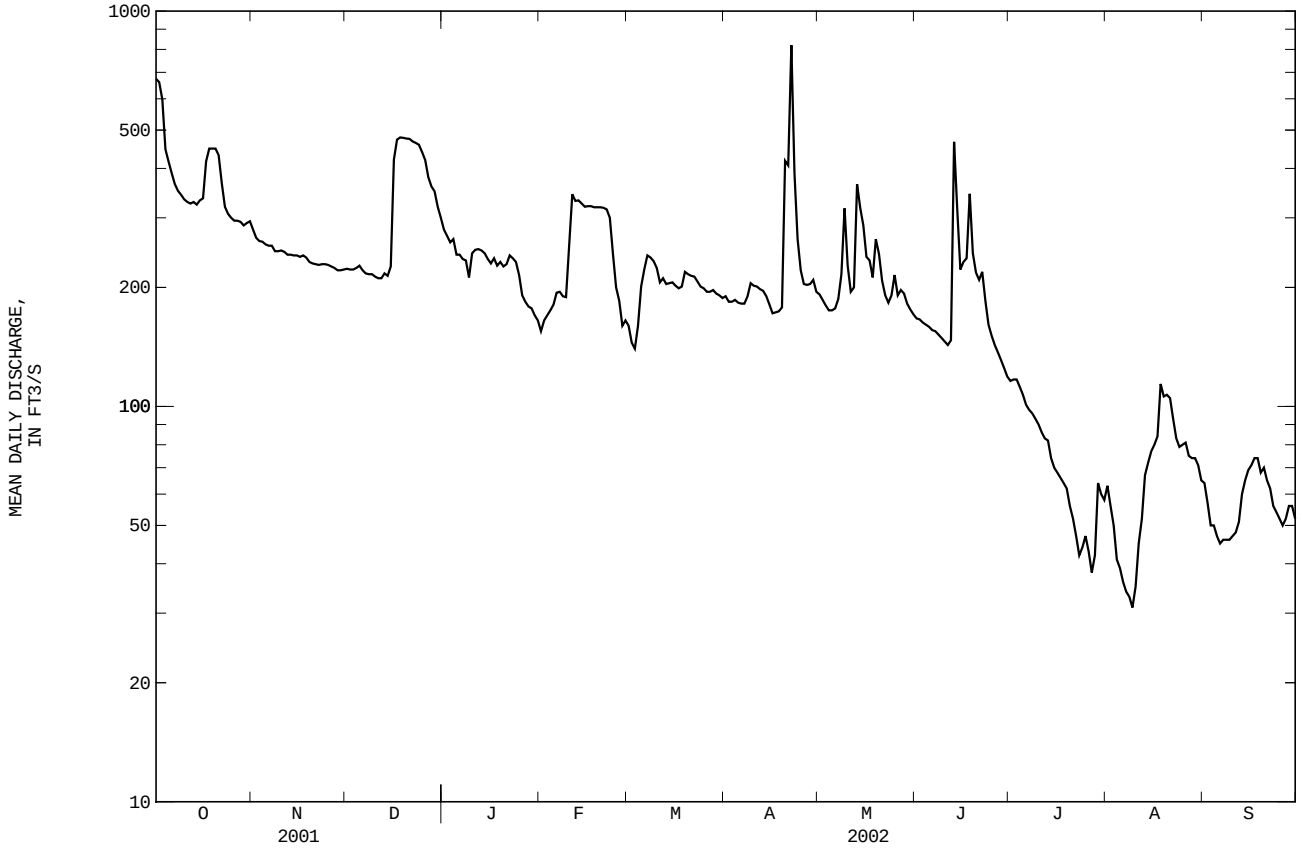
06870200 SMOKY HILL RIVER AT NEW CAMBRIA, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	504.6	403.5	367.6	283.3	444.3	691.6	854.7	1054	1135	1021	716.4	614.4
MAX	6168	3087	3293	2071	2850	4789	6506	5331	5360	12190	5796	4601
(WY)	1974	1974	1974	1994	1993	1973	1973	1995	1995	1993	1993	1993
MIN	23.2	43.1	40.8	40.0	35.8	40.6	47.2	47.6	117	52.5	51.7	56.8
(WY)	1992	1992	1992	1992	1992	1992	1992	1992	1988	1968	1991	2002

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1963 - 2002	
ANNUAL MEAN	708.7		205.4		675.1	
HIGHEST ANNUAL MEAN					3609	1993
LOWEST ANNUAL MEAN					117	1989
HIGHEST DAILY MEAN	5300	Feb 25	820	Apr 22	25000	Oct 12 1973
LOWEST DAILY MEAN	70	Jan 1	31	Aug 9	13	Oct 18 1991
ANNUAL SEVEN-DAY MINIMUM	89	Feb 5	36	Aug 4	14	Oct 18 1991
MAXIMUM PEAK FLOW			982	Apr 22	26400	Oct 12 1973
MAXIMUM PEAK STAGE			9.15	Apr 22	31.72	Jun 25 1993
INSTANTANEOUS LOW FLOW			30	Aug 9	11	Oct 22 1991
ANNUAL RUNOFF (AC-FT)	513100		148700		489100	
10 PERCENT EXCEEDS	1670		343		1820	
50 PERCENT EXCEEDS	377		202		224	
90 PERCENT EXCEEDS	163		56		71	

e Estimated



06870300 GYPSUM CREEK NEAR GYPSUM, KS

LOCATION.--Lat 38°39'11", long 97°25'10", in SE $^1/_4$ SE $^1/_4$ SW $^1/_4$ sec.15, T.16 S., R.1 W., Saline County, Hydrologic Unit 10260008, on left bank at downstream side of highway bridge, 2.6 mi upstream from Stag Creek, 3.5 mi south of Gypsum, and at mile 22.7.

DRAINAGE AREA.--117 mi^2.

PERIOD OF RECORD.--October 1954 to September 1971. October 1971 to September 1990, flood hydrograph record. May 2000 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,232.16 ft above NGVD of 1929. Prior to July 21, 1959, nonrecording and crest-stage gages at same site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, 11,400 ft^3/s June 26, 1965, (gage height 20.71 ft). Maximum stage known since at least 1869, 22.2 ft May 29, 1903; flood in April 1929 reached a swtage of 21.9 ft, and that of July 11, 1951, a stage of 21.7 ft, from floodmark; information from newspapers and local residents.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 650 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Apr 19	0945	988	15.07	Jun 12	1330	1,670	17.22
Apr 21	0800	*1,840	*17.46				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.1	6.9	7.3	e5.5	e4.0	e5.0	6.6	28	11	5.8	0.49	0.00
2	3.0	5.8	7.5	e5.3	e5.0	e4.0	6.5	25	8.9	5.8	0.21	0.00
3	2.8	5.4	7.7	e5.2	e6.5	e3.0	5.8	23	7.7	5.0	0.19	0.00
4	2.7	5.9	8.1	e5.3	e7.0	e5.0	5.6	21	6.9	4.5	0.15	0.00
5	7.0	6.5	8.4	e6.0	e7.2	11	5.8	20	8.3	4.7	0.13	0.00
6	12	7.2	8.0	e7.0	e7.3	13	6.1	19	9.2	4.5	0.14	0.00
7	6.3	7.4	7.2	e9.0	e7.6	10	6.5	52	8.1	4.1	0.14	0.00
8	4.7	6.5	6.7	9.2	e8.0	9.1	8.0	93	6.9	3.9	0.14	0.00
9	4.1	6.1	6.6	11	e8.8	9.4	14	50	6.2	3.5	0.18	0.00
10	4.1	6.1	6.8	12	e10	12	11	27	5.8	3.1	0.42	0.00
11	3.7	6.3	6.9	11	e12	9.7	9.0	24	7.1	3.0	0.32	0.00
12	3.7	6.5	7.3	12	13	8.4	7.7	185	876	2.9	0.38	0.00
13	3.9	7.4	8.5	10	9.8	8.0	7.0	73	157	2.7	0.59	0.0
14	3.8	7.6	9.2	9.2	10	7.8	7.2	35	73	2.4	1.5	0.04
15	4.2	7.7	8.3	8.5	9.6	7.3	7.2	25	47	1.6	1.1	0.0
16	6.2	7.6	8.1	8.7	9.0	6.6	7.1	42	95	1.4	0.64	0.54
17	6.6	6.7	7.6	7.8	8.7	6.8	6.5	55	50	1.0	0.60	0.36
18	5.1	6.7	7.6	6.5	8.6	7.2	10	52	29	1.4	0.68	0.22
19	4.5	6.8	7.5	8.1	9.0	7.8	434	26	24	1.1	0.80	0.17
20	4.2	6.1	7.3	9.0	8.8	8.8	143	21	19	0.85	0.65	0.23
21	4.4	6.2	7.3	12	8.3	8.0	968	19	16	0.70	0.61	0.21
22	4.8	6.7	7.9	10	7.8	6.4	138	17	14	0.85	0.55	0.19
23	5.2	7.0	7.2	8.7	8.0	7.0	71	16	12	0.45	0.45	0.13
24	5.4	7.3	5.3	7.4	8.3	7.3	51	17	11	0.38	0.36	0.02
25	5.0	7.1	e5.4	6.4	7.6	7.6	39	35	9.7	0.36	0.43	0.00
26	4.6	6.9	e5.6	8.1	5.4	6.8	36	21	9.1	0.34	0.45	0.00
27	4.8	6.4	e5.9	7.7	e4.0	7.1	63	17	8.4	0.28	0.27	0.00
28	5.3	6.0	e6.0	7.2	e5.0	7.4	91	15	7.9	0.36	0.18	0.00
29	6.0	5.7	e6.0	6.7	---	6.8	39	13	7.3	2.0	0.12	0.00
30	5.9	6.9	e5.8	4.1	---	6.5	31	12	6.5	1.5	0.05	0.00
31	6.1	---	e5.6	e4.0	---	6.4	---	11	---	0.59	0.00	---
MEAN	4.942	6.647	7.116	8.019	8.011	7.652	74.72	35.13	51.93	2.292	0.417	0.070
MAX	12	7.7	9.2	12	13	13	968	185	876	5.8	1.5	0.54
MIN	2.7	5.4	5.3	4.0	4.0	3.0	5.6	11	5.8	0.28	0.00	0.00
AC-FT	304	396	438	493	445	470	4450	2160	3090	141	26	4.2

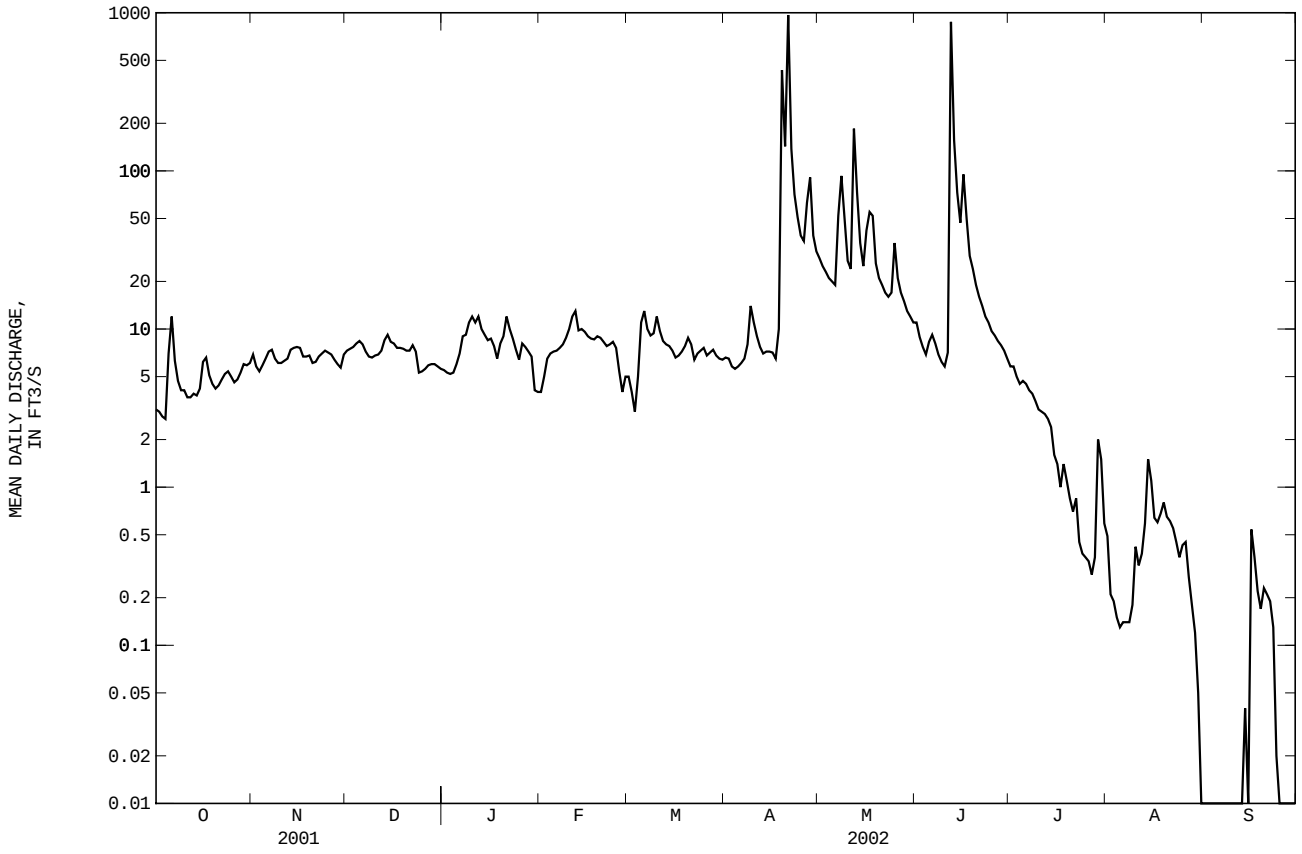
06870300 GYPSUM CREEK NEAR GYPSUM, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1955 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	14.48	8.600	8.177	12.09	17.33	30.28	36.97	58.16	62.72	23.87	5.509	24.85
MAX	89.3	30.8	25.0	58.9	57.1	123	145	359	331	101	22.3	237
(WY)	1968	1968	1968	1962	2001	1960	1969	1969	1965	1969	2001	1967
MIN	0.000	0.000	0.000	0.000	0.000	0.016	0.12	1.42	0.050	0.000	0.000	0.000
(WY)	1955	1955	1956	1957	1957	1956	1956	1955	1956	1956	1955	1956

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1955 - 2002	
ANNUAL TOTAL	9489.14		6257.99			
ANNUAL MEAN	26.00		17.15		25.64	
HIGHEST ANNUAL MEAN					73.3	1969
LOWEST ANNUAL MEAN					0.26	1956
HIGHEST DAILY MEAN	802	Mar 15	968	Apr 21	3500	Jun 26 1965
LOWEST DAILY MEAN	0.45	Aug 21	0.00	Aug 31	0.00	Oct 1 1954
ANNUAL SEVEN-DAY MINIMUM	0.68	Aug 16	0.00	Aug 31	0.00	Oct 1 1954
MAXIMUM PEAK FLOW			1840	Apr 21	11400	Jun 26 1965
MAXIMUM PEAK STAGE			17.46	Apr 21	20.71	Jun 26 1965
INSTANTANEOUS LOW FLOW			0.00	Aug 30	.00	at times
ANNUAL RUNOFF (AC-FT)	18820		12410		18580	
10 PERCENT EXCEEDS	36		23		35	
50 PERCENT EXCEEDS	8.3		6.7		7.1	
90 PERCENT EXCEEDS	2.7		0.20		0.00	

e Estimated



06871000 NORTH FORK SOLOMON RIVER AT GLADE, KS

LOCATION.--Lat 39°40'40", long 99°18'30", in NW $^1/_4$ SW $^1/_4$ sec.25, T.4 S., R.18 W., Phillips County, Hydrologic Unit 10260011, on left bank at downstream side of bridge on U.S. Highway 183, 0.5 mi south of Glade.

DRAINAGE AREA.--849 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is 1,754.04 ft above NGVD of 1929. Prior to Feb. 17, 1965, at datum 2.00 ft higher.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Natural flow affected by ground-water withdrawals, diversions for irrigation, and return flow from irrigated areas. Satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 26	0500	*28	*3.66	No peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.2	5.7	7.0	e6.6	e8.4	e13	15	15	4.2	0.00	0.00	0.00
2	4.6	5.7	11	e7.0	e8.4	e15	15	15	3.4	0.00	0.00	0.00
3	3.9	6.2	13	e8.0	e9.0	16	14	15	2.6	0.00	0.00	0.00
4	3.9	6.3	14	e9.2	e9.9	e17	15	15	3.3	0.00	0.00	0.00
5	4.0	6.7	12	e9.6	e10	e18	15	15	3.2	0.00	0.00	0.00
6	4.0	6.8	10	e11	e11	e18	16	15	2.6	0.00	0.00	0.00
7	4.1	6.7	11	e11	e11	e18	16	14	1.9	0.00	0.00	0.00
8	4.0	6.5	11	e12	e11	e18	17	14	1.6	0.00	0.00	0.00
9	4.1	6.5	e10	e12	e11	e18	16	12	1.3	0.00	0.00	0.00
10	4.9	7.0	e10	e12	e12	e19	17	9.9	1.0	0.00	0.00	0.00
11	4.2	7.0	10	e11	e12	e20	16	10	0.79	0.00	0.00	0.00
12	4.9	7.6	9.9	e11	e12	21	15	11	0.72	0.00	0.00	0.00
13	5.9	8.0	e9.8	e10	e13	19	16	11	0.81	0.00	0.00	0.00
14	5.6	8.1	e9.6	e10	e13	18	15	11	0.52	0.00	0.00	0.00
15	6.6	7.7	e9.4	e9.6	e14	17	15	10	1.1	0.00	0.00	0.00
16	4.7	7.5	e9.5	e8.7	e15	16	16	9.8	2.0	0.00	0.00	0.00
17	5.4	7.5	e9.6	e8.0	18	15	14	10	1.1	0.00	0.00	0.00
18	10	7.5	e9.6	e7.4	18	15	12	9.5	0.52	0.00	0.00	0.00
19	8.8	6.3	e9.4	e7.5	17	15	14	8.9	0.12	0.00	0.00	0.00
20	7.1	6.6	e9.0	e7.8	16	15	14	8.9	0.0	0.00	0.00	0.00
21	5.9	7.4	e8.0	e8.1	15	14	15	8.7	0.00	0.00	0.00	0.00
22	5.5	7.5	e7.0	e8.3	14	e15	14	7.8	0.00	0.00	0.00	0.00
23	5.3	8.7	e6.2	e8.7	14	15	14	6.8	0.00	0.00	0.00	0.00
24	5.9	9.8	5.8	e9.0	14	14	14	8.7	0.00	0.00	0.00	0.00
25	5.7	9.4	6.5	e9.3	14	19	12	9.9	0.00	0.00	0.00	0.00
26	4.6	9.4	6.5	e9.6	e13	21	12	8.5	0.00	0.00	0.00	0.00
27	5.0	7.0	e6.4	e9.6	e12	16	15	8.2	0.00	0.00	0.00	0.00
28	5.5	4.5	e6.4	e9.4	12	16	12	7.8	0.00	0.00	0.00	0.00
29	5.3	4.1	e6.4	e9.0	---	15	13	7.2	0.00	0.00	0.00	0.00
30	5.4	5.3	e6.4	e8.6	---	15	14	6.1	0.00	0.00	0.00	0.00
31	5.9	---	e6.4	e8.4	---	14	---	5.2	---	0.00	0.00	---
MEAN	5.352	7.033	8.929	9.271	12.78	16.61	14.60	10.48	1.093	0.000	0.000	0.000
MAX	10	9.8	14	12	18	21	17	15	4.2	0.00	0.00	0.00
MIN	3.9	4.1	5.8	6.6	8.4	13	12	5.2	0.00	0.00	0.00	0.00
AC-FT	329	419	549	570	709	1020	869	644	65	0.00	0.00	0.00

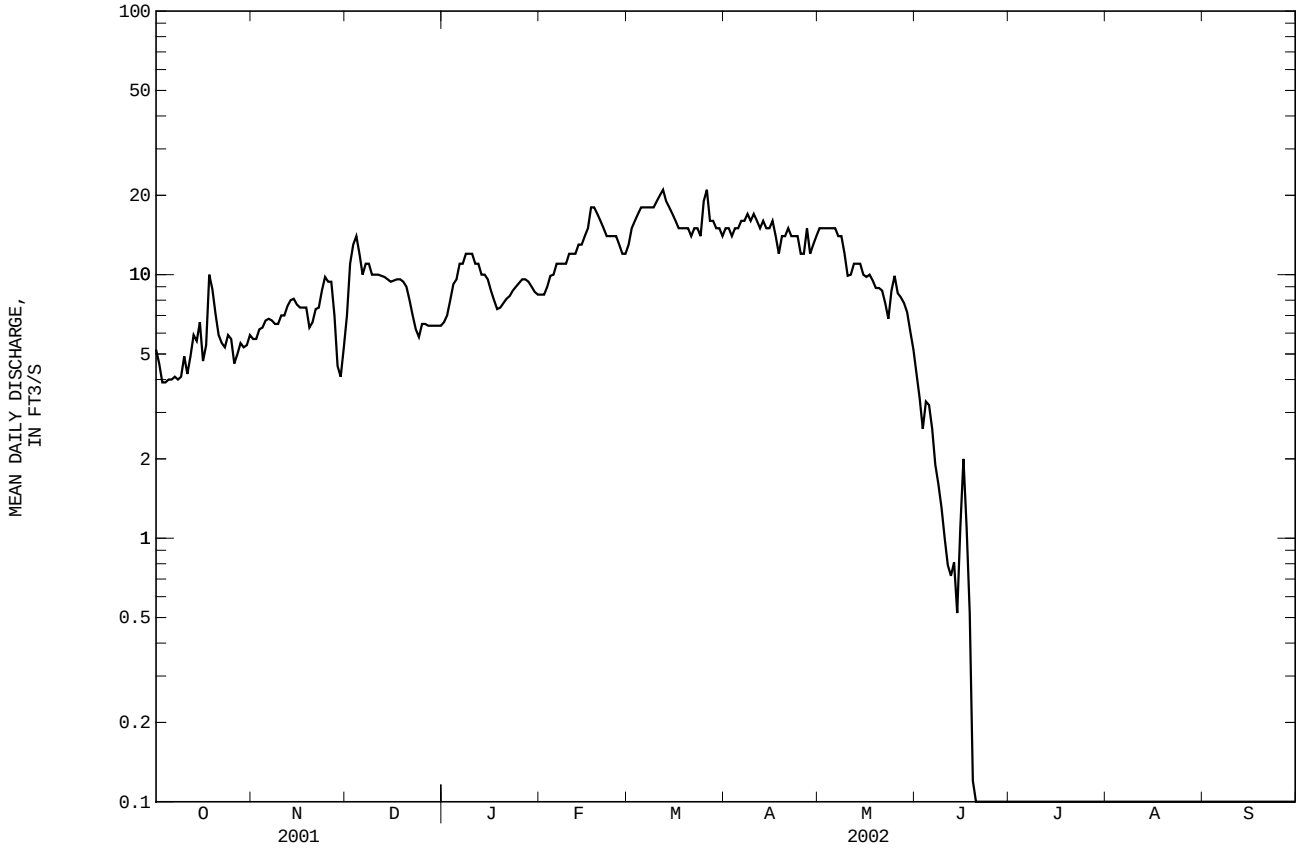
06871000 NORTH FORK SOLOMON RIVER AT GLADE, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1953 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	13.18	8.932	9.100	10.35	18.45	27.98	25.19	53.94	70.14	40.08	30.84	17.45
MAX	318	60.6	59.5	66.8	105	250	98.7	512	1011	182	315	249
(WY)	1966	1994	1994	1994	1966	1960	1987	1995	1957	1957	1968	1965
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.94	0.28	0.000	0.000	0.000
(WY)	1959	1965	1956	1957	1957	1981	1981	1992	1991	1980	1956	1956

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1953 - 2002	
ANNUAL MEAN	15.30		7.149		27.17	
HIGHEST ANNUAL MEAN					124	1957
LOWEST ANNUAL MEAN					1.26	1991
HIGHEST DAILY MEAN	228	May 6	21	Mar 12	10900	Jun 16 1957
LOWEST DAILY MEAN	0.02	Sep 14	0.00	Jun 20	0.00	Sep 25 1953
ANNUAL SEVEN-DAY MINIMUM	0.32	Sep 1	0.00	Jun 20	0.00	Sep 25 1953
MAXIMUM PEAK FLOW			28	Mar 26	23300	Jun 16 1957
MAXIMUM PEAK STAGE			3.66	Mar 26	18.55	Jun 16 1957
INSTANTANEOUS LOW FLOW			0.00	Jun 19	.00	at times
ANNUAL RUNOFF (AC-FT)	11080		5180		19680	
10 PERCENT EXCEEDS	32		15		46	
50 PERCENT EXCEEDS	9.2		7.0		8.3	
90 PERCENT EXCEEDS	2.0		0.00		0.00	

e Estimated



06871500 BOW CREEK NEAR STOCKTON, KS

LOCATION.--Lat 39°33'46", long 99°17'04", in SW $^1/_4$ NW $^1/_4$ sec.1, T.6 S., R.18 W., Rooks County, Hydrologic Unit 10260011, on left bank at downstream side of bridge on U.S. Highway 183, 8.5 mi north of Stockton.

DRAINAGE AREA.--341 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is 1,801.80 ft above NGVD of 1929. Prior to June 28, 1951, nonrecording gage at same site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Natural flow affected by ground-water withdrawals, diversions for irrigation, and return flow from irrigated areas. Satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 600 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct 10	0400	*30	*3.85	No peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.1	4.9	6.8	e6.2	e6.2	e6.0	7.5	8.2	2.9	0.27	0.13	0.12
2	2.8	4.9	6.6	e6.0	e6.2	e5.7	7.3	8.1	2.5	0.31	0.15	0.10
3	2.4	5.0	6.5	e6.0	e6.2	e5.8	7.1	8.1	2.3	0.35	0.17	0.10
4	2.5	5.1	6.4	e6.2	e6.2	e6.4	7.2	8.2	3.0	0.32	0.11	0.09
5	2.6	5.1	6.3	e6.7	e6.2	e7.6	7.2	7.7	2.9	0.28	0.10	0.07
6	2.6	5.2	6.4	6.7	e6.6	e7.8	7.5	7.9	2.6	0.28	0.09	0.07
7	2.7	5.3	6.2	e7.2	e7.9	e7.8	7.8	7.6	2.2	0.26	0.09	0.06
8	2.7	5.3	6.2	e8.3	e8.1	e7.7	9.2	7.6	1.9	0.24	0.11	0.06
9	2.8	5.5	6.2	e7.9	e8.4	e7.8	8.4	7.3	1.6	0.24	0.56	0.09
10	6.3	5.5	6.3	e7.4	e7.9	e8.1	8.3	7.2	1.6	0.21	0.32	0.15
11	2.6	5.7	6.4	e7.4	e7.8	e8.6	8.4	7.3	1.4	0.21	0.24	0.17
12	2.7	5.8	6.5	e8.0	e7.8	8.8	8.2	7.1	1.7	0.26	0.23	0.16
13	2.9	5.9	6.5	8.2	e7.9	8.1	8.7	7.0	2.4	0.28	0.59	0.39
14	2.8	6.0	6.5	7.8	e7.8	7.6	8.4	6.8	1.9	0.23	0.29	0.33
15	3.5	6.0	6.4	e7.1	e7.6	7.2	8.3	6.6	2.9	0.22	0.22	0.26
16	3.0	6.1	6.8	e6.4	e7.4	7.0	8.2	6.5	3.2	0.19	0.23	0.23
17	3.1	6.0	6.7	e6.1	7.4	7.0	7.9	6.5	2.5	0.18	0.25	0.19
18	3.0	6.1	6.8	e6.3	7.4	7.3	7.9	6.1	2.0	0.21	0.34	0.17
19	3.2	6.0	6.9	e7.2	7.3	7.2	7.7	6.1	1.6	0.18	0.42	0.21
20	3.3	6.0	6.8	e7.6	7.2	7.2	7.7	6.0	1.5	0.15	0.32	0.23
21	3.5	6.1	6.8	e7.8	7.0	7.0	7.8	5.7	1.3	0.14	0.30	0.18
22	3.8	6.2	6.9	e8.0	7.0	7.2	7.9	5.5	1.2	0.35	0.26	0.20
23	3.8	6.7	8.7	8.2	7.2	7.2	8.0	5.1	0.94	0.23	0.24	0.21
24	3.6	7.0	e8.5	e8.4	7.1	7.4	8.0	5.6	0.78	0.22	0.24	0.22
25	3.6	6.8	e8.1	e8.2	7.3	8.0	7.8	5.6	0.67	0.17	0.24	0.16
26	3.9	6.4	e7.7	e8.0	e7.4	e7.6	7.9	5.4	0.73	0.17	0.24	0.22
27	4.0	e6.4	7.5	e7.3	e7.4	e7.6	8.3	5.1	0.63	0.21	0.24	0.31
28	4.2	e6.4	e7.3	e6.7	e7.3	e7.7	8.1	4.7	0.51	0.22	0.18	0.28
29	4.4	e6.6	e7.1	e6.4	---	7.9	8.1	4.2	0.38	0.27	0.15	0.23
30	4.6	6.8	e6.9	e6.2	---	7.5	8.2	3.8	0.29	0.17	0.16	0.17
31	4.8	---	e6.6	e6.2	---	7.4	---	3.3	---	0.13	0.16	---
MEAN	3.381	5.893	6.848	7.165	7.257	7.394	7.967	6.384	1.734	0.231	0.238	0.181
MAX	6.3	7.0	8.7	8.4	8.4	8.8	9.2	8.2	3.2	0.35	0.59	0.39
MIN	2.4	4.9	6.2	6.0	6.2	5.7	7.1	3.3	0.29	0.13	0.09	0.06
AC-FT	208	351	421	441	403	455	474	393	103	14	15	11

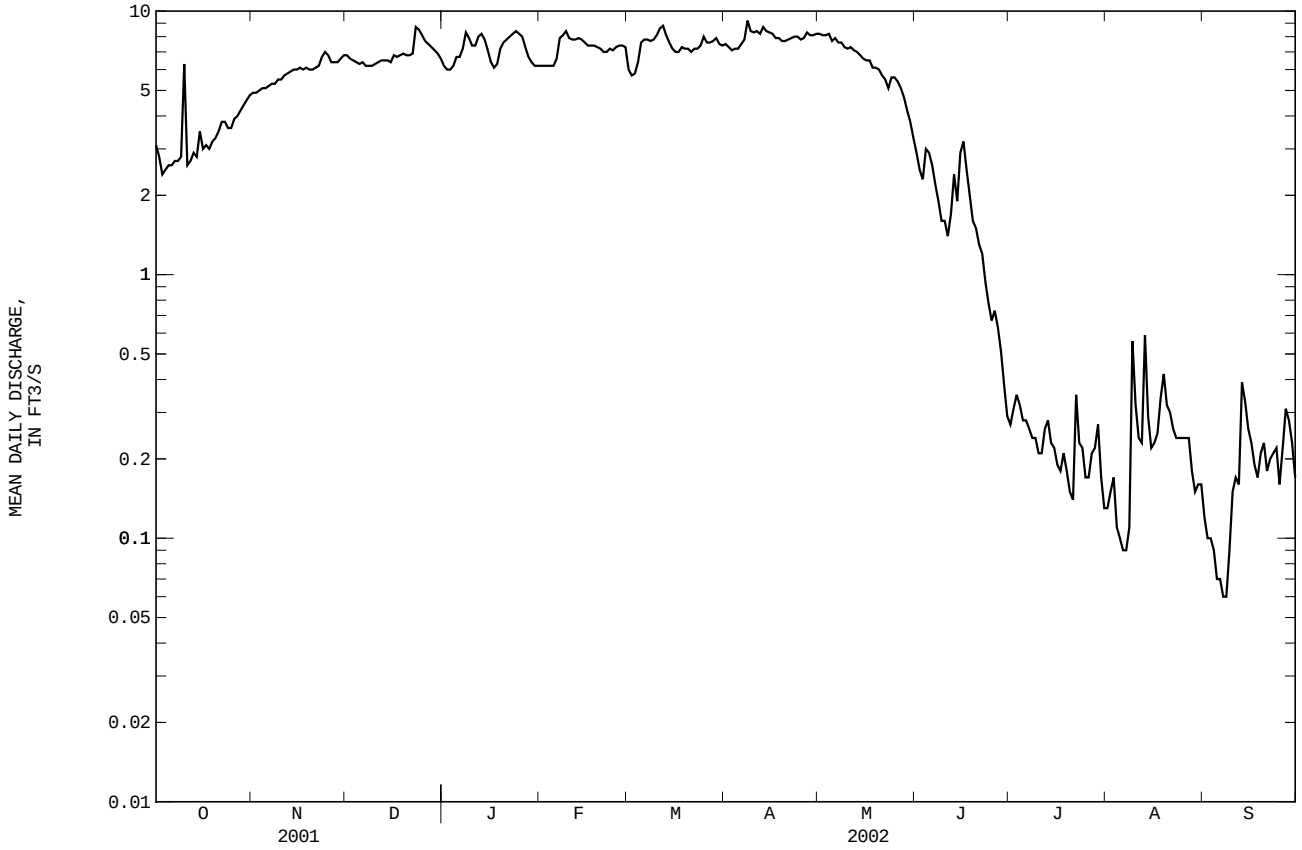
06871500 BOW CREEK NEAR STOCKTON, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1952 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	7.450	5.536	5.521	5.939	9.726	12.40	12.60	27.37	30.59	22.03	13.78	8.112
MAX	98.5	25.8	22.7	22.0	57.6	91.2	68.8	247	321	300	145	66.6
(WY)	1966	1994	1994	1994	1966	1960	1987	1995	1957	1993	1968	1965
MIN	0.000	0.000	0.000	0.000	0.22	1.68	3.98	2.41	0.37	0.000	0.000	0.000
(WY)	1957	1957	1957	1957	1957	1957	1982	1955	1991	1991	1964	1956

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1952 - 2002	
ANNUAL MEAN	8.880		4.540		13.44	
HIGHEST ANNUAL MEAN					45.5	1993
LOWEST ANNUAL MEAN					1.73	1981
HIGHEST DAILY MEAN	50	May 5	9.2	Apr 8	3810	May 27 1995
LOWEST DAILY MEAN	1.1	Aug 21	0.06	Sep 7	0.00	Sep 15 1953
ANNUAL SEVEN-DAY MINIMUM	1.4	Aug 16	0.08	Sep 3	0.00	Sep 15 1953
MAXIMUM PEAK FLOW			30	Oct 10	12900	Jul 12 1951
MAXIMUM PEAK STAGE			3.85	Oct 10	13.60	Jul 12 1951
INSTANTANEOUS LOW FLOW			0.02	Aug 5	.00	at times
ANNUAL RUNOFF (AC-FT)	6430		3290		9740	
10 PERCENT EXCEEDS	15		8.0		18	
50 PERCENT EXCEEDS	6.8		6.0		5.6	
90 PERCENT EXCEEDS	2.6		0.19		0.43	

e Estimated



06871700 KIRWIN RESERVOIR AT KIRWIN, KS

LOCATION.--Lat 39°39'49", long 99°07'29", in SE $^{1}/_{4}$ NE $^{1}/_{4}$ sec.33, T.4 S., R.16 W., Phillips County, Hydrologic Unit 10260011, in control house structure at outlet works of Kirwin Dam on North Fork Solomon River, 0.5 mi south of Kirwin, 1.6 mi upstream from Deer Creek, and at mile 67.8.

DRAINAGE AREA.--1,367 mi^2.

PERIOD OF RECORD.--September 1955 to September 2002 (discontinued). Monthly records only prior to October 1956.

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929 (levels by Bureau of Reclamation). Prior to Aug. 7, 1957, nonrecording gage at same site and datum.

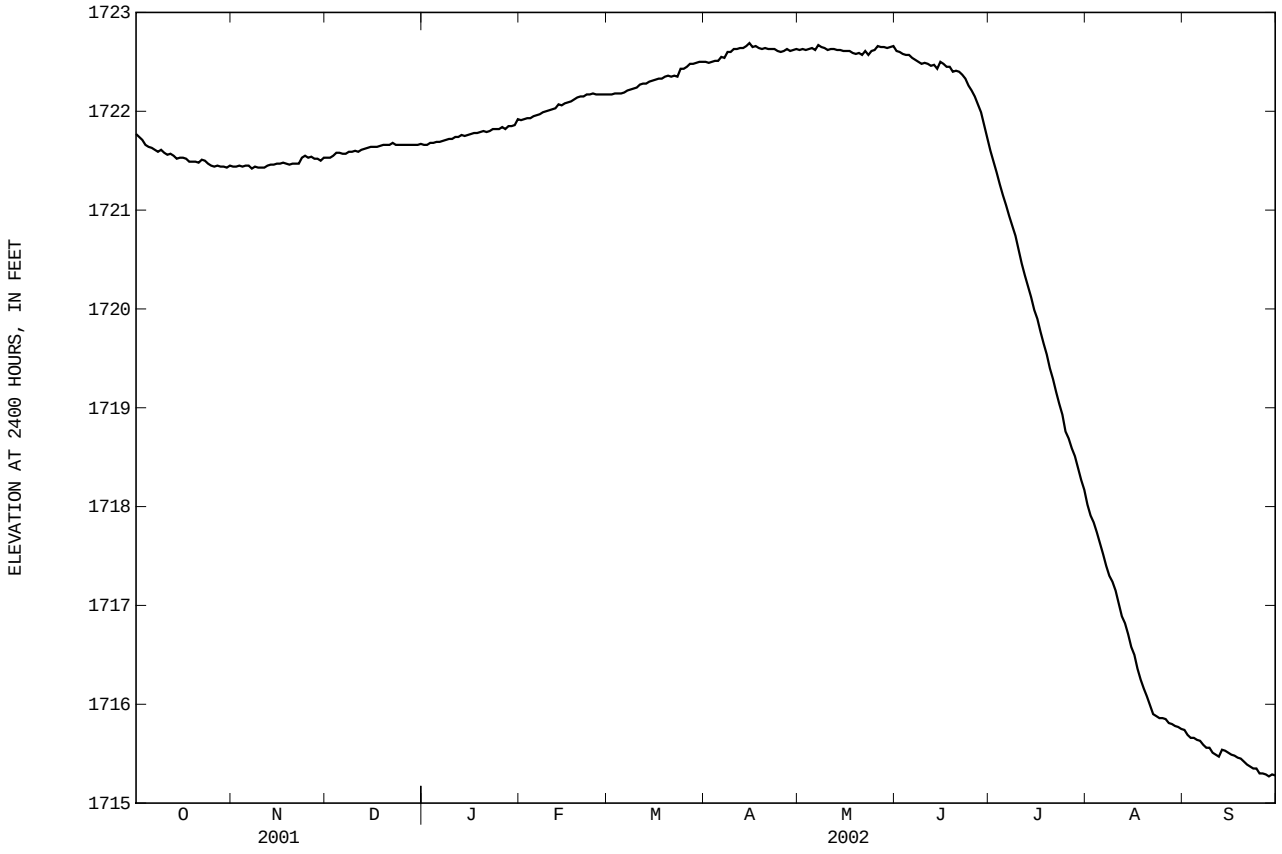
REMARKS.--Reservoir is formed by compacted earthfill dam. Storage began Sept. 19, 1955. Total capacity, 512,000 acre-ft, consisting of the following: Dead storage, 6,400 acre-ft below elevation 1,693.0 ft, sill of trashrack structure; irrigation pool, 93,300 acre-ft between elevations 1,693.0 ft and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

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 1,737.06 ft June 1-3, 1995, contents, 144,600 acre-ft; minimum elevation since first filling of irrigation pool, 1,695.46 ft Feb. 10-14, 1981, contents, 8,330 acre-ft.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 1,722.75 Apr. 16, contents, 68,500 acre-ft; minimum elevation, 1,715.27 ft Sept. 29, contents, 41,760 acre-ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey made in May 1996 by Bureau of Reclamation)

1,714	37,940	1,720	57,910
1,716	44,070	1,722	65,520
1,718	50,770	1,724	73,720



06871700 KIRWIN RESERVOIR AT KIRWIN, KS--Continued

ELEVATION, in FT (NGVD), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1721.77	1721.44	1721.53	1721.66	1721.91	1722.17	1722.50	1722.62	1722.61	1721.60	1718.02	1715.74
2	1721.74	1721.44	1721.53	1721.66	1721.92	1722.17	1722.49	1722.63	1722.60	1721.49	1717.91	1715.69
3	1721.71	1721.45	1721.55	1721.68	1721.93	1722.18	1722.50	1722.62	1722.58	1721.38	1717.84	1715.66
4	1721.66	1721.44	1721.58	1721.68	1721.93	1722.18	1722.51	1722.63	1722.57	1721.26	1717.74	1715.66
5	1721.64	1721.45	1721.58	1721.69	1721.95	1722.18	1722.51	1722.64	1722.57	1721.15	1717.63	1715.64
6	1721.63	1721.45	1721.57	1721.69	1721.96	1722.19	1722.55	1722.62	1722.54	1721.05	1717.52	1715.63
7	1721.61	1721.42	1721.57	1721.70	1721.97	1722.21	1722.54	1722.67	1722.52	1720.94	1717.40	1715.59
8	1721.59	1721.44	1721.59	1721.71	1721.99	1722.22	1722.60	1722.65	1722.50	1720.84	1717.30	1715.56
9	1721.61	1721.43	1721.59	1721.72	1722.00	1722.23	1722.60	1722.64	1722.48	1720.74	1717.24	1715.56
10	1721.58	1721.43	1721.60	1721.72	1722.01	1722.24	1722.63	1722.62	1722.49	1720.60	1717.15	1715.51
11	1721.56	1721.43	1721.59	1721.74	1722.02	1722.27	1722.63	1722.63	1722.48	1720.46	1717.02	1715.49
12	1721.57	1721.45	1721.61	1721.74	1722.03	1722.28	1722.64	1722.63	1722.46	1720.34	1716.89	1715.47
13	1721.55	1721.46	1721.62	1721.76	1722.07	1722.28	1722.64	1722.62	1722.47	1720.23	1716.82	1715.54
14	1721.52	1721.46	1721.63	1721.75	1722.06	1722.30	1722.66	1722.62	1722.43	1720.12	1716.71	1715.53
15	1721.53	1721.47	1721.64	1721.76	1722.08	1722.31	1722.69	1722.61	1722.50	1719.99	1716.58	1715.51
16	1721.53	1721.47	1721.64	1721.77	1722.09	1722.32	1722.65	1722.61	1722.48	1719.90	1716.50	1715.49
17	1721.52	1721.48	1721.64	1721.78	1722.10	1722.33	1722.66	1722.61	1722.45	1719.77	1716.36	1715.48
18	1721.49	1721.47	1721.65	1721.78	1722.12	1722.33	1722.64	1722.59	1722.45	1719.65	1716.25	1715.46
19	1721.49	1721.46	1721.66	1721.79	1722.14	1722.35	1722.63	1722.58	1722.40	1719.54	1716.16	1715.45
20	1721.49	1721.47	1721.66	1721.80	1722.15	1722.36	1722.64	1722.59	1722.41	1719.40	1716.08	1715.42
21	1721.48	1721.47	1721.66	1721.79	1722.15	1722.35	1722.63	1722.57	1722.40	1719.29	1715.99	1715.39
22	1721.51	1721.47	1721.68	1721.80	1722.17	1722.36	1722.63	1722.61	1722.37	1719.16	1715.90	1715.37
23	1721.50	1721.53	1721.66	1721.82	1722.17	1722.35	1722.63	1722.57	1722.33	1719.04	1715.88	1715.35
24	1721.47	1721.55	1721.66	1721.82	1722.18	1722.43	1722.61	1722.61	1722.26	1718.93	1715.86	1715.35
25	1721.45	1721.53	1721.66	1721.82	1722.17	1722.43	1722.60	1722.62	1722.21	1718.76	1715.86	1715.30
26	1721.44	1721.54	1721.66	1721.84	1722.17	1722.45	1722.61	1722.66	1722.15	1718.69	1715.85	1715.30
27	1721.45	1721.52	1721.66	1721.82	1722.17	1722.48	1722.63	1722.65	1722.07	1718.59	1715.81	1715.29
28	1721.44	1721.52	1721.66	1721.85	1722.17	1722.48	1722.61	1722.65	1721.99	1718.51	1715.80	1715.27
29	1721.44	1721.50	1721.66	1721.85	---	1722.49	1722.62	1722.64	1721.86	1718.39	1715.78	1715.29
30	1721.43	1721.53	1721.66	1721.86	---	1722.50	1722.63	1722.65	1721.73	1718.27	1715.77	1715.28
31	1721.45	---	1721.67	1721.92	---	1722.50	---	1722.66	---	1718.17	1715.75	---
MEAN	1721.54	1721.47	1721.62	1721.77	1722.06	1722.32	1722.60	1722.62	1722.38	1719.88	1716.62	1715.48
MAX	1721.77	1721.55	1721.68	1721.92	1722.18	1722.50	1722.69	1722.67	1722.61	1721.60	1718.02	1715.74
MIN	1721.43	1721.42	1721.53	1721.66	1721.91	1722.17	1722.49	1722.57	1721.73	1718.17	1715.75	1715.27
(+)	63,360	63,670	64,220	65,200	66,190	67,510	68,030	68,160	64,450	51,370	43,270	41,790
(#)	-1,250	+310	+550	+980	+990	+1,320	+520	+130	-3,710	-13,080	-8,100	-1,480

CAL YR 2001 ..... (#) -10,520
WTR YR 2002 ..... (#) -22,820

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

06871800 NORTH FORK SOLOMON RIVER AT KIRWIN, KS

LOCATION.--Lat 39°39'36", long 99°06'55", in two channels, in SE $^1/_4$ sec.33 (river outlet gage on right bank) and SW $^1/_4$ sec.34 (spillway gage on left bank), T.4 S., R.16 W., Phillips County, Hydrologic Unit 10260012, 200 ft and 600 ft, respectively, downstream from toe of Kirwin Dam, 0.5 mi and 0.8 mi, respectively, south of Kirwin, 1.3 mi upstream from Deer Creek, and at mile 67.2.

DRAINAGE AREA.--1,367 mi^2.

PERIOD OF RECORD.--August 1919 to June 1925, August 1928 to June 1932, December 1941 to September 2002 (discontinued).

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

GAGE.--Water-stage recorder and concrete control on river outlet channel. Datum of river outlet gage is 1,659.50 ft above NGVD of 1929 (Bureau of Reclamation bench mark). Water-stage recorder on spillway channel. Datum of spillway channel gage is 1,650.81 ft above NGVD of 1929 (Bureau of Reclamation bench mark). See WSP 1919 for history of changes prior to Jan. 30, 1957.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Flow completely regulated since 1955 by Kirwin Reservoir (station 06871700), 0.6 mi upstream. Figures of flow do not include diversion immediately upstream from station into Kirwin Main Canal. Separate records are collected and computed for a river outlet channel and for a spillway channel. Figures given herein represent combined discharge.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in June 1915 reached a stage of about 27 ft, site and datum in use prior to July 1955, from information by local residents.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e0.06	e0.04	e0.02	e0.00	e0.00	e0.00	e0.00	e0.00	e0.01	0.01	0.10	0.11
2	e0.06	e0.04	e0.02	e0.00	e0.00	e0.00	e0.00	e0.00	e0.01	0.04	0.11	0.10
3	e0.06	e0.03	e0.02	e0.00	e0.00	e0.00	e0.00	e0.00	e0.01	0.03	0.12	0.09
4	e0.06	e0.03	e0.02	e0.00	e0.00	e0.00	e0.00	e0.00	e0.01	0.03	0.11	0.08
5	e0.06	e0.03	e0.02	e0.00	e0.00	e0.00	e0.00	e0.00	e0.01	0.04	0.12	0.07
6	e0.05	e0.03	e0.02	e0.00	e0.00	e0.00	e0.00	e0.00	e0.01	0.03	0.12	0.07
7	e0.05	e0.03	e0.02	e0.00	e0.00	e0.00	e0.00	e0.00	0.00	0.04	0.12	0.06
8	e0.05	e0.03	e0.02	e0.00	e0.00	e0.00	e0.00	e0.00	0.00	0.05	0.13	0.05
9	e0.05	e0.03	e0.02	e0.00	e0.00	e0.00	e0.00	e0.00	0.00	0.04	0.13	0.05
10	e0.05	e0.03	e0.02	e0.00	e0.00	e0.00	e0.00	e0.00	0.00	0.06	0.12	0.05
11	e0.05	e0.03	e0.02	e0.00	e0.00	e0.00	e0.00	e0.00	0.00	0.06	0.12	0.05
12	e0.05	e0.03	e0.02	e0.00	e0.00	e0.00	e0.00	e0.00	0.00	0.06	0.13	0.05
13	e0.05	e0.03	e0.02	e0.00	e0.00	e0.00	e0.00	e0.00	0.0	0.07	0.14	0.06
14	e0.05	e0.03	e0.02	e0.00	e0.00	e0.00	e0.00	e0.00	0.00	0.07	0.15	0.05
15	e0.05	e0.03	e0.02	e0.00	e0.00	e0.00	e0.00	e0.00	0.01	0.08	0.15	0.04
16	e0.05	e0.03	e0.02	e0.00	e0.00	e0.00	e0.00	e0.00	0.00	0.08	0.16	0.04
17	e0.05	e0.03	e0.02	e0.00	e0.00	e0.00	e0.00	e0.07	0.00	0.08	0.16	0.04
18	e0.05	e0.03	e0.02	e0.00	e0.00	e0.00	e0.00	e0.01	0.00	0.09	0.16	0.03
19	e0.04	e0.03	e0.02	e0.00	e0.00	e0.00	e0.00	e0.01	0.00	0.11	0.16	0.03
20	e0.04	e0.03	e0.02	e0.00	e0.00	e0.00	e0.00	e0.01	0.00	0.10	0.16	0.03
21	e0.04	e0.03	e0.02	e0.00	e0.00	e0.00	e0.00	e0.01	0.00	0.12	0.16	0.02
22	e0.04	e0.03	e0.02	e0.00	e0.00	e0.00	e0.00	e0.01	0.00	0.12	0.20	0.03
23	e0.04	e0.02	e0.01	e0.00	e0.00	e0.00	e0.00	e0.01	0.00	0.12	1.7	0.02
24	e0.04	e0.02	e0.00	e0.00	e0.00	e0.00	e0.00	e0.01	0.01	0.14	0.19	0.02
25	e0.04	e0.02	e0.00	e0.00	e0.00	e0.00	e0.00	e0.01	0.00	0.13	0.16	0.01
26	e0.04	e0.02	e0.00	e0.00	e0.00	e0.00	e0.00	e0.01	0.00	0.11	0.14	0.02
27	e0.04	e0.02	e0.00	e0.00	e0.00	e0.00	e0.00	e0.01	0.00	0.10	0.13	0.02
28	e0.04	e0.02	e0.00	e0.00	e0.00	e0.00	e0.00	e0.01	0.00	0.11	0.13	0.02
29	e0.04	e0.02	e0.00	e0.00	---	e0.00	e0.00	e0.01	0.00	0.10	0.12	0.01
30	e0.04	e0.02	e0.00	e0.00	---	e0.00	e0.00	e0.01	0.00	0.10	0.12	0.01
31	e0.04	---	e0.00	e0.00	---	e0.00	---	e0.01	---	0.10	0.10	---
MEAN	0.047	0.028	0.015	0.000	0.000	0.000	0.000	0.007	0.003	0.078	0.188	0.044
MAX	0.06	0.04	0.02	0.00	0.00	0.00	0.00	0.07	0.01	0.14	1.7	0.11
MIN	0.04	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.10	0.01
AC-FT	2.9	1.7	0.9	0.00	0.00	0.00	0.00	0.4	0.2	4.8	12	2.6

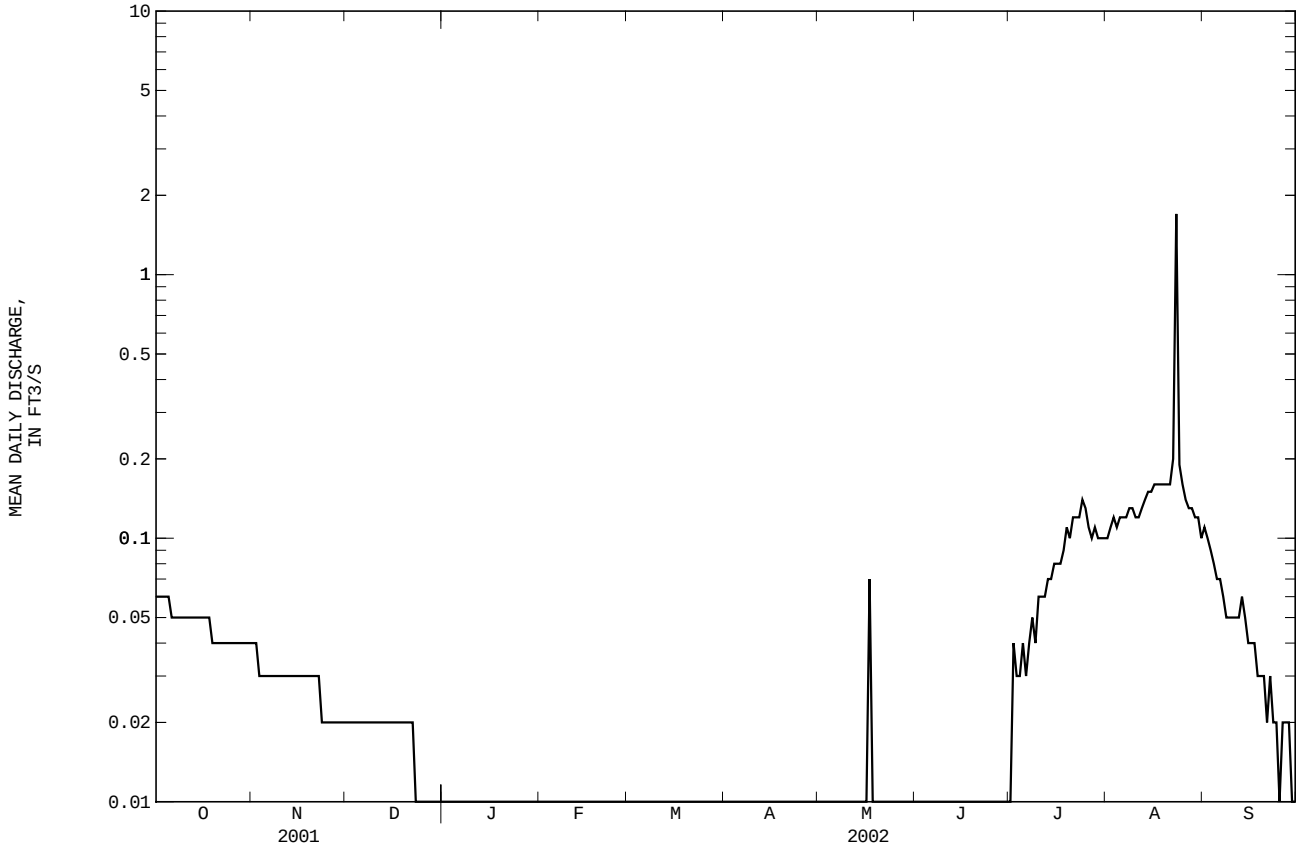
06871800 NORTH FORK SOLOMON RIVER AT KIRWIN, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1920 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	22.53	13.37	10.76	12.19	19.34	18.70	28.09	43.99	95.54	76.22	42.37	20.05
MAX	467	124	106	217	221	215	195	378	1393	1809	1036	525
(WY)	1947	1966	1994	1994	1994	1994	1944	1954	1951	1951	1950	1951
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1983	1956	1956	1956	1956	1956	1985	1957	1979	1981	1985	1984

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1920 - 2002	
ANNUAL MEAN	0.040		0.035		32.39	
HIGHEST ANNUAL MEAN					385	1951
LOWEST ANNUAL MEAN					0.000	1985
HIGHEST DAILY MEAN	0.74	Mar 28	1.7	Aug 23	12000	Jul 12 1951
LOWEST DAILY MEAN	0.00	Jan 15	0.00	Dec 24	0.00	Jul 6 1924
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 19	0.00	Dec 24	0.00	Sep 17 1943
MAXIMUM PEAK FLOW			12	Aug 23	24000	Sep 18 1919
MAXIMUM PEAK STAGE			2.88	Aug 23	22.50	Sep 18 1919
INSTANTANEOUS LOW FLOW			0.00	Jun 6	.00	at times
ANNUAL RUNOFF (AC-FT)	29		25		23470	
10 PERCENT EXCEEDS	0.09		0.11		52	
50 PERCENT EXCEEDS	0.02		0.01		0.10	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

e Estimated



06872500 NORTH FORK SOLOMON RIVER AT PORTIS, KS

LOCATION.--Lat 39°33'15", long 98°41'31", in SW $^{1}/_{4}$ SW $^{1}/_{4}$ SW $^{1}/_{4}$ sec.5, T.6 S., R.12 W., Osborne County, Hydrologic Unit 10260012, on left bank at downstream side of bridge on U.S. Highway 281, 0.5 mi south of Portis, and at mile 27.0.

DRAINAGE AREA.--2,315 mi^2, 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 above NGVD of 1929. Prior to Dec. 5, 1946, nonrecording gage and Dec. 5, 1946, to Sept. 30, 1964, water-stage recorder at site 9.0 mi downstream at datum 30.39 ft lower.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow partially regulated since 1955 by Kirwin Reservoir (station 06871700), 40.8 mi upstream. Natural flow also affected by ground-water withdrawals, diversions for irrigation, and return flow from irrigated areas. Satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 15, 1915, reached a stage about 1.0 ft higher than that of July 12, 1951, from information by Kansas Highway Commission.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	32	37	e38	e40	e43	46	41	53	13	16	9.4
2	26	33	33	e39	e40	e42	43	42	47	16	14	7.7
3	25	33	33	e43	e40	e44	41	42	41	15	11	9.1
4	24	33	34	e46	e41	e46	40	41	38	13	11	10
5	23	33	35	48	e41	e47	40	40	38	15	12	8.7
6	23	34	35	47	e41	e47	40	40	37	15	10	8.5
7	24	34	36	e47	e43	e46	41	39	35	16	15	12
8	25	35	35	e46	e44	e45	45	39	34	14	14	10
9	25	35	35	46	e44	44	46	38	32	11	13	11
10	25	34	35	45	e45	51	44	38	31	10	16	11
11	24	35	35	e43	e46	49	43	39	31	8.9	15	10
12	25	35	35	42	e47	48	42	37	30	10	15	11
13	28	36	e35	e42	47	47	42	37	32	11	28	16
14	26	36	35	e42	47	e46	42	37	29	10	30	16
15	29	36	35	42	49	e44	41	35	29	13	25	14
16	28	36	35	e42	49	e43	42	35	70	11	20	15
17	28	37	36	e42	49	e43	41	36	100	7.7	29	14
18	29	36	35	e43	51	e44	40	34	58	6.9	30	14
19	28	36	e34	43	52	46	39	34	43	5.3	27	14
20	30	35	e34	e43	52	46	39	33	31	8.4	22	14
21	29	35	34	43	51	45	39	32	30	9.2	15	14
22	30	35	35	43	51	44	40	32	24	13	17	13
23	30	36	35	42	50	44	40	60	18	19	18	12
24	28	39	e35	41	49	44	38	138	15	21	14	12
25	27	39	e35	e41	48	46	38	102	16	15	12	12
26	26	40	e36	e41	41	46	39	69	19	17	12	12
27	27	38	e36	e41	e42	46	41	181	29	19	9.7	13
28	29	38	e37	e41	e44	48	41	534	27	18	9.3	14
29	30	38	e37	41	---	48	40	203	15	31	9.3	14
30	31	e37	e38	e40	---	48	41	92	16	24	8.8	14
31	31	---	e38	e40	---	47	---	65	---	18	8.5	---
MEAN	27.06	35.63	35.26	42.68	45.86	45.71	41.13	73.06	34.93	14.01	16.34	12.18
MAX	31	40	38	48	52	51	46	534	100	31	30	16
MIN	23	32	33	38	40	42	38	32	15	5.3	8.5	7.7
AC-FT	1660	2120	2170	2620	2550	2810	2450	4490	2080	862	1000	725

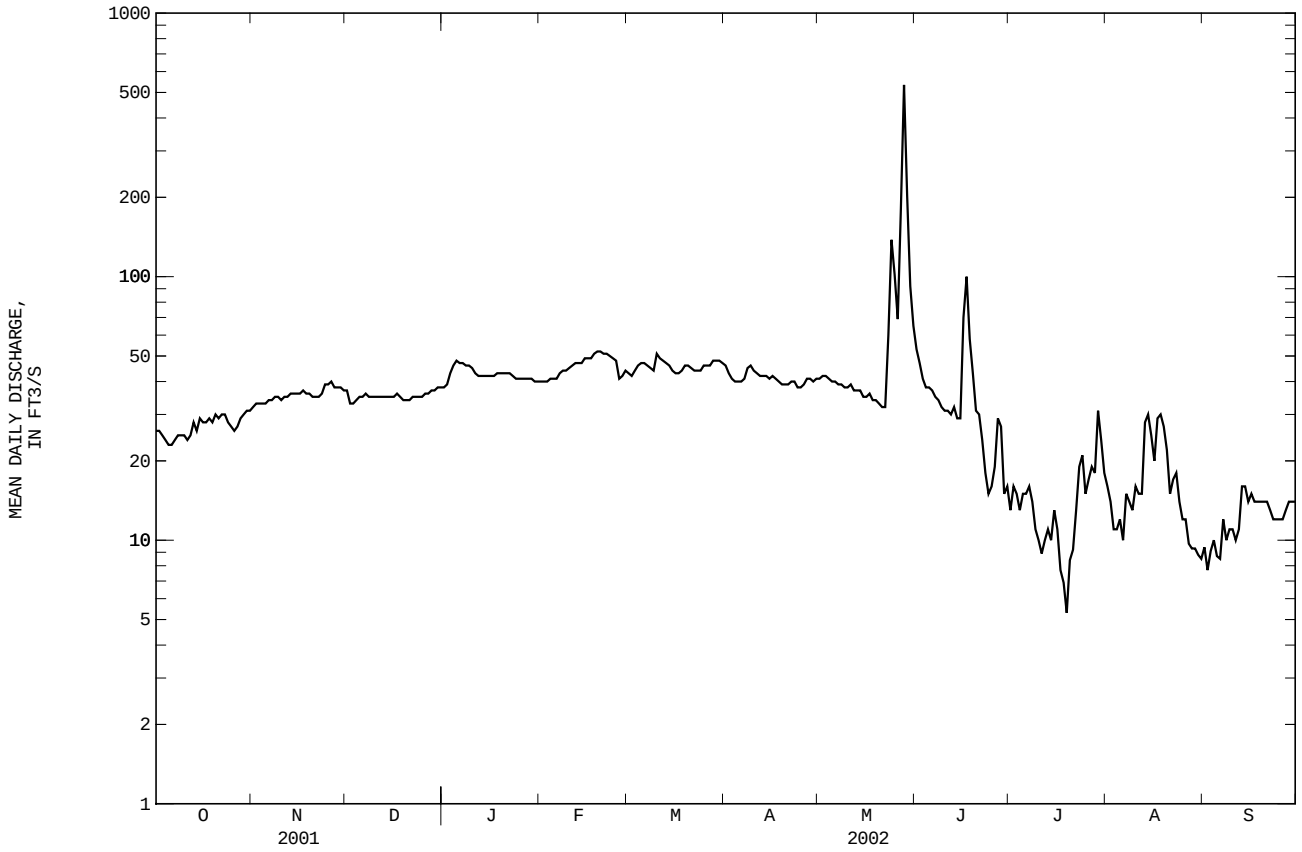
06872500 NORTH FORK SOLOMON RIVER AT PORTIS, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	71.73	48.87	40.19	45.61	81.99	106.6	88.96	180.7	313.1	240.7	145.7	100.0
MAX	686	475	314	399	688	1043	498	1416	3516	4031	2247	758
(WY)	1947	1997	1994	1994	1949	1993	1987	1995	1951	1951	1950	1951
MIN	0.65	1.44	2.08	2.19	6.29	9.53	6.81	2.25	10.8	4.03	1.39	0.29
(WY)	1957	1957	1957	1957	1957	1956	1956	1956	1991	1991	1956	1956

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1946 - 2002	
ANNUAL MEAN	87.34		35.28		122.1	
HIGHEST ANNUAL MEAN					855	1951
LOWEST ANNUAL MEAN					21.7	1991
HIGHEST DAILY MEAN	3330	May 30	534	May 28	32300	Jul 12 1951
LOWEST DAILY MEAN	23	Oct 5	5.3	Jul 19	0.00	Aug 25 1956
ANNUAL SEVEN-DAY MINIMUM	24	Oct 3	8.8	Jul 15	0.07	Aug 23 1956
MAXIMUM PEAK FLOW			653	May 28	35700	Jul 12 1951
MAXIMUM PEAK STAGE			7.73	May 28	30.41	Jul 12 1951
INSTANTANEOUS LOW FLOW			4.1	Jul 19	.00	at times
ANNUAL RUNOFF (AC-FT)	63230		25540		88480	
10 PERCENT EXCEEDS	137		47		180	
50 PERCENT EXCEEDS	41		35		34	
90 PERCENT EXCEEDS	29		12		11	

e Estimated



06873000 SOUTH FORK SOLOMON RIVER ABOVE WEBSTER RESERVOIR, KS

LOCATION.--Lat 39°22'26", long 99°34'54", in SW $^1/_4$ NW $^1/_4$ sec.8, T.8 S., R.20 W., Rooks County, Hydrologic Unit 10260013, on right bank 0.4 mi downstream from county highway bridge, 4.0 mi north of Damar, 7 mi downstream from Wild Horse Creek, and 11 mi upstream from Webster Dam.

DRAINAGE AREA.--1,040 mi^2, approximately.

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

REVISED RECORDS.--WSP 1440: 1945-48, 1950.

GAGE.--Water-stage recorders. Datum of gage is 1,936.51 ft above NGVD of 1929 (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 downstream at datum 94.52 ft lower. Oct. 1, 1951, to May 22, 1952, nonrecording gage at bridge near Stockton, 23 mi downstream, at different datum. May 23, 1952, to May 23, 1954, water-stage recorder at site 8.0 mi downstream at datum 94.52 ft lower. Since July 30, 1980, supplementary water-stage recorder at site 0.4 mi downstream at datum 3.00 ft lower. Satellite telemeter at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Natural flow affected by ground-water withdrawals, diversions for irrigation, and return flow from irrigated areas. Satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1908, 13.4 ft June 1908, present site and datum, discharge not determined, from information obtained from Kansas Highway Commission.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,200 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct 10	0030	*99	*3.56	No peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	16	21	e23	e28	e25	28	20	7.0	0.0	0.00	0.00
2	10	16	20	e21	e28	e26	27	19	5.9	0.0	0.00	0.00
3	9.2	16	21	e23	e28	e28	24	19	5.1	0.0	0.00	0.00
4	8.9	16	21	e25	e28	e29	24	19	6.5	0.0	0.00	0.00
5	8.7	17	20	e27	e28	e30	26	20	5.9	0.0	0.00	0.00
6	9.0	17	20	e27	e28	e31	25	20	4.9	0.0	0.00	0.00
7	8.7	17	20	e26	e28	e32	24	19	3.3	0.0	0.00	0.00
8	8.5	17	20	e26	e28	32	29	18	2.1	0.0	0.00	0.00
9	9.8	17	20	e27	e29	e31	28	16	1.3	0.0	0.00	0.00
10	24	17	20	27	e29	28	28	17	0.82	0.0	0.00	0.00
11	9.7	18	20	27	e29	31	26	18	0.56	0.0	0.00	0.00
12	10	18	20	26	e30	28	25	17	0.49	0.0	0.00	0.00
13	11	18	21	28	31	28	24	17	4.3	0.0	0.00	0.00
14	12	18	21	28	31	28	26	16	3.5	0.0	0.00	0.00
15	12	18	23	27	30	26	25	14	4.8	0.0	0.00	0.00
16	12	18	23	27	29	25	24	14	4.8	0.0	0.00	0.00
17	12	18	22	26	29	25	24	14	4.0	0.00	0.00	0.00
18	12	18	22	26	30	25	24	13	2.7	0.0	0.00	0.00
19	12	18	22	28	30	25	22	13	1.5	0.00	0.00	0.00
20	12	18	22	26	29	26	23	14	1.2	0.00	0.00	0.00
21	12	18	22	26	28	25	23	12	0.73	0.00	0.00	0.00
22	13	19	23	29	28	25	22	11	0.29	0.00	0.00	0.00
23	13	20	22	29	29	25	22	9.9	0.14	0.00	0.00	0.00
24	13	22	19	27	29	27	22	13	0.01	0.00	0.00	0.00
25	13	22	e18	26	27	27	20	15	0.0	0.00	0.00	0.00
26	13	22	e21	28	e26	29	21	15	0.0	0.00	0.00	0.00
27	13	20	e23	28	e26	31	23	13	0.0	0.00	0.00	0.00
28	14	17	e25	27	e25	33	23	11	0.0	0.00	0.00	0.00
29	14	29	e24	28	---	31	22	10	0.0	0.00	0.00	0.00
30	15	25	e24	e29	---	29	22	9.5	0.0	0.00	0.00	0.00
31	16	---	e24	e28	---	27	---	8.4	---	0.00	0.00	---
MEAN	11.95	18.67	21.42	26.65	28.50	28.00	24.20	14.99	2.395	0.000	0.000	0.000
MAX	24	29	25	29	31	33	29	20	7.0	0.00	0.00	0.00
MIN	8.5	16	18	21	25	25	20	8.4	0.00	0.00	0.00	0.00
AC-FT	735	1110	1320	1640	1580	1720	1440	922	142	0.00	0.00	0.00

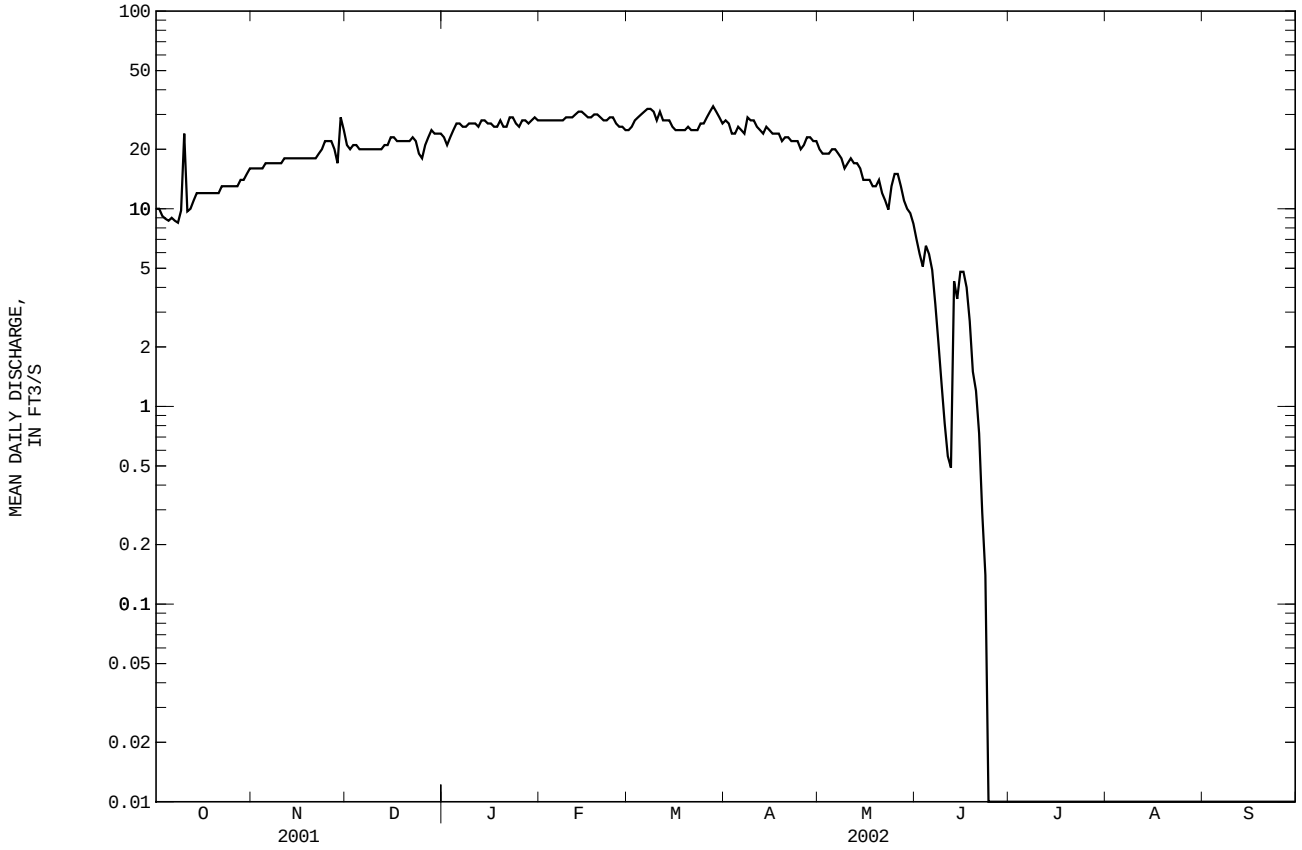
06873000 SOUTH FORK SOLOMON RIVER ABOVE WEBSTER RESERVOIR, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	34.76	16.36	15.73	17.78	33.13	42.47	46.14	84.15	123.4	121.4	62.83	32.71
MAX	1003	124	84.4	77.1	219	314	174	724	1767	2561	1029	385
(WY)	1947	1947	1994	1994	1949	1960	1998	1995	1951	1951	1950	1951
MIN	0.000	0.000	0.000	0.000	0.023	0.67	0.28	0.065	0.48	0.000	0.000	0.000
(WY)	1946	1946	1982	1982	1992	1982	1989	1989	1992	1966	1946	1947

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1946 - 2002	
ANNUAL MEAN	32.74		14.66		52.69	
HIGHEST ANNUAL MEAN					487	1951
LOWEST ANNUAL MEAN					1.59	1991
HIGHEST DAILY MEAN	1430	May 30	33	Mar 28	35000	Jul 12 1951
LOWEST DAILY MEAN	0.00	Sep 1	0.00	Jun 25	0.00	Oct 1 1945
ANNUAL SEVEN-DAY MINIMUM	0.00	Sep 1	0.00	Jun 25	0.00	Oct 1 1945
MAXIMUM PEAK FLOW			99	Oct 10	55200	Jul 12 1951
MAXIMUM PEAK STAGE			3.56	Oct 10	14.90	Jul 12 1951
INSTANTANEOUS LOW FLOW			0.00	Jun 22	.00	most years
ANNUAL RUNOFF (AC-FT)	23700		10610		38170	
10 PERCENT EXCEEDS	51		28		76	
50 PERCENT EXCEEDS	20		17		14	
90 PERCENT EXCEEDS	2.3		0.00		0.03	

e Estimated



06873100 WEBSTER RESERVOIR NEAR STOCKTON, KS

LOCATION.--Lat 39°23'29", long 99°25'33", in SW $^{1}/_{4}$ NW $^{1}/_{4}$ NE $^{1}/_{4}$ sec.3, T.8 S., R.19 W., Rooks County, Hydrologic Unit 10260013, on south-east shore near Webster Dam on South Fork Solomon River, 8.0 mi west of Stockton, and at mile 92.4.

DRAINAGE AREA.--1,150 mi^2.

PERIOD OF RECORD.--June 1956 to September 2002 (discontinued). Prior to October 1956, monthly records only.

REVISED RECORDS.--WDR KS-87-1: 1986.

GAGE.--Water-stage recorder. Prior to July 31, 1968, elevations below 1,873 ft from mercury-column gage near south end of dam read once daily. Datum of gage is NGVD of 1929 (levels by Bureau of Reclamation).

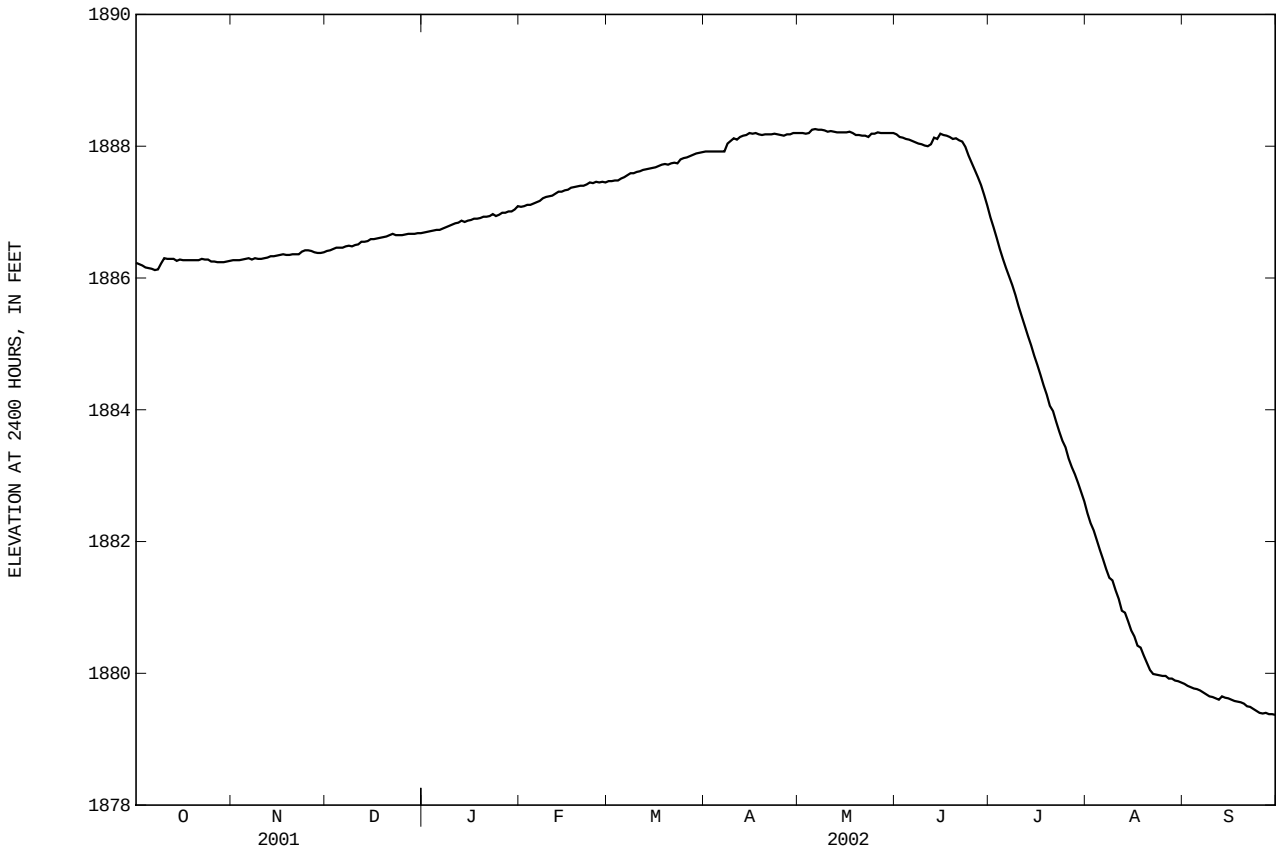
REMARKS.--Reservoir is formed by compacted earthfill dam. Storage began May 3, 1956. Total capacity, 401,600 acre-ft, consisting of the following: Dead storage, 2,184 acre-ft below elevation 1,855.5 ft, sill of trashrack; irrigation pool, 74,250 acre-ft between elevations 1,855.5 ft and 1,892.2 ft; flood-control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

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 1,907.03 ft June 5, 1995, contents, 144,600 acre-ft; minimum elevation since first filling of irrigation pool, 1,857.33 ft Oct. 23, 24, 1971, contents, 3,210 acre-ft.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 1,888.35 ft Apr. 27, contents, 61,660 acre-ft; minimum elevation, 1,879.36 ft Sept. 30, contents, 35,980 acre-ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on field survey of Bureau of Reclamation in May 1996)

1,879	35,120	1,887	57,270
1,886	54,140	1,889	63,830



06873100 WEBSTER RESERVOIR NEAR STOCKTON, KS--Continued

ELEVATION, in FT (NGVD), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1886.23	1886.27	1886.41	1886.69	1887.08	1887.47	1887.92	1888.20	1888.18	1886.92	1882.43	1879.84
2	1886.21	1886.27	1886.42	1886.70	1887.09	1887.47	1887.92	1888.20	1888.14	1886.77	1882.28	1879.81
3	1886.19	1886.27	1886.44	1886.71	1887.11	1887.48	1887.92	1888.19	1888.13	1886.61	1882.17	1879.79
4	1886.16	1886.28	1886.46	1886.72	1887.11	1887.48	1887.92	1888.20	1888.11	1886.44	1882.02	1879.77
5	1886.15	1886.29	1886.46	1886.73	1887.13	1887.51	1887.92	1888.25	1888.10	1886.29	1881.87	1879.76
6	1886.14	1886.30	1886.46	1886.73	1887.15	1887.53	1887.92	1888.26	1888.08	1886.15	1881.73	1879.74
7	1886.12	1886.28	1886.48	1886.75	1887.17	1887.56	1887.92	1888.25	1888.06	1886.02	1881.58	1879.71
8	1886.13	1886.30	1886.49	1886.77	1887.21	1887.59	1888.04	1888.25	1888.04	1885.89	1881.45	1879.68
9	1886.22	1886.29	1886.48	1886.79	1887.23	1887.59	1888.08	1888.24	1888.03	1885.74	1881.41	1879.65
10	1886.30	1886.29	1886.50	1886.81	1887.24	1887.61	1888.12	1888.22	1888.01	1885.57	1881.26	1879.64
11	1886.29	1886.30	1886.51	1886.83	1887.25	1887.62	1888.10	1888.23	1888.00	1885.42	1881.13	1879.62
12	1886.29	1886.31	1886.55	1886.84	1887.28	1887.64	1888.14	1888.22	1888.03	1885.27	1880.95	1879.60
13	1886.29	1886.33	1886.55	1886.87	1887.31	1887.65	1888.16	1888.21	1888.13	1885.12	1880.92	1879.65
14	1886.26	1886.33	1886.56	1886.85	1887.31	1887.66	1888.17	1888.21	1888.11	1884.98	1880.79	1879.63
15	1886.28	1886.34	1886.59	1886.87	1887.33	1887.67	1888.20	1888.21	1888.19	1884.82	1880.65	1879.62
16	1886.27	1886.35	1886.59	1886.88	1887.34	1887.68	1888.19	1888.21	1888.17	1884.68	1880.56	1879.60
17	1886.27	1886.36	1886.60	1886.90	1887.37	1887.70	1888.20	1888.22	1888.16	1884.53	1880.42	1879.58
18	1886.27	1886.35	1886.61	1886.90	1887.38	1887.72	1888.18	1888.20	1888.14	1884.37	1880.39	1879.57
19	1886.27	1886.35	1886.62	1886.91	1887.39	1887.73	1888.17	1888.17	1888.11	1884.23	1880.27	1879.56
20	1886.27	1886.36	1886.63	1886.93	1887.40	1887.72	1888.18	1888.17	1888.12	1884.06	1880.16	1879.54
21	1886.27	1886.36	1886.65	1886.93	1887.40	1887.74	1888.18	1888.16	1888.09	1883.98	1880.05	1879.50
22	1886.29	1886.36	1886.67	1886.94	1887.42	1887.75	1888.18	1888.16	1888.07	1883.82	1879.99	1879.49
23	1886.28	1886.40	1886.65	1886.97	1887.45	1887.74	1888.19	1888.14	1887.99	1883.67	1879.98	1879.46
24	1886.28	1886.42	1886.65	1886.94	1887.44	1887.80	1888.18	1888.19	1887.86	1883.53	1879.97	1879.43
25	1886.25	1886.42	1886.65	1886.96	1887.46	1887.82	1888.17	1888.19	1887.75	1883.43	1879.96	1879.40
26	1886.25	1886.41	1886.66	1886.99	1887.45	1887.83	1888.16	1888.21	1887.64	1883.26	1879.96	1879.39
27	1886.24	1886.39	1886.67	1886.99	1887.46	1887.85	1888.18	1888.20	1887.53	1883.13	1879.92	1879.40
28	1886.24	1886.38	1886.67	1887.01	1887.45	1887.87	1888.18	1888.20	1887.41	1883.02	1879.92	1879.38
29	1886.24	1886.38	1886.67	1887.01	---	1887.89	1888.20	1888.20	1887.26	1882.89	1879.89	1879.38
30	1886.25	1886.39	1886.68	1887.04	---	1887.90	1888.20	1888.20	1887.10	1882.75	1879.88	1879.37
31	1886.26	---	1886.68	1887.09	---	1887.91	---	1888.20	---	1882.61	1879.86	---
MEAN	1886.24	1886.34	1886.57	1886.87	1887.30	1887.68	1888.11	1888.20	1887.96	1884.71	1880.77	1879.59
MAX	1886.30	1886.42	1886.68	1887.09	1887.46	1887.91	1888.20	1888.26	1888.19	1886.92	1882.43	1879.84
MIN	1886.12	1886.27	1886.41	1886.69	1887.08	1887.47	1887.92	1888.14	1887.10	1882.61	1879.86	1879.37
(+)	54,950	53,350	56,260	57,560	58,710	60,210	61,160	61,160	57,590	44,300	37,190	36,000
(#)	+30	+400	+910	+1,300	+1,150	+1,500	+950	0	-3,570	-13,290	-7,110	-1,190

CAL YR 2001 ..... (#) -410
WTR YR 2002 ..... (#) -18,920

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

06873200 SOUTH FORK SOLOMON RIVER BELOW WEBSTER RESERVOIR, KS

LOCATION.--Lat 39°24'34", long 99°24'53", in SW $^{1}/_{4}$ SW $^{1}/_{4}$ SW $^{1}/_{4}$ sec.26, T.7 S., R.19 W., Rooks County, Hydrologic Unit 10260014, on right bank 0.4 mi downstream from Webster Dam, 1.1 mi upstream from Sand Creek, 8 mi west of Stockton, and at mile 92.0.

DRAINAGE AREA.--1,150 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is 1,828.50 ft above NGVD of 1929 (Bureau of Reclamation bench mark). Prior to Apr. 9, 1963, water-stage recorders in two channels 0.2 mi upstream at different datums.

REMARKS.--Records fair. Flow completely regulated since 1956 by Webster Reservoir (station 06873100), 0.4 mi upstream.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.44	211	178	0.00
2	0.00	0.00	0.00	0.00	0.00	0.12	0.00	0.00	0.27	211	171	0.00
3	1.4	0.00	0.00	e0.00	0.00	0.17	0.00	0.00	0.19	211	157	0.00
4	0.02	0.00	0.00	e0.0	0.00	0.20	0.00	0.00	0.25	202	153	0.00
5	0.00	0.00	0.00	e0.0	0.00	0.11	0.00	0.12	0.16	190	161	0.00
6	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.11	0.07	178	163	0.00
7	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.07	0.02	173	161	0.00
8	0.00	0.00	0.00	0.00	0.00	0.08	0.09	0.07	0.00	182	168	0.00
9	0.05	0.00	0.00	0.00	0.00	0.05	0.02	0.06	0.00	186	171	0.00
10	0.39	0.00	0.00	0.00	0.00	0.05	0.01	0.08	0.00	191	167	0.00
11	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.12	0.00	192	165	0.00
12	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.09	0.00	185	161	0.00
13	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.09	0.31	180	153	0.00
14	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.07	0.05	179	146	0.00
15	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.02	0.41	183	139	0.00
16	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.04	0.39	186	125	0.00
17	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.18	0.37	183	116	0.00
18	0.00	0.00	0.00	0.00	0.0	0.04	0.00	0.07	0.37	185	113	0.00
19	0.00	0.00	0.00	0.00	0.0	0.04	0.00	0.06	0.34	187	117	0.00
20	0.00	0.00	0.00	0.00	0.0	0.03	0.00	0.08	0.65	186	129	0.00
21	0.00	0.00	0.00	0.00	0.01	0.04	0.00	0.06	0.59	187	141	0.00
22	0.00	0.00	0.00	0.00	0.03	0.03	0.00	0.08	0.34	190	77	0.00
23	0.00	0.00	0.00	0.00	0.02	0.02	0.00	1.8	63	182	0.00	0.00
24	0.00	0.00	0.00	0.00	0.04	0.03	0.00	1.4	132	173	0.00	0.00
25	0.00	0.00	0.00	0.00	0.05	0.04	0.00	1.3	148	165	0.00	0.00
26	0.00	0.00	0.00	0.00	0.06	0.02	0.00	1.0	e151	164	0.00	0.00
27	0.00	0.00	0.00	0.00	0.07	0.01	0.00	0.83	e151	165	0.00	0.00
28	0.00	0.00	0.00	0.00	0.09	0.01	0.00	0.81	151	167	0.00	0.00
29	0.00	0.00	0.00	0.00	---	0.00	0.00	0.81	164	159	0.00	0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.69	199	160	0.00	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.59	---	173	0.00	---
MEAN	0.060	0.000	0.000	0.000	0.013	0.055	0.004	0.345	38.81	182.8	104.3	0.000
MAX	1.4	0.00	0.00	0.00	0.09	0.20	0.09	1.8	199	211	178	0.00
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	159	0.00	0.00
AC-FT	3.7	0.00	0.00	0.00	0.7	3.4	0.2	21	2310	11240	6410	0.00

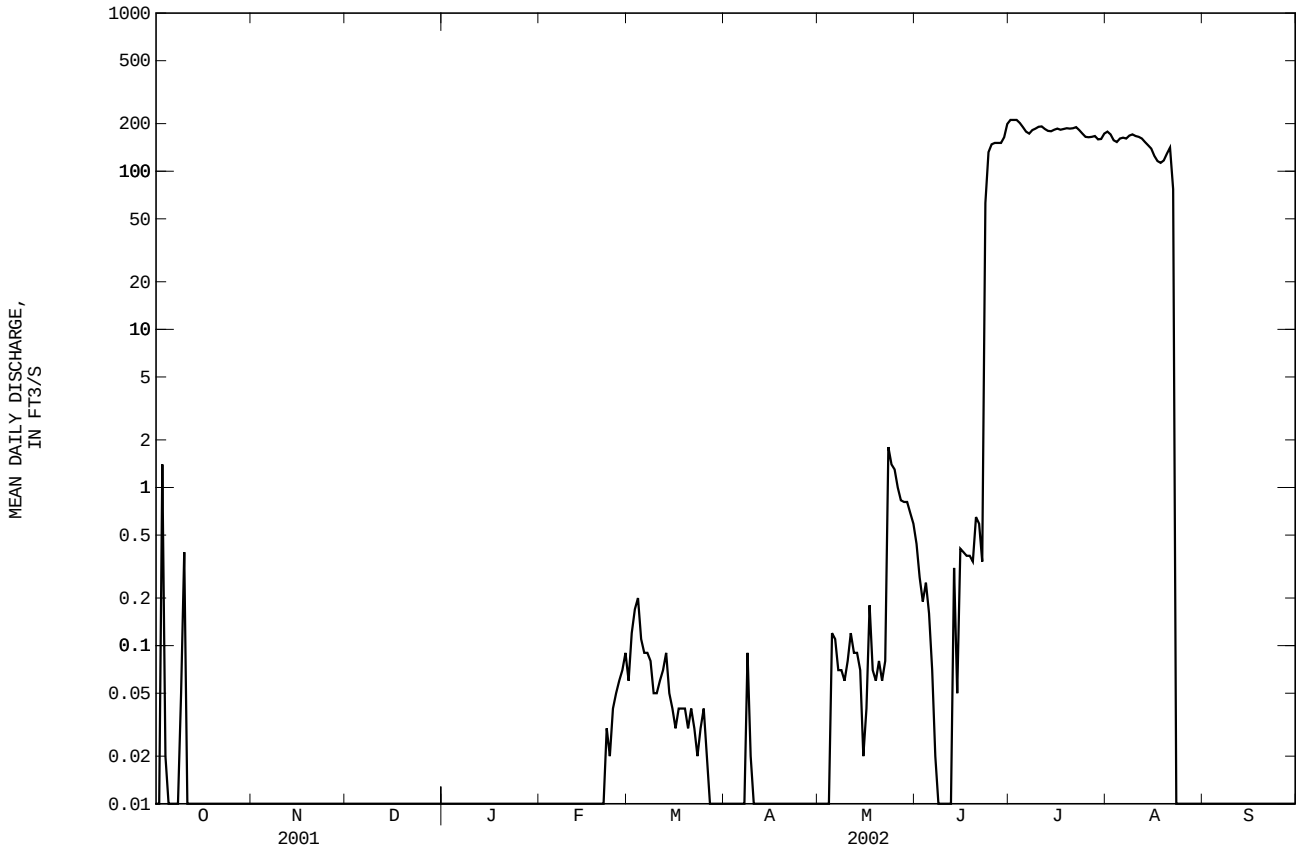
06873200 SOUTH FORK SOLOMON RIVER BELOW WEBSTER RESERVOIR, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	6.518	8.695	13.72	8.937	17.03	23.63	29.00	27.64	68.33	142.8	82.02	16.49
MAX	115	191	468	131	201	268	418	334	731	682	433	250
(WY)	1994	1994	1994	1994	1994	1959	1960	1960	1995	1995	1961	1962
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1957	1957	1957	1957	1957	1957	1965	1968	1978	1978	1978	1972

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1957 - 2002	
ANNUAL MEAN	24.43		27.61		37.29	
HIGHEST ANNUAL MEAN					163	1995
LOWEST ANNUAL MEAN					0.000	1984
HIGHEST DAILY MEAN	201	Jul 18	211	Jul 1	1990	Jul 10 1962
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 1	0.00	Oct 1 1956
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 11	0.00	Oct 1 1956
MAXIMUM PEAK FLOW			212	Jun 30	2070	Jul 10 1962
MAXIMUM PEAK STAGE			6.38	Jun 30	--	
INSTANTANEOUS LOW FLOW			0.00	Oct 1	.00	most years
ANNUAL RUNOFF (AC-FT)	17690		19990		27010	
10 PERCENT EXCEEDS	126		164		129	
50 PERCENT EXCEEDS	0.00		0.00		0.04	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

e Estimated



06873460 SOUTH FORK SOLOMON RIVER AT WOODSTON, KS

LOCATION.--39°26'23", long 99°06'05", in NE $^{1}/_{4}$ SE $^{1}/_{4}$ SE $^{1}/_{4}$ sec.16, T.7 S., R.16 W., Rooks County, Hydrologic Unit 10260014, on left bank near upstream side of county highway bridge, 0.8 mi south of Woodston, and at mile 64.1.

DRAINAGE AREA.--1,502 mi^2.

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

REVISED RECORDS.--WDR KS-82-1: 1979(M) (monthly runoff), 1980 (monthly runoff).

GAGE.--Water-stage recorder. Datum of gage is 1,660.78 ft above NGVD of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow moderately regulated since 1956 by Webster Reservoir (station 06873100), 28.3 mi upstream, and Woodston diversion dam, 1.9 mi upstream. Natural flow also affected by ground-water withdrawals and return flow from irrigation areas. Satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.3	8.4	9.3	e5.8	4.6	7.4	10	7.9	4.4	19	5.0	6.5
2	4.1	7.8	9.3	5.7	e5.1	e7.0	9.2	7.6	3.5	27	13	4.9
3	3.5	7.8	9.4	e5.6	e5.7	e7.4	8.6	7.2	2.4	27	16	3.9
4	3.3	7.9	9.2	5.6	e6.3	e8.6	9.0	6.8	2.7	27	5.6	3.2
5	3.6	8.1	9.6	7.1	8.1	11	9.0	6.9	3.0	20	2.2	2.3
6	3.9	8.2	8.3	8.6	10	14	9.3	7.5	2.5	15	5.1	1.8
7	4.2	8.1	8.1	8.7	11	13	9.7	7.3	1.9	6.4	6.3	1.5
8	4.7	7.9	8.0	9.9	12	e10	21	7.4	1.5	2.3	5.8	1.3
9	4.4	7.9	7.7	12	15	9.9	18	6.4	1.2	7.5	24	1.2
10	12	8.1	8.3	12	10	11	15	6.0	0.98	8.6	26	1.2
11	101	8.2	8.6	9.0	12	12	14	6.1	0.84	10	21	1.2
12	37	8.6	8.7	10	13	11	13	5.6	1.0	12	18	1.2
13	22	8.8	8.9	9.8	11	11	12	5.7	2.7	10	76	1.4
14	15	8.7	8.5	9.2	12	10	12	5.4	4.4	5.6	39	1.2
15	14	8.3	9.8	7.1	11	9.5	12	5.0	4.0	3.4	34	1.2
16	12	8.6	9.0	e6.9	11	9.8	12	4.7	7.5	6.3	29	1.1
17	11	8.6	8.4	e6.7	11	10	11	5.5	4.1	8.0	17	1.1
18	10	8.1	8.8	e6.6	11	10	11	4.5	2.8	8.0	10	1.1
19	9.4	7.6	8.2	e6.9	11	9.8	9.6	3.9	3.4	9.8	11	1.1
20	9.0	7.7	7.9	8.1	10	9.6	9.7	3.8	2.1	9.7	3.6	1.0
21	8.8	8.1	8.8	8.4	10	8.6	11	3.5	1.5	9.0	4.5	0.91
22	8.6	8.5	9.6	10	9.8	e9.0	9.7	3.5	0.85	23	23	0.98
23	8.6	10	6.7	9.7	10	9.8	9.4	15	0.64	23	59	0.92
24	8.0	13	5.9	8.1	10	10	8.8	14	0.52	25	48	1.0
25	7.2	11	6.4	7.6	8.6	10	8.3	54	10	17	31	0.95
26	7.2	9.5	6.2	9.8	e8.4	10	8.3	44	20	12	23	1.1
27	7.4	7.3	7.7	9.4	e8.5	12	10	19	23	13	18	1.1
28	7.7	6.5	7.4	8.4	9.0	11	8.6	14	22	12	14	1.0
29	7.7	6.8	6.4	6.2	---	11	8.2	9.7	9.4	16	12	1.0
30	8.3	8.3	6.2	5.9	---	9.9	7.9	7.2	4.8	6.1	9.6	0.98
31	8.5	---	5.9	5.1	---	9.8	---	5.7	---	2.9	8.2	---
MEAN	12.14	8.413	8.103	8.061	9.825	10.10	10.84	10.03	4.988	12.95	19.93	1.645
MAX	101	13	9.8	12	15	14	21	54	23	27	76	6.5
MIN	3.3	6.5	5.9	5.1	4.6	7.0	7.9	3.5	0.52	2.3	2.2	0.91
AC-FT	747	501	498	496	546	621	645	616	297	797	1230	98

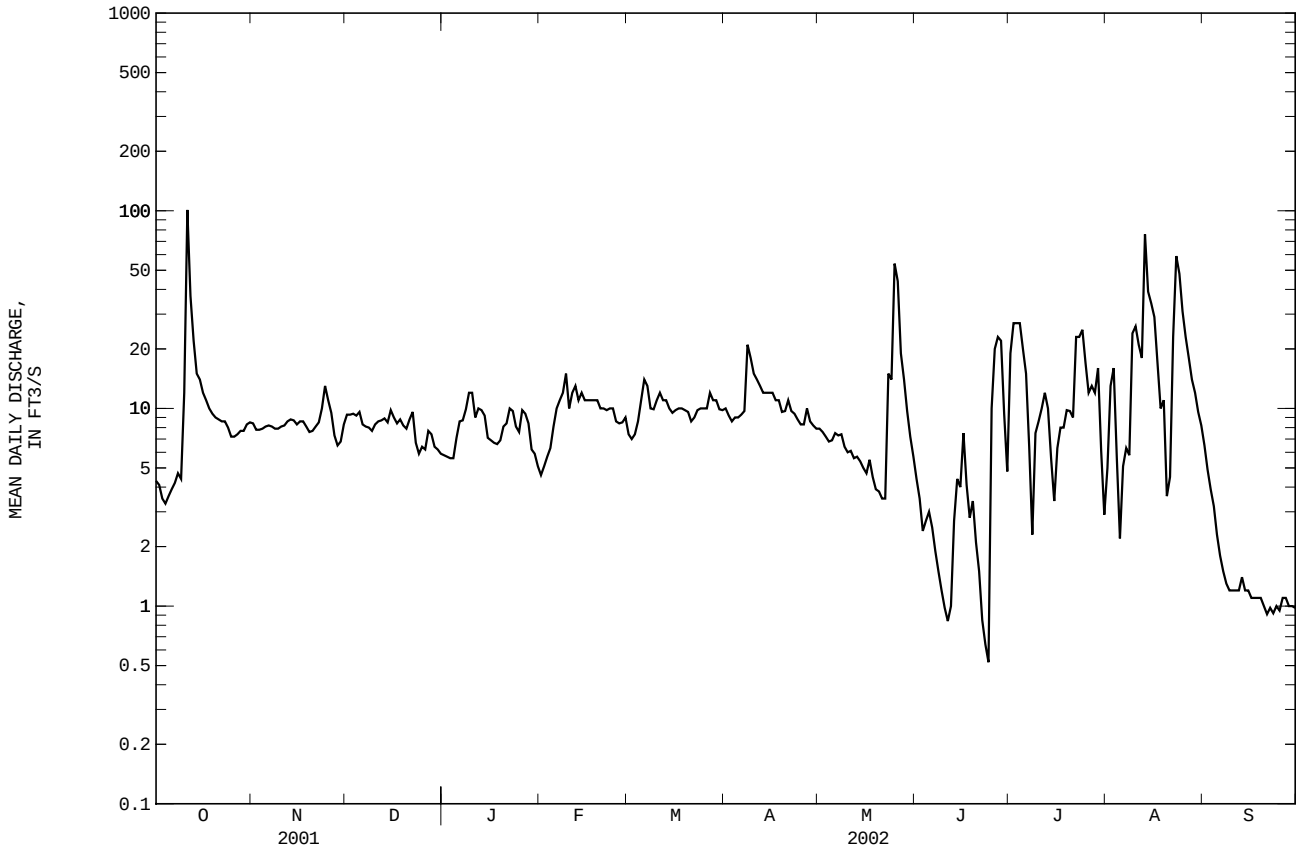
06873460 SOUTH FORK SOLOMON RIVER AT WOODSTON, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	16.59	21.95	32.10	22.99	30.50	47.40	70.23	81.28	63.54	129.9	44.52	19.32
MAX	186	240	541	228	271	282	663	723	862	1742	346	161
(WY)	1994	1994	1994	1994	1994	1994	1987	1995	1995	1993	1993	1993
MIN	0.006	0.052	0.11	0.055	0.62	0.42	0.36	0.31	0.10	0.080	0.14	0.10
(WY)	1979	1982	1982	1982	1992	1982	1982	1982	1981	1981	1981	1981

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1979 - 2002	
ANNUAL MEAN	23.34		9.788		48.55	
HIGHEST ANNUAL MEAN					248	1993
LOWEST ANNUAL MEAN					0.59	1981
HIGHEST DAILY MEAN	599	Jun 9	101	Oct 11	7260	Jul 21 1993
LOWEST DAILY MEAN	2.0	Jan 1	0.52	Jun 24	0.00	Oct 1 1978
ANNUAL SEVEN-DAY MINIMUM	3.7	Jan 1	0.98	Sep 19	0.00	Oct 6 1978
MAXIMUM PEAK FLOW			152	Oct 11	8710	Jul 21 1993
MAXIMUM PEAK STAGE			5.95	Oct 11	22.89	Jul 21 1993
INSTANTANEOUS LOW FLOW			0.36	Jun 23	0.00	Oct 1 1979
ANNUAL RUNOFF (AC-FT)	16900		7090		35170	
10 PERCENT EXCEEDS	47		16		94	
50 PERCENT EXCEEDS	10		8.5		7.0	
90 PERCENT EXCEEDS	4.7		2.2		0.46	

e Estimated



06874000 SOUTH FORK SOLOMON RIVER AT OSBORNE, KS

LOCATION.--Lat 39°25'43", long 98°41'40", in SW $^{1}/_{4}$ NW $^{1}/_{4}$ SW $^{1}/_{4}$ sec.20, T.7 S., R.12 W., Osborne County, Hydrologic Unit 10260014, on right bank at downstream side of bridge on U.S. Highway 281, 0.5 mi south of Osborne, 0.6 mi downstream from Covert Creek, and at mile 27.6.

DRAINAGE AREA.--2,012 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is 1,505.09 ft above NGVD of 1929. Prior to Dec. 12, 1946, nonrecording gage at same site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow moderately regulated since 1956 by Webster Reservoir (station 06873100), 64.8 mi upstream. Diversions upstream from station for irrigation. Occasional low-water regulation by Osborne city reservoir, 1.5 mi upstream. Satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	23	26	e24	e24	e22	22	23	15	9.1	9.5	13
2	16	22	26	e25	e24	e22	22	23	14	8.8	8.5	12
3	16	22	26	25	e24	e22	21	22	13	13	7.7	11
4	16	22	26	29	e24	e22	21	22	12	13	11	11
5	16	23	26	29	e24	e23	21	21	12	14	11	9.9
6	16	23	25	27	e25	e23	21	21	12	15	9.2	9.6
7	16	23	25	35	e26	e23	21	20	12	13	8.6	9.5
8	16	23	24	30	e26	e23	25	21	11	12	9.9	9.7
9	16	23	24	29	e27	e24	29	20	11	10	10	9.6
10	17	23	24	29	e28	e25	33	19	10	9.0	13	9.8
11	17	23	25	27	29	e26	29	19	10	11	18	10
12	61	24	26	26	29	e27	27	19	10	11	17	10
13	47	24	26	27	29	28	26	18	11	12	31	11
14	33	24	26	27	28	27	26	18	12	11	36	12
15	28	24	26	24	28	26	25	17	12	10	42	11
16	26	23	26	24	28	25	23	17	14	8.5	30	11
17	24	23	26	25	27	25	23	18	12	8.8	27	10
18	23	23	26	23	27	25	23	17	11	10	26	10
19	22	23	26	25	28	25	22	17	10	10	20	10
20	21	23	26	24	26	25	23	16	10	13	18	10
21	21	23	26	23	26	24	25	16	10	14	15	9.9
22	21	23	26	e23	25	23	23	16	9.6	16	12	9.7
23	22	24	25	e23	25	24	23	27	9.3	17	12	9.7
24	22	27	e25	e23	26	25	23	45	8.8	19	18	9.6
25	21	28	e25	23	25	25	22	111	8.9	17	30	9.5
26	21	28	e25	e23	21	25	22	43	8.8	18	28	9.4
27	21	25	e25	e22	e21	25	25	103	11	14	19	9.9
28	22	25	e24	e22	e22	26	24	38	13	15	17	10
29	22	25	e24	e22	---	25	24	24	13	17	15	9.7
30	22	25	e24	e22	---	23	23	20	12	15	13	9.4
31	23	---	24	e23	---	22	---	17	---	13	13	---
MEAN	22.61	23.80	25.29	25.26	25.79	24.35	23.90	27.35	11.28	12.81	17.92	10.23
MAX	61	28	26	35	29	28	33	111	15	19	42	13
MIN	16	22	24	22	21	22	21	16	8.8	8.5	7.7	9.4
AC-FT	1390	1420	1560	1550	1430	1500	1420	1680	671	788	1100	609

06874000 SOUTH FORK SOLOMON RIVER AT OSBORNE, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	60.92	43.91	40.41	38.73	62.88	94.00	119.2	154.5	246.7	305.9	112.6	71.69
MAX	792	353	630	342	487	644	1437	1158	3675	5193	1666	708
(WY)	1947	1997	1994	1994	1949	1993	1987	1995	1951	1951	1950	1951
MIN	0.21	0.36	1.05	1.22	2.70	4.77	6.01	7.39	5.24	1.74	0.75	0.28
(WY)	1957	1957	1957	1957	1957	1957	1972	1992	1981	1955	1978	1956

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1947 - 2002	
ANNUAL MEAN	52.07		20.88		112.9	
HIGHEST ANNUAL MEAN					994	1951
LOWEST ANNUAL MEAN					9.27	1991
HIGHEST DAILY MEAN	1750	May 30	111	May 25	53500	Jul 12 1951
LOWEST DAILY MEAN	16	Oct 1	7.7	Aug 3	0.00	Sep 24 1984
ANNUAL SEVEN-DAY MINIMUM	16	Oct 1	9.3	Jun 20	0.17	Sep 11 1981
MAXIMUM PEAK FLOW			155	May 25	81200	Jul 13 1951
MAXIMUM PEAK STAGE			5.71	May 25	28.33	Jul 21 1993
INSTANTANEOUS LOW FLOW			7.2	Aug 3	.00	many years
ANNUAL RUNOFF (AC-FT)	37690		15120		81800	
10 PERCENT EXCEEDS	79		27		198	
50 PERCENT EXCEEDS	26		22		23	
90 PERCENT EXCEEDS	20		10		5.6	

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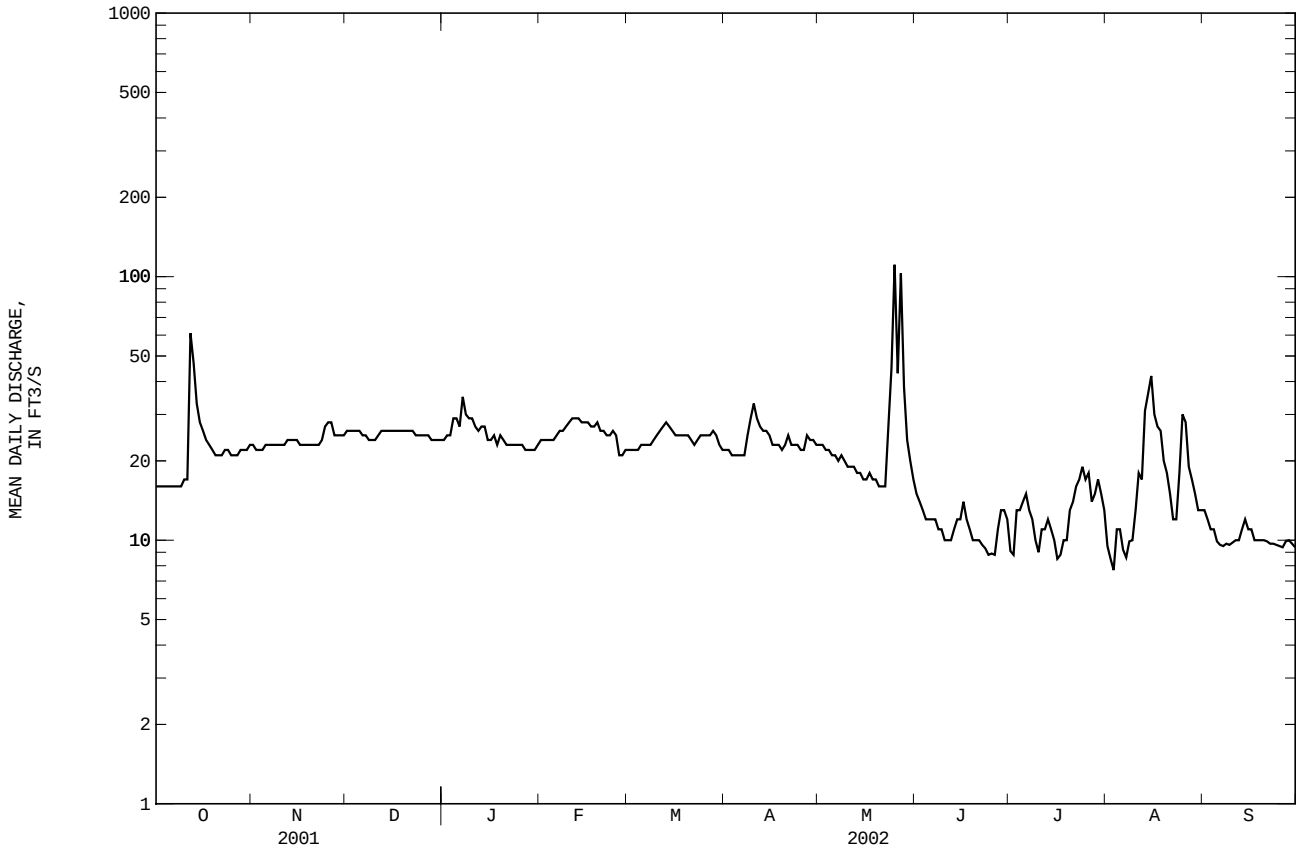


06874200 WACONDA LAKE AT GLEN ELDER, KS

LOCATION.--Lat 39°29'46", long 98°18'48", in SW $^{1}/_{4}$ SE $^{1}/_{4}$ SW $^{1}/_{4}$ sec.27, T.6 S., R.9 W., Mitchell County, Hydrologic Unit 10260015, in outlet structure of Glen Elder Dam on Solomon River, southwest edge of Glen Elder, and at mile 172.4.

DRAINAGE AREA.--5,076 mi^2.

PERIOD OF RECORD.--January 1969 to September 2002 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929 (levels by Bureau of Reclamation). Prior to June 4, 1969, nonrecording gage at same site and datum.

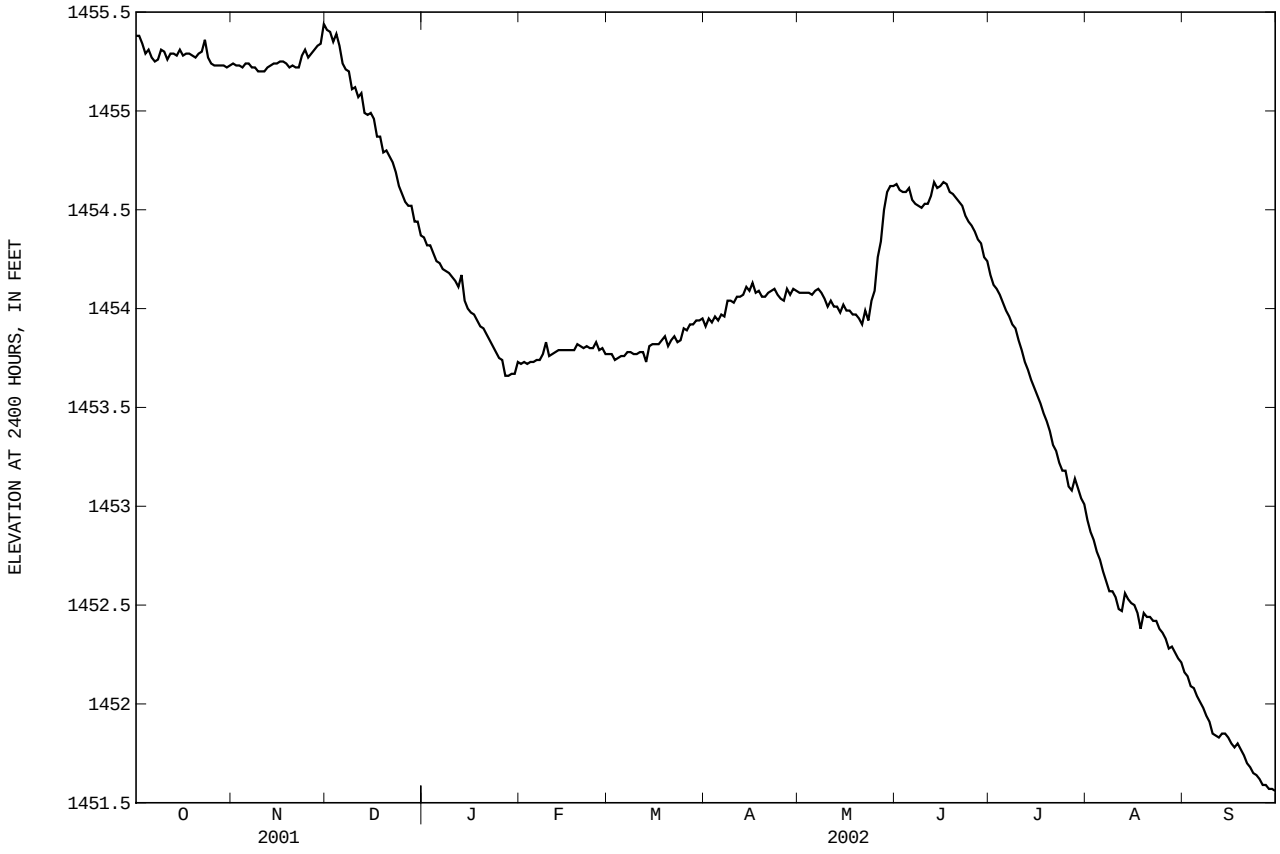
REMARKS.--Reservoir is formed by compacted earthfill dam. Date of closure was Oct. 18, 1967. Regulated storage began Jan. 1, 1969. Conservation pool elevation was first reached on May 17, 1973. Total capacity, 1,128,700 acre-ft, consisting of the following: Dead storage, 1,236 acre-ft below elevation 1,407.8 ft; conservation pool, 240,200 acre-ft between elevations 1,407.8 ft and 1,455.6 ft; flood-control pool, 722,300 acre-ft between elevations 1,455.6 ft and 1,488.3 ft; and surcharge pool, 165,000 acre-ft between elevations 1,488.3 ft and 1,492.9 ft. Figures given herein represent total contents. Inflow partially regulated by Webster Reservoir (station 06873100) and Kirwin Reservoir (station 06871700). Diversions for irrigation upstream from station. Satellite telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 1,487.01 ft July 29, 1993, contents, 921,000 acre-ft; minimum elevation since conservation pool was first reached, 1,448.90 ft Dec. 5-7, 1984, contents, 65,440 acre-ft.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 1,455.48 ft Dec. 1, contents, 239950 acre-ft; minimum elevation, 1,451.55 ft Sept. 30, contents, 193,940 acre-ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Computed by Bureau of Reclamation on basis of resurvey made in 1995)
(used Oct. 1, 1995, to present)

1,451	187,980	1,454	221,780
1,452	198,810	1,455	233,920
1,453	210,080	1,456	246,480



06874200 WACONDA LAKE AT GLEN ELDER, KS--Continued

ELEVATION, in FT (NGVD), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1455.38	1455.24	1455.41	1454.36	1453.72	1453.77	1453.91	1454.08	1454.63	1454.17	1452.93	1452.16
2	1455.38	1455.23	1455.40	1454.32	1453.73	1453.77	1453.95	1454.08	1454.60	1454.12	1452.87	1452.14
3	1455.34	1455.23	1455.35	1454.32	1453.72	1453.74	1453.93	1454.08	1454.59	1454.10	1452.83	1452.09
4	1455.29	1455.22	1455.39	1454.28	1453.73	1453.75	1453.96	1454.08	1454.59	1454.07	1452.77	1452.08
5	1455.31	1455.24	1455.33	1454.24	1453.73	1453.76	1453.94	1454.07	1454.61	1454.03	1452.73	1452.04
6	1455.27	1455.24	1455.24	1454.23	1453.74	1453.76	1453.97	1454.09	1454.55	1453.99	1452.67	1452.01
7	1455.25	1455.22	1455.21	1454.20	1453.74	1453.78	1453.96	1454.10	1454.53	1453.96	1452.62	1451.98
8	1455.26	1455.22	1455.20	1454.19	1453.77	1453.78	1454.04	1454.08	1454.52	1453.92	1452.57	1451.94
9	1455.31	1455.20	1455.11	1454.18	1453.83	1453.77	1454.04	1454.05	1454.51	1453.90	1452.57	1451.91
10	1455.30	1455.20	1455.12	1454.16	1453.76	1453.77	1454.03	1454.01	1454.53	1453.84	1452.54	1451.85
11	1455.26	1455.20	1455.07	1454.14	1453.77	1453.78	1454.06	1454.04	1454.53	1453.79	1452.48	1451.84
12	1455.29	1455.22	1455.09	1454.11	1453.78	1453.78	1454.06	1454.01	1454.57	1453.73	1452.47	1451.83
13	1455.29	1455.23	1454.99	1454.17	1453.79	1453.73	1454.07	1454.01	1454.64	1453.69	1452.56	1451.85
14	1455.28	1455.24	1454.98	1454.04	1453.79	1453.81	1454.11	1453.98	1454.61	1453.64	1452.53	1451.85
15	1455.31	1455.24	1454.99	1454.00	1453.79	1453.82	1454.09	1454.02	1454.62	1453.60	1452.51	1451.83
16	1455.28	1455.25	1454.96	1453.98	1453.79	1453.82	1454.13	1453.99	1454.64	1453.56	1452.50	1451.80
17	1455.29	1455.25	1454.87	1453.97	1453.79	1453.82	1454.08	1453.99	1454.63	1453.52	1452.46	1451.78
18	1455.29	1455.24	1454.87	1453.94	1453.79	1453.84	1454.09	1453.97	1454.59	1453.47	1452.38	1451.80
19	1455.28	1455.22	1454.79	1453.91	1453.82	1453.86	1454.06	1453.97	1454.58	1453.43	1452.46	1451.77
20	1455.27	1455.23	1454.80	1453.90	1453.81	1453.81	1454.06	1453.95	1454.56	1453.38	1452.44	1451.74
21	1455.29	1455.22	1454.77	1453.87	1453.80	1453.84	1454.08	1453.92	1454.54	1453.31	1452.44	1451.70
22	1455.30	1455.22	1454.74	1453.84	1453.81	1453.86	1454.09	1453.99	1454.52	1453.28	1452.42	1451.68
23	1455.36	1455.28	1454.69	1453.81	1453.80	1453.83	1454.10	1453.94	1454.47	1453.22	1452.42	1451.65
24	1455.27	1455.31	1454.62	1453.78	1453.80	1453.84	1454.07	1454.04	1454.44	1453.18	1452.38	1451.64
25	1455.24	1455.27	1454.58	1453.75	1453.83	1453.90	1454.05	1454.09	1454.42	1453.18	1452.36	1451.62
26	1455.23	1455.29	1454.54	1453.74	1453.79	1453.89	1454.04	1454.26	1454.39	1453.10	1452.33	1451.59
27	1455.23	1455.31	1454.52	1453.66	1453.80	1453.92	1454.10	1454.34	1454.35	1453.08	1452.28	1451.59
28	1455.23	1455.33	1454.52	1453.66	1453.77	1453.92	1454.07	1454.50	1454.33	1453.14	1452.29	1451.57
29	1455.23	1455.34	1454.44	1453.67	---	1453.94	1454.10	1454.59	1454.26	1453.09	1452.26	1451.57
30	1455.22	1455.44	1454.44	1453.67	---	1453.94	1454.09	1454.62	1454.24	1453.04	1452.23	1451.56
31	1455.23	---	1454.37	1453.73	---	1453.95	---	1454.62	---	1453.01	1452.21	---
MEAN	1455.28	1455.25	1454.92	1453.99	1453.78	1453.82	1454.04	1454.12	1454.52	1453.57	1452.50	1451.82
MAX	1455.38	1455.44	1455.41	1454.36	1453.83	1453.95	1454.13	1454.62	1454.64	1454.17	1452.93	1452.16
MIN	1455.22	1455.20	1454.37	1453.66	1453.72	1453.73	1453.91	1453.92	1454.24	1453.01	1452.21	1451.56
(+)	236,810	239,450	226,270	218,620	219,090	221,190	222,870	229,310	224,690	210,190	201,180	194,050
(#)	-2,010	+2,640	-13,180	-7,650	+470	+2,100	+1,680	+6,440	-4,620	-14,500	-9,010	-7,130

CAL YR 2001 ..... (#) +29,510
WTR YR 2002 ..... (#) -44,770

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

06875900 SOLOMON RIVER NEAR GLEN ELDER, KS

LOCATION.--Lat 39°28'27", long 98°16'58", in SE $^{1}/_{4}$ SE $^{1}/_{4}$ NE $^{1}/_{4}$ sec.2, T.7 S., R.9 W., Mitchell County, Hydrologic Unit 10260015, on right bank, 3.6 mi downstream from Glen Elder Dam, 2.0 mi southeast of Glen Elder, and at mile 168.8.

DRAINAGE AREA.--5,340 mi^2.

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

GAGE.--Water-stage recorder. Concrete control since Mar. 4, 1970. Datum of gage is 1,374.13 ft above NGVD of 1929 (levels by Bureau of Reclamation).

REMARKS.--Records good. Flow mostly regulated since 1967 by Waconda Lake (station 06874200), which in turn is moderately regulated since 1955 by Kirwin Reservoir (station 06871700), and since 1956 by Webster Reservoir (station 06873100). Large diversions downstream from Kirwin and Webster Reservoirs and many small diversions upstream from Waconda Lake for irrigation. Satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

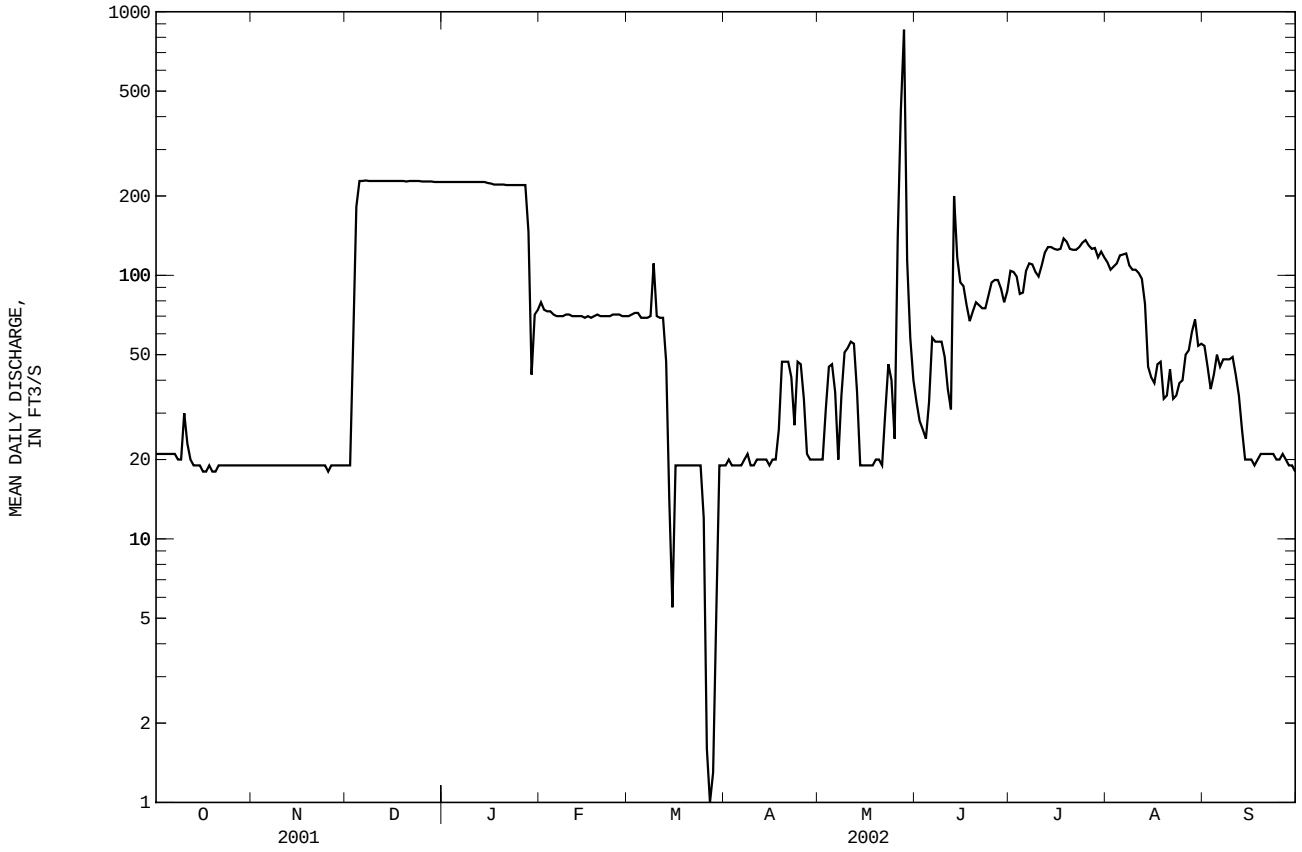
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	19	19	226	79	70	19	20	33	104	112	54
2	21	19	19	226	74	71	20	20	28	103	105	45
3	21	19	57	226	73	72	19	31	26	99	108	37
4	21	19	182	226	73	72	19	45	24	85	111	42
5	21	19	228	226	71	69	19	46	33	86	119	50
6	21	19	228	226	70	69	19	36	58	104	120	45
7	21	19	229	226	70	69	20	20	56	111	121	48
8	20	19	228	226	70	70	21	35	56	110	109	48
9	20	19	228	226	71	111	19	51	56	103	105	48
10	30	19	228	226	71	70	19	53	49	99	105	49
11	23	19	228	226	70	69	20	56	37	109	102	42
12	20	19	228	226	70	69	20	55	31	122	97	35
13	19	19	228	226	70	47	20	36	200	128	78	26
14	19	19	228	226	70	14	20	19	117	128	45	20
15	19	19	228	224	69	5.5	19	19	94	126	41	20
16	18	19	228	223	70	19	20	19	91	125	39	20
17	18	19	228	221	69	19	20	19	77	126	46	19
18	19	19	228	221	70	19	26	19	67	138	47	20
19	18	19	228	221	71	19	47	20	73	134	34	21
20	18	19	227	221	70	19	47	20	79	126	35	21
21	19	19	228	220	70	19	47	19	77	125	44	21
22	19	19	228	220	70	19	41	30	75	125	34	21
23	19	19	228	220	70	19	27	46	75	128	35	21
24	19	19	228	220	71	19	47	40	84	133	39	20
25	19	18	227	220	71	12	46	24	94	136	40	20
26	19	19	227	220	71	1.6	34	141	96	130	50	21
27	19	19	227	220	70	1.0	21	424	96	126	52	20
28	19	19	227	146	70	1.3	20	855	89	127	61	19
29	19	19	226	42	---	5.1	20	114	79	117	68	19
30	19	19	226	71	---	19	20	58	87	123	54	18
31	19	---	226	74	---	19	---	40	---	117	55	---
MEAN	19.90	18.97	207.2	205.4	70.86	37.98	25.87	78.39	71.23	117.8	71.32	30.33
MAX	30	19	229	226	79	111	47	855	200	138	121	54
MIN	18	18	19	42	69	1.0	19	19	24	85	34	18
AC-FT	1220	1130	12740	12630	3940	2340	1540	4820	4240	7250	4390	1800

06875900 SOLOMON RIVER NEAR GLEN ELDER, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	172.4	187.7	192.4	155.9	176.7	234.4	226.3	290.6	364.0	350.5	306.0	206.5
MAX	3047	2983	2315	2220	1472	1680	1635	1939	2092	2096	3083	3148
(WY)	1994	1994	1994	1994	1994	1993	1993	1987	1995	1993	1993	1993
MIN	11.3	7.70	1.10	8.00	11.7	8.98	9.60	15.0	16.5	28.0	26.1	18.3
(WY)	1970	1972	1969	1976	1978	1971	1971	1970	1981	1969	1969	1970

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1965 - 2002	
ANNUAL MEAN	133.1		80.15		239.0	
HIGHEST ANNUAL MEAN					1369	1994
LOWEST ANNUAL MEAN					18.4	1970
HIGHEST DAILY MEAN	1100	Jun 14	855	May 28	7210	Jul 22 1993
LOWEST DAILY MEAN	17	Apr 25	1.0	Mar 27	0.32	Nov 22 1971
ANNUAL SEVEN-DAY MINIMUM	18	Oct 14	8.4	Mar 23	0.62	Dec 13 1968
MAXIMUM PEAK FLOW			1370	May 28	9410	Jul 22 1993
MAXIMUM PEAK STAGE			14.93	May 28	29.57	Jul 22 1993
INSTANTANEOUS LOW FLOW			0.79	Mar 27	0.32	Nov 22 1971
ANNUAL RUNOFF (AC-FT)	96380		58030		173100	
10 PERCENT EXCEEDS	228		226		613	
50 PERCENT EXCEEDS	21		49		54	
90 PERCENT EXCEEDS	19		19		15	



06876070 SOLOMON RIVER NEAR SIMPSON, KS

LOCATION.--Lat 39°22'05", long 97°55'44", in SW $^{1}/_{4}$ NW $^{1}/_{4}$ SW $^{1}/_{4}$ sec.7, T.8 S., R.5 W., Cloud County, Hydrologic Unit 10260015, on right bank at downstream side of county highway bridge, 1.0 mile south of Simpson, and at mile 115.4.

DRAINAGE AREA.--5,538 mi^2.

PERIOD OF RECORD.--October 1990 to current year.

REVISED RECORDS.--WDR KS-92-1: 1991.

GAGE.--Water-stage recorder. Datum of gage is 1,334.26 ft above NGVD of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow mostly regulated since 1967 by Waconda Lake (station 06874200), 57.0 mi upstream. Many small diversions upstream from station. Satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1951 reached a gage height of 42.2 ft, from floodmark on house on left downstream side of bridge, from information by local resident.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	41	31	e222	43	94	20	28	69	26	61	42
2	28	24	33	e222	105	36	33	28	53	30	50	47
3	28	20	30	e221	111	59	32	28	45	42	34	46
4	28	22	31	e221	90	79	32	28	40	38	29	38
5	28	29	95	e221	84	86	32	33	37	36	37	28
6	28	29	212	e220	87	88	32	47	36	24	35	30
7	28	30	218	e220	91	75	33	49	41	23	45	33
8	28	29	220	e220	92	71	36	43	57	37	50	26
9	30	28	219	e220	97	57	39	23	53	36	60	29
10	31	28	220	e219	80	73	39	28	51	26	60	32
11	29	28	220	e219	94	84	36	51	54	17	60	33
12	36	29	222	219	95	74	35	62	49	14	54	34
13	40	29	223	220	81	71	35	62	41	23	72	45
14	33	30	221	221	81	71	35	54	61	43	95	41
15	32	30	221	219	80	50	35	41	162	47	66	33
16	35	29	222	218	80	30	36	23	87	46	44	24
17	32	27	221	216	79	20	43	23	83	40	38	22
18	30	27	221	216	79	24	21	25	75	47	33	22
19	29	27	221	217	86	31	30	24	54	47	41	22
20	29	27	221	220	85	32	35	21	47	60	52	23
21	30	28	221	217	79	30	59	22	49	55	33	22
22	29	28	221	215	77	29	59	21	47	55	20	22
23	29	30	221	214	78	30	56	23	42	52	30	21
24	30	34	221	214	78	31	51	35	45	47	22	21
25	30	34	e220	214	78	32	34	62	44	43	13	19
26	31	31	e220	213	75	33	47	50	47	53	21	21
27	43	30	e220	213	58	30	54	196	50	55	18	19
28	13	28	e220	213	97	22	50	420	48	58	23	17
29	26	24	e221	197	---	17	31	1010	41	62	24	18
30	28	28	e221	96	---	16	28	229	30	74	38	18
31	31	---	e221	20	---	15	---	101	---	54	46	---
MEAN	30.03	28.60	191.9	207.0	83.57	48.06	37.93	93.23	54.60	42.26	42.06	28.27
MAX	43	41	223	222	111	94	59	1010	162	74	95	47
MIN	13	20	30	20	43	15	20	21	30	14	13	17
AC-FT	1850	1700	11800	12730	4640	2960	2260	5730	3250	2600	2590	1680

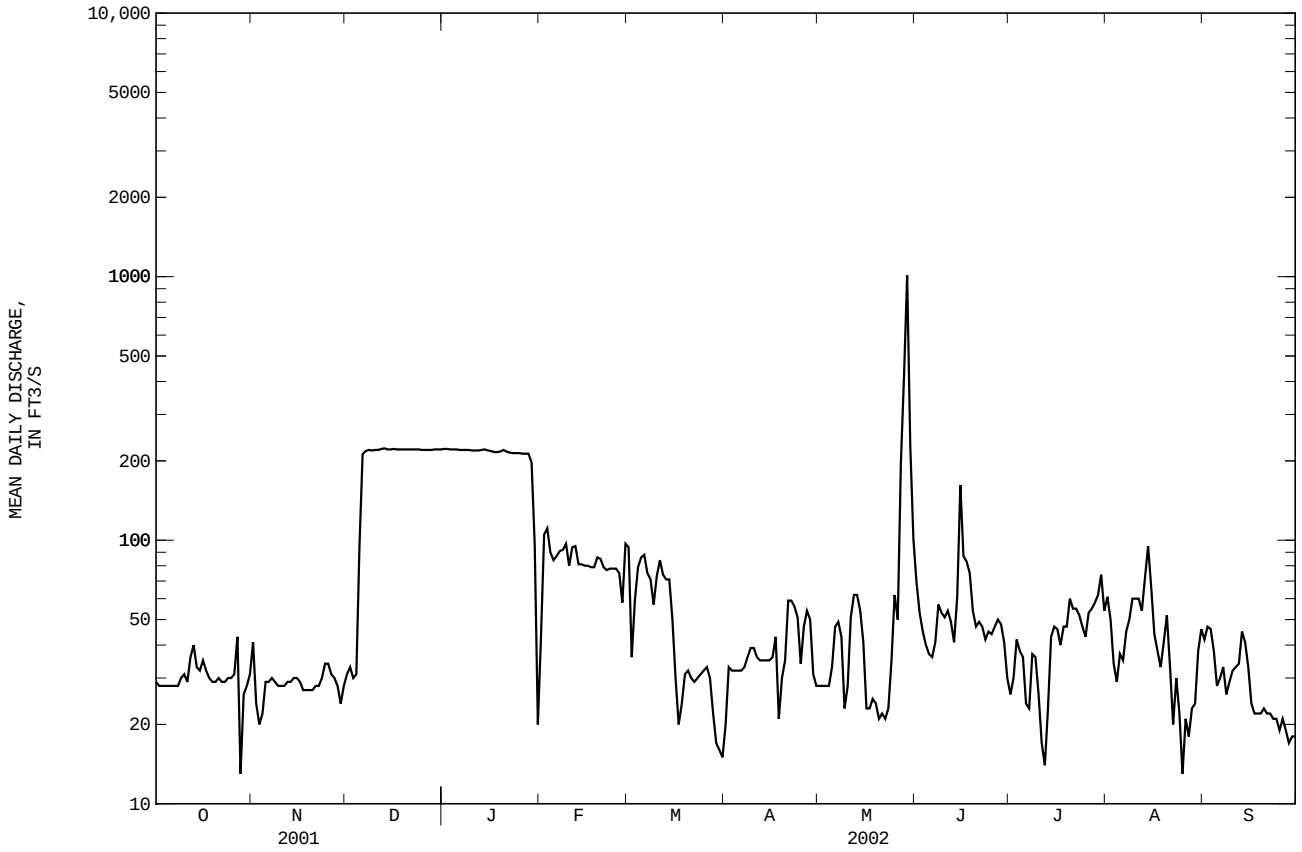
06876070 SOLOMON RIVER NEAR SIMPSON, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	330.7	388.8	458.5	388.1	393.0	461.3	385.2	493.3	610.4	838.6	661.7	395.9
MAX	3108	3055	2519	2374	1574	1924	1820	1395	2133	5033	3671	3368
(WY)	1994	1994	1994	1994	1994	1993	1993	1993	1995	1993	1993	1993
MIN	23.0	25.0	25.0	22.3	22.2	22.7	25.9	19.1	32.2	32.8	27.8	28.3
(WY)	1992	1992	1992	2001	1992	1992	1992	1992	1991	2000	2000	2002

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1991 - 2002	
ANNUAL MEAN	146.6		74.28		484.9	
HIGHEST ANNUAL MEAN					1694	1993
LOWEST ANNUAL MEAN					74.3	2002
HIGHEST DAILY MEAN	2030	Jun 6	1010	May 29	10200	Jul 8 1993
LOWEST DAILY MEAN	6.4	Feb 9	13	Oct 28	2.1	Jun 26 1991
ANNUAL SEVEN-DAY MINIMUM	17	Jan 21	19	Sep 24	5.4	Jun 21 1991
MAXIMUM PEAK FLOW			1280	May 29	10700	Jul 8 1993
MAXIMUM PEAK STAGE			12.45	May 29	32.69	Jul 8 1993
INSTANTANEOUS LOW FLOW			9.9	Oct 28	0.78	Jun 27 1991
ANNUAL RUNOFF (AC-FT)	106100		53780		351300	
10 PERCENT EXCEEDS	301		220		1430	
50 PERCENT EXCEEDS	40		41		151	
90 PERCENT EXCEEDS	26		23		28	

e Estimated



06876700 SALT CREEK NEAR ADA, KS

LOCATION.--Lat 39°08'30", long 97°50'10", in NW $^1/_4$ NW $^1/_4$ SW $^1/_4$ sec.36, T.10 S., R.5 W., Ottawa County, Hydrologic Unit 10260015, on left bank at downstream side of county highway bridge, 3.0 mi southeast of Ada, and at mile 19.4.

DRAINAGE AREA.--384 mi^2, approximately.

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

GAGE.--Water-stage recorder. Datum of gage is 1,247.18 ft above NGVD of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1942 reached a stage of about 21 ft, from information by local residents.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 580 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Apr 21	0000	*63	*5.98	No peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.2	8.1	8.9	e7.0	e8.6	12	11	11	7.0	1.0	0.65	0.41
2	6.8	7.8	9.2	e6.8	e8.2	e11	10	10	6.2	0.96	0.65	0.39
3	6.4	8.4	9.4	e6.9	e8.6	e10	9.7	9.4	5.1	0.95	0.66	0.32
4	6.0	10	9.4	9.5	e10	12	9.3	9.1	4.5	0.91	0.53	0.31
5	5.8	9.3	9.5	10	e11	13	8.9	8.9	4.1	0.92	0.47	0.29
6	6.0	8.1	9.4	11	12	14	8.8	19	3.9	0.84	0.45	0.31
7	6.2	8.1	9.3	11	14	15	8.8	17	3.7	0.86	0.41	0.28
8	6.3	8.5	9.3	11	14	15	9.4	13	3.5	0.81	0.38	0.26
9	6.5	8.6	9.0	12	16	15	11	10	3.3	0.77	0.41	0.25
10	6.0	8.6	8.8	11	18	14	11	9.7	3.0	0.62	0.57	0.25
11	5.8	9.2	8.8	11	21	15	10	9.0	2.8	0.68	0.61	0.28
12	6.6	9.2	9.1	11	20	14	11	9.6	2.8	0.62	1.0	0.39
13	7.6	9.1	9.5	11	18	12	10	13	4.4	0.55	6.9	0.67
14	7.6	8.9	9.8	11	17	12	9.6	12	6.2	0.58	14	0.67
15	8.3	9.0	9.8	10	16	12	9.2	9.6	6.0	0.68	3.8	1.5
16	8.2	9.2	9.8	10	15	12	8.8	8.6	12	0.57	2.2	1.3
17	8.7	8.8	9.7	11	14	11	8.6	8.9	7.7	0.52	1.5	1.1
18	8.5	8.5	9.6	10	13	11	8.5	8.6	6.4	0.65	1.1	0.94
19	8.1	8.0	9.4	11	13	13	9.7	8.2	5.7	0.53	0.86	0.78
20	9.2	7.9	9.3	11	14	14	29	7.8	4.2	0.48	0.68	0.77
21	7.6	7.8	9.5	11	13	12	46	7.7	3.1	0.52	0.53	0.65
22	7.2	8.9	9.9	11	13	11	22	7.6	2.6	0.63	0.57	0.53
23	7.0	8.5	9.3	13	13	11	17	7.4	2.3	0.66	0.53	0.53
24	6.5	9.9	9.5	11	12	11	13	7.3	2.0	0.55	0.49	0.49
25	6.2	9.2	9.6	11	12	11	11	8.0	1.9	0.69	0.46	0.54
26	6.7	9.1	9.0	12	12	11	10	8.6	1.7	0.73	0.50	0.51
27	6.7	9.0	8.8	11	12	11	11	8.7	1.5	0.52	0.50	0.45
28	6.5	8.5	e8.6	10	12	11	11	8.1	1.4	0.58	0.61	0.46
29	7.3	8.4	e8.2	9.8	---	11	11	9.1	1.3	0.75	0.49	0.43
30	8.1	8.9	e7.8	e9.4	---	10	11	11	1.2	0.66	0.44	0.35
31	8.3	---	e7.4	e9.0	---	11	---	8.0	---	0.63	0.47	---
MEAN	7.094	8.717	9.181	10.37	13.59	12.19	12.51	9.803	4.050	0.691	1.401	0.547
MAX	9.2	10	9.9	13	21	15	46	19	12	1.0	14	1.5
MIN	5.8	7.8	7.4	6.8	8.2	10	8.5	7.3	1.2	0.48	0.38	0.25
AC-FT	436	519	565	637	755	750	744	603	241	42	86	33

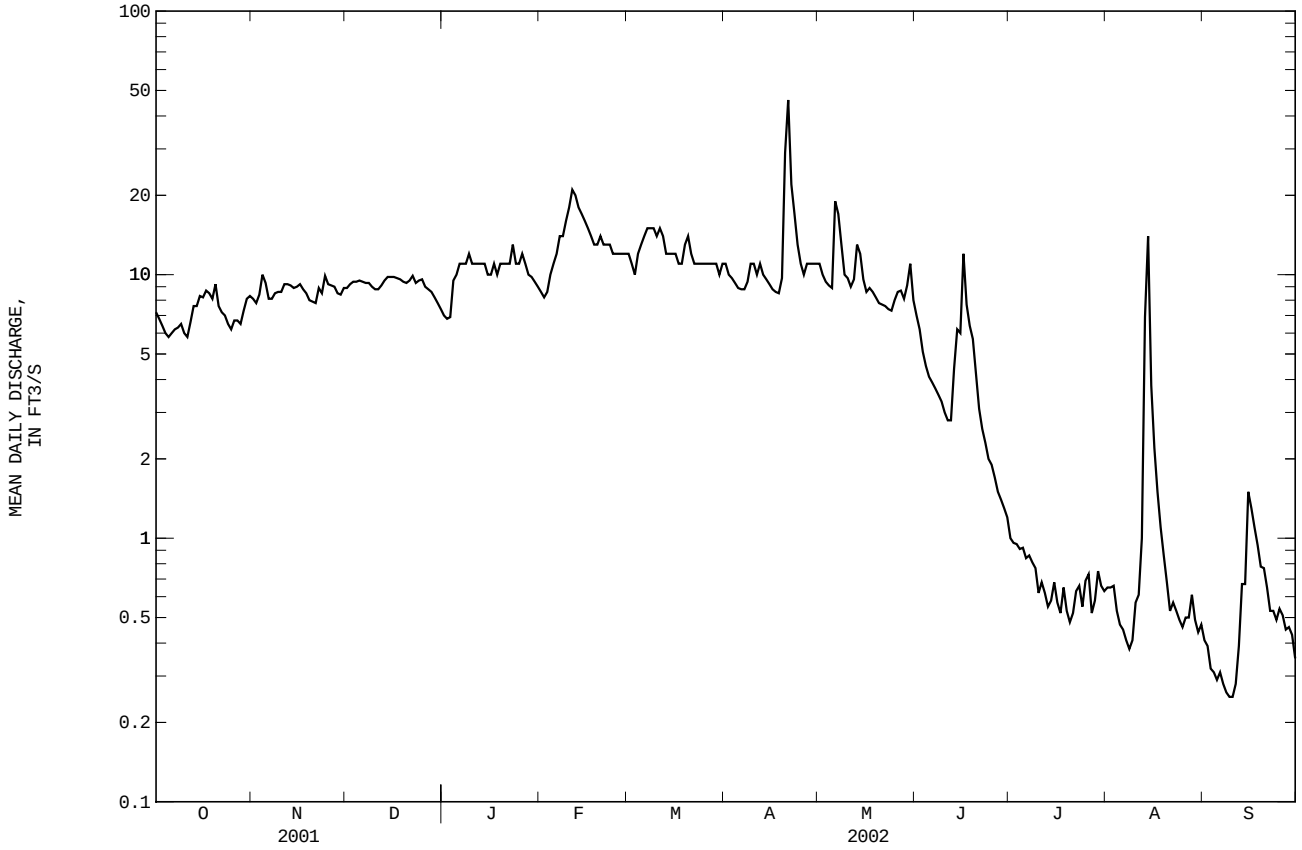
06876700 SALT CREEK NEAR ADA, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	41.18	27.67	20.92	24.50	44.64	104.2	101.6	142.4	98.26	135.1	34.58	40.56
MAX	827	216	203	277	495	899	898	1201	578	2595	292	677
(WY)	1974	1999	1974	1974	1993	1973	1987	1995	1993	1993	1993	1973
MIN	0.014	0.13	0.39	1.14	1.71	1.25	3.61	1.62	0.48	0.20	0.052	0.43
(WY)	1967	1967	1967	1967	1967	1967	1992	1967	1966	1970	1970	1991

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1960 - 2002	
ANNUAL MEAN	36.71		7.473		68.15	
HIGHEST ANNUAL MEAN					469	1993
LOWEST ANNUAL MEAN					3.81	1966
HIGHEST DAILY MEAN	883	Jun 6	46	Apr 21	10400	May 23 1961
LOWEST DAILY MEAN	2.4	Aug 22	0.25	Sep 9	0.00	Jul 21 1964
ANNUAL SEVEN-DAY MINIMUM	2.7	Aug 16	0.27	Sep 5	0.00	Aug 5 1964
MAXIMUM PEAK FLOW			63	Apr 21	16000	May 23 1961
MAXIMUM PEAK STAGE			5.98	Apr 21	23.25	May 23 1961
INSTANTANEOUS LOW FLOW			0.24	Sep 8	.00	many years
ANNUAL RUNOFF (AC-FT)	26580		5410		49370	
10 PERCENT EXCEEDS	80		13		102	
50 PERCENT EXCEEDS	10		8.6		12	
90 PERCENT EXCEEDS	4.8		0.53		1.6	

e Estimated



06876900 SOLOMON RIVER AT NILES, KS

LOCATION.--Lat 38°58'08", long 97°28'34", in NW $^{1}/_{4}$ SE $^{1}/_{4}$ NW $^{1}/_{4}$ sec.31, T.12 S., R.1 W., Ottawa County, Hydrologic Unit 10260015, on right bank at downstream side of county highway bridge, 0.8 mi west of Niles, and at mile 21.6.

WATER-DISCHARGE RECORDS

DRAINAGE AREA.--6,770 mi^2, 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.

REVISED RECORDS.--WSP 806: Drainage area. WSP 926: 1935. WSP 1310: 1897-1903. WSP 1440: 1903, 1919, 1927.

GAGE.--Water-stage recorders. Datum of gage is 1,160.97 ft above NGVD of 1929. 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 upstream at different datum. June 1, 1919, to Sept. 30, 1922, nonrecording gage at present site at datum 2.00 ft higher. Oct. 1, 1922, to Apr. 25, 1934, nonrecording gage at present site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow moderately regulated since 1967 by Waconda Lake (station 06874200), 150.8 mi upstream. Slight regulation since 1955 by Kirwin Reservoir (station 06871700) and since 1956 by Webster Reservoir (station 06873100). Many small diversions upstream from station for irrigation. Satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	81	73	75	e225	e220	105	72	97	565	66	68	58
2	79	70	75	e240	e205	e100	69	88	276	65	70	46
3	76	74	75	e265	e190	e105	72	80	163	62	71	50
4	75	78	79	301	e185	e130	68	73	121	56	66	54
5	79	87	84	358	e165	164	68	73	101	53	65	51
6	76	77	84	363	195	139	72	112	89	55	59	54
7	75	74	81	380	176	149	72	125	80	61	50	54
8	74	72	91	403	162	164	75	95	75	58	45	49
9	73	77	210	376	164	154	80	95	72	56	48	43
10	72	75	247	367	166	155	83	90	71	51	51	44
11	72	74	254	352	174	132	79	91	75	47	57	45
12	72	75	259	371	159	128	78	99	78	53	62	43
13	75	76	264	373	151	136	79	121	78	54	74	46
14	76	77	266	323	156	142	79	133	105	49	77	52
15	80	78	266	295	155	134	76	113	120	44	74	57
16	90	78	268	285	148	129	75	110	97	42	84	68
17	93	79	267	296	142	123	74	102	95	41	94	70
18	85	79	267	301	139	114	74	96	154	54	89	59
19	79	78	269	370	139	107	76	80	128	58	73	53
20	79	81	268	358	140	118	133	70	109	57	62	47
21	77	75	267	277	139	101	127	69	101	54	61	44
22	75	75	269	277	139	103	135	70	87	56	55	42
23	75	75	270	270	139	91	132	67	75	58	57	41
24	74	77	269	270	132	85	114	69	72	64	60	41
25	73	81	e255	266	131	83	121	75	72	63	52	41
26	71	83	e240	263	123	86	103	78	70	63	43	40
27	72	80	248	263	e115	84	97	106	68	61	45	40
28	72	80	e245	263	e110	80	95	168	68	77	49	40
29	72	79	e240	265	---	79	94	157	66	124	63	39
30	73	77	e235	e250	---	81	95	283	67	70	93	39
31	83	---	e230	e235	---	76	---	771	---	69	80	---
MEAN	76.71	77.13	210.2	306.5	155.7	115.4	88.90	124.4	113.3	59.39	64.42	48.33
MAX	93	87	270	403	220	164	135	771	565	124	94	70
MIN	71	70	75	225	110	76	68	67	66	41	43	39
AC-FT	4720	4590	12930	18850	8650	7090	5290	7650	6740	3650	3960	2880

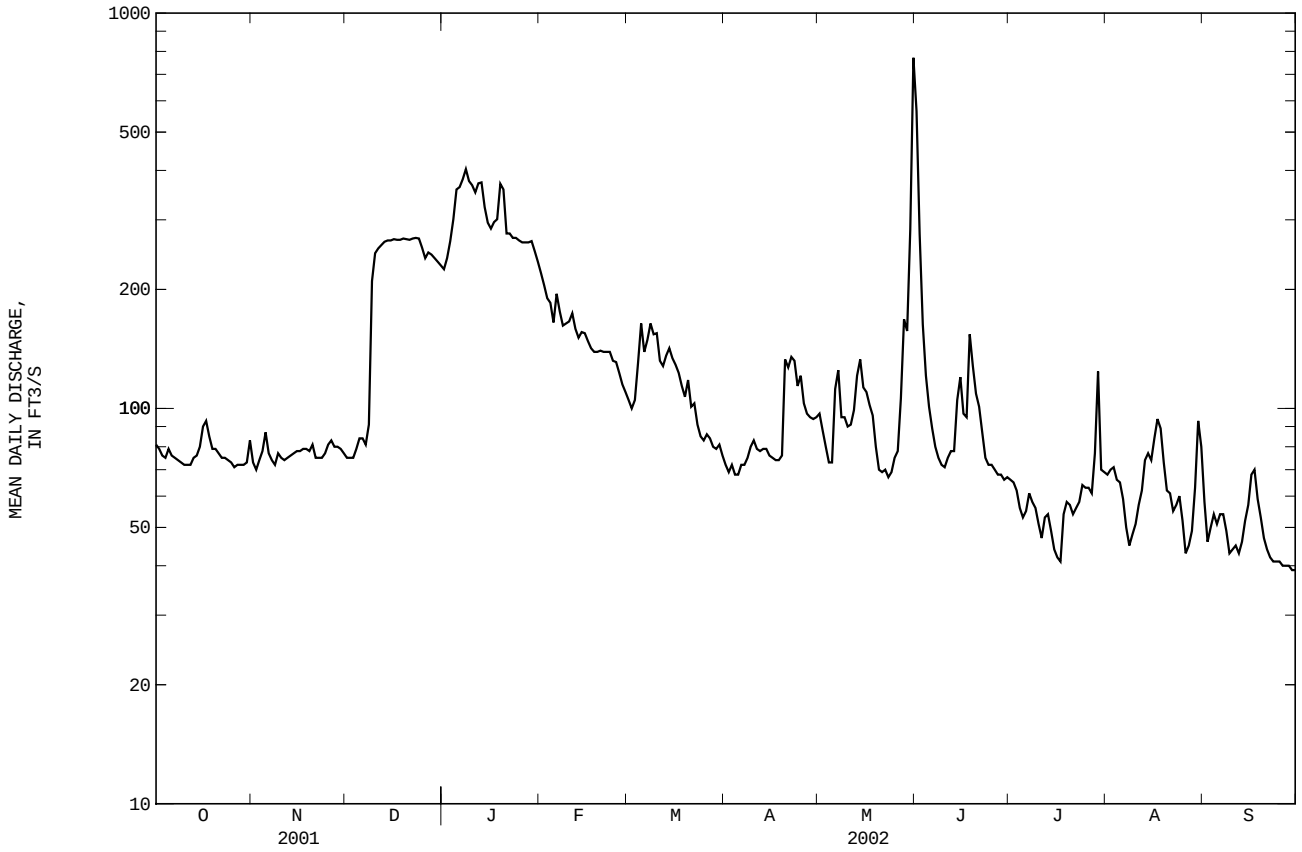
06876900 SOLOMON RIVER AT NILES, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1898 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	397.6	262.5	213.2	202.4	294.2	420.9	529.9	825.3	1342	1116	609.5	636.9
MAX	6545	3336	2844	2595	2129	2693	3393	5549	12150	23080	4699	5066
(WY)	1974	1994	1994	1994	1993	1993	1987	1903	1951	1951	1950	1946
MIN	16.2	22.5	19.0	17.5	26.3	35.9	41.7	32.1	69.7	27.1	17.9	5.60
(WY)	1923	1957	1957	1940	1957	1957	1940	1956	1933	1901	1901	1956

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1898 - 2002	
ANNUAL MEAN	306.9		120.2		571.4	
HIGHEST ANNUAL MEAN					4113	1951
LOWEST ANNUAL MEAN					92.3	1970
HIGHEST DAILY MEAN	3690	Feb 25	771	May 31	157000	Jul 14 1951
LOWEST DAILY MEAN	69	Sep 1	39	Sep 29	1.0	Sep 4 1926
ANNUAL SEVEN-DAY MINIMUM	72	Oct 24	40	Sep 24	4.2	Sep 22 1956
MAXIMUM PEAK FLOW			862	May 31	178000	Jul 14 1951
MAXIMUM PEAK STAGE			8.16	May 31	31.76	Jul 14 1951
INSTANTANEOUS LOW FLOW			38	Sep 29	1.0	Sep 4 1926
ANNUAL RUNOFF (AC-FT)	222200		86990		414000	
10 PERCENT EXCEEDS	814		266		1220	
50 PERCENT EXCEEDS	129		80		160	
90 PERCENT EXCEEDS	76		53		50	

e Estimated



06876900 SOLOMON RIVER AT NILES, KS--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1959 to 1987, 2000 to current year.

REMARKS.--Unpublished records of intermittent sediment samples are available on the Internet at http://ks.waterdata.usgs.gov/nwis. Sediment samples are collected only at selected flow conditions.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)
FEB						
07...	1515	181	1770	2.5	48	23.3
MAR						
14...	0915	145	1630	7.0	38	15.0
APR						
04...	0915	65	1760	8.5	52	9.2
JUN						
26...	1115	76	1440	28.0	137	28.0

06877600 SMOKY HILL RIVER AT ENTERPRISE, KS

LOCATION.--Lat 38°54'24", long 97°07'12", in NW $^{1}/_{4}$ NW $^{1}/_{4}$ SE $^{1}/_{4}$ sec.20, T.13 S., R.3 E., Dickinson County, Hydrologic Unit 10260008, on right bank at downstream side of bridge on Kansas Highway 43 in Enterprise, 18.6 mi upstream from Chapman Creek, and at mile 43.3.

WATER-DISCHARGE RECORDS

DRAINAGE AREA.--19,260 mi^2.

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

REVISED RECORDS.--WSP 1390: 1935(M).

GAGE.--Water-stage recorder. Datum of gage is 1,098.25 ft above NGVD 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 downstream at datum 0.40 ft lower, May 4, 1959 to Sept. 30, 1991 datum of gage 5.00 ft higher at same site. July 16, 1998 moved gage to new State Highway 43 bridge about 0.1 mi downstream from previous site at previous datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Natural flow affected by six lakes or reservoirs, and by numerous diversions upstream from station. Satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1903 reached stage of about 27 ft, present site and datum, from information by U.S. Army Corps of Engineers, discharge, 90,000 ft^3/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	866	397	319	390	202	320	340	517	794	e260	148	184
2	839	382	319	468	425	182	319	485	828	e250	145	159
3	808	352	320	484	465	156	302	457	704	e240	150	132
4	734	345	327	506	427	258	299	424	525	e225	147	118
5	624	354	340	554	363	459	303	390	423	e215	139	115
6	519	357	339	556	358	419	287	449	369	e205	125	118
7	470	363	340	579	401	423	291	564	329	e195	122	114
8	441	352	329	594	413	462	326	532	310	e185	112	113
9	412	337	316	642	401	505	342	513	e290	e180	104	113
10	395	335	415	673	399	478	373	726	e280	e170	102	113
11	376	344	523	598	455	460	387	596	e270	e165	103	107
12	364	359	546	634	615	418	382	555	269	e160	111	111
13	360	355	561	625	603	398	366	741	602	155	136	118
14	358	354	565	668	584	406	356	769	1320	161	155	125
15	380	355	569	624	579	401	341	603	958	156	176	132
16	375	359	578	614	570	403	317	449	751	145	182	137
17	387	361	766	571	565	389	299	559	658	139	184	146
18	475	364	847	576	562	378	294	662	673	134	199	164
19	536	356	863	535	570	395	295	616	851	132	231	169
20	538	337	866	542	568	395	420	606	717	136	225	152
21	542	334	872	569	559	406	996	521	593	136	215	140
22	540	333	872	591	558	397	e1300	411	521	132	200	129
23	475	333	861	590	557	398	e1400	353	510	130	178	123
24	408	345	847	582	549	389	e820	329	429	126	167	116
25	370	331	807	567	467	358	754	348	347	126	163	112
26	356	335	721	548	405	355	632	425	e330	130	156	111
27	354	327	740	505	346	355	590	553	e315	128	147	107
28	357	320	771	485	288	357	538	517	e300	130	139	107
29	365	320	780	482	---	354	598	551	e285	131	138	107
30	367	321	585	460	---	348	603	475	e270	187	143	106
31	372	---	416	169	---	344	---	495	---	184	167	---
MEAN	476.2	347.2	591.0	547.8	473.4	379.5	495.7	522.3	527.4	166.1	155.1	126.6
MAX	866	397	872	673	615	505	1400	769	1320	260	231	184
MIN	354	320	316	169	202	156	287	329	269	126	102	106
AC-FT	29280	20660	36340	33680	26290	23340	29490	32110	31380	10210	9540	7530

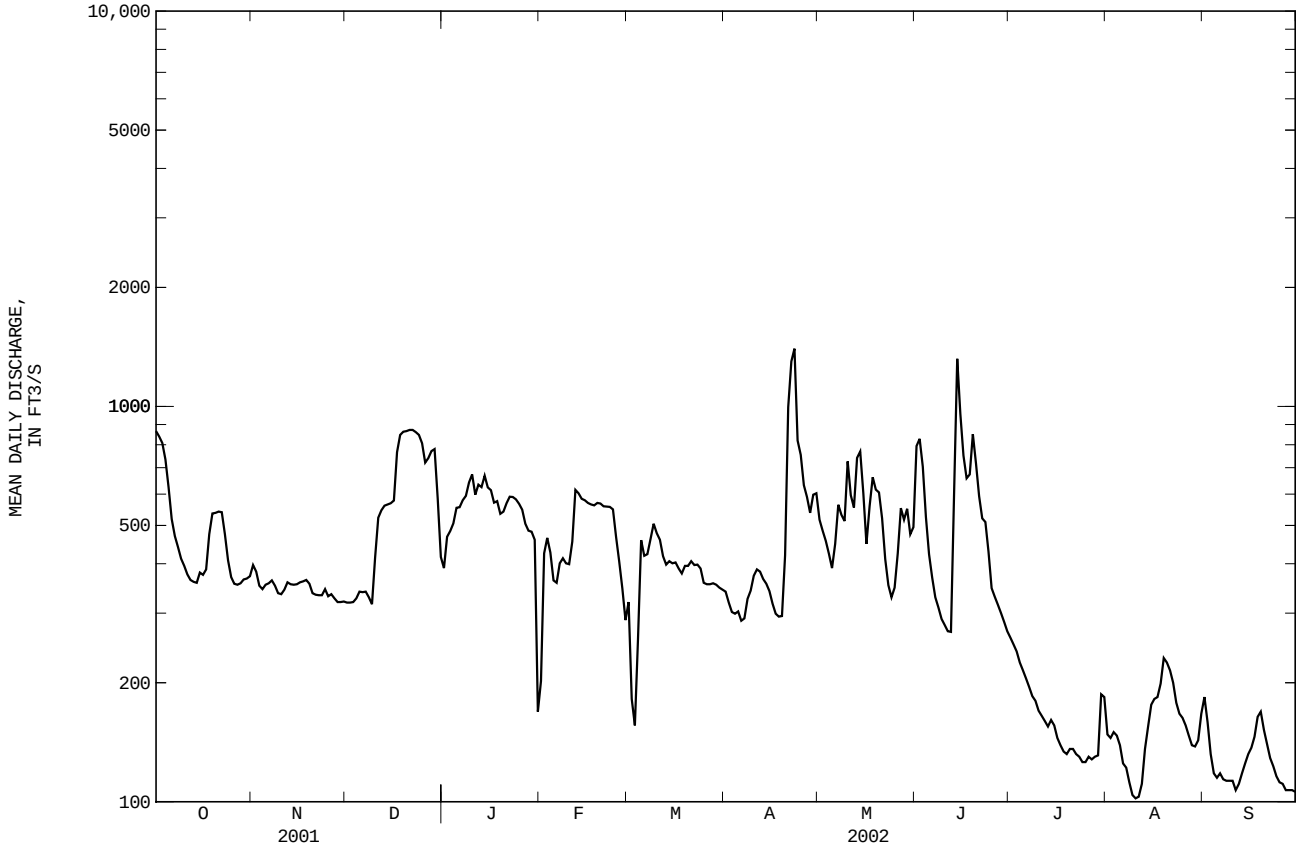
06877600 SMOKY HILL RIVER AT ENTERPRISE, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1935 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1313	850.6	657.9	602.5	909.8	1329	1765	2359	3193	3037	1602	1659
MAX	15720	6269	5723	4925	5776	8584	9597	11620	22500	45080	11460	12130
(WY)	1974	1974	1974	1994	1949	1973	1973	1995	1951	1951	1993	1951
MIN	65.9	96.6	74.2	55.0	89.0	98.1	96.0	102	310	141	121	58.6
(WY)	1992	1940	1957	1940	1957	1935	1935	1956	1988	1991	1936	1956

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1935 - 2002	
ANNUAL MEAN	1277		400.4		1609	
HIGHEST ANNUAL MEAN					8855	1951
LOWEST ANNUAL MEAN					293	1956
HIGHEST DAILY MEAN	10000	Feb 25	1400	Apr 23	207000	Jul 14 1951
LOWEST DAILY MEAN	111	Jan 20	102	Aug 10	38	Sep 23 1956
ANNUAL SEVEN-DAY MINIMUM	241	Jan 1	109	Sep 24	44	Sep 20 1956
MAXIMUM PEAK FLOW			1700	Apr 23	233000	Jul 14 1951
MAXIMUM PEAK STAGE			9.80	Apr 23	33.96	Jul 14 1951
INSTANTANEOUS LOW FLOW			92	Jan 31	10	Apr 23 1935
ANNUAL RUNOFF (AC-FT)	924300		289900		1166000	
10 PERCENT EXCEEDS	3040		664		3910	
50 PERCENT EXCEEDS	727		365		564	
90 PERCENT EXCEEDS	323		132		160	

e Estimated



06877600 SMOKY HILL RIVER AT ENTERPRISE, KS--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1956-95, 2000 to current year.

PERIOD OF DAILY RECORD.--October 1957 to September 1975.

REMARKS.--Unpublished records of intermittent sediment samples are available on the Internet at http://ks.waterdata.usgs.gov/nwis. Sediment samples are collected only at selected flow conditions.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
FEB							
07...	1110	406	1880	2.0	46	50.3	--
MAR							
14...	1120	365	1960	10.0	53	52.5	--
27...	1510	351	2130	10.0	78	74.3	--
MAY							
23...	0935	356	1920	19.0	297	285	100
JUN							
11...	1425	271	2150	29.0	160	117	--
14...	1300	1330	1020	27.0	1410	5050	--
25...	1335	344	1660	--	119	110	--
JUL							
10...	1245	172	2410	32.0	80	37.1	--

06878000 CHAPMAN CREEK NEAR CHAPMAN, KS

LOCATION.--Lat 39°01'52", long 97°02'24", in SW $^1/_4$ SE $^1/_4$ SE $^1/_4$ sec.1, T.12 S., R.3 E., Dickinson County, Hydrologic Unit 10260008, on right bank at downstream side of bridge on Kansas Highway 18, 5.0 mi northwest of Chapman, and at mile 10.0.

DRAINAGE AREA.--300 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is 1,102.41 ft above NGVD of 1929 (levels by U.S. Army Corps of Engineers). Prior to May 5, 1959, nonrecording gage at same site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in July 1951 reached a stage of 25.5 ft, from floodmarks, discharge, 46,700 ft^3/s, from rating curve extended above 12,000 ft^3/s on basis of contracted-opening measurement of peak flow.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,200 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 13	0100	*320	*8.56	No peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	21	20	e14	e19	e20	22	26	22	7.0	8.7	5.3
2	18	22	20	e15	e18	e19	21	24	20	6.5	7.8	4.4
3	18	25	21	16	e17	e19	20	23	18	5.9	6.7	3.7
4	18	25	21	16	e16	e20	20	23	17	6.1	5.4	3.6
5	20	23	21	17	e18	e21	20	22	16	6.9	5.1	3.1
6	19	23	22	18	e20	23	20	57	16	6.0	4.6	3.5
7	19	23	22	e17	22	26	20	55	16	7.5	3.6	3.5
8	19	23	22	20	24	27	22	36	15	8.0	3.1	3.5
9	19	23	20	20	27	26	25	28	14	6.3	2.7	2.8
10	19	22	20	21	e27	24	25	24	14	5.4	2.7	2.7
11	19	22	20	e20	28	25	26	38	14	6.7	4.0	4.4
12	19	23	20	22	29	27	24	122	13	7.0	3.6	4.7
13	19	23	21	23	27	24	22	196	13	6.6	5.0	5.5
14	19	24	21	21	25	24	22	61	13	5.7	8.7	7.5
15	20	24	21	21	25	23	22	39	14	4.7	8.2	7.4
16	22	23	22	20	24	22	21	31	15	6.4	10	7.5
17	22	23	21	21	24	22	21	28	14	6.7	9.3	7.3
18	23	22	21	19	24	21	20	26	13	6.7	8.3	7.3
19	21	22	21	20	25	24	84	26	13	6.2	8.3	6.9
20	20	21	21	21	24	28	122	25	12	5.3	8.3	6.8
21	19	21	21	21	25	31	82	24	11	4.6	11	6.3
22	19	21	21	22	24	28	86	23	11	3.7	9.9	5.7
23	19	21	21	23	24	24	53	23	11	3.2	8.5	5.8
24	19	23	20	22	23	23	38	23	10	3.0	8.5	5.8
25	19	23	19	20	23	23	32	26	9.2	3.1	8.1	5.8
26	19	24	e18	21	22	23	28	29	9.0	2.8	7.7	5.1
27	19	22	19	23	20	22	27	172	8.5	2.8	7.3	5.5
28	19	20	e18	22	e20	22	27	95	7.9	5.0	7.9	5.8
29	20	20	e17	21	---	22	29	46	6.9	8.4	7.4	6.6
30	21	20	e16	21	---	22	29	31	7.0	7.0	5.8	6.7
31	21	---	e15	20	---	22	---	25	---	6.3	5.5	---
MEAN	19.52	22.40	20.10	19.94	23.00	23.45	34.33	46.03	13.12	5.726	6.829	5.350
MAX	23	25	22	23	29	31	122	196	22	8.4	11	7.5
MIN	18	20	15	14	16	19	20	22	6.9	2.8	2.7	2.7
AC-FT	1200	1330	1240	1230	1280	1440	2040	2830	781	352	420	318

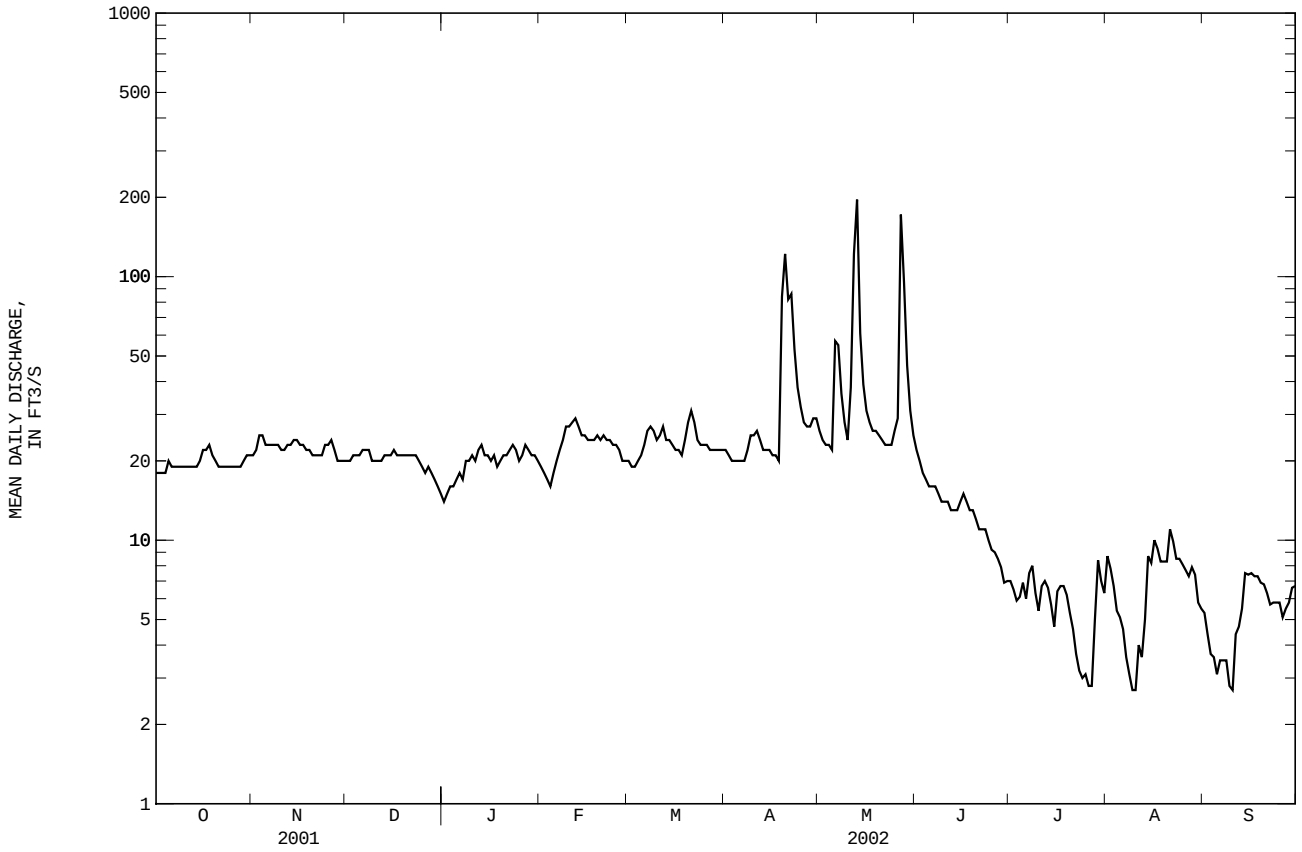
06878000 CHAPMAN CREEK NEAR CHAPMAN, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1955 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	70.63	52.00	35.11	36.78	66.19	116.0	100.8	181.9	163.1	133.5	67.22	73.01
MAX	943	659	214	223	263	690	594	1115	963	1479	375	598
(WY)	1974	1999	1974	1962	1969	1973	1999	1995	1977	1993	1977	1973
MIN	2.64	1.69	3.23	3.60	5.30	4.53	5.60	4.14	7.11	3.61	0.86	3.77
(WY)	1958	1957	1957	1957	1957	1957	1956	1956	1956	1955	1955	1957

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1955 - 2002	
ANNUAL MEAN	81.24		19.97		91.48	
HIGHEST ANNUAL MEAN					326	1993
LOWEST ANNUAL MEAN					11.4	1956
HIGHEST DAILY MEAN	3120	Feb 25	196	May 13	12600	Oct 12 1973
LOWEST DAILY MEAN	12	Jul 22	2.7	Aug 9	0.20	Oct 10 1956
ANNUAL SEVEN-DAY MINIMUM	12	Aug 11	3.2	Sep 4	0.41	Sep 20 1956
MAXIMUM PEAK FLOW			320	May 13	15800	Oct 12 1973
MAXIMUM PEAK STAGE			8.56	May 13	24.08	Oct 12 1973
INSTANTANEOUS LOW FLOW			2.1	Aug 10	0.10	Oct 10 1956
ANNUAL RUNOFF (AC-FT)	58810		14460		66270	
10 PERCENT EXCEEDS	90		27		122	
50 PERCENT EXCEEDS	22		20		24	
90 PERCENT EXCEEDS	15		5.5		7.7	

e Estimated



06879100 KANSAS RIVER AT FORT RILEY, KS

LOCATION.--Lat 39°03'09", long 96°46'33", in NE $^{1}/_{4}$ SW $^{1}/_{4}$ NW $^{1}/_{4}$ sec.33, T.11 S., R.6 E., Geary County, Hydrologic Unit 10270101, on right bank at downstream side of military highway bridge, 1.6 mi downstream from the confluence of the Republican and Smoky Hill Rivers, and at mile 168.9.

DRAINAGE AREA.--44,870 mi^2, 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 above NGVD of 1929.

REMARKS.--Records good. Natural flow affected by reservoirs in Colorado, Nebraska, and Kansas, and by numerous diversions upstream from station. Satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in July 1951 reached a stage of 34.5 ft, from information by U.S. Army Corps of Engineers.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

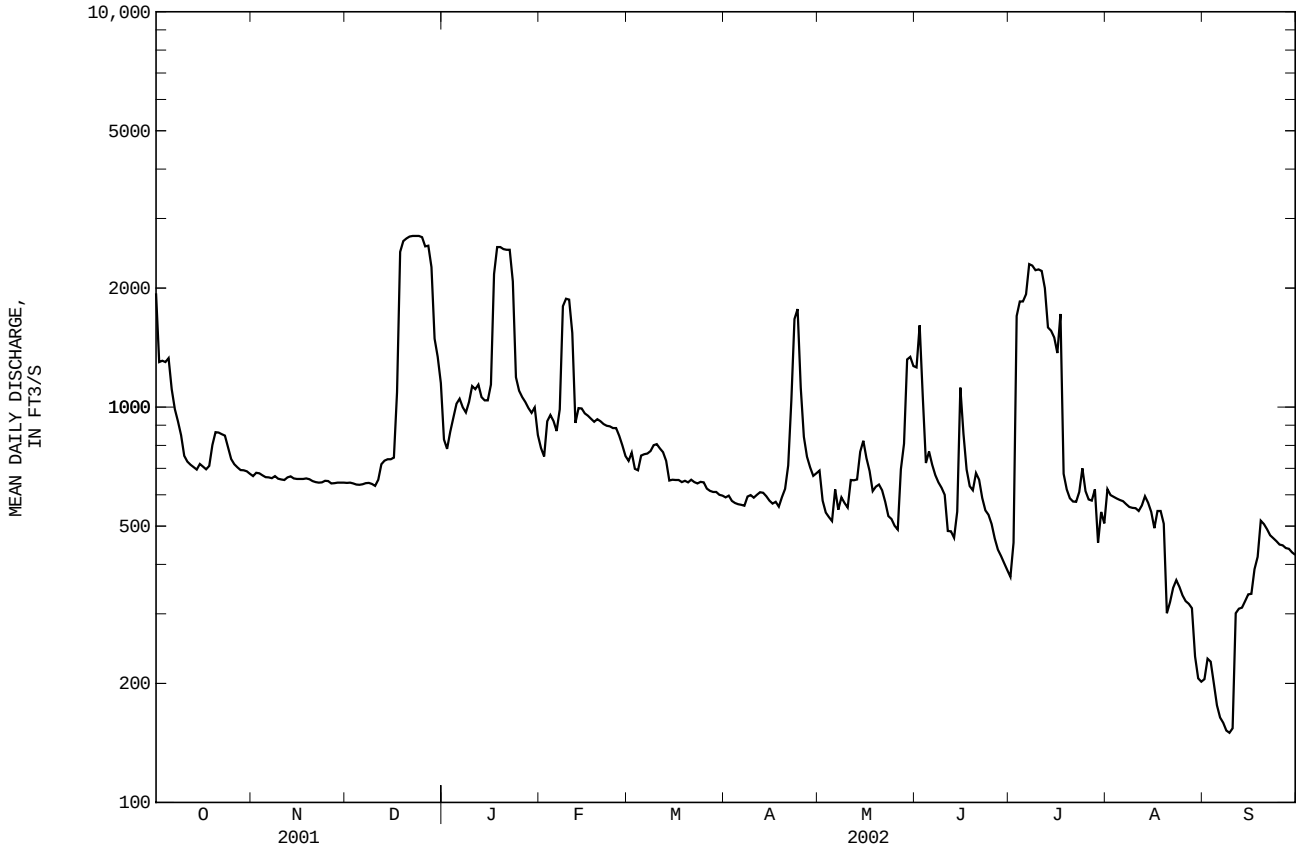
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1940	669	643	828	788	731	591	691	1260	372	620	205
2	1300	682	644	784	750	767	597	580	1610	454	599	231
3	1310	680	641	866	921	698	579	541	1060	1700	593	227
4	1300	672	637	940	955	692	572	527	722	1850	587	200
5	1330	665	636	1020	922	754	568	515	772	1850	582	176
6	1110	664	638	1050	870	760	566	619	715	1930	578	164
7	988	661	642	999	987	763	563	550	673	2300	568	159
8	920	669	643	969	1800	774	594	591	645	2280	559	152
9	849	659	639	1030	1880	801	599	572	625	2220	556	150
10	753	656	632	1130	1870	806	590	557	600	2230	555	154
11	728	654	655	1110	1540	786	600	654	486	2210	546	301
12	715	664	717	1140	912	769	609	653	485	2000	564	309
13	705	668	732	1060	994	731	607	656	467	1590	595	311
14	695	660	738	1040	992	652	595	771	544	1560	573	323
15	718	658	738	1040	964	655	580	822	1120	1500	543	336
16	707	658	745	1140	951	654	570	743	856	1370	494	337
17	696	658	1090	2170	934	654	576	689	695	1720	546	389
18	710	660	2470	2540	918	646	560	613	631	678	546	418
19	802	657	2630	2540	932	651	592	629	616	619	507	516
20	864	650	2670	2510	921	645	621	637	681	588	301	506
21	862	646	2700	2500	906	655	712	616	655	577	321	491
22	854	644	2710	2500	897	646	1040	576	589	576	349	474
23	847	645	2710	2080	894	641	1670	530	548	610	365	466
24	791	651	2710	1190	885	647	1770	521	534	700	351	458
25	739	650	2690	1100	885	645	1120	501	506	613	334	449
26	717	641	2550	1060	846	622	841	490	465	584	323	447
27	704	642	2560	1030	800	614	749	696	436	580	318	440
28	693	644	2260	994	752	610	704	808	420	619	310	438
29	692	644	1490	967	---	610	670	1320	403	454	234	429
30	688	644	1340	998	---	600	680	1340	387	543	206	423
31	678	---	1150	850	---	597	---	1270	---	508	202	---
MEAN	884.0	657.2	1434	1328	1024	686.3	722.8	686.4	673.5	1206	462.1	336.0
MAX	1940	682	2710	2540	1880	806	1770	1340	1610	2300	620	516
MIN	678	641	632	784	750	597	560	490	387	372	202	150
AC-FT	54360	39100	88170	81670	56860	42200	43010	42200	40080	74150	28410	19990

06879100 KANSAS RIVER AT FORT RILEY, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2435	2082	1858	1266	1928	2990	3380	4204	4334	4430	2942	2283
MAX	26340	16650	10070	7041	8689	13800	16580	16640	18730	40990	24050	16210
(WY)	1974	1974	1974	1974	1993	1973	1987	1993	1995	1993	1993	1993
MIN	335	226	204	207	182	204	210	191	408	240	447	336
(WY)	1981	1992	1992	1992	1992	1992	1992	1992	1988	1991	1970	2002

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1965 - 2002	
ANNUAL MEAN	2130		842.9		2849	
HIGHEST ANNUAL MEAN					12500	1993
LOWEST ANNUAL MEAN					625	1991
HIGHEST DAILY MEAN	11600	Feb 26	2710	Dec 22	83700	Jul 25 1993
LOWEST DAILY MEAN	293	Jan 10	150	Sep 9	130	Dec 25 1966
ANNUAL SEVEN-DAY MINIMUM	343	Jan 6	165	Sep 4	152	May 7 1992
MAXIMUM PEAK FLOW			2790	Jul 17	87600	Jul 26 1993
MAXIMUM PEAK STAGE			5.36	Jul 17	27.93	Jul 26 1993
INSTANTANEOUS LOW FLOW			146	Sep 8	100	Dec 24 1966
ANNUAL RUNOFF (AC-FT)	1542000		610200		2064000	
10 PERCENT EXCEEDS	5010		1600		7000	
50 PERCENT EXCEEDS	1430		660		1270	
90 PERCENT EXCEEDS	573		433		400	



06879650 KINGS CREEK NEAR MANHATTAN, KS

LOCATION.--Lat 39°06'07", long 96°35'42", in NW $^1/_4$ NW $^1/_4$ NW $^1/_4$ sec.18, T.11 S., R.8 E., Riley County, Hydrologic Unit 10270101, on left bank, 6.0 mi south of Manhattan, and at mile 2.9.

DRAINAGE AREA.--4.09 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is 1,094.65 ft above NGVD of 1929.

REMARKS.--Records fair. Satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 50 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 5	2245	*342	*5.90	May 11	0130	61	4.65

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

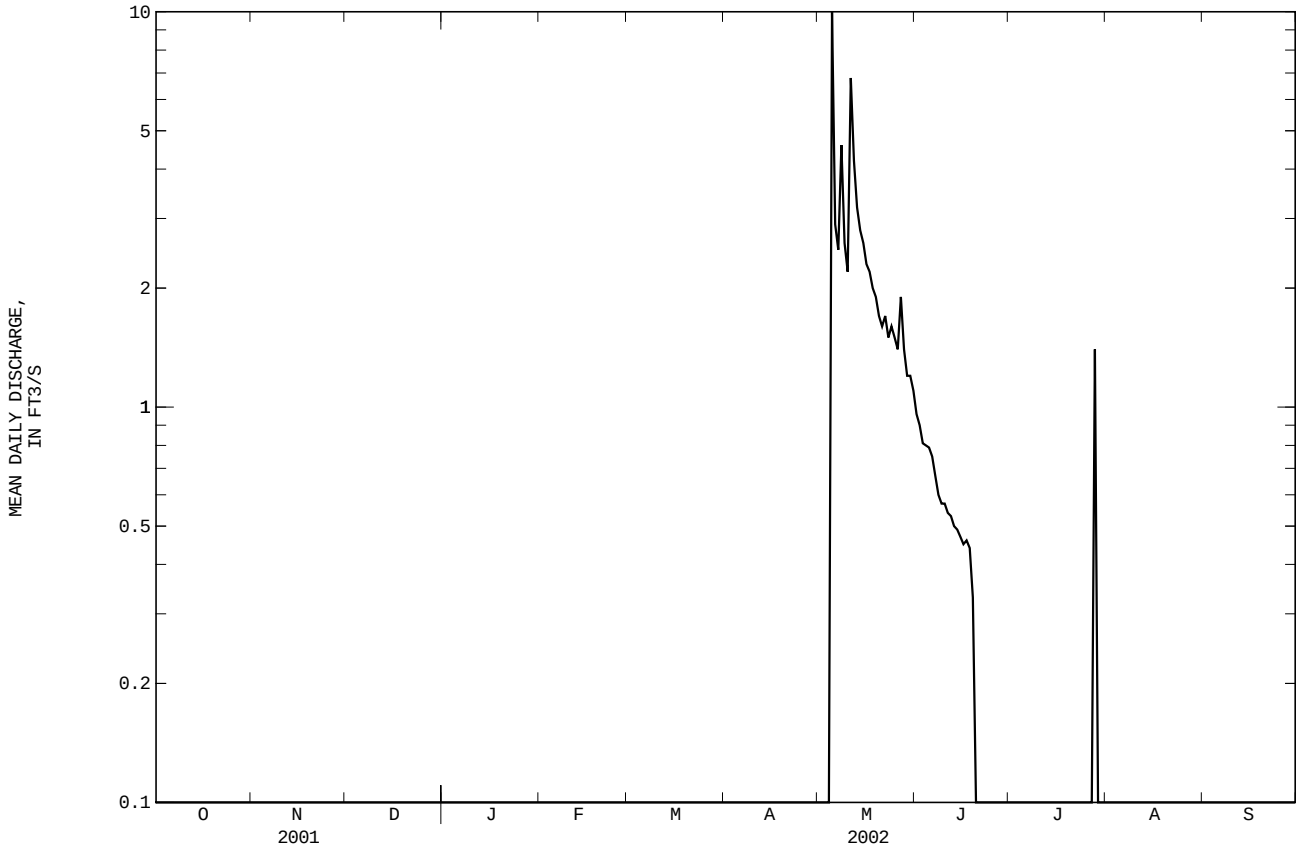
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.96	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.80	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10	0.79	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.9	0.75	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.5	0.67	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.6	0.60	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.6	0.57	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.2	0.57	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.8	0.54	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.2	0.53	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.50	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.8	0.49	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.6	0.47	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.3	0.45	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.2	0.46	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.0	0.44	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.9	0.33	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.7	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.6	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.7	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.5	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.6	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.5	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.4	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.9	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.4	0.00	1.4	0.00	0.00
29	0.00	0.00	0.00	0.00	---	0.00	0.00	1.2	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.00	1.2	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	0.00	---	1.1	---	0.00	0.00	---
MEAN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.277	0.388	0.045	0.000	0.000
MAX	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10	0.96	1.4	0.00	0.00
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	140	23	2.8	0.00	0.00

06879650 KINGS CREEK NEAR MANHATTAN, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.400	1.683	0.859	0.492	1.149	3.003	5.529	6.777	3.044	4.007	0.554	0.239
MAX	10.9	24.7	8.09	2.32	4.51	12.5	21.9	43.7	10.2	43.5	4.11	2.46
(WY)	1999	1999	1993	1999	1993	1984	1999	1995	1982	1993	1998	1989
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1980	1980	1980	1980	1980	1981	1981	1989	1989	1988	1980	1980

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1980 - 2002	
ANNUAL MEAN	1.131		0.229		2.401	
HIGHEST ANNUAL MEAN					9.47	1993
LOWEST ANNUAL MEAN					0.20	1989
HIGHEST DAILY MEAN	148	Jun 20	10	May 5	464	May 13 1995
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 1	0.00	Oct 1 1979
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 1	0.00	Oct 1 1979
MAXIMUM PEAK FLOW			342	May 5	10200	May 13 1995
MAXIMUM PEAK STAGE			5.90	May 5	13.98	May 13 1995
INSTANTANEOUS LOW FLOW			0.00	Oct 1	.00	many years
ANNUAL RUNOFF (AC-FT)	819		166		1740	
10 PERCENT EXCEEDS	1.5		0.58		5.3	
50 PERCENT EXCEEDS	0.00		0.00		0.12	
90 PERCENT EXCEEDS	0.00		0.00		0.00	



06882510 BIG BLUE RIVER AT MARYSVILLE, KS

LOCATION.--Lat 39°50'31", long 96°39'39", in NE $^{1}/_{4}$ NW $^{1}/_{4}$ NE $^{1}/_{4}$ sec.32, T.2 S., R.7 E., Marshall County, Hydrologic Unit 10270205, on right bank at downstream side of bridge on U.S. Highway 36, 0.3 mi west of Marysville, and at mile 84.6.

DRAINAGE AREA.--4,777 mi^2.

PERIOD OF RECORD.--October 1984 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,110.31 ft above NGVD of 1929.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Power plant located 0.8 mi upstream. Some pump diversions for irrigation upstream from station. Natural flow affected by ground-water withdrawals for irrigation and return flow from irrigated areas. Satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 1903 reached a stage of 43.79 ft, from floodmarks. Flood of June 9, 1941, reached a stage of 45.39 ft, from floodmarks; no discharge determined. Flood of June 15, 1951, reached a stage of 40.22 ft, from U.S. Weather Bureau wire-weight gage reading; discharge 55,600 ft^3/sec, by contracted-opening measurement of peak flow. Flood of Oct. 13, 1973, reached a stage of 43.86 ft, from wire-weight gage readings.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 10,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 29	0400	*11,200	*22.41	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	540	277	321	e260	e240	e220	357	440	2500	122	82	245
2	460	278	315	e260	e255	e245	350	411	1800	127	76	223
3	404	274	307	e260	296	288	332	402	1460	120	68	208
4	367	272	312	296	341	e320	323	407	1140	107	55	189
5	418	273	326	330	346	375	321	394	887	99	43	179
6	385	277	316	325	347	411	318	639	746	101	37	161
7	343	275	306	345	359	428	316	1110	654	99	41	154
8	322	274	298	339	379	392	352	1420	595	174	40	148
9	314	266	294	344	403	359	408	1080	549	222	59	138
10	313	265	290	371	423	366	372	979	522	193	67	135
11	311	267	292	356	373	348	355	859	1040	158	67	134
12	299	270	300	384	399	391	352	3390	827	143	69	133
13	332	276	304	396	374	368	342	3020	589	116	90	151
14	468	282	299	389	389	385	330	2300	530	100	167	179
15	502	286	299	352	380	402	330	2380	951	87	277	166
16	762	286	302	359	392	383	323	1770	990	76	226	359
17	656	283	299	322	397	376	324	1270	750	68	222	356
18	492	285	293	305	392	377	313	980	662	72	233	226
19	412	280	288	332	401	378	322	789	588	76	310	192
20	375	274	286	311	399	380	306	658	e521	73	261	178
21	356	269	286	320	388	356	324	570	469	62	230	165
22	338	273	290	343	378	334	339	520	398	56	227	153
23	327	285	299	331	368	332	345	562	335	48	247	146
24	315	312	265	317	363	336	333	702	291	45	645	141
25	293	352	227	329	356	346	319	2910	253	43	2040	137
26	283	360	202	324	322	346	316	3850	216	90	1640	136
27	278	365	260	332	253	349	351	4380	184	143	802	134
28	271	336	255	330	e240	359	442	6800	169	232	577	135
29	272	329	e255	320	---	371	442	9090	e151	178	406	134
30	275	326	e255	263	---	377	465	4820	e133	137	301	132
31	275	---	e255	e240	---	369	---	3260	---	104	276	---
MEAN	379.3	290.9	287.0	325.3	355.5	357.0	347.4	2005	696.7	112.0	318.7	175.6
MAX	762	365	326	396	423	428	465	9090	2500	232	2040	359
MIN	271	265	202	240	240	220	306	394	133	43	37	132
AC-FT	23320	17310	17650	20000	19740	21950	20670	123300	41460	6880	19600	10450

06882510 BIG BLUE RIVER AT MARYSVILLE, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1985 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	722.8	582.5	449.6	373.8	662.3	1511	1085	1852	2052	2564	1047	1029
MAX	5114	2172	1016	644	2157	7346	4912	5946	4229	15000	2751	3957
(WY)	1987	1999	1998	1987	1993	1987	1987	1995	2001	1993	1993	1989
MIN	87.5	146	179	182	208	243	211	187	294	112	170	109
(WY)	1992	1992	1991	1991	1990	1991	1989	1989	1988	2002	1988	1991

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1985 - 2002	
ANNUAL MEAN	1491		472.8		1164	
HIGHEST ANNUAL MEAN					3318	1993
LOWEST ANNUAL MEAN					413	1988
HIGHEST DAILY MEAN	14100	Sep 17	9090	May 29	34400	Jul 7 1986
LOWEST DAILY MEAN	190	Jan 1	37	Aug 6	23	Mar 25 1991
ANNUAL SEVEN-DAY MINIMUM	204	Aug 31	49	Aug 4	49	Aug 4 2002
MAXIMUM PEAK FLOW			11200	May 29	39700	Jul 6 1986
MAXIMUM PEAK STAGE			22.41	May 29	38.90	Jul 6 1986
INSTANTANEOUS LOW FLOW			36	Aug 6	17	Dec 4 1991
ANNUAL RUNOFF (AC-FT)	1079000		342300		843600	
10 PERCENT EXCEEDS	4170		678		2560	
50 PERCENT EXCEEDS	466		321		448	
90 PERCENT EXCEEDS	267		133		197	

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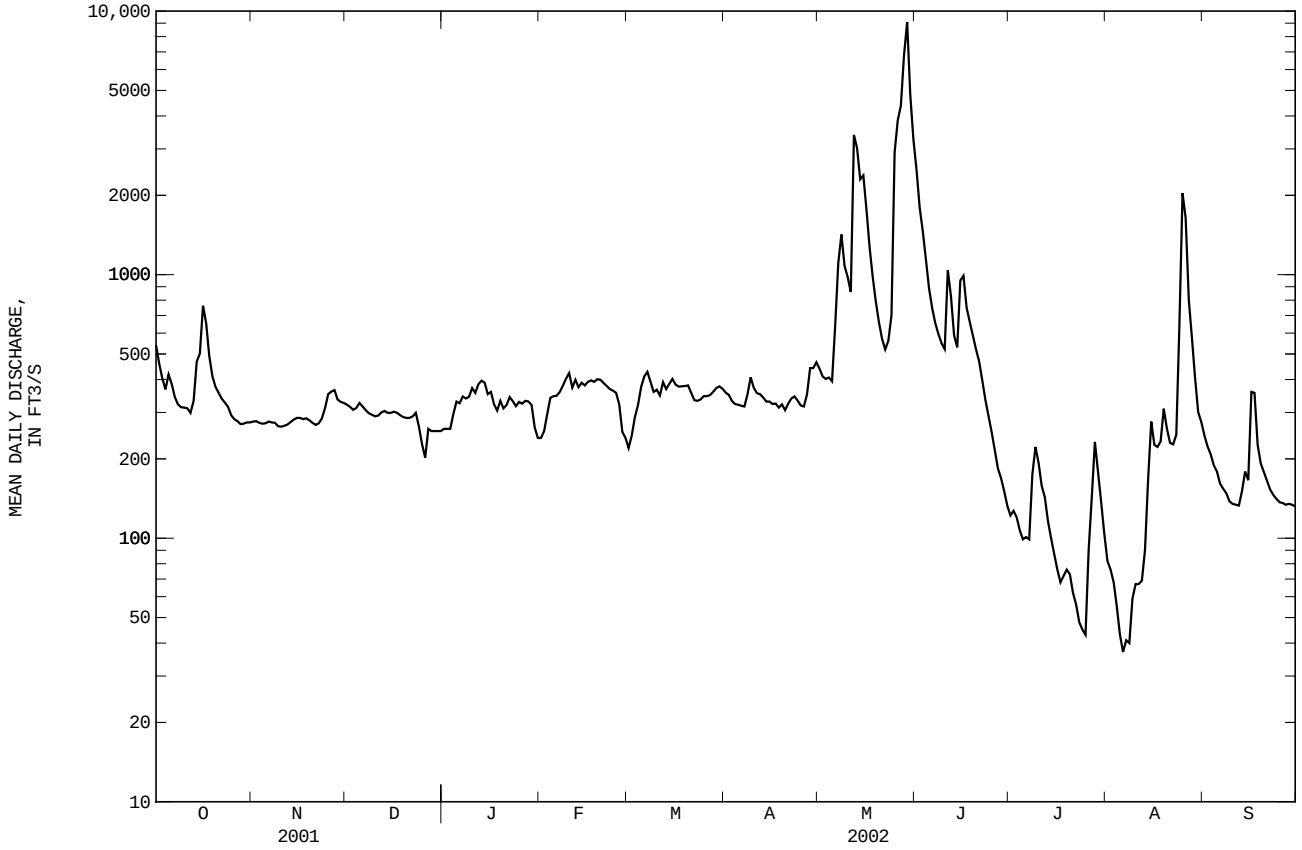

06884200 MILL CREEK AT WASHINGTON, KS

LOCATION.--Lat 39°48'50", long 97°02'20", in SW $^1/_4$ SW $^1/_4$ SE $^1/_4$ sec.1, T.3 S., R.3 E., Washington County, Hydrologic Unit 10270207, on right bank at downstream side of bridge in roadside park on U.S. Highway 36, 0.5 mi east of Washington, and at mile 26, approximately.

DRAINAGE AREA.--344 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is 1,261.56 ft above NGVD of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Low flow partially regulated at times by irrigation. Satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum known stages since at least 1903, about 36 ft June 8, 1941, about 34 ft in 1903 and 1908, from information by local residents and newspaper files.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,200 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 28	1645	*2,870	*14.47	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	17	19	e19	e20	e16	24	34	89	8.7	0.06	2.9
2	11	16	20	24	e22	e14	23	29	64	7.7	0.62	2.6
3	9.8	16	21	26	e25	e17	20	27	51	7.1	0.75	2.3
4	9.2	16	21	27	e25	e18	19	25	42	6.8	0.32	2.4
5	9.0	17	21	25	e25	18	19	23	35	6.8	0.19	2.4
6	8.8	16	20	21	24	20	20	34	32	6.8	0.08	2.3
7	8.7	16	20	e18	21	22	19	66	29	9.6	0.51	1.2
8	8.4	18	20	19	23	25	22	36	25	9.7	0.61	1.1
9	8.4	18	19	19	28	29	23	29	22	7.5	0.91	2.2
10	8.3	17	19	20	35	22	23	24	19	6.7	1.4	1.9
11	8.4	16	19	e20	e35	25	23	26	56	6.6	1.5	2.0
12	9.4	17	19	24	30	21	22	176	541	5.7	1.5	3.3
13	14	17	19	23	e26	21	21	115	151	5.6	9.8	7.4
14	19	19	19	23	e26	22	21	70	68	5.6	4.5	4.6
15	39	20	19	e20	e25	21	19	48	47	5.6	2.5	3.0
16	102	20	19	e20	e25	19	18	36	36	4.3	2.8	2.4
17	85	19	19	e20	e25	18	18	33	31	3.3	8.5	2.2
18	51	19	19	e19	e27	17	18	29	28	3.1	11	2.4
19	30	18	18	20	33	18	18	28	24	2.2	19	3.1
20	22	18	18	e19	34	19	20	24	22	1.9	12	2.5
21	20	17	18	e20	32	19	22	22	19	1.4	9.2	1.8
22	18	17	19	e20	26	17	21	21	17	1.3	6.4	1.5
23	16	19	18	e19	22	17	21	20	15	0.69	8.3	1.6
24	16	24	15	e18	20	17	21	37	13	0.22	8.4	1.5
25	14	27	e19	e18	19	19	20	283	12	0.04	6.3	1.4
26	15	28	e18	22	13	22	19	458	13	0.02	5.2	1.4
27	14	24	e16	20	e17	22	27	651	12	0.00	4.1	1.8
28	14	22	e19	20	e18	24	65	1850	10	0.68	4.0	1.9
29	13	20	e19	15	---	27	65	670	10	2.1	3.5	1.7
30	14	19	e19	e16	---	29	45	155	8.7	0.70	2.0	1.7
31	14	---	e19	e17	---	28	---	193	---	0.21	1.7	---
MEAN	20.66	18.90	18.94	20.35	25.04	20.74	24.53	170.1	51.39	4.150	4.440	2.350
MAX	102	28	21	27	35	29	65	1850	541	9.7	19	7.4
MIN	8.3	16	15	15	13	14	18	20	8.7	0.00	0.06	1.1
AC-FT	1270	1120	1160	1250	1390	1280	1460	10460	3060	255	273	140

06884200 MILL CREEK AT WASHINGTON, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	70.62	50.36	31.70	45.74	84.28	179.7	124.5	200.7	200.6	132.5	59.70	95.68
MAX	839	359	176	367	505	1264	725	1161	804	2151	344	864
(WY)	1974	1973	1993	1962	1969	1979	1987	1995	1967	1993	1968	1973
MIN	1.11	1.50	1.39	1.06	2.23	5.81	6.23	3.54	6.38	0.33	1.15	2.08
(WY)	1967	1967	1967	1967	1967	1967	1966	1966	2000	1964	1991	2000

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1960 - 2002	
ANNUAL MEAN	99.96		31.93		106.4	
HIGHEST ANNUAL MEAN					468	1993
LOWEST ANNUAL MEAN					12.7	1964
HIGHEST DAILY MEAN	3060	Jun 6	1850	May 28	10000	Jul 7 1993
LOWEST DAILY MEAN	5.0	Jan 1	0.00	Jul 27	0.00	Jun 29 1963
ANNUAL SEVEN-DAY MINIMUM	5.2	Jan 17	0.32	Jul 31	0.00	Jun 29 1963
MAXIMUM PEAK FLOW			2870	May 28	14600	Jul 7 1993
MAXIMUM PEAK STAGE			14.47	May 28	29.35	Jul 7 1993
INSTANTANEOUS LOW FLOW			0.00	Jul 26	.00	many years
ANNUAL RUNOFF (AC-FT)	72370		23120		77070	
10 PERCENT EXCEEDS	188		34		176	
50 PERCENT EXCEEDS	24		19		19	
90 PERCENT EXCEEDS	5.4		1.9		3.2	

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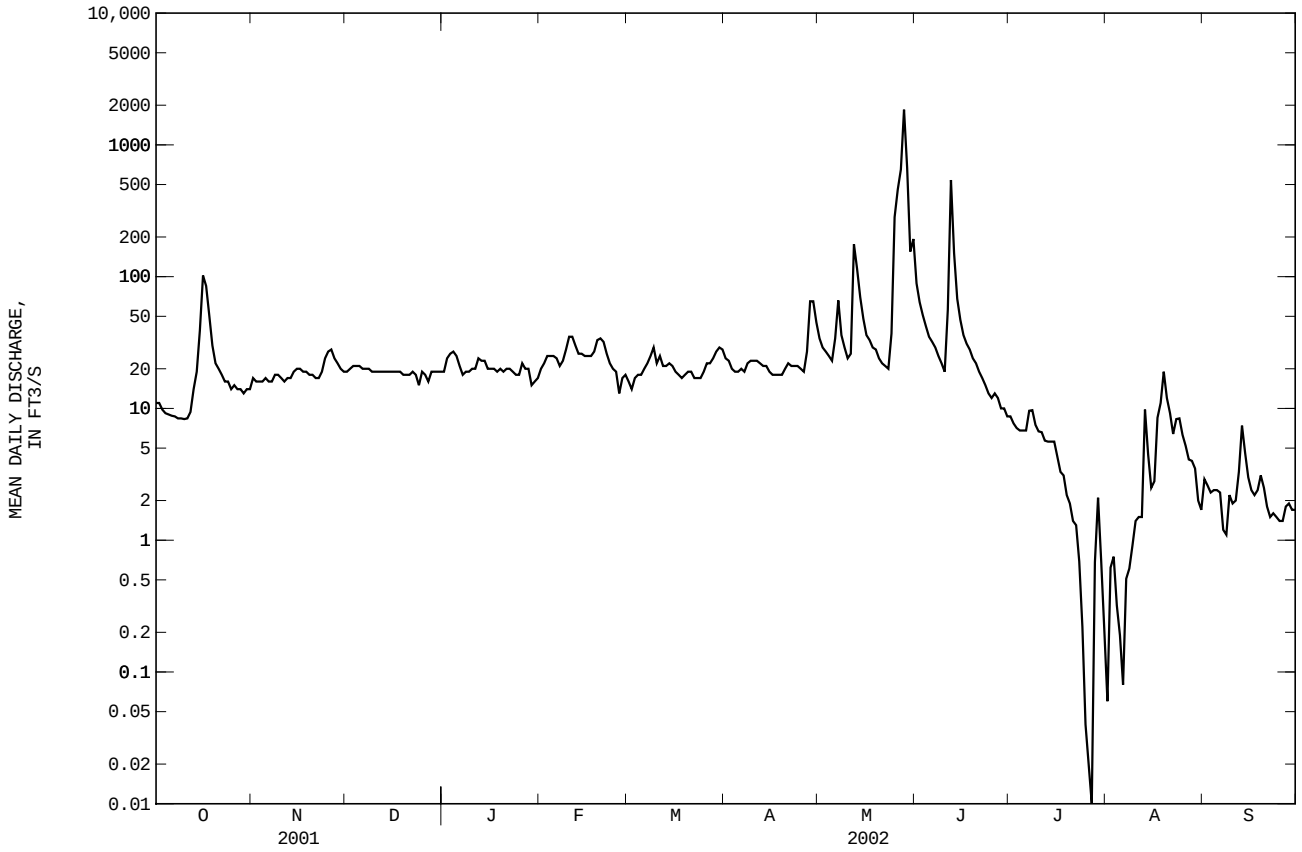


06884400 LITTLE BLUE RIVER NEAR BARNES, KS

LOCATION.--Lat 39°46'33", long 96°51'29", in NW $^{1}/_{4}$ NW $^{1}/_{4}$ SW $^{1}/_{4}$ sec.22, T.3 S., R.5 E., Washington County, Hydrologic Unit 10270207, on right bank at downstream side of bridge on Kansas Highway 15E., 0.4 mi downstream from Malone Creek, 4.5 mi north of Barnes, and at mile 19.2.

DRAINAGE AREA.--3,324 mi^2.

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 downstream and are considered not equivalent.

GAGE.--Water-stage recorders. Datum of gage is 1,140.06 ft above NGVD of 1929 (levels by U.S. Army Corps of Engineers).

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Natural flow affected by ground-water withdrawals, diversions for irrigation, and return flow from irrigated areas. Satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 28	2300	*10,300	*12.51	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	240	168	203	e210	e180	e150	241	303	1270	107	222	95
2	211	167	208	e210	e190	e175	236	266	913	99	181	91
3	190	168	213	e210	e208	e210	220	240	727	95	130	72
4	177	168	223	e220	e218	e222	211	226	607	91	85	61
5	171	165	225	e240	e220	e230	208	220	541	85	62	55
6	174	167	216	e275	e220	e294	209	250	478	78	53	51
7	162	170	213	293	e222	e315	208	379	416	85	50	49
8	156	167	210	298	e225	e294	233	821	388	82	47	46
9	161	162	208	322	e227	e273	238	741	359	71	43	44
10	162	166	207	359	e229	e219	238	508	337	71	42	43
11	159	168	206	e372	e233	e234	232	381	383	72	43	41
12	151	168	208	e360	e236	e273	226	935	674	66	46	40
13	182	174	212	e322	e238	e287	218	1060	1010	67	60	44
14	238	180	213	e319	e240	e280	214	771	1720	65	65	50
15	235	181	213	e247	e246	e283	215	806	935	64	61	57
16	408	180	212	e228	e250	263	209	687	614	60	58	118
17	411	180	212	e201	e265	252	200	556	472	58	79	87
18	394	181	211	e184	e280	243	196	467	392	60	76	72
19	345	174	211	e175	e288	242	207	403	347	54	90	66
20	285	166	209	e170	297	244	200	364	304	47	123	65
21	260	165	211	e175	288	235	214	332	273	44	204	60
22	249	169	213	e187	279	223	231	317	244	47	129	57
23	225	180	208	e207	268	218	229	309	215	44	95	56
24	204	225	e175	e201	260	224	230	415	197	45	83	55
25	184	270	e140	e173	252	230	216	1440	174	45	101	55
26	173	280	e166	e181	e210	232	208	3160	162	43	354	54
27	168	255	e195	e222	e165	245	242	3300	151	43	309	54
28	167	237	e200	e210	e160	251	395	5330	136	52	207	55
29	167	220	e207	e192	---	252	375	6900	123	72	181	55
30	165	213	e208	e173	---	240	346	2490	112	86	138	55
31	165	---	e210	e170	---	237	---	1450	---	167	116	---
MEAN	217.4	187.8	205.4	235.7	235.5	244.2	234.8	1156	489.1	69.84	114.0	60.10
MAX	411	280	225	372	297	315	395	6900	1720	167	354	118
MIN	151	162	140	170	160	150	196	220	112	43	42	40
MED	182	172	210	210	234	242	219	508	386	66	85	55
AC-FT	13370	11180	12630	14490	13080	15020	13970	71060	29110	4290	7010	3580

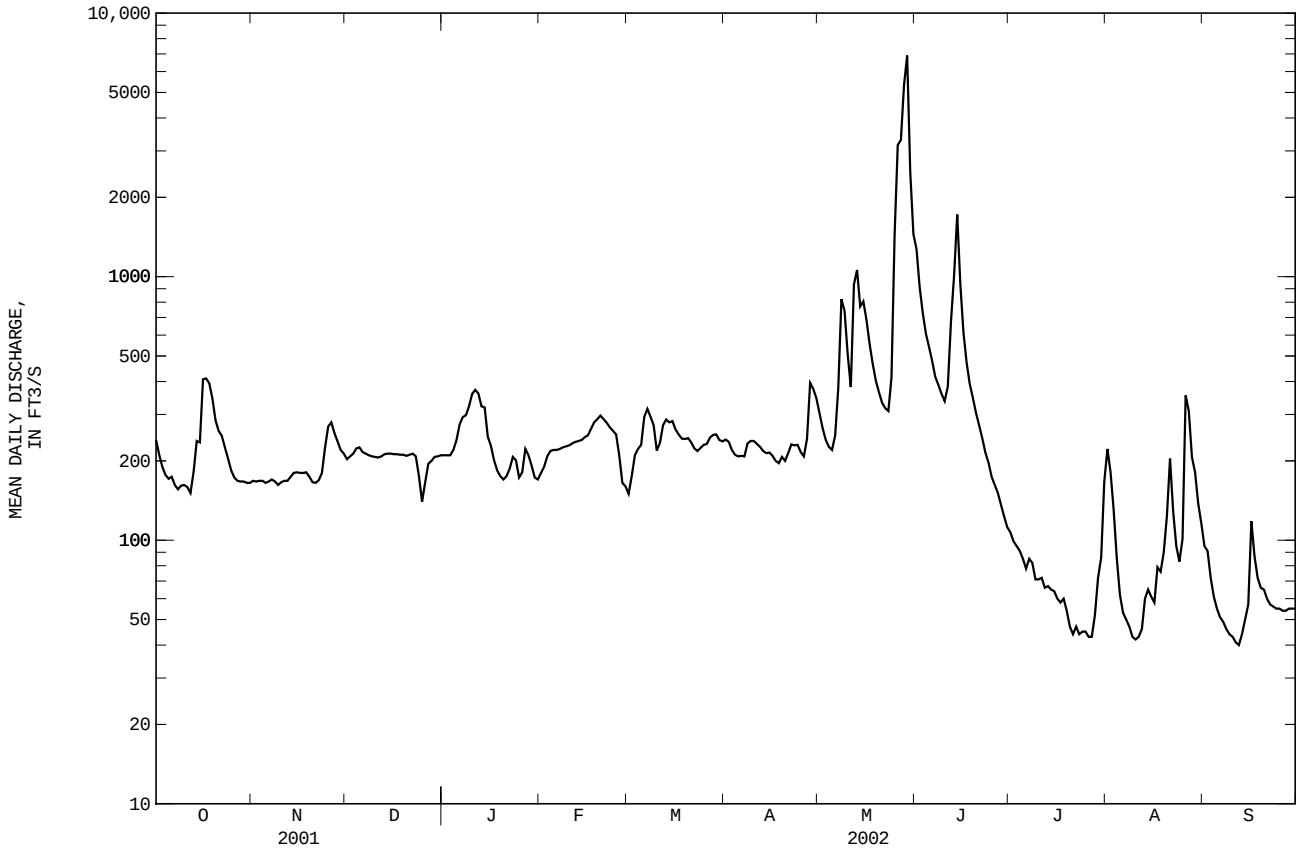
06884400 LITTLE BLUE RIVER NEAR BARNES, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1959 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	574.7	342.0	249.7	296.5	494.5	1026	713.3	1145	1260	1074	600.4	587.5
MAX	6989	1526	676	1097	1576	5436	3696	3985	5343	11420	3487	3804
(WY)	1974	1997	1974	1974	1993	1979	1987	1995	1984	1993	1985	1973
MIN	52.9	102	114	90.2	129	146	150	128	208	69.8	63.4	51.5
(WY)	1992	1992	1967	1967	1992	1992	1981	1992	1988	2002	1991	1991

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1959 - 2002	
ANNUAL MEAN	867.7		288.4		698.2	
HIGHEST ANNUAL MEAN					2413	1993
LOWEST ANNUAL MEAN					234	1991
HIGHEST DAILY MEAN	14300	May 6	6900	May 29	46100	Oct 13 1973
LOWEST DAILY MEAN	105	Jan 1	40	Sep 12	24	Aug 4 1964
ANNUAL SEVEN-DAY MINIMUM	134	Jan 1	44	Sep 7	28	Aug 1 1964
MAXIMUM PEAK FLOW			10300	May 28	53700	Oct 12 1973
MAXIMUM PEAK STAGE			12.51	May 28	27.70	Oct 12 1973
INSTANTANEOUS LOW FLOW			40	Jul 27	22	Aug 6 1964
ANNUAL RUNOFF (AC-FT)	628200		208800		505800	
10 PERCENT EXCEEDS	2000		393		1330	
50 PERCENT EXCEEDS	288		210		264	
90 PERCENT EXCEEDS	160		57		126	

e Estimated



06885500 BLACK VERMILLION RIVER NEAR FRANKFORT, KS

LOCATION.--Lat 39°41'03", long 96°26'15", in NE $^1/_4$ NW $^1/_4$ NW $^1/_4$ sec.29, T.4 S., R.9 E., Marshall County, Hydrologic Unit 10270205, on right bank at downstream side of county highway bridge, 0.2 mi downstream from Robidoux Creek, 2.2 mi southwest of Frankfort, and at mile 19.9.

WATER-DISCHARGE RECORDS

DRAINAGE AREA.--410 mi^2.

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 above NGVD of 1929. Prior to May 13, 1954, nonrecording gage at same site and datum.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Aug. 3, 1948, reached a stage of 30.2 ft, present site and datum, from floodmarks. Flood in June 1951 reached a stage of 28.6 ft, present site and datum, from floodmarks, discharge, 30,400 ft^3/s, based on contracted-opening measurement of peak flow.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 27	1500	*1,760	*13.58	No peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53	37	36	21	e24	e23	25	35	44	5.4	3.6	2.3
2	49	36	36	20	e25	e23	25	32	39	5.2	2.9	2.1
3	44	34	36	20	e28	e24	23	31	33	5.1	2.7	2.0
4	42	34	37	23	e30	25	22	33	29	5.2	2.9	1.9
5	42	35	38	29	36	28	23	32	27	7.5	2.9	1.8
6	40	37	37	35	37	37	23	44	25	7.7	2.6	1.7
7	39	37	36	36	39	37	23	47	23	6.6	2.6	1.7
8	39	36	34	39	41	34	28	38	21	6.9	2.7	1.8
9	39	34	34	42	47	32	39	32	20	4.8	2.7	1.7
10	41	33	34	44	48	e31	41	27	20	4.0	2.8	1.6
11	39	36	35	42	44	e31	38	121	21	4.0	3.0	1.6
12	38	36	38	45	44	32	35	185	28	4.1	3.1	1.6
13	38	38	39	41	38	35	31	157	23	5.9	3.4	2.8
14	38	38	38	42	39	34	29	68	20	6.0	3.9	3.9
15	44	37	38	42	38	30	29	49	17	4.5	3.5	3.3
16	105	36	37	38	36	27	27	43	17	3.6	3.1	2.5
17	59	36	36	37	35	26	26	41	16	4.2	3.5	2.1
18	44	36	35	e35	35	26	26	39	15	4.2	3.7	2.2
19	41	33	34	e34	37	28	26	35	13	3.5	3.9	2.3
20	39	31	32	34	39	29	25	32	12	3.2	4.1	2.7
21	38	32	32	e33	38	26	31	29	12	3.8	3.8	2.3
22	38	35	34	e32	34	22	34	27	11	3.1	3.7	2.2
23	40	37	29	e33	33	25	32	28	11	3.1	4.1	2.0
24	38	42	28	e33	32	26	31	31	9.8	3.6	6.4	1.9
25	35	45	e27	e34	29	26	27	59	9.5	3.3	6.1	1.8
26	32	42	26	e34	21	25	25	53	9.0	3.3	4.5	1.8
27	32	38	28	34	e22	27	31	945	7.3	3.3	4.2	1.9
28	34	36	28	33	e24	28	46	448	6.6	3.4	29	2.0
29	36	36	28	28	---	29	44	151	6.8	7.9	13	2.3
30	37	36	27	24	---	28	39	72	5.7	13	4.4	2.6
31	37	---	23	e24	---	26	---	53	---	4.3	2.9	---
MEAN	42.26	36.30	33.23	33.58	34.75	28.39	30.13	97.32	18.39	4.958	4.700	2.147
MAX	105	45	39	45	48	37	46	945	44	13	29	3.9
MIN	32	31	23	20	21	22	22	27	5.7	3.1	2.6	1.6
AC-FT	2600	2160	2040	2060	1930	1750	1790	5980	1090	305	289	128

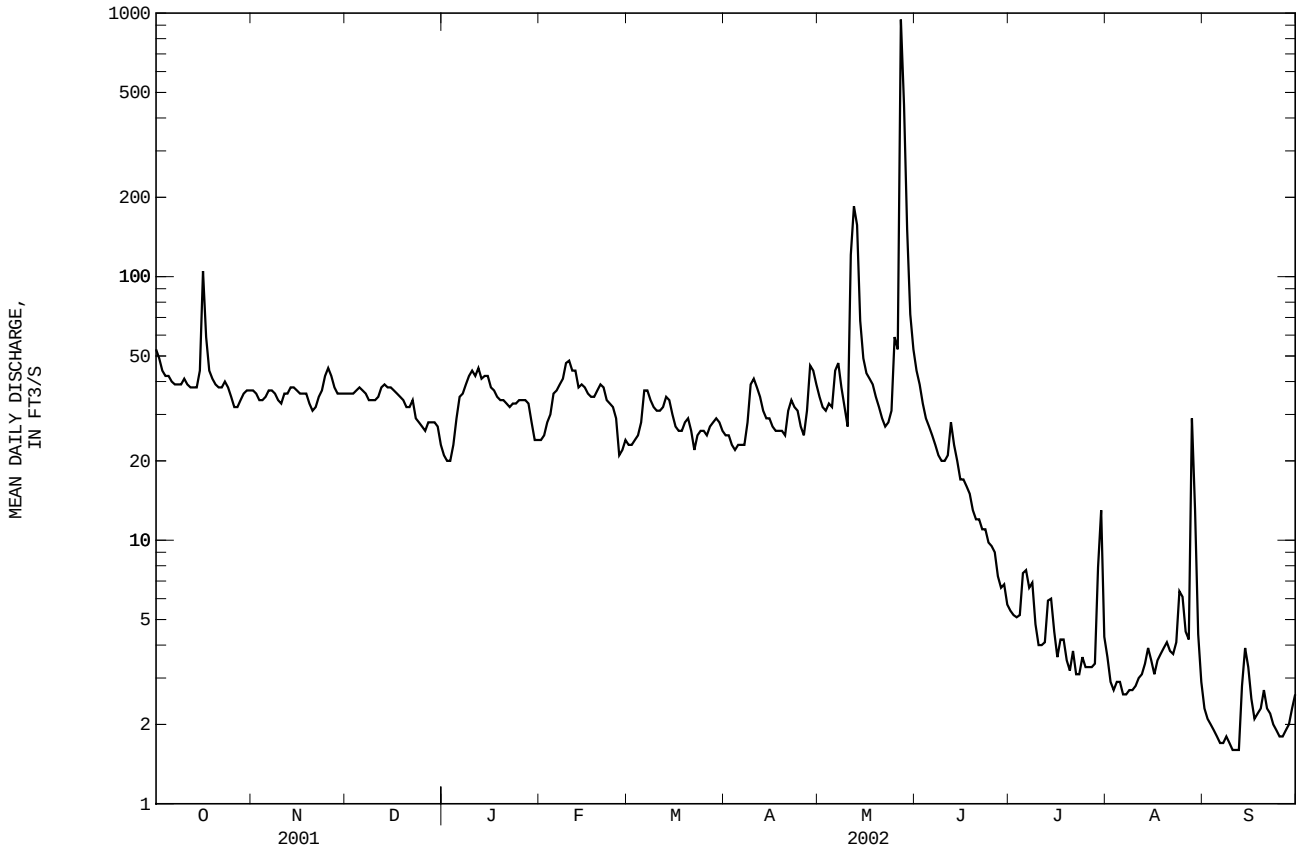
06885500 BLACK VERMILLION RIVER NEAR FRANKFORT, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	119.8	90.50	49.88	54.94	143.9	243.8	216.2	315.4	319.1	274.8	83.64	167.7
MAX	1685	1158	255	371	662	1413	1750	1873	1431	4575	675	1068
(WY)	1974	1999	1993	1962	1969	1979	1999	1995	1999	1993	1985	1977
MIN	0.000	0.020	0.51	0.49	2.00	2.87	3.18	3.88	11.8	2.38	0.22	0.000
(WY)	1957	1957	1957	1957	1956	1956	1956	1956	1972	1954	1955	1956

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1954 - 2002	
ANNUAL MEAN	294.5		30.57		173.3	
HIGHEST ANNUAL MEAN					812	1993
LOWEST ANNUAL MEAN					11.8	1956
HIGHEST DAILY MEAN	7760	Feb 25	945	May 27	28800	Oct 11 1973
LOWEST DAILY MEAN	5.8	Jan 1	1.6	Sep 10	0.00	Aug 3 1955
ANNUAL SEVEN-DAY MINIMUM	7.7	Jan 1	1.7	Sep 6	0.00	Aug 28 1956
MAXIMUM PEAK FLOW			1760	May 27	38300	May 30 1959
MAXIMUM PEAK STAGE			13.58	May 27	32.28	Jul 22 1993
INSTANTANEOUS LOW FLOW			1.6	Sep 9	.00	at times
ANNUAL RUNOFF (AC-FT)	213200		22130		125500	
10 PERCENT EXCEEDS	532		42		242	
50 PERCENT EXCEEDS	43		29		29	
90 PERCENT EXCEEDS	15		2.9		4.0	

e Estimated



06885500 BLACK VERMILION RIVER NEAR FRANKFORT, KS--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to April 1990, 2000 to current year.

REMARKS.--Unpublished records of intermittent sediment samples are available on the Internet at http://ks.waterdata.usgs.gov/nwis. Sediment samples are collected only at selected flow conditions.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
DEC							
11...	1015	36	610	4.0	134	13.0	--
MAR							
06...	1040	37	586	1.5	13	1.3	--
APR							
10...	1350	42	570	18.0	48	5.5	--
MAY							
28...	1100	293	350	23.0	957	757	99
JUN							
25...	1425	9.6	609	28.5	73	1.9	--
AUG							
19...	1725	4.3	535	26.5	55	.64	--

06886900 TUTTLE CREEK LAKE NEAR MANHATTAN, KS

LOCATION.--Lat 39°15'16", long 96°36'08", in NW $^1/_4$ NE $^1/_4$ SW $^1/_4$ sec.24, T.9 S., R.7 E., Pottawatomie County, Hydrologic Unit 10270205, on Big Blue River, near right end of dam, 5.0 mi north of Manhattan, and at mile 10.0.

DRAINAGE AREA.--9,628 mi^2.

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 NGVD of 1929 (levels by U.S. Army Corps of Engineers). Prior to July 1, 1968, at site 19.8 mi upstream at same datum.

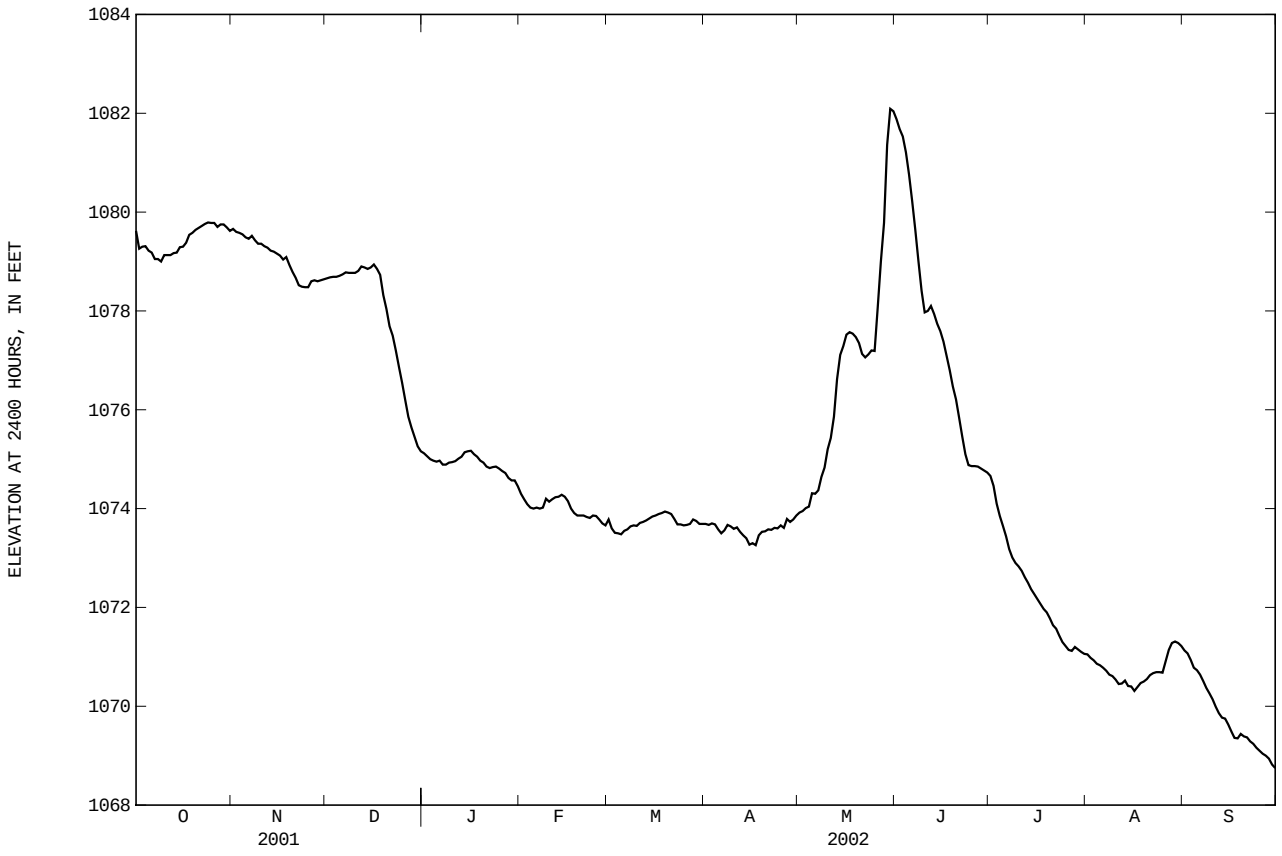
REMARKS.--Reservoir is formed by compacted earthfill dam. Storage began Mar. 15, 1962. Conservation pool elevation was first reached on Apr. 30, 1963. Total capacity, 3,186,000 acre-ft consisting of the following: Sedimentation, 211,500 acre-ft below elevation 1,061.0 ft; conservation pool, 177,100 acre-ft between elevations 1,061.0 ft and 1,075.0 ft; flood-control pool, 1,937,000 acre-ft between elevations 1,075.0 ft and 1,136.0 ft; and surcharge pool, 860,100 acre-ft between elevations 1,136.0 ft and 1,150.0 ft. Reservoir is used to store water for flood control. Figures given herein represent total contents. Satellite telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 1,137.76 ft July 22, 1993, contents, 2,423,000 acre-ft; minimum elevation since conservation pool was first reached, 1,060.82 ft Jan. 4, 1967, contents, 231,000 acre-ft.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 1,082.13 ft May 31, contents, 507,500 acre-ft; minimum elevation, 1,068.75 ft Sept. 30, contents, 303,700 acre-ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on field survey by U.S. Army Corps of Engineers in 1973 revised 1982)

1,065	256,400	1,080	469,400
1,070	320,100	1,090	663,700
1,075	388,600	1,095	778,700



06886900 TUTTLE CREEK LAKE NEAR MANHATTAN, KS--Continued

ELEVATION, in FT (NGVD), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1079.62	1079.66	1078.66	1075.12	1074.30	1073.78	1073.69	1073.92	1081.88	1074.66	1071.05	1071.13
2	1079.26	1079.60	1078.68	1075.06	1074.19	1073.60	1073.67	1073.95	1081.68	1074.46	1070.98	1071.07
3	1079.30	1079.58	1078.69	1075.00	1074.09	1073.51	1073.70	1074.01	1081.53	1074.10	1070.93	1070.94
4	1079.31	1079.55	1078.69	1074.97	1074.02	1073.50	1073.68	1074.04	1081.21	1073.85	1070.86	1070.78
5	1079.22	1079.49	1078.71	1074.95	1074.00	1073.48	1073.58	1074.31	1080.76	1073.65	1070.83	1070.73
6	1079.18	1079.46	1078.74	1074.97	1074.02	1073.55	1073.50	1074.30	1080.22	1073.44	1070.78	1070.64
7	1079.05	1079.52	1078.78	1074.89	1074.00	1073.58	1073.56	1074.37	1079.64	1073.18	1070.72	1070.51
8	1079.05	1079.43	1078.77	1074.89	1074.02	1073.64	1073.67	1074.64	1079.01	1073.01	1070.64	1070.37
9	1079.00	1079.36	1078.77	1074.93	1074.20	1073.66	1073.64	1074.83	1078.41	1072.90	1070.61	1070.26
10	1079.13	1079.36	1078.77	1074.94	1074.14	1073.65	1073.59	1075.20	1077.97	1072.83	1070.54	1070.14
11	1079.13	1079.31	1078.81	1074.96	1074.19	1073.71	1073.62	1075.43	1078.00	1072.74	1070.45	1069.99
12	1079.13	1079.28	1078.90	1075.01	1074.23	1073.73	1073.53	1075.86	1078.10	1072.61	1070.46	1069.86
13	1079.17	1079.22	1078.88	1075.05	1074.24	1073.76	1073.46	1076.62	1077.94	1072.50	1070.52	1069.77
14	1079.18	1079.20	1078.85	1075.14	1074.28	1073.80	1073.40	e1077.11	1077.74	1072.37	1070.41	1069.75
15	1079.29	1079.16	1078.88	1075.16	1074.24	1073.84	1073.27	e1077.29	1077.59	1072.27	1070.40	1069.63
16	1079.30	1079.12	1078.94	1075.17	1074.15	1073.86	1073.30	1077.52	1077.38	1072.17	1070.31	1069.49
17	1079.38	1079.04	1078.85	1075.10	1074.00	1073.89	1073.26	1077.57	1077.09	1072.07	1070.39	1069.36
18	1079.54	1079.09	1078.73	1075.05	1073.91	1073.91	1073.46	1077.54	1076.80	1071.97	1070.47	1069.35
19	1079.58	1078.93	1078.32	1074.97	1073.86	1073.94	1073.53	1077.47	1076.47	1071.90	1070.50	1069.44
20	1079.64	1078.79	1078.04	1074.93	1073.86	1073.92	1073.54	1077.35	1076.21	1071.78	1070.55	1069.39
21	1079.68	1078.67	1077.69	1074.85	1073.86	1073.89	1073.58	1077.13	1075.84	1071.64	1070.63	1069.37
22	1079.72	1078.52	1077.50	1074.82	1073.83	1073.79	1073.57	1077.06	1075.46	1071.57	1070.67	1069.29
23	1079.76	1078.49	1077.20	1074.84	1073.81	1073.68	1073.61	1077.12	1075.10	1071.43	1070.69	1069.24
24	1079.79	1078.48	1076.87	1074.85	1073.86	1073.68	1073.60	1077.20	1074.88	1071.30	1070.69	1069.16
25	1079.78	1078.48	1076.55	1074.81	1073.85	1073.66	1073.66	1077.19	1074.86	1071.22	1070.68	1069.10
26	1079.78	1078.60	1076.20	1074.76	1073.78	1073.67	1073.61	1078.08	1074.86	1071.14	1070.91	1069.04
27	1079.70	1078.62	1075.86	1074.72	1073.70	1073.69	1073.79	1079.00	1074.85	1071.12	1071.14	1069.00
28	1079.75	1078.60	1075.64	1074.62	1073.66	1073.78	1073.73	1079.78	1074.81	1071.20	1071.28	1068.94
29	1079.75	1078.62	1075.45	1074.57	---	1073.75	1073.78	1081.36	1074.77	1071.15	1071.31	1068.82
30	1079.69	1078.64	1075.26	1074.57	---	1073.69	1073.86	1082.09	1074.73	1071.10	1071.28	1068.75
31	1079.62	---	1075.16	1074.45	---	1073.69	---	1082.04	---	1071.06	1071.22	---
MEAN	1079.43	1079.06	1077.87	1074.91	1074.01	1073.72	1073.58	1076.82	1077.53	1072.34	1070.74	1069.78
MAX	1079.79	1079.66	1078.94	1075.17	1074.30	1073.94	1073.86	1082.09	1081.88	1074.66	1071.31	1071.13
MIN	1079.00	1078.48	1075.16	1074.45	1073.66	1073.48	1073.26	1073.92	1074.73	1071.06	1070.31	1068.75
(+)	462,900	446,300	391,000	380,500	369,200	370,000	372,000	505,900	384,600	334,100	336,200	303,700
(#)	-11,400	-16,600	-55,300	-10,500	-11,300	+800	+2,000	+133,900	-121,300	-50,500	+2,100	-32,500

CAL YR 2001 ..... (#) +85,200
WTR YR 2002 ..... (#) -170,600

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

e Estimated

06887000 BIG BLUE RIVER NEAR MANHATTAN, KS

LOCATION.--Lat 39°14'14", long 96°34'16", in SW $^{1}/_{4}$ NW $^{1}/_{4}$ SE $^{1}/_{4}$ sec.30, T.9 S., R.8 E., Riley County, Hydrologic Unit 10270205, on right bank at downstream side of county highway bridge, 2.5 mi downstream from Tuttle Creek Dam, 4.0 mi north of Manhattan, and at mile 7.5.

DRAINAGE AREA.--9,640 mi^2.

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 recorders. Datum of gage is 988.86 ft above NGVD of 1929. May 1 to July 31, 1951, nonrecording gage above power dam 1.1 mi upstream at datum 8.34 ft higher. Oct. 1 to Nov. 17, 1954, nonrecording gage and Nov. 18, 1954, to Sept. 30, 1974, recording gage at present site and datum 3.00 ft higher.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Flow regulated since 1962 by Tuttle Creek Lake (station 06886900), 2.5 mi upstream. Discharge may, at times, be affected by backwater from the Kansas River. Satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 31, 1903, reached a stage of 38.85 ft, and flood in June 1941 reached a stage of about 37.1 ft, from floodmarks and information by local resident.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6140	890	457	700	984	708	810	489	5550	444	399	761
2	3480	927	457	e680	981	590	767	482	4190	1110	397	753
3	1090	782	456	e680	981	589	758	485	4180	2550	398	748
4	977	778	457	e680	981	602	702	485	4620	1610	397	747
5	975	772	459	e680	806	620	618	513	4910	1600	397	742
6	953	770	456	686	e570	571	599	570	5050	1600	396	742
7	943	729	457	675	e570	556	590	522	5160	1600	396	740
8	941	774	456	676	e570	555	604	514	5140	1280	396	731
9	718	768	455	587	e570	545	701	328	5130	791	396	728
10	476	760	454	477	566	544	972	235	4420	784	396	728
11	469	753	455	462	564	546	958	657	1340	780	397	726
12	467	748	460	455	566	542	949	518	893	778	403	627
13	464	872	458	447	562	536	946	483	2510	777	408	433
14	459	964	456	441	560	530	943	904	3040	770	394	530
15	632	949	456	436	788	528	751	2070	3040	690	393	663
16	671	972	457	676	1460	527	486	2060	3030	555	393	660
17	474	1010	1050	1000	1470	528	487	2060	3020	607	336	660
18	469	1010	2360	1010	1460	529	486	2050	3020	598	335	578
19	467	991	2660	1010	1170	533	494	2040	3000	590	271	396
20	464	1220	2670	1010	753	753	491	2040	2990	578	51	389
21	463	1460	2680	1010	748	1060	493	2030	2970	566	200	388
22	461	1450	2670	839	744	1050	485	1700	2950	563	402	387
23	459	1160	2640	591	744	1060	483	1010	2930	557	420	387
24	456	970	2640	586	748	1070	486	1020	2200	532	444	387
25	452	463	2630	698	749	760	479	1020	799	441	444	385
26	451	458	2610	992	745	428	483	1000	449	409	444	389
27	448	459	2610	987	753	424	491	1980	447	418	445	412
28	444	458	2100	986	756	594	483	4230	446	421	443	428
29	602	459	1480	985	---	790	483	4860	445	250	563	427
30	794	459	1480	998	---	782	487	5270	445	396	769	425
31	785	---	1120	991	---	780	---	5770	---	397	764	---
MEAN	888.5	841.2	1313	746.2	818.5	652.6	632.2	1593	2944	807.8	409.3	569.9
MAX	6140	1460	2680	1010	1470	1070	972	5770	5550	2550	769	761
MIN	444	458	454	436	560	424	479	235	445	250	51	385
AC-FT	54630	50050	80740	45880	45460	40130	37620	97970	175200	49670	25160	33910

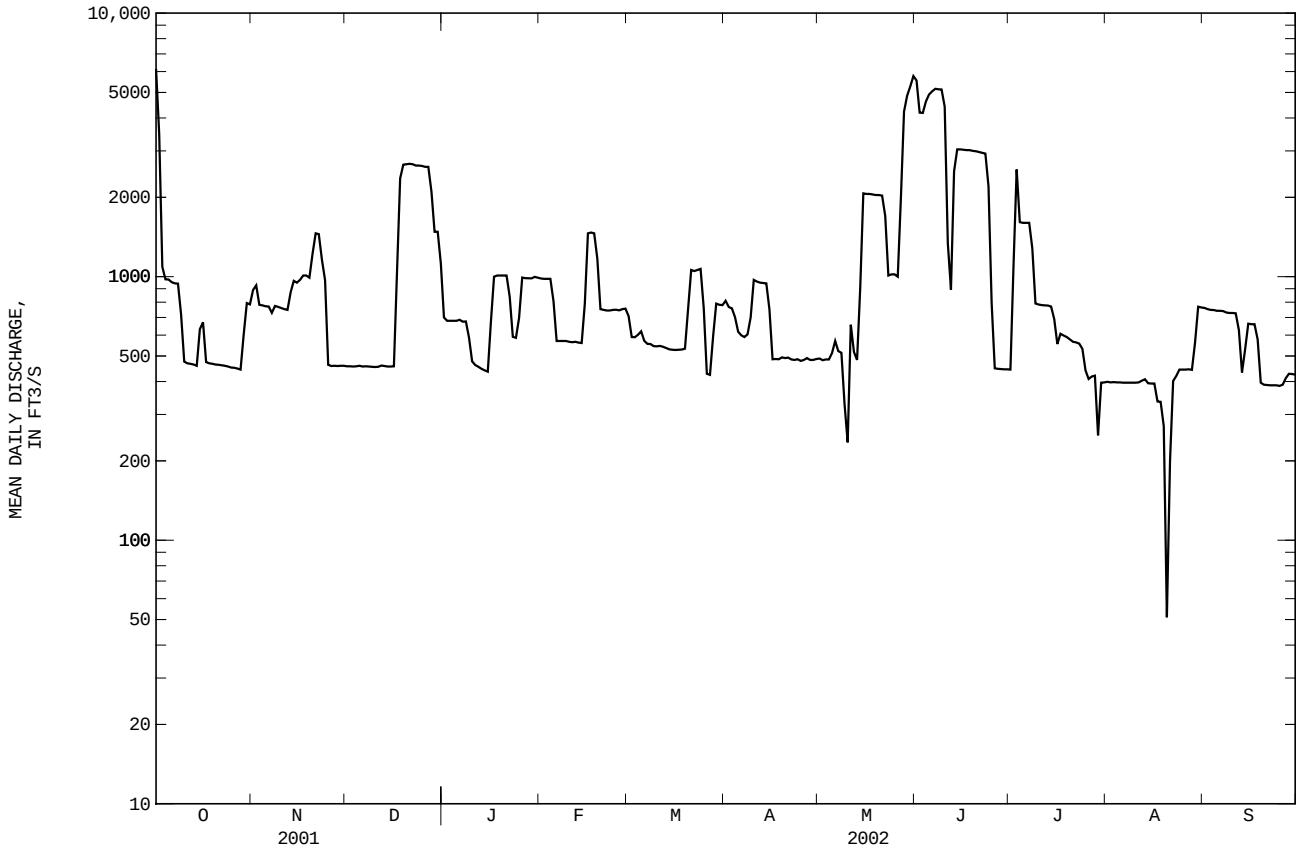
06887000 BIG BLUE RIVER NEAR MANHATTAN, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1694	1726	1457	844.1	1577	2576	3230	3654	4087	4280	2584	1794
MAX	13370	20110	4969	3311	5586	12200	15400	15210	16640	24360	23900	14770
(WY)	1987	1974	1974	1974	1973	1969	1987	1987	1995	1993	1993	1993
MIN	63.7	56.6	161	106	21.9	48.1	50.8	53.7	91.5	371	308	43.3
(WY)	1985	1988	1965	1970	1975	1967	1967	1967	1981	1970	1976	1988

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1963 - 2002	
ANNUAL MEAN	2863		1017		2462	
HIGHEST ANNUAL MEAN					9450	1993
LOWEST ANNUAL MEAN					790	1988
HIGHEST DAILY MEAN	20800	Mar 22	6140	Oct 1	59500	Jul 24 1993
LOWEST DAILY MEAN	38	Mar 10	51	Aug 20	2.3	Sep 14 1988
ANNUAL SEVEN-DAY MINIMUM	137	Mar 7	283	Aug 15	2.6	Sep 8 1988
MAXIMUM PEAK FLOW			7560	Oct 1	93400	Jul 12 1951
MAXIMUM PEAK STAGE			8.89	Oct 1	36.04	Jul 12 1951
INSTANTANEOUS LOW FLOW			2.4	Jul 29	0.20	Nov 23 1978
ANNUAL RUNOFF (AC-FT)	2073000		736400		1784000	
10 PERCENT EXCEEDS	7600		2530		6360	
50 PERCENT EXCEEDS	1100		671		963	
90 PERCENT EXCEEDS	445		411		187	

e Estimated



06887500 KANSAS RIVER AT WAMEGO, KS

LOCATION.--Lat 39°11'52", long 96°18'16", in NW $^{1}/_{4}$ SW $^{1}/_{4}$ NE $^{1}/_{4}$ sec.9, T.10 S., R.10 E., Pottawatomie County, Hydrologic Unit 10270102, on left bank at upstream side of bridge on Kansas Highway 99 at Wamego, 3.0 mi downstream from Antelope Creek, and at mile 126.9.

WATER-DISCHARGE RECORDS

DRAINAGE AREA.--55,280 mi^2, approximately, of which a large area is probably noncontributing.

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

REVISED RECORDS.--WSP 806: Drainage area. WSP 1310: 1937(M).

GAGE.--Water-stage recorder. Datum of gage is 950.82 ft above NGVD of 1929. 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 higher.

REMARKS.--Records good above 1,000 ft^3/s and fair below, except those for estimated daily discharges, which are poor. Natural flow affected by reservoirs in Colorado, Nebraska, and Kansas, and by numerous small diversions for irrigation upstream from station. Satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1903 reached a stage of 29.3 ft, present datum, determined by U.S. Weather Bureau, from floodmarks.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9530	1750	1290	2380	2430	1850	1460	1310	7140	959	865	1080
2	6100	1890	1290	2150	2330	1810	1460	1320	6120	926	960	1070
3	3810	1790	1280	2190	2270	1780	1400	1200	5820	2300	966	1080
4	2500	1700	1290	2260	2330	1740	1390	1150	5610	2920	961	1080
5	2710	1670	1290	2180	2350	1670	1290	1160	6000	2770	962	1080
6	2600	1650	1280	2120	2140	1620	1230	2000	6060	2770	960	1060
7	2460	1650	1270	2110	2020	1630	1210	1930	6220	2830	959	1040
8	2380	1550	1270	2110	2050	1630	1270	1450	6180	3040	953	1030
9	2320	1600	1270	2070	2480	1680	1310	1350	6140	2620	951	1030
10	1980	1590	1270	1960	2560	1640	1460	1090	6100	2470	964	1030
11	1780	1590	1260	1990	2540	1650	1640	1850	3910	2470	1000	1020
12	1710	1580	1300	1970	2400	1630	1650	2140	1860	2440	1000	1080
13	1660	1620	1360	2000	2050	1620	1630	1840	2450	2340	1150	1040
14	1600	1830	1380	1920	2060	1570	1630	1500	3510	2100	1110	941
15	1660	1840	1390	1890	2050	1450	1610	2400	3670	2060	1020	1190
16	1930	1790	1390	1900	2410	1420	1290	2970	4120	1880	1010	1160
17	1670	1870	1390	2330	2670	1420	1160	2960	3960	1750	997	1140
18	1540	1880	2710	3020	2670	1420	1150	2880	3790	1930	1020	1190
19	1530	1870	4550	3340	2690	1420	1190	2800	3680	1410	1020	1170
20	1620	1840	4810	3340	2310	1410	1200	2810	3630	1200	888	1020
21	1680	2240	4870	3330	2150	1720	1360	2820	3670	1130	e685	964
22	1680	2290	4890	3340	2120	1840	1370	2800	3610	1090	709	940
23	1650	2300	4880	3120	2110	1870	1580	2290	3500	1080	822	922
24	1620	2080	4870	2780	2070	1870	2020	1990	3390	1070	959	917
25	1550	1560	4870	2310	2040	1850	2200	2040	e2760	1130	964	908
26	1480	1360	4800	2400	2020	1390	1800	1940	e1700	966	931	899
27	1450	1320	4680	2470	2080	1230	1660	2090	1210	907	927	907
28	1430	1300	4660	2450	1910	1200	1520	4760	1120	1620	918	984
29	1410	1300	3560	2420	---	1420	1400	5930	1060	1260	907	1010
30	1700	1300	2960	2460	---	1480	1340	6420	1010	833	1020	996
31	1780	---	2890	2570	---	1470	---	7130	---	920	1090	---
MEAN	2275	1720	2654	2415	2261	1594	1463	2526	3967	1780	956.4	1033
MAX	9530	2300	4890	3340	2690	1870	2200	7130	7140	3040	1150	1190
MIN	1410	1300	1260	1890	1910	1200	1150	1090	1010	833	685	899
AC-FT	139900	102300	163200	148500	125600	97980	87040	155300	236000	109500	58810	61440

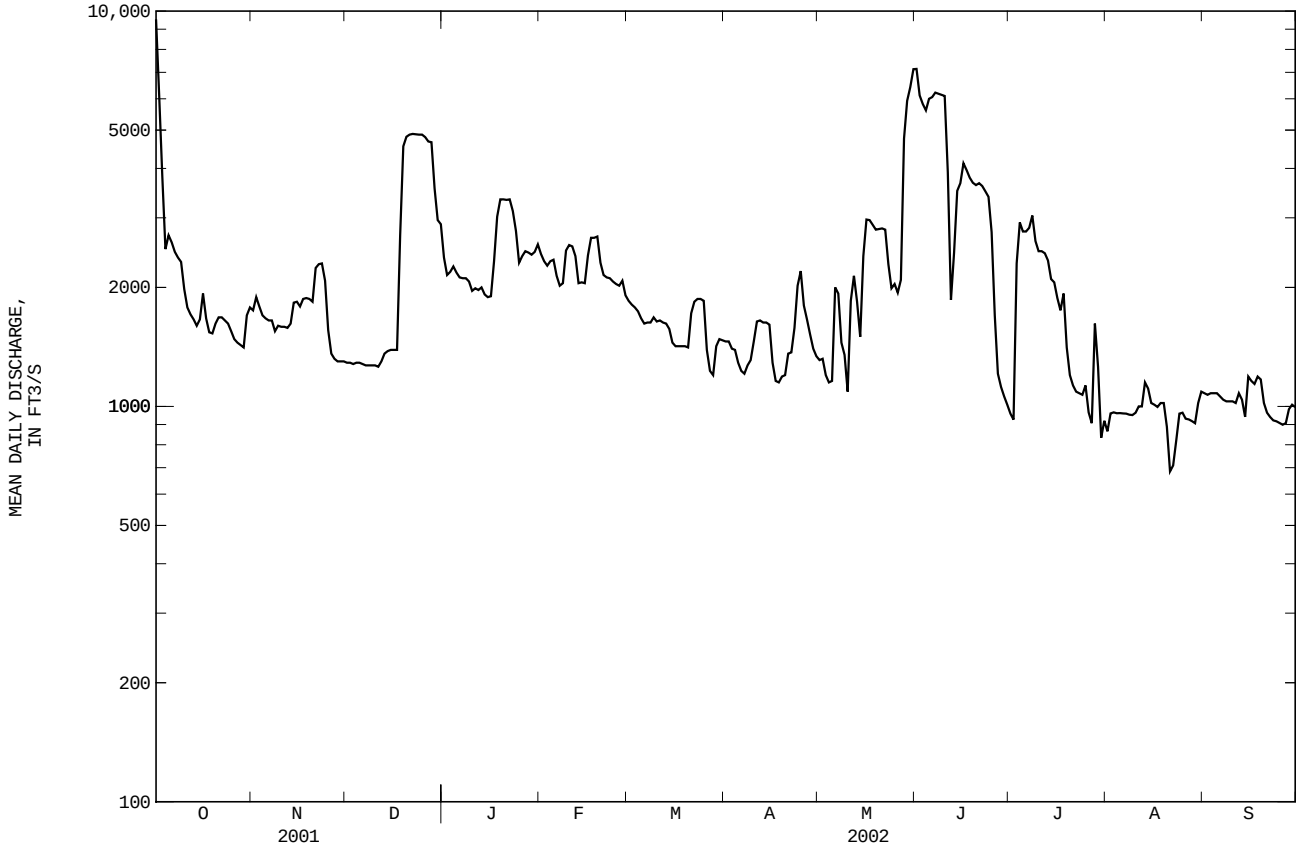
06887500 KANSAS RIVER AT WAMEGO, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1920 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3971	3009	2473	1988	3168	4743	5920	7530	10540	8942	5332	4820
MAX	39030	35430	14410	9735	14320	23240	32710	30610	64620	98420	50300	32530
(WY)	1974	1974	1974	1974	1949	1973	1987	1987	1951	1951	1993	1951
MIN	336	390	384	302	494	465	606	379	1114	747	271	388
(WY)	1957	1957	1957	1940	1957	1967	1956	1967	1966	1936	1934	1956

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1920 - 2002	
ANNUAL MEAN	5160		2052		5209	
HIGHEST ANNUAL MEAN					22320	1993
LOWEST ANNUAL MEAN					1135	1956
HIGHEST DAILY MEAN	25900	Jun 20	9530	Oct 1	393000	Jul 13 1951
LOWEST DAILY MEAN	787	Feb 19	685	Aug 21	116	Dec 14 1940
ANNUAL SEVEN-DAY MINIMUM	860	Feb 17	851	Aug 20	171	Oct 5 1956
MAXIMUM PEAK FLOW			10600	Oct 1	400000	Jul 13 1951
MAXIMUM PEAK STAGE			7.66	Oct 1	30.56	Jul 13 1951
INSTANTANEOUS LOW FLOW			641	Aug 22	73	Dec 14 1940
ANNUAL RUNOFF (AC-FT)	3736000		1486000		3774000	
10 PERCENT EXCEEDS	11700		3580		12400	
50 PERCENT EXCEEDS	2880		1670		2350	
90 PERCENT EXCEEDS	1210		997		800	

e Estimated



06887500 KANSAS RIVER AT WAMEGO, KS--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1970-74, 1999 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1969 to September 1974, July 1999 to current year.
pH: July 1999 to current year.
WATER TEMPERATURE: October 1969 to September 1974, July 1999 to current year.
DISSOLVED OXYGEN: July 1999 to current year.
TURBIDITY: July 1999 to current year.

INSTRUMENTATION.--Multiparameter water-quality monitor.

REMARKS.--Records fair except those for periods of missing records. Interruptions in record are due to ice conditions or malfunction of the recording instrument or sensors. Instruments used to measure turbidity conform to ISO 7027 standards.

EXTREMES FOR PERIOD OF RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 1,820 microsiemens/cm, Oct. 24, 1999; minimum, 268 microsiemens/cm, Aug. 26, 2001.
pH: Maximum, 9.3 standard units, Aug. 19, 2002; minimum, 7.1 standard units, Aug. 26, 2001.
WATER TEMPERATURE: Maximum, 34.1°C, Aug. 1, 2002; minimum, -0.2°C, Feb. 15, 2001.
DISSOLVED OXYGEN: Maximum 18.9 mg/L, Dec. 10, 2001; minimum, 4.7 mg/L, Aug. 8, 2002.
TURBIDITY: Maximum, >1,600 NTU, Aug 28, 2001; minimum, 6 NTU, Oct. 18, 1999.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 1,450 microsiemens/cm, July 31; minimum, 397 microsiemens/cm, Oct. 1.
pH: Maximum, 9.3 units, Aug. 19; minimum, 7.7 units, on several days in October and November.
WATER TEMPERATURE: Maximum, 34.1°C, Aug. 1; minimum, 0.1°C, Dec. 13, 14.
DISSOLVED OXYGEN: Maximum, 18.9 mg/L, Dec. 10; minimum, 4.7 mg/L, Aug. 8.
TURBIDITY: Maximum, 1,300 NTU, May 6; minimum, 13 NTU, Apr. 17.

SPECIFIC CONDUCTANCE FROM YSI, in US/CM @ 25C, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	418	397	403	877	864	870	1030	1020	1020	---	---	---
2	460	418	449	872	798	836	1020	1010	1020	---	---	---
3	564	456	513	867	799	834	1020	1000	1010	---	---	---
4	737	564	664	880	867	876	1010	1000	1010	---	---	---
5	652	639	647	887	873	880	1020	1010	1010	---	---	---
6	677	649	659	880	868	874	1020	1010	1020	---	---	---
7	680	671	675	885	871	877	1020	1010	1020	---	---	---
8	723	676	695	969	843	904	1020	1020	1020	---	---	---
9	734	719	723	905	892	898	1040	1020	1030	---	---	---
10	---	---	---	901	887	894	1040	1020	1030	---	---	---
11	---	---	---	902	882	893	1020	994	1010	---	---	---
12	---	---	---	896	884	890	---	---	---	---	---	---
13	---	---	---	892	883	888	---	---	---	---	---	---
14	---	---	---	893	839	859	---	---	---	---	---	---
15	---	---	---	851	835	843	---	---	---	---	---	---
16	927	836	872	849	835	839	---	---	---	---	---	---
17	953	830	880	859	819	835	---	---	---	---	---	---
18	979	953	969	841	824	832	---	---	---	---	---	---
19	979	967	974	845	829	838	---	---	---	---	---	---
20	1010	962	984	864	845	853	---	---	---	---	---	---
21	1020	971	997	869	748	790	---	---	---	---	---	---
22	1020	994	1010	751	735	741	---	---	---	---	---	---
23	1040	1020	1040	743	725	734	---	---	---	---	---	---
24	1070	1040	1060	897	724	777	---	---	---	---	---	---
25	1070	1050	1070	995	725	880	---	---	---	---	---	---
26	1050	1020	1040	1020	995	1010	---	---	---	---	---	---
27	1020	1000	1010	1030	1020	1020	---	---	---	---	---	---
28	1010	990	1000	1040	1030	1030	---	---	---	---	---	---
29	1000	977	990	1040	1020	1030	---	---	---	---	---	---
30	985	849	919	1020	1020	1020	---	---	---	---	---	---
31	867	848	857	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	1040	724	878	---	---	---	---	---	---

06887500 KANSAS RIVER AT WAMEGO, KS--Continued

SPECIFIC CONDUCTANCE FROM YSI, in US/CM @ 25C, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	---	---	---	995	988	992	1010	932	971
2	---	---	---	---	---	---	1010	977	993	1050	1010	1040
3	---	---	---	---	---	---	1010	998	1000	1050	996	1030
4	---	---	---	---	---	---	1010	993	1000	1030	972	1010
5	---	---	---	---	---	---	1030	996	1010	1010	726	971
6	---	---	---	---	---	---	1060	1030	1040	867	735	794
7	---	---	---	---	---	---	1060	1050	1060	869	715	777
8	---	---	---	---	---	---	1060	983	1030	882	784	810
9	---	---	---	---	---	---	1030	989	1010	983	879	949
10	---	---	---	---	---	---	1040	935	995	987	917	953
11	---	---	---	---	---	---	951	932	942	965	605	797
12	---	---	---	---	---	---	942	928	936	745	623	675
13	---	---	---	---	---	---	947	934	941	838	739	802
14	---	---	---	---	---	---	951	930	941	917	832	886
15	---	---	---	1070	1040	1060	964	937	950	947	731	837
16	---	---	---	1080	1070	1080	1100	964	1030	731	707	717
17	---	---	---	1080	1060	1070	1120	1080	1100	712	662	682
18	---	---	---	1070	1060	1060	1100	1090	1100	684	642	666
19	---	---	---	1080	1050	1060	1100	1030	1070	681	649	668
20	---	---	---	1050	1040	1040	1070	989	1040	726	681	705
21	---	---	---	1050	932	983	1050	979	1010	734	709	720
22	---	---	---	946	937	941	1140	1020	1080	736	721	727
23	---	---	---	949	937	943	1260	1030	1130	832	724	782
24	---	---	---	952	945	948	1260	916	e1030	818	779	805
25	---	---	---	948	935	941	---	---	---	855	792	825
26	---	---	---	1110	944	1030	---	---	---	880	855	869
27	---	---	---	1120	1110	1110	733	702	720	885	777	844
28	---	---	---	1120	1100	1110	835	733	779	849	593	661
29	---	---	---	1130	974	1040	926	835	885	610	597	606
30	---	---	---	985	975	980	935	918	928	605	570	589
31	---	---	---	991	982	986	---	---	---	570	559	563
MONTH	---	---	---	---	---	---	---	---	---	1050	559	798

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	566	551	558	922	848	885	1000	850	918	813	---	---
2	588	560	575	922	872	900	1050	935	970	818	---	---
3	638	557	598	926	555	666	1070	1010	1030	827	718	799
4	637	535	579	654	595	634	1030	898	963	839	805	827
5	535	505	513	664	613	e648	919	813	876	824	746	794
6	522	510	516	---	---	---	847	706	808	779	675	743
7	516	507	511	---	---	---	855	---	---	733	660	704
8	519	509	514	680	---	---	857	---	---	725	614	686
9	518	505	510	749	677	718	857	772	832	661	485	595
10	509	500	505	749	736	744	877	838	859	577	515	554
11	585	501	549	748	715	740	868	564	825	607	520	575
12	759	574	682	753	740	748	874	842	865	690	544	624
13	1050	625	766	771	722	746	870	770	823	715	658	683
14	645	592	608	783	731	765	852	774	819	783	715	765
15	617	585	592	778	732	758	940	848	910	770	696	728
16	765	550	690	785	725	761	967	935	955	765	706	733
17	567	523	548	791	735	770	1040	743	938	759	720	745
18	552	521	533	796	655	739	1080	875	1000	796	731	771
19	555	519	540	864	684	811	939	851	904	839	761	792
20	569	521	553	861	765	820	939	878	902	922	839	883
21	596	565	584	853	780	822	1020	859	949	954	887	923
22	590	575	583	872	821	855	1210	890	1090	927	891	910
23	575	550	566	883	815	856	1060	843	993	902	862	889
24	585	541	551	932	831	866	1020	856	960	881	865	873
25	705	585	655	932	829	867	936	782	874	889	804	864
26	848	705	760	933	868	900	917	729	846	861	787	832
27	853	551	787	968	674	910	880	761	837	845	803	830
28	875	637	809	783	580	691	875	759	831	847	799	829
29	877	740	822	970	576	747	913	789	858	839	794	820
30	898	795	855	1280	835	979	888	694	810	835	793	818
31	---	---	---	1450	1000	1200	---	723	---	---	---	---
MONTH	1050	500	614	---	---	---	---	---	---	954	---	---

e Estimated

06887500 KANSAS RIVER AT WAMEGO, KS--Continued

PH, WH, FIELD FROM YSI, in (STANDARD UNITS), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

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

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	---	---	---	8.9	8.6	8.8	---	---	---
2	---	---	---	---	---	---	8.9	8.6	8.8	---	---	---
3	---	---	---	---	---	---	8.8	8.6	8.7	---	---	---
4	---	---	---	---	---	---	8.9	8.6	8.7	---	---	---
5	---	---	---	---	---	---	8.9	8.6	8.8	---	---	---
6	---	---	---	---	---	---	8.9	8.7	8.8	---	---	---
7	---	---	---	---	---	---	8.8	8.6	8.7	---	---	---
8	---	---	---	---	---	---	8.8	8.6	8.7	---	---	---
9	---	---	---	---	---	---	8.9	8.6	8.7	---	---	---
10	---	---	---	---	---	---	9.0	8.6	8.8	---	---	---
11	---	---	---	---	---	---	8.9	8.7	8.8	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	8.8	8.6	8.7	---	---	---	---	---	---
16	---	---	---	8.8	8.5	8.7	---	---	---	---	---	---
17	---	---	---	8.8	8.6	8.7	---	---	---	---	---	---
18	---	---	---	8.9	8.6	8.8	8.8	8.5	8.7	---	---	---
19	---	---	---	8.8	8.6	8.7	---	---	---	---	---	---
20	---	---	---	8.8	8.5	8.6	---	---	---	---	---	---
21	---	---	---	8.8	8.6	8.7	---	---	---	---	---	---
22	---	---	---	8.7	8.6	8.6	---	---	---	---	---	---
23	---	---	---	8.8	8.6	8.7	---	---	---	---	---	---
24	---	---	---	8.7	8.6	8.6	---	---	e8.0	8.6	8.4	8.5
25	---	---	---	8.7	8.5	8.6	---	---	---	8.8	8.5	8.6
26	---	---	---	8.6	8.5	8.6	---	---	---	8.9	8.6	8.7
27	---	---	---	8.7	8.5	8.6	---	---	---	8.9	8.6	8.8
28	---	---	---	8.8	8.5	8.7	---	---	---	8.8	8.3	8.4
29	---	---	---	8.9	8.6	8.7	---	---	---	8.5	8.5	8.5
30	---	---	---	8.9	8.6	8.8	---	---	---	8.5	8.3	8.4
31	---	---	---	8.9	8.6	8.8	---	---	---	8.4	8.3	8.3
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---

06887500 KANSAS RIVER AT WAMEGO, KS--Continued

PH, WH, FIELD FROM YSI, in (STANDARD UNITS), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	8.4	8.3	8.3	9.0	8.5	8.8	9.0	8.5	8.7	8.9	8.4	8.6
2	8.4	8.3	8.3	9.1	8.6	8.8	9.0	8.5	8.8	9.0	8.6	8.8
3	8.4	8.3	8.3	8.9	8.3	8.4	9.0	8.7	8.8	9.0	8.7	8.9
4	8.4	8.2	8.3	8.6	8.3	8.4	9.0	8.6	8.7	9.2	8.6	8.8
5	8.3	8.2	8.2	8.7	8.4	8.6	9.0	8.6	8.7	9.2	8.6	9.0
6	8.2	8.2	8.2	---	---	---	9.0	8.6	8.7	9.1	8.5	8.8
7	8.2	8.2	8.2	---	---	---	8.9	8.6	8.7	9.1	8.5	8.8
8	8.3	8.2	8.2	8.8	---	---	9.0	8.5	8.8	9.1	8.5	8.8
9	8.3	8.2	8.2	8.9	8.5	8.7	9.0	8.7	8.8	9.1	8.5	8.8
10	8.3	8.2	8.2	8.9	8.5	8.7	9.0	8.6	8.8	8.9	8.3	8.7
11	8.4	8.2	8.2	9.0	8.5	8.7	8.9	8.7	8.8	9.0	8.4	8.7
12	8.8	8.2	8.3	8.9	8.6	8.8	9.0	8.5	8.9	8.9	8.5	8.7
13	8.7	8.4	8.5	8.9	8.6	8.8	8.9	8.5	8.7	8.7	8.4	8.6
14	8.5	8.3	8.4	9.0	8.6	8.8	9.0	8.4	8.7	8.5	8.3	8.4
15	8.4	8.3	8.4	9.1	8.6	8.9	9.2	8.8	9.0	8.6	8.3	8.4
16	8.3	8.2	8.3	9.1	8.6	8.9	9.2	8.7	8.9	8.7	8.3	8.4
17	8.3	8.2	8.2	9.1	8.7	8.9	9.1	8.6	8.8	8.7	8.3	8.5
18	8.3	8.3	8.3	9.1	8.7	8.9	9.1	8.6	8.8	8.5	8.1	8.4
19	8.4	8.3	8.3	9.0	8.6	8.8	9.3	8.6	9.0	8.4	8.0	8.2
20	8.4	8.3	8.3	9.1	8.6	8.8	9.3	8.8	9.0	8.3	8.0	8.1
21	8.4	8.3	8.3	9.0	8.6	8.8	9.0	8.6	8.9	8.8	8.0	8.2
22	8.4	8.3	8.4	9.1	8.7	8.8	8.9	8.3	8.7	8.7	8.4	8.6
23	8.4	8.3	8.4	9.1	8.6	8.8	8.7	8.1	8.3	8.5	8.0	8.3
24	8.6	8.3	8.4	9.0	8.7	8.8	8.5	8.1	8.3	8.4	8.0	8.2
25	8.8	8.4	8.5	9.0	8.7	8.8	8.8	8.4	8.5	8.6	7.9	8.2
26	8.9	8.4	8.6	9.0	8.6	8.8	8.8	8.4	8.6	8.5	8.2	8.3
27	9.0	8.5	8.8	8.9	8.6	8.7	8.7	8.4	8.6	8.4	7.9	8.2
28	9.0	8.6	8.8	8.8	8.1	8.6	8.7	8.4	8.6	8.6	8.0	8.2
29	9.0	8.6	8.8	8.8	8.0	8.2	8.8	8.6	8.7	8.5	8.1	8.3
30	8.9	8.4	8.7	9.1	8.6	8.8	8.7	8.5	8.6	8.5	8.0	8.2
31	---	---	---	9.0	8.5	8.7	8.7	8.4	8.5	---	---	---
MAX	9.0	8.6	8.8	---	---	---	9.3	8.8	9.0	9.2	8.7	9.0
MIN	8.2	8.2	8.2	---	---	---	8.5	8.1	8.3	8.3	7.9	8.1

e Estimated

WATER TEMPERATURE FROM YSI, in (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	20.9	18.6	19.8	17.7	14.2	15.7	6.6	3.5	4.9	---	---	---
2	20.8	18.7	19.8	16.6	13.6	15.2	8.2	4.2	6.2	---	---	---
3	21.5	18.4	19.8	16.5	12.8	14.6	10.6	6.2	8.2	---	---	---
4	19.9	15.8	18.1	17.4	14.2	15.5	13.9	9.7	11.7	---	---	---
5	17.0	14.8	15.8	17.2	13.3	15.2	15.7	11.9	14.2	---	---	---
6	17.8	13.8	15.7	18.1	14.0	15.9	11.9	9.1	10.3	---	---	---
7	18.0	14.3	16.0	17.7	14.9	16.3	9.5	6.8	8.3	---	---	---
8	18.7	14.9	16.7	16.1	11.7	13.5	8.2	5.9	7.0	---	---	---
9	19.1	17.2	17.9	12.4	9.2	10.9	7.3	4.6	6.0	---	---	---
10	19.6	17.4	18.4	13.3	9.5	11.3	7.4	4.3	5.9	---	---	---
11	19.2	15.4	e17.3	13.4	9.7	11.5	7.5	4.7	6.2	---	---	---
12	---	---	---	12.9	11.0	12.0	7.6	3.2	6.6	---	---	---
13	---	---	---	14.6	12.8	13.6	9.1	0.1	3.6	---	---	---
14	---	---	---	16.4	14.2	15.2	---	---	---	---	---	---
15	---	---	---	17.2	14.3	15.6	---	---	---	---	---	---
16	15.0	10.8	12.8	16.3	13.5	14.9	---	---	---	---	---	---
17	15.5	11.3	13.4	15.9	13.7	14.7	---	---	---	---	---	---
18	15.6	12.6	14.0	15.0	13.3	14.3	---	---	---	---	---	---
19	15.8	12.1	14.0	13.3	9.9	11.3	---	---	---	---	---	---
20	17.1	12.4	14.7	10.2	7.8	9.1	---	---	---	---	---	---
21	16.3	14.6	15.5	10.6	8.0	9.2	---	---	---	---	---	---
22	16.8	15.2	15.9	12.4	9.4	10.6	---	---	---	---	---	---
23	18.1	14.7	16.1	13.0	11.2	11.9	---	---	---	---	---	---
24	17.1	14.2	15.7	12.1	10.1	11.4	---	---	---	---	---	---
25	14.2	11.7	12.8	10.5	8.6	9.6	---	---	---	---	---	---
26	13.2	9.8	11.4	11.1	7.9	9.7	---	---	---	---	---	---
27	12.6	9.0	10.8	7.9	4.5	5.8	---	---	---	---	---	---
28	14.6	10.0	12.1	4.5	3.2	3.7	---	---	---	---	---	---
29	16.0	12.1	13.9	4.5	3.1	3.7	---	---	---	---	---	---
30	16.4	13.9	15.0	4.9	4.2	4.5	---	---	---	---	---	---
31	15.7	13.4	14.5	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	18.1	3.1	11.9	---	---	---	---	---	---

06887500 KANSAS RIVER AT WAMEGO, KS--Continued

WATER TEMPERATURE FROM YSI, in (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	---	---	---	16.6	8.8	12.7	18.8	14.6	16.7
2	---	---	---	---	---	---	14.7	9.6	12.1	19.0	12.5	15.3
3	---	---	---	---	---	---	11.8	6.2	9.0	18.9	13.8	16.4
4	---	---	---	---	---	---	13.2	6.6	9.8	22.2	15.0	18.0
5	---	---	---	---	---	---	15.2	7.8	11.4	24.0	17.4	20.5
6	---	---	---	---	---	---	12.5	9.6	11.1	24.5	19.4	21.5
7	---	---	---	---	---	---	10.9	9.9	10.4	23.6	20.4	21.5
8	---	---	---	---	---	---	10.8	10.1	10.4	23.0	18.2	20.4
9	---	---	---	---	---	---	15.8	8.4	11.8	21.2	16.3	18.7
10	---	---	---	---	---	---	18.1	11.8	14.8	20.1	16.0	18.0
11	---	---	---	---	---	---	17.8	14.2	15.8	18.7	15.3	16.8
12	---	---	---	---	---	---	17.7	13.6	15.4	18.1	15.1	16.6
13	---	---	---	---	---	---	17.8	13.3	15.4	20.3	13.3	16.5
14	---	---	---	---	---	---	20.8	14.4	17.4	22.9	16.0	19.3
15	---	---	---	10.4	6.1	8.2	22.9	16.8	19.7	21.9	17.9	19.9
16	---	---	---	9.4	5.0	7.2	21.6	18.3	19.9	21.8	18.7	20.1
17	---	---	---	11.3	5.9	8.4	23.8	17.8	20.6	20.4	16.6	18.5
18	---	---	---	11.5	6.9	9.2	25.1	19.7	22.2	21.4	16.4	18.7
19	---	---	---	10.0	7.7	8.9	23.3	16.0	18.7	19.6	17.3	18.0
20	---	---	---	11.7	6.1	8.7	16.0	13.1	14.0	21.6	16.1	18.4
21	---	---	---	9.1	4.3	6.2	16.8	12.7	14.4	20.4	16.5	18.5
22	---	---	---	7.7	1.9	4.7	19.8	12.6	16.0	19.9	16.9	18.3
23	---	---	---	9.9	3.5	6.5	22.4	15.3	18.7	18.6	17.7	18.2
24	---	---	---	8.0	4.8	6.7	20.7	18.0	---	17.7	14.8	15.8
25	---	---	---	4.8	2.5	3.4	---	---	---	21.4	13.6	16.9
26	---	---	---	9.0	1.8	5.1	---	---	---	24.2	17.3	20.5
27	---	---	---	12.4	5.1	8.6	17.2	12.3	14.1	25.7	19.2	22.3
28	---	---	---	16.1	9.2	12.4	18.5	12.2	15.2	24.0	19.8	21.7
29	---	---	---	16.0	11.3	13.5	21.2	14.6	17.7	22.3	18.8	20.6
30	---	---	---	14.3	9.6	12.0	20.4	17.0	18.8	22.8	19.1	20.9
31	---	---	---	14.0	9.2	11.4	---	---	---	23.3	19.4	21.3
MONTH	---	---	---	---	---	---	---	---	---	25.7	12.5	18.9

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	22.9	19.7	21.4	28.9	25.4	27.0	34.1	27.5	30.5	29.6	24.4	27.0
2	24.0	19.5	21.7	28.6	24.6	26.5	30.5	24.8	27.8	31.1	24.5	27.4
3	23.1	20.4	21.8	28.5	25.1	26.9	32.5	26.1	29.2	29.1	24.2	26.6
4	21.9	19.0	20.3	29.2	26.0	27.5	33.1	27.3	30.1	30.4	23.6	26.8
5	21.7	19.0	20.3	30.0	26.0	e27.6	32.5	27.6	30.0	31.0	24.8	27.6
6	23.5	19.6	21.4	---	---	---	31.6	27.7	29.6	30.8	24.9	27.7
7	23.7	20.1	21.9	---	---	---	32.1	26.8	29.2	30.4	24.7	27.6
8	24.2	20.4	22.3	30.8	---	---	30.8	25.1	28.0	29.9	24.9	27.2
9	24.0	21.0	22.6	32.5	27.2	29.5	27.6	24.4	25.4	29.8	24.3	26.9
10	24.3	21.2	22.7	30.8	28.0	29.2	28.7	23.5	25.6	27.2	24.6	25.8
11	25.6	22.1	23.6	29.9	26.1	27.7	29.7	24.9	26.8	27.1	21.6	24.3
12	29.2	22.3	25.3	27.3	24.8	25.8	28.1	24.4	26.2	24.5	21.4	22.9
13	28.4	23.2	25.6	27.7	23.2	25.2	26.8	22.5	24.1	24.6	20.9	22.4
14	24.4	20.5	22.4	30.0	23.8	26.7	28.3	21.6	24.6	23.5	21.7	22.3
15	24.2	21.1	22.6	30.7	25.0	27.7	29.0	22.7	25.9	25.0	19.5	22.1
16	25.4	20.8	22.8	30.2	25.2	27.7	31.4	26.0	28.3	26.0	19.1	22.4
17	25.6	22.4	24.0	30.8	26.0	28.4	28.0	23.7	25.0	26.3	20.6	23.3
18	25.8	22.5	24.1	31.9	26.7	29.1	28.6	22.3	25.0	26.6	22.0	24.3
19	26.4	22.6	24.3	31.9	27.3	29.1	28.2	24.4	26.3	24.8	20.6	22.3
20	26.8	23.7	25.2	33.1	27.2	29.9	30.2	24.2	26.9	24.4	18.7	21.4
21	27.7	24.3	25.9	32.4	27.1	29.6	29.7	24.7	27.2	24.9	19.2	21.7
22	27.9	24.7	26.3	29.7	26.6	28.0	32.2	25.2	28.5	23.6	18.2	20.7
23	27.2	23.8	25.5	30.4	24.4	27.3	32.4	26.3	29.4	23.2	17.2	20.0
24	27.8	24.0	25.9	31.8	25.1	28.2	30.2	26.5	27.9	22.1	16.6	19.4
25	30.6	24.9	27.6	31.4	25.3	28.4	31.5	24.8	27.9	23.4	17.4	20.2
26	32.0	25.8	28.3	32.5	26.6	29.3	31.2	25.6	28.2	24.3	18.2	21.0
27	31.8	25.5	28.4	31.6	25.9	28.8	31.2	25.0	28.0	22.0	18.2	19.9
28	32.7	26.5	29.5	29.0	25.5	26.9	31.2	25.4	28.1	22.8	17.4	20.0
29	32.0	27.3	29.6	32.3	24.4	27.9	30.5	24.9	27.6	24.8	19.8	22.1
30	31.4	26.7	29.0	33.4	27.0	30.1	29.1	24.0	26.6	25.6	20.6	22.9
31	---	---	---	33.2	27.2	30.1	30.0	23.8	26.8	---	---	---
MONTH	32.7	19.0	24.4	---	---	---	34.1	21.6	27.4	31.1	16.6	23.5

e Estimated

06887500 KANSAS RIVER AT WAMEGO, KS--Continued

OXYGEN DISSOLVED FROM YSI, in (MG/L), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	10.3	10.0	10.1	13.0	9.2	10.7	16.0	15.4	15.7	---	---	---
2	10.0	9.7	9.8	13.2	9.5	11.0	15.8	14.9	15.4	---	---	---
3	10.0	9.6	9.8	13.2	10.0	11.3	15.1	14.0	14.7	---	---	---
4	10.8	9.6	10.1	13.4	9.8	11.2	14.0	12.6	13.5	---	---	---
5	11.2	10.8	11.0	13.6	10.0	11.4	13.9	12.0	12.8	---	---	---
6	11.4	11.0	11.2	13.1	9.8	11.1	15.8	13.1	14.5	---	---	---
7	11.7	11.0	11.3	13.2	9.6	11.0	17.0	14.7	15.8	---	---	---
8	11.9	10.8	11.3	13.8	10.0	11.7	18.0	15.5	16.7	---	---	---
9	11.4	10.6	10.9	14.7	11.6	12.9	18.4	16.6	17.4	---	---	---
10	---	---	---	15.2	11.7	13.1	18.9	17.0	17.8	---	---	---
11	---	---	---	15.3	11.6	13.0	18.6	16.9	17.6	---	---	---
12	---	---	---	13.8	11.3	12.3	---	---	---	---	---	---
13	---	---	---	13.0	10.7	11.6	---	---	---	---	---	---
14	---	---	---	12.7	10.1	11.1	---	---	---	---	---	---
15	---	---	---	12.8	10.0	11.1	---	---	---	---	---	---
16	13.1	10.4	11.5	12.8	10.2	11.3	---	---	---	---	---	---
17	12.6	10.4	11.4	12.7	10.4	11.2	---	---	---	---	---	---
18	13.6	10.0	11.6	11.6	10.1	10.7	---	---	---	---	---	---
19	14.4	10.3	12.0	13.5	10.6	12.0	---	---	---	---	---	---
20	14.9	10.2	12.3	13.4	12.0	12.7	---	---	---	---	---	---
21	13.8	9.7	11.4	12.8	11.7	12.3	---	---	---	---	---	---
22	13.4	9.6	11.2	12.2	11.0	11.6	---	---	---	---	---	---
23	13.7	9.7	11.2	---	---	---	---	---	---	---	---	---
24	12.6	9.5	10.8	11.6	10.6	11.1	---	---	---	---	---	---
25	13.0	10.2	11.3	12.7	11.6	12.2	---	---	---	---	---	---
26	13.4	10.9	11.9	12.8	12.2	12.5	---	---	---	---	---	---
27	13.8	11.2	12.3	14.8	12.8	14.2	---	---	---	---	---	---
28	12.9	10.9	11.8	15.8	14.8	15.4	---	---	---	---	---	---
29	13.9	10.0	11.7	15.9	15.5	15.7	---	---	---	---	---	---
30	13.2	9.8	11.2	15.7	15.2	15.4	---	---	---	---	---	---
31	12.2	9.3	10.7	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	---	---	---	11.9	9.9	10.9	12.0	8.4	9.9
2	---	---	---	---	---	---	12.0	9.2	10.7	13.9	9.2	11.3
3	---	---	---	---	---	---	12.6	10.4	11.6	14.1	9.1	11.6
4	---	---	---	---	---	---	13.2	10.8	11.9	14.4	8.9	11.4
5	---	---	---	---	---	---	13.1	10.5	11.7	13.2	8.1	10.5
6	---	---	---	---	---	---	12.2	9.9	11.1	8.9	5.5	7.5
7	---	---	---	---	---	---	12.0	9.9	10.9	8.7	6.1	7.3
8	---	---	---	---	---	---	12.3	9.9	11.0	10.6	7.8	8.7
9	---	---	---	---	---	---	13.3	10.4	11.7	12.5	8.0	10.0
10	---	---	---	---	---	---	12.1	9.7	10.9	13.2	8.4	10.4
11	---	---	---	---	---	---	11.9	9.0	10.2	9.2	7.8	8.4
12	---	---	---	---	---	---	12.3	9.1	10.5	9.2	7.8	8.4
13	---	---	---	---	---	---	12.4	9.3	10.8	11.6	8.9	10.0
14	---	---	---	---	---	---	11.1	9.1	10.1	12.4	8.6	10.3
15	---	---	---	12.8	9.9	11.5	10.8	8.3	9.4	9.9	8.2	8.8
16	---	---	---	13.2	11.0	12.0	10.0	8.0	9.0	9.1	8.1	8.5
17	---	---	---	13.9	10.9	12.3	11.2	7.8	9.3	9.5	8.4	9.0
18	---	---	---	13.4	10.7	11.9	12.3	7.9	9.8	9.7	8.7	9.1
19	---	---	---	12.4	10.0	11.1	12.0	---	e9.9	9.8	8.5	9.0
20	---	---	---	13.8	10.6	12.0	10.9	8.8	9.9	10.1	8.8	9.4
21	---	---	---	12.9	10.9	12.1	12.1	9.1	10.5	10.4	8.7	9.4
22	---	---	---	13.3	12.0	12.6	13.5	9.2	11.1	9.9	8.6	9.1
23	---	---	---	13.1	11.3	12.3	15.0	8.5	11.4	10.3	8.4	e9.2
24	---	---	---	11.9	10.6	11.3	10.1	7.4	e8.5	---	---	---
25	---	---	---	13.5	11.4	12.4	---	---	---	---	---	---
26	---	---	---	12.8	11.7	12.5	---	---	e9.0	---	---	---
27	---	---	---	12.3	10.5	11.6	9.4	8.8	9.2	---	---	---
28	---	---	---	13.2	9.8	11.3	9.9	8.8	9.4	---	---	---
29	---	---	---	13.2	9.4	11.2	12.1	8.8	10.1	---	---	---
30	---	---	---	13.3	9.8	11.4	14.2	8.5	10.9	---	---	---
31	---	---	---	13.0	9.9	11.3	---	---	---	8.4	8.0	8.2
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

06887500 KANSAS RIVER AT WAMEGO, KS--Continued

OXYGEN DISSOLVED FROM YSI, in (MG/L), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	8.4	8.0	8.2	12.8	6.2	9.6	14.6	5.8	9.6	---	---	---
2	8.6	7.9	8.3	13.1	6.3	9.4	14.5	6.2	9.7	---	---	---
3	8.6	7.7	8.1	8.6	5.7	7.5	12.6	6.3	9.0	---	---	---
4	8.5	7.7	8.1	9.0	6.7	7.8	13.4	5.7	9.1	14.4	7.2	10.1
5	8.2	8.0	8.1	10.1	6.9	e8.9	13.2	5.3	8.5	15.0	6.9	10.1
6	8.3	8.0	8.1	---	---	---	12.9	5.5	8.7	14.0	6.9	9.8
7	8.4	7.9	8.1	---	---	---	13.1	5.3	8.6	14.0	6.8	9.8
8	8.5	8.0	8.2	---	---	---	11.8	4.7	8.0	13.2	7.0	9.6
9	8.7	7.9	8.3	11.5	7.2	e9.1	11.0	6.1	8.5	14.0	7.2	9.9
10	8.8	8.0	8.3	11.0	7.0	8.8	12.1	6.5	9.0	12.7	7.2	9.5
11	8.9	7.7	8.2	12.4	7.4	9.6	12.3	6.7	8.5	13.3	7.9	10.1
12	10.8	7.4	8.7	11.8	7.7	9.4	11.7	6.2	e8.2	12.0	7.9	9.8
13	10.0	6.6	8.1	12.3	8.2	10.1	10.9	7.1	8.6	12.1	8.2	9.4
14	9.4	8.2	8.8	13.1	8.0	10.3	11.8	7.5	9.4	10.9	8.1	8.9
15	9.1	8.0	8.5	13.8	7.8	9.9	13.2	7.4	9.9	11.7	8.4	9.7
16	8.7	7.7	8.2	14.5	7.6	10.7	13.6	7.0	9.7	12.7	8.3	10.2
17	8.1	7.4	7.8	15.8	7.8	11.5	11.6	7.1	8.8	12.8	8.4	10.1
18	8.0	7.6	7.8	16.1	6.5	10.7	14.1	8.0	10.2	11.9	7.9	9.6
19	8.2	7.6	7.9	14.4	6.2	e8.7	16.6	7.6	11.1	10.8	7.9	9.1
20	8.4	7.0	7.9	17.4	6.6	11.1	15.4	7.6	10.7	12.2	8.7	10.2
21	8.7	7.4	8.0	15.4	6.6	10.4	12.6	7.2	9.5	13.0	8.6	10.4
22	8.5	7.4	8.0	14.5	6.7	10.1	16.2	7.4	11.0	13.1	8.9	10.7
23	8.7	7.5	8.1	14.2	6.9	10.3	15.9	6.9	10.8	13.6	9.2	11.0
24	9.3	7.5	8.3	15.8	6.0	10.8	13.2	6.8	8.9	13.0	9.2	10.8
25	11.3	7.0	9.0	12.2	---	e9.0	15.5	7.3	10.8	13.1	9.2	10.8
26	13.2	6.9	9.1	---	---	---	16.3	7.0	10.4	13.5	8.8	10.7
27	13.4	6.8	9.8	---	---	---	---	6.8	---	13.3	8.7	10.5
28	15.6	6.7	10.6	9.3	5.6	---	---	---	---	13.6	9.1	10.9
29	16.1	6.4	10.9	9.7	5.6	7.5	---	---	---	12.2	8.5	10.1
30	14.7	6.2	10.3	14.9	5.8	9.8	---	---	---	12.2	8.0	9.8
31	---	---	---	14.3	5.6	9.5	---	---	---	---	---	---
MONTH	16.1	6.2	8.5	---	---	---	---	---	---	---	---	---

e Estimated

TURBIDITY, FIELD 6026 FROM YSI, in (NTU), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	190	150	160	56	31	40	27	23	24	---	---	---
2	160	140	150	58	33	44	29	24	26	---	---	---
3	190	150	170	53	35	43	30	25	27	---	---	---
4	210	160	190	50	32	39	34	25	28	---	---	---
5	180	160	170	45	28	35	40	22	28	---	---	---
6	180	150	160	38	25	32	30	20	24	---	---	---
7	160	130	140	38	25	31	24	19	22	---	---	---
8	130	110	120	36	26	31	25	18	22	---	---	---
9	120	100	110	40	28	32	23	18	21	---	---	---
10	120	92	100	38	27	31	22	18	20	---	---	---
11	94	74	84	37	22	31	23	18	20	---	---	---
12	87	72	78	40	27	31	---	---	---	---	---	---
13	77	62	68	48	28	33	---	---	---	---	---	---
14	68	51	60	54	29	38	---	---	---	---	---	---
15	68	53	60	55	34	42	---	---	---	---	---	---
16	72	55	64	52	33	40	---	---	---	---	---	---
17	65	43	52	48	31	39	---	---	---	---	---	---
18	46	36	42	47	32	40	---	---	---	---	---	---
19	46	33	37	51	35	42	---	---	---	---	---	---
20	45	30	35	48	31	40	---	---	---	---	---	---
21	45	22	32	66	35	52	---	---	---	---	---	---
22	40	23	31	74	48	56	---	---	---	---	---	---
23	36	25	29	68	50	58	---	---	---	---	---	---
24	36	22	30	61	46	53	---	---	---	---	---	---
25	38	24	29	57	28	39	---	---	---	---	---	---
26	34	21	26	41	27	31	---	---	---	---	---	---
27	31	21	24	34	23	28	---	---	---	---	---	---
28	35	19	26	25	21	23	---	---	---	---	---	---
29	39	19	24	26	21	23	---	---	---	---	---	---
30	36	19	29	28	24	25	---	---	---	---	---	---
31	47	31	38	---	---	---	---	---	---	---	---	---
MONTH	210	19	76	74	21	37	---	---	---	---	---	---

06887500 KANSAS RIVER AT WAMEGO, KS--Continued

TURBIDITY, FIELD 6026 FROM YSI, in (NTU), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	---	---	---	49	22	28	98	62	83
2	---	---	---	---	---	---	35	24	28	120	81	93
3	---	---	---	---	---	---	28	20	23	91	69	80
4	---	---	---	---	---	---	28	21	25	92	60	72
5	---	---	---	---	---	---	24	19	21	1000	56	99
6	---	---	---	---	---	---	25	18	21	>1300	320	>718
7	---	---	---	---	---	---	26	18	21	810	350	560
8	---	---	---	---	---	---	35	18	23	440	180	320
9	---	---	---	---	---	---	31	19	23	190	110	140
10	---	---	---	---	---	---	39	21	29	140	100	120
11	---	---	---	---	---	---	34	22	30	960	99	430
12	---	---	---	---	---	---	33	19	25	570	260	370
13	---	---	---	---	---	---	27	20	24	260	170	210
14	---	---	---	---	---	---	36	17	25	180	98	140
15	---	---	---	30	21	25	31	18	24	260	100	190
16	---	---	---	24	18	21	36	15	26	200	160	180
17	---	---	---	25	20	23	59	13	20	170	140	150
18	---	---	---	28	20	24	36	14	20	140	120	130
19	---	---	---	27	25	26	42	16	24	140	100	120
20	---	---	---	26	23	25	52	19	25	110	98	110
21	---	---	---	42	26	36	130	24	49	120	91	100
22	---	---	---	30	24	27	45	28	36	130	96	110
23	---	---	---	31	25	27	79	32	62	120	96	100
24	---	---	---	30	26	28	---	65	---	110	95	99
25	---	---	---	26	19	23	---	---	---	100	84	93
26	---	---	---	21	17	19	---	450	---	87	68	77
27	---	---	---	29	19	23	480	310	380	86	64	75
28	---	---	---	29	22	25	370	220	280	780	82	320
29	---	---	---	35	24	29	220	160	190	170	100	140
30	---	---	---	31	24	26	160	66	110	120	81	99
31	---	---	---	28	23	25	---	---	---	100	73	88
MONTH	---	---	---	---	---	---	---	---	---	1300	56	180

> Actual value is known to be greater than the value shown

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	83	66	76	47	38	42	63	47	54	51	33	41
2	72	51	61	52	36	42	60	49	54	45	30	37
3	99	58	73	130	52	100	53	42	48	47	29	35
4	120	60	92	120	99	110	50	39	44	41	27	34
5	120	88	100	112	---	---	46	36	40	41	28	34
6	120	94	110	---	---	---	44	34	37	45	30	37
7	95	80	89	---	---	---	49	34	38	40	30	35
8	89	74	80	---	69	---	43	35	39	43	33	36
9	82	68	75	79	61	70	48	36	39	45	34	38
10	83	65	71	75	54	65	52	33	38	48	36	41
11	100	63	79	68	53	61	550	33	90	43	34	38
12	130	76	99	64	52	58	63	37	47	43	35	38
13	200	97	130	64	48	56	72	37	55	120	33	45
14	110	76	94	59	46	53	68	41	53	48	34	37
15	100	68	83	55	43	51	45	33	39	76	37	55
16	280	88	160	62	41	50	43	34	38	58	35	45
17	280	140	200	60	44	51	250	35	79	46	35	39
18	200	120	160	64	47	53	52	39	44	48	36	42
19	220	97	160	140	45	61	63	40	46	54	39	47
20	140	110	110	71	43	53	50	39	44	50	37	44
21	120	94	110	60	40	48	50	31	39	52	33	38
22	110	90	98	48	33	39	61	31	43	39	29	35
23	100	86	92	44	32	37	53	39	45	37	26	32
24	120	62	86	46	30	37	340	38	87	41	27	31
25	77	61	68	47	28	35	100	41	54	33	22	28
26	200	63	74	54	30	44	44	36	40	33	23	27
27	82	40	52	82	51	65	42	34	37	34	23	28
28	60	32	39	430	82	200	47	32	36	40	24	29
29	42	31	37	440	65	180	50	30	35	40	22	30
30	47	36	41	89	57	69	44	32	36	36	24	31
31	---	---	---	80	53	67	47	33	40	---	---	---
MONTH	280	31	93	---	---	---	550	30	47	120	22	37

06888000 VERMILLION CREEK NEAR WAMEGO, KS

LOCATION.--Lat 39°21'00", long 96°13'10", in NE $^{1}/_{4}$ NW $^{1}/_{4}$ NW $^{1}/_{4}$ sec.20, T.8 S., R.11 E., Pottawatomie County, Hydrologic Unit 10270102, on left bank at upstream side of bridge of county highway bridge, 1.9 mi upstream fom Indian Creek, 14 mi northeast of Wamego, and at mile 15.8.

DRAINAGE AREA.--243 mi^2.

PERIOD OF RECORD.--April 1936 to June 1946, January 1954 to June 1972, February 2002 to September 2002.

GAGE.--Water-stage recorder. Datum of gage is 992.20 ft above NGVD of 1929. Apr. 22, 1936, to June 30, 1946, gage at present site and datum. Jan 1, 1954, to June 30, 1972, gage at present site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--maximum known stage 31.2 ft in June 1915, from flood marks and other information from local residents.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	15	15	15	58	76	8.8	4.3	2.8
2	---	---	---	---	26	11	15	54	66	7.9	3.6	2.7
3	---	---	---	---	24	9.2	13	46	58	7.3	2.9	2.6
4	---	---	---	---	20	10	12	40	53	7.4	2.6	2.3
5	---	---	---	---	18	13	12	69	55	35	2.3	2.3
6	---	---	---	---	19	22	13	627	52	28	2.1	2.1
7	---	---	---	---	22	26	15	165	46	14	2.0	2.2
8	---	---	---	---	26	23	24	93	41	9.9	2.0	2.0
9	---	---	---	---	e38	e20	84	80	38	8.2	1.9	1.9
10	---	---	---	---	e33	e21	87	56	36	6.8	1.9	1.8
11	---	---	---	---	37	22	44	4200	36	6.5	2.1	1.7
12	---	---	---	---	34	17	30	876	40	6.6	3.7	1.8
13	---	---	---	---	26	17	25	402	36	6.9	6.1	2.3
14	---	---	---	---	22	16	22	214	31	7.4	6.3	3.7
15	---	---	---	---	21	15	20	159	28	6.6	4.7	6.2
16	---	---	---	---	20	14	18	133	27	5.7	6.3	5.0
17	---	---	---	---	19	13	17	131	26	5.1	35	3.5
18	---	---	---	---	18	13	16	123	23	4.6	22	3.5
19	---	---	---	---	21	15	17	94	20	4.3	12	9.2
20	---	---	---	---	26	16	21	87	18	3.9	7.1	5.1
21	---	---	---	---	24	15	86	79	16	3.6	92	3.4
22	---	---	---	---	18	12	107	72	15	3.4	30	3.8
23	---	---	---	---	16	11	68	70	15	3.2	10	3.3
24	---	---	---	---	16	13	55	70	13	3.1	6.7	2.7
25	---	---	---	---	15	17	43	140	12	2.8	5.1	2.6
26	---	---	---	---	11	18	33	110	11	3.0	4.3	2.5
27	---	---	---	---	7.4	16	72	1560	11	2.8	4.0	2.2
28	---	---	---	---	11	18	131	330	13	4.5	4.2	1.9
29	---	---	---	---	---	23	90	151	12	4.2	3.8	1.8
30	---	---	---	---	---	23	67	110	9.9	4.0	3.4	1.7
31	---	---	---	---	---	18	---	90	---	4.1	3.1	---
MEAN	---	---	---	---	21.55	16.52	42.40	338.4	31.13	7.406	9.597	3.020
MAX	---	---	---	---	38	26	131	4200	76	35	92	9.2
MIN	---	---	---	---	7.4	9.2	12	40	9.9	2.8	1.9	1.7
AC-FT	---	---	---	---	1200	1020	2520	20800	1850	455	590	180

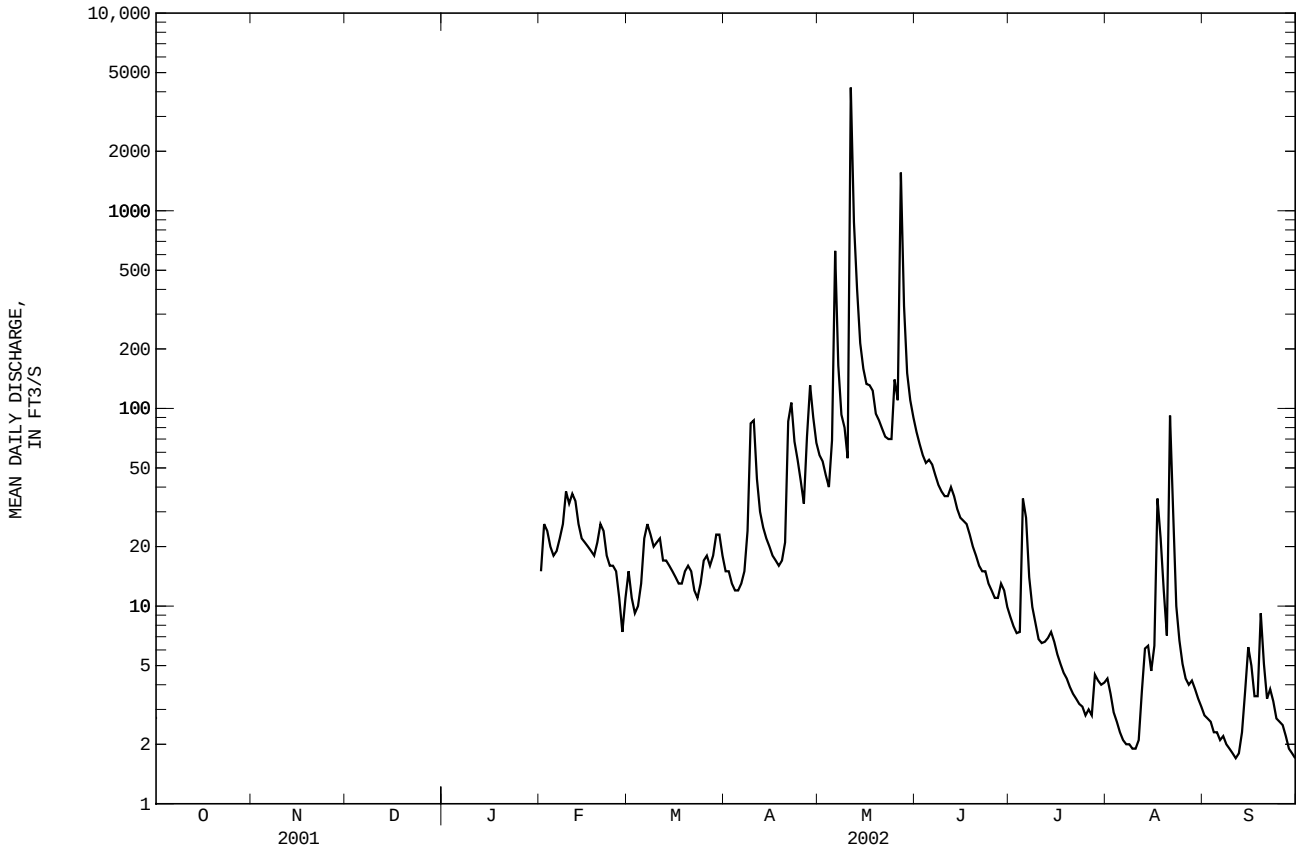
06888000 VERMILLION CREEK NEAR WAMEGO, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1936 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	77.62	37.07	30.54	29.50	62.30	86.24	104.5	179.3	201.5	74.79	62.17	56.79
MAX	845	259	226	219	250	495	539	619	879	544	668	675
(WY)	1942	1962	1945	1962	1969	1960	1944	1959	1967	1958	1968	1965
MIN	0.000	0.000	0.000	0.000	0.29	0.33	0.31	1.01	4.67	0.49	0.000	0.000
(WY)	1957	1957	1957	1957	1957	1956	1956	1956	1937	1940	1937	1937

SUMMARY STATISTICS	WATER YEARS 1936 - 2002		
ANNUAL MEAN	90.78		
HIGHEST ANNUAL MEAN	208		1945
LOWEST ANNUAL MEAN	1.88		1956
HIGHEST DAILY MEAN	13200	Oct 9	1941
LOWEST DAILY MEAN	0.00	Jun 22	1937
ANNUAL SEVEN-DAY MINIMUM	0.00	Jun 22	1937
MAXIMUM PEAK FLOW	8520	May 11	2002
MAXIMUM PEAK STAGE	18.80	May 11	2002
INSTANTANEOUS LOW FLOW	0.00	Jun 2	1937
ANNUAL RUNOFF (AC-FT)	65770		
10 PERCENT EXCEEDS	149		
50 PERCENT EXCEEDS	19		
90 PERCENT EXCEEDS	0.40		

e Estimated



06888350 KANSAS RIVER NEAR BELVUE, KS

LOCATION.--Lat 39°11'15", long 96°08'50", in NW $^{1}/_{4}$ NW $^{1}/_{4}$ NW $^{1}/_{4}$ sec.13, T.10 S., R.11 E., Wabaunsee County, Hydrologic Unit 10270102, on left bank at downstream side of county highway bridge, 3.5 mi southeast of Belvue, 1.3 mi downstream from Wells Creek, 6.4 mi downstream from Vermillion Creek, and at mile 115.0.

DRAINAGE AREA.--55,870 mi^2, of which a large area is probably noncontributing.

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

GAGE.--Water-stage recorder. Datum of gage is 925.54 ft above NGVD of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Natural flow affected by lakes and reservoirs in Colorado, Nebraska, and Kansas, and by numerous diversions upstream from station. Satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10100	1840	1240	2950	2490	1840	1470	1400	7270	1030	888	948
2	7750	1930	1240	2510	2330	e1800	1450	1400	6680	979	948	924
3	5560	1920	1240	2390	2170	e1770	1390	1300	5940	1630	997	933
4	3680	1780	1240	2400	2180	e1760	1390	1190	5790	3190	978	944
5	3450	1750	1240	2490	2240	e1700	1320	1170	6080	3040	964	938
6	3260	1720	1240	2270	2110	1540	1230	3470	6210	3070	942	910
7	3010	1720	1220	2210	1920	1590	1210	2720	6380	3100	916	895
8	2830	1670	1200	2150	1850	1590	1290	2040	6380	3330	897	879
9	2730	1730	1190	2110	2270	1630	1420	1630	6330	3100	891	853
10	2520	1720	1180	2040	2490	1600	1480	1400	6280	2780	910	840
11	2250	1710	1180	1990	2500	1600	1800	6740	4980	2740	908	842
12	2130	1700	1190	1950	2440	1600	2050	5550	2640	2700	1050	865
13	2050	1720	1260	1980	2030	1560	1830	3760	2250	2650	1070	938
14	1970	1860	1330	1880	1920	1530	1820	2560	3410	2380	1180	829
15	1950	1900	1340	1800	1920	1380	1790	2650	3840	2300	989	929
16	2110	1850	1310	1710	2150	1310	1580	3420	4200	2230	951	1020
17	2090	1870	1300	1980	2680	1310	1220	3410	4250	2080	1020	980
18	1860	1920	1930	2680	2730	1300	1190	3330	4090	2120	988	1010
19	1780	1890	4030	3300	2770	1330	1240	3180	3980	1920	972	1080
20	1790	1860	4750	3400	2510	1340	1330	e3120	3910	1420	873	890
21	1830	2090	5010	3400	2170	1510	1720	3130	3920	1280	610	796
22	1840	2280	5160	3420	2120	1850	1750	3100	3930	1210	612	753
23	1820	2320	5200	3270	2100	1920	1770	2760	3820	1150	678	732
24	1730	2140	5220	3010	2080	1930	2060	2280	3750	1150	745	717
25	1640	1870	5230	2370	2030	1940	2400	2310	2940	1260	902	699
26	1560	1430	5220	2280	2010	1610	2110	2280	1990	1120	809	692
27	1520	1330	5130	2400	2060	1220	1940	2830	1540	954	781	696
28	1470	1280	5110	2350	1950	1180	1980	4920	1340	1500	766	744
29	e1480	1270	4420	2310	---	1280	1640	5860	1220	1850	751	778
30	1610	1270	3540	2440	---	1490	1480	6520	1110	945	799	765
31	1880	---	3400	2540	---	1480	---	7090	---	950	949	---
MEAN	2685	1778	2725	2451	2222	1564	1612	3178	4215	1973	894.6	860.6
MAX	10100	2320	5230	3420	2770	1940	2400	7090	7270	3330	1180	1080
MIN	1470	1270	1180	1710	1850	1180	1190	1170	1110	945	610	692
AC-FT	165100	105800	167600	150700	123400	96180	95900	195400	250800	121300	55010	51210

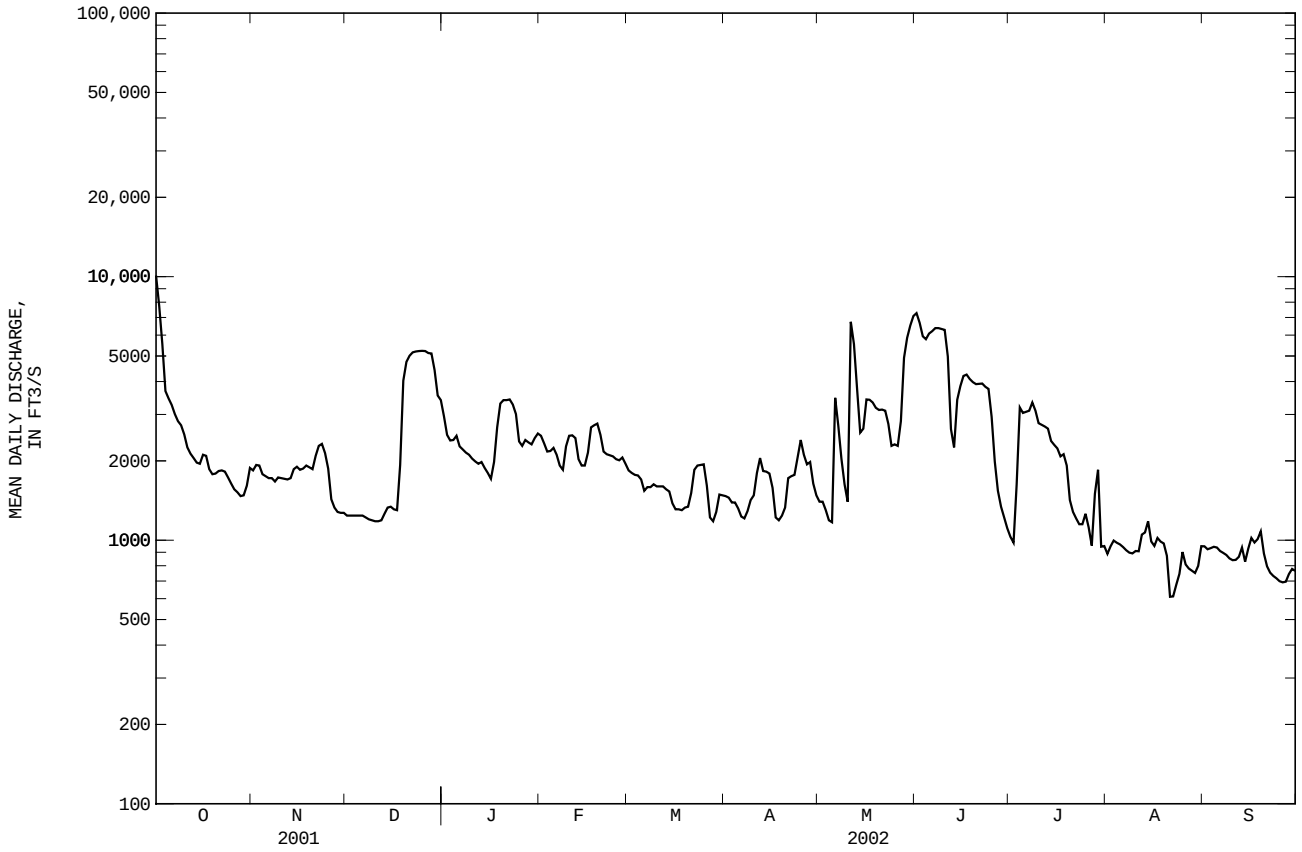
06888350 KANSAS RIVER NEAR BELVUE, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	4762	3888	4323	2684	4317	5712	8220	11510	11060	11410	8685	5192
MAX	23260	21070	10790	7497	15650	24150	32300	31800	42050	72370	57370	35230
(WY)	1987	1999	1993	1994	1993	1993	1987	1995	1995	1993	1993	1993
MIN	756	651	567	651	674	838	846	869	1441	1385	895	680
(WY)	1985	1992	1992	1992	1992	1991	1989	1992	1989	1991	2002	1991

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1983 - 2002	
ANNUAL MEAN	5527		2180		6829	
HIGHEST ANNUAL MEAN					25330	1993
LOWEST ANNUAL MEAN					1798	1991
HIGHEST DAILY MEAN	27100	Jun 20	10100	Oct 1	167000	Jul 26 1993
LOWEST DAILY MEAN	853	Jan 2	610	Aug 21	390	Jan 16 1992
ANNUAL SEVEN-DAY MINIMUM	1070	Feb 17	719	Sep 22	478	Jan 14 1992
MAXIMUM PEAK FLOW			10700	May 11	170000	Jul 26 1993
MAXIMUM PEAK STAGE			10.05	May 11	26.00	Jul 26 1993
INSTANTANEOUS LOW FLOW			542	Aug 21	390	Jan 16 1992
ANNUAL RUNOFF (AC-FT)	4002000		1578000		4948000	
10 PERCENT EXCEEDS	12600		3920		17300	
50 PERCENT EXCEEDS	3380		1840		3300	
90 PERCENT EXCEEDS	1240		921		948	

e Estimated



06888500 MILL CREEK NEAR PAXICO, KS

LOCATION.--Lat 39°03'44", long 96°10'52", in SW $^{1}/_{4}$ NE $^{1}/_{4}$ SW $^{1}/_{4}$ sec.27, T.11 S., R.11 E., Wabaunsee County, Hydrologic Unit 10270102, on right bank between bridges of Interstate Highway 70, 1.0 mi southwest of Paxico, 2.0 mi downstream from Kuenzli Creek, and at mile 16.0.

DRAINAGE AREA.--316 mi^2.

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

REVISED RECORDS.--WSP 1560: 1954, 1957.

GAGE.--Water-stage recorder. Datum of gage is 964.92 ft above NGVD of 1929. Prior to Apr. 15, 1958, nonrecording gage at same site and datum.

REMARKS.--Records good. Satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum known stage since at least 1935, 34.7 ft July 12, 1951, from floodmarks, discharge, 77,200 ft^3/s, from contracted-opening measurement of peak flow.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 27	1000	*5,140	*11.43	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

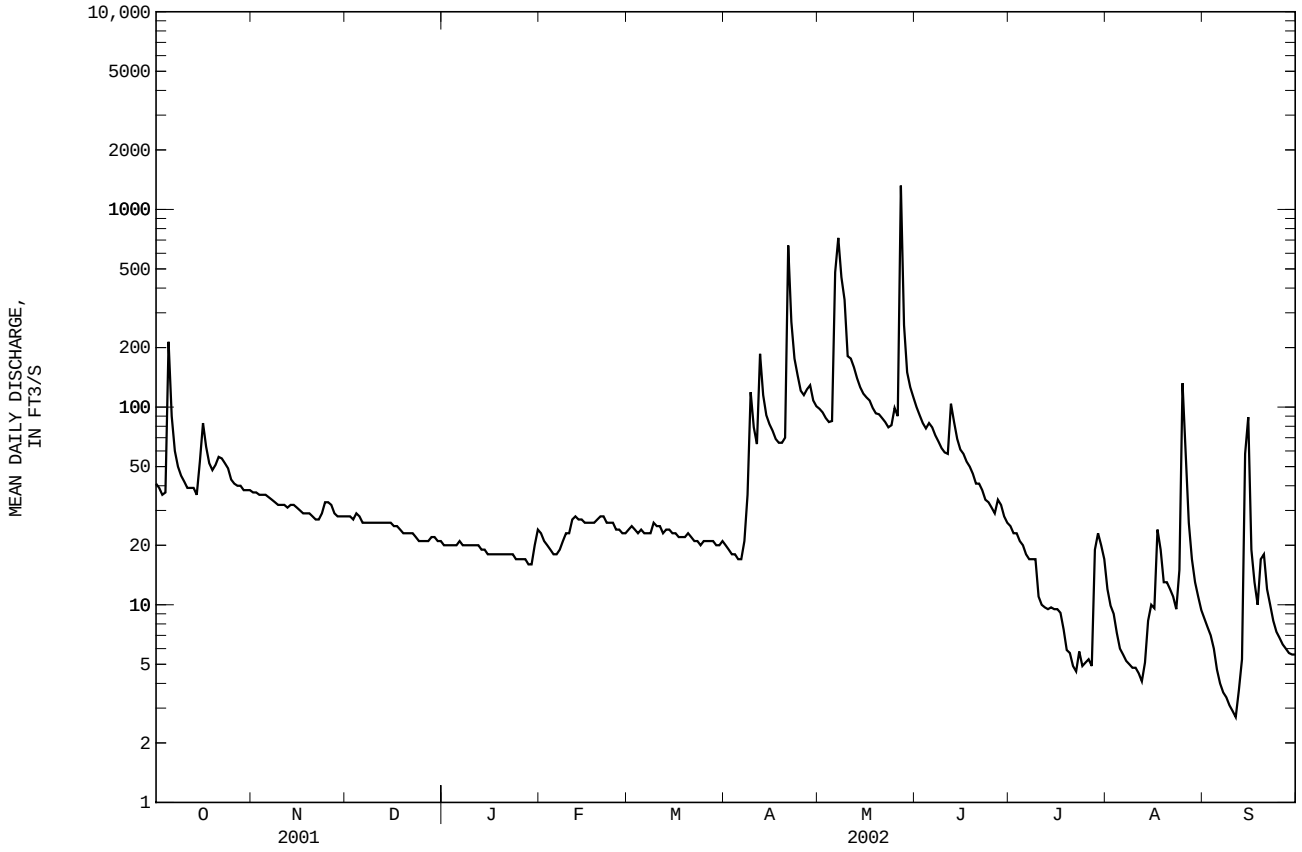
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41	37	28	20	23	24	20	98	100	25	12	8.5
2	39	37	28	20	21	25	19	94	91	23	9.9	7.7
3	36	36	27	20	20	24	18	88	83	23	9.0	7.0
4	37	36	29	20	19	23	18	84	78	21	7.2	6.0
5	214	36	28	20	18	24	17	85	83	20	6.0	4.7
6	90	35	26	21	18	23	17	481	79	18	5.6	4.0
7	60	34	26	20	19	23	21	718	72	17	5.2	3.6
8	50	33	26	20	21	23	36	454	67	17	5.0	3.4
9	45	32	26	20	23	26	119	349	62	17	4.8	3.1
10	42	32	26	20	23	25	79	181	59	11	4.8	2.9
11	39	32	26	20	27	25	65	176	58	10	4.5	2.7
12	39	31	26	20	28	23	186	159	104	9.7	4.1	3.7
13	39	32	26	19	27	24	115	140	84	9.5	5.1	5.3
14	36	32	26	19	27	24	91	126	69	9.7	8.3	58
15	53	31	26	18	26	23	82	117	61	9.5	10	89
16	83	30	25	18	26	23	76	112	58	9.5	9.6	19
17	63	29	25	18	26	22	69	108	53	9.1	24	13
18	52	29	24	18	26	22	66	99	50	7.5	19	10
19	48	29	23	18	27	22	66	93	46	5.9	13	17
20	51	28	23	18	28	23	70	92	41	5.7	13	18
21	56	27	23	18	28	22	657	88	41	4.9	12	12
22	55	27	23	18	26	21	270	84	38	4.6	11	10
23	52	29	22	18	26	21	176	79	34	5.8	9.5	8.3
24	49	33	21	17	26	20	145	81	33	4.9	15	7.3
25	43	33	21	17	24	21	121	99	31	5.1	132	6.8
26	41	32	21	17	24	21	115	90	29	5.3	59	6.3
27	40	29	21	17	23	21	123	1320	34	4.9	26	6.0
28	40	28	22	16	23	21	129	260	32	19	17	5.7
29	38	28	22	16	---	20	108	150	28	23	13	5.6
30	38	28	21	20	---	20	101	126	26	20	11	5.6
31	38	---	21	24	---	21	---	112	---	17	9.4	---
MEAN	53.13	31.50	24.45	18.87	24.04	22.58	106.5	204.6	57.47	12.66	15.97	12.01
MAX	214	37	29	24	28	26	657	1320	104	25	132	89
MIN	36	27	21	16	18	20	17	79	26	4.6	4.1	2.7
MED	43	32	25	19	25	23	80	112	58	9.7	9.9	6.5
AC-FT	3270	1870	1500	1160	1330	1390	6340	12580	3420	779	982	714

06888500 MILL CREEK NEAR PAXICO, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	151.0	119.2	98.31	81.04	136.7	251.6	324.0	383.6	320.7	191.7	79.88	114.4
MAX	1179	1108	668	382	611	1325	1680	2895	1653	2136	535	1954
(WY)	1986	1999	1974	1974	1973	1973	1999	1995	1967	1993	1968	1973
MIN	0.000	0.000	0.000	0.000	0.000	0.97	1.51	3.05	1.89	1.82	0.055	0.040
(WY)	1957	1957	1957	1957	1957	1957	1954	1989	1989	1956	1955	1956

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1954 - 2002	
ANNUAL MEAN	189.4		48.82		190.5	
HIGHEST ANNUAL MEAN					634	1993
LOWEST ANNUAL MEAN					7.02	1956
HIGHEST DAILY MEAN	4390	Jun 20	1320	May 27	21700	May 17 1995
LOWEST DAILY MEAN	6.5	Jan 20	2.7	Sep 11	0.00	Sep 22 1954
ANNUAL SEVEN-DAY MINIMUM	6.9	Jan 19	3.3	Sep 6	0.00	Sep 22 1954
MAXIMUM PEAK FLOW			5140	May 27	42200	Sep 26 1973
MAXIMUM PEAK STAGE			11.43	May 27	32.21	Sep 26 1973
INSTANTANEOUS LOW FLOW			2.6	Sep 10	.00	at times
ANNUAL RUNOFF (AC-FT)	137100		35340		138000	
10 PERCENT EXCEEDS	393		98		335	
50 PERCENT EXCEEDS	49		25		54	
90 PERCENT EXCEEDS	15		7.3		5.0	



06889000 KANSAS RIVER AT TOPEKA, KS

LOCATION.--Lat 39°04'00", long 95°38'58", in SW $^1/_4$ SW $^1/_4$ NW $^1/_4$ sec.28, T.11 S., R.16 E., Shawnee County, Hydrologic Unit 10270102, on right bank at downstream side of Sardou Bridge in Topeka, 2.3 mi upstream from Soldier Creek (diversion channel), and at mile 83.1.

WATER-DISCHARGE RECORDS

DRAINAGE AREA.--56,720 mi^2, 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.

REVISED RECORDS.--WSP 806: Drainage area. WSP 1310: 1920(M), 1922(M).

GAGE.--Water-stage recorder. Datum of gage is 846.66 ft above NGVD of 1929. Feb. 28, 1961, to Sept. 30, 1988, gage datum was 5.00 ft higher. Prior to Feb. 28, 1961, recording or nonrecording gages at several sites within 8,000 ft of present site at various datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Natural flow affected by reservoirs in Colorado, Nebraska, and Kansas, and by numerous diversions upstream from station. Satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 30, 1903 (second highest since 1844) reached a stage of about 37 ft, present site and datum, from floodmarks at site 5,900 ft upstream, discharge, about 300,000 ft^3/s. A flood in the spring of 1844 is known to have been higher than that of 1903.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9840	1850	1420	e2960	2490	1800	1380	1570	7250	1090	978	925
2	8820	1830	1410	2760	2440	1740	1440	1510	7200	1070	924	918
3	5810	1890	1390	e2390	2280	1360	1400	1470	6120	1050	954	915
4	3980	1860	1370	e2350	2060	1250	1360	1380	6170	1860	967	921
5	3820	1790	1360	e2370	2060	1860	1350	1310	5870	2960	951	940
6	3520	1770	1380	2420	2100	1760	1310	2890	6170	2870	946	930
7	2960	1760	1400	2210	1910	1480	1280	4790	6180	2900	934	904
8	2750	1790	1390	2210	1750	1520	1450	3810	6270	2980	911	886
9	2570	1730	1370	2300	1770	1650	1730	2800	6190	3210	903	880
10	2530	1780	1370	2140	2320	1540	1660	2090	6150	2790	921	879
11	2190	1760	1360	1870	2380	1510	1580	3460	6040	2570	918	869
12	2000	1740	1380	1850	2380	1500	2170	9620	4010	2520	951	874
13	1920	1730	1390	1810	2230	1480	2210	6090	2190	2470	1080	931
14	1860	1740	1440	1870	1780	1430	1830	3950	2430	2340	1080	1040
15	2120	1840	1470	1780	1730	1450	1700	2750	3580	2010	1090	1030
16	2430	1850	1470	1750	1730	1360	1600	3140	3860	1930	1030	1040
17	2280	1810	1470	1700	2020	1340	1460	3690	4250	1800	1250	1010
18	2050	1850	1470	2020	2450	1340	1270	3570	4110	1660	1230	999
19	1860	1880	2120	2830	2560	1350	1350	3410	3930	1820	1180	1090
20	1830	1850	3770	3270	2570	1370	1420	3250	3830	1500	1130	1080
21	1870	1840	4340	3310	2220	1420	2130	3170	3780	1210	967	956
22	1890	2020	4720	3270	1920	1500	3270	3110	3800	1160	786	878
23	1890	2110	4810	3310	1870	1670	2200	3140	3740	1130	805	840
24	1870	2250	4810	3100	1860	1720	2010	2640	3620	1100	796	808
25	1810	2020	4820	2740	1910	1790	2120	2440	3510	1110	876	797
26	1750	1730	4790	2120	1860	1750	2360	2410	2330	1160	1030	789
27	1680	1520	4760	2090	1870	1440	2110	3040	1560	1050	917	782
28	1630	1480	4700	2220	1920	1280	1990	4930	1300	1040	860	780
29	1600	1450	4650	2200	---	1260	1990	5710	1210	1470	824	817
30	1580	1430	3870	2190	---	1300	1680	6300	1150	1490	815	823
31	1700	---	3410	2060	---	1390	---	6700	---	983	843	---
MEAN	2787	1798	2609	2370	2087	1504	1760	3553	4260	1816	962.8	911.0
MAX	9840	2250	4820	3310	2570	1860	3270	9620	7250	3210	1250	1090
MIN	1580	1430	1360	1700	1730	1250	1270	1310	1150	983	786	780
AC-FT	171400	107000	160400	145700	115900	92450	104700	218500	253500	111700	59200	54210

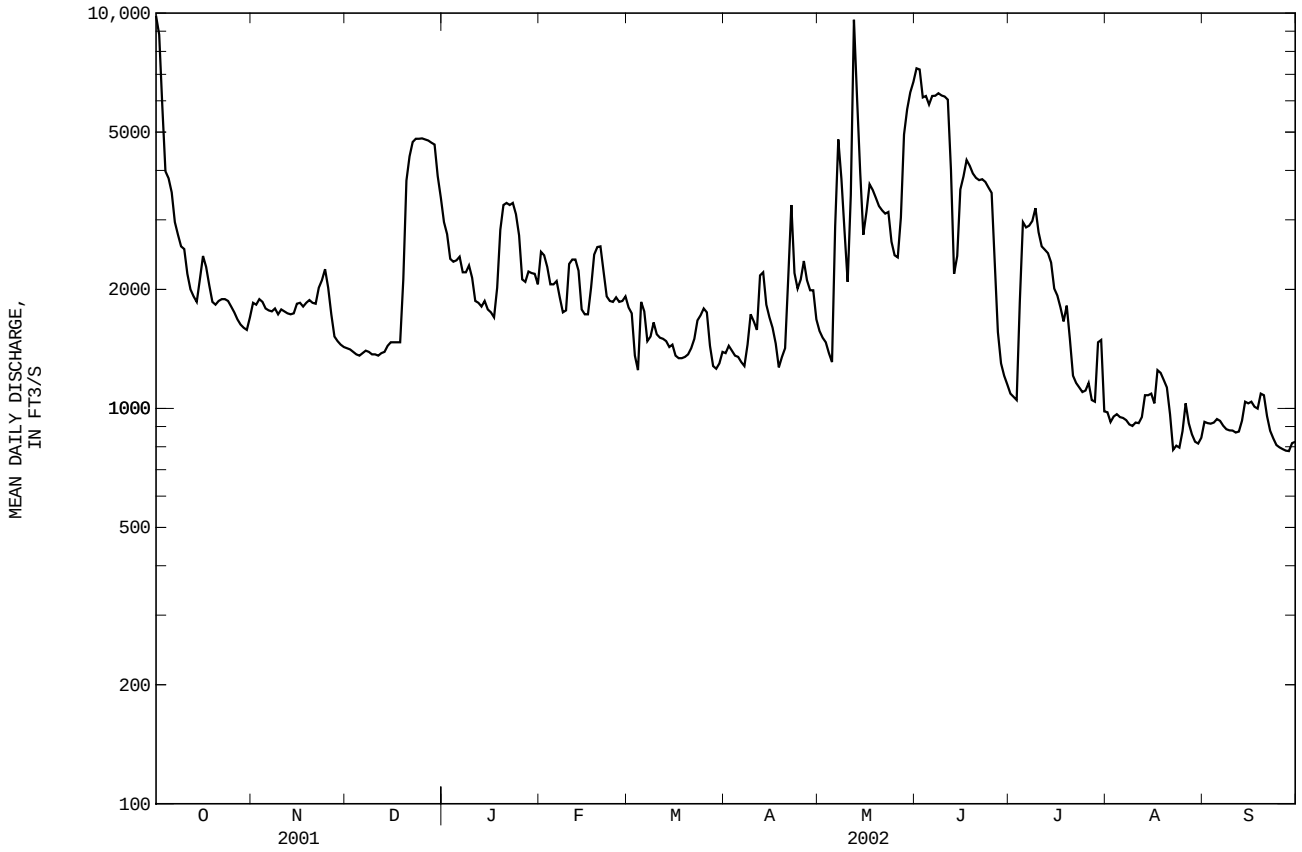
06889000 KANSAS RIVER AT TOPEKA, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1918 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	4367	3401	2760	2217	3495	5451	7012	8659	11790	9624	5698	5289
MAX	42320	35190	16140	11280	16720	27610	32500	36010	64670	109100	55350	34840
(WY)	1974	1974	1974	1974	1949	1973	1987	1995	1951	1951	1993	1951
MIN	348	406	383	328	500	492	650	585	1075	986	269	425
(WY)	1957	1957	1957	1957	1957	1967	1956	1956	1989	1936	1934	1956

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1918 - 2002	
ANNUAL MEAN	5861		2203		5859	
HIGHEST ANNUAL MEAN					25580	1993
LOWEST ANNUAL MEAN					1138	1956
HIGHEST DAILY MEAN	31600	Jun 21	9840	Oct 1	458000	Jul 13 1951
LOWEST DAILY MEAN	880	Jan 2	780	Sep 28	170	Oct 11 1956
ANNUAL SEVEN-DAY MINIMUM	1130	Jan 1	799	Sep 24	183	Oct 7 1956
MAXIMUM PEAK FLOW			12900	May 12	469000	Jul 13 1951
MAXIMUM PEAK STAGE			11.05	May 12	40.80	Jul 13 1951
INSTANTANEOUS LOW FLOW			746	Aug 22	112	Dec 16 1940
ANNUAL RUNOFF (AC-FT)	4243000		1595000		4245000	
10 PERCENT EXCEEDS	15100		3890		13700	
50 PERCENT EXCEEDS	3520		1810		2670	
90 PERCENT EXCEEDS	1360		938		887	

e Estimated



06889000 KANSAS RIVER AT TOPEKA, KS--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--July 1999 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: July 1999 to current year.
pH: July 1999 to current year.
WATER TEMPERATURE: July 1999 to current year.
DISSOLVED OXYGEN: July 1999 to current year.
TURBIDITY: July 1999 to current year.

INSTRUMENTATION.--Multiparameter water-quality monitor.

REMARKS.--Records fair except those for periods of missing records. Interruptions in record are due to ice condtions or malfunction of the recording instrument or sensors. Instruments used to measure turbidity conform to ISO 7027 standards.

EXTREMES FOR PERIOD OF RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 1,630 microsiemens/cm, Oct. 26, 1999; minimum, 189 microsiemens/cm, Aug. 17, 2000.
pH: Maximum, 9.4 standard units, Aug. 31, 2000; minimum, 7.0 standard units, July 5, 2000.
WATER TEMPERATURE: Maximum, 33.4°C, July 14, 2000; minimum, 0.0°C, Feb. 25, 2001.
DISSOLVED OXYGEN: Maximum 17.4 mg/L, Sept. 30, 1999; minimum, 3.7 mg/L, Sept. 3, 2002.
TURBIDITY: Maximum, >1,600 NTU, July 4, 2000; minimum, 6.0 NTU, July 28, 2002.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 1,140 microsiemens/cm, Aug. 2; minimum, 262 microsiemens/cm, May 12.
pH: Maximum, 9.1 units, Sept. 2; minimum, 7.5 units, Sept. 8.
WATER TEMPERATURE: Maximum, 33.2°C, July 9; minimum, 0.0°C, on several days.
DISSOLVED OXYGEN: Maximum, 16.7 mg/L, Mar. 20; minimum, 3.7 mg/L, Sept. 3.
TURBIDITY: Maximum, 1,300 NTU, on several days in May; minimum, 6 NTU, July 28.

SPECIFIC CONDUCTANCE FROM YSI, in US/CM @ 25C, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	444	438	441	933	839	869	989	977	984	---	---	---
2	439	435	436	841	831	837	979	970	976	---	---	---
3	492	439	474	844	823	838	976	968	973	---	---	---
4	524	481	497	823	783	801	971	962	966	---	---	---
5	611	480	528	836	800	823	975	958	963	---	---	---
6	616	593	602	846	808	837	---	962	e966	---	---	---
7	643	616	632	845	827	839	---	---	---	---	---	---
8	660	643	650	841	832	836	968	917	945	---	---	---
9	674	659	666	852	838	845	951	926	937	---	---	---
10	694	674	681	892	852	872	972	951	961	---	---	---
11	715	694	700	864	855	860	999	959	984	---	---	---
12	786	715	761	860	856	859	993	971	982	---	---	---
13	824	786	811	862	855	859	975	961	968	---	---	---
14	839	824	832	869	856	861	1000	970	983	---	---	---
15	843	753	808	876	848	867	1070	1000	1040	---	---	---
16	780	701	744	850	838	843	1080	1060	1070	---	---	e999
17	834	779	812	839	821	833	1110	1080	1100	1010	980	998
18	803	780	786	836	821	829	1080	983	1020	988	914	975
19	870	784	833	822	815	818	987	759	927	914	808	862
20	882	870	878	828	820	823	789	672	707	810	765	778
21	896	878	884	834	825	830	688	668	681	773	760	765
22	904	891	896	845	778	825	668	653	657	771	759	768
23	921	887	911	778	760	767	657	653	655	765	755	757
24	946	899	919	763	740	748	663	656	659	805	763	776
25	981	943	964	840	745	768	669	660	663	817	805	811
26	999	981	994	837	761	784	---	---	---	892	804	832
27	998	979	991	961	819	912	---	---	---	927	892	915
28	979	959	969	980	961	971	---	---	---	899	870	877
29	960	941	951	983	979	981	---	---	---	876	871	873
30	945	926	936	989	982	987	---	---	---	872	860	865
31	942	926	935	---	---	---	---	---	---	862	843	855
MONTH	999	435	772	989	740	847	---	---	---	---	---	---

06889000 KANSAS RIVER AT TOPEKA, KS--Continued

SPECIFIC CONDUCTANCE FROM YSI, in US/CM @ 25C, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	857	843	851	1030	1010	1020	956	931	946	834	806	825
2	864	849	859	1010	967	988	959	944	952	855	822	842
3	860	824	836	1050	993	1020	977	952	970	897	852	878
4	842	806	816	1060	1010	1040	974	968	971	925	897	912
5	813	794	803	1030	908	992	986	973	980	905	854	895
6	877	813	835	934	895	914	975	960	971	859	493	722
7	932	877	902	951	897	929	1000	965	990	566	470	516
8	957	932	946	1030	940	1000	1000	908	965	605	526	574
9	953	933	941	1110	1020	1060	924	883	907	647	592	623
10	976	869	926	1120	1080	1100	921	887	910	817	630	721
11	886	869	880	1080	1060	1060	963	888	939	841	393	796
12	884	874	878	1060	1050	1060	908	842	855	405	262	351
13	874	860	865	1060	1040	1050	867	793	819	460	390	416
14	958	853	877	1040	1010	1030	885	853	876	617	458	547
15	1030	958	1010	1020	1000	1010	899	870	885	725	617	670
16	1050	1030	1040	1020	1010	1020	883	867	875	868	723	792
17	1040	956	1020	1030	1010	1020	882	860	872	771	746	761
18	956	878	893	1030	1010	1020	960	876	928	755	718	743
19	885	871	878	1010	999	1000	964	917	942	718	685	708
20	876	862	869	1010	979	999	960	909	942	688	674	680
21	920	865	875	1000	986	997	922	717	858	736	688	713
22	993	920	970	1020	972	1010	754	647	690	750	733	743
23	1000	986	995	973	911	929	883	754	815	760	727	752
24	1020	994	1010	922	918	920	914	860	880	760	747	752
25	1020	1000	1010	927	918	922	1020	872	958	771	749	761
26	1040	1010	1030	932	907	922	930	723	862	763	737	755
27	1070	1020	1040	923	903	907	723	668	685	747	579	692
28	1040	1020	1030	1020	923	982	722	679	702	680	521	619
29	---	---	---	1040	1010	1020	729	685	708	698	521	604
30	---	---	---	1030	1010	1020	806	729	768	655	592	628
31	---	---	---	1010	925	950	---	---	---	658	630	645
MONTH	1070	794	924	1120	895	997	1020	647	881	925	262	698

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	630	606	612	847	831	836	957	819	902	862	733	791
2	620	607	615	866	847	854	1140	957	1090	741	727	734
3	631	614	622	873	860	867	1050	909	952	737	723	728
4	714	618	654	888	656	840	982	907	931	751	733	739
5	724	633	681	690	617	647	1000	981	994	773	742	754
6	633	553	573	---	---	---	1000	904	962	777	767	772
7	568	553	561	---	---	---	904	843	866	776	740	755
8	568	561	564	641	---	e602	846	818	829	742	689	711
9	578	567	571	---	---	---	857	836	843	695	663	685
10	584	573	578	670	---	e653	863	841	852	721	692	706
11	583	573	579	697	655	679	852	841	848	730	717	722
12	631	573	592	690	670	680	849	781	822	724	710	718
13	669	631	658	691	671	683	797	723	772	740	674	727
14	947	668	773	687	663	675	825	768	806	781	670	747
15	765	637	675	689	653	667	794	738	770	792	710	736
16	648	629	635	666	651	658	788	733	754	800	744	780
17	852	633	750	659	638	650	823	656	736	773	668	735
18	813	595	638	687	644	671	794	750	776	780	703	759
19	618	570	589	710	669	679	840	734	774	773	725	751
20	600	581	589	725	661	691	860	793	826	790	769	778
21	604	---	e600	776	680	743	870	833	857	831	777	799
22	620	601	606	789	771	779	929	838	e869	878	831	866
23	632	618	626	798	773	785	932	872	892	926	878	906
24	623	598	613	814	796	802	1100	886	1020	917	892	908
25	600	577	588	838	810	826	1080	938	1030	914	902	909
26	---	579	---	874	830	845	941	824	880	911	883	897
27	---	---	---	---	---	---	861	838	854	889	874	883
28	769	---	---	---	---	---	863	845	853	887	876	882
29	799	769	784	823	751	798	858	844	851	883	859	874
30	832	797	814	751	653	676	857	848	852	859	812	837
31	---	---	---	819	657	730	866	856	863	---	---	---
MONTH	---	---	---	---	---	---	1140	656	869	926	663	786

e Estimated

06889000 KANSAS RIVER AT TOPEKA, KS--Continued

PH, WH, FIELD FROM YSI, in (STANDARD UNITS), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	8.1	8.1	8.1	8.8	8.6	8.7	8.3	8.3	8.3	---	---	---
2	8.2	8.1	8.1	8.8	8.5	8.7	8.3	8.2	8.3	---	---	---
3	8.2	8.2	8.2	8.8	8.6	8.7	8.3	8.2	8.3	---	---	---
4	8.2	8.2	8.2	8.8	8.5	8.6	8.5	8.3	8.3	---	---	---
5	8.2	8.1	8.2	8.8	8.5	8.6	8.5	8.3	8.3	---	---	---
6	8.3	8.2	8.2	8.8	8.5	8.6	8.5	---	e8.4	---	---	---
7	8.3	8.2	8.3	8.7	8.5	8.6	---	---	e8.4	---	---	---
8	8.4	8.2	8.3	8.7	8.5	8.6	8.5	8.4	8.4	---	---	---
9	8.4	8.3	8.3	8.6	8.5	8.6	8.5	8.3	8.4	---	---	---
10	8.4	8.3	8.4	8.6	8.4	8.5	8.5	8.4	8.4	---	---	---
11	8.5	8.3	8.4	8.6	8.3	8.5	8.7	8.4	8.4	---	---	---
12	8.7	8.4	8.5	8.6	8.4	8.5	8.6	8.4	8.4	---	---	---
13	8.8	8.5	8.6	8.6	8.4	8.5	8.5	8.3	8.4	---	---	---
14	8.9	8.6	8.7	8.7	8.3	8.5	8.6	8.4	8.5	---	---	---
15	8.8	8.5	8.6	8.7	8.4	8.6	8.5	8.4	8.4	---	---	---
16	8.6	8.4	8.5	8.7	8.4	8.5	8.5	8.4	8.4	---	---	e8.2
17	8.7	8.4	8.5	8.7	8.4	8.5	8.6	8.4	8.4	8.5	8.2	8.2
18	8.7	8.4	8.6	8.6	8.4	8.4	8.5	8.4	8.4	8.3	8.3	8.3
19	8.8	8.5	8.6	8.6	8.3	8.4	8.4	8.3	8.4	8.4	8.3	8.3
20	8.8	8.6	8.7	8.6	8.4	8.5	8.3	8.2	8.3	8.5	8.3	8.3
21	8.8	8.5	8.7	8.6	8.4	8.5	8.4	8.3	8.3	8.5	8.3	8.3
22	8.8	8.5	8.6	8.6	8.4	8.4	8.4	8.3	8.3	8.5	8.3	8.3
23	8.8	8.4	8.6	8.5	8.3	8.4	8.4	8.3	8.3	8.4	8.3	8.3
24	8.8	8.5	8.6	8.4	8.3	8.3	8.4	8.3	8.3	8.4	8.3	8.3
25	8.7	8.5	8.6	8.4	8.3	8.3	8.4	8.3	8.3	8.4	8.3	8.3
26	8.6	8.5	8.5	8.4	8.3	8.3	---	---	e8.3	8.5	8.3	8.3
27	8.5	8.4	8.5	8.4	8.3	8.4	---	---	---	8.6	8.3	8.3
28	8.6	8.3	8.4	8.4	8.3	8.3	---	---	---	8.4	8.3	8.4
29	8.7	8.4	8.5	8.3	8.3	8.3	---	---	---	8.5	8.3	8.4
30	8.8	8.4	8.6	8.3	8.3	8.3	---	---	---	8.5	8.3	8.3
31	8.8	8.6	8.7	---	---	---	---	---	---	8.4	8.3	8.3
MAX	8.9	8.6	8.7	8.8	8.6	8.7	---	---	---	---	---	---
MIN	8.1	8.1	8.1	8.3	8.3	8.3	---	---	---	---	---	---

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		FEBRUARY			MARCH			APRIL			MAY	
1	8.3	8.2	8.3	8.4	8.3	8.4	8.8	8.5	8.6	8.7	8.5	8.6
2	8.3	8.3	8.3	8.6	8.3	8.4	8.8	8.4	8.6	8.8	8.5	8.6
3	8.5	8.3	8.3	8.3	8.3	8.3	8.8	8.6	8.7	8.7	8.3	8.4
4	8.5	8.3	8.3	8.3	8.2	8.3	8.7	8.6	8.7	8.6	8.3	8.4
5	8.4	8.3	8.3	8.3	8.2	8.3	8.8	8.5	8.6	8.6	8.2	8.3
6	8.3	8.3	8.3	8.7	8.3	8.3	8.8	8.6	8.7	8.3	7.8	8.1
7	8.4	8.3	8.3	8.5	8.3	8.4	8.7	8.5	8.6	8.0	7.8	7.8
8	8.4	8.3	8.3	8.6	8.4	8.5	8.6	8.5	8.6	8.2	8.0	8.1
9	8.4	8.3	8.3	8.5	8.4	8.4	8.8	8.4	8.6	8.3	8.1	8.2
10	8.5	8.4	8.4	8.4	8.3	8.4	8.8	8.4	8.6	8.7	8.3	8.4
11	8.6	8.4	8.4	8.5	8.3	8.4	8.8	8.5	8.6	8.7	7.7	8.5
12	8.6	8.4	8.4	8.5	8.4	8.5	8.7	8.5	8.5	7.9	7.7	7.8
13	8.4	8.4	8.4	8.6	8.4	8.5	8.7	8.4	8.5	8.0	7.9	7.9
14	8.5	8.3	8.4	8.7	8.5	8.6	8.9	8.6	8.7	8.3	8.0	8.1
15	8.5	8.3	8.4	8.8	8.6	8.7	8.8	8.4	8.5	8.6	8.3	8.4
16	8.5	8.4	8.4	8.7	8.6	8.6	8.7	8.3	8.5	8.6	8.5	8.6
17	8.6	8.4	8.5	8.8	8.6	8.7	8.8	8.3	8.4	8.6	8.4	8.5
18	8.5	8.4	8.5	8.8	8.5	8.6	8.6	8.1	8.3	8.6	8.4	8.5
19	8.5	8.4	8.4	8.7	8.5	8.6	8.6	8.1	8.3	8.6	8.5	8.5
20	8.6	8.4	8.4	8.8	8.5	8.6	8.5	8.2	8.4	8.5	8.4	8.5
21	8.6	8.4	8.5	8.8	8.5	8.7	8.5	8.1	8.4	8.6	8.4	8.5
22	8.6	8.4	8.5	8.7	8.5	8.6	8.3	8.0	8.1	8.6	8.5	8.6
23	8.7	8.5	8.6	8.6	8.5	8.5	8.7	8.3	8.5	8.6	8.5	8.6
24	8.8	8.5	8.6	8.5	8.4	8.5	8.7	8.3	8.6	8.6	8.5	8.5
25	8.8	8.6	8.7	8.6	8.4	8.5	8.8	8.4	8.6	8.6	8.4	8.5
26	8.7	8.5	8.6	8.6	8.5	8.5	8.6	8.2	8.3	8.7	8.4	8.6
27	8.6	8.4	8.5	8.5	8.4	8.5	8.3	8.2	8.2	8.6	8.0	8.3
28	8.4	8.4	8.4	8.6	8.3	8.5	8.3	8.2	8.3	8.2	8.0	8.1
29	---	---	---	8.8	8.4	8.6	8.4	8.3	8.3	8.1	8.0	8.0
30	---	---	---	8.8	8.3	8.5	8.7	8.3	8.5	8.3	8.1	8.2
31	---	---	---	8.8	8.4	8.6	---	---	---	8.4	8.2	8.2
MAX	8.8	8.6	8.7	8.8	8.6	8.7	8.9	8.6	8.7	8.8	8.5	8.6
MIN	8.3	8.2	8.3	8.3	8.2	8.3	8.3	8.0	8.1	7.9	7.7	7.8

06889000 KANSAS RIVER AT TOPEKA, KS--Continued

PH, WH, FIELD FROM YSI, in (STANDARD UNITS), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	8.4	8.2	8.3	8.6	8.0	8.3	8.3	7.9	8.1	8.8	8.0	8.3
2	8.5	8.3	8.4	8.5	8.0	8.2	8.6	7.6	8.3	9.1	8.0	8.6
3	8.6	8.3	8.4	8.7	8.0	8.3	8.8	7.9	8.3	8.8	8.2	8.5
4	8.6	8.3	8.3	8.8	8.0	8.4	8.7	8.1	8.4	8.6	7.8	8.2
5	8.3	8.2	8.3	9.0	8.5	8.8	8.7	8.0	8.4	8.6	7.8	8.2
6	8.4	8.2	8.3	9.0	8.5	8.8	8.7	8.2	8.4	8.3	7.6	7.9
7	8.3	8.3	8.3	8.9	8.2	8.6	8.8	8.3	8.5	8.4	7.6	7.7
8	8.4	8.3	8.3	8.9	8.3	8.6	8.9	8.4	8.6	8.4	7.5	7.7
9	8.5	8.3	8.4	8.8	8.1	8.5	8.6	8.2	8.4	8.9	7.5	7.7
10	8.5	8.4	8.4	8.9	8.1	8.5	8.5	8.1	8.2	8.9	8.0	8.5
11	8.6	8.4	8.5	8.8	8.1	8.5	8.8	8.2	8.5	8.9	8.0	8.5
12	8.8	8.4	8.5	8.8	8.2	8.5	8.9	8.2	8.5	8.9	8.0	8.5
13	8.8	8.6	8.7	8.8	8.3	8.5	9.0	8.2	8.6	9.0	8.2	8.6
14	8.8	8.5	8.7	8.7	8.1	8.3	8.9	8.3	8.6	8.8	8.3	8.5
15	8.8	8.6	8.7	8.6	7.9	8.1	8.8	8.1	8.4	8.9	8.3	8.6
16	8.8	8.5	8.6	8.5	7.8	8.0	8.3	7.7	8.0	9.1	8.4	8.8
17	8.7	8.5	8.6	8.4	7.9	8.0	8.0	7.6	7.8	9.1	8.5	8.8
18	8.5	8.3	8.4	8.2	7.9	8.0	8.5	7.8	8.1	9.0	8.2	8.6
19	8.5	8.4	8.4	8.0	7.8	7.9	8.3	7.9	8.0	8.5	8.0	8.3
20	8.5	8.4	8.4	8.5	7.8	8.0	8.2	7.8	7.9	8.8	8.3	8.5
21	8.7	---	e8.5	8.3	8.0	8.1	8.4	7.7	7.9	8.8	8.4	8.6
22	8.8	8.5	8.6	8.7	8.0	8.3	8.7	7.7	8.5	8.9	8.5	8.7
23	8.9	8.6	8.8	9.0	8.3	8.6	8.8	8.3	8.6	8.9	8.6	8.8
24	8.9	8.6	8.7	8.5	8.1	8.4	8.6	8.2	8.4	8.9	8.6	8.7
25	8.9	8.6	8.7	8.3	7.8	8.1	8.8	8.1	8.4	8.9	8.6	8.8
26	8.9	e8.5	e8.7	8.6	7.6	7.8	8.8	8.2	8.5	8.9	8.5	8.7
27	---	---	---	8.5	8.0	8.2	8.8	8.2	8.5	8.9	8.4	8.7
28	8.8	---	---	8.5	7.8	8.2	8.8	8.2	8.5	8.8	8.5	8.7
29	8.6	8.1	8.4	8.5	7.9	8.2	8.8	8.1	8.5	8.9	8.4	8.6
30	8.6	8.1	8.3	8.3	7.9	8.1	8.8	8.2	8.5	8.8	8.3	8.5
31	---	---	---	8.6	7.7	8.1	8.8	8.2	8.4	---	---	---
MAX	---	---	---	9.0	8.5	8.8	9.0	8.4	8.6	9.1	8.6	8.8
MIN	---	---	---	8.0	7.6	7.8	8.0	7.6	7.8	8.3	7.5	7.7

e Estimated

WATER TEMPERATURE FROM YSI, in (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	20.8	18.8	19.9	17.3	14.2	15.5	5.2	2.8	4.0	---	---	---
2	20.7	18.8	19.9	17.0	15.0	15.9	6.9	3.9	5.4	---	---	---
3	21.1	18.6	19.8	16.1	14.1	15.2	10.3	6.3	8.0	---	---	---
4	20.6	16.8	19.2	17.3	15.5	16.3	13.9	10.2	11.7	---	---	---
5	16.8	14.7	15.5	16.8	14.9	16.0	15.3	13.1	14.4	---	---	---
6	16.2	13.5	14.9	17.4	15.0	16.2	13.1	---	---	---	---	---
7	16.5	14.2	15.4	17.3	15.7	16.6	---	---	---	---	---	---
8	17.0	14.3	15.6	16.9	12.5	14.5	8.9	6.7	7.5	---	---	---
9	18.0	16.5	17.1	12.5	10.0	11.1	6.7	4.7	5.6	---	---	---
10	19.2	17.5	18.2	12.2	9.8	11.0	5.8	4.2	5.2	---	---	---
11	18.6	16.3	17.4	12.0	10.0	11.2	6.4	4.4	5.5	---	---	---
12	17.6	15.6	16.6	11.9	10.5	11.2	7.2	6.4	6.8	---	---	---
13	17.5	15.8	16.6	13.8	11.9	12.7	7.1	6.1	6.8	---	---	---
14	16.9	14.3	15.4	15.9	13.5	14.5	6.7	5.8	6.1	---	---	---
15	15.2	12.6	13.8	16.8	14.8	15.8	7.0	5.1	5.9	---	---	---
16	13.3	10.4	11.9	16.3	14.8	15.6	8.0	7.0	7.5	3.3	---	---
17	13.9	11.1	12.5	16.0	14.5	15.3	7.7	5.9	6.8	2.8	1.5	2.2
18	14.7	12.0	13.3	15.3	13.8	14.6	6.6	5.1	5.8	2.4	0.8	1.3
19	14.6	12.5	13.7	13.8	10.3	11.9	5.7	4.1	4.7	2.0	0.6	1.2
20	16.3	12.7	14.3	10.3	7.9	8.7	5.2	3.4	4.3	2.6	0.4	1.5
21	16.7	15.4	16.0	9.0	7.1	8.1	5.7	4.1	4.9	3.7	1.3	2.5
22	17.1	15.8	16.4	10.2	8.0	9.0	6.5	4.9	6.0	5.3	2.5	3.7
23	18.4	15.9	17.1	12.2	9.0	11.0	4.9	2.3	3.3	5.4	4.1	4.9
24	18.2	14.8	16.3	12.2	10.0	11.4	2.3	0.7	1.5	4.1	2.0	3.2
25	14.8	11.6	12.5	10.0	8.6	9.4	1.3	0.0	0.6	4.2	1.8	3.0
26	11.9	9.8	11.0	10.9	8.8	9.8	---	---	---	5.9	2.9	4.3
27	11.6	9.2	10.5	8.8	4.6	6.0	---	---	---	7.0	4.6	5.8
28	12.8	9.5	11.1	4.6	2.7	3.1	---	---	---	6.7	4.5	5.3
29	14.5	11.5	12.9	3.6	2.4	2.9	---	---	---	4.5	1.8	3.1
30	15.5	13.4	14.4	4.3	3.6	3.9	---	---	---	1.8	0.0	0.3
31	14.8	13.2	14.1	---	---	---	---	---	---	0.5	0.0	0.2
MONTH	21.1	9.2	15.3	17.4	2.4	11.8	---	---	---	---	---	---

06889000 KANSAS RIVER AT TOPEKA, KS--Continued

WATER TEMPERATURE FROM YSI, in (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	0.3	0.0	0	3.2	1.8	2.3	16.8	10.9	13.8	18.7	15.8	17.1
2	0.4	0.0	0.2	1.8	0.0	0.6	16.6	12.4	14.4	18.3	13.6	15.8
3	1.6	0.0	0.7	0.9	0.0	0.2	12.4	8.2	10.3	18.4	14.8	16.7
4	2.0	0.4	1.2	1.8	0.0	0.5	12.8	8.3	10.5	21.2	15.6	18.1
5	2.2	0.9	1.6	2.5	0.0	0.8	14.4	9.5	11.9	23.7	18.7	21.1
6	3.6	1.7	2.5	7.7	0.4	4.1	14.1	11.1	12.6	22.9	20.4	21.6
7	5.2	2.6	3.7	7.2	5.2	6.1	12.6	11.1	11.4	22.1	20.5	21.2
8	6.6	3.6	5.1	10.0	7.1	8.0	11.7	11.0	11.3	22.2	19.0	20.5
9	6.6	5.6	6.1	9.2	3.4	5.2	15.5	9.8	12.3	20.7	17.6	19.3
10	5.6	3.4	4.4	6.6	2.4	4.4	18.1	13.1	15.5	19.6	16.6	18.0
11	4.6	1.9	3.3	8.0	4.7	6.3	17.5	15.9	16.5	19.5	16.3	17.4
12	5.0	3.4	4.2	9.7	5.7	7.7	17.9	15.5	16.5	16.5	14.8	15.3
13	5.6	2.9	4.3	12.3	7.8	9.9	18.7	15.5	17.0	18.2	13.8	15.7
14	5.8	3.2	4.6	13.8	10.0	11.8	21.4	16.6	18.8	21.0	16.2	18.4
15	6.9	4.0	5.5	11.4	8.1	9.6	24.0	19.1	21.3	22.0	18.3	20.2
16	7.7	4.4	6.1	9.4	6.9	8.2	22.9	20.3	21.4	22.9	19.9	21.4
17	7.4	5.1	6.4	11.9	7.0	9.3	24.2	19.5	21.6	22.0	18.9	20.5
18	7.5	5.7	6.5	11.5	9.5	10.3	25.0	21.5	23.1	21.4	17.7	19.6
19	9.0	7.5	8.2	10.2	9.2	9.9	24.4	18.1	20.6	20.6	18.5	19.1
20	9.1	7.1	8.2	12.4	7.8	10	18.1	14.3	16.0	21.7	17.1	19.2
21	8.7	6.1	7.6	11.7	6.4	8.2	16.4	13.6	14.7	20.7	17.3	19.1
22	8.3	5.9	7.2	7.2	3.2	5.4	18.2	13.4	15.5	19.7	17.5	18.7
23	9.8	6.5	8.1	9.4	4.8	7.0	21.5	15.9	18.3	18.8	18.1	18.4
24	11.2	8.3	9.6	9.0	6.2	7.9	21.1	18.4	19.7	18.2	16.2	17.0
25	9.6	4.6	7.0	6.2	3.2	4.5	18.6	14.9	16.9	20.7	14.7	17.4
26	4.6	0.0	1.1	8.1	2.3	4.9	17.9	13.5	15.4	23.2	18.2	20.5
27	0.3	0.0	0.1	11.2	5.9	8.4	16.5	12.5	13.9	23.9	20.4	22.1
28	3.4	0.0	1.3	15.4	9.5	12.2	17.8	13.0	15.3	24.9	21.7	23.3
29	---	---	---	16.2	12.9	14.6	20.2	15.1	17.4	26.3	23.1	24.5
30	---	---	---	15.3	12.2	13.4	19.7	17.8	18.7	26.6	23.3	24.9
31	---	---	---	14.7	11.4	13.0	---	---	---	27.5	24.4	25.9
MONTH	11.2	0.0	4.5	16.2	0.0	7.2	25.0	8.2	16.1	27.5	13.6	19.6

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	27.3	24.5	26.0	29.0	26.6	27.7	33.2	28.2	30.6	29.7	26.0	27.8
2	27.3	24.8	26.1	28.0	25.5	26.5	30.9	26.6	28.9	29.7	25.2	27.5
3	27.1	24.2	25.7	30.1	25.6	27.7	32.2	27.4	29.7	28.9	25.4	27.0
4	26.5	22.0	24.1	29.5	27.7	28.7	32.3	28.1	30.1	29.6	24.7	27.0
5	23.3	20.9	22.0	31.0	27.4	29.0	32.4	28.4	30.3	30.7	26.1	28.2
6	25.0	20.9	22.9	31.8	28.1	29.9	31.5	28.4	29.8	30.7	27.0	28.8
7	26.0	22.7	24.3	32.3	28.8	30.5	31.4	26.8	28.8	30.1	26.3	28.4
8	26.6	23.6	25.1	32.4	29.2	30.8	29.7	24.8	27.2	29.8	26.3	28.1
9	26.0	24.3	25.2	33.2	29.4	31.1	27.0	24.7	26.0	29.8	26.0	27.8
10	26.3	23.9	25.0	31.8	29.4	30.5	27.3	24.0	25.2	29.1	25.8	27.1
11	27.0	24.6	25.6	30.2	27.5	28.7	30.2	25.1	27.1	27.0	23.4	25.2
12	28.7	24.4	26.4	29.5	25.8	27.1	28.4	24.8	26.5	24.5	22.5	23.6
13	28.3	24.7	26.3	27.9	24.4	26.1	27.2	22.7	24.6	24.8	21.3	22.8
14	25.5	22.0	23.8	29.4	25.3	27.3	26.8	21.1	23.9	23.4	22.1	22.7
15	24.9	22.3	23.7	30.1	26.0	28.1	27.8	23.7	25.9	24.9	20.4	22.7
16	26.0	21.7	23.7	30.0	26.7	28.5	30.1	26.2	27.9	24.9	20.5	22.8
17	26.7	23.2	24.9	31.3	27.1	29.2	28.3	24.0	25.3	26.3	22.0	23.8
18	26.6	23.8	25.2	32.3	28.1	30.2	27.3	22.8	24.9	26.1	22.5	24.2
19	27.6	23.5	25.5	31.7	28.6	29.8	27.6	25.2	26.4	24.8	21.1	23.0
20	28.8	25.2	27.0	32.1	27.5	29.8	28.9	24.3	26.3	23.3	19.5	21.4
21	29.7	---	---	32.0	28.0	30.1	29.8	26.0	27.4	25.0	20.2	22.2
22	29.8	26.8	28.3	30.6	27.6	28.9	30.4	25.7	27.9	23.1	19.7	21.4
23	29.0	25.8	27.5	30.7	25.7	28.0	32.0	26.9	29.2	22.5	18.3	20.3
24	29.4	25.9	27.7	31.5	26.0	28.6	30.4	26.8	28.4	21.3	17.5	19.4
25	30.6	26.9	28.6	31.0	26.2	28.6	30.9	25.3	27.9	22.3	17.8	20.0
26	---	27.4	---	32.3	27.5	29.8	30.5	26.4	28.3	23.9	19.0	21.3
27	---	---	---	31.8	26.7	29.3	30.4	26.0	28.1	22.0	19.6	20.5
28	32.3	---	---	30.6	27.3	28.7	30.4	26.0	27.9	22.3	18.1	20.2
29	32.1	28.6	30.4	30.9	25.7	28.4	29.8	25.4	27.3	24.2	20.3	22.2
30	31.1	27.7	29.4	32.1	28.1	30.1	28.4	24.6	26.3	24.8	21.4	23.1
31	---	---	---	32.8	28.2	30.4	29.7	25.0	27.1	---	---	---
MONTH	---	---	---	33.2	24.4	29.0	33.2	21.1	27.5	30.7	17.5	24.0

06889000 KANSAS RIVER AT TOPEKA, KS--Continued

OXYGEN DISSOLVED FROM YSI, in (MG/L), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	9.3	9.0	9.1	14.1	9.6	11.3	15.1	14.1	14.6	---	---	---
2	9.3	9.1	9.2	14.6	9.5	11.5	14.8	13.5	14.3	---	---	---
3	9.5	9.1	9.3	14.6	10.2	11.9	13.9	12.5	13.4	---	---	---
4	10.1	9.0	9.4	14.4	10.1	11.8	12.8	11.5	12.3	---	---	---
5	10.6	10.1	10.4	14.7	10.1	11.9	12.2	11.0	11.6	---	---	---
6	11.1	10.4	10.8	14.1	10.2	11.7	---	---	---	---	---	---
7	11.2	10.6	10.9	14.0	10.0	11.6	---	---	---	---	---	---
8	11.3	10.5	10.9	14.2	10.2	11.9	13.2	11.6	12.3	---	---	---
9	10.8	10.0	10.4	14.9	11.9	13.2	13.7	12.3	13.0	---	---	---
10	11.2	9.9	10.4	15.0	12.2	13.2	13.8	12.7	13.2	---	---	---
11	12.0	10.0	10.8	15.1	12.0	13.2	14.0	12.5	13.1	---	---	---
12	12.9	10.2	11.1	14.2	11.9	12.8	12.7	12.1	12.4	---	---	---
13	13.6	10.0	11.3	13.6	11.5	12.3	13.8	12.0	12.8	---	---	---
14	14.0	10.2	11.7	13.1	10.9	11.7	13.6	12.4	12.9	---	---	---
15	12.4	10.3	11.1	---	---	---	13.9	12.5	13.1	---	---	---
16	13.2	11.3	12.0	---	---	---	12.8	12.0	12.4	---	---	e13.6
17	14.3	11.2	12.3	---	---	---	13.9	12.0	12.9	14.1	13.5	13.8
18	13.5	10.8	11.8	---	---	---	14.0	12.6	13.2	14.5	13.7	14.2
19	13.8	10.9	12.0	---	---	---	14.4	12.9	13.6	14.7	14.3	14.5
20	14.4	10.9	12.2	---	---	---	13.5	13.1	13.3	14.7	14.0	14.4
21	13.7	10.6	11.8	---	---	---	13.4	12.8	13.1	14.5	13.8	14.1
22	13.0	10.5	11.5	---	---	---	12.8	12.4	12.6	14.1	12.6	13.5
23	14.1	10.3	11.8	---	---	---	14.0	12.7	13.5	13.2	12.5	12.8
24	13.7	9.8	11.4	11.1	10.3	10.7	14.8	14.0	14.4	13.9	13.0	13.5
25	13.9	10.8	11.9	12.4	11.1	11.8	15.2	14.7	14.9	14.1	13.0	13.5
26	---	---	---	12.1	11.5	11.7	---	---	---	13.7	12.4	13.1
27	---	---	---	13.8	11.6	13.0	---	---	---	13.3	12.1	12.7
28	---	---	---	14.9	13.6	14.4	---	---	---	13.8	12.0	12.8
29	---	---	---	15.0	14.3	14.7	---	---	---	14.5	12.5	13.4
30	---	---	---	14.6	14.2	14.3	---	---	---	15.0	12.4	13.9
31	---	---	---	---	---	---	---	---	---	15.2	13.1	14.0
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	15.0	12.6	14.1	---	---	---	14.7	10.3	12.4	11.4	9.0	10.0
2	15.5	12.0	13.7	---	---	---	15.2	9.8	12.0	13.6	9.9	11.5
3	15.3	11.9	13.6	---	---	---	15.6	11.3	12.8	13.2	10.0	11.4
4	14.5	12.0	13.2	---	---	---	13.6	10.5	11.6	12.7	9.8	11.0
5	14.8	12.2	13.2	---	---	---	14.2	9.8	11.5	12.1	8.8	10.3
6	14.4	11.8	12.8	13.3	11.4	12.6	13.8	9.9	11.4	10.2	7.7	8.6
7	13.7	11.5	12.6	12.8	11.4	12.0	---	---	---	9.1	7.6	8.2
8	13.7	11.8	12.6	13.1	11.0	11.9	---	---	---	9.8	8.9	9.4
9	12.7	12.0	12.3	14.0	10.9	12.7	---	---	---	11.2	9.4	10.4
10	14.4	12.5	13.6	14.4	12.1	13.3	12.7	9.5	10.9	11.8	9.9	10.7
11	14.7	13.7	14.1	13.8	11.9	12.7	12.4	8.9	10.4	11.6	7.0	9.9
12	14.7	13.5	14.0	13.9	11.4	12.7	12.7	9.3	10.4	10.1	7.0	8.7
13	15.0	13.3	14.1	14.3	11.0	12.4	13.0	9.5	10.9	10.5	9.7	10.1
14	14.2	12.8	13.5	13.8	10.7	11.9	13.8	9.4	11.1	11.1	10.0	10.5
15	14.4	12.4	13.3	15.2	10.7	12.8	13.7	8.7	10.7	11.5	9.8	10.6
16	14.3	12.3	13.1	15.7	11.5	13.2	12.1	8.1	9.9	11.3	9.1	10.2
17	14.7	11.5	12.9	16.3	11.3	13.4	13.6	8.5	10.5	11.2	9.2	10.0
18	14.3	11.1	12.7	15.7	11.0	13.0	11.9	8.1	9.6	11.2	9.3	10.1
19	13.1	10.6	12.0	15.3	11.2	12.8	11.3	8.0	9.6	11.0	9.0	9.9
20	13.1	10.6	11.9	16.7	11.3	13.8	10.9	9.0	9.9	10.9	9.2	10
21	13.1	9.9	11.2	16.1	11.5	13.7	12.0	9.1	10.1	11.0	9.0	9.9
22	12.4	9.4	10.8	16.5	11.4	14.3	11.2	9.1	10.3	10.8	8.8	9.7
23	11.8	8.2	9.9	15.6	12.3	13.9	11.9	8.7	10.5	10.2	8.6	9.4
24	12.3	8.2	10.2	13.8	11.8	12.8	11.4	7.9	9.4	10.9	8.8	9.7
25	10.9	7.9	9.5	15.4	12.3	13.8	12.0	8.4	9.9	11.6	8.4	10.0
26	---	---	---	15.9	12.6	14.2	10.1	8.4	9.2	12.1	8.6	10.2
27	---	---	---	14.6	11.8	13.5	10.3	8.8	9.6	12.7	7.7	9.6
28	---	---	---	15.3	11.3	12.9	10.7	8.9	9.8	9.5	7.8	8.4
29	---	---	---	14.0	10.2	11.8	10.5	8.9	9.6	8.6	7.8	8.2
30	---	---	---	14.6	9.8	12.0	10.8	8.6	9.8	9.4	8.1	8.8
31	---	---	---	15.4	10.6	12.5	---	---	---	9.7	8.3	9.0
MONTH	---	---	---	---	---	---	---	---	---	13.6	7.0	9.8

06889000 KANSAS RIVER AT TOPEKA, KS--Continued

OXYGEN DISSOLVED FROM YSI, in (MG/L), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	9.9	8.3	9.0	9.2	6.1	7.7	---	---	---	13.3	5.4	8.7
2	10.5	8.3	9.4	10.6	6.2	8.2	---	---	---	12.8	5.4	8.5
3	11.7	8.5	9.8	11.1	5.9	8.5	9.6	5.5	7.3	13.0	3.7	7.5
4	9.6	8.3	8.8	11.7	4.8	8.0	10.2	5.6	7.4	11.9	6.0	8.7
5	10.6	8.9	9.6	12.2	7.0	9.3	9.3	5.4	7.0	15.0	6.4	9.9
6	9.6	8.3	9.0	12.8	6.7	9.3	7.3	4.4	5.8	---	---	e8.8
7	8.8	8.3	8.6	14.2	5.3	9.5	8.0	4.7	6.2	---	---	---
8	8.9	8.3	8.6	14.7	6.2	10	10.3	5.7	7.9	---	---	---
9	9.0	8.2	8.6	14.0	6.1	9.2	11.2	6.1	8.4	---	---	---
10	9.0	8.0	8.5	11.9	5.0	7.7	10.9	6.4	8.2	11.6	5.5	8.0
11	9.3	7.8	8.4	13.0	7.0	9.6	---	---	---	12.6	6.0	8.8
12	10.2	7.8	8.8	12.0	7.8	9.9	---	---	---	13.2	6.4	9.3
13	9.9	7.0	8.2	13.5	8.7	10.9	---	---	---	13.8	6.4	9.2
14	10.6	7.6	9.0	14.8	8.8	11.3	14.4	7.6	10.6	12.8	6.3	8.8
15	10.0	7.6	8.6	13.9	8.3	10.8	14.7	7.7	10.7	13.4	7.1	9.8
16	10.2	7.6	9.0	13.2	8.0	10.4	14.7	7.5	10.2	14.7	7.0	10.1
17	9.4	7.8	8.6	13.2	8.0	10.2	10.5	7.5	8.9	12.2	6.2	8.8
18	9.5	8.0	9.0	---	---	---	14.7	7.9	10.9	12.6	5.1	8.5
19	9.5	8.4	9.0	---	---	---	15.1	7.9	10.6	12.5	5.1	8.0
20	9.1	8.3	8.7	---	---	---	12.6	6.7	9.3	14.6	6.5	10.1
21	---	---	e8.8	---	---	---	12.5	5.8	8.6	14.2	7.7	10.4
22	11.0	8.1	9.4	---	---	e8.1	10.6	6.5	8.7	15.3	7.6	10.6
23	12.3	8.5	10.1	10.2	6.6	8.1	12.3	5.6	8.5	13.4	7.1	9.9
24	12.4	8.8	10.3	10.6	6.7	8.3	11.5	5.3	7.6	13.5	7.1	9.7
25	12.6	8.9	10.5	9.2	6.4	7.8	13.0	6.0	9.0	13.0	7.2	9.6
26	---	---	---	9.6	6.1	7.3	---	---	---	13.8	7.7	10.4
27	---	---	---	8.9	6.0	7.2	---	---	---	14.1	7.9	10.4
28	---	---	---	11.0	5.3	7.5	---	---	---	13.5	8.3	10.5
29	9.3	5.6	7.4	11.9	6.3	8.8	---	---	---	13.6	7.9	10.3
30	8.9	5.8	7.4	11.2	5.3	8.3	12.9	6.4	9.0	12.0	7.6	9.3
31	---	---	---	---	---	e7.2	13.4	6.2	9.1	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

e Estimated

TURBIDITY, FIELD 6026 FROM YSI, in (NTU), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	240	200	220	52	14	23	51	19	25	---	---	---
2	210	150	190	55	18	22	33	16	23	---	---	---
3	160	130	150	38	17	25	46	22	29	---	---	---
4	160	120	130	32	16	23	54	20	32	---	---	---
5	230	150	180	51	18	26	54	21	32	---	---	---
6	180	120	150	79	19	33	37	---	---	---	---	---
7	130	120	120	79	18	33	---	13	---	---	---	---
8	130	110	120	110	20	26	20	12	16	---	---	---
9	120	98	110	34	17	24	18	12	15	---	---	---
10	110	88	98	46	16	23	27	11	16	---	---	---
11	96	66	82	24	18	21	84	12	18	---	---	---
12	83	60	68	53	18	26	28	14	18	---	---	---
13	83	57	66	93	19	29	31	13	19	---	---	---
14	65	52	57	54	17	26	57	14	22	---	---	---
15	170	51	72	54	17	24	28	14	18	---	---	---
16	150	74	110	34	19	23	34	13	19	---	30	---
17	100	62	73	43	21	27	27	11	18	45	27	30
18	98	41	56	88	23	33	26	13	17	59	28	42
19	110	34	48	78	26	36	160	15	54	100	59	84
20	75	26	35	42	25	30	200	130	160	100	66	82
21	36	25	30	57	27	34	140	94	110	69	55	62
22	81	25	35	64	32	42	110	87	97	61	49	54
23	110	24	43	63	41	49	110	80	95	60	47	52
24	150	20	32	76	45	56	100	83	91	52	36	44
25	100	19	32	92	39	51	91	68	83	43	31	37
26	74	14	26	51	33	42	---	---	---	35	26	30
27	43	12	17	89	25	34	---	---	---	40	26	32
28	78	12	17	53	22	28	---	---	---	39	28	34
29	48	12	20	35	19	25	---	---	---	36	26	31
30	46	11	21	37	18	24	---	---	---	52	26	35
31	39	9	22	---	---	---	---	---	---	200	32	55
MONTH	240	9	78	110	14	31	---	---	---	---	---	---

06889000 KANSAS RIVER AT TOPEKA, KS--Continued

TURBIDITY, FIELD 6026 FROM YSI, in (NTU), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	57	23	33	72	30	44	60	24	37	180	100	140
2	50	21	32	37	22	30	54	25	35	120	54	79
3	72	25	40	36	16	24	55	21	31	89	68	79
4	51	25	35	43	11	21	140	21	42	92	62	77
5	34	23	27	110	17	43	84	20	30	83	53	67
6	36	24	28	130	32	61	36	20	25	>1300	62	>540
7	41	19	27	75	26	44	30	16	23	>1300	1000	>1300
8	32	19	25	54	26	32	98	18	43	>1300	500	>950
9	84	21	32	75	38	51	77	35	52	550	330	400
10	56	30	45	41	26	33	65	31	47	370	200	270
11	68	37	48	130	22	49	190	24	45	>1300	160	>330
12	66	29	39	75	22	41	260	74	140	>1300	>1300	>1300
13	91	32	43	72	29	39	230	62	130	>1300	730	>1100
14	110	25	44	72	26	39	68	26	47	810	300	500
15	56	22	28	47	27	36	49	16	35	370	190	250
16	110	24	38	54	20	30	57	20	35	280	160	220
17	52	22	35	40	20	25	35	11	24	260	160	200
18	53	38	46	95	20	31	41	14	26	210	140	160
19	76	37	50	40	25	32	88	23	40	150	120	130
20	73	37	46	58	26	37	100	20	40	150	110	130
21	90	28	46	54	25	35	370	46	97	140	93	110
22	34	25	29	57	22	35	580	160	400	150	92	120
23	63	23	29	54	30	40	230	63	120	150	92	120
24	48	27	33	41	28	34	120	52	86	150	87	110
25	66	29	39	39	25	32	220	60	89	130	88	100
26	42	24	33	64	24	31	370	100	210	160	85	110
27	48	24	35	68	21	33	370	290	340	>1300	89	>410
28	55	20	39	54	19	29	320	230	280	>1300	500	>870
29	---	---	---	180	23	48	260	160	210	>1300	360	>640
30	---	---	---	54	22	31	200	140	160	380	210	290
31	---	---	---	60	22	36	---	---	---	270	140	210
MONTH	110	19	37	180	11	36	580	11	97	1300	53	360

> Actual value is known to be greater than the value shown

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	220	150	190	34	18	26	---	---	---	63	25	40
2	190	140	160	35	20	25	---	---	---	63	26	43
3	150	100	130	35	17	26	---	---	---	62	25	42
4	160	100	130	170	20	81	---	---	---	58	23	37
5	160	110	130	170	110	130	70	23	45	59	25	41
6	180	130	150	140	100	110	80	34	56	63	27	43
7	200	160	180	120	83	100	76	29	50	66	30	46
8	180	140	160	110	72	89	67	26	43	---	---	---
9	160	130	150	110	88	95	54	27	40	---	---	---
10	160	120	140	94	44	73	50	23	35	70	25	43
11	140	120	130	70	36	58	50	23	36	69	26	39
12	120	94	110	74	39	56	89	30	52	46	23	35
13	110	53	86	64	37	50	---	---	---	81	20	40
14	140	52	110	60	27	49	---	---	---	69	30	52
15	150	110	130	66	27	46	56	23	42	63	24	42
16	120	88	100	60	20	42	100	29	54	52	23	36
17	170	100	120	54	22	40	270	27	120	78	37	53
18	270	170	220	55	24	38	130	54	85	74	38	58
19	220	180	200	---	---	---	160	68	110	98	52	74
20	210	150	170	---	---	---	170	63	100	92	49	68
21	160	---	e140	---	---	---	130	82	120	84	53	69
22	150	120	130	51	19	---	130	40	84	73	39	50
23	140	100	130	64	17	29	76	34	57	63	33	50
24	130	91	120	98	19	44	83	29	49	62	37	47
25	120	86	100	---	---	---	66	35	47	86	28	47
26	100	---	---	---	---	---	69	33	51	46	26	36
27	---	---	---	58	8	26	71	31	47	53	26	40
28	---	32	---	130	6	21	69	31	45	51	24	37
29	32	20	26	84	24	42	59	29	41	52	22	35
30	32	18	25	83	41	60	58	23	38	61	25	39
31	---	---	---	99	36	65	64	22	33	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

e Estimated

06889170 SOLDIER CREEK NEAR HOLTON, KS

LOCATION.--Lat 39°26'03", long 95°55'31", in NW $^{1}/_{4}$ NW $^{1}/_{4}$ NW $^{1}/_{4}$ sec.23, T.7 S., R.13 E., Jackson County, Hydrologic Unit 10270102, on right bank at downstream side of bridge on County Road 214, 10.5 mi west and 2 mi south of Holton, and at mile 50.9.

DRAINAGE AREA.--60.8 mi^2.

PERIOD OF RECORD.--April 2001 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,055.00 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,200 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 11	0600	*6,620	*15.14	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	7.4	6.3	e4.5	e3.1	e3.9	3.8	8.9	27	2.7	0.83	0.82
2	17	6.8	6.0	e4.3	e3.4	e3.8	3.3	7.5	23	2.5	0.79	0.80
3	15	6.2	6.1	e4.4	e3.4	e4.0	3.0	6.0	20	2.6	0.73	0.74
4	14	6.2	6.0	4.9	e3.4	e4.0	2.9	5.3	19	2.6	0.69	0.73
5	20	6.3	6.2	6.0	e3.4	4.2	3.1	30	19	112	0.68	0.70
6	15	6.2	6.5	6.2	3.6	4.1	3.3	395	18	13	0.64	0.71
7	13	6.0	6.6	6.1	3.6	4.3	3.7	67	15	5.3	0.67	0.67
8	12	6.3	6.3	6.5	4.1	5.2	6.9	22	9.2	3.2	0.64	0.63
9	11	5.8	6.1	6.6	5.7	6.7	15	20	8.4	2.4	0.62	0.62
10	10	5.7	6.4	5.9	11	6.0	13	12	8.2	1.9	0.67	0.60
11	9.8	5.7	6.6	5.4	8.1	5.1	7.4	1580	9.5	1.7	0.70	0.66
12	9.9	6.1	7.1	4.5	5.6	4.6	5.5	406	10	1.7	6.3	0.62
13	9.8	6.0	6.8	4.5	4.7	4.3	5.5	189	8.6	1.8	1.7	0.68
14	9.0	5.9	7.0	4.5	4.7	4.3	4.9	135	7.3	1.8	1.0	1.4
15	45	5.9	6.9	4.5	4.4	3.8	4.6	102	6.4	1.5	0.79	1.3
16	78	6.1	6.6	4.1	4.6	3.7	4.4	74	6.2	1.4	2.7	0.98
17	20	6.3	6.4	3.8	4.5	3.5	3.7	63	5.8	1.1	2.0	0.81
18	13	6.6	6.2	e3.8	4.5	3.7	3.5	54	5.2	1.1	1.8	0.85
19	12	6.5	5.9	e3.7	5.0	3.8	3.3	45	4.9	0.88	1.5	2.8
20	11	6.2	5.8	3.8	5.1	3.8	4.1	41	4.3	0.86	1.2	1.8
21	10	6.1	5.9	3.8	4.9	4.3	60	36	4.6	0.77	12	1.0
22	9.9	6.4	6.3	3.6	4.9	3.3	29	34	4.4	0.70	5.0	1.0
23	9.8	7.2	5.7	3.8	4.4	3.0	12	31	4.3	0.69	1.9	0.99
24	9.1	10	5.5	4.1	4.0	3.4	8.6	33	3.9	0.72	1.1	0.87
25	8.1	9.9	5.0	3.9	4.5	3.5	6.0	55	3.7	0.86	1.1	0.83
26	7.1	8.5	5.1	3.4	e3.6	3.7	4.8	41	4.7	1.7	1.0	0.77
27	7.4	7.3	e5.0	3.5	e3.7	4.0	63	429	7.4	0.93	1.0	0.76
28	7.6	6.7	e4.8	e3.5	e4.0	4.3	88	134	5.5	1.6	1.0	0.83
29	7.3	6.4	e4.7	e3.4	---	4.9	19	65	4.3	1.8	1.1	0.79
30	7.5	6.5	e4.7	e3.2	---	4.3	11	43	3.4	1.2	0.90	0.73
31	7.6	---	e4.6	e3.1	---	4.0	---	33	---	1.0	0.87	---
MEAN	14.67	6.640	5.971	4.429	4.639	4.177	13.54	135.4	9.373	5.613	1.730	0.916
MAX	78	10	7.1	6.6	11	6.7	88	1580	27	112	12	2.8
MIN	7.1	5.7	4.6	3.1	3.1	3.0	2.9	5.3	3.4	0.69	0.62	0.60
AC-FT	902	395	367	272	258	257	806	8320	558	345	106	55

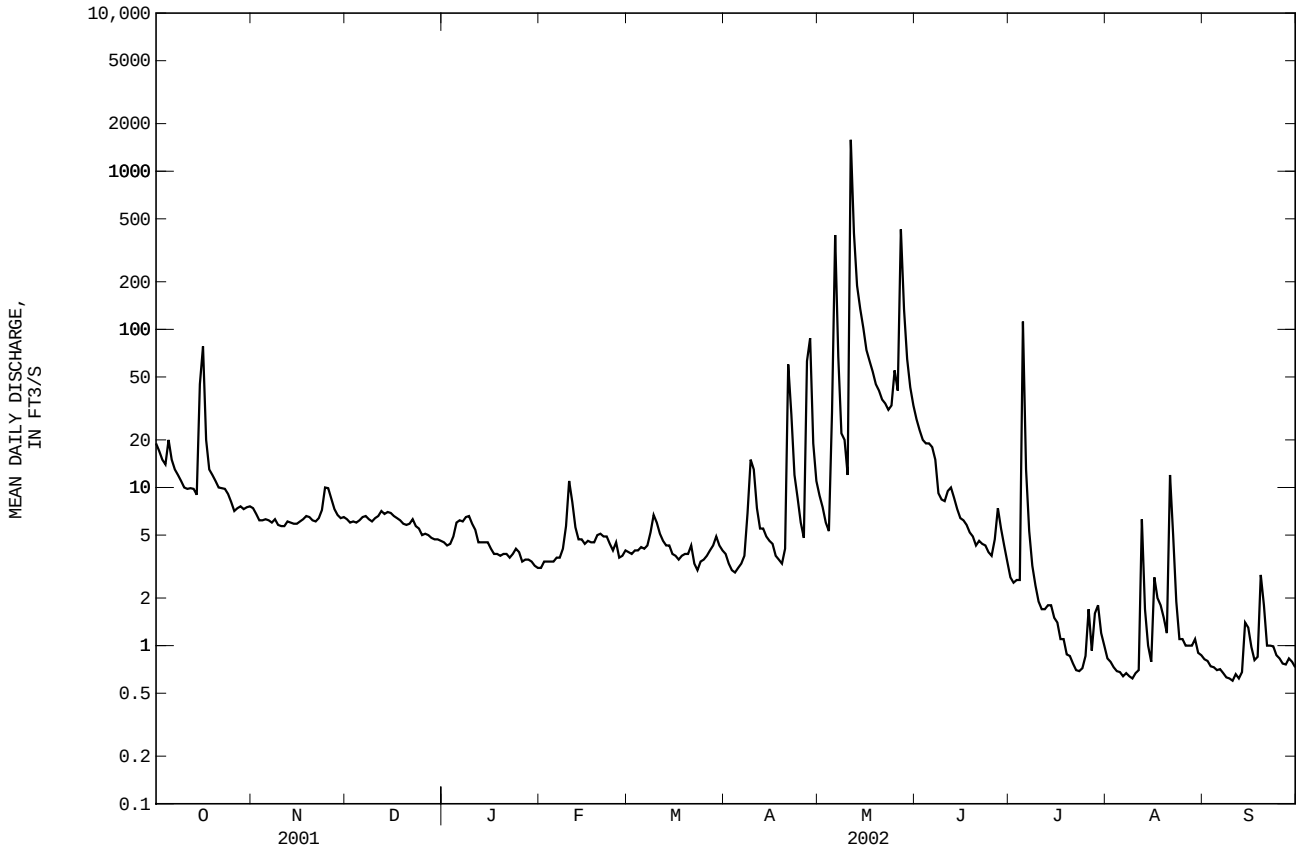
06889170 SOLDIER CREEK NEAR HOLTON, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2001 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	14.67	6.640	5.971	4.429	4.639	4.177	41.95	74.62	95.73	27.59	21.15	184.2
MAX	14.7	6.64	5.97	4.43	4.64	4.18	70.4	135	182	49.6	40.6	368
(WY)	2002	2002	2002	2002	2002	2002	2001	2002	2001	2001	2001	2001
MIN	14.7	6.64	5.97	4.43	4.64	4.18	13.5	13.9	9.37	5.61	1.73	0.92
(WY)	2002	2002	2002	2002	2002	2002	2002	2001	2002	2002	2002	2002

SUMMARY STATISTICS	FOR 2002 WATER YEAR		WATER YEARS 2001 - 2002	
ANNUAL MEAN	17.47		17.47	
HIGHEST ANNUAL MEAN			17.5	2002
LOWEST ANNUAL MEAN			17.5	2002
HIGHEST DAILY MEAN	1580	May 11	6400	Sep 17 2001
LOWEST DAILY MEAN	0.60	Sep 10	0.60	Sep 10 2002
ANNUAL SEVEN-DAY MINIMUM	0.64	Sep 7	0.64	Sep 7 2002
MAXIMUM PEAK FLOW	6620	May 11	20700	Sep 17 2001
MAXIMUM PEAK STAGE	15.14	May 11	21.85	Sep 17 2001
INSTANTANEOUS LOW FLOW	0.51	Sep 8	0.51	Sep 8 2002
ANNUAL RUNOFF (AC-FT)	12650		12650	
10 PERCENT EXCEEDS	20		20	
50 PERCENT EXCEEDS	4.9		4.9	
90 PERCENT EXCEEDS	0.84		0.84	

e Estimated



06889200 SOLDIER CREEK NEAR DELIA, KS

LOCATION.--Lat 39°12'08", long 95°52'25", in NE $^1/_4$ NW $^1/_4$ NE $^1/_4$ sec.8, T.10 S., R.14 E., Shawnee County, Hydrologic Unit 10270102, on right bank at downstream side of county highway bridge, 5.1 mi upstream from Walnut Creek, 5.5 mi southeast of Delia, and at mile 21.9.

DRAINAGE AREA.--157 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is 929.34 ft above NGVD of 1929. Gage datum lowered 2.0 ft on Oct. 1, 1993. Gage datum lowered 5.0 ft on Oct. 1, 1999.

REMARKS.--Records good above 10 ft^3/s, fair between 4 ft^3/s and 10 ft^3/s, and below 4 ft^3/s and estimated daily discharges, which are poor. Satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since at least 1909, about 24 ft June 21, 1951, from floodmarks and information by local residents.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 11	1745	*3,840	*19.85	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	58	26	18	e11	e9.9	e7.6	9.2	40	49	7.5	3.2	3.2
2	54	26	18	11	e10	e7.4	8.6	36	41	6.7	2.6	3.0
3	49	25	18	10	e10	e7.9	8.1	31	36	6.4	2.3	2.5
4	46	24	18	11	e11	9.1	7.9	28	34	6.2	2.1	2.3
5	71	24	19	12	12	11	7.8	33	36	26	1.9	2.2
6	67	24	16	e13	12	13	8.2	639	33	53	1.9	2.0
7	48	24	17	e13	13	11	8.9	181	29	17	1.7	1.9
8	43	23	16	14	16	11	29	104	25	10	1.6	1.7
9	40	22	16	15	23	12	84	65	23	7.9	1.5	1.6
10	40	22	16	17	22	13	37	54	22	6.8	1.5	1.4
11	38	22	16	15	17	12	42	2370	22	6.0	1.8	1.3
12	36	22	17	17	18	11	146	918	33	5.4	70	1.2
13	36	22	18	17	14	11	42	503	26	5.2	47	1.4
14	35	23	17	16	13	10	30	190	21	5.2	10	2.0
15	53	23	17	16	12	9.8	26	137	18	4.7	5.3	4.2
16	99	22	16	15	12	9.3	20	114	16	4.5	19	4.2
17	65	21	16	13	11	9.1	18	99	15	4.3	99	3.0
18	40	21	16	e13	11	9.2	17	85	13	4.1	222	2.7
19	33	20	16	e13	12	9.3	18	74	12	3.9	264	3.5
20	30	18	15	e13	15	9.4	30	67	11	3.7	32	5.0
21	28	17	15	e14	13	9.1	527	60	10	3.5	51	4.7
22	27	18	15	e14	12	8.8	140	55	9.7	3.2	63	3.5
23	27	20	14	e14	11	8.5	84	52	9.1	2.9	14	2.5
24	25	25	14	12	11	8.8	59	52	8.5	2.7	7.9	1.9
25	23	30	13	12	9.8	8.9	44	103	8.0	2.6	5.7	1.6
26	25	26	e11	13	9.0	9.1	37	74	8.3	2.7	4.7	1.5
27	25	21	e11	12	8.4	9.1	51	618	9.6	3.5	4.1	1.4
28	25	19	e11	11	e7.8	10	122	290	12	6.8	3.6	1.3
29	26	18	e10	11	---	11	72	107	9.7	7.3	3.4	1.5
30	26	18	e11	e10	---	9.8	48	74	8.2	6.1	3.5	1.2
31	26	---	e11	e9.7	---	9.5	---	59	---	4.3	3.3	---
MEAN	40.77	22.20	15.23	13.15	12.71	9.861	59.39	235.9	20.27	7.745	30.79	2.380
MAX	99	30	19	17	23	13	527	2370	49	53	264	5.0
MIN	23	17	10	9.7	7.8	7.4	7.8	28	8.0	2.6	1.5	1.2
AC-FT	2510	1320	936	809	706	606	3530	14500	1210	476	1890	142

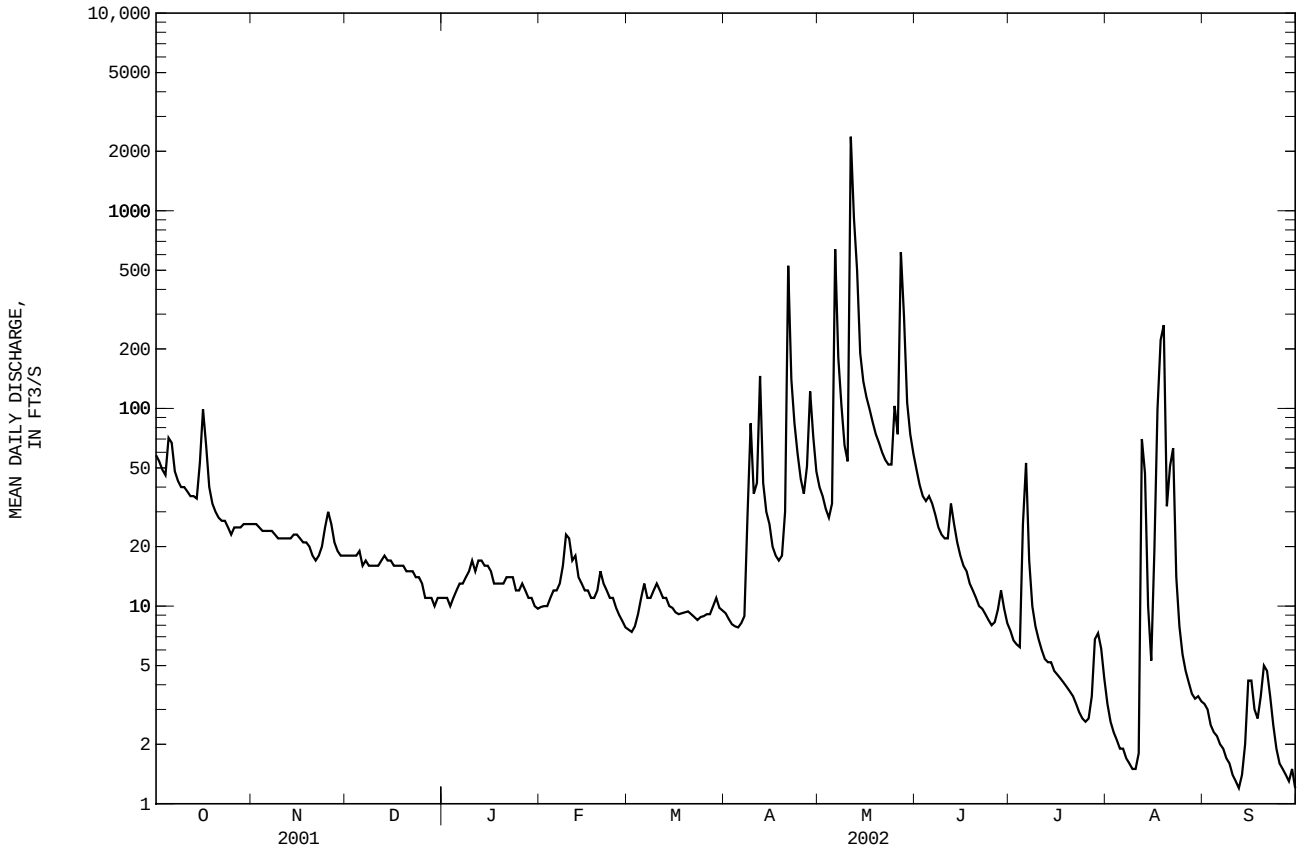
06889200 SOLDIER CREEK NEAR DELIA, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1959 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	74.46	66.85	44.78	37.49	70.48	131.7	149.7	181.7	194.1	87.01	46.11	95.81
MAX	484	605	293	236	316	651	800	1056	1051	1139	540	670
(WY)	1974	1999	1973	1973	1973	1973	1999	1995	1967	1993	1968	1977
MIN	0.005	1.74	1.86	1.22	2.23	2.67	3.62	2.82	4.50	2.90	0.68	0.15
(WY)	1992	1977	1977	1977	1989	1967	1989	1989	1989	1988	1988	2000

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1959 - 2002	
ANNUAL MEAN	112.0		39.56		98.25	
HIGHEST ANNUAL MEAN					281	1973
LOWEST ANNUAL MEAN					23.1	2000
HIGHEST DAILY MEAN	4520	Sep 18	2370	May 11	14800	Jun 9 1982
LOWEST DAILY MEAN	0.75	Aug 21	1.2	Sep 12	0.00	Sep 10 1976
ANNUAL SEVEN-DAY MINIMUM	1.0	Aug 16	1.5	Sep 24	0.00	Oct 1 1991
MAXIMUM PEAK FLOW			3840	May 11	29400	Jun 9 1982
MAXIMUM PEAK STAGE			19.85	May 11	26.44	Sep 18 2001
INSTANTANEOUS LOW FLOW			0.91	Sep 30	0.00	Sep 10 1976
ANNUAL RUNOFF (AC-FT)	81110		28640		71180	
10 PERCENT EXCEEDS	169		61		151	
50 PERCENT EXCEEDS	25		14		21	
90 PERCENT EXCEEDS	2.7		3.0		2.9	

e Estimated



06889500 SOLDIER CREEK NEAR TOPEKA, KS

LOCATION.--Lat 39°06'00", long 95°43'27", in SW $^1/_4$ NW $^1/_4$ NW $^1/_4$ sec.14, T.11 S., R.15 E., Shawnee County, Hydrologic Unit 10270102, on right bank 150 ft downstream of county highway bridge, 1.5 mi upstream from Halfday Creek, 4.0 mi northwest of Topeka, and at mile 6.0.

DRAINAGE AREA.--290 mi^2.

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.

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

GAGE.--Water-stage recorder. Datum of gage is 862.95 ft above NGVD of 1929. Prior to July 27, 1935, chain gage at site 2.0 mi 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 higher. May 25, 1960, to June 8, 1961, nonrecording gage at site 1.1 mi downstream at datum 1.79 ft lower.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 11	1700	*4,730	*11.65	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	72	46	26	16	27	e25	26	72	63	14	12	7.0
2	66	46	26	15	34	e23	26	65	54	14	10	6.6
3	59	46	26	15	38	e22	24	59	47	13	8.7	6.2
4	57	45	26	14	36	e22	24	53	45	12	7.9	5.9
5	163	46	26	14	36	e24	27	51	48	12	7.7	5.4
6	124	46	26	17	37	e25	29	951	47	43	7.5	4.9
7	75	46	24	18	41	e26	31	404	43	33	7.5	4.7
8	96	46	24	18	47	29	85	276	38	20	7.0	4.4
9	68	44	24	20	69	32	298	178	35	15	6.8	4.0
10	68	44	24	23	68	33	115	106	33	14	6.5	4.0
11	59	44	24	23	51	32	82	2760	33	13	6.6	3.8
12	55	44	25	25	47	29	292	1540	35	12	7.0	3.7
13	52	44	26	26	45	28	138	780	39	11	78	4.8
14	50	44	26	25	40	26	75	302	32	11	37	8.1
15	180	45	26	23	37	25	59	199	28	9.8	17	7.5
16	233	44	24	23	36	24	50	153	26	9.2	15	6.0
17	132	43	24	24	36	23	45	137	25	8.7	62	6.5
18	82	43	24	20	36	23	41	111	23	8.5	211	7.5
19	68	42	24	23	42	24	51	94	22	8.4	279	8.3
20	61	39	24	25	45	24	55	86	20	8.5	131	7.6
21	58	38	24	24	47	23	735	78	19	7.8	34	7.9
22	56	38	23	29	42	22	339	71	18	7.6	101	8.2
23	55	41	23	31	39	22	161	68	17	7.2	40	8.2
24	53	49	21	30	41	24	118	71	16	7.0	23	7.3
25	47	53	19	25	40	25	86	126	15	6.5	16	6.7
26	45	46	18	26	34	24	74	115	17	6.3	12	6.4
27	44	35	18	29	30	24	78	507	19	5.5	13	5.8
28	44	31	20	28	29	27	146	530	18	5.7	11	5.3
29	44	29	18	26	---	32	133	157	19	7.1	9.5	4.7
30	45	27	18	36	---	31	83	98	17	10	8.2	3.9
31	45	---	17	28	---	28	---	76	---	13	7.6	---
MEAN	76.00	42.47	23.16	23.19	41.07	25.84	117.5	331.4	30.37	12.06	38.73	6.043
MAX	233	53	26	36	69	33	735	2760	63	43	279	8.3
MIN	44	27	17	14	27	22	24	51	15	5.5	6.5	3.7
AC-FT	4670	2530	1420	1430	2280	1590	6990	20380	1810	741	2380	360

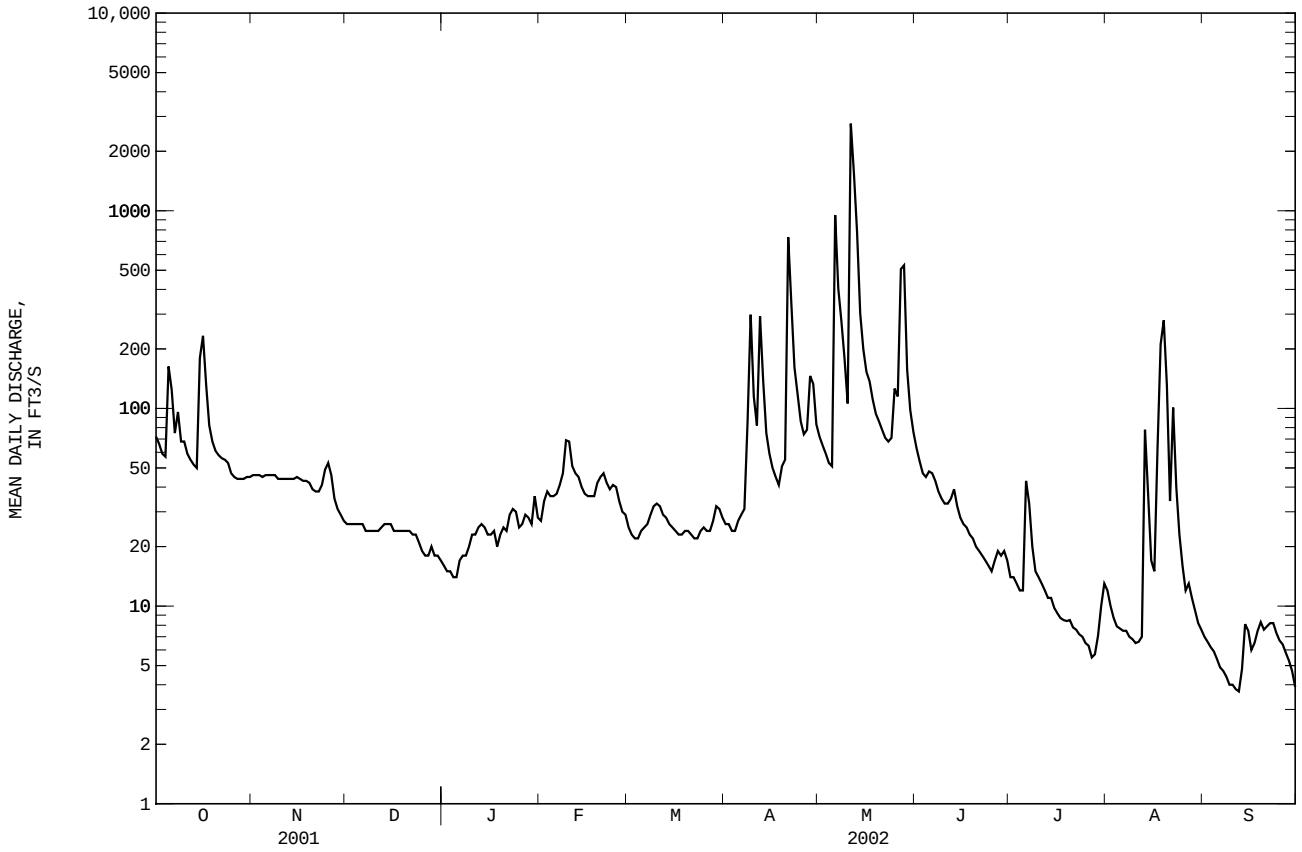
06889500 SOLDIER CREEK NEAR TOPEKA, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1936 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	120.6	87.50	66.48	55.59	102.8	191.7	233.1	279.3	330.8	191.8	86.78	144.4
MAX	1178	1175	475	359	382	1269	1464	1838	2183	2711	1130	1288
(WY)	1974	1999	1973	1974	1937	1987	1944	1995	1967	1993	1968	1977
MIN	0.000	0.000	0.000	0.000	0.18	0.14	1.03	5.17	4.06	1.13	0.27	0.000
(WY)	1938	1938	1957	1957	1957	1956	1956	1956	1953	1940	1957	1937

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1936 - 2002	
ANNUAL MEAN	184.7		64.34		157.5	
HIGHEST ANNUAL MEAN					590	1993
LOWEST ANNUAL MEAN					5.07	1956
HIGHEST DAILY MEAN	8260	Sep 18	2760	May 11	17200	Sep 13 1977
LOWEST DAILY MEAN	6.0	Jan 23	3.7	Sep 12	0.00	Jul 24 1936
ANNUAL SEVEN-DAY MINIMUM	6.3	Jan 20	4.2	Sep 7	0.00	Aug 17 1936
MAXIMUM PEAK FLOW			4730	May 11	30400	Jun 9 1982
MAXIMUM PEAK STAGE			11.65	May 11	27.44	Jun 9 1982
INSTANTANEOUS LOW FLOW			3.6	Sep 11	.00	many years
ANNUAL RUNOFF (AC-FT)	133700		46580		114100	
10 PERCENT EXCEEDS	270		103		242	
50 PERCENT EXCEEDS	45		28		30	
90 PERCENT EXCEEDS	11		7.5		2.2	

e Estimated



06890100 DELAWARE RIVER NEAR MUSCOTAH, KS

LOCATION.--Lat 39°31'17", long 95°31'57", in SW $^{1}/_{4}$ SW $^{1}/_{4}$ SW $^{1}/_{4}$ sec.16, T.6 S., R.17 E., Atchison County, Hydrologic Unit 10270103, on right bank at downstream side of county highway bridge, 2.0 mi south of Muscotah, and at mile 45.5.

WATER-DISCHARGE RECORDS

DRAINAGE AREA.--431 mi^2.

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 above NGVD of 1929 (Kansas Geological Survey bench mark).

REMARKS.--Records good above 10 ft^3/s and fair below and those for estimated daily discharges, which are poor. Satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1925 reached a stage of 36.5 ft, from information by local residents (discharge not determined). Floods in 1951 and 1967 were lower than the flood of 1925.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 5,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 11	1200	*8,030	*17.89	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	108	60	45	e34	e23	32	31	66	115	35	2.5	5.9
2	98	57	43	e36	e27	e31	29	61	101	29	1.8	4.9
3	89	55	45	e38	e30	e31	28	47	89	27	1.8	4.1
4	82	54	47	43	e34	e36	25	41	82	27	1.9	3.7
5	92	54	48	48	e36	48	24	44	78	36	1.4	3.5
6	87	56	45	55	e40	45	25	1250	74	29	0.81	3.8
7	79	57	42	54	44	44	26	433	68	21	0.51	4.1
8	76	55	41	60	52	40	39	202	64	17	0.54	3.9
9	70	53	40	65	77	60	106	145	59	13	0.75	3.8
10	70	53	39	77	93	49	80	109	58	12	1.7	4.3
11	71	52	44	76	58	42	59	3710	211	11	1.9	4.7
12	67	52	42	74	62	40	49	1900	569	9.4	1.9	4.8
13	89	53	42	70	46	39	43	764	172	8.8	3.6	5.8
14	78	54	42	59	43	36	40	349	98	9.5	3.8	12
15	565	58	42	68	40	34	38	248	76	9.3	2.6	11
16	486	48	41	45	36	30	36	200	65	8.9	3.0	7.9
17	195	49	39	57	35	28	32	181	60	7.3	7.9	7.6
18	123	51	38	70	35	29	30	159	54	5.1	8.8	7.2
19	102	50	41	69	41	28	30	140	50	3.6	10	13
20	92	46	35	66	51	28	36	126	44	4.4	7.5	11
21	82	45	36	57	45	28	400	116	40	6.2	8.5	11
22	e75	46	40	46	39	26	170	112	37	5.0	9.6	11
23	e75	48	38	43	34	25	101	105	30	3.2	14	9.0
24	e74	89	e36	32	34	29	88	107	30	2.7	9.8	e9.8
25	72	89	e33	37	32	34	75	246	26	2.3	8.2	e8.3
26	64	69	e33	38	e29	32	62	166	112	2.4	6.0	e8.8
27	62	56	e31	37	e32	31	157	1010	451	3.1	4.9	e9.3
28	60	46	e31	32	e30	38	303	575	116	4.9	4.1	e9.2
29	60	43	e31	24	---	39	115	239	62	13	13	e9.5
30	59	46	e32	21	---	36	80	168	45	5.8	9.2	e9.0
31	61	---	e33	e23	---	33	---	136	---	4.2	6.0	---
MEAN	111.7	54.80	39.19	50.13	42.07	35.52	78.57	424.4	104.5	12.13	5.097	7.397
MAX	565	89	48	77	93	60	400	3710	569	36	14	13
MIN	59	43	31	21	23	25	24	41	26	2.3	0.51	3.5
AC-FT	6870	3260	2410	3080	2340	2180	4680	26090	6220	746	313	440

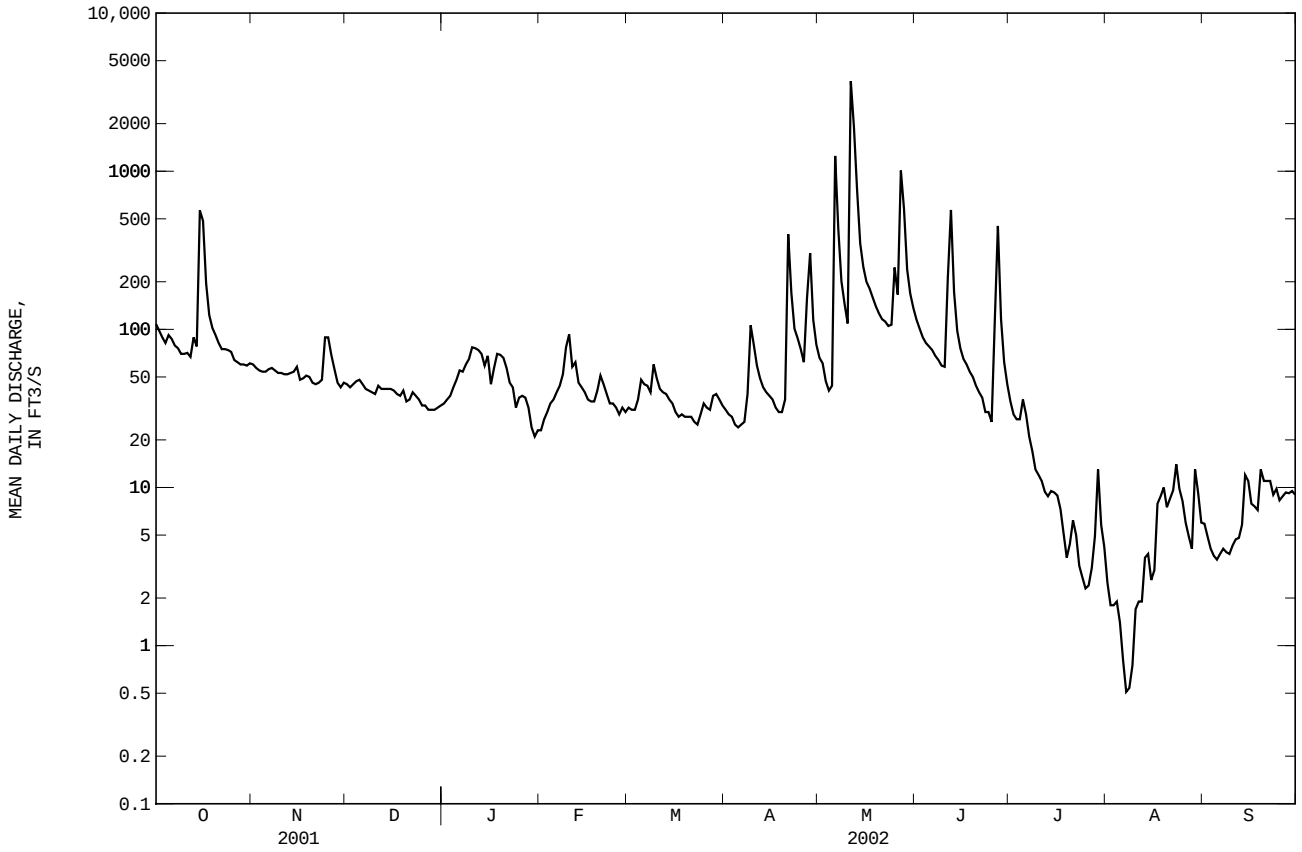
06890100 DELAWARE RIVER NEAR MUSCOTAH, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	179.3	176.8	118.9	89.37	189.6	367.2	414.2	509.6	441.2	361.8	162.1	329.7
MAX	1921	1240	655	545	917	1703	1771	2355	2725	4103	1039	2474
(WY)	1974	1999	1973	1973	1973	1973	1999	1995	1984	1993	1973	1977
MIN	1.57	4.68	3.25	3.01	8.35	18.6	8.81	9.01	16.5	2.54	0.56	0.32
(WY)	1989	1977	2001	1977	1989	1977	1989	1989	1988	1991	1991	1991

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1970 - 2002	
ANNUAL MEAN	446.3		80.98		278.3	
HIGHEST ANNUAL MEAN					830	1973
LOWEST ANNUAL MEAN					38.4	2000
HIGHEST DAILY MEAN	13500	Jul 12	3710	May 11	23400	Oct 11 1973
LOWEST DAILY MEAN	2.6	Jan 10	0.51	Aug 7	0.00	Sep 12 2000
ANNUAL SEVEN-DAY MINIMUM	2.9	Jan 6	1.1	Aug 4	0.02	Aug 12 1989
MAXIMUM PEAK FLOW			8030	May 11	28000	Sep 13 1977
MAXIMUM PEAK STAGE			17.89	May 11	30.83	Sep 13 1977
INSTANTANEOUS LOW FLOW			0.28	Aug 7	0.00	Aug 17 1989
ANNUAL RUNOFF (AC-FT)	323100		58630		201600	
10 PERCENT EXCEEDS	600		115		437	
50 PERCENT EXCEEDS	57		41		50	
90 PERCENT EXCEEDS	4.0		4.9		5.6	

e Estimated



06890100 DELAWARE RIVER NEAR MUSCOTAH, KS--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1977 to August 1991, 2000 to current year.

REMARKS.--Unpublished records of intermittent sediment samples are available on the Internet at http://ks.waterdata.usgs.gov/nwis. Sediment samples are collected only at selected flow conditions.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT							
22...	1300	75	540	14.0	54	10.9	--
MAY							
02...	0930	64	551	13.5	82	14.2	--
JUN							
12...	1115	453	238	27.0	1120	1370	98
27...	1400	277	277	28.5	590	441	98
JUL							
17...	1200	7.1	542	30.0	16	.32	--
AUG							
06...	0845	1.2	536	28.0	69	.22	--

06890898 PERRY LAKE NEAR PERRY, KS

LOCATION.--Lat 39°06'52", long 95°25'33", in NE $^1/_4$ NW $^1/_4$ NW $^1/_4$ sec.9, T.11 S., R.18 E., Jefferson County, Hydrologic Unit 10270103, in control tower near center of dam on Delaware River, 4.5 mi northwest of Perry, and at mile 5.8.

DRAINAGE AREA.--1,117 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929 (levels by U.S. Army Corps of Engineers).

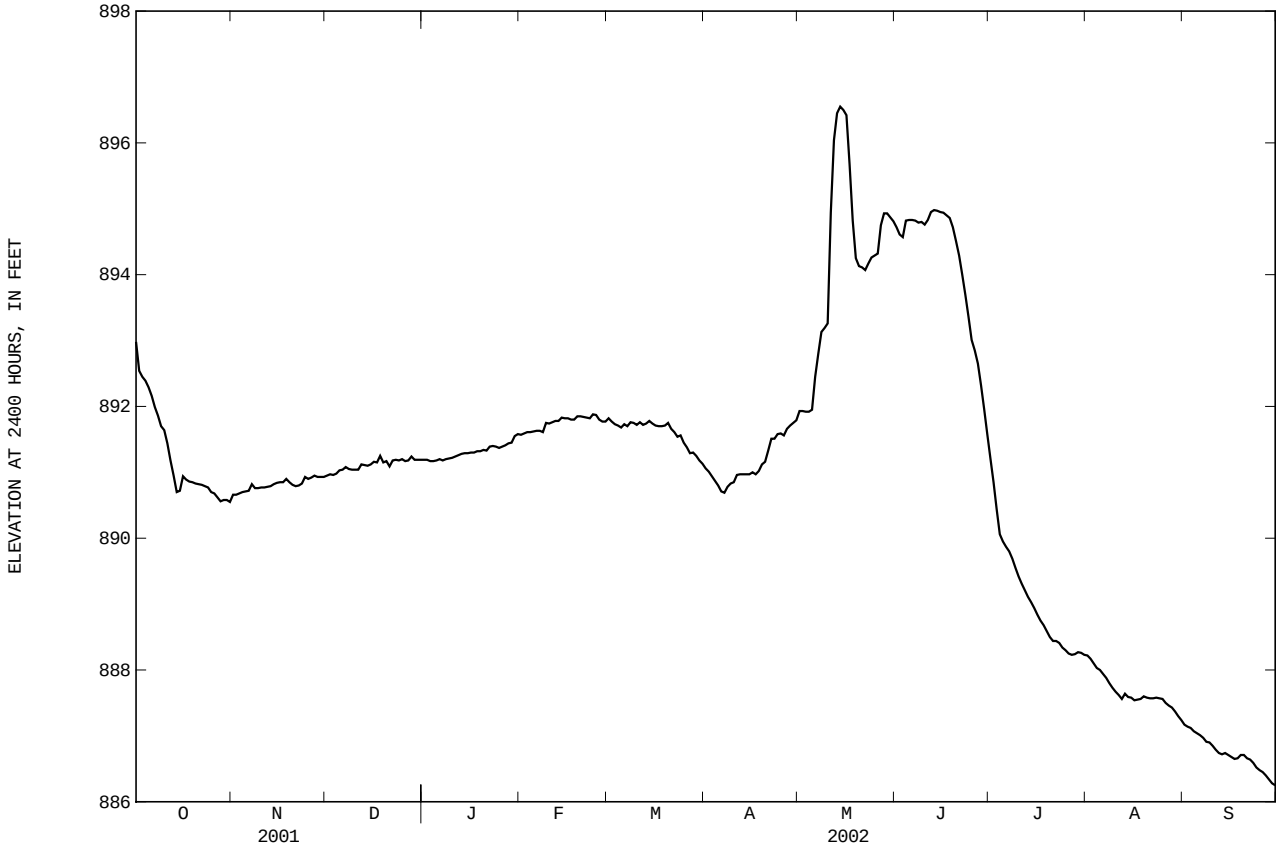
REMARKS.--Reservoir is formed by compacted earthfill dam. Some temporary storage occurred in Feb. 1969; dam was closed Mar. 21, 1969. Conservation pool elevation was first reached on June 3, 1970. Total capacity, 778,700 acre-ft, consisting of the following: Conservation pool, 225,000 acre-ft below elevation 891.5 ft; flood-control pool, 517,500 acre-ft between elevations 891.5 ft and 920.6 ft; and uncontrolled storage, 36,160 acre-ft between elevations 920.6 ft and 922.0 ft. Reservoir is used to store water for flood control, irrigation, and recreation. Figures given herein represent total contents. Satellite telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 920.94 ft July 26, 1993, contents, 734,000 acre-ft; minimum elevation since conservation pool was first reached, 886.23 ft Sept. 30, 2002, contents, 155,500 acre-ft.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 896.63 ft May 16, contents, 272,600 acre-ft; minimum elevation, 886.23 ft Sept. 30, contents, 155,500 acre-ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Computed by U.S. Army Corps of Engineers on basis of resurvey made in 1989)
Note.--Effective date of new capacity table Oct. 1, 1990.

885	144,400	895	251,200
890	193,200	900	320,800



06890898 PERRY LAKE NEAR PERRY, KS--Continued

ELEVATION, in FT (NGVD), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	892.98	890.66	890.95	891.19	891.57	891.82	891.06	891.93	894.72	891.21	888.22	887.17
2	892.54	890.66	890.97	891.19	891.59	891.77	891.01	891.93	894.61	890.85	888.17	887.14
3	892.45	890.68	890.96	891.17	891.61	891.73	890.94	891.92	894.57	890.44	888.10	887.12
4	892.39	890.70	890.98	891.17	891.61	891.71	890.87	891.92	894.82	890.06	888.03	887.07
5	892.29	890.71	891.03	891.18	891.62	891.68	890.80	891.95	894.83	889.95	888.00	887.04
6	892.16	890.72	891.04	891.20	891.63	891.73	890.71	892.45	894.83	889.87	887.94	887.01
7	891.99	890.82	891.08	891.18	891.63	891.70	890.69	892.80	894.82	889.80	887.88	886.97
8	891.86	890.76	891.05	891.20	891.61	891.76	890.78	893.13	894.79	889.69	887.80	886.91
9	891.70	890.76	891.04	891.21	891.75	891.75	890.83	893.19	894.80	889.55	887.73	886.90
10	891.64	890.77	891.04	891.22	891.74	891.72	890.85	893.26	894.76	889.42	887.67	886.85
11	891.44	890.77	891.04	891.24	891.76	891.76	890.96	894.94	894.83	889.31	887.62	886.79
12	891.18	890.78	891.12	891.26	891.78	891.72	890.97	896.04	894.95	889.21	887.56	886.74
13	890.95	890.79	891.11	891.28	891.78	891.74	890.97	896.45	894.98	889.11	887.64	886.72
14	890.70	890.82	891.10	891.29	891.83	891.78	890.97	896.55	894.97	889.03	887.59	886.74
15	890.72	890.84	891.12	891.29	891.82	891.74	890.97	896.50	894.95	888.94	887.58	886.71
16	890.94	890.85	891.16	891.30	891.82	891.71	891.00	896.42	894.94	888.84	887.54	886.68
17	890.89	890.85	891.15	891.30	891.80	891.70	890.97	895.67	894.90	888.75	887.55	886.65
18	890.86	890.90	891.25	891.32	891.80	891.70	891.02	894.82	894.86	888.68	887.56	886.66
19	890.85	890.85	891.15	891.32	891.85	891.71	891.12	894.25	894.72	888.59	887.60	886.71
20	890.83	890.81	891.17	891.34	e891.85	891.75	891.16	894.13	894.51	888.50	887.58	886.71
21	890.82	890.79	891.09	891.33	e891.84	891.66	891.33	894.11	894.29	888.44	887.57	886.66
22	890.81	890.80	891.18	891.39	e891.83	891.61	891.51	894.07	894.00	888.44	887.57	886.64
23	890.79	890.83	891.19	891.40	891.82	891.54	891.51	894.17	893.69	888.41	887.58	886.59
24	890.77	890.93	891.18	891.39	891.88	891.56	891.58	894.26	893.36	888.34	887.57	886.52
25	890.70	890.90	891.20	891.37	891.87	891.45	891.59	894.29	893.01	888.30	887.56	886.48
26	890.68	890.92	891.17	891.39	891.80	891.38	891.56	894.32	892.85	888.25	887.50	886.45
27	890.62	890.95	891.18	891.41	891.77	891.29	891.66	894.75	892.65	888.23	887.46	886.40
28	890.56	890.93	891.24	891.44	891.77	891.30	891.71	894.93	892.32	888.24	887.43	886.34
29	890.58	890.93	891.19	891.45	---	891.25	891.75	894.93	891.96	888.27	887.37	886.28
30	890.58	890.93	891.19	891.55	---	891.18	891.79	894.87	891.58	888.26	887.30	886.25
31	890.55	---	891.19	891.58	---	891.13	---	894.81	---	888.23	887.24	---
MEAN	891.25	890.81	891.11	891.31	891.75	891.61	891.15	894.19	894.20	889.07	887.66	886.73
MAX	892.98	890.95	891.25	891.58	891.88	891.82	891.79	896.55	894.98	891.21	888.22	887.17
MIN	890.55	890.66	890.95	891.17	891.57	891.13	890.69	891.92	891.58	888.23	887.24	886.25
(+)	199,000	203,200	206,100	210,400	212,500	205,400	212,800	248,700	210,400	174,800	165,000	155,600
(#)	-36,900	+4,200	+2,900	+4,300	+2,100	-7,100	+7,400	+35,900	-38,300	-35,600	-9,800	-9,400

CAL YR 2001 ..... (#) +11,800
WTR YR 2002 ..... (#) -80,300

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

e Estimated

06890900 DELAWARE RIVER BELOW PERRY DAM, KS

LOCATION.--Lat 39°06'51", long 95°25'33", in NE $^{1}/_{4}$ NW $^{1}/_{4}$ NW $^{1}/_{4}$ sec.9, T.11 S., R.18 E., Jefferson County, Hydrologic Unit 10270103, at outlet structure of Perry Dam, 4.5 mi northwest of Perry, and at mile 5.8.

DRAINAGE AREA.--1,117 mi^2.

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

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

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

REMARKS.--Records poor. Flow completely regulated since 1969 by Perry Lake (station 06890898). Discharge computed from relation between discharge, head, and gate openings. Satellite telemeter at station.

COOPERATION.--Reservoir elevation-discharge ratings for reservoir outflow gates and gate operation logs furnished by U.S. Army Corps of Engineers.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

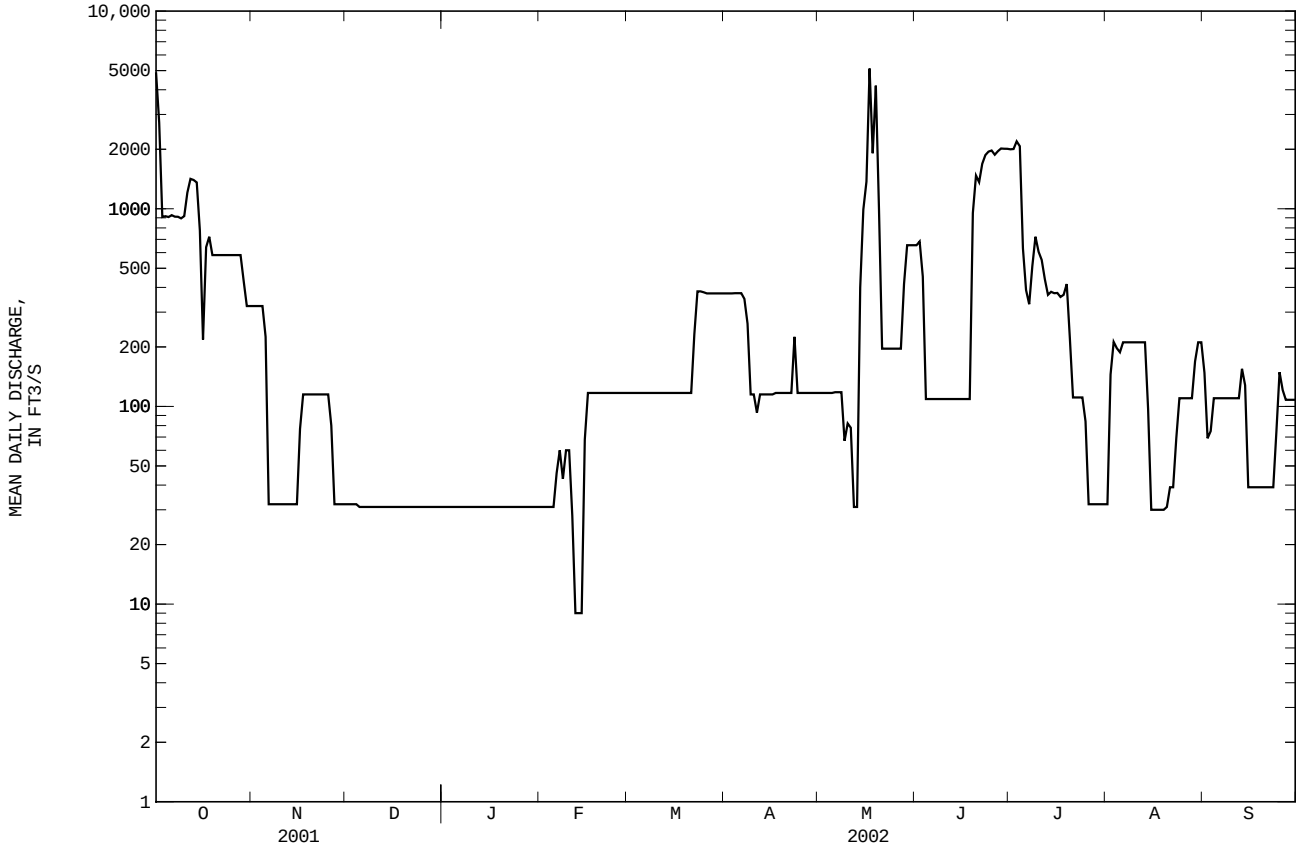
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4900	322	32.0	31.0	31.0	117	373	117	654	2000	32.0	148
2	2720	322	32.0	31.0	31.0	117	373	117	683	2010	145	69.0
3	909	322	32.0	31.0	31.0	117	373	117	454	2190	212	75.0
4	917	322	32.0	31.0	31.0	117	374	117	109	2070	197	110
5	908	225	31.0	31.0	31.0	117	374	117	109	631	188	110
6	928	32.0	31.0	31.0	46.0	117	374	118	109	388	211	110
7	912	32.0	31.0	31.0	60.0	117	350	118	109	329	211	110
8	911	32.0	31.0	31.0	43.0	117	262	118	109	512	211	110
9	894	32.0	31.0	31.0	60.0	117	115	67.0	109	722	211	110
10	918	32.0	31.0	31.0	60.0	117	115	82.0	109	606	211	110
11	1210	32.0	31.0	31.0	28.0	117	93.0	78.0	109	551	211	110
12	1420	32.0	31.0	31.0	9.0	117	115	31.0	109	440	211	110
13	1400	32.0	31.0	31.0	9.0	117	115	31.0	109	367	211	155
14	1360	32.0	31.0	31.0	9.0	117	115	400	109	380	97.0	128
15	776	32.0	31.0	31.0	68	117	115	991	109	374	30.0	39.0
16	218	77.0	31.0	31.0	117	117	115	1370	109	375	30.0	39.0
17	639	115	31.0	31.0	117	117	117	5120	109	358	30.0	39.0
18	722	115	31.0	31.0	117	117	117	1910	109	367	30.0	39.0
19	583	115	31.0	31.0	117	117	117	4200	952	416	30.0	39.0
20	583	115	31.0	31.0	117	117	117	995	1470	221	31.0	39.0
21	583	115	31.0	31.0	117	117	117	196	1360	111	39.0	39.0
22	583	115	31.0	31.0	117	232	117	196	1690	111	39.0	39.0
23	583	115	31.0	31.0	117	382	225	196	1870	111	69.0	39.0
24	583	115	31.0	31.0	117	382	117	196	1950	111	110	75.0
25	583	115	31.0	31.0	117	378	117	196	1970	84.0	110	149
26	583	80.0	31.0	31.0	117	373	117	196	1880	32.0	110	121
27	583	32.0	31.0	31.0	117	373	117	196	1960	32.0	110	108
28	583	32.0	31.0	31.0	117	373	117	416	2020	32.0	110	108
29	431	32.0	31.0	31.0	---	373	117	654	2010	32.0	169	108
30	322	32.0	31.0	31.0	---	373	117	654	2010	32.0	211	108
31	322	---	31.0	31.0	---	373	---	654	---	32.0	211	---
MEAN	953.8	105.1	31.13	31.00	73.86	195.8	183.2	644.0	818.9	517.0	129.9	89.77
MAX	4900	322	32	31	117	382	374	5120	2020	2190	212	155
MIN	218	32	31	31	9.0	117	93	31	109	32	30	39
AC-FT	58650	6250	1910	1910	4100	12040	10900	39600	48730	31790	7990	5340

06890900 DELAWARE RIVER BELOW PERRY DAM, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	683.4	580.5	494.5	235.2	446.5	659.6	1090	1053	1393	909.5	630.9	510.9
MAX	4827	4160	2618	2446	2314	3260	4380	4929	7077	4649	7610	5159
(WY)	1974	1974	1993	1973	1973	1973	1973	1999	1995	1984	1993	1977
MIN	9.00	0.000	0.000	0.000	15.4	16.4	22.3	22.0	22.0	24.1	22.6	9.00
(WY)	2001	1984	1984	1984	1970	1970	1989	1989	1989	1989	1989	2000

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1970 - 2002	
ANNUAL MEAN	1102		316.6		724.1	
HIGHEST ANNUAL MEAN					1933	1993
LOWEST ANNUAL MEAN					74.5	1989
HIGHEST DAILY MEAN	11800	Jun 24	5120	May 17	14000	May 31 1995
LOWEST DAILY MEAN	9.0	Jan 1	9.0	Feb 12	0.00	Apr 1 1973
ANNUAL SEVEN-DAY MINIMUM	9.0	Jan 1	31	Dec 5	0.00	Oct 12 1973
MAXIMUM PEAK FLOW			11600	May 17	14000	May 31 1995
INSTANTANEOUS LOW FLOW			9.0	Feb 11	.00	many years
ANNUAL RUNOFF (AC-FT)	798100		229200		524600	
10 PERCENT EXCEEDS	3420		823		2040	
50 PERCENT EXCEEDS	222		117		102	
90 PERCENT EXCEEDS	9.0		31		25	



06891000 KANSAS RIVER AT LECOMPTON, KS

LOCATION.--Lat 39°03'07", long 95°23'15", in SE $^{1}/_{4}$ SW $^{1}/_{4}$ NW $^{1}/_{4}$ sec.35, T.11 S., R.18 E., Jefferson County, Hydrologic Unit 10270104, on left bank at upstream side of county highway bridge at Lecompton, 0.8 mi downstream from Delaware River, and at mile 63.8.

DRAINAGE AREA.--58,460 mi^2, 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.

REVISED RECORDS.--WSP 876: 1937. WSP 1176: 1903(M). WSP 1440: 1948-49(P). See also PERIOD OF RECORD.

GAGE.--Water-stage recorder. Datum of gage is 821.84 ft above NGVD of 1929. Prior to July 30, 1952, nonrecording gage, and July 30, 1952, to Apr. 29, 1970, recording gage, at site 0.15 mi upstream at same datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Natural flow affected by lakes and reservoirs in Colorado, Nebraska, and Kansas, and by numerous diversions upstream from station. Satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since 1844, 30.23 ft July 13, 1951. Flood of May 31, 1903 (second highest since 1844), reached a stage of 27.9 ft, from floodmark.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15500	2170	1750	3690	2680	2360	1990	2240	8070	3150	900	1100
2	13300	2170	1750	e3380	2650	2180	1940	2100	8200	3110	1000	1040
3	8560	2180	1740	e3100	2590	e1700	1910	2030	7310	3200	1060	1010
4	6550	2220	1740	e2820	2500	e1840	1900	1940	e6600	3400	1130	1060
5	6000	2120	1730	e2790	2340	1970	1860	1830	e6430	3540	1120	1150
6	5740	2120	1700	e2860	2390	2590	1820	3100	6430	3240	1150	1120
7	4910	2110	1700	e2680	2360	2050	1730	7520	6410	3260	1130	1070
8	4520	2070	1680	e2590	2170	2010	1810	e5830	6460	3410	1080	1030
9	4300	2060	1670	e2680	2220	2110	2700	e4530	6440	3920	1080	1010
10	4140	2060	1680	e2520	2440	1990	2430	3430	6380	3750	1090	997
11	4150	2080	1690	e2460	2700	1930	1980	4120	6320	3260	1120	969
12	4020	2070	1710	2440	2650	1920	2960	13500	5200	3110	1110	985
13	3810	2070	1700	2370	2590	1900	3080	8720	2970	2960	1410	1040
14	3640	2080	1740	2340	2210	1880	2440	6180	2100	2920	1400	1440
15	3470	2130	1820	2270	2000	1800	2180	4940	3130	2630	1310	1280
16	3900	2230	1820	2190	2050	1730	2060	4660	3730	2460	1210	1150
17	3510	2250	1800	2130	2110	1660	1920	9000	4050	2390	1630	1180
18	3350	2240	1790	2190	2710	1640	1640	10000	4150	2230	1910	1140
19	2630	2270	1940	2800	2970	1630	1710	8530	4640	2220	1890	1290
20	2520	2260	3590	3550	3210	1640	2050	4740	5310	2190	1790	1350
21	2520	2230	4710	3710	2930	1620	4320	3500	5120	1480	1350	1190
22	2570	2330	4950	3730	2470	1740	5060	3400	5360	1260	1050	983
23	2610	2600	5030	3740	2360	2290	3660	3330	5630	1190	1000	892
24	2590	2820	5080	3620	2340	2380	2800	3300	5560	1140	951	889
25	2470	2650	5090	3350	2330	2420	2660	3010	5550	1110	934	977
26	2410	2430	5170	2720	2320	2420	2990	2780	4890	1090	1180	953
27	2350	1930	5100	2420	2240	2310	3080	3550	4150	1080	1160	930
28	2280	1820	5010	2540	2260	1960	2930	5730	3590	924	1020	934
29	2100	1780	5010	2510	---	1840	2830	6630	3370	1340	998	968
30	1950	1770	4540	2570	---	1770	2480	7060	3260	1860	1030	1030
31	1980	---	3870	2560	---	1950	---	7500	---	1230	1030	---
MEAN	4334	2177	2913	2817	2457	1975	2497	5120	5227	2389	1201	1072
MAX	15500	2820	5170	3740	3210	2590	5060	13500	8200	3920	1910	1440
MIN	1950	1770	1670	2130	2000	1620	1640	1830	2100	924	900	889
AC-FT	266500	129600	179100	173200	136400	121400	148600	314800	311000	146900	73830	63780

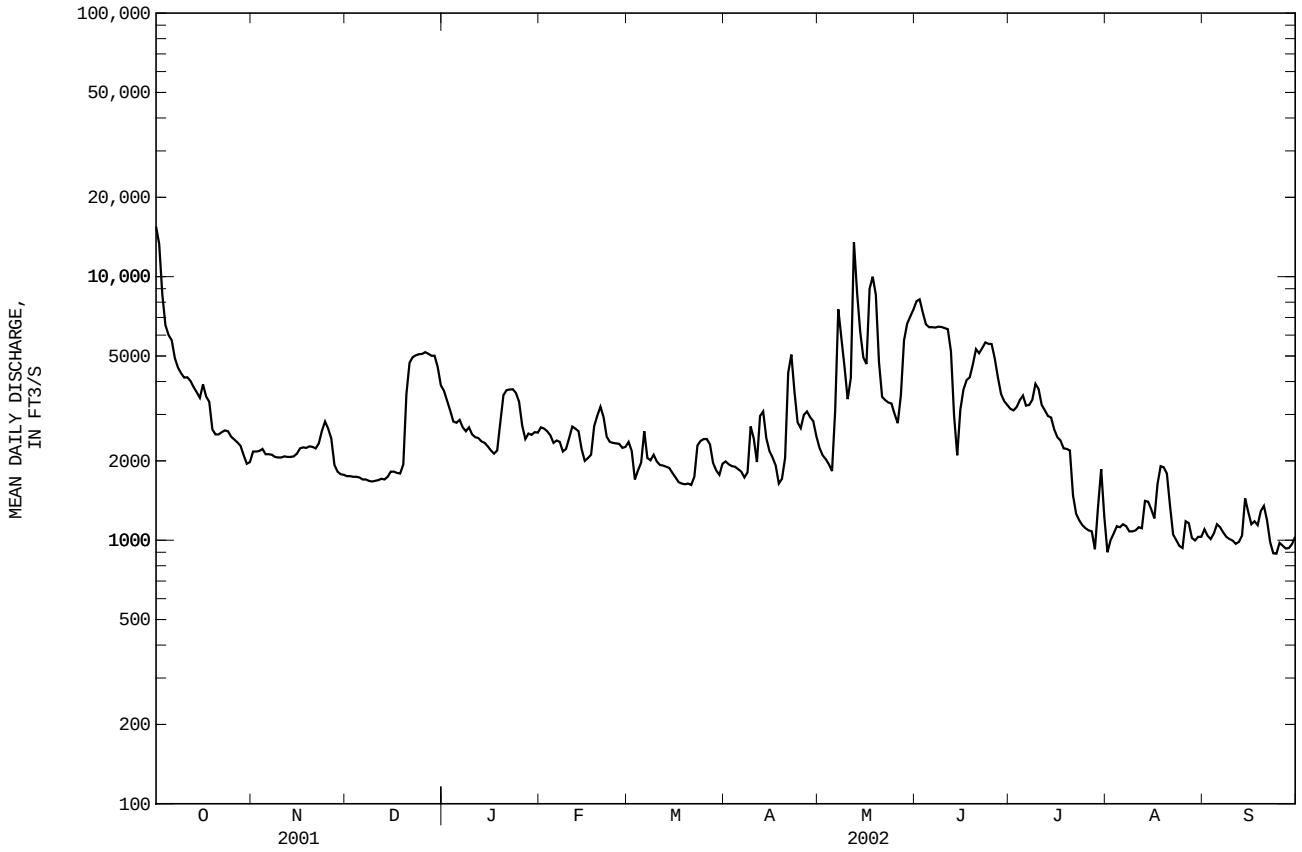
06891000 KANSAS RIVER AT LECOMPTON, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1937 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	5766	4343	3629	2797	4527	7174	9165	10860	14560	12180	6980	6338
MAX	49500	41790	20690	13740	19640	31540	39070	40820	81560	116500	65080	36200
(WY)	1974	1974	1974	1974	1949	1973	1987	1995	1951	1951	1993	1951
MIN	349	417	377	329	496	564	774	784	1120	1190	602	448
(WY)	1957	1957	1957	1957	1957	1967	1956	1956	1989	1940	1955	1956

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1937 - 2002	
ANNUAL MEAN	7696		2853		7367	
HIGHEST ANNUAL MEAN					28330	1993
LOWEST ANNUAL MEAN					1275	1956
HIGHEST DAILY MEAN	42900	Jun 21	15500	Oct 1	472000	Jul 13 1951
LOWEST DAILY MEAN	930	Jan 3	889	Sep 24	185	Oct 13 1956
ANNUAL SEVEN-DAY MINIMUM	1180	Jan 1	935	Sep 23	200	Oct 8 1956
MAXIMUM PEAK FLOW			16800	May 12	483000	Jul 13 1951
MAXIMUM PEAK STAGE			7.62	May 12	30.23	Jul 13 1951
INSTANTANEOUS LOW FLOW			857	Sep 23	185	Oct 13 1956
ANNUAL RUNOFF (AC-FT)	5572000		2065000		5337000	
10 PERCENT EXCEEDS	20800		5140		17700	
50 PERCENT EXCEEDS	4720		2320		3430	
90 PERCENT EXCEEDS	1820		1100		990	

e Estimated



06891478 CLINTON LAKE NEAR LAWRENCE, KS

LOCATION.--Lat 38°55'51", long 95°20'02", in NW $^1/_4$ SW $^1/_4$ SW $^1/_4$ sec.8, T.13 S., R.19 E., Douglas County, Hydrologic Unit 10270104, in control tower of Clinton Dam on Wakarusa River, 4.0 mi west of Lawrence, and at mile 22.3.

DRAINAGE AREA.--367 mi^2.

PERIOD OF RECORD.--December 1977 to current year.

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929 (levels by U.S. Army Corps of Engineers).

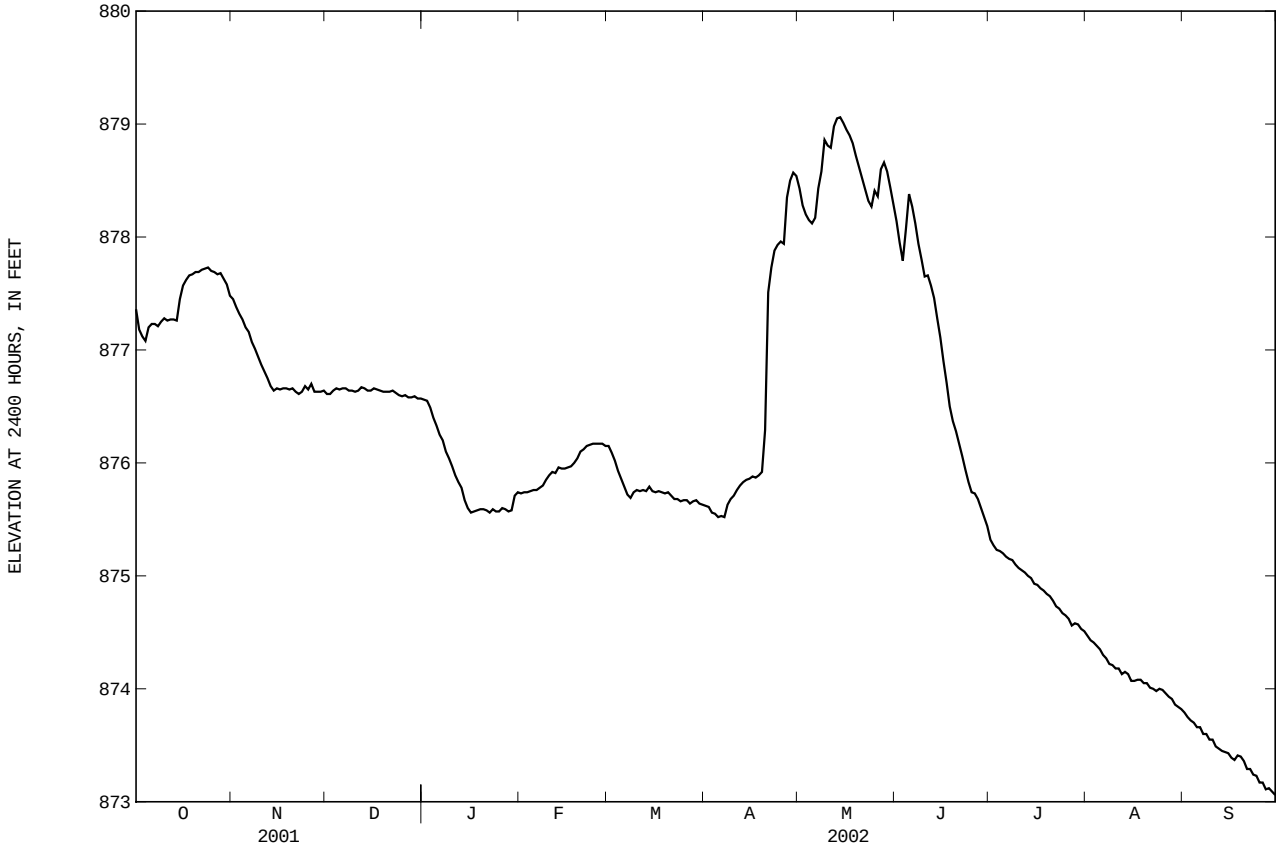
REMARKS.--Reservoir is formed by compacted earthfill dam. Storage began Nov. 30, 1977. Conservation pool elevation was first reached Apr. 3, 1980. Total capacity, 683,400 acre-ft, consisting of the following: Dead storage, 90 acre-ft below elevation 825.0 ft; conservation pool, 129,100 acre-ft between elevations 825.0 ft and 875.5 ft; flood-control pool, 268,400 acre-ft between elevations 875.5 ft and 903.4 ft; and surcharge pool, 285,800 acre-ft between elevations 903.4 ft and 921.4 ft. Reservoir is used for flood control, conservation, and recreation. Figures given herein represent total contents. Satellite telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 892.48 ft May 29, 1995, contents, 274,500 acre-ft; minimum elevation since conservation pool first reached, 871.60 ft Aug. 18, 1989, contents, 103,300 acre-ft.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 879.10 ft May 14, contents, 155,600 acre-ft; minimum elevation, 873.01 ft Sept. 30, contents, 112,300 acre-ft.

Capacity table (elevation, in feet, and total contents, in acre-feet)
(Computed by U.S. Army Corps of Engineers in 1965)

870	93,420	885	203,900
875	125,700	890	250,000
880	162,500		



06891478 CLINTON LAKE NEAR LAWRENCE, KS--Continued

ELEVATION, in FT (NGVD), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	877.36	877.45	876.61	876.56	875.73	876.15	875.62	878.43	878.14	875.32	874.47	873.79
2	877.18	877.38	876.61	876.55	875.74	876.09	875.61	878.28	877.95	875.27	874.43	873.75
3	877.12	877.32	876.64	876.49	875.74	876.02	875.56	878.20	877.79	875.23	874.41	873.72
4	877.08	877.27	876.66	876.40	875.75	875.93	875.55	878.15	878.07	875.22	874.38	873.70
5	877.20	877.20	876.65	876.33	875.76	875.86	875.52	878.12	878.38	875.20	874.35	873.66
6	877.23	877.16	876.66	876.25	875.76	875.79	875.53	878.17	878.27	875.17	874.30	873.66
7	877.23	877.07	876.66	876.20	875.78	875.72	875.52	878.43	878.12	875.15	874.27	873.60
8	877.21	877.01	876.64	876.10	875.80	875.69	875.63	878.58	877.94	875.14	874.22	873.60
9	877.25	876.94	876.64	876.04	875.85	875.74	875.68	878.86	877.80	875.10	874.21	873.55
10	877.28	876.87	876.63	875.97	875.89	875.76	875.71	878.81	877.65	875.07	874.18	873.55
11	877.26	876.81	876.64	875.89	875.92	875.75	875.76	878.79	877.66	875.05	874.18	873.49
12	877.27	876.75	876.67	875.83	875.91	875.76	875.80	878.98	877.57	875.03	874.13	873.47
13	877.27	876.68	876.66	875.78	875.96	875.75	875.83	879.05	877.46	875.00	874.15	873.45
14	877.26	876.64	876.64	875.67	875.95	875.79	875.85	879.06	877.28	874.98	874.13	873.44
15	877.45	876.66	876.64	875.60	875.95	875.75	875.86	879.01	877.11	874.93	874.07	873.43
16	877.57	876.65	876.66	875.56	875.96	875.74	875.88	878.95	876.90	874.92	874.07	873.39
17	877.62	876.66	876.65	875.57	875.97	875.75	875.87	878.90	876.71	874.89	874.08	873.37
18	877.66	876.66	876.64	875.58	876.00	875.74	875.89	878.83	876.50	874.87	874.08	873.41
19	877.67	876.65	876.63	875.59	876.04	875.73	875.92	878.72	876.37	874.84	874.05	873.40
20	877.69	876.66	876.63	875.59	876.10	875.74	876.29	878.62	876.28	874.82	874.05	873.36
21	877.69	876.63	876.63	875.58	876.12	875.71	877.51	878.52	876.17	874.78	874.01	873.29
22	877.71	876.61	876.64	875.56	876.15	875.68	877.73	878.42	876.06	874.73	874.00	873.29
23	877.72	876.63	876.62	875.59	876.16	875.68	877.88	878.32	875.94	874.71	873.98	873.24
24	877.73	876.68	876.60	875.57	876.17	875.66	877.93	878.27	875.83	874.67	874.00	873.23
25	877.70	876.65	876.59	875.57	876.17	875.67	877.96	878.41	875.74	874.65	873.99	873.17
26	877.69	876.70	876.60	875.60	876.17	875.67	877.94	878.36	875.73	874.62	873.96	873.17
27	877.67	876.63	876.58	875.59	876.17	875.64	878.35	878.60	875.68	874.56	873.93	873.11
28	877.68	876.63	876.58	875.57	876.15	875.66	878.50	878.66	875.60	874.58	873.91	873.12
29	877.63	876.63	876.59	875.58	---	875.67	878.57	878.58	875.52	874.57	873.86	873.09
30	877.58	876.64	876.57	875.71	---	875.64	878.54	878.44	875.44	874.53	873.84	873.06
31	877.48	---	876.57	875.74	---	875.63	---	878.29	---	874.51	873.82	---
MEAN	877.46	876.83	876.63	875.85	875.96	875.76	876.53	878.57	876.92	874.91	874.11	873.42
MAX	877.73	877.45	876.67	876.56	876.17	876.15	878.57	879.06	878.38	875.32	874.47	873.79
MIN	877.08	876.61	876.57	875.56	875.73	875.63	875.52	878.12	875.44	874.51	873.82	873.06
(+)	143,400	137,300	136,800	130,900	133,800	131,000	151,300	149,400	128,800	122,300	117,700	112,000
(#)	-900	-6,100	-500	-5,900	+2,900	-2,800	+20,300	-1,900	-20,600	-6,500	-4,600	-5,100

CAL YR 2001 ..... (#) +24,400
WTR YR 2002 ..... (#) -3,400

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

06891500 WAKARUSA RIVER NEAR LAWRENCE, KS

LOCATION.--Lat 38°54'40", long 95°15'37", in NE $^1/_4$ NE $^1/_4$ NE $^1/_4$ sec.23, T.13 S., R.19 E., Douglas County, Hydrologic Unit 10270104, on left bank at upstream side of bridge on U.S. Highway 59, 4 mi south of Lawrence, and at mile 16.3.

DRAINAGE AREA.--425 mi^2, Dec. 1, 1972 to Sept. 30, 1980, 412 mi^2.

PERIOD OF RECORD.--April 1929 to current year. Published as "below Clinton Dam" December 1972 to September 1980.

REVISED RECORDS.--WSP 976: 1935. WSP 1310: 1929(M), 1933(M), 1938(M), 1945-47(M), 1949-50(M). WSP 1919: 1958, 1959.

GAGE.--Water-stage recorder. Datum of gage is 799.26 ft above NGVD of 1929. Prior to May 7, 1959, nonrecording gage, and May 8, 1959, to Nov. 30, 1972, water-stage recorder at present site and datum. Dec. 1, 1972, to Sept. 30, 1980, water-stage recorder at site 2.3 mi upstream at datum 3.95 ft higher.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow significantly regulated since 1977 by Clinton Lake (station 06891478), 6.0 mi upstream. Satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since at least 1880, that of July 12, 1951.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	983	277	5.1	28	16	84	55	722	698	270	16	16
2	768	276	4.9	24	12	321	55	719	694	276	16	15
3	265	275	4.9	183	15	319	55	594	693	240	16	15
4	180	276	5.0	412	12	317	54	271	621	25	16	16
5	81	276	5.2	324	8.3	321	54	252	385	23	16	16
6	29	276	5.5	317	8.9	320	54	267	747	21	16	16
7	19	277	5.2	316	11	318	55	631	738	19	16	15
8	14	278	5.0	316	14	250	96	1210	731	19	16	15
9	12	274	5.0	315	20	84	89	724	731	19	16	16
10	12	273	5.1	316	21	63	89	448	725	18	16	16
11	11	273	5.3	314	17	61	68	787	738	18	16	16
12	9.9	274	9.3	313	14	69	72	140	891	18	16	16
13	9.8	273	12	313	12	73	64	124	746	20	27	16
14	8.9	236	6.2	311	11	59	61	208	727	18	18	22
15	118	12	5.7	310	11	57	58	498	720	18	16	18
16	96	5.1	5.7	201	10	57	e52	502	716	18	17	17
17	73	5.8	5.7	5.9	9.5	56	e51	523	714	18	22	16
18	38	5.7	5.6	4.5	9.1	56	56	486	711	18	18	18
19	18	7.8	5.5	5.3	22	56	76	484	510	17	21	22
20	15	6.2	5.3	5.3	17	56	163	478	411	18	17	19
21	13	6.3	5.3	4.9	14	57	808	472	409	17	16	17
22	12	6.1	5.4	5.0	12	56	356	470	407	17	19	16
23	12	6.1	5.4	5.5	11	55	177	467	407	18	17	16
24	11	10	5.4	5.5	10	55	141	486	404	18	17	16
25	10	7.5	5.9	5.0	9.5	56	86	1480	346	18	19	16
26	9.9	6.2	5.3	4.7	8.6	55	79	717	279	17	16	16
27	9.7	38	5.5	4.5	8.2	55	311	754	285	16	16	16
28	10	36	5.7	4.5	8.8	64	290	731	275	17	16	16
29	97	9.0	5.6	4.5	---	56	166	630	273	24	16	16
30	277	6.0	5.3	6.9	---	55	356	717	271	17	16	16
31	276	---	10	24	---	55	---	702	---	16	16	---
MEAN	112.8	132.9	5.871	142.2	12.60	116.6	138.2	570.8	566.8	42.13	17.16	16.57
MAX	983	278	12	412	22	321	808	1480	891	276	27	22
MIN	8.9	5.1	4.9	4.5	8.2	55	51	124	271	16	16	15
AC-FT	6940	7910	361	8750	700	7170	8230	35100	33730	2590	1060	986

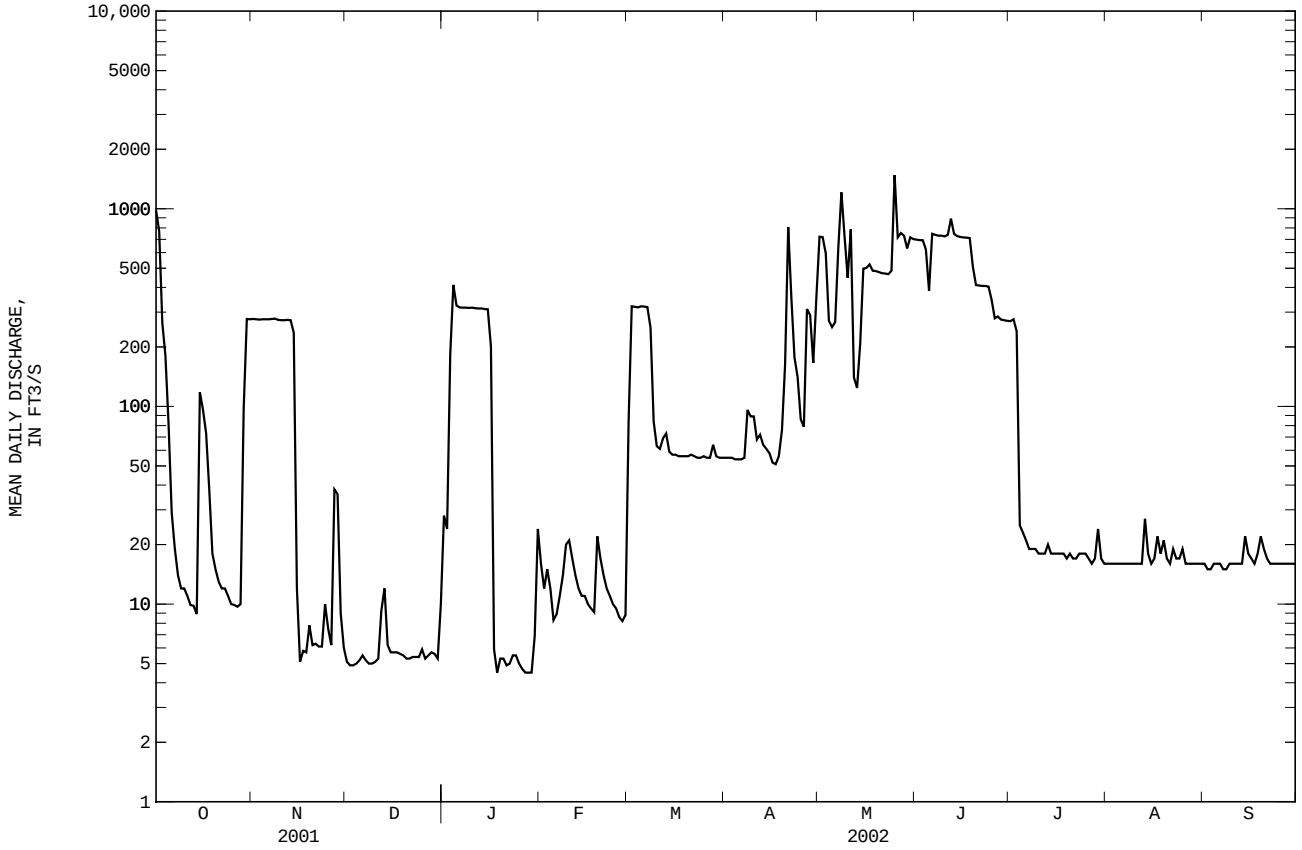
06891500 WAKARUSA RIVER NEAR LAWRENCE, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	233.0	216.3	156.6	70.71	139.2	290.6	389.6	510.9	534.4	317.2	132.5	105.4
MAX	2038	1953	984	380	682	874	1481	2324	2447	725	1145	702
(WY)	1986	1999	1993	1998	1982	1987	1983	1999	1995	1984	1993	1993
MIN	2.66	3.60	2.04	1.26	1.71	3.54	15.1	17.4	23.9	11.5	16.3	3.42
(WY)	1991	1996	1979	1996	1996	1996	1981	2000	1989	1994	1990	1991

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1978 - 2002	
ANNUAL MEAN	229.2		156.8		258.4	
HIGHEST ANNUAL MEAN					728	1999
LOWEST ANNUAL MEAN					20.8	1989
HIGHEST DAILY MEAN	1550	Mar 23	1480	May 25	6340	Oct 5 1998
LOWEST DAILY MEAN	4.9	Dec 2	4.5	Jan 18	0.24	Nov 3 1983
ANNUAL SEVEN-DAY MINIMUM	5.1	Dec 2	4.9	Jan 23	0.59	Oct 30 1983
MAXIMUM PEAK FLOW			1900	May 25	24200	Jul 12 1951
MAXIMUM PEAK STAGE			14.70	May 25	31.59	Jul 12 1951
INSTANTANEOUS LOW FLOW			4.3	Jan 18	.00	some years
ANNUAL RUNOFF (AC-FT)	165900		113500		187200	
10 PERCENT EXCEEDS	807		505		856	
50 PERCENT EXCEEDS	41		20		29	
90 PERCENT EXCEEDS	6.3		5.7		5.8	

e Estimated



06892000 STRANGER CREEK NEAR TONGANOXIE, KS

LOCATION.--Lat 39°06'59", long 95°00'39", in NE $^1/_4$ NE $^1/_4$ NW $^1/_4$ sec.7, T.11 S., R.22 E., Leavenworth County, Hydrologic Unit 10270104, on left bank at downstream side of bridge on U.S. Highway 40, 2.0 mi upstream from Tonganoxie Creek, 4.0 mi east of Tonganoxie, and at mile 18.1.

DRAINAGE AREA.--406 mi^2.

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

REVISED RECORDS.--WSP 1440: 1929, 1936(M), 1940, 1942(M), 1949. WSP 1710: 1951.

GAGE.--Water-stage recorder. Datum of gage is 800.95 ft above NGVD of 1929 (levels by U.S. Army Corps of Engineers). Apr. 30, 1929, to June 1, 1939, nonrecording gage and June 2, 1939, to June 1, 1960, water-stage recorder, at present site and datum. June 1, 1960, to May 16, 1997, water-stage recorder 1.3 mi upstream of present site, at datum 4.00 ft higher. May 28, 1998 moved gage back to permanent location on U.S. Highway 40.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,600 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Apr 21	0400	3,750	18.64	May 7	0500	3,730	18.59
May 6	1200	3,180	16.99	May 13	0600	*4,050	*19.46

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	73	55	36	22	32	36	33	109	96	17	6.4	1.4
2	67	56	34	19	34	35	31	94	82	13	2.8	1.3
3	60	52	35	17	40	28	28	80	72	12	1.6	1.3
4	64	51	35	16	42	31	26	72	113	14	1.3	1.2
5	220	51	38	17	36	36	25	81	100	11	1.3	1.1
6	222	56	36	19	36	45	26	2480	74	21	1.3	1.2
7	162	52	34	20	39	45	26	3040	66	23	1.3	1.2
8	96	50	34	22	45	45	36	1630	55	13	1.2	1.2
9	77	48	32	25	68	59	164	1310	48	10	1.0	1.1
10	70	47	31	29	84	56	193	528	45	10	1.0	1.1
11	68	45	31	31	87	54	121	1670	45	8.4	1.1	1.1
12	72	44	34	36	65	51	107	3750	109	7.0	1.1	1.0
13	69	45	42	e32	53	46	85	3460	499	6.4	17	1.2
14	62	45	39	e33	46	44	74	741	98	5.4	7.0	e1.1
15	202	45	38	e28	43	40	65	327	59	5.6	2.1	e1.1
16	677	45	36	e28	40	36	56	246	47	5.5	1.6	e1.1
17	497	43	34	e25	38	34	51	210	40	4.9	1.6	1.1
18	160	44	33	e25	36	33	47	169	36	4.1	1.7	1.1
19	114	43	34	30	53	33	139	138	33	4.2	4.1	1.2
20	96	41	31	e25	120	33	364	118	29	3.6	24	1.2
21	84	39	31	e24	66	31	2240	105	25	3.7	20	1.7
22	78	39	34	e27	53	29	392	97	23	4.0	5.5	1.6
23	76	39	30	37	47	29	234	89	21	3.1	3.0	1.3
24	72	43	27	e28	44	30	140	90	19	2.5	2.0	1.3
25	66	46	21	e25	40	31	104	184	18	2.3	1.8	1.5
26	60	52	24	33	36	33	86	239	17	2.2	2.3	1.6
27	54	50	26	30	28	32	394	1180	16	2.1	1.9	1.4
28	52	42	24	29	31	34	314	1190	41	2.3	1.6	1.2
29	52	38	25	28	---	36	292	316	56	2.5	1.4	1.1
30	53	36	23	28	---	36	139	161	26	2.5	1.3	1.1
31	55	---	22	29	---	35	---	119	---	20	1.4	---
MEAN	123.5	46.07	31.74	26.35	49.36	37.94	201.1	774.9	66.93	7.945	3.958	1.237
MAX	677	56	42	37	120	59	2240	3750	499	23	24	1.7
MIN	52	36	21	16	28	28	25	72	16	2.1	1.0	1.0
MED	72	45	34	28	42	35	95	210	46	5.5	1.6	1.2
AC-FT	7600	2740	1950	1620	2740	2330	11960	47650	3980	489	243	74

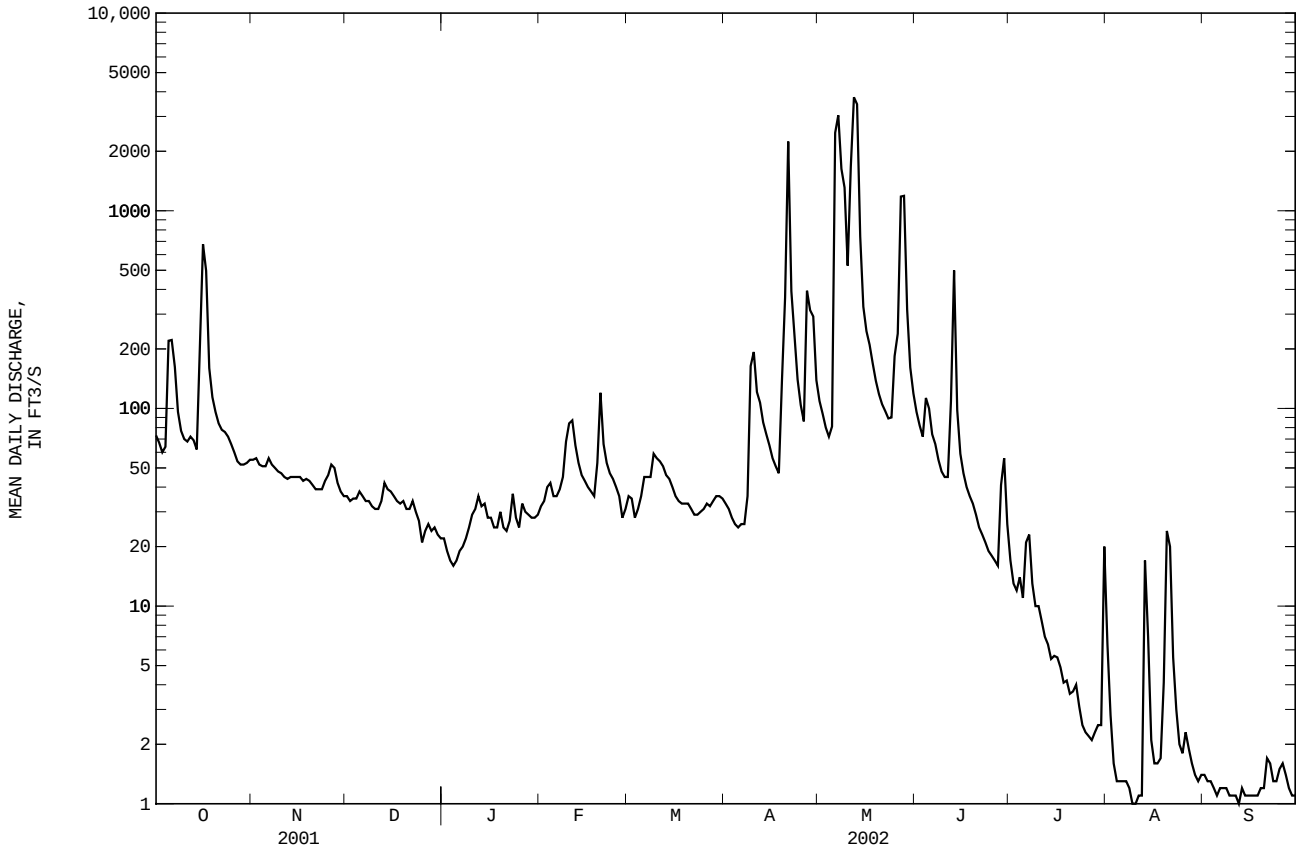
06892000 STRANGER CREEK NEAR TONGANOXIE, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	200.9	177.6	112.2	91.52	175.2	271.7	359.0	397.2	504.3	296.9	143.9	254.1
MAX	2060	1734	942	579	1071	2013	1692	1868	2915	2697	1151	2411
(WY)	1986	1932	1945	1973	1962	1973	1999	1995	1967	1993	1968	1977
MIN	0.000	0.013	0.12	0.10	0.54	2.85	4.30	9.20	3.61	0.58	0.000	0.000
(WY)	1954	1957	1957	1957	1957	1954	1935	1989	1988	1934	1934	1956

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1930 - 2002	
ANNUAL MEAN	504.0		115.2		248.4	
HIGHEST ANNUAL MEAN					802	1993
LOWEST ANNUAL MEAN					8.20	1934
HIGHEST DAILY MEAN	22200	Jun 21	3750	May 12	22200	Jun 21 2001
LOWEST DAILY MEAN	6.4	Jan 1	1.0	Aug 9	0.00	Jul 4 1934
ANNUAL SEVEN-DAY MINIMUM	9.1	Jan 1	1.1	Sep 9	0.00	Jul 21 1934
MAXIMUM PEAK FLOW			4050	May 13	40000	Jun 21 2001
MAXIMUM PEAK STAGE			19.46	May 13	29.81	Jun 21 2001
INSTANTANEOUS LOW FLOW			0.87	Sep 12	.00	many years
ANNUAL RUNOFF (AC-FT)	364900		83390		180000	
10 PERCENT EXCEEDS	826		148		432	
50 PERCENT EXCEEDS	84		36		40	
90 PERCENT EXCEEDS	20		1.4		2.0	

e Estimated



06892350 KANSAS RIVER AT DESOTO, KS

LOCATION.--Lat 38°59'00", long 94°57'52", in SE $^{1}/_{4}$ NE $^{1}/_{4}$ NE $^{1}/_{4}$ sec.27, T.12 S., R.22 E., Leavenworth County, Hydrologic Unit 10270104, on left bank at downstream side of bridge on county highway, north edge of DeSoto, 0.4 mi upstream from Kill Creek, and at mile 31.0.

WATER-DISCHARGE RECORDS

DRAINAGE AREA.--59,756 mi^2, of which a large area is noncontributing.

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

REVISED RECORDS.--WSP 806: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 753.87 ft above NGVD of 1929. July 9, 1917, to Apr. 23, 1934, nonrecording gage; Apr. 24, 1934, to Nov. 25, 1960, water-stage recorder at site 9.7 mi downstream at datum 11.81 ft lower; Nov. 26, 1960, to Feb. 9, 1961, nonrecording gage; Feb. 10, 1961, to Sept. 30, 1971, water-stage recorder at site 10.2 mi downstream at datum 17.81 ft lower; and Oct. 1, 1971, to Sept. 30, 1973, at site 10.2 mi downstream at datum 22.81 ft lower. Lowered gage datum 5.0 ft Sept. 30, 1996, to 753.87 ft.

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

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

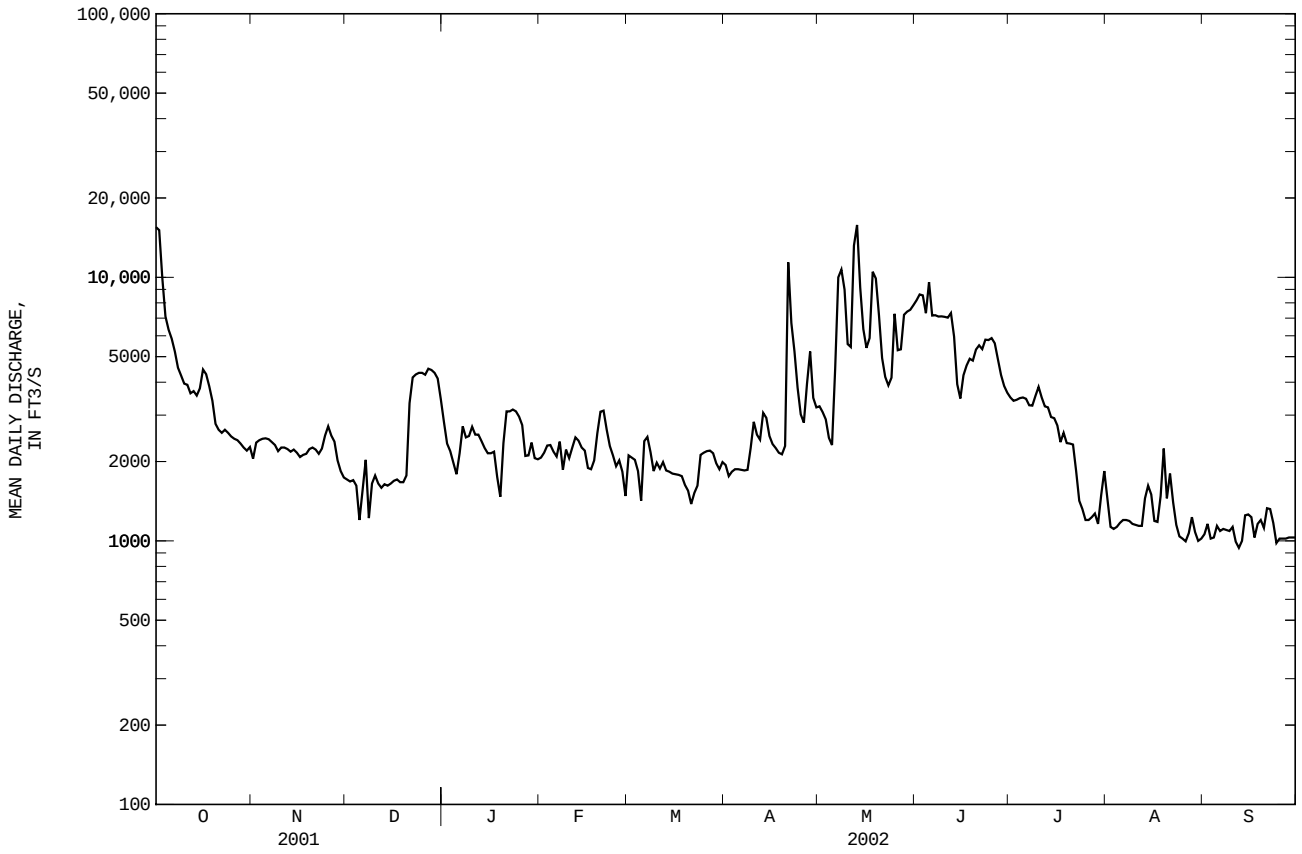
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15500	2050	1710	2820	2070	2110	1940	3240	8180	3500	1440	1060
2	15100	2360	1680	2340	2160	2070	1760	3080	8610	3400	1130	1160
3	9940	2410	1700	2190	2300	2030	1830	2890	8540	3430	1110	1020
4	7110	2440	1620	1980	2310	1840	1870	2460	7310	3480	1130	1030
5	6330	2450	1200	1790	2180	1420	1870	2310	9590	3500	1170	1140
6	5850	2430	1560	2150	2090	2390	1860	4500	7160	3460	1200	1090
7	5230	2370	2030	2720	2380	2480	1850	10000	7180	3270	1200	1110
8	4540	2310	1220	2470	1860	2170	1860	10700	7100	3260	1190	1100
9	4240	2190	1650	2500	2220	1840	2250	8980	7110	3550	1160	1090
10	3950	2260	1770	2710	2060	1980	2830	5580	7080	3840	1150	1130
11	3910	2260	1650	2530	2260	1880	2530	5440	7030	3500	1140	993
12	3630	2230	1590	2530	2470	1990	2420	13200	7320	3240	1140	941
13	3700	2180	1640	2390	2400	1850	3060	15800	5960	3210	1450	1000
14	3560	2220	1620	2250	2260	1830	2930	9150	3930	2950	1620	1250
15	3790	2160	1650	2150	2200	1800	2500	6360	3470	2920	1500	1260
16	4470	2080	1690	2150	1890	1790	2330	5400	4250	2740	1190	1230
17	4290	2120	1710	2180	1870	1780	2250	5880	4630	2370	1180	1030
18	3860	2140	1670	1750	2020	1760	2160	10500	4910	2570	1480	1160
19	3400	2230	1670	1470	2560	1630	2130	9900	4830	2350	2240	1200
20	2780	2260	1770	2350	3090	1550	2290	7170	5320	2340	1450	1120
21	2640	2220	3330	3100	3120	1380	11400	4940	5520	2320	1800	1330
22	2570	2140	4170	3100	2640	1520	6710	4190	5340	1840	1400	1320
23	2640	2240	4280	3150	2290	1620	5230	3890	5800	1420	1150	1170
24	2570	2510	4340	3100	2110	2120	3810	4160	5780	1320	1040	981
25	2490	2720	4340	2960	1920	2160	3020	7270	5880	1200	1020	1020
26	2440	2510	4270	2750	2020	2190	2810	5290	5620	1200	996	1020
27	2410	2380	4500	2100	1830	2200	3940	5330	4890	1230	1070	1020
28	2340	2020	4450	2110	1480	2150	5230	7210	4260	1270	1230	1030
29	2260	1840	4340	2360	---	1970	3490	7410	3870	1160	1080	1030
30	2200	1740	4130	2060	---	1870	3210	7530	3650	1490	1000	1030
31	2270	---	3440	2040	---	1990	---	7840	---	1840	1020	---
MEAN	4581	2249	2529	2395	2216	1915	3112	6697	6004	2554	1261	1102
MAX	15500	2720	4500	3150	3120	2480	11400	15800	9590	3840	2240	1330
MIN	2200	1740	1200	1470	1480	1380	1760	2310	3470	1160	996	941
AC-FT	281700	133800	155500	147300	123100	117700	185200	411800	357300	157000	77510	65580

06892350 KANSAS RIVER AT DESOTO, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1918 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	5746	4630	3637	2909	4525	7134	9641	11140	15040	11690	6951	6592
MAX	51630	42320	21940	15990	20800	36560	43570	43270	78870	133200	66680	44660
(WY)	1974	1974	1974	1973	1949	1973	1973	1993	1951	1951	1993	1951
MIN	365	504	465	364	635	632	845	953	1188	1106	455	525
(WY)	1957	1957	1957	1957	1957	1967	1956	1989	1989	1936	1934	1956

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1918 - 2002	
ANNUAL MEAN	8298		3057		7476	
HIGHEST ANNUAL MEAN					30570	1993
LOWEST ANNUAL MEAN					1326	1956
HIGHEST DAILY MEAN	68500	Jun 21	15800	May 13	486000	Jul 14 1951
LOWEST DAILY MEAN	950	Jan 3	941	Sep 12	160	Oct 11 1956
ANNUAL SEVEN-DAY MINIMUM	1290	Jan 1	1020	Sep 24	195	Oct 9 1956
MAXIMUM PEAK FLOW			21800	May 12	510000	Jul 13 1951
MAXIMUM PEAK STAGE			11.65	May 12	37.30	Jul 13 1951
INSTANTANEOUS LOW FLOW			809	Sep 12	160	Oct 11 1956
ANNUAL RUNOFF (AC-FT)	6008000		2213000		5416000	
10 PERCENT EXCEEDS	21600		5880		17800	
50 PERCENT EXCEEDS	4770		2260		3390	
90 PERCENT EXCEEDS	1770		1160		1100	



06892350 KANSAS RIVER AT DESOTO, KS--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1975-91, 2000 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1974 to September 1981, June 1999 to current year.
pH: June 1999 to current year.
WATER TEMPERATURE: October 1974 to September 1981, June 1999 to current year.
DISSOLVED OXYGEN: June 1999 to current year.
TURBIDITY: June 1999 to current year.

INSTRUMENTATION.--Multiparameter water-quality monitor.

REMARKS.--Records fair. Interruptions in record are due to ice conditions or malfunction of the recording instrument or sensors. Instruments used to measure turbidity conform to ISO 7027 standards.

EXTREMES FOR PERIOD OF RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 1,510 microsiemens/cm, Nov. 6, 1999 minimum, 193 microsiemens/cm, June 30, 1999.
pH: Maximum, 9.2 standard units, Sept. 21, 2000; minimum, 7.4 standard units, June 30, 1999.
WATER TEMPERATURE: Maximum, 34.8°C, Aug. 8, 2002; minimum, 0.0°C, Jan. 26, 2000.
DISSOLVED OXYGEN: Maximum 21.7 mg/L, Nov. 7, 1999; minimum, 5.5 mg/L, Aug. 6, 2000.
TURBIDITY: Maximum, >1,400 NTU, July 3, 1999; minimum, 3 NTU, Nov. 27, 2000.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 1,090 microsiemens/cm, Dec. 19; minimum, 287 microsiemens/cm, May 13.
pH: Maximum, 9.2 units, on several days in August; minimum, 7.5 units, Apr. 21.
WATER TEMPERATURE: Maximum, 34.8°C, Aug. 1; minimum, 0.0°C, on several days.
DISSOLVED OXYGEN: Maximum, 19.0 mg/L, Mar. 17; minimum, 4.1 mg/L, Aug. 2.
TURBIDITY: Maximum, 1,200 NTU, many days; minimum, 10 NTU, Dec. 11.

SPECIFIC CONDUCTANCE FROM YSI, in US/CM @ 25C, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	404	352	372	855	809	836	986	970	979	---	---	---
2	359	347	356	845	834	841	984	975	980	---	---	---
3	403	341	378	839	772	815	994	978	982	---	---	---
4	428	381	400	773	751	764	980	967	972	---	---	---
5	432	400	422	773	747	761	969	953	960	---	---	---
6	437	---	e421	773	727	751	975	963	971	---	---	---
7	---	---	---	769	727	750	983	968	973	---	---	---
8	---	---	---	791	768	784	980	960	968	---	---	---
9	---	---	---	798	768	789	990	980	985	---	---	---
10	---	---	e542	801	790	796	997	985	991	---	---	---
11	562	548	557	802	795	798	988	978	984	---	---	---
12	564	526	556	841	793	819	990	962	977	---	---	---
13	526	516	520	841	808	821	975	968	972	---	---	---
14	552	520	540	835	808	818	985	972	979	898	---	---
15	564	547	554	857	816	831	984	974	980	934	896	917
16	643	504	534	873	856	865	985	976	981	940	917	929
17	672	581	618	868	857	862	1030	980	1010	1010	918	977
18	659	618	639	862	814	837	1050	1030	1050	1020	1000	1010
19	684	626	644	842	816	833	1090	1050	1070	1020	998	1000
20	729	684	712	839	827	832	1090	1020	1060	1020	972	1010
21	743	705	725	837	824	831	1020	770	933	972	833	901
22	784	743	771	834	826	831	770	697	710	833	785	802
23	794	780	788	840	828	834	706	682	696	790	780	786
24	811	786	802	854	825	846	682	676	679	793	782	789
25	821	802	809	825	765	783	681	675	679	783	774	778
26	834	816	822	770	749	759	---	---	e684	806	778	789
27	862	834	849	787	750	763	---	---	---	819	806	816
28	891	862	878	835	787	814	---	---	---	845	816	821
29	896	878	889	932	804	856	---	---	---	929	845	902
30	885	798	855	970	932	956	---	---	---	913	841	873
31	854	784	831	---	---	---	---	---	---	868	840	850
MONTH	---	---	---	970	727	816	---	---	---	---	---	---

06892350 KANSAS RIVER AT DESOTO, KS--Continued

SPECIFIC CONDUCTANCE FROM YSI, in US/CM @ 25C, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	873	856	863	981	950	967	818	799	807	660	557	593
2	886	856	870	981	882	944	827	778	808	599	566	582
3	866	849	855	889	867	877	778	759	767	620	589	607
4	871	853	865	887	---	e874	770	759	763	689	591	648
5	875	852	864	---	---	---	786	764	774	725	686	710
6	867	---	e856	868	845	854	784	769	775	733	593	670
7	---	818	---	879	826	866	796	768	783	689	423	603
8	851	822	832	828	775	787	803	761	783	452	405	433
9	892	851	876	836	780	813	777	734	756	432	405	419
10	923	892	914	924	836	868	848	724	789	515	427	480
11	917	896	906	967	924	947	759	716	740	527	484	505
12	907	881	899	996	936	982	785	737	761	668	381	526
13	881	858	863	982	944	966	806	740	786	476	287	348
14	868	860	864	955	915	939	752	717	734	424	392	411
15	863	851	857	951	918	933	757	683	729	465	424	442
16	858	845	852	924	877	909	760	697	741	514	463	487
17	932	849	894	891	852	872	774	742	761	543	493	522
18	968	932	953	896	857	877	776	750	766	612	418	496
19	973	933	953	892	874	884	771	744	759	476	464	469
20	934	793	839	903	863	883	755	712	733	527	452	479
21	838	806	823	897	863	882	712	306	451	584	519	538
22	822	805	814	894	878	885	583	326	476	606	582	595
23	833	807	814	895	881	887	622	579	603	631	599	617
24	896	833	877	898	841	867	641	577	603	---	---	---
25	930	895	910	848	809	830	755	639	703	---	---	---
26	954	927	941	810	801	805	805	755	773	---	---	---
27	965	---	e957	816	802	809	890	494	787	---	---	---
28	---	---	---	809	788	798	609	448	547	---	---	---
29	---	---	---	788	756	770	609	582	591	---	---	---
30	---	---	---	777	755	764	658	609	638	564	---	---
31	---	---	---	811	768	796	---	---	---	553	510	528
MONTH	---	---	---	---	---	---	890	306	716	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	574	548	562	504	473	494	790	734	760	804	779	794
2	570	539	555	511	494	507	746	702	725	784	771	776
3	558	540	549	517	504	509	738	698	706	810	762	787
4	559	537	551	521	502	512	852	738	814	832	769	804
5	591	376	501	507	480	499	940	826	901	770	718	750
6	622	479	575	736	504	659	910	850	883	721	705	715
7	610	540	578	648	591	619	858	843	851	741	707	728
8	541	524	529	632	605	622	905	858	885	757	729	743
9	535	527	530	625	584	614	893	827	870	788	755	775
10	537	526	531	586	567	578	829	785	807	797	764	784
11	542	530	538	574	564	569	790	766	779	769	708	743
12	542	476	516	620	572	602	790	773	782	711	688	702
13	533	515	528	651	620	640	786	747	769	699	667	689
14	543	528	535	674	651	665	772	747	759	700	660	683
15	562	542	553	668	646	662	776	731	759	688	667	679
16	708	542	618	672	646	659	749	714	724	683	662	673
17	630	535	583	680	655	666	780	749	766	722	683	708
18	592	538	570	674	660	668	766	714	741	---	682	---
19	732	592	684	663	654	658	737	606	665	772	678	---
20	659	528	589	674	649	660	713	618	682	759	700	743
21	528	507	513	678	662	665	718	679	701	782	749	772
22	523	515	520	---	678	e691	739	683	714	792	772	782
23	527	499	515	756	---	e724	775	738	757	791	774	783
24	525	501	511	787	756	775	810	774	799	837	780	804
25	528	501	516	787	778	784	820	778	801	883	837	866
26	517	496	507	794	784	791	802	767	787	906	868	890
27	506	443	483	819	794	804	891	779	829	878	840	862
28	462	393	433	858	819	840	914	865	896	850	841	845
29	454	408	442	874	848	862	869	786	836	846	824	837
30	473	446	463	880	832	859	818	786	802	828	804	819
31	---	---	---	835	780	804	823	802	812	---	---	---
MONTH	732	376	536	---	---	666	940	606	786	---	660	---

e Estimated

06892350 KANSAS RIVER AT DESOTO, KS--Continued

PH, WH, FIELD FROM YSI, in (STANDARD UNITS), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	8.2	8.1	8.2	8.8	8.5	8.6	8.3	8.2	8.2	---	---	---
2	8.2	8.1	8.2	8.7	8.5	8.6	8.3	8.2	8.2	---	---	---
3	8.2	8.2	8.2	8.7	8.4	8.5	8.3	8.2	8.2	---	---	---
4	8.3	8.2	8.2	8.8	8.4	8.5	8.3	8.2	8.2	---	---	---
5	8.3	8.3	8.3	8.8	8.4	8.6	8.4	8.2	8.2	---	---	---
6	8.3	8.1	8.2	8.8	8.5	8.6	8.4	8.3	8.4	---	---	---
7	---	8.1	e8.2	8.8	8.4	8.6	8.6	8.4	8.4	---	---	---
8	---	---	---	8.7	8.5	8.6	8.5	8.3	8.4	---	---	---
9	---	---	---	8.8	8.5	8.6	8.5	8.4	8.5	---	---	---
10	8.4	---	e8.4	8.8	8.6	8.7	8.5	8.4	8.5	---	---	---
11	8.6	8.3	8.4	8.8	8.7	8.8	8.5	8.4	8.4	---	---	---
12	8.6	8.4	8.5	8.8	8.6	8.7	8.4	8.3	8.3	---	---	---
13	8.7	8.4	8.5	8.7	8.5	8.6	8.4	8.3	8.3	---	---	---
14	8.9	8.4	8.6	8.8	8.5	8.6	8.5	8.3	8.4	8.2	---	e8.2
15	8.8	8.6	8.7	8.8	8.5	8.6	8.5	8.3	8.4	8.3	8.2	8.2
16	8.8	8.3	8.6	8.9	8.6	8.8	8.4	8.3	8.4	8.4	8.2	8.2
17	8.8	8.2	8.5	8.8	8.6	8.7	8.5	8.3	8.4	8.3	8.2	8.2
18	8.7	8.4	8.5	8.7	8.5	8.6	8.5	8.3	8.4	8.2	8.2	8.2
19	8.8	8.4	8.6	8.6	8.4	8.5	8.5	8.4	8.4	8.2	8.2	8.2
20	8.9	8.6	8.8	8.6	8.4	8.5	8.5	8.4	8.4	8.3	8.2	8.2
21	8.9	8.6	8.7	8.6	8.4	8.5	8.4	8.3	8.4	8.3	8.3	8.3
22	8.8	8.5	8.6	8.5	8.4	8.5	8.3	8.2	8.3	8.3	8.3	8.3
23	8.9	8.4	8.6	8.5	8.3	8.4	8.4	8.3	8.3	8.3	8.3	8.3
24	8.8	8.5	8.6	8.4	8.3	8.4	8.4	8.3	8.3	8.4	8.3	8.3
25	8.8	8.5	8.7	8.5	8.3	8.4	8.3	8.3	8.3	8.3	8.3	8.3
26	8.9	8.6	8.8	8.4	8.2	8.3	8.3	8.3	e8.3	8.3	8.3	8.3
27	8.9	8.7	8.8	8.4	8.3	8.3	---	---	---	8.3	8.2	8.2
28	8.9	8.7	8.8	8.4	8.3	8.3	---	---	---	8.3	8.2	8.2
29	8.8	8.6	8.7	8.3	8.2	8.3	---	---	---	8.4	8.3	8.3
30	8.7	8.5	8.7	8.3	8.2	8.2	---	---	---	8.3	8.3	8.3
31	8.8	8.6	8.7	---	---	---	---	---	---	8.3	8.3	8.3
MAX	---	---	---	8.9	8.7	8.8	---	---	---	---	---	---
MIN	---	---	---	8.3	8.2	8.2	---	---	---	---	---	---

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		FEBRUARY			MARCH			APRIL			MAY	
1	8.3	8.2	8.2	8.7	8.5	8.6	8.9	8.5	8.8	8.3	8.2	8.2
2	8.3	8.2	8.2	8.5	8.4	8.5	8.9	8.6	8.7	8.5	8.2	8.3
3	8.3	8.2	8.2	8.5	8.4	8.4	8.9	8.6	8.8	8.8	8.4	8.6
4	8.3	8.2	8.2	8.4	8.3	8.4	8.9	8.7	8.8	8.8	8.4	8.6
5	8.3	8.2	8.3	8.3	---	---	8.9	8.7	8.8	8.7	8.4	8.5
6	8.3	8.2	e8.3	8.4	8.2	8.3	8.9	8.6	8.7	8.4	8.0	8.3
7	8.3	8.2	e8.3	8.5	8.3	8.4	8.7	8.5	8.6	8.2	7.7	8.0
8	8.3	8.2	8.2	8.4	8.3	8.3	8.7	8.4	8.5	7.9	7.7	7.8
9	8.3	8.3	8.3	8.5	8.3	8.4	8.9	8.5	8.6	7.9	7.8	7.9
10	8.4	8.2	8.3	8.7	8.4	8.6	8.9	8.7	8.8	8.1	7.9	8.0
11	8.4	8.3	8.3	8.7	8.5	8.6	8.9	8.4	8.7	8.2	8.1	8.1
12	8.5	8.3	8.4	8.8	8.5	8.6	8.9	8.6	8.8	8.2	7.7	8.1
13	8.5	8.3	8.4	8.8	8.6	8.7	8.8	8.4	8.6	7.8	7.7	7.7
14	8.4	8.3	8.4	8.9	8.4	8.7	8.9	8.3	8.5	7.9	7.7	7.8
15	8.5	8.3	8.4	9.1	8.4	8.9	8.9	8.5	8.6	8.0	7.9	7.9
16	8.4	8.3	8.4	9.0	8.6	8.8	8.8	8.6	8.7	8.2	8.0	8.1
17	8.5	8.3	8.4	8.9	8.4	8.6	8.8	8.1	8.5	8.5	8.2	8.3
18	8.7	8.4	8.6	8.9	8.4	8.7	8.7	8.2	8.5	8.5	8.1	8.3
19	8.6	8.4	8.6	8.8	8.5	8.6	8.6	8.1	8.4	8.3	8.2	8.3
20	8.6	8.4	8.5	8.7	8.4	8.6	8.3	7.9	8.2	8.6	8.3	8.3
21	8.6	8.4	8.5	8.7	8.4	8.6	8.2	7.5	7.6	8.7	8.4	8.5
22	8.7	8.5	8.7	8.7	8.6	8.7	8.0	7.6	7.8	8.7	8.4	8.6
23	8.6	8.5	8.6	8.6	8.5	8.6	8.1	8.0	8.0	8.6	8.5	8.6
24	8.9	8.5	8.6	8.6	8.4	8.5	8.3	8.0	8.0	---	8.5	---
25	9.0	8.7	8.8	8.7	8.5	8.6	8.8	8.3	8.4	---	---	---
26	9.0	8.8	8.9	8.8	8.5	8.6	8.8	8.6	8.7	---	---	---
27	8.9	8.8	8.8	8.8	8.6	8.7	8.6	8.0	8.4	---	---	---
28	8.8	8.6	8.7	8.8	8.6	8.7	8.2	7.9	8.1	---	---	---
29	---	---	---	9.0	8.6	8.8	8.3	8.1	8.2	---	---	---
30	---	---	---	9.0	8.6	8.8	8.4	8.2	8.3	---	---	---
31	---	---	---	9.0	8.5	8.8	---	---	---	8.2	8.0	8.1
MAX	9.0	8.8	8.9	9.1	---	---	8.9	8.7	8.8	---	---	---
MIN	8.3	8.2	8.2	8.3	---	---	8.0	7.5	7.6	---	---	---

06892350 KANSAS RIVER AT DESOTO, KS--Continued

PH, WH, FIELD FROM YSI, in (STANDARD UNITS), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	8.4	8.2	8.3	8.8	8.3	8.6	8.6	8.0	8.3	8.6	7.9	8.3
2	8.3	8.2	8.3	8.7	8.3	8.5	8.6	7.9	8.2	9.0	7.9	8.6
3	8.5	8.3	8.4	8.7	8.2	8.4	8.7	8.1	8.4	8.9	8.4	8.7
4	8.4	8.4	8.4	8.7	8.2	8.5	9.1	8.1	8.6	8.9	8.5	8.7
5	8.4	7.8	8.0	8.8	8.1	8.5	9.1	8.4	8.8	9.0	8.2	8.7
6	8.4	7.9	8.2	8.7	8.3	8.5	9.0	8.4	8.7	9.0	8.1	8.6
7	8.4	8.2	8.3	8.8	8.3	8.6	9.2	8.5	8.9	8.9	7.9	8.5
8	8.2	8.2	8.2	8.7	8.1	8.4	9.2	8.7	8.9	8.7	7.9	8.3
9	8.3	8.2	8.2	8.6	7.9	8.2	9.2	8.3	8.9	8.9	7.8	8.5
10	8.3	8.2	8.2	8.7	7.9	8.3	9.1	8.4	8.8	8.9	7.9	8.6
11	8.3	8.2	8.3	8.6	8.0	8.2	9.2	8.4	8.8	9.0	7.9	8.7
12	8.3	8.2	8.2	8.9	8.0	8.4	9.1	8.6	8.9	9.0	8.1	8.7
13	8.5	8.3	8.4	8.7	8.1	8.4	9.0	8.4	8.7	8.9	8.1	8.6
14	8.7	8.3	8.4	8.7	8.1	8.4	9.1	8.4	8.7	8.6	7.9	8.2
15	8.8	8.4	8.6	8.6	8.1	8.4	9.2	8.8	9.0	8.9	7.9	8.3
16	8.8	8.3	8.6	8.7	7.9	8.3	9.1	8.4	8.8	9.0	8.4	8.8
17	8.9	8.5	8.7	8.7	8.2	8.5	8.9	8.2	8.6	8.8	8.2	8.6
18	8.9	8.6	8.8	8.7	8.1	8.4	9.1	8.1	8.5	---	8.1	e8.3
19	8.8	8.4	8.6	8.7	8.0	8.4	9.1	8.3	8.7	---	---	e8.3
20	8.4	8.2	8.3	8.7	7.9	8.3	9.2	8.7	8.9	8.9	7.7	8.4
21	8.4	8.2	8.3	8.8	8.2	8.6	8.9	8.6	8.7	9.1	8.1	8.7
22	8.6	8.2	8.3	9.0	8.2	8.5	8.8	8.3	8.5	9.0	8.1	8.6
23	8.7	8.3	8.5	9.0	8.5	8.7	8.8	8.0	8.4	9.1	8.0	8.9
24	8.8	8.4	8.7	8.9	8.3	8.7	8.8	8.3	8.4	9.1	8.6	8.9
25	8.9	8.6	8.7	8.9	8.2	8.6	8.9	8.1	8.5	9.0	8.6	8.8
26	8.9	8.5	8.7	8.8	8.2	8.5	8.8	8.3	8.7	9.0	8.6	8.8
27	8.9	8.5	8.8	8.7	8.1	8.5	8.8	8.3	8.6	8.9	8.4	8.7
28	8.9	8.5	8.7	8.7	8.0	8.4	8.9	8.2	8.5	8.8	8.5	8.6
29	8.8	8.4	8.6	8.7	8.1	8.4	8.5	8.0	8.3	8.8	8.3	8.6
30	8.8	8.4	8.6	8.9	8.2	8.6	8.5	7.8	8.1	8.9	8.3	8.6
31	---	---	---	8.8	8.2	8.6	8.5	7.8	8.2	---	---	---
MAX	8.9	8.6	8.8	9.0	8.5	8.7	9.2	8.8	9.0	---	---	8.9
MIN	8.2	7.8	8.0	8.6	7.9	8.2	8.5	7.8	8.1	---	---	8.2

e Estimated

WATER TEMPERATURE FROM YSI, in (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	20.1	19.4	19.7	16.9	14.0	15.2	5.5	2.9	4.1	---	---	---
2	20.3	19.5	19.9	16.4	14.3	15.4	6.7	3.4	5.1	---	---	---
3	20.8	19.6	20.1	16.2	14.2	15.2	9.3	6.2	7.3	---	---	---
4	20.6	18.3	19.9	17.3	15.5	16.3	12.6	9.3	10.8	---	---	---
5	18.3	16.4	17.2	17.5	15.3	16.4	14.8	11.9	13.3	---	---	---
6	17.1	14.9	15.9	17.6	15.1	16.5	12.3	10.3	11.2	---	---	---
7	---	---	---	17.6	15.6	16.6	10.9	9.6	10.3	---	---	---
8	---	---	---	16.6	13.0	14.7	9.7	6.8	8.3	---	---	---
9	---	---	---	13.5	11.3	12.4	7.6	6.0	6.6	---	---	---
10	18.8	---	---	13.1	10.7	11.9	6.7	5.0	5.9	---	---	---
11	19.0	16.6	17.8	12.6	10.5	11.7	6.3	4.6	5.6	---	---	---
12	17.8	16.0	16.9	11.8	10.6	11.3	6.7	6.2	6.4	---	---	---
13	17.8	15.9	16.8	13.0	11.7	12.3	7.2	6.0	6.5	---	---	---
14	16.8	15.0	16.0	14.6	12.5	13.4	6.6	5.9	6.3	2.2	---	---
15	15.8	13.3	14.3	15.7	13.5	14.5	6.6	5.4	6.0	3.1	1.2	2.1
16	13.7	11.6	12.8	16.1	14.0	15.1	7.1	6.6	6.9	3.1	2.2	2.6
17	13.7	10.4	12.1	16.0	14.5	15.3	7.6	5.6	6.6	3.6	1.8	2.5
18	14.0	11.2	12.7	15.7	14.3	15.2	7.0	5.4	6.3	2.4	0.8	1.6
19	14.8	12.0	13.5	14.3	11.5	12.6	6.4	4.6	5.5	3.0	1.2	1.8
20	16.0	12.3	14.2	11.5	9.6	10.5	5.7	3.8	4.7	2.7	0.5	1.7
21	17.2	14.7	15.8	9.7	8.2	9.2	5.2	3.2	4.4	3.3	0.4	2.0
22	17.6	16.3	17.0	10.2	8.1	9.2	6.3	4.6	5.3	4.9	1.2	3.2
23	19.4	16.6	17.9	11.1	9.7	10.2	4.9	2.9	3.9	4.9	3.8	4.4
24	18.7	15.5	17.0	11.2	9.9	10.7	2.9	0.9	1.9	5.0	2.8	4.0
25	15.5	12.7	13.8	11.0	9.2	10.1	1.3	0.0	0.6	4.9	1.9	3.6
26	12.8	11.0	11.9	11.3	9.3	10.3	---	0.0	---	5.4	2.2	4.0
27	12.1	9.6	10.9	9.3	6.3	7.4	---	---	---	6.7	3.7	5.3
28	12.7	9.9	11.3	6.3	4.0	4.8	---	---	---	6.3	4.6	5.5
29	13.8	10.9	12.4	4.2	3.6	3.9	---	---	---	5.2	2.1	4.0
30	14.9	12.8	13.7	4.7	3.6	4.1	---	---	---	2.1	0.4	0.9
31	14.8	13.2	13.9	---	---	---	---	---	---	1.5	0.7	1.1
MONTH	---	---	---	17.6	3.6	12.1	---	---	---	---	---	---

06892350 KANSAS RIVER AT DESOTO, KS--Continued

WATER TEMPERATURE FROM YSI, in (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	2.0	0.0	0.8	2.9	1.8	2.3	16.6	10.9	13.9	18.9	16.3	17.3
2	1.5	0.1	0.8	2.6	0.0	0.8	15.3	10.8	13.2	18.0	14.1	15.9
3	2.8	0.3	1.5	1.0	0.0	0.2	13.1	8.9	10.9	18.5	14.0	16.2
4	1.8	0.0	1.1	2.9	0.0	---	13.3	9.3	11.2	21.3	15.0	17.9
5	2.5	0.8	1.7	6.9	---	---	14.3	9.8	11.9	23.3	17.6	20.3
6	3.1	1.8	e2.3	6.0	2.2	4.3	13.3	10.7	12.2	22.2	19.7	21.1
7	4.3	---	---	7.2	4.1	5.5	12.7	11.4	12.0	22.2	19.7	21.1
8	6.0	2.7	4.2	9.8	7.1	8.0	12.1	11.5	11.7	20.6	19.2	19.8
9	5.6	4.1	5.0	9.4	4.4	6.3	15.6	10.1	12.7	20.0	17.9	18.9
10	5.2	3.8	4.6	8.2	4.7	6.2	17.4	11.8	14.6	19.7	16.8	18.2
11	5.6	2.9	4.3	8.1	5.3	6.7	17.0	14.5	15.9	18.7	16.5	17.7
12	5.2	3.3	4.5	9.6	5.8	7.6	17.0	15.1	16.2	18.6	16.0	17.4
13	6.1	2.9	4.7	11.8	7.5	9.5	17.6	14.8	16.2	17.0	14.4	15.7
14	5.8	3.5	5.0	14.4	10.0	11.8	20.9	15.2	17.8	19.7	15.8	17.5
15	6.8	4.2	5.6	11.3	8.7	10.1	23.6	18.0	20.7	21.6	17.6	19.4
16	7.8	4.5	6.1	9.6	7.9	8.7	22.2	20.1	20.9	22.7	19.0	20.5
17	7.5	5.0	6.4	11.4	7.4	9.3	24.7	20.1	22.0	21.3	18.2	19.9
18	8.1	5.9	6.9	10.0	8.8	9.4	24.2	21.6	22.7	20.1	18.2	19.1
19	9.2	7.8	8.6	10.5	9.4	9.9	23.4	19.6	21.1	19.9	18.5	19.0
20	9.7	7.3	8.6	12.9	8.1	10.2	19.6	16.1	18.2	21.2	17.6	19.2
21	9.6	6.4	8.1	10.6	5.4	7.7	16.1	13.5	14.4	21.5	17.2	19.3
22	9.3	5.9	7.8	9.7	4.7	6.9	17.5	13.0	15.0	21.3	17.3	19.3
23	10.1	6.5	8.4	9.9	5.8	7.7	20.4	14.7	17.4	19.5	18.1	18.9
24	11.9	7.7	9.5	8.8	6.7	7.7	19.2	17.2	18.2	---	---	---
25	9.2	5.4	6.9	6.7	4.3	5.4	19.8	15.4	17.6	---	---	---
26	5.4	1.2	2.4	9.1	3.9	6.2	18.3	15.3	16.3	---	---	---
27	3.0	0.0	1.3	9.8	5.0	7.5	16.0	13.7	14.7	---	---	---
28	5.2	0.1	---	13.1	8.4	10.7	17.2	12.8	14.8	---	---	---
29	---	---	---	14.7	10.8	12.7	19.7	14.1	16.8	---	---	---
30	---	---	---	15.3	12.0	13.5	20.0	16.3	18.3	26.8	---	---
31	---	---	---	14.8	11.8	13.3	---	---	---	27.7	24.2	25.9
MONTH	11.9	---	---	15.3	---	---	24.7	8.9	16.0	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	28.0	25.0	26.4	29.3	26.0	27.7	34.8	29.3	31.7	30.3	25.0	27.4
2	28.1	25.6	26.7	27.2	25.1	26.3	32.4	26.9	29.7	30.3	25.6	27.7
3	28.0	25.3	26.4	27.8	24.5	26.1	34.1	28.0	30.7	29.8	25.0	27.2
4	25.9	23.6	25.2	28.0	25.6	27.1	33.3	28.8	31.0	30.7	24.8	27.4
5	23.6	22.3	22.9	30.5	25.4	27.8	33.5	28.7	30.9	31.0	26.3	28.5
6	25.4	21.4	23.3	32.3	26.8	29.5	31.2	28.7	30.1	31.3	26.4	28.7
7	26.3	22.5	24.3	32.6	28.3	30.5	31.5	26.7	28.8	31.1	25.9	28.4
8	26.5	23.4	24.9	34.3	28.8	31.4	30.7	25.1	27.5	30.7	26.4	28.4
9	25.8	24.0	24.8	34.4	29.4	32.0	29.8	25.0	27.2	30.6	25.6	27.9
10	25.9	23.7	24.7	32.8	29.2	30.9	28.2	24.9	26.4	29.7	25.3	27.2
11	26.0	24.2	25.1	31.5	27.5	29.4	31.0	25.2	27.6	28.4	23.4	25.6
12	27.3	24.0	25.5	29.9	26.4	28.2	28.3	25.4	26.8	27.0	22.4	24.4
13	26.3	24.7	25.7	28.8	25.4	27.2	26.4	23.5	24.8	26.7	22.1	24.2
14	25.8	22.7	24.2	30.2	24.9	27.5	28.9	22.4	25.1	24.0	22.9	23.6
15	26.3	22.4	24.3	30.7	25.1	28.0	28.0	23.8	25.6	26.1	21.2	23.4
16	26.9	22.2	24.5	31.6	26.2	28.9	29.8	26.1	27.4	26.4	21.1	23.5
17	27.2	22.5	24.9	31.9	27.4	29.6	27.2	24.4	25.5	26.3	22.7	24.1
18	26.5	23.3	24.8	32.6	27.8	30.2	29.0	24.0	26.1	26.4	22.4	---
19	27.7	23.2	25.4	32.6	28.4	30.3	28.1	25.4	26.7	23.2	---	---
20	28.8	24.6	26.7	33.7	28.1	30.6	29.7	24.6	26.8	25.7	20.7	22.8
21	29.5	25.4	27.4	32.9	28.6	30.7	28.8	26.2	27.4	25.7	20.7	22.8
22	30.0	25.8	27.9	31.7	28.6	30.1	29.7	26.3	27.6	23.6	19.7	21.4
23	29.4	25.9	27.6	31.6	27.6	29.3	31.8	26.3	28.7	23.3	18.4	20.6
24	29.5	25.4	27.5	32.0	26.3	29.0	28.8	26.4	27.3	22.4	17.5	19.7
25	30.4	26.0	28.1	32.4	26.4	29.1	31.8	25.3	28.0	23.3	17.8	20.3
26	31.0	26.4	28.6	33.8	27.9	30.5	32.0	25.7	28.5	24.5	18.4	21.2
27	30.5	26.1	28.4	33.0	27.5	30.0	31.3	25.8	28.3	23.8	19.1	21.1
28	31.2	26.0	28.6	31.4	28.0	29.5	31.0	26.2	28.2	24.5	18.6	21.3
29	31.7	26.9	29.3	33.1	26.6	29.4	30.5	25.4	27.5	25.9	20.6	22.9
30	30.8	26.9	28.9	33.1	28.1	30.5	29.8	24.4	26.8	26.0	21.2	23.3
31	---	---	---	33.3	28.8	30.9	30.0	24.5	27.0	---	---	---
MONTH	31.7	21.4	26.1	34.4	24.5	29.3	34.8	22.4	27.8	31.3	---	---

e Estimated

06892350 KANSAS RIVER AT DESOTO, KS--Continued

OXYGEN DISSOLVED FROM YSI, in (MG/L), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	9.3	9.1	9.2	14.6	9.5	11.7	15.1	14.5	14.8	---	---	---
2	9.2	9.0	9.1	14.3	9.5	11.6	15.2	13.7	14.5	---	---	---
3	9.0	---	e8.9	13.9	9.8	11.5	14.4	12.6	13.6	---	---	---
4	---	---	---	14.4	9.7	11.7	13.4	11.5	12.5	---	---	---
5	---	---	---	14.6	9.7	11.8	12.6	10.8	11.5	---	---	---
6	---	---	---	14.4	9.6	11.8	13.9	11.3	12.4	---	---	---
7	---	---	---	13.7	9.4	11.3	14.7	11.6	12.9	---	---	---
8	---	---	---	13.3	9.4	11.1	14.9	12.4	13.5	---	---	---
9	---	---	---	14.0	10.3	11.9	15.6	13.5	14.5	---	---	---
10	---	---	e9.0	14.9	11.0	12.7	15.9	14.0	14.9	---	---	---
11	10.3	8.7	9.3	15.7	11.3	13.2	15.8	14.2	14.8	---	---	---
12	10.7	9.0	9.7	15.0	11.2	12.9	14.6	13.5	14.0	---	---	---
13	11.7	9.1	10.2	14.8	10.9	12.6	15.4	13.3	14.1	---	---	---
14	13.0	9.5	11.0	15.3	10.6	12.6	15.3	13.4	14.2	---	---	---
15	11.9	9.9	10.7	15.4	10.3	12.6	15.5	13.5	14.2	13.2	12.7	12.9
16	13.0	10.2	11.5	16.2	10.4	13.0	14.2	12.2	13.3	12.9	12.7	12.8
17	12.4	10.5	11.4	14.7	10.2	12.2	14.8	11.5	13.2	13.1	12.8	12.9
18	13.0	10.2	11.3	12.2	9.8	10.9	14.6	13.0	13.6	13.4	12.9	13.2
19	13.5	10.1	11.6	12.4	10.1	11.2	14.6	12.8	13.7	13.3	13.1	13.2
20	14.7	10.3	12.2	12.9	10.4	11.5	14.7	13.4	14.0	13.7	13.2	13.4
21	14.2	9.9	11.7	13.2	11.0	12.0	14.2	13.3	13.7	14.0	13.3	13.6
22	12.6	9.1	10.6	13.3	11.2	12.2	13.3	12.5	12.8	13.8	12.8	13.4
23	14.1	8.7	10.9	12.4	11.0	11.6	13.4	12.5	13.0	13.0	12.6	12.9
24	12.4	8.9	10.4	11.9	10.4	11.1	---	---	---	13.4	12.6	13.0
25	12.9	9.5	11.1	12.9	11.0	11.7	---	---	---	13.8	12.9	13.3
26	13.9	10.4	12.0	12.6	11.1	11.7	---	---	---	13.8	12.8	13.3
27	15.0	11.2	12.8	13.8	11.6	12.7	---	---	---	13.0	12.2	12.7
28	15.8	11.4	13.3	14.7	12.9	13.8	---	---	---	13.2	12.1	12.6
29	16.4	10.9	13.2	15.0	14.0	14.4	---	---	---	13.8	12.2	13.0
30	15.8	10.6	12.9	14.9	14.1	14.5	---	---	---	14.1	13.1	13.6
31	15.0	10.4	12.2	---	---	---	---	---	---	14.2	12.6	13.7
MONTH	---	---	---	16.2	9.4	12.2	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	13.6	12.1	12.7	13.3	11.1	12.2	14.1	10.5	12.2	9.0	8.2	8.5
2	12.9	11.0	12.1	12.6	10.7	11.7	14.3	9.8	12.0	10.8	8.4	9.4
3	13.1	11.1	12.0	12.7	11.2	11.8	15.3	11.0	13.1	12.9	9.4	10.8
4	12.4	10.1	11.3	12.5	10.7	11.6	15.6	11.7	13.6	13.8	8.8	11.0
5	12.3	11.5	12.0	---	---	---	14.7	11.4	13.0	12.2	8.0	9.9
6	---	11.3	e12.1	13.4	12.1	12.7	13.6	10.1	11.7	9.8	7.0	8.0
7	---	---	e12.1	13.5	11.7	12.4	11.7	9.3	10.3	7.9	7.2	7.6
8	12.4	11.7	12.1	12.4	10.6	11.5	11.6	9.1	10.3	8.2	7.7	8.0
9	12.2	11.4	11.7	13.1	10.5	12.0	12.5	9.0	10.5	8.8	8.1	8.5
10	12.6	11.2	11.9	15.3	11.7	13.3	11.7	8.4	9.9	9.2	8.8	9.0
11	12.9	11.8	12.3	15.4	11.9	13.5	12.1	7.9	9.8	9.6	9.0	9.3
12	13.3	11.9	12.5	16.0	11.8	13.7	13.3	7.0	9.8	9.5	8.3	9.1
13	13.2	11.9	12.5	16.2	11.6	13.7	12.3	8.4	10	9.9	8.2	9.1
14	12.5	11.5	12.0	16.1	10.9	13.2	12.1	7.8	9.6	---	---	---
15	12.8	11.2	11.9	18.0	10.3	13.8	12.3	7.2	9.5	---	---	---
16	12.5	11.2	11.8	18.1	11.3	14.5	9.7	6.4	8.0	---	---	---
17	13.0	10.9	11.9	19.0	11.3	15.0	10.4	6.2	8.0	---	---	---
18	14.3	11.3	12.5	16.8	11.6	14.0	9.5	5.9	7.5	---	---	---
19	13.3	10.8	11.6	16.6	10.9	13.0	9.0	5.8	7.3	---	---	---
20	12.3	10.2	11.1	17.4	10.5	13.4	9.3	6.4	7.6	---	---	---
21	12.2	10.4	11.2	15.8	9.8	12.9	8.0	5.8	6.8	---	---	---
22	13.0	10.4	11.4	16.7	9.8	13.0	9.0	7.8	8.4	10.4	8.4	9.2
23	12.3	9.9	10.9	17.0	10.0	13.1	8.9	8.2	8.7	9.6	8.2	8.8
24	12.4	9.1	10.4	15.4	10.8	12.8	9.6	7.9	8.6	---	---	---
25	11.8	8.5	9.9	13.4	8.3	10.5	13.5	8.8	10.8	---	---	---
26	12.2	9.1	10.7	18.0	9.2	13.0	12.1	8.8	10.3	---	---	---
27	13.2	10.9	12.0	17.7	9.3	12.8	10.9	8.6	9.4	---	---	---
28	15.3	11.0	12.9	14.5	11.1	13.0	9.7	8.4	9.1	---	---	---
29	---	---	---	15.4	10.1	12.4	10.0	8.9	9.5	---	---	---
30	---	---	---	16.5	10.1	13.2	10.3	8.9	9.5	---	---	e7.2
31	---	---	---	16.7	10.6	13.6	---	---	---	7.9	7.0	7.4
MONTH	---	---	11.8	---	---	---	15.6	5.8	9.8	---	---	---

06892350 KANSAS RIVER AT DESOTO, KS--Continued

OXYGEN DISSOLVED FROM YSI, in (MG/L), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	8.5	7.0	7.7	11.0	7.0	8.9	8.1	4.3	6.0	11.1	5.7	8.0
2	8.0	6.9	7.5	9.9	6.9	8.4	9.6	4.1	6.9	10.2	5.5	7.6
3	8.6	6.9	7.8	10.2	7.0	8.4	11.7	5.8	8.5	12.1	5.2	8.4
4	8.0	6.8	7.3	10.2	6.9	8.4	15.5	5.7	10.2	12.2	6.1	8.9
5	7.3	6.7	7.0	11.9	6.9	9.2	16.7	5.9	11.0	12.0	5.4	8.3
6	9.1	7.0	7.9	9.9	6.6	8.4	14.6	6.2	9.9	---	---	---
7	8.7	7.5	8.1	12.2	5.8	8.6	15.4	6.7	10.6	---	---	---
8	8.0	7.1	7.6	---	---	---	14.7	6.7	10.4	---	---	---
9	7.8	7.3	7.6	---	---	---	14.4	6.3	10.2	---	---	---
10	7.9	7.2	7.6	---	---	---	12.7	6.4	9.2	14.1	6.5	9.7
11	7.8	7.2	7.5	---	---	---	14.0	5.2	9.0	15.8	7.6	11.4
12	7.8	7.0	7.4	---	---	---	13.2	4.8	8.9	17.1	8.5	11.9
13	8.5	7.1	7.7	10.0	6.1	7.9	10.2	5.6	7.6	16.3	8.6	11.7
14	10.5	7.3	8.7	10.2	6.4	8.1	14.4	6.6	10.1	12.7	8.0	10
15	11.2	7.5	9.3	10.3	6.3	8.1	16.0	7.2	10.9	17.8	8.9	12.7
16	10.3	7.3	e8.6	10.3	6.1	7.9	14.0	6.6	9.6	18.1	8.8	12.8
17	---	---	---	10.7	6.2	8.3	12.3	6.3	8.4	14.6	7.4	10.6
18	---	---	---	10.3	5.9	7.9	13.4	6.5	9.3	13.9	7.1	e9.8
19	10.5	7.4	8.8	10.4	5.8	7.5	13.8	6.1	9.3	---	---	---
20	8.5	7.2	7.7	11.7	5.5	8.4	12.5	6.4	9.1	---	---	---
21	8.4	7.2	7.7	10.6	5.8	8.0	10.7	5.4	7.7	15.7	5.5	10.2
22	9.3	7.1	8.0	11.9	5.2	7.8	9.4	5.5	7.1	---	---	---
23	10.5	7.0	8.5	12.3	6.3	9.4	11.4	6.2	8.3	---	---	---
24	11.0	7.0	8.8	12.2	5.8	8.7	11.2	5.7	7.6	14.5	8.0	10.7
25	11.4	7.1	8.9	12.6	5.3	8.3	12.6	6.1	8.8	14.7	7.9	10.8
26	---	---	---	11.1	4.9	7.8	12.9	5.9	9.0	15.3	7.6	10.8
27	---	---	---	12.0	5.6	8.3	12.2	6.1	8.8	14.1	7.3	10.1
28	---	---	---	10.3	5.1	7.4	12.6	5.8	8.7	13.3	7.5	9.8
29	11.7	7.1	9.4	11.5	5.5	8.0	11.4	5.6	8.2	13.4	6.9	9.5
30	11.2	6.9	9.1	12.6	5.4	8.6	11.2	6.0	8.2	13.3	6.8	9.4
31	---	---	---	11.3	5.0	7.8	11.1	6.0	8.1	---	---	---
MONTH	---	---	---	---	---	---	16.7	4.1	8.9	---	---	---

e Estimated

TURBIDITY, FIELD 6026 FROM YSI, in (NTU), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	300	190	250	39	27	32	20	14	16	---	---	---
2	250	200	220	37	26	31	19	13	16	---	---	---
3	280	200	240	35	24	28	19	13	15	---	---	---
4	240	150	190	32	24	27	24	14	17	---	---	---
5	180	150	160	34	24	28	32	17	21	---	---	---
6	200	160	180	37	26	31	34	21	26	---	---	---
7	200	---	---	36	26	30	42	22	30	---	---	---
8	---	---	---	35	27	30	26	14	19	---	---	---
9	---	---	---	37	24	28	22	13	17	---	---	---
10	---	110	---	28	20	23	20	11	15	---	---	---
11	120	100	110	30	19	22	15	10	12	---	---	---
12	110	93	98	24	20	22	19	11	14	---	---	---
13	94	81	88	26	19	22	24	15	18	---	---	---
14	86	78	80	28	20	23	22	15	18	---	---	e45
15	98	74	84	26	18	22	21	14	17	53	39	48
16	180	96	130	25	17	21	30	14	17	70	28	50
17	170	110	130	26	17	20	32	13	21	60	29	46
18	120	81	91	25	17	20	27	15	19	65	27	42
19	88	68	77	33	18	23	24	14	17	32	20	25
20	70	52	58	37	20	27	19	12	15	58	22	34
21	61	45	51	32	19	23	110	17	62	81	53	64
22	57	38	46	33	18	22	130	87	100	83	61	70
23	46	38	42	25	17	21	130	72	96	86	61	71
24	45	34	39	38	22	30	100	78	88	73	46	58
25	45	35	40	47	34	39	99	68	84	81	46	57
26	43	26	33	42	32	35	---	---	e89	72	40	52
27	32	24	27	39	25	32	---	---	---	59	36	45
28	27	22	24	28	17	22	---	---	---	67	25	47
29	31	23	26	29	16	19	---	---	---	61	28	44
30	37	26	29	19	15	17	---	---	---	55	28	40
31	42	29	34	---	---	---	---	---	---	34	18	23
MONTH	---	---	---	47	15	26	---	---	---	---	---	---

06892350 KANSAS RIVER AT DESOTO, KS--Continued

TURBIDITY, FIELD 6026 FROM YSI, in (NTU), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	37	17	27	42	24	30	60	34	44	250	118	186
2	44	23	32	78	33	46	52	37	43	193	165	179
3	54	26	35	78	32	54	57	35	43	199	162	176
4	51	27	34	52	28	39	45	26	37	171	43	107
5	41	23	31	61	---	e45	43	26	34	102	66	80
6	---	---	e16	61	32	40	44	28	37	>1200	73	>540
7	---	---	e27	57	37	46	48	31	40	1111	192	518
8	51	25	33	62	47	55	44	32	37	1082	661	850
9	58	27	42	95	58	69	58	34	46	855	476	653
10	41	29	37	94	45	63	76	51	61	490	228	332
11	56	30	40	53	40	45	80	51	64	303	194	234
12	56	33	44	55	36	46	62	44	52	>1200	197	>520
13	54	34	42	46	33	40	80	53	64	>1200	>1200	>1200
14	45	30	37	64	42	51	87	54	70	>1200	941	>1100
15	51	30	38	61	44	52	64	46	54	1094	451	672
16	49	25	37	54	38	47	52	29	38	458	280	362
17	42	26	34	49	37	42	36	21	28	319	220	263
18	59	34	41	52	36	42	31	17	24	892	246	435
19	69	47	58	54	43	48	41	19	30	264	178	218
20	91	54	71	58	48	53	342	27	58	190	128	152
21	86	57	71	61	47	54	>1200	342	>1100	136	114	124
22	78	56	65	61	41	52	>1200	269	>700	151	122	139
23	73	46	59	57	33	41	302	202	241	150	106	125
24	69	47	58	66	47	56	238	143	185	---	---	---
25	83	45	59	65	42	52	184	101	137	---	---	---
26	77	42	53	46	30	37	137	89	114	---	---	---
27	50	30	39	38	27	32	>1200	84	>290	---	---	---
28	38	26	31	43	28	36	>1200	271	>600	---	---	---
29	---	---	---	45	31	38	271	144	191	---	---	---
30	---	---	---	42	30	36	165	110	132	---	---	---
31	---	---	---	61	31	41	---	---	---	383	264	312
MONTH	---	---	43	95	---	46	1200	17	153	---	---	---

> Actual value is known to be greater than the value shown

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	283	237	255	70	55	62	55	28	39	67	51	59
2	282	233	252	70	48	59	40	28	33	71	56	63
3	262	205	228	66	54	60	41	30	35	68	36	53
4	220	158	190	75	44	58	45	31	38	60	34	45
5	>1200	167	>650	72	49	58	56	37	44	56	30	42
6	841	192	330	71	48	58	55	41	48	50	31	41
7	209	175	191	79	55	65	67	45	54	46	37	43
8	220	173	202	70	43	57	67	55	61	51	36	46
9	216	183	201	64	43	52	70	57	64	57	29	43
10	221	180	199	70	46	55	77	58	68	58	32	42
11	205	176	189	58	40	50	88	60	73	62	34	48
12	524	188	266	53	38	46	96	67	79	56	39	50
13	221	137	181	50	33	42	98	67	78	59	46	52
14	178	118	144	47	33	41	94	63	74	74	50	61
15	167	95	119	50	33	41	75	56	67	73	53	61
16	136	99	122	49	29	39	65	52	58	65	52	59
17	138	97	117	50	28	37	63	49	56	64	45	53
18	128	89	111	47	32	38	82	57	64	---	46	e56
19	147	110	122	47	30	37	99	63	83	---	---	---
20	226	147	190	45	30	37	76	51	61	---	---	---
21	204	162	177	55	33	42	87	66	77	---	---	---
22	184	150	167	45	29	e36	99	69	85	---	---	---
23	181	143	162	64	---	e49	91	68	80	---	47	e55
24	159	132	148	54	32	40	79	64	71	58	48	53
25	145	116	131	50	32	41	77	64	70	64	49	54
26	133	104	118	42	32	36	70	57	65	66	50	57
27	117	91	103	44	32	36	76	58	66	67	49	55
28	107	83	93	45	31	38	84	64	73	64	43	52
29	89	61	72	43	31	36	76	57	66	60	44	50
30	71	49	62	57	35	47	67	52	60	56	43	49
31	---	---	---	62	45	54	67	53	60	---	---	---
MONTH	1200	49	183	79	---	47	99	28	63	---	---	---

> Actual value is known to be greater than the value shown

e Estimated

06892440 CEDAR CREEK AT HIGHWAY 56 AT OLATHE, KS

LOCATION.--Lat 38°51'33", long 94°51'14", in SE $^{1}/_{4}$ NE $^{1}/_{4}$ SE $^{1}/_{4}$ sec.4, T.14 S., R.23 E., Johnson County, Hydrologic Unit 10300101, on right upstream side of old Highway 56 bridge, 2 mi west of Olathe.

WATER-DISCHARGE RECORDS

DRAINAGE AREA.--13.3 mi^2.

PERIOD OF RECORD.--October 2000 to current year.

GAGE.--Water-stage recorder. Datum of gage is 955.00 ft above NGVD of 1929.

REMARKS.--Records good except those for Oct. 1 to Dec. 18, which are fair. Satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	&9.7	&3.8	&0.25	0.05	17	3.3	0.83	1.2	1.5	0.00	0.00	0.00
2	&8.7	&1.6	&0.24	0.05	18	3.5	0.34	0.67	1.3	0.00	0.00	0.00
3	&9.9	&1.5	&0.28	0.05	27	2.2	0.23	0.61	1.1	0.00	0.00	0.00
4	&6.3	&1.8	&0.45	0.06	14	1.7	0.16	0.23	7.0	0.08	0.00	0.00
5	&41	&1.4	&1.5	0.10	4.1	4.1	0.14	0.32	5.9	0.09	0.00	0.00
6	&6.1	&1.3	&0.55	0.11	2.9	7.5	0.57	3.9	1.8	0.00	0.00	0.00
7	&3.1	&1.6	&0.19	0.11	3.3	10	0.44	32	1.2	0.51	0.00	0.00
8	&6.8	&1.8	&0.32	0.11	4.1	8.5	9.5	74	1.1	0.26	0.00	0.00
9	&8.5	&2.8	&0.22	0.16	4.0	16	12	68	3.0	0.02	0.00	0.00
10	&12	&3.6	&0.17	0.19	1.9	5.8	4.1	7.4	3.2	0.00	0.00	0.00
11	&6.3	&3.0	&0.14	0.17	1.6	4.5	1.9	25	1.2	0.00	0.00	0.00
12	&3.9	&3.3	&1.6	0.17	2.2	2.9	0.86	321	14	0.04	0.00	0.00
13	&3.3	&6.4	&4.8	0.15	2.4	3.8	0.89	27	2.3	0.11	1.0	0.11
14	&2.5	&0.93	&1.9	0.13	2.4	4.1	0.71	13	1.0	0.00	0.09	1.8
15	&44	&0.87	&3.0	0.13	2.2	1.1	1.6	7.7	0.71	0.00	0.0	0.23
16	&12	&0.66	&1.0	0.10	1.7	1.1	1.5	14	0.61	0.00	0.00	0.03
17	&3.3	&0.40	&0.28	0.10	2.2	0.87	0.89	8.4	0.51	0.00	0.04	0.00
18	&2.5	&0.40	&0.20	0.08	3.5	0.88	0.68	4.1	0.71	0.00	0.13	0.96
19	&2.3	&0.75	0.20	0.15	18	0.87	2.7	2.4	0.55	0.00	0.06	4.3
20	&1.6	&0.57	0.18	0.21	23	0.69	15	1.8	0.25	0.00	0.02	1.4
21	&1.8	&0.44	0.55	0.22	6.0	0.46	184	2.3	0.10	0.00	0.00	0.36
22	&3.5	&0.42	1.4	0.43	3.5	0.45	13	2.0	0.06	0.00	0.00	0.17
23	&6.0	&2.5	0.40	0.53	2.9	0.42	4.1	1.1	0.04	0.00	0.00	0.08
24	&7.2	&6.5	0.16	0.20	3.3	1.3	1.7	16	0.0	0.00	0.00	0.0
25	&5.0	&3.7	0.10	0.51	1.1	0.96	0.56	231	0.00	0.00	0.00	0.10
26	&2.2	&2.7	0.08	0.46	0.97	0.27	1.6	16	2.0	0.00	0.00	0.08
27	&2.5	&0.21	0.09	0.42	0.62	2.0	126	23	1.1	0.00	0.00	0.03
28	&3.1	&0.28	0.10	0.43	0.75	3.0	19	9.0	0.15	0.00	0.00	0.00
29	&3.5	&0.23	0.08	1.6	---	1.6	5.4	5.8	0.09	0.19	0.00	0.00
30	&1.6	&0.23	0.06	12	---	0.84	2.7	3.4	0.02	0.02	0.00	0.00
31	&5.0	---	0.06	41	---	0.51	---	2.0	---	0.00	0.00	---
MEAN	7.587	1.856	0.663	1.941	6.237	3.072	13.77	29.82	1.750	0.043	0.043	0.322
MAX	44	6.5	4.8	41	27	16	184	321	14	0.51	1.0	4.3
MIN	1.6	0.21	0.06	0.05	0.62	0.27	0.14	0.23	0.00	0.00	0.00	0.00
MED	5.0	1.4	0.24	0.16	3.1	1.7	1.6	7.4	1.1	0.00	0.00	0.00
AC-FT	467	110	41	119	346	189	819	1830	104	2.6	2.7	19

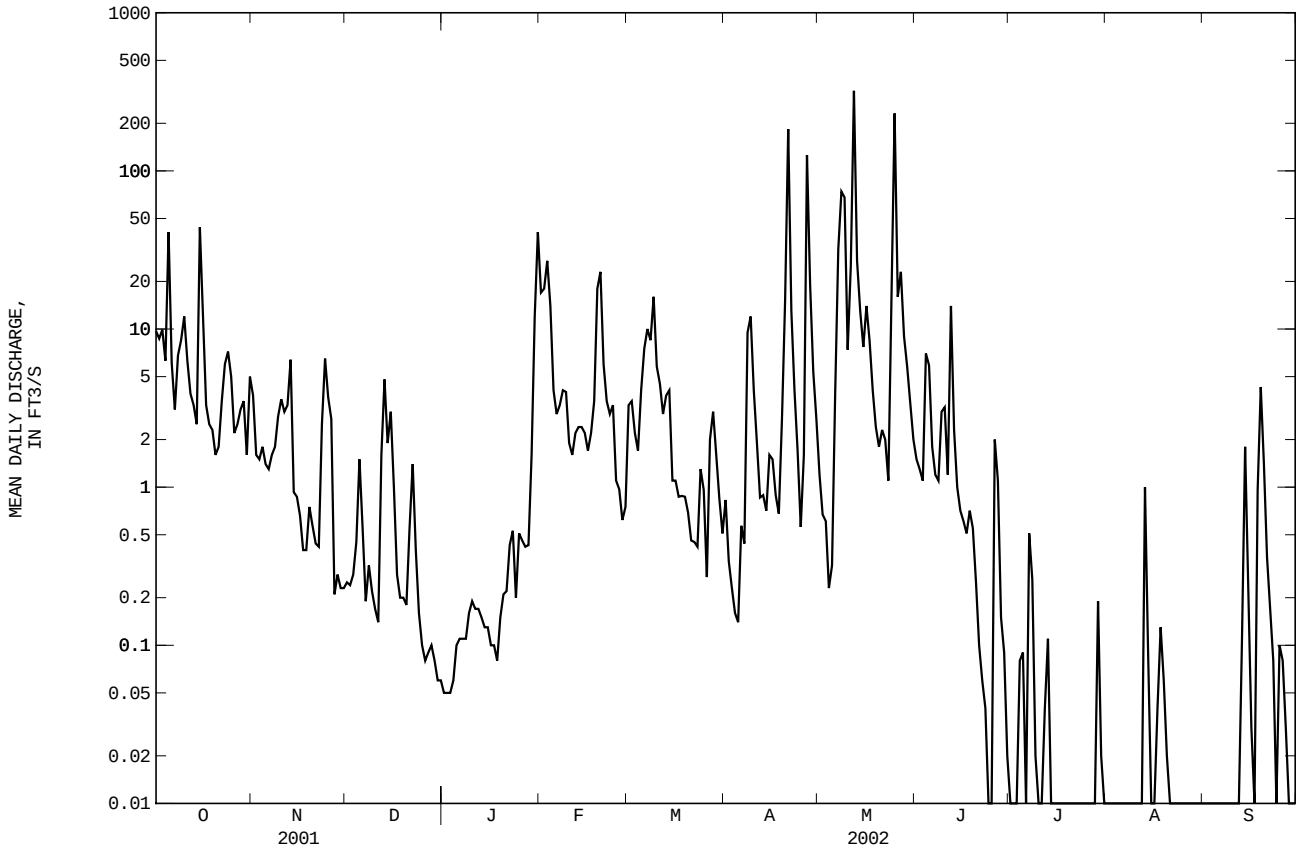
06892440 CEDAR CREEK AT HIGHWAY 56 AT OLATHE, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2001 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	5.970	3.860	0.704	3.345	16.02	8.597	10.93	21.85	29.52	3.779	7.333	16.92
MAX	7.59	5.86	0.75	4.75	25.8	14.1	13.8	29.8	57.3	7.52	14.6	33.5
(WY)	2002	2001	2001	2001	2001	2001	2002	2002	2001	2001	2001	2001
MIN	4.35	1.86	0.66	1.94	6.24	3.07	8.09	13.9	1.75	0.043	0.043	0.32
(WY)	2001	2002	2002	2002	2002	2002	2001	2001	2002	2002	2002	2002

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 2001 - 2002	
ANNUAL TOTAL	5702.75		2043.72			
ANNUAL MEAN	15.62		5.599		10.64	
HIGHEST ANNUAL MEAN					15.7	2001
LOWEST ANNUAL MEAN					5.60	2002
HIGHEST DAILY MEAN	484	Jun 4	321	May 12	484	Jun 4 2001
LOWEST DAILY MEAN	0.06	Dec 30	0.00	Jun 24	0.00	Oct 1 2000
ANNUAL SEVEN-DAY MINIMUM	0.08	Dec 25	0.00	Jul 14	0.00	Jul 14 2002
MAXIMUM PEAK FLOW			945	May 12	1870	Jun 4 2001
MAXIMUM PEAK STAGE			63.83	May 12	66.03	Jun 4 2001
INSTANTANEOUS LOW FLOW			0.00	Jun 24	0.00	Oct 1 2000
ANNUAL RUNOFF (AC-FT)	11310		4050		7710	
10 PERCENT EXCEEDS	30		9.2		21	
50 PERCENT EXCEEDS	4.7		0.71		2.0	
90 PERCENT EXCEEDS	0.50		0.00		0.02	

& Value was computed from affected unit values



06892440 CEDAR CREEK AT HIGHWAY 56 AT OLATHE, KS--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 2000 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 2000 to current year.
pH: October 2000 to current year.
WATER TEMPERATURE: October 2000 to current year.
DISSOLVED OXYGEN: October 2000 to current year.
TURBIDITY: October 2000 to current year.

INSTRUMENTATION.--Multiparameter water-quality monitor.

REMARKS.--Records fair. Interruptions in record are due to ice conditions, malfunction of the recording instrument or sensors, or during days of no streamflow. Instruments used to measure turbidity conform to ISO 7027 standards.

EXTREMES FOR PERIOD OF RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 1,910 microsiemens/cm, Nov. 20, 2001; minimum, 99 microsiemens/cm, June 1, 2001.
pH: Maximum, 8.7 standard units, Aug. 3, 2000; minimum, 7.2 standard units, May 2, 2001.
WATER TEMPERATURE: Maximum, 33.3°C, July 22, 2001; minimum, 0.5°C, Feb. 28, 2001.
DISSOLVED OXYGEN: Maximum 25.3 mg/L, Mar. 23, 2002; minimum, 2.5 mg/L, May 11, 2002.
TURBIDITY: Maximum, >1,300 NTU, June 1, 2001; minimum, <2.0 NTU, Oct. 22, 2000.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 1,910 microsiemens/cm, Nov. 20; minimum, 279 microsiemens/cm, May 24.
pH: Maximum, 8.6 units, many days in March and April; minimum, 7.2 units, Nov. 4.
WATER TEMPERATURE: Maximum, 31.8°C, June 21; minimum, 0.6°C, Mar. 3.
DISSOLVED OXYGEN: Maximum, 25.3 mg/L, Mar. 4; minimum, 2.9 mg/L, on many days.
TURBIDITY: Maximum, 1,300 NTU, many days; minimum, 2.0 NTU, on many days.

SPECIFIC CONDUCTANCE FROM DCP, in US/CM @ 25C, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	859	812	831	1110	1080	1090	575	551	560	---	---	---
2	821	808	812	1110	1080	1090	632	556	590	---	---	---
3	817	807	811	1080	1080	1080	681	627	649	---	---	---
4	824	810	818	---	---	---	685	677	682	---	---	---
5	889	477	591	---	---	---	692	669	680	---	---	---
6	502	484	492	---	---	---	766	674	700	---	---	---
7	562	502	519	---	---	---	779	707	751	---	---	---
8	674	534	603	---	---	---	775	759	771	---	---	---
9	639	558	598	---	---	---	775	745	768	---	---	---
10	617	568	593	---	---	---	774	757	769	---	---	---
11	611	596	604	---	---	---	776	760	772	---	---	---
12	624	611	618	---	---	---	985	760	776	---	---	---
13	653	624	636	---	---	---	1300	617	778	---	---	---
14	685	648	666	---	---	---	617	581	591	---	---	---
15	1090	543	698	---	---	---	604	581	591	---	---	---
16	543	493	502	1600	---	---	844	596	612	---	---	---
17	526	501	512	1730	1600	1650	1430	844	1220	---	---	---
18	547	523	532	1860	1730	1790	1150	958	1060	---	---	---
19	577	547	552	1900	1860	1890	1120	1020	1050	---	---	---
20	802	550	635	1910	1850	1880	1020	959	989	---	---	---
21	809	741	792	1850	1770	1800	964	851	925	---	---	---
22	803	792	797	1780	1750	1770	878	771	833	---	---	---
23	798	759	790	1810	1770	1790	879	819	836	---	---	---
24	876	744	781	1770	803	1190	842	820	834	---	---	---
25	1100	836	970	803	619	694	851	815	834	---	---	---
26	1270	1060	1140	619	568	588	---	---	---	---	---	---
27	1350	1240	1290	568	538	546	---	---	---	---	---	---
28	1410	1260	1390	543	540	541	---	---	---	---	---	---
29	1400	1340	1370	547	543	544	---	---	---	---	---	---
30	1350	1250	1290	552	543	547	---	---	---	---	---	---
31	1300	1090	1230	---	---	---	---	---	---	---	---	---
MONTH	1410	477	789	---	---	---	---	---	---	---	---	---

06892440 CEDAR CREEK AT HIGHWAY 56 AT OLATHE, KS--Continued

SPECIFIC CONDUCTANCE FROM DCP, in US/CM @ 25C, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	1140	1070	1120	1090	974	980	772	712	749
2	---	---	---	1070	1020	1050	1080	1060	1070	771	751	763
3	---	---	---	1130	1020	1070	1090	1060	1070	774	722	761
4	---	---	---	1140	1070	1110	1090	1040	1070	783	714	738
5	---	---	---	1100	1020	1060	1050	973	1020	808	768	793
6	561	521	553	1060	895	966	975	947	962	768	617	695
7	668	561	616	964	896	922	1020	948	979	951	620	689
8	916	619	725	939	903	924	1050	624	931	701	513	614
9	879	769	832	989	838	940	1030	924	995	707	494	593
10	977	754	876	994	966	982	1030	968	1010	749	622	684
11	956	829	874	1030	989	1010	985	904	965	865	534	755
12	998	922	962	1630	1030	1320	987	907	957	534	384	417
13	1010	971	989	1540	1140	1340	966	927	947	649	451	534
14	1080	921	1000	1280	1080	1180	1040	931	1000	682	634	653
15	1080	1020	1050	1300	1230	1270	1020	969	997	806	655	747
16	1040	940	1020	1570	1240	1380	1140	994	1110	736	626	686
17	1230	873	1030	1740	1510	1650	1120	1100	1110	845	659	747
18	1220	996	1100	1510	1350	1420	1110	1080	1100	665	655	660
19	997	852	935	1470	1350	1440	1090	723	963	678	657	670
20	852	834	839	1540	1460	1530	1110	699	1030	695	672	684
21	914	838	866	1560	1490	1520	954	589	684	697	621	677
22	990	863	911	1600	1510	1560	836	615	753	685	621	657
23	1040	911	968	1600	1550	1580	903	809	832	847	589	641
24	1040	897	973	1570	1530	1540	907	847	863	849	279	653
25	937	903	919	1580	1440	1540	880	855	865	520	343	427
26	988	936	962	1440	1340	1370	902	790	857	574	497	551
27	1080	988	1050	1340	1220	1300	821	525	668	603	480	527
28	1130	1070	1090	1320	1070	1180	644	525	593	613	501	556
29	---	---	---	1190	1080	1150	759	644	695	714	613	676
30	---	---	---	1100	1000	1060	756	705	717	784	711	770
31	---	---	---	1020	978	997	---	---	---	839	768	806
MONTH	---	---	---	1740	838	1240	1140	525	926	951	279	664

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	913	820	852	---	---	---	---	---	---	---	---	---
2	979	890	917	---	---	---	---	---	---	---	---	---
3	983	851	916	---	---	---	---	---	---	---	---	---
4	1030	535	885	---	---	---	---	---	---	---	---	---
5	764	634	694	---	---	---	---	---	---	---	---	---
6	884	764	819	---	---	---	---	---	---	---	---	---
7	967	884	922	---	---	---	---	---	---	---	---	---
8	1050	933	958	---	---	---	---	---	---	---	---	---
9	1090	674	1000	---	---	---	---	---	---	---	---	---
10	854	611	685	---	---	---	---	---	---	---	---	---
11	864	702	762	---	---	---	---	---	---	---	---	---
12	860	479	570	---	---	---	---	---	---	---	---	---
13	774	630	714	---	511	---	---	415	---	---	---	---
14	931	763	871	---	---	---	---	---	---	---	---	---
15	969	917	941	---	---	---	---	---	---	---	---	---
16	1090	969	1050	---	---	---	---	---	---	---	---	---
17	1190	1090	1160	---	---	---	---	---	---	---	---	---
18	1290	1190	1230	---	---	---	709	689	700	558	538	545
19	1280	1140	1210	---	---	---	---	---	---	1030	420	577
20	1160	1110	1130	---	---	---	---	---	---	560	448	478
21	1120	1100	1110	---	---	---	---	---	---	587	458	528
22	1130	1110	1120	---	---	---	---	---	---	594	561	584
23	1140	1130	1130	---	---	---	---	---	---	---	---	---
24	1150	1080	1140	---	---	---	---	---	---	---	---	---
25	1160	1090	1130	---	---	---	---	---	---	647	---	---
26	---	705	---	---	---	---	---	---	---	---	---	---
27	966	764	878	---	---	---	---	---	---	---	---	---
28	1000	965	979	---	---	---	---	---	---	---	---	---
29	---	---	---	717	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

06892440 CEDAR CREEK AT HIGHWAY 56 AT OLATHE, KS--Continued

PH, WH, FIELD FROM DCP, in (STANDARD UNITS), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	7.7	7.5	7.6	7.5	7.3	7.4	7.9	7.7	7.7	---	---	---
2	7.7	7.6	7.6	7.5	7.3	7.3	8.0	7.7	7.8	---	---	---
3	7.6	7.4	7.5	7.4	7.3	7.3	8.0	7.7	7.8	---	---	---
4	7.5	7.4	7.5	7.4	7.2	7.3	7.9	7.8	7.8	---	---	---
5	7.9	7.5	7.7	7.3	7.3	7.3	7.9	7.8	7.8	---	---	---
6	7.7	7.6	7.6	7.4	7.3	7.3	7.9	7.6	7.7	---	---	---
7	7.6	7.5	7.5	7.4	7.3	7.3	7.8	7.6	7.7	---	---	---
8	7.6	7.4	7.5	7.5	7.3	7.4	7.8	7.7	7.7	---	---	---
9	7.7	7.4	7.6	7.5	7.4	7.4	8.0	7.8	7.8	---	---	---
10	7.6	7.4	7.4	7.6	7.4	7.5	7.9	7.8	7.9	---	---	---
11	7.7	7.4	7.6	7.6	7.4	7.6	7.9	7.8	7.8	---	---	---
12	7.6	7.5	7.5	7.4	7.4	7.4	7.9	7.7	7.9	---	---	---
13	7.5	7.3	7.4	7.8	7.4	7.7	7.9	7.6	7.8	---	---	---
14	7.6	7.4	7.5	7.7	7.3	7.6	7.9	7.8	7.9	---	---	---
15	7.7	7.4	7.6	7.3	7.3	7.3	8.1	7.8	8.0	---	---	---
16	7.6	7.5	7.5	7.4	7.3	7.3	7.9	7.7	7.8	---	---	---
17	7.5	7.4	7.5	7.4	7.4	7.4	7.7	7.5	7.6	---	---	---
18	7.5	7.4	7.4	7.5	7.4	7.4	8.1	7.6	7.7	---	---	---
19	7.6	7.4	7.4	7.6	7.5	7.5	8.0	7.8	7.9	---	---	---
20	7.6	7.4	7.5	7.8	7.6	7.6	8.1	8.0	8.0	---	---	---
21	7.5	7.4	7.5	7.8	7.7	7.7	8.1	7.9	8.0	---	---	---
22	7.5	7.4	7.4	7.8	7.7	7.7	8.1	7.8	8.0	---	---	---
23	7.5	7.3	7.4	7.8	7.7	7.7	8.2	8.0	8.1	---	---	---
24	7.6	7.3	7.4	7.7	7.7	7.7	8.3	8.0	8.2	---	---	---
25	7.5	7.3	7.4	8.0	7.7	7.8	8.3	8.2	8.2	---	---	---
26	7.5	7.3	7.4	8.2	7.8	8.0	---	---	---	---	---	---
27	7.4	7.4	7.4	8.0	7.9	7.9	---	---	---	---	---	---
28	7.6	7.3	7.5	7.9	7.8	7.8	---	---	---	---	---	---
29	7.5	7.4	7.4	7.8	7.8	7.8	---	---	---	---	---	---
30	7.6	7.3	7.4	7.8	7.7	7.7	---	---	---	---	---	---
31	7.6	7.4	7.5	---	---	---	---	---	---	---	---	---
MAX	7.9	7.6	7.7	8.2	7.9	8.0	---	---	---	---	---	---
MIN	7.4	7.3	7.4	7.3	7.2	7.3	---	---	---	---	---	---

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	8.3	8.0	8.2	8.4	8.1	8.3	7.9	7.8	7.8
2	---	---	---	8.2	7.9	8.0	8.6	8.0	8.3	8.0	7.8	7.8
3	---	---	---	8.4	7.9	8.0	8.6	8.2	8.4	8.0	7.8	7.9
4	---	---	---	8.3	8.0	8.2	8.6	8.3	8.4	8.0	7.8	7.8
5	---	---	---	8.5	8.0	8.2	8.6	8.3	8.4	8.0	7.7	7.8
6	7.4	7.3	7.4	8.4	8.1	8.2	8.6	8.2	8.4	8.5	7.7	7.8
7	7.4	7.3	7.3	8.4	8.1	8.2	8.4	8.0	8.1	8.1	7.8	8.0
8	7.8	7.3	7.4	8.4	8.0	8.1	8.1	7.8	7.9	8.1	7.8	8.0
9	7.8	7.5	7.6	8.4	7.8	8.2	8.3	7.8	8.0	8.0	7.7	7.9
10	7.6	7.5	7.5	8.6	8.0	8.2	8.5	7.8	8.2	7.9	7.7	7.8
11	7.8	7.4	7.5	8.6	8.0	8.3	8.5	7.9	8.2	8.0	7.7	7.7
12	7.8	7.5	7.6	8.6	8.0	8.2	8.4	7.7	8.0	8.0	7.7	7.8
13	7.8	7.5	7.7	8.5	7.9	8.1	8.4	7.8	8.1	7.7	7.7	7.7
14	8.0	7.5	7.8	8.6	7.9	8.1	8.3	7.7	8.1	7.7	7.6	7.7
15	8.1	7.5	7.7	8.6	7.8	8.2	8.3	7.7	8.0	7.8	7.7	7.7
16	8.1	7.5	7.8	8.5	8.0	8.3	8.3	7.6	7.9	7.8	7.7	7.8
17	8.2	7.5	7.9	8.5	8.0	8.3	8.3	7.6	7.9	7.9	7.8	7.8
18	8.3	7.6	8.0	8.4	8.2	8.3	8.4	7.7	8.1	7.8	7.8	7.8
19	8.1	7.7	7.9	8.3	7.9	8.2	8.2	7.6	7.8	7.8	7.8	7.8
20	8.0	7.7	7.9	8.3	7.9	8.2	8.2	7.5	7.7	7.9	7.8	7.8
21	8.1	7.7	7.8	8.4	8.0	8.2	8.0	7.7	7.9	7.9	7.8	7.8
22	8.2	7.7	7.8	8.3	8.0	8.2	7.8	7.6	7.8	8.1	7.8	7.9
23	8.4	7.8	8.1	8.2	8.1	8.2	7.9	7.7	7.8	7.9	7.8	7.8
24	8.6	7.9	8.2	8.2	7.9	8.1	7.9	7.7	7.8	8.3	7.7	7.9
25	8.1	7.9	8.0	8.1	7.8	8.0	7.9	7.8	7.8	8.1	7.7	7.8
26	8.3	7.9	8.0	8.2	8.0	8.1	7.9	7.8	7.8	7.8	7.7	7.7
27	8.0	7.8	7.9	8.5	8.1	8.2	8.0	7.8	7.9	8.0	7.7	7.9
28	8.2	7.8	8.0	8.5	8.0	8.2	7.9	7.8	7.8	8.0	7.8	7.9
29	---	---	---	8.5	8.0	8.2	7.9	7.8	7.8	8.0	7.8	7.9
30	---	---	---	8.5	8.0	8.3	8.0	7.8	7.8	7.9	7.8	7.8
31	---	---	---	8.5	8.1	8.3	---	---	---	7.8	7.7	7.7
MAX	---	---	---	8.6	8.2	8.3	8.6	8.3	8.4	8.5	7.8	8.0
MIN	---	---	---	8.1	7.8	8.0	7.8	7.5	7.7	7.7	7.6	7.7

06892440 CEDAR CREEK AT HIGHWAY 56 AT OLATHE, KS--Continued

PH, WH, FIELD FROM DCP, in (STANDARD UNITS), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	7.8	7.7	7.7	---	---	---	---	---	---	---	---	---
2	7.8	7.7	7.7	---	---	---	---	---	---	---	---	---
3	7.9	7.7	7.7	---	---	---	---	---	---	---	---	---
4	8.0	7.6	7.7	---	---	---	---	---	---	---	---	---
5	8.0	7.9	7.9	---	---	---	---	---	---	---	---	---
6	8.0	7.8	7.8	---	---	---	---	---	---	---	---	---
7	7.9	7.8	7.8	---	---	---	---	---	---	---	---	---
8	8.0	7.7	7.8	---	---	---	---	---	---	---	---	---
9	7.9	7.7	7.8	---	---	---	---	---	---	---	---	---
10	8.0	7.8	7.9	---	---	---	---	---	---	---	---	---
11	7.9	7.8	7.8	---	---	---	---	---	---	---	---	---
12	8.1	7.8	8.0	---	---	---	---	---	---	---	---	---
13	7.9	7.8	7.9	7.8	7.4	7.6	---	---	---	---	---	---
14	8.0	7.8	7.9	---	---	---	---	---	---	---	---	---
15	8.0	7.8	7.9	---	---	---	---	---	---	---	---	---
16	8.0	7.8	7.9	---	---	---	---	---	---	---	---	---
17	8.0	7.7	7.8	---	---	---	---	---	---	---	---	---
18	8.0	7.7	7.8	---	---	---	7.6	7.3	7.5	---	---	---
19	8.1	7.7	7.8	---	---	---	---	---	---	7.6	7.4	7.5
20	8.0	7.7	7.8	---	---	---	---	---	---	7.6	7.4	7.5
21	7.9	7.7	7.8	---	---	---	---	---	---	7.9	7.5	7.6
22	---	---	---	---	---	---	---	---	---	8.1	7.6	7.8
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	8.5	8.2	8.3
26	---	---	---	---	---	---	---	---	---	---	---	---
27	7.8	7.5	7.7	---	---	---	---	---	---	---	---	---
28	7.9	---	7.6	---	---	---	---	---	---	---	---	---
29	---	---	---	---	7.3	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---

WATER TEMPERATURE FROM DCP, in (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	19.2	13.9	16.3	16.2	13.1	14.4	5.8	3.1	4.4	---	---	---
2	20.9	14.5	17.0	15.8	13.2	14.5	7.7	4.2	5.7	---	---	---
3	20.1	15.8	17.8	15.0	12.1	13.6	10.8	6.0	8.1	---	---	---
4	20.2	16.5	18.1	16.2	14.1	14.8	13.7	10.6	11.9	---	---	---
5	16.7	13.3	15.6	16.1	12.6	14.2	13.7	10.6	12.9	---	---	---
6	15.3	12.2	13.8	16.5	12.4	14.4	10.6	7.3	9.1	---	---	---
7	15.4	11.2	13.2	16.3	13.5	14.8	8.4	5.5	7.0	---	---	---
8	15.6	12.7	14.0	14.6	10.6	13.2	7.3	4.3	6.0	---	---	---
9	17.6	14.6	15.8	10.6	8.2	9.6	5.9	2.7	4.3	---	---	---
10	18.0	16.8	17.3	10.7	8.1	9.5	5.6	3.8	4.6	---	---	---
11	17.4	15.4	16.4	11.1	8.4	9.8	5.8	3.9	4.9	---	---	---
12	15.5	14.2	14.8	10.2	8.4	9.4	6.7	5.4	5.8	---	---	---
13	16.5	14.5	15.2	15.3	10.2	13.2	7.0	5.8	6.4	---	---	---
14	15.2	12.6	13.8	15.6	13.2	14.3	5.9	4.8	5.4	---	---	---
15	13.3	9.8	12.4	15.2	13.1	14.1	6.2	4.5	5.5	---	---	---
16	12.1	10.2	11.2	15.0	12.3	13.3	7.2	6.1	6.6	---	---	---
17	12.2	9.3	10.7	14.4	12.1	13.3	8.4	4.7	6.8	---	---	---
18	14.0	10.2	11.8	14.0	13.2	13.7	6.8	3.9	5.2	---	---	---
19	13.4	10.2	12.0	13.5	8.5	11.2	6.0	2.9	4.5	---	---	---
20	15.0	10.1	12.3	8.5	6.1	7.3	5.2	2.4	3.6	---	---	---
21	16.8	13.3	14.8	8.4	5.3	6.9	5.7	3.1	4.3	---	---	---
22	17.2	15.1	16.1	9.5	6.5	7.9	7.6	4.8	6.3	---	---	---
23	18.9	15.9	17.2	10.7	8.5	9.4	4.8	2.4	3.1	---	---	---
24	17.9	14.4	16.0	10.8	9.7	10.5	2.8	1.5	2.1	---	---	---
25	14.4	11.1	12.9	10.2	8.3	9.5	4.3	2.2	2.9	---	---	---
26	12.1	9.4	10.6	11.1	8.7	9.7	---	---	---	---	---	---
27	10.0	7.0	8.7	8.7	5.0	6.7	---	---	---	---	---	---
28	11.3	7.6	9.6	5.0	2.8	3.8	---	---	---	---	---	---
29	13.4	10.2	11.6	4.1	2.4	3.1	---	---	---	---	---	---
30	14.9	11.6	13.1	5.1	2.9	3.9	---	---	---	---	---	---
31	14.1	12.1	13.2	---	---	---	---	---	---	---	---	---
MONTH	20.9	7.0	14.0	16.5	2.4	10.8	---	---	---	---	---	---

06892440 CEDAR CREEK AT HIGHWAY 56 AT OLATHE, KS--Continued

WATER TEMPERATURE FROM DCP, in (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	4.3	2.7	3.5	17.7	10.6	14.1	18.2	14.8	16.4
2	---	---	---	3.1	1.0	2.0	15.9	11.1	13.9	18.4	13.2	15.2
3	---	---	---	2.9	0.6	1.9	13.0	7.5	10.3	17.8	12.8	15.2
4	---	---	---	3.4	0.8	2.0	14.0	7.3	10.5	22.8	13.9	17.7
5	---	---	---	4.2	1.4	2.7	15.5	8.1	11.6	24.1	15.6	19.3
6	3.3	2.3	2.7	7.4	1.8	4.5	14.7	9.9	12.7	22.3	18.1	20.8
7	4.6	2.1	2.9	7.2	3.6	5.5	13.5	11.6	12.2	21.5	18.7	19.6
8	6.1	2.4	3.9	11.3	6.9	9.5	12.0	10.7	11.4	20.3	17.3	18.8
9	5.9	4.1	5.0	10.5	5.1	7.1	15.6	9.7	12.6	19.8	16.3	17.9
10	5.1	3.2	4.3	8.3	3.4	5.7	19.2	12.9	15.7	18.9	14.5	16.6
11	5.6	1.6	3.4	8.7	5.4	6.8	18.5	15.1	16.7	18.4	15.6	16.8
12	4.8	1.8	3.2	11.0	4.5	7.6	17.6	15.1	16.1	18.6	15.1	16.9
13	5.9	2.1	4.0	13.1	6.2	9.3	16.9	13.7	15.3	18.7	13.7	15.9
14	5.9	1.5	3.9	15.2	9.1	---	20.9	14.4	17.3	20.6	13.9	17.0
15	6.8	2.9	4.9	11.8	8.2	9.3	25.0	18.4	21.2	21.6	16.9	19.2
16	7.3	3.4	5.4	8.7	6.3	7.8	22.4	19.8	21.2	21.6	16.9	19.5
17	6.9	4.2	5.6	11.6	6.3	8.7	25.4	19.6	22.0	20.5	16.3	18.6
18	8.2	4.3	6.2	9.6	7.9	8.8	24.9	21.8	23.3	19.6	14.6	17.0
19	10.0	7.8	8.8	10.0	8.5	9.2	23.3	17.9	20.2	18.8	15.6	17.0
20	9.3	6.9	8.0	12.6	7.8	10.0	18.9	15.1	17.1	22.1	14.9	17.7
21	8.5	5.3	6.8	10.4	5.4	8.1	16.9	13.6	15.1	21.2	15.4	17.7
22	8.5	5.0	6.5	9.2	3.9	6.4	18.8	12.1	15.2	21.8	16.8	18.8
23	10.2	5.5	7.7	10.2	4.6	7.5	20.8	14.7	17.8	19.6	18.0	18.8
24	12.3	7.0	9.4	9.2	6.7	8.0	20.2	15.9	18.5	18.6	14.5	17.4
25	9.2	4.6	6.7	6.7	3.0	4.8	19.2	13.1	15.9	17.8	15.0	16.6
26	4.6	1.1	2.6	9.6	2.4	5.9	15.5	14.0	14.6	21.0	15.5	18.0
27	5.2	1.4	3.1	12.3	5.7	8.6	15.3	12.6	13.9	21.9	17.5	19.9
28	5.5	2.8	4.2	15.6	8.5	11.7	17.7	12.6	14.8	23.1	20.0	21.6
29	---	---	---	16.6	11.1	13.6	18.9	12.6	15.7	23.9	19.8	22.1
30	---	---	---	15.6	11.4	13.7	18.7	15.8	17.4	26.4	21.7	23.6
31	---	---	---	15.6	11.2	13.3	---	---	---	28.3	22.8	25.0
MONTH	---	---	---	16.6	0.6	---	25.4	7.3	15.8	28.3	12.8	18.5

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	29.0	23.6	25.8	---	---	---	---	---	---	---	---	---
2	29.9	24.0	26.4	---	---	---	---	---	---	---	---	---
3	30.2	24.2	26.7	---	---	---	---	---	---	---	---	---
4	26.2	21.8	23.8	---	---	---	---	---	---	---	---	---
5	22.8	21.3	21.9	---	---	---	---	---	---	---	---	---
6	25.8	19.8	22.3	---	---	---	---	---	---	---	---	---
7	27.0	20.2	23.2	---	---	---	---	---	---	---	---	---
8	27.3	21.8	24.2	---	---	---	---	---	---	---	---	---
9	24.2	22.6	23.2	---	---	---	---	---	---	---	---	---
10	24.8	22.6	23.6	---	---	---	---	---	---	---	---	---
11	26.7	23.7	24.9	---	---	---	---	---	---	---	---	---
12	26.7	23.1	25.0	---	---	---	---	---	---	---	---	---
13	26.1	22.7	24.7	---	24.3	---	---	21.8	---	---	---	---
14	25.1	20.1	22.5	---	---	---	---	---	---	---	---	---
15	26.7	18.8	22.1	---	---	---	---	---	---	---	---	---
16	26.5	19.5	22.7	---	---	---	---	---	---	---	---	---
17	27.0	19.4	22.9	---	---	---	---	---	---	---	---	---
18	24.8	21.4	22.8	---	---	---	26.2	22.8	24.3	---	---	---
19	27.9	21.2	24.3	---	---	---	---	---	---	23.7	20.4	21.3
20	29.7	23.1	26.2	---	---	---	---	---	---	22.6	19.7	20.9
21	31.8	25.0	27.8	---	---	---	---	---	---	22.0	18.0	20.1
22	---	---	---	---	---	---	---	---	---	21.2	17.6	19.4
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	19.8	16.1	17.9
26	---	23.1	---	---	---	---	---	---	---	---	---	---
27	30.2	22.6	25.7	---	---	---	---	---	---	---	---	---
28	---	24.4	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	25.2	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

06892440 CEDAR CREEK AT HIGHWAY 56 AT OLATHE, KS--Continued

OXYGEN DISSOLVED FROM DCP, in (MG/L), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	13.5	10.3	11.7	7.4	2.9	5.5	12.2	11.0	11.4	---	---	---
2	12.2	10.8	11.6	8.2	2.9	5.3	12.1	11.0	11.4	---	---	---
3	11.2	9.2	10.1	6.5	3.8	4.5	11.2	10.6	10.9	---	---	---
4	9.7	7.6	8.6	4.9	2.5	3.6	11.2	10.0	10.5	---	---	---
5	12.4	9.1	11.3	5.3	3.4	4.2	10.6	10.0	10.2	---	---	---
6	11.6	9.8	10.8	6.5	3.7	4.9	10.2	9.6	9.9	---	---	---
7	9.8	8.6	9.2	6.5	3.5	4.9	10.1	9.2	9.6	---	---	---
8	13.5	9.2	10.7	---	---	---	14.4	9.3	11.1	---	---	---
9	12.9	9.0	10.9	---	---	---	14.4	10.7	12.2	---	---	---
10	11.2	7.4	9.0	---	---	---	13.9	11.8	12.4	---	---	---
11	10.5	8.6	9.9	---	---	---	16.9	11.7	13.5	---	---	---
12	10.6	9.3	10.0	---	---	---	15.5	11.9	14.4	---	---	---
13	9.4	8.1	8.9	---	---	---	13.4	10.5	12.5	---	---	---
14	11.3	9.1	10.2	---	---	---	14.7	11.6	13.2	---	---	---
15	16.0	9.8	13.0	---	---	---	15.0	12.5	13.8	---	---	---
16	15.4	11.5	13.8	8.1	7.1	---	13.7	11.3	12.3	---	---	---
17	12.2	10.4	11.3	7.1	6.1	6.5	12.2	8.2	10.4	---	---	---
18	11.4	9.1	10.3	7.1	5.7	6.2	13.7	9.1	10.9	---	---	---
19	10.7	---	---	11.0	7.1	8.5	17.5	13.6	15.1	---	---	---
20	9.8	7.2	8.7	10.2	7.9	8.9	18.3	16.4	17.4	---	---	---
21	7.8	7.1	7.3	11.9	9.2	10.7	22.0	17.5	19.2	---	---	---
22	8.8	6.2	7.4	12.5	11.9	12.2	17.9	13.4	15.4	---	---	---
23	7.5	4.5	6.1	13.1	11.4	12.4	19.1	14.8	17.1	---	---	---
24	6.6	4.1	5.5	11.4	8.7	9.3	---	---	---	---	---	---
25	8.2	4.0	6.2	12.8	8.8	10.7	---	---	---	---	---	---
26	10.6	6.5	8.8	13.3	9.5	11.4	---	---	---	---	---	---
27	11.2	8.3	9.7	13.6	10.8	12.2	---	---	---	---	---	---
28	12.4	8.7	10.8	12.6	12.1	12.3	---	---	---	---	---	---
29	11.7	9.2	10.2	12.1	11.6	11.8	---	---	---	---	---	---
30	10.2	9.2	9.8	11.7	11.2	11.5	---	---	---	---	---	---
31	12.8	7.4	10.6	---	---	---	---	---	---	---	---	---
MONTH	16.0	---	---	---	---	---	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	21.6	15.3	19.0	20.4	17.4	18.7	8.0	6.2	7.0
2	---	---	---	21.6	14.8	17.7	19.3	15.3	17.3	10.5	7.1	8.3
3	---	---	---	21.0	17.6	19.4	18.2	13.9	15.7	9.8	7.3	8.4
4	---	---	---	25.3	17.8	19.5	22.0	16.1	17.7	11.1	6.8	8.5
5	---	---	---	23.8	20.1	21.6	21.0	17.6	19.2	12.6	6.5	8.2
6	13.9	13.4	13.6	20.8	15.6	18.2	20.5	17.0	18.7	11.2	5.7	7.7
7	13.4	12.5	12.9	19.2	13.1	16.0	17.0	13.1	14.4	8.0	5.4	6.8
8	14.8	11.8	12.8	15.0	10.8	12.5	13.2	9.3	10.9	8.6	4.0	6.3
9	13.4	12.4	12.8	15.1	9.8	12.4	14.3	9.2	11.0	8.8	4.2	7.3
10	12.4	11.3	11.9	19.0	11.4	14.3	17.9	8.2	12.1	8.9	4.3	6.8
11	13.8	11.2	12.3	18.8	12.3	15.3	17.6	8.9	12.6	8.7	2.5	5.3
12	20.1	12.6	14.3	20.9	12.6	16.3	20.1	7.1	12.2	9.2	8.1	8.9
13	19.9	12.2	14.2	22.3	12.4	15.8	20.3	10.2	15.6	9.5	7.5	8.8
14	21.0	11.0	14.6	20.4	11.4	15.4	19.2	8.8	15.0	8.5	7.0	7.6
15	22.5	13.1	16.9	24.4	10.3	17.1	18.8	11.0	14.9	7.8	6.1	6.8
16	22.1	11.7	15.7	24.1	14.5	19.7	13.3	5.7	9.6	8.0	5.8	6.9
17	20.6	11.7	14.5	20.7	11.5	16.2	14.0	4.0	8.6	7.4	5.4	6.3
18	19.9	12.6	16.0	21.4	17.2	19.4	13.4	8.1	10.9	8.2	6.5	7.2
19	17.1	11.4	13.7	18.9	12.2	15.7	12.1	4.0	7.5	8.2	6.3	7.1
20	12.1	10.8	11.3	20.9	11.5	16.2	10.6	3.2	6.1	9.2	6.5	7.3
21	11.0	9.3	10.3	23.1	17.1	20.1	---	---	---	9.3	6.4	7.4
22	10.8	8.8	9.9	24.2	14.8	20.0	---	---	---	10.2	6.2	7.8
23	13.0	9.0	10.6	25.3	20.0	22.4	9.0	6.4	7.7	7.6	4.4	6.3
24	18.8	10.3	14.4	22.9	13.3	17.2	8.4	5.7	6.9	9.7	4.8	7.2
25	19.5	11.2	13.1	16.1	12.0	14.0	9.7	6.8	8.0	---	---	---
26	19.2	14.7	16.4	23.1	14.6	18.5	9.1	7.0	7.9	---	---	---
27	16.8	14.7	15.8	22.0	17.1	20.3	9.4	7.6	8.5	---	---	---
28	15.6	15.0	15.3	18.5	12.0	15.3	9.1	7.9	8.6	---	---	---
29	---	---	---	20.4	11.0	15.3	9.4	7.1	8.4	8.5	---	---
30	---	---	---	20.9	12.6	17.3	9.4	6.5	7.7	7.6	5.0	5.9
31	---	---	---	20.7	14.5	18.0	---	---	---	8.0	4.6	5.6
MONTH	---	---	---	25.3	9.8	17.3	---	---	---	---	---	---

06892440 CEDAR CREEK AT HIGHWAY 56 AT OLATHE, KS--Continued

OXYGEN DISSOLVED FROM DCP, in (MG/L), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	8.2	4.4	5.6	---	---	---	---	---	---	---	---	---
2	9.1	4.3	5.6	---	---	---	---	---	---	---	---	---
3	9.2	4.1	5.7	---	---	---	---	---	---	---	---	---
4	8.2	3.0	5.3	---	---	---	---	---	---	---	---	---
5	8.5	6.6	7.2	---	---	---	---	---	---	---	---	---
6	9.7	6.1	7.2	---	---	---	---	---	---	---	---	---
7	10.3	6.1	7.2	---	---	---	---	---	---	---	---	---
8	11.2	5.6	7.2	---	---	---	---	---	---	---	---	---
9	8.2	5.2	6.3	---	---	---	---	---	---	---	---	---
10	9.2	6.3	7.3	---	---	---	---	---	---	---	---	---
11	6.8	5.4	6.2	---	---	---	---	---	---	---	---	---
12	8.0	5.5	6.8	---	---	---	---	---	---	---	---	---
13	6.2	4.8	5.5	---	---	---	---	---	---	---	---	---
14	8.4	5.5	6.7	---	---	---	---	---	---	---	---	---
15	9.0	5.9	7.1	---	---	---	---	---	---	---	---	---
16	11.4	5.3	7.5	---	---	---	---	---	---	---	---	---
17	12.1	5.4	8.0	---	---	---	---	---	---	---	---	---
18	12.5	5.1	7.8	---	---	---	---	---	---	---	---	---
19	13.1	5.1	8.3	---	---	---	---	---	---	6.8	3.4	5.2
20	12.5	5.3	8.3	---	---	---	---	---	---	10.5	2.9	6.4
21	10.9	6.1	8.3	---	---	---	---	---	---	10.3	4.1	7.0
22	---	---	---	---	---	---	---	---	---	11.4	5.3	8.0
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	10.0	5.1	7.1	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

TURBIDITY, FIELD FROM DCP, in (NTU), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	15	5.0	7.4	10	<2.0	4.5	4.0	2.0	3.4	---	---	---
2	11	4.0	5.7	3.0	<2.0	<2.0	4.0	<2.0	2.7	---	---	---
3	8.0	2.0	4.8	3.0	<2.0	<2.0	3.0	<2.0	<2.0	---	---	---
4	7.0	2.0	3.7	2.0	<2.0	<2.0	3.0	<2.0	2.3	---	---	---
5	540	7.0	120	3.0	<2.0	<2.0	5.0	2.0	3.3	---	---	---
6	30	13	19	4.0	<2.0	2.5	3.0	<2.0	2.0	---	---	---
7	13	8.0	10	4.0	<2.0	2.1	2.0	<2.0	<2.0	---	---	---
8	14	7.0	9.4	3.0	<2.0	<2.0	3.0	<2.0	<2.0	---	---	---
9	18	10	14	2.0	<2.0	<2.0	4.0	<2.0	<2.0	---	---	---
10	17	6.0	10	2.0	<2.0	<2.0	3.0	<2.0	<2.0	---	---	---
11	7.0	3.0	4.6	3.0	<2.0	<2.0	3.0	<2.0	<2.0	---	---	---
12	3.0	<2.0	2.0	2.0	<2.0	<2.0	75	2.0	5.9	---	---	---
13	2.0	<2.0	<2.0	40	<2.0	16	130	5.0	30	---	---	---
14	<2.0	<2.0	<2.0	8.0	3.0	5.6	6.0	3.0	5.0	---	---	---
15	1300	<2.0	130	4.0	<2.0	2.0	7.0	3.0	5.5	---	---	---
16	86	29	48	8.0	<2.0	<2.0	11	3.0	4.9	---	---	---
17	31	19	24	2.0	<2.0	<2.0	12	3.0	7.2	---	---	---
18	20	12	16	8.0	<2.0	2.2	13	6.0	9.4	---	---	---
19	24	9.0	12	4.0	<2.0	2.5	12	10	11	---	---	---
20	9.0	5.0	7.5	5.0	<2.0	2.0	10	6.0	7.7	---	---	---
21	7.0	4.0	5.6	4.0	<2.0	2.4	8.0	5.0	6.5	---	---	---
22	9.0	3.0	5.4	3.0	<2.0	<2.0	10	6.0	8.2	---	---	---
23	7.0	3.0	4.6	4.0	<2.0	<2.0	6.0	5.0	5.3	---	---	---
24	10	3.0	6.5	22	2.0	11	5.0	4.0	4.9	---	---	---
25	13	4.0	7.1	12	7.6	9.2	8.0	4.0	5.0	---	---	---
26	7.0	3.0	4.7	11	6.3	8.3	---	---	---	---	---	---
27	6.0	3.0	3.8	9.0	3.0	6.3	---	---	---	---	---	---
28	7.0	3.0	5.0	5.0	2.0	3.2	---	---	---	---	---	---
29	4.0	<2.0	2.2	4.0	2.0	2.7	---	---	---	---	---	---
30	4.0	<2.0	<2.0	4.0	2.0	2.7	---	---	---	---	---	---
31	10	<2.0	4.2	---	---	---	---	---	---	---	---	---
MONTH	1300	2.0	16	40	2.0	3.7	---	---	---	---	---	---

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

06892440 CEDAR CREEK AT HIGHWAY 56 AT OLATHE, KS--Continued

TURBIDITY, FIELD FROM DCP, in (NTU), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	7.0	4.0	5.5	25	14	19	62	33	47
2	---	---	---	10	3.0	5.9	30	14	18	48	26	37
3	---	---	---	11	3.0	6.4	29	16	19	44	23	33
4	---	---	---	9.0	2.0	5.7	22	11	15	36	25	31
5	---	---	---	9.0	4.0	5.6	28	11	15	34	16	25
6	29	20	23	15	5.0	11	22	10	13	250	20	56
7	20	5.0	12	30	5.0	20	14	9.0	11	610	54	250
8	20	9.0	13	21	11	13	130	9.0	48	1300	69	250
9	20	6.0	13	440	12	78	68	15	29	460	69	150
10	26	2.0	12	23	13	17	22	12	16	120	44	55
11	13	3.0	8.3	31	11	14	36	12	22	750	46	160
12	9.0	4.0	6.7	75	14	31	25	9.0	15	>1300	280	>550
13	9.0	4.0	5.8	21	11	14	20	7.0	14	290	140	190
14	10	2.0	5.6	22	10	15	17	6.0	9.6	170	70	110
15	10	2.0	6.2	27	11	16	16	7.0	10	120	64	82
16	9.0	3.0	5.6	29	9.0	14	12	7.0	9.1	200	63	100
17	13	3.0	4.8	16	9.0	11	12	6.0	9.0	70	42	56
18	24	4.0	8.5	16	10	13	16	8.0	11	68	38	50
19	170	7.0	28	15	10	12	90	11	33	50	30	41
20	120	19	44	16	8.0	11	370	12	78	40	26	34
21	38	16	22	20	12	16	>1300	150	>460	41	27	33
22	22	11	15	---	---	---	350	65	120	45	31	38
23	22	9.0	13	---	---	---	78	39	57	61	28	40
24	29	8.0	13	24	7.0	11	50	31	39	>1300	33	>110
25	21	7.0	11	19	7.0	9.6	47	21	32	>1300	90	>340
26	15	6.0	9.4	16	6.0	9.8	46	23	32	99	53	70
27	12	4.0	6.6	33	10	15	>1300	41	>330	200	56	100
28	10	4.0	8.0	43	8.8	21	200	78	120	97	42	65
29	---	---	---	28	10	16	83	35	54	64	32	44
30	---	---	---	25	11	18	57	34	45	44	30	36
31	---	---	---	23	12	17	---	---	---	44	27	36
MONTH	---	---	---	---	---	---	1300	6.0	57	1300	16	100

> Actual value is known to be greater than the value shown

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	45	23	34	---	---	---	---	---	---	---	---	---
2	41	23	31	---	---	---	---	---	---	---	---	---
3	42	20	30	---	---	---	---	---	---	---	---	---
4	740	26	120	---	---	---	---	---	---	---	---	---
5	120	40	68	---	---	---	---	---	---	---	---	---
6	71	36	50	---	---	---	---	---	---	---	---	---
7	53	29	40	---	---	---	---	---	---	---	---	---
8	50	24	35	---	---	---	---	---	---	---	---	---
9	110	26	48	---	---	---	---	---	---	---	---	---
10	68	29	42	---	---	---	---	---	---	---	---	---
11	1200	34	59	---	---	---	---	---	---	---	---	---
12	530	50	110	---	---	---	---	---	---	---	---	---
13	95	49	67	---	---	---	---	---	---	---	---	---
14	72	45	57	---	---	---	---	---	---	---	---	---
15	72	22	46	---	---	---	---	---	---	---	---	---
16	75	20	46	---	---	---	---	---	---	---	---	---
17	60	17	37	---	---	---	---	---	---	---	---	---
18	63	19	38	---	---	---	---	---	---	---	---	---
19	42	14	28	---	---	---	---	---	---	---	---	---
20	53	15	29	---	---	---	---	---	---	---	---	---
21	47	19	30	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	480	---	---	---	---	---	---	---	---	---	---	---
27	310	16	81	---	---	---	---	---	---	---	---	---
28	58	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

06892450 OLATHE LAKE NEAR OLATHE, KS

LOCATION.--Lat 38°52'52", long 94°52'23", in SE $^{1}/_{4}$ NE $^{1}/_{4}$ NE $^{1}/_{4}$ sec.32, T.13 S., R.23 E., Johnson County, Hydrologic Unit 10300101, on intake structure of Olathe Lake on Cedar Creek, 2 mi west of Olathe, and at mile 13.0.

WATER-DISCHARGE RECORDS

DRAINAGE AREA.--13.3 mi^2.

PERIOD OF RECORD.--October 2000 to current year.

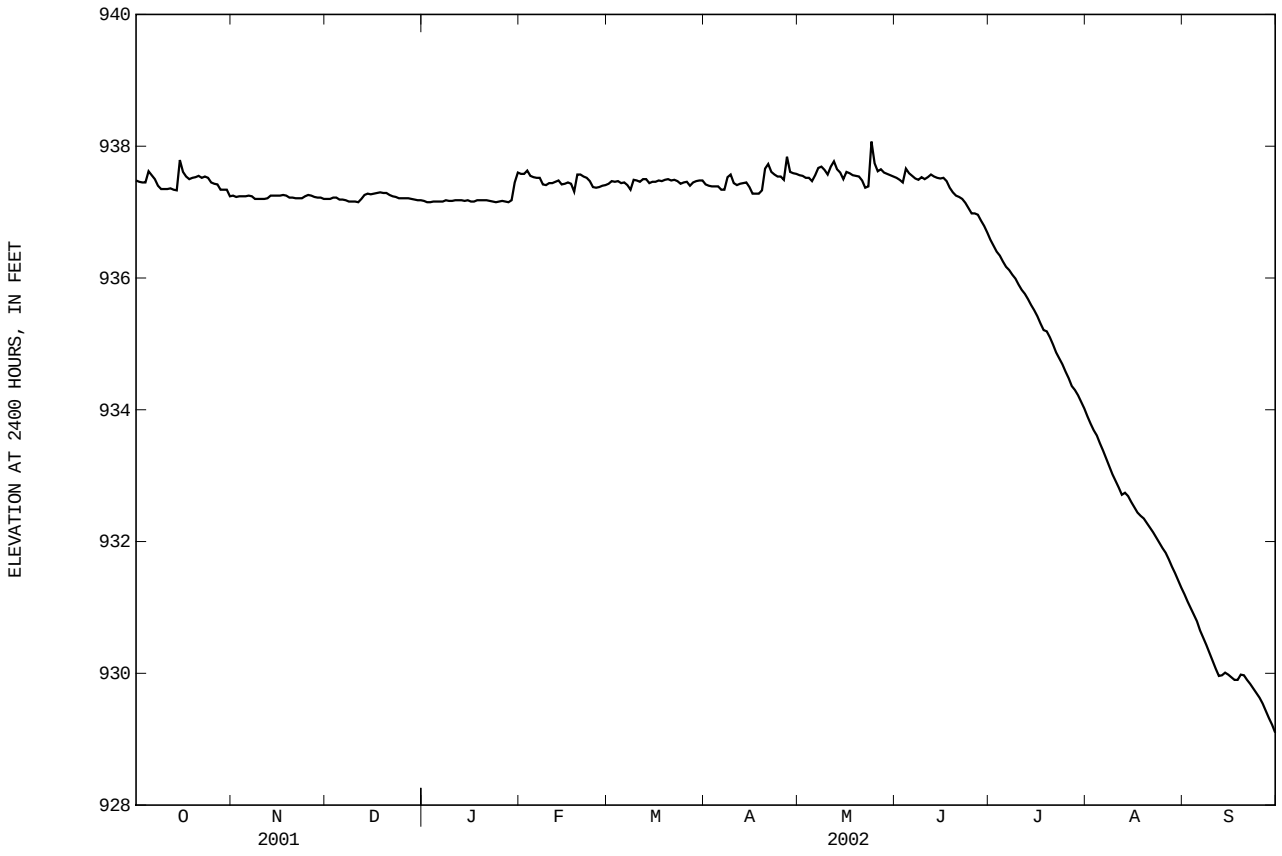
GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929.

REMARKS.--Records good. Reservoir is compacted earthfill dam and concrete control structure. Filling began January 1956. Reservoir is used for water supply. Capacity table limited to top of control structure. Due to nature of control structure, elevation of lake may appear higher than elevation of spillway. Satellite telemeter at station.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 938.56 ft May 12, contents, 3,910 acre-ft; minimum elevation, 929.10 ft Sept. 30, contents, 2,090 acre-ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on field survey by City of Olathe)

928	1,960	936	3,200
932	2,460	938	3,910
934	2,740		



06892450 OLATHE LAKE NEAR OLATHE, KS--Continued

ELEVATION, in FT (NGVD), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	937.48	937.25	937.20	937.17	937.58	937.43	937.42	937.56	937.52	936.58	933.90	931.20
2	937.46	937.23	937.20	937.15	937.58	937.47	937.40	937.55	937.49	936.49	933.79	931.09
3	937.45	937.24	937.22	937.15	937.63	937.46	937.39	937.52	937.45	936.40	933.69	930.99
4	937.45	937.24	937.22	937.16	937.55	937.47	937.39	937.52	937.66	936.34	933.61	930.89
5	937.62	937.24	937.19	937.16	937.53	937.44	937.39	937.47	937.59	936.25	933.49	930.79
6	937.56	937.25	937.19	937.16	937.52	937.45	937.34	937.56	937.55	936.17	933.38	930.65
7	937.50	937.24	937.18	937.16	937.52	937.41	937.34	937.67	937.51	936.12	933.26	930.54
8	937.40	937.20	937.16	937.18	937.42	937.34	937.53	937.69	937.49	936.05	933.14	930.43
9	937.35	937.20	937.16	937.17	937.41	937.49	937.57	937.64	937.53	935.99	933.02	930.31
10	937.35	937.20	937.16	937.17	937.44	937.48	937.44	937.57	937.50	935.90	932.92	930.19
11	937.35	937.20	937.15	937.18	937.44	937.46	937.41	937.69	937.53	935.82	932.82	930.07
12	937.36	937.21	937.20	937.18	937.46	937.50	937.43	937.77	937.57	935.76	932.71	929.96
13	937.34	937.25	937.26	937.18	937.48	937.50	937.44	937.65	937.54	935.68	932.74	929.97
14	937.33	937.25	937.28	937.17	937.42	937.44	937.45	937.60	937.52	935.59	932.69	930.01
15	937.79	937.25	937.27	937.18	937.43	937.46	937.38	937.50	937.51	935.51	932.60	929.98
16	937.61	937.25	937.28	937.16	937.45	937.46	937.28	937.61	937.52	935.42	932.52	929.94
17	937.54	937.26	937.29	937.16	937.43	937.48	937.28	937.59	937.47	935.31	932.44	929.90
18	937.50	937.25	937.30	937.18	937.31	937.47	937.28	937.56	937.37	935.21	932.39	929.90
19	937.52	937.22	937.29	937.18	937.57	937.49	937.33	937.55	937.30	935.19	932.35	929.98
20	937.53	937.22	937.29	937.18	937.57	937.50	937.66	937.54	937.25	935.10	932.28	929.97
21	937.55	937.21	937.26	937.18	937.54	937.48	937.73	937.48	937.23	934.99	932.21	929.90
22	937.52	937.21	937.24	937.17	937.52	937.49	937.61	937.37	937.20	934.87	932.14	929.84
23	937.54	937.21	937.23	937.16	937.47	937.47	937.57	937.39	937.14	934.78	932.06	929.77
24	937.52	937.24	937.21	937.15	937.38	937.43	937.54	938.07	937.06	934.69	931.98	929.70
25	937.45	937.26	937.21	937.16	937.37	937.45	937.54	937.74	936.98	934.58	931.90	929.63
26	937.43	937.25	937.21	937.17	937.38	937.46	937.49	937.62	936.98	934.48	931.83	929.54
27	937.42	937.23	937.21	937.16	937.40	937.40	937.84	937.65	936.96	934.36	931.73	929.43
28	937.34	937.22	937.20	937.15	937.41	937.45	937.61	937.60	936.87	934.30	931.62	929.32
29	937.34	937.22	937.19	937.18	---	937.47	937.59	937.58	936.79	934.22	931.52	929.22
30	937.34	937.20	937.18	937.45	---	937.48	937.58	937.56	936.69	934.12	931.41	929.10
31	937.24	---	937.18	937.60	---	937.48	---	937.54	---	934.02	931.30	---
MEAN	937.46	937.23	937.22	937.19	937.47	937.46	937.48	937.59	937.33	935.36	932.56	930.07
MAX	937.79	937.26	937.30	937.60	937.63	937.50	937.84	938.07	937.66	936.58	933.90	931.20
MIN	937.24	937.20	937.15	937.15	937.31	937.34	937.28	937.37	936.69	934.02	931.30	929.10
(+)	3,620	3,610	3,610	3,760	3,690	3,720	3,750	3,740	3,430	2,750	2,360	2,090
(#)	-100	-10	0	+150	-70	+30	+30	-10	-310	-680	-390	-270

CAL YR 2001 ..... (#) --
WTR YR 2002 ..... (#) -1,630

\+ CONTENTS, IN ACRE-FEET, AT END OF MONTH.
\# CHANGE IN CONTENTS, IN ACRE-FEET.
-- Not Determined

06892450 OLATHE LAKE NEAR OLATHE, KS--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 2000 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 2000 to current year.
pH: October 2000 to current year.
WATER TEMPERATURE: October 2000 to current year.
DISSOLVED OXYGEN: October 2000 to current year.
TURBIDITY: October 2000 to current year.

INSTRUMENTATION.--Multiparameter water-quality monitor.

REMARKS.--Records fair. Interruptions in record are due to ice conditions or malfunction of the recording instrument or sensors. Instruments used to measure turbidity conform to ISO 7027 standards.

EXTREMES FOR PERIOD OF RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 691 microsiemens/cm, May 1, 2001; minimum, 361 microsiemens/cm, July 18, 2001.
pH: Maximum, 9.1 standard units, Sept. 7, 2002; minimum, 6.9 standard units, June 14, 2002.
WATER TEMPERATURE: Maximum, 33.7°C, Aug. 5, 2001; minimum, 2.7°C, Feb. 2, 2002.
DISSOLVED OXYGEN: Maximum 18.0 mg/L, June 2, 2002; minimum, <0.2 mg/L, July 20, 2002.
TURBIDITY: Maximum, 240 NTU, May 12, 2002; minimum, <2.0 NTU, Oct. 29, 2000.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 642 microsiemens/cm, Apr. 21; minimum, 417 microsiemens/cm, Oct. 1.
pH: Maximum, 9.1 units, Aug. 17, Sept. 7; minimum, 6.9 units, June 4.
WATER TEMPERATURE: Maximum, 31.4°C, July 18; minimum, 2.7°C, Feb. 2.
DISSOLVED OXYGEN: Maximum, 18.0 mg/L, June 2; minimum, 0.2 mg/L, many days.
TURBIDITY: Maximum, 240 NTU, May 12; minimum, <2.0 NTU, many days.

SPECIFIC CONDUCTANCE FROM DCP, in US/CM @ 25C, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	424	417	420	---	---	---	469	468	468	484	482	482
2	424	417	420	451	449	450	469	468	468	485	475	481
3	428	422	424	451	449	450	469	468	468	476	475	476
4	428	422	425	452	450	451	469	468	468	478	476	477
5	428	425	427	450	446	448	469	468	469	478	476	477
6	429	427	428	450	447	449	470	468	469	479	477	478
7	429	427	428	452	448	450	469	468	469	480	476	479
8	431	428	430	454	450	453	469	469	469	482	478	479
9	433	430	432	454	453	454	470	469	470	481	477	480
10	436	433	434	455	454	454	470	469	470	480	479	480
11	437	434	435	455	454	454	471	470	470	482	477	479
12	437	434	436	455	454	455	471	470	470	481	477	479
13	437	434	435	456	455	455	471	470	470	480	478	479
14	439	435	438	456	455	455	471	470	471	479	477	478
15	439	436	438	456	455	456	472	471	472	480	477	478
16	439	436	438	456	453	455	472	472	472	479	476	478
17	440	436	439	457	451	453	475	472	474	479	475	478
18	443	438	440	456	452	453	475	474	474	481	473	478
19	443	439	442	456	455	455	475	474	475	481	476	478
20	445	442	443	456	455	456	476	475	475	482	476	478
21	444	443	443	457	455	456	476	475	476	479	475	478
22	444	435	439	459	456	457	476	475	476	478	476	478
23	444	435	441	460	458	459	477	476	476	478	476	477
24	446	437	443	462	459	461	478	476	477	478	475	477
25	447	444	445	462	461	462	479	477	478	478	477	477
26	447	445	445	463	461	462	479	478	479	478	477	477
27	446	445	446	465	463	463	480	479	479	478	477	477
28	447	446	447	466	464	465	480	479	480	479	475	477
29	447	447	447	467	465	466	481	479	480	478	476	477
30	448	447	447	468	466	467	483	479	481	477	475	476
31	---	---	---	---	---	---	484	481	482	484	473	475
MONTH	---	---	---	---	---	---	484	468	473	485	473	478

06892450 OLATHE LAKE NEAR OLATHE, KS--Continued

SPECIFIC CONDUCTANCE FROM DCP, in US/CM @ 25C, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	484	478	482	557	555	556	589	586	588	---	---	---
2	485	482	484	558	557	557	590	588	588	---	629	---
3	508	484	491	560	558	559	590	588	589	635	628	630
4	501	491	495	561	559	560	590	589	590	632	630	631
5	497	492	494	562	560	561	591	588	590	633	624	630
6	497	493	495	564	560	562	593	589	590	633	631	632
7	532	494	506	563	562	562	591	590	591	630	625	628
8	510	498	500	564	562	563	592	589	591	635	629	631
9	528	510	524	564	562	563	591	590	590	637	630	633
10	533	527	530	565	563	563	597	586	592	632	626	630
11	534	532	533	570	565	567	612	592	600	629	627	628
12	536	534	535	567	564	566	614	610	612	634	530	604
13	536	535	535	571	566	568	617	610	612	589	568	579
14	539	535	536	572	566	570	617	611	614	583	577	582
15	539	537	538	574	572	573	616	614	615	583	578	580
16	539	538	539	574	573	574	617	615	616	581	576	577
17	540	539	539	575	573	574	618	616	617	580	577	578
18	541	540	540	577	574	575	620	617	618	583	578	579
19	540	538	540	578	576	577	621	618	619	584	580	582
20	540	539	539	578	577	577	620	614	618	585	580	583
21	541	533	538	579	578	579	642	612	622	584	581	583
22	539	537	538	581	579	580	628	620	622	584	582	584
23	543	539	542	581	580	580	---	---	---	585	584	585
24	551	543	547	583	581	582	---	---	---	586	579	585
25	551	549	550	584	582	583	---	---	---	585	540	566
26	554	550	552	586	583	584	---	---	---	567	550	558
27	556	554	555	586	584	585	---	---	---	559	546	555
28	557	555	556	586	584	585	---	---	---	554	548	551
29	---	---	---	586	584	585	---	---	---	552	546	549
30	---	---	---	592	584	586	---	---	---	550	541	547
31	---	---	---	587	585	586	---	---	---	551	547	548
MONTH	557	478	527	592	555	572	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	551	545	548	528	500	510	497	472	481	491	476	483
2	552	498	530	509	503	507	496	479	485	484	476	479
3	538	499	506	515	507	513	483	471	474	487	476	481
4	553	505	523	516	509	512	483	472	476	484	475	479
5	533	511	524	516	499	504	500	470	478	484	474	480
6	537	511	528	517	509	513	497	467	486	499	478	486
7	545	515	533	520	507	514	484	469	472	497	473	488
8	541	517	525	519	511	515	481	469	474	498	474	485
9	525	520	523	522	503	515	481	474	477	493	479	486
10	528	524	526	521	494	511	490	474	480	498	484	491
11	534	527	530	518	497	506	480	474	476	494	488	491
12	547	529	534	513	494	502	482	477	473	491	489	490
13	547	536	541	511	495	500	488	479	483	492	489	491
14	547	534	540	503	499	501	492	478	484	495	486	490
15	539	534	537	507	495	502	489	476	479	497	489	492
16	540	522	536	512	491	505	483	478	481	496	493	494
17	536	515	521	512	484	503	492	479	482	496	492	494
18	531	516	520	513	480	504	490	482	485	496	492	495
19	533	531	532	512	480	501	489	482	486	499	495	497
20	541	530	529	507	470	491	487	478	483	500	498	499
21	543	527	537	503	478	488	486	481	483	500	498	499
22	543	523	536	512	478	495	486	483	484	503	500	502
23	544	522	535	500	477	494	491	484	486	503	500	502
24	546	534	539	507	480	491	491	480	488	503	500	502
25	548	536	540	495	476	481	490	482	486	503	498	501
26	---	---	---	---	---	---	490	480	485	506	499	502
27	---	---	---	488	482	485	493	481	487	506	500	504
28	543	536	539	491	488	490	497	462	486	501	488	493
29	541	534	537	496	490	491	494	464	482	491	486	489
30	541	495	520	496	484	493	490	472	480	489	485	487
31	---	---	---	495	476	486	488	474	480	---	---	---
MONTH	---	---	---	---	---	---	500	462	481	506	473	492

06892450 OLATHE LAKE NEAR OLATHE, KS--Continued

PH, WH, FIELD FROM DCP, in (STANDARD UNITS), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	8.7	8.0	8.6	---	---	---	7.7	7.7	7.7	7.8	7.8	7.8
2	8.7	8.3	8.6	---	---	---	7.7	7.7	7.7	7.8	7.8	7.8
3	8.5	7.9	8.3	7.9	7.7	7.8	7.7	7.7	7.7	7.8	7.8	7.8
4	8.5	7.8	8.3	7.8	7.6	7.7	7.7	7.7	7.7	7.8	7.8	7.8
5	7.8	7.6	7.7	8.4	7.7	8.2	7.8	7.7	7.7	7.8	7.8	7.8
6	8.0	7.7	7.7	8.3	8.1	8.2	7.7	7.7	7.7	7.8	7.8	7.8
7	8.0	7.8	7.8	8.3	8.0	8.2	7.7	7.7	7.7	7.8	7.8	7.8
8	7.8	7.7	7.8	8.2	7.7	7.8	7.7	7.7	7.7	7.8	7.8	7.8
9	7.7	7.6	7.7	7.7	7.6	7.6	7.7	7.6	7.7	7.8	7.8	7.8
10	7.7	7.4	7.6	7.7	7.6	7.6	7.7	7.6	7.7	7.8	7.8	7.8
11	7.7	7.4	7.5	7.8	7.6	7.7	7.7	7.7	7.7	7.8	7.8	7.8
12	7.6	7.4	7.5	7.7	7.7	7.7	7.7	7.6	7.7	7.8	7.8	7.8
13	7.5	7.4	7.5	7.7	7.6	7.7	7.7	7.6	7.7	7.8	7.8	7.8
14	7.5	7.4	7.4	7.8	7.6	7.7	7.7	7.6	7.7	7.8	7.8	7.8
15	7.5	7.4	7.5	7.8	7.6	7.7	7.7	7.6	7.7	7.8	7.8	7.8
16	7.5	7.4	7.5	7.9	7.6	7.7	7.7	7.6	7.7	7.8	7.8	7.8
17	7.6	7.5	7.5	8.3	7.5	8.1	7.7	7.6	7.7	7.9	7.8	7.8
18	7.6	7.5	7.6	8.1	7.6	8.0	7.7	7.6	7.7	7.9	7.8	7.8
19	8.0	7.5	7.6	7.7	7.6	7.6	7.7	7.7	7.7	7.9	7.8	7.8
20	7.8	7.5	7.6	7.6	7.6	7.6	7.7	7.6	7.7	7.9	7.8	7.9
21	7.6	7.4	7.6	7.7	7.6	7.6	7.7	7.6	7.7	7.9	7.8	7.9
22	8.4	7.4	8.2	7.7	7.6	7.6	7.8	7.7	7.7	7.9	7.9	7.9
23	8.5	7.7	8.2	7.7	7.6	7.6	7.8	7.7	7.8	7.9	7.9	7.9
24	8.4	7.6	7.8	7.6	7.6	7.6	7.8	7.8	7.8	8.0	7.9	7.9
25	7.8	7.5	7.6	7.7	7.6	7.6	7.8	7.7	7.8	8.0	7.9	8.0
26	7.7	7.6	7.6	7.7	7.6	7.6	7.8	7.8	7.8	8.0	8.0	8.0
27	7.9	7.6	7.6	7.7	7.6	7.6	7.8	7.8	7.8	8.0	8.0	8.0
28	7.8	7.6	7.7	7.7	7.6	7.6	7.8	7.7	7.8	8.0	8.0	8.0
29	8.0	7.6	7.7	7.7	7.6	7.6	7.8	7.8	7.8	8.0	8.0	8.0
30	---	---	---	7.7	7.6	7.7	7.8	7.8	7.8	8.0	8.0	8.0
31	---	---	---	---	---	---	7.8	7.8	7.8	8.1	8.0	8.0
MAX	---	---	---	---	---	---	7.8	7.8	7.8	8.1	8.0	8.0
MIN	---	---	---	---	---	---	7.7	7.6	7.7	7.8	7.8	7.8

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		FEBRUARY			MARCH			APRIL			MAY	
1	8.1	8.0	8.0	8.1	8.1	8.1	8.3	8.2	8.3	---	---	---
2	8.1	8.0	8.1	8.1	8.1	8.1	8.3	8.2	8.2	---	---	---
3	8.1	8.0	8.1	8.1	8.1	8.1	8.2	8.2	8.2	7.6	7.2	7.3
4	8.2	8.0	8.1	8.1	8.1	8.1	8.3	8.2	8.2	7.5	7.2	7.4
5	8.2	8.1	8.1	8.1	8.1	8.1	8.3	8.2	8.2	8.1	7.2	7.4
6	8.2	8.1	8.1	8.1	8.1	8.1	8.3	8.2	8.3	---	---	---
7	8.2	8.0	8.1	8.2	8.1	8.1	8.3	8.2	8.3	---	---	---
8	8.2	8.1	8.2	8.2	8.1	8.1	8.3	8.2	8.2	7.6	7.4	7.6
9	8.2	8.1	8.1	8.2	8.1	8.2	8.2	8.2	8.2	7.5	7.2	7.4
10	8.1	8.1	8.1	8.2	8.1	8.2	8.4	8.2	8.3	7.6	7.4	7.5
11	8.2	8.1	8.1	8.2	8.1	8.2	8.3	8.1	8.2	7.5	7.4	7.4
12	8.1	8.1	8.1	8.2	8.1	8.1	8.2	8.1	8.1	7.4	7.2	7.3
13	8.1	8.1	8.1	8.2	8.1	8.2	8.2	8.1	8.2	7.3	7.1	7.2
14	8.2	8.1	8.1	8.2	8.1	8.2	8.3	8.1	8.2	7.2	7.1	7.2
15	8.2	8.1	8.1	8.1	8.1	8.1	8.3	8.2	8.2	7.3	7.1	7.2
16	8.2	8.1	8.1	8.2	8.1	8.1	8.2	8.2	8.2	7.3	7.1	7.2
17	8.2	8.1	8.1	8.1	8.1	8.1	8.3	8.1	8.2	7.3	7.1	7.1
18	8.1	8.1	8.1	8.2	8.1	8.1	8.2	8.2	8.2	7.4	7.3	7.3
19	8.1	8.1	8.1	8.1	8.1	8.1	8.2	8.0	8.1	7.4	7.3	7.4
20	8.1	8.1	8.1	8.1	8.1	8.1	8.2	8.0	8.1	7.9	7.3	7.4
21	8.2	8.1	8.1	8.1	8.1	8.1	8.2	7.9	8.0	8.0	7.8	7.8
22	8.2	8.1	8.2	8.1	8.1	8.1	8.0	7.9	8.0	7.9	7.6	7.7
23	8.2	8.2	8.2	8.2	8.1	8.1	---	---	---	7.6	7.5	7.6
24	8.2	8.1	8.2	8.1	8.1	8.1	---	---	---	7.5	7.4	7.5
25	8.2	8.1	8.1	8.1	8.1	8.1	---	---	---	7.5	7.3	7.4
26	8.1	8.1	8.1	8.1	8.1	8.1	---	---	---	7.7	7.4	7.5
27	8.1	8.1	8.1	8.1	8.1	8.1	---	---	---	7.6	7.3	7.4
28	8.1	8.1	8.1	8.2	8.1	8.1	---	---	---	7.4	7.2	7.3
29	---	---	---	8.2	8.1	8.1	---	---	---	7.3	7.2	7.2
30	---	---	---	8.2	8.1	8.2	---	---	---	7.2	7.1	7.2
31	---	---	---	8.3	8.1	8.2	---	---	---	7.3	7.1	7.2
MAX	8.2	8.2	8.2	8.3	8.1	8.2	---	---	---	---	---	---
MIN	8.1	8.0	8.0	8.1	8.1	8.1	---	---	---	---	---	---

06892450 OLATHE LAKE NEAR OLATHE, KS--Continued

PH, WH, FIELD FROM DCP, in (STANDARD UNITS), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	7.3	7.1	7.2	8.8	7.8	8.7	8.8	7.9	8.6	8.8	7.7	8.3
2	8.3	7.1	7.3	8.8	8.2	8.6	8.6	7.9	8.4	8.8	8.1	8.6
3	8.2	7.2	8.1	8.8	---	---	9.0	8.4	8.8	8.8	7.7	8.1
4	8.1	6.9	7.4	7.8	7.2	7.4	9.0	8.3	8.6	8.7	7.7	8.0
5	7.9	7.0	7.2	8.4	7.3	8.2	8.9	7.8	8.4	8.6	7.7	7.8
6	7.9	7.0	7.2	7.7	7.2	7.4	8.5	7.8	7.9	8.1	7.7	7.8
7	8.1	6.9	7.1	7.8	7.2	7.3	8.7	7.9	8.4	9.1	7.8	7.9
8	8.1	6.9	8.0	7.5	7.2	7.3	8.6	8.1	8.3	9.0	7.8	8.5
9	8.0	7.7	7.8	8.1	7.1	7.3	8.8	8.1	8.6	9.0	7.9	8.7
10	7.8	7.5	7.6	8.3	7.2	7.3	8.8	7.9	8.6	8.9	7.7	8.2
11	7.7	7.5	7.6	7.9	7.2	7.5	8.9	8.4	8.6	8.6	7.9	8.2
12	7.8	7.2	7.5	8.2	7.2	7.6	8.9	8.3	8.5	8.8	8.2	8.4
13	7.4	7.0	7.2	8.1	7.2	7.9	8.5	7.8	8.0	8.8	8.3	8.5
14	7.7	6.9	7.3	8.0	7.5	7.8	8.8	7.9	8.0	8.9	7.8	8.3
15	7.9	7.3	7.6	8.1	7.3	7.6	9.0	8.0	---	8.2	7.8	7.9
16	8.1	7.1	7.5	8.0	7.2	7.3	9.0	8.5	8.7	8.2	7.8	8.0
17	8.2	7.5	8.0	8.3	7.2	7.3	9.1	7.8	8.8	8.8	7.8	7.9
18	8.8	7.6	8.0	8.3	7.2	7.3	8.9	8.0	8.5	8.8	8.2	8.5
19	8.8	8.6	8.7	8.0	7.2	7.3	8.9	8.0	8.6	8.5	7.8	8.0
20	9.0	8.2	8.7	8.4	7.2	7.4	9.0	8.4	8.8	8.0	7.7	7.8
21	8.9	8.0	8.3	8.3	7.2	8.0	9.0	8.7	8.8	8.2	7.7	7.9
22	8.8	7.8	8.1	8.2	7.2	7.8	9.0	8.7	8.8	8.1	7.7	7.8
23	8.9	7.8	8.0	8.2	7.6	7.9	9.0	8.1	8.8	8.0	7.8	7.9
24	8.2	7.7	7.9	8.2	7.3	7.9	9.0	8.2	8.3	8.3	7.7	7.9
25	7.9	7.6	7.8	8.4	7.6	8.2	8.7	8.2	8.4	8.2	7.8	8.1
26	---	---	---	8.9	---	---	9.0	8.0	8.2	8.2	7.7	7.8
27	---	---	---	8.9	8.7	8.8	8.4	7.8	8.0	7.8	7.6	7.7
28	7.7	7.6	7.6	8.9	8.6	8.8	8.8	7.8	7.9	8.2	7.7	8.0
29	7.7	7.6	7.7	8.7	8.0	8.5	8.9	7.8	7.9	8.2	7.7	8.0
30	8.8	7.7	7.9	8.9	8.0	8.2	8.8	7.8	8.0	8.2	7.9	8.0
31	---	---	---	9.0	8.0	8.3	8.8	7.8	8.5	---	---	---
MAX	---	---	---	9.0	---	---	9.1	8.7	---	9.1	8.3	8.7
MIN	---	---	---	7.5	---	---	8.4	7.8	---	7.8	7.6	7.7

WATER TEMPERATURE FROM TRANSDUCER, in (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	21.0	20.1	20.4	---	---	---	9.4	9.1	9.2	3.8	3.5	3.7
2	21.0	20.2	20.6	---	---	---	9.3	8.9	9.1	3.6	3.4	3.5
3	20.9	20.0	20.3	15.0	14.4	14.7	9.3	9.1	9.2	3.7	3.4	3.5
4	20.8	19.6	20.3	14.9	14.6	14.7	9.9	9.3	9.6	3.6	3.3	3.4
5	19.7	19.1	19.4	15.9	14.7	15.3	10.4	9.9	10.2	3.6	3.2	3.3
6	19.3	18.8	19.0	15.7	15.2	15.4	10.3	10.1	10.2	3.4	3.2	3.3
7	19.1	18.5	18.7	15.7	15.3	15.5	10.3	9.9	10.1	3.6	3.1	3.3
8	18.6	18.0	18.2	15.5	14.5	14.9	10.1	9.7	9.9	3.4	3.0	3.2
9	18.1	17.9	18.0	14.5	14.2	14.3	9.7	9.4	9.5	3.5	3.1	3.3
10	18.1	17.9	17.9	14.2	13.8	14.0	9.4	9.0	9.2	3.6	3.2	3.3
11	18.8	17.7	18.1	14.2	13.6	13.9	9.0	8.7	8.8	3.7	3.2	3.5
12	18.0	17.7	17.8	13.8	13.5	13.6	8.8	8.6	8.7	3.7	3.4	3.5
13	17.8	17.5	17.6	13.8	13.5	13.6	8.6	8.4	8.5	3.6	3.2	3.4
14	17.5	17.3	17.4	14.0	13.6	13.7	8.4	8.2	8.3	3.6	3.4	3.5
15	17.3	16.7	17.1	14.3	13.7	13.9	8.2	8.0	8.1	3.4	3.3	3.4
16	16.7	16.1	16.4	14.4	13.9	14.1	8.1	8.0	8.1	3.7	3.2	3.3
17	16.2	15.8	16.0	14.8	13.9	14.3	8.1	7.8	7.9	3.5	3.0	3.2
18	16.0	15.5	15.7	14.5	13.8	14.2	8.1	7.7	7.8	3.5	2.8	3.1
19	16.2	15.2	15.6	13.8	13.4	13.6	7.8	7.4	7.6	3.3	2.8	3.1
20	16.1	15.3	15.7	13.4	13.0	13.2	7.4	7.2	7.3	3.1	2.8	3.0
21	16.0	15.8	15.9	13.0	12.5	12.7	7.2	7.1	7.1	3.2	2.8	3.0
22	17.3	15.7	16.8	12.5	12.3	12.4	7.3	7.1	7.2	3.4	2.9	3.1
23	17.7	16.3	16.9	12.3	12.2	12.2	7.1	6.6	6.9	3.6	3.4	3.5
24	17.4	15.7	16.4	12.2	12.0	12.1	6.6	6.0	6.3	3.7	3.4	3.5
25	16.0	15.3	15.6	12.1	11.8	11.9	6.0	5.5	5.7	3.6	3.2	3.4
26	15.3	14.9	15.1	11.8	11.6	11.7	5.6	5.1	5.3	3.7	3.3	3.5
27	15.4	14.7	15.0	11.6	10.8	11.2	5.2	4.9	5.0	4.0	3.6	3.8
28	15.0	14.2	14.4	10.8	10.1	10.5	5.0	4.6	4.8	4.3	3.8	4.0
29	15.2	14.1	14.4	10.1	9.6	9.8	4.6	4.2	4.4	4.1	3.8	3.9
30	---	---	---	9.6	9.3	9.4	4.3	3.9	4.1	3.8	3.2	3.6
31	---	---	---	---	---	---	4.0	3.6	3.8	3.7	3.2	3.4
MONTH	---	---	---	---	---	---	10.4	3.6	7.7	4.3	2.8	3.4

06892450 OLATHE LAKE NEAR OLATHE, KS--Continued

WATER TEMPERATURE FROM TRANSDUCER, in (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	3.6	3.2	3.3	5.2	4.8	5.0	9.8	9.0	9.4	---	---	---
2	3.3	2.7	3.0	4.8	4.2	4.5	9.9	9.4	9.7	15.8	---	---
3	3.4	3.0	3.2	4.2	3.8	4.0	9.6	9.2	9.3	16.9	15.5	16.0
4	3.5	3.0	3.3	3.8	3.3	3.6	9.4	9.1	9.2	16.5	15.6	16.0
5	3.6	3.0	3.2	4.0	3.5	3.8	10.0	9.2	9.6	18.9	15.7	16.7
6	3.6	3.2	3.3	4.4	3.8	4.1	10.4	9.3	10.1	---	---	---
7	3.7	3.2	3.4	4.7	4.2	4.4	10.2	10.0	10.1	19.1	---	---
8	3.5	3.1	3.3	5.7	4.7	5.2	10.1	9.9	10	18.8	18.0	18.4
9	3.8	3.4	3.6	5.7	5.4	5.5	10.0	9.9	9.9	18.1	17.5	17.9
10	3.8	3.6	3.6	5.6	5.2	5.4	12.2	9.9	11.1	18.3	17.8	18.0
11	3.7	3.4	3.5	5.9	5.5	5.6	12.1	11.1	11.7	18.0	17.8	17.9
12	3.8	3.5	3.7	6.8	5.6	5.8	11.9	11.5	11.6	18.0	17.5	17.7
13	3.8	3.6	3.7	7.3	5.6	6.6	12.9	11.9	12.3	17.6	16.9	17.2
14	3.9	3.6	3.7	7.3	6.4	7.0	14.4	11.9	13.0	17.6	17.0	17.4
15	4.1	3.8	3.9	7.1	7.0	7.0	15.4	14.0	14.7	19.2	17.1	18.2
16	4.2	4.0	4.1	7.2	6.9	7.0	15.7	15.2	15.5	18.6	17.8	18.1
17	4.5	4.1	4.3	7.7	6.9	7.1	17.1	15.2	16.1	18.5	17.6	18.0
18	4.7	4.3	4.5	7.6	6.9	7.3	17.7	16.7	17.2	18.7	18.1	18.2
19	5.4	4.7	5.0	7.5	7.1	7.3	17.3	16.2	17.0	18.8	18.3	18.5
20	5.5	5.1	5.3	7.4	7.3	7.3	17.2	16.8	17.0	19.5	18.1	18.6
21	5.6	5.3	5.5	7.5	7.3	7.4	16.8	15.7	16.2	19.9	19.0	19.5
22	6.2	5.5	5.7	7.3	6.9	7.0	16.2	15.9	16.0	19.5	18.8	19.0
23	6.2	5.7	6.0	7.6	6.8	7.2	---	---	---	19.0	18.7	18.8
24	6.6	6.1	6.3	7.6	7.2	7.3	---	---	---	18.8	18.4	18.6
25	6.6	6.2	6.4	7.2	6.9	7.0	---	---	---	18.5	17.8	18.1
26	6.2	5.3	5.7	6.9	6.4	6.6	---	---	---	19.7	18.0	18.8
27	5.3	4.9	5.0	7.2	6.6	6.9	---	---	---	19.8	17.9	18.8
28	5.1	4.7	4.8	7.6	7.2	7.3	---	---	---	19.1	18.4	18.8
29	---	---	---	8.4	7.2	7.6	---	---	---	19.0	18.5	18.7
30	---	---	---	9.5	7.6	8.3	---	---	---	19.3	18.5	18.9
31	---	---	---	9.3	7.5	8.4	---	---	---	19.6	18.7	19.1
MONTH	6.6	2.7	4.3	9.5	3.3	6.3	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	20.0	18.9	19.4	29.0	27.5	28.4	30.3	28.5	29.6	27.2	26.1	26.5
2	27.8	19.5	23.0	28.4	27.8	28.0	29.5	28.6	29.0	27.3	26.5	26.8
3	27.0	22.3	26.2	28.0	27.0	27.6	30.8	29.2	29.9	27.3	26.0	26.6
4	26.6	18.9	24.3	27.7	27.0	27.4	30.7	29.4	30.0	26.8	25.9	26.3
5	24.3	22.7	23.5	29.2	27.5	28.1	30.4	29.0	29.8	27.0	25.9	26.2
6	24.1	22.4	23.0	28.1	27.3	27.6	30.3	29.1	29.5	26.6	25.9	26.2
7	25.7	21.7	23.1	28.6	27.4	27.9	30.2	29.2	29.1	28.2	26.0	26.8
8	26.2	22.1	24.7	28.5	27.7	28.0	29.6	28.4	28.8	27.9	26.3	27.1
9	25.6	24.5	25.0	29.4	27.4	28.2	29.1	28.0	28.3	27.9	26.7	27.2
10	24.8	23.9	24.5	30.5	27.6	28.6	28.7	27.6	28.1	27.8	26.1	26.8
11	25.2	24.4	24.7	29.3	27.9	28.7	28.7	27.5	28.0	26.6	25.8	26.2
12	25.0	23.8	24.4	29.0	28.2	28.6	28.1	27.4	27.7	26.1	25.5	25.8
13	24.4	23.5	24.0	28.7	27.8	28.2	27.4	26.2	26.8	25.9	25.0	25.4
14	24.6	22.8	23.9	28.3	27.7	27.9	28.0	25.7	26.3	26.0	24.7	25.1
15	24.4	23.6	24.0	28.4	27.6	27.9	---	---	---	24.8	24.0	24.4
16	24.6	23.4	23.9	28.7	27.5	27.8	27.1	25.8	26.2	24.4	23.8	24.0
17	25.8	23.9	24.9	29.7	27.5	28.2	27.1	25.1	26.4	25.0	23.8	24.1
18	25.4	24.4	24.9	31.4	27.8	28.4	26.4	25.4	25.6	25.1	23.8	24.3
19	25.1	24.1	24.5	30.3	27.8	28.5	26.5	25.3	25.9	24.5	23.7	24.1
20	26.7	24.3	24.9	30.6	28.1	28.9	27.1	25.7	26.1	23.7	23.0	23.3
21	26.7	24.2	24.9	30.5	28.3	29.6	27.1	26.2	26.5	23.5	22.9	23.2
22	27.4	24.2	25.8	30.2	28.2	29.1	27.2	26.2	26.5	23.5	22.2	22.7
23	27.7	24.7	25.9	29.1	28.4	28.7	27.2	26.0	26.7	22.5	21.8	22.1
24	26.4	24.9	25.8	29.0	28.2	28.6	27.0	26.2	26.4	22.1	21.3	21.7
25	26.3	25.1	25.8	30.0	28.4	29.3	26.5	26.2	26.4	22.0	21.1	21.5
26	---	---	---	30.3	28.6	29.7	26.6	26.1	26.2	21.8	21.0	21.3
27	---	---	---	30.0	29.1	29.6	26.5	26.0	26.2	21.1	20.7	20.9
28	26.7	25.8	26.3	29.8	29.0	29.4	27.0	25.9	26.3	21.6	20.7	21.0
29	26.9	26.4	26.6	29.2	28.3	28.7	27.2	26.0	26.4	22.1	21.2	21.5
30	29.6	26.6	28.0	29.5	28.4	28.6	27.0	26.1	26.4	22.3	21.6	21.9
31	---	---	---	30.7	28.4	29.4	27.3	26.1	26.5	---	---	---
MONTH	---	---	---	31.4	27.0	28.5	---	---	---	28.2	20.7	24.4

06892450 OLATHE LAKE NEAR OLATHE, KS--Continued

OXYGEN DISSOLVED FROM DCP, in (MG/L), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	10.8	5.5	8.8	---	---	---	8.8	8.4	8.6	11.5	11.2	11.4
2	10.5	7.0	9.0	---	---	---	8.9	8.5	8.7	11.5	10.7	11.1
3	9.1	6.3	7.5	8.5	7.4	8.0	8.9	8.5	8.7	10.7	10.6	10.7
4	9.4	5.2	7.7	8.1	6.0	7.4	9.1	8.7	9.0	10.8	10.6	10.7
5	6.0	4.6	5.2	11.6	7.4	10.0	9.2	9.0	9.2	10.8	10.6	10.7
6	7.2	4.9	5.8	11.1	9.8	10.3	9.1	8.8	9.0	10.8	10.6	10.7
7	7.4	5.5	6.4	10.4	9.0	9.9	9.1	8.8	9.0	10.8	10.6	10.7
8	7.0	5.9	6.5	9.7	7.0	8.0	9.0	8.8	8.9	10.8	10.6	10.8
9	6.6	5.7	6.2	7.0	6.2	6.6	9.1	8.8	8.9	10.9	10.5	10.8
10	6.4	5.2	6.1	7.3	6.1	6.7	9.2	8.7	9.0	10.8	10.6	10.8
11	7.9	5.2	6.1	8.1	6.6	7.4	9.3	9.0	9.2	10.9	10.4	10.7
12	6.7	5.0	6.1	7.7	7.1	7.3	9.3	8.5	9.1	10.9	10.6	10.8
13	6.3	5.2	5.7	7.7	7.0	7.2	9.2	8.9	9.2	11.0	10.8	10.9
14	6.1	4.9	5.5	8.0	7.1	7.5	9.2	8.9	9.1	11.2	10.9	11.0
15	6.1	5.0	5.5	8.3	7.0	7.4	9.5	9.0	9.3	11.3	10.9	11.2
16	6.8	5.7	6.3	9.1	6.2	7.7	9.5	9.0	9.3	11.3	11.1	11.3
17	8.0	5.5	6.8	10.8	4.5	8.8	9.3	9.0	9.2	11.8	11.2	11.4
18	7.6	6.4	7.0	9.6	6.4	8.7	9.5	9.0	9.3	11.8	11.1	11.5
19	9.3	6.3	7.7	7.2	6.4	6.8	9.6	9.2	9.4	11.7	11.2	11.5
20	9.3	6.6	7.8	7.1	6.2	6.6	9.6	9.4	9.5	11.8	11.2	11.7
21	8.4	7.3	7.8	7.5	6.8	7.2	9.8	9.4	9.6	11.8	11.5	11.7
22	13.5	6.1	10.6	7.9	6.8	7.3	10.2	9.8	10.0	12.2	11.5	12.0
23	13.0	8.3	11.5	7.7	7.2	7.5	10.4	10.0	10.2	12.2	12.0	12.1
24	12.9	6.7	9.4	7.6	7.1	7.3	10.5	10.3	10.4	12.2	12.0	12.1
25	9.1	5.4	6.8	8.0	6.9	7.3	10.6	10.4	10.5	12.4	12.2	12.3
26	6.5	5.5	6.1	8.1	7.6	7.8	10.8	10.5	10.7	12.7	12.4	12.5
27	7.8	5.9	6.5	8.2	7.6	7.8	10.9	10.7	10.8	12.8	12.5	12.7
28	7.2	6.5	6.9	8.2	7.8	8.0	10.9	10.8	10.9	12.7	12.4	12.6
29	8.6	6.8	7.4	8.3	7.9	8.1	11.2	10.9	11.0	12.7	12.6	12.7
30	---	---	---	8.9	8.0	8.4	11.3	11.1	11.2	12.8	12.5	12.6
31	---	---	---	---	---	---	11.4	11.2	11.3	12.8	12.2	12.6
MONTH	---	---	---	---	---	---	11.4	8.4	9.6	12.8	10.4	11.5

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	13.0	12.2	12.7	13.3	13.1	13.2	13.4	12.8	13.2	---	---	---
2	13.2	12.8	13.0	13.5	13.2	13.3	12.9	12.4	12.7	---	---	---
3	13.2	12.9	13.1	13.8	13.5	13.7	12.6	12.3	12.4	10.4	7.7	8.9
4	13.6	13.0	13.3	14.1	13.8	14.0	12.6	12.2	12.4	9.8	7.5	8.7
5	13.6	13.2	13.5	14.3	14.0	14.2	12.6	12.1	12.3	13.4	7.5	9.7
6	13.7	12.9	13.4	14.5	14.3	14.3	12.4	12.1	12.3	---	---	---
7	13.6	12.8	13.2	14.5	14.4	14.5	12.1	11.8	11.9	---	---	---
8	14.0	13.4	13.8	14.6	14.3	14.4	11.8	11.2	11.5	9.9	8.3	9.4
9	13.8	13.2	13.4	14.5	14.2	14.4	11.5	11.2	11.3	8.7	7.1	8.1
10	13.4	13.2	13.3	14.6	14.4	14.5	11.8	11.1	11.5	9.2	8.4	8.9
11	13.5	13.2	13.3	14.7	14.4	14.6	11.3	10.4	10.9	8.8	8.2	8.4
12	13.4	13.2	13.3	14.8	14.5	14.6	10.4	10.1	10.2	8.2	6.8	7.6
13	13.3	13.1	13.2	14.8	14.4	14.7	10.9	10.1	10.5	7.7	6.1	7.3
14	13.4	13.1	13.3	14.7	14.4	14.6	10.9	10.0	10.5	7.6	6.6	7.3
15	13.4	13.2	13.3	14.5	14.3	14.4	10.7	10.2	10.4	8.5	6.4	7.5
16	13.3	13.2	13.2	14.6	14.3	14.4	10.2	9.6	9.9	8.1	6.7	7.2
17	13.3	13.0	13.2	14.6	14.3	14.4	10.2	9.2	9.7	7.7	6.5	7.0
18	13.2	13.0	13.1	14.7	14.2	14.5	9.8	9.4	9.6	8.2	7.2	7.5
19	13.0	12.6	12.8	15.6	14.4	14.7	9.4	8.7	9.1	8.4	7.2	8.0
20	12.7	12.4	12.6	14.6	14.0	14.3	9.5	8.5	9.0	11.4	6.8	8.4
21	12.8	12.3	12.6	14.1	13.9	14.0	9.1	8.0	8.5	12.4	10.5	11.4
22	12.8	12.6	12.7	14.0	13.8	13.9	8.7	8.0	8.4	11.4	9.4	10.1
23	12.8	12.7	12.8	14.1	13.8	14.0	---	---	---	9.6	8.6	9.1
24	12.8	12.6	12.7	14.0	13.7	13.8	---	---	---	8.9	7.6	8.3
25	12.7	12.6	12.7	13.7	13.4	13.6	---	---	---	8.6	7.0	8.0
26	12.9	12.6	12.8	13.5	13.4	13.4	---	---	---	10.2	7.8	9.0
27	13.1	12.9	13.0	13.6	13.5	13.5	---	---	---	9.5	7.6	8.3
28	13.2	13.0	13.0	13.6	13.2	13.4	---	---	---	8.5	6.9	7.6
29	---	---	---	13.4	13.0	13.2	---	---	---	7.3	6.2	6.8
30	---	---	---	13.3	12.8	13.1	---	---	---	7.1	5.1	6.3
31	---	---	---	13.5	12.6	13.0	---	---	---	8.4	5.5	6.3
MONTH	14.0	12.2	13.1	15.6	12.6	14.0	---	---	---	---	---	---

06892450 OLATHE LAKE NEAR OLATHE, KS--Continued

OXYGEN DISSOLVED FROM DCP, in (MG/L), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	7.1	4.7	6.0	---	---	---	10.2	3.2	7.5	7.6	0.2	4.2
2	18.0	4.9	10.3	---	---	---	7.9	3.5	6.3	7.7	3.6	5.7
3	15.5	6.2	13.9	---	---	---	10.9	6.9	9.7	6.8	0.9	3.9
4	13.7	1.8	8.3	---	---	---	10.8	6.5	8.6	5.5	0.3	2.9
5	10.6	3.4	5.9	---	---	---	10.6	1.2	8.6	5.4	0.2	1.5
6	10.4	3.0	5.5	---	---	---	8.7	2.1	4.0	5.1	0.5	2.2
7	13.8	1.3	5.6	---	---	---	8.9	3.5	6.2	11.2	2.4	5.7
8	12.8	1.8	9.2	---	---	---	7.4	5.1	5.5	10.5	1.8	6.3
9	11.4	8.7	9.8	---	---	---	9.8	5.2	7.7	10.3	3.3	7.2
10	9.3	7.8	8.5	8.7	0.4	3.3	9.6	6.5	8.0	9.7	0.8	4.8
11	8.7	7.4	8.1	6.9	0.8	4.0	9.7	6.8	8.5	6.8	3.2	5.2
12	9.2	4.8	6.8	8.9	1.8	5.6	9.8	6.6	7.9	8.6	5.4	6.5
13	6.3	3.6	5.0	8.2	1.9	6.3	7.9	3.4	5.3	8.9	5.9	6.8
14	9.1	1.7	5.6	7.7	4.8	6.5	9.9	4.1	6.2	9.3	3.3	6.2
15	10.6	6.3	8.2	8.9	3.2	5.7	9.9	4.1	8.4	6.1	3.2	4.7
16	14.5	4.4	8.1	9.8	1.6	3.8	9.9	6.4	7.8	6.9	3.6	5.6
17	14.5	8.1	12.7	10.7	1.2	4.3	10.1	3.8	7.8	9.4	4.1	5.8
18	13.0	8.7	11.7	11.3	0.4	3.1	9.3	4.5	6.8	9.8	6.0	7.7
19	12.8	10.5	11.6	8.5	0.2	3.5	9.3	4.8	7.1	7.8	4.3	6.2
20	15.3	7.9	11.4	10.0	<0.2	4.5	10.3	6.3	8.1	5.5	3.1	4.4
21	14.0	5.7	8.6	9.6	0.3	6.4	10.0	7.4	8.4	7.6	3.9	6.2
22	13.5	4.5	8.5	8.4	0.2	4.7	9.9	7.3	8.3	7.4	4.3	5.4
23	13.4	4.4	7.9	9.3	5.4	7.1	9.4	4.9	7.7	6.9	4.4	6.1
24	8.1	1.7	4.7	10.1	3.1	7.7	9.8	4.9	6.0	9.6	4.6	6.7
25	---	---	---	11.3	5.9	9.9	7.1	4.8	6.0	8.8	6.2	7.8
26	---	---	---	10.5	---	---	9.8	3.6	5.5	8.6	4.5	6.5
27	---	---	---	9.6	7.9	8.8	6.8	2.6	4.4	5.9	3.0	4.4
28	2.8	0.2	---	9.2	7.4	8.4	9.0	0.8	3.6	8.7	4.9	7.3
29	---	---	---	8.0	4.6	6.5	9.9	0.8	4.2	8.5	3.7	6.4
30	---	---	---	10.7	4.8	6.2	7.7	1.2	4.3	7.6	4.6	5.7
31	---	---	---	11.6	4.9	8.1	8.0	1.3	5.3	---	---	---
MONTH	---	---	---	---	---	---	10.9	0.8	6.8	11.2	0.2	5.5

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

TURBIDITY, FIELD FROM DCP, in (NTU), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	11	5.2	8.1	---	---	---	9.5	7.2	8.3	8.6	6.7	7.6
2	13	6.3	8.8	---	---	---	11	7.4	8.9	7.9	5.7	6.9
3	11	5.8	8.6	14	9.3	12	16	7.3	11	7.2	4.8	5.9
4	9.2	5.2	7.1	14	6.2	9.5	13	9.8	11	8.2	5.1	6.2
5	11	5.5	7.5	11	6.2	8.1	18	11	14	6.1	5.0	5.6
6	11	6.4	8.4	9.4	6.1	7.8	16	11	13	6.3	5.0	5.6
7	12	7.0	9.5	9.0	5.0	6.9	14	12	13	6.5	4.4	5.1
8	24	7.7	12	16	5.9	11	20	13	15	6.2	4.5	5.0
9	19	9.9	13	15	9.5	12	20	13	14	5.4	4.3	4.9
10	13	5.8	9.8	14	9.4	11	16	12	14	6.4	4.2	4.9
11	10	5.7	8.1	15	8.9	12	18	14	16	5.6	3.7	4.6
12	10	4.1	7.7	15	8.9	12	16	14	15	6.1	4.0	4.8
13	15	8.4	11	17	12	14	19	12	15	6.5	4.0	4.5
14	16	8.9	12	15	10	13	17	12	14	5.8	4.1	5.0
15	17	11	13	14	7.5	9.9	18	14	16	5.6	4.0	4.5
16	19	12	16	9.7	5.9	7.8	20	13	15	6.2	4.1	5.0
17	18	11	15	9.9	4.9	7.0	19	14	15	6.2	3.6	4.4
18	19	11	15	16	4.8	7.8	16	12	14	5.4	3.4	4.2
19	20	10	15	22	10	17	17	13	14	4.9	3.7	4.2
20	27	14	22	20	14	17	15	12	14	4.9	3.3	4.3
21	25	8.5	16	18	13	15	17	12	14	5.1	3.2	4.0
22	35	10	22	18	12	14	19	14	16	6.5	3.7	4.6
23	35	10	17	17	12	14	18	13	15	5.5	3.9	4.6
24	22	11	15	19	13	15	17	13	15	5.4	3.3	4.3
25	57	12	---	18	13	15	17	11	13	4.8	3.4	4.0
26	52	20	26	16	12	14	13	10	12	5.2	3.4	4.0
27	23	18	21	21	13	15	14	9.1	11	5.0	3.6	4.2
28	24	18	21	18	13	14	12	8.9	9.8	4.8	3.1	3.9
29	23	15	18	14	10	12	11	8.3	9.6	5.1	3.5	4.0
30	---	---	---	13	7.9	9.9	13	7.4	8.9	4.8	3.2	3.8
31	---	---	---	---	---	---	9.3	6.9	8.0	5.5	2.6	3.8
MONTH	---	---	---	---	---	---	20	6.9	13	8.6	2.6	4.8

06892450 OLATHE LAKE NEAR OLATHE, KS--Continued

TURBIDITY, FIELD FROM DCP, in (NTU), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	5.3	3.3	3.8	6.9	4.2	5.3	12	7.4	9.4	---	---	---
2	4.9	3.4	3.9	7.7	5.1	6.4	15	8.1	10	---	---	---
3	6.0	3.1	3.9	8.4	4.8	6.4	15	9.4	11	16	8.1	11
4	6.5	2.9	3.7	7.7	4.7	6.1	9.7	6.7	8.0	16	5.9	8.8
5	4.4	2.8	3.3	9.0	4.2	5.8	12	5.9	7.5	10	3.3	6.3
6	3.5	2.4	2.8	7.4	4.1	5.2	9.1	4.8	6.9	---	---	---
7	4.7	2.2	2.9	6.4	3.8	4.9	9.1	5.6	7.2	---	---	---
8	3.9	2.5	2.9	8.5	4.3	5.8	9.4	4.5	7.0	11	6.0	8.0
9	3.5	2.7	3.0	8.0	4.7	5.8	7.9	4.8	6.0	19	7.1	12
10	6.1	2.5	3.1	9.2	5.0	6.4	6.7	4.6	5.6	17	6.1	9.8
11	3.4	2.2	3.0	9.8	4.3	7.7	8.3	5.0	6.2	19	5.6	8.8
12	3.4	2.4	2.9	15	3.1	7.3	7.5	4.3	5.8	240	4.9	68
13	6.4	2.2	3.0	10	2.0	6.6	6.7	4.0	4.8	120	50	77
14	4.8	2.3	2.9	9.2	5.4	7.3	6.1	3.7	4.5	73	32	43
15	3.9	2.3	2.6	10	7.0	8.5	5.5	2.9	4.0	42	29	34
16	6.1	2.0	2.6	15	5.2	9.1	6.6	3.6	5.0	33	24	27
17	3.6	2.0	2.5	18	7.9	10	9.1	4.2	5.4	36	19	25
18	3.8	2.2	2.7	16	7.5	9.3	9.5	3.8	5.2	27	16	19
19	3.4	2.2	2.8	13	7.5	9.2	9.5	4.0	5.8	21	12	15
20	3.8	2.2	2.7	11	7.8	9.3	8.3	3.8	5.3	19	11	13
21	3.6	<2.0	2.2	18	8.4	11	47	4.2	17	17	10	12
22	2.8	<2.0	<2.0	16	9.1	11	29	14	17	17	10	14
23	5.1	<2.0	<2.0	14	8.7	10	---	---	---	17	9.5	12
24	5.5	<2.0	3.2	13	8.7	11	---	---	---	15	7.6	10
25	9.7	2.8	4.4	18	9.6	11	---	---	---	67	8.5	28
26	12	3.7	6.4	17	8.1	12	---	---	---	31	15	21
27	8.8	2.5	6.3	14	9.2	11	---	---	---	22	10	14
28	11	2.7	5.5	13	5.1	10	---	---	---	14	8.7	11
29	---	---	---	10	7.9	8.9	---	---	---	12	6.7	8.8
30	---	---	---	17	4.8	8.6	---	---	---	14	5.9	8.0
31	---	---	---	13	6.3	8.4	---	---	---	11	5.1	6.7
MONTH	12	2.0	3.3	18	2.0	8.2	---	---	---	---	---	---

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	12	4.1	6.3	9.3	4.8	6.5	22	11	17	---	---	---
2	11	3.6	6.5	11	4.4	6.8	23	12	18	28	13	19
3	9.4	4.5	6.8	16	3.6	5.1	26	17	23	---	---	---
4	10	4.4	6.7	19	2.1	4.8	26	17	22	---	---	---
5	10	3.4	6.1	10	2.9	5.6	23	12	20	25	7.4	12
6	12	3.1	6.1	10	3.7	6.0	25	12	18	15	8.6	12
7	13	3.3	5.6	9.2	3.5	6.1	27	17	22	20	9.9	14
8	16	5.0	8.5	9.2	2.9	5.5	24	16	22	21	11	16
9	27	5.9	13	10	2.6	5.2	23	16	20	22	13	17
10	36	5.2	12	7.6	<2.0	5.3	24	16	19	23	9.1	14
11	27	3.3	8.1	11	2.8	5.4	22	18	21	25	11	15
12	8.8	2.3	5.0	11	3.4	6.5	23	19	19	20	11	15
13	8.7	2.0	5.1	11	4.8	7.0	25	15	23	20	13	16
14	8.3	<2.0	4.3	11	4.1	6.3	24	15	20	18	10	14
15	5.5	<2.0	3.6	11	3.4	6.5	27	18	23	16	7.2	11
16	8.2	<2.0	3.3	12	3.4	6.6	25	19	22	15	5.5	9.0
17	8.2	2.7	4.8	14	3.7	8.0	26	15	22	35	4.6	9.5
18	9.4	3.0	5.3	56	3.3	11	26	15	21	18	10	14
19	6.6	4.1	5.6	63	9.8	18	28	16	22	26	5.7	15
20	8.7	4.1	5.6	170	6.3	14	26	19	23	25	14	19
21	6.3	4.5	5.3	52	6.5	19	26	19	23	16	10	13
22	7.4	4.4	5.7	37	5.2	20	28	19	23	17	8.5	12
23	7.7	5.5	6.3	72	8.1	18	26	17	22	16	7.4	12
24	8.6	5.8	6.9	63	7.8	19	26	12	19	20	6.5	13
25	8.3	6.1	---	40	10	22	29	10	19	21	13	17
26	---	---	---	---	---	---	28	7.7	15	20	7.9	14
27	---	---	---	18	15	16	19	4.7	10	20	8.3	14
28	6.5	3.8	5.0	17	15	16	24	4.6	13	25	9.6	16
29	7.3	4.5	5.8	17	13	15	26	7.8	16	---	---	---
30	9.3	4.4	6.4	19	11	16	---	---	---	---	---	---
31	---	---	---	22	11	16	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

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

06892460 CEDAR CREEK BELOW OLATHE LAKE NEAR OLATHE, KS

LOCATION.--Lat 38°53'02", long 94°52'48", in NW $^{1}/_{4}$ NW $^{1}/_{4}$ NE $^{1}/_{4}$ sec.32, T.13 S., R.23 E., Johnson County, Hydrologic Unit 10270104, on right upstream bank of Cedar Creek, 2 mi west of Olathe.

DRAINAGE AREA.--17.3 mi^2.

PERIOD OF RECORD.--March 2001 to current year.

GAGE.--Water-stage recorder. Datum of gage is 880.00 ft above NGVD of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow regulated since 1956 by Olathe Lake (station 06892450). Satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.07	0.25	0.0	e0.00	e16	0.38	4.4	6.1	2.9	0.00	0.00	0.00
2	2.4	0.0	e0.00	e0.00	e17	0.08	0.06	3.8	4.0	0.00	0.00	0.00
3	1.0	0.0	e0.00	e0.00	e23	0.13	0.00	4.3	3.1	0.00	0.00	0.00
4	0.04	0.0	e0.20	e0.00	e11	0.43	0.00	1.3	19	0.00	0.00	0.00
5	22	0.0	e0.50	e0.00	e3.7	3.4	0.07	5.9	19	0.00	0.00	0.00
6	8.8	0.0	e0.25	e0.05	3.1	1.2	2.5	3.8	5.9	0.00	0.00	0.00
7	4.6	0.01	e0.00	e0.05	2.9	6.6	0.27	36	3.9	0.00	0.00	0.00
8	8.8	0.0	e0.00	e0.05	12	10	0.04	73	2.9	0.00	0.00	0.00
9	5.6	0.0	e0.00	e0.05	5.5	0.09	7.1	82	2.1	0.00	0.00	0.00
10	1.4	0.0	e0.00	e0.07	0.02	4.9	13	22	5.8	0.00	0.00	0.00
11	0.0	0.0	e0.00	e0.07	1.6	3.2	3.4	18	2.6	0.00	0.00	0.00
12	0.0	0.0	e0.50	e0.07	0.04	0.19	0.01	400	15	0.00	0.00	0.00
13	0.0	0.02	e1.5	e0.06	0.22	1.4	0.06	54	4.9	0.00	0.00	0.00
14	0.0	0.03	e1.0	e0.05	5.3	4.7	0.65	27	1.5	0.00	0.00	0.00
15	20	0.0	e1.0	e0.04	0.01	0.04	6.3	21	0.49	0.00	0.00	0.00
16	34	0.0	e0.25	e0.00	0.03	0.32	6.9	14	0.22	0.00	0.00	0.00
17	11	0.0	e0.00	e0.00	2.2	0.16	0.42	18	0.77	0.00	0.00	0.00
18	4.5	0.02	e0.00	e0.00	9.3	0.88	0.74	8.9	1.7	0.00	0.00	0.00
19	0.18	0.0	e0.00	e0.02	1.3	0.06	0.03	4.3	0.77	0.00	0.00	0.00
20	1.2	0.0	e0.00	e0.07	27	0.09	3.6	2.7	0.00	0.00	0.00	0.00
21	0.26	0.0	e0.10	e0.10	8.4	0.10	256	5.8	0.00	0.00	0.00	0.00
22	5.4	0.06	e0.25	e0.20	4.0	0.07	35	9.8	0.00	0.00	0.00	0.00
23	0.64	0.67	e0.10	e0.25	5.6	1.6	16	0.87	0.00	0.00	0.00	0.00
24	0.08	0.05	e0.00	e0.10	8.4	1.7	7.9	18	0.00	0.00	0.00	0.00
25	0.07	0.04	e0.00	e0.25	0.02	0.01	3.4	373	0.00	0.00	0.00	0.00
26	0.05	1.2	e0.00	e0.20	0.00	0.00	9.4	40	0.00	0.00	0.00	0.00
27	1.5	0.01	e0.00	e0.15	0.00	4.4	130	34	0.00	0.00	0.00	0.00
28	10	0.0	e0.00	e0.15	0.00	0.31	51	20	0.00	0.00	0.00	0.00
29	0.39	0.0	e0.00	e1.0	---	0.05	17	10	0.00	0.00	0.00	0.00
30	1.8	0.01	e0.00	e8.9	---	0.09	9.9	6.7	0.00	0.00	0.00	0.00
31	13	---	e0.00	e31	---	0.08	---	4.0	---	0.00	0.00	---
MEAN	5.122	0.079	0.182	1.385	5.987	1.505	19.50	42.85	3.218	0.000	0.000	0.000
MAX	34	1.2	1.5	31	27	10	256	400	19	0.00	0.00	0.00
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87	0.00	0.00	0.00	0.00
AC-FT	315	4.7	11	85	333	93	1160	2630	192	0.00	0.00	0.00

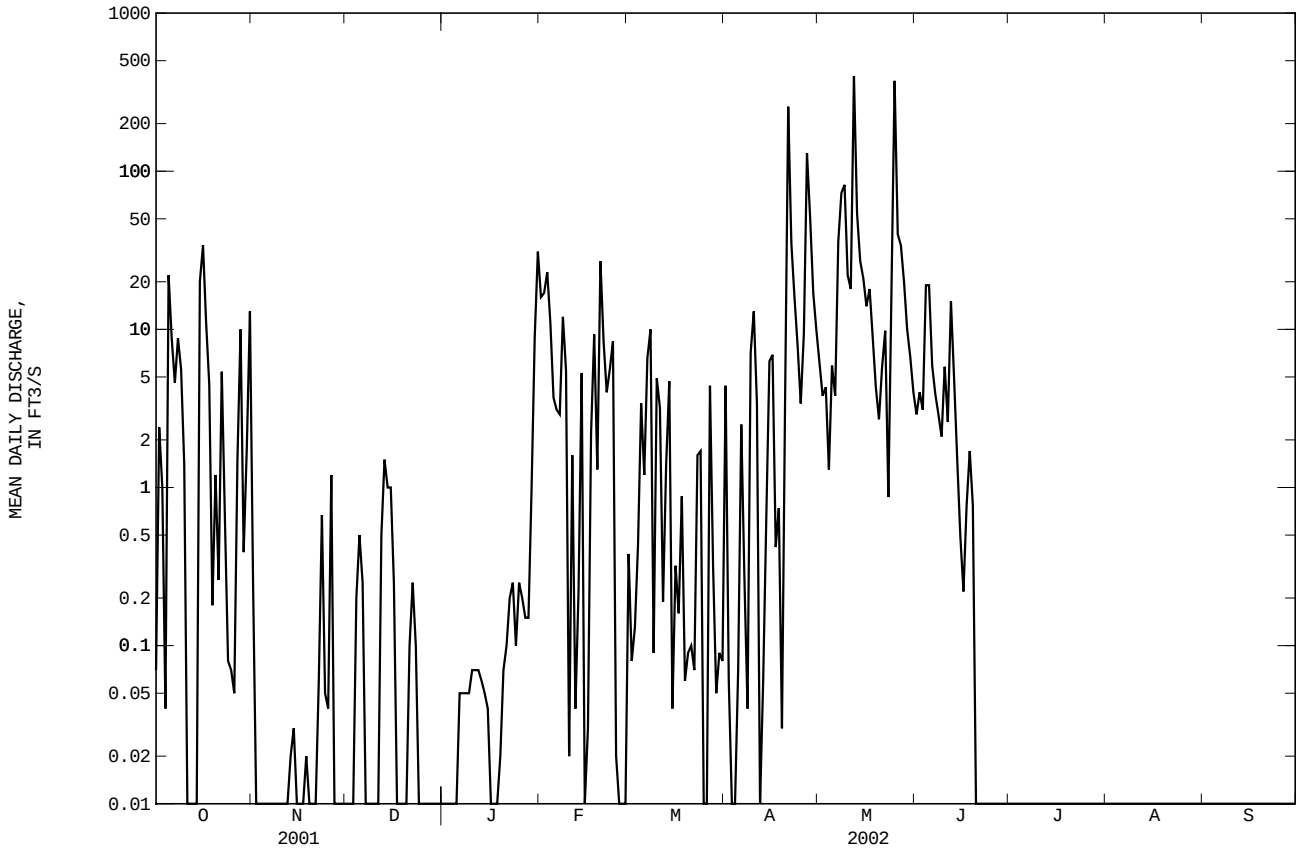
06892460 CEDAR CREEK BELOW OLATHE LAKE NEAR OLATHE, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2001 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	5.122	0.079	0.182	1.385	5.987	1.505	15.33	25.50	20.99	1.321	0.290	3.354
MAX	5.12	0.079	0.18	1.39	5.99	1.51	19.5	42.8	38.8	2.64	0.58	6.71
(WY)	2002	2002	2002	2002	2002	2002	2002	2002	2001	2001	2001	2001
MIN	5.12	0.079	0.18	1.39	5.99	1.51	11.1	8.16	3.22	0.000	0.000	0.000
(WY)	2002	2002	2002	2002	2002	2002	2001	2001	2002	2002	2002	2002

SUMMARY STATISTICS	FOR 2002 WATER YEAR		WATER YEARS 2001 - 2002	
ANNUAL MEAN	6.669		6.669	
HIGHEST ANNUAL MEAN			6.67	2002
LOWEST ANNUAL MEAN			6.67	2002
HIGHEST DAILY MEAN	400	May 12	400	May 12 2002
LOWEST DAILY MEAN	0.00	Oct 11	0.00	Jul 5 2001
ANNUAL SEVEN-DAY MINIMUM	0.00	Dec 24	0.00	Jul 20 2001
MAXIMUM PEAK FLOW	913	May 12	913	May 12 2002
MAXIMUM PEAK STAGE	79.08	May 12	81.63	Jun 4 2001
INSTANTANEOUS LOW FLOW	0.00	Oct 4	0.00	May 16 2001
ANNUAL RUNOFF (AC-FT)	4830		4830	
10 PERCENT EXCEEDS	11		11	
50 PERCENT EXCEEDS	0.05		0.05	
90 PERCENT EXCEEDS	0.00		0.00	

e Estimated



06893080 BLUE RIVER NEAR STANLEY, KS

LOCATION.--Lat 38°48'45", long 94°40'31", in SW $^1/_4$ SW $^1/_4$ SE $^1/_4$ sec.19, T.14 S., R.25 E., Johnson County, Hydrologic Unit 10300001, on left bank between bridges on U.S. Highway 69, 0.5 mi downstream from confluence of Wolf and Coffee Creeks, and 3.0 mi south of Stanley.

DRAINAGE AREA.--46 mi^2, approximately.

PERIOD OF RECORD.--Annual maximum, water years 1970-74. October 1974 to current year.

GAGE.--Water-stage recorder. Datum of gage is 886.05 ft above NGVD of 1929 (levels by U.S. Army Corps of Engineers). Prior to Oct. 1, 1974, crest-stage gage at same site and datum.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,300 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 9	0100	1,530	9.49	May 12	0800	3,780	13.10
May 11	2300	*5,180	*14.66	May 25	0300	3,670	12.96

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	1.5	0.47	e0.45	e54	6.6	4.1	27	19	0.58	0.15	0.00
2	1.4	1.3	0.43	e0.39	47	9.2	4.0	22	15	0.58	0.11	0.00
3	1.5	1.2	0.47	e0.36	54	7.8	4.6	17	12	0.55	0.09	0.00
4	1.3	1.2	0.62	0.39	40	5.6	3.7	13	9.4	0.53	0.08	0.00
5	18	1.2	0.97	0.42	20	6.7	4.2	11	12	1.5	0.06	0.00
6	11	1.4	1.1	0.49	16	14	2.9	13	10	1.2	0.06	0.00
7	3.6	1.5	1.0	0.53	13	15	2.9	145	8.0	0.73	0.04	0.00
8	2.8	1.3	1.0	0.54	11	12	5.2	439	5.8	0.56	0.03	0.00
9	3.6	1.5	0.81	0.63	11	26	17	597	6.9	0.56	0.02	0.00
10	2.7	1.4	0.92	0.72	9.9	18	11	109	19	0.48	0.01	0.00
11	3.2	0.98	0.78	0.76	6.6	14	7.8	725	12	0.39	0.03	0.00
12	2.8	0.75	0.99	0.74	5.0	13	7.0	1980	269	0.43	0.10	0.00
13	2.8	0.70	5.2	0.78	4.6	10	5.9	256	40	0.40	0.21	0.00
14	4.3	0.77	3.5	0.79	4.0	11	4.9	110	22	0.35	0.16	0.00
15	38	0.80	2.0	0.76	4.0	11	4.6	68	14	0.30	0.12	0.00
16	39	0.60	1.7	0.74	3.4	7.9	4.3	86	9.6	0.26	0.10	0.00
17	12	0.61	1.4	0.69	3.0	5.7	4.1	176	6.6	0.23	0.09	0.00
18	6.0	0.70	1.3	1.9	2.6	4.9	3.4	70	4.9	0.19	0.09	0.00
19	3.6	0.99	1.2	2.1	20	4.9	4.0	43	3.8	0.21	0.08	0.00
20	2.8	0.95	1.4	1.3	150	5.1	11	32	2.9	0.40	0.07	0.02
21	2.5	1.2	1.0	1.0	40	4.5	361	26	2.4	0.97	0.06	0.02
22	2.9	1.0	0.92	0.96	24	5.2	78	22	1.8	0.61	0.06	0.01
23	4.3	1.1	1.0	1.0	19	3.9	37	18	1.5	0.38	0.05	0.00
24	5.0	2.4	e1.2	1.0	16	4.0	26	30	1.8	0.27	0.04	0.00
25	6.4	4.5	e1.0	1.1	13	4.6	17	1080	2.1	0.21	0.04	0.00
26	6.1	1.2	e0.80	1.1	10	4.4	15	138	1.4	0.16	0.03	0.00
27	4.9	0.66	0.72	0.98	7.6	3.9	370	109	1.3	0.13	0.02	0.00
28	5.1	0.62	0.66	0.93	6.5	5.0	146	74	1.0	0.10	0.02	0.00
29	6.8	0.59	e0.60	0.93	---	5.7	52	46	0.77	0.18	0.00	0.00
30	2.1	0.52	e0.50	e3.4	---	4.7	34	31	0.66	0.21	0.00	0.00
31	1.6	---	e0.53	e100	---	3.5	---	24	---	0.19	0.00	---
MEAN	6.748	1.171	1.167	4.125	21.97	8.316	41.75	210.9	17.22	0.446	0.065	0.002
MAX	39	4.5	5.2	100	150	26	370	1980	269	1.5	0.21	0.02
MIN	1.1	0.52	0.43	0.36	2.6	3.5	2.9	11	0.66	0.10	0.00	0.00
AC-FT	415	70	72	254	1220	511	2480	12970	1020	27	4.0	0.1

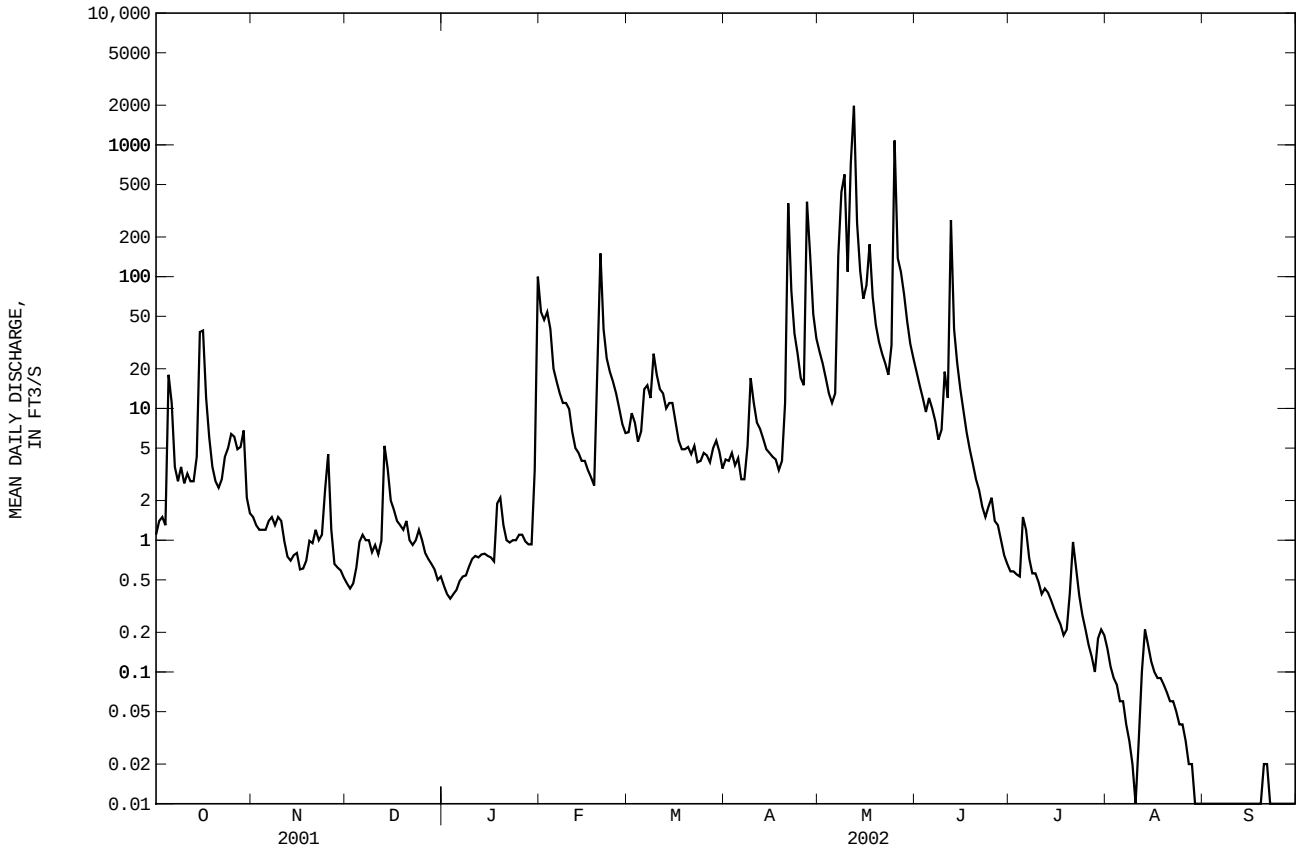
06893080 BLUE RIVER NEAR STANLEY, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	27.27	29.90	21.02	14.70	35.38	40.13	56.97	84.59	56.07	27.59	6.856	27.15
MAX	200	200	143	65.3	208	133	223	450	182	415	44.7	237
(WY)	1987	1999	1993	1982	1985	1987	1983	1995	1984	1993	1996	1986
MIN	0.000	0.016	0.040	0.042	0.45	0.78	1.12	2.29	1.07	0.040	0.000	0.000
(WY)	1979	1981	1977	1977	1977	1996	1996	1988	1988	1980	1991	1976

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1975 - 2002	
ANNUAL MEAN	33.90		26.31		35.56	
HIGHEST ANNUAL MEAN					104	1993
LOWEST ANNUAL MEAN					4.99	1976
HIGHEST DAILY MEAN	1280	Jun 4	1980	May 12	5520	May 17 1995
LOWEST DAILY MEAN	0.11	Aug 14	0.00	Aug 29	0.00	Aug 9 1976
ANNUAL SEVEN-DAY MINIMUM	0.14	Aug 14	0.00	Aug 29	0.00	Aug 9 1976
MAXIMUM PEAK FLOW			5180	May 11	20200	May 15 1990
MAXIMUM PEAK STAGE			14.66	May 11	20.51	May 15 1990
INSTANTANEOUS LOW FLOW			0.00	Aug 11	.00	most years
ANNUAL RUNOFF (AC-FT)	24540		19050		25760	
10 PERCENT EXCEEDS	63		33		56	
50 PERCENT EXCEEDS	5.2		1.5		4.8	
90 PERCENT EXCEEDS	0.66		0.02		0.08	

e Estimated



06893300 INDIAN CREEK AT OVERLAND PARK, KS

LOCATION.--Lat 38°56'30", long 94°40'10", in NW $^{1}/_{4}$ NE $^{1}/_{4}$ NE $^{1}/_{4}$ sec.7, T.13 S., R.25 E., Johnson County, Hydrologic Unit 10300001, on right bank at downstream side of Marty Street bridge in Overland Park.

DRAINAGE AREA.--26.6 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is 856.88 ft above NGVD of 1929 (levels by U.S. Army Corps of Engineers). Prior to May 17, 1977, water-stage recorder at site 700 ft downstream at same datum.

REMARKS.--Records good. Satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Apr 21	0600	2,550	11.11	May 25	0100	*3,070	*11.65
Apr 27	1300	1,420	9.69				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

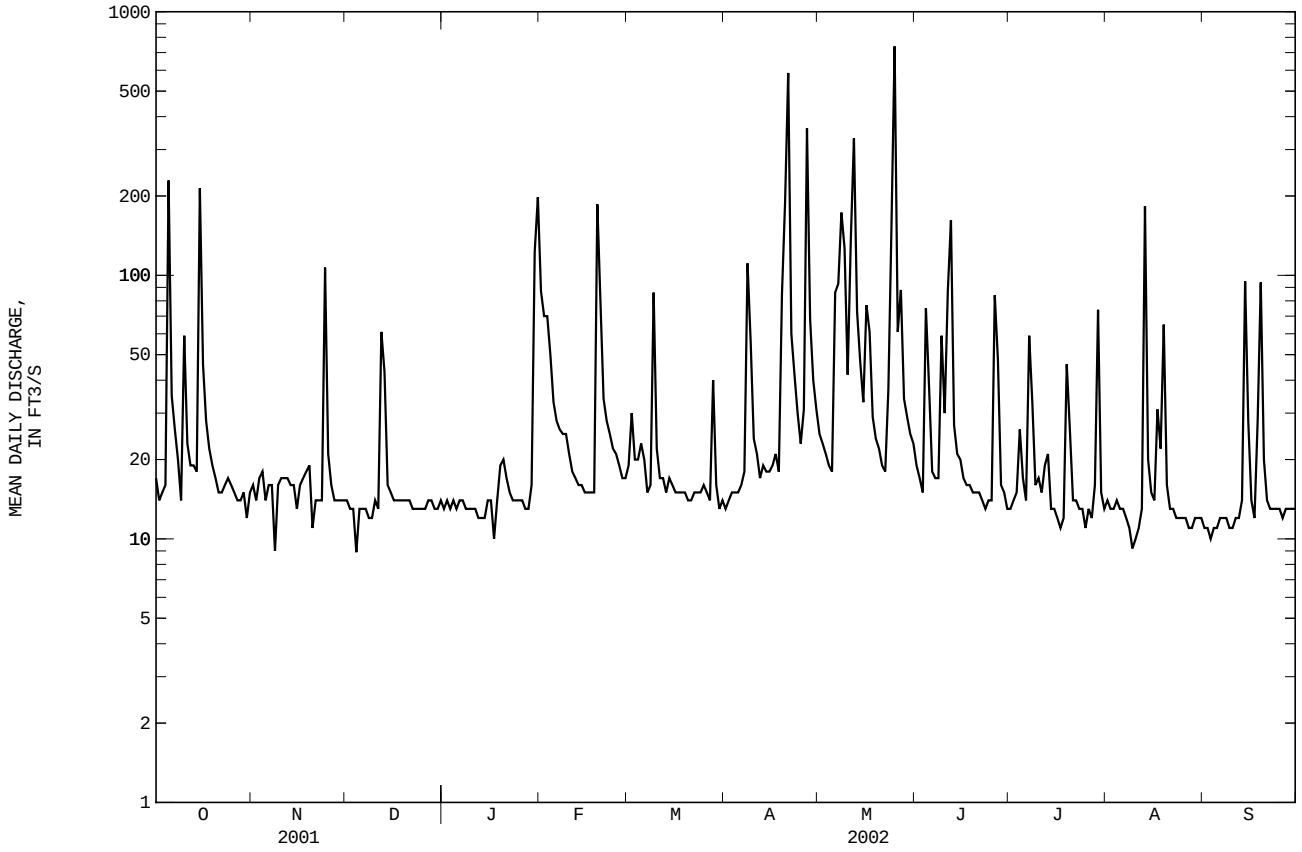
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	16	14	13	87	19	13	25	19	13	14	11
2	14	14	13	14	70	30	14	23	17	14	13	11
3	15	17	13	13	70	20	15	21	15	15	13	10
4	16	18	8.9	14	50	20	15	19	75	26	14	11
5	229	14	13	13	33	23	15	18	38	17	13	11
6	35	16	13	14	28	20	16	86	18	14	13	12
7	26	16	13	14	26	15	18	93	17	59	12	12
8	20	9.0	12	13	25	16	111	173	17	33	11	12
9	14	16	12	13	25	86	56	127	59	16	9.2	11
10	59	17	14	13	21	22	24	42	30	17	10	11
11	23	17	13	13	18	17	21	136	87	15	11	12
12	19	17	61	12	17	17	17	331	162	19	13	12
13	19	16	43	12	16	15	19	73	27	21	183	14
14	18	16	16	12	16	17	18	47	21	13	20	95
15	214	13	15	14	15	16	18	33	20	13	15	28
16	46	16	14	14	15	15	19	77	17	12	14	14
17	28	17	14	10	15	15	21	61	16	11	31	12
18	22	18	14	14	15	15	18	29	16	12	22	28
19	19	19	14	19	186	15	85	24	15	46	65	94
20	17	11	14	20	79	14	190	22	15	26	16	20
21	15	14	14	17	34	14	586	19	15	14	13	14
22	15	14	13	15	28	15	60	18	14	14	13	13
23	16	14	13	14	25	15	42	37	13	13	12	13
24	17	107	13	14	22	15	30	155	14	13	12	13
25	16	21	13	14	21	16	23	739	14	11	12	13
26	15	16	13	14	19	15	31	61	84	13	12	12
27	14	14	14	13	17	14	361	88	48	12	11	13
28	14	14	14	13	17	40	68	34	16	16	11	13
29	15	14	13	16	---	16	40	29	15	74	12	13
30	12	14	13	123	---	13	31	25	13	15	12	13
31	15	---	14	198	---	14	---	23	---	13	12	---
MEAN	33.35	18.50	15.84	23.39	36.07	19.81	66.50	86.71	31.57	20.00	20.78	19.03
MAX	229	107	61	198	186	86	586	739	162	74	183	95
MIN	12	9.0	8.9	10	15	13	13	18	13	11	9.2	10
AC-FT	2050	1100	974	1440	2000	1220	3960	5330	1880	1230	1280	1130

06893300 INDIAN CREEK AT OVERLAND PARK, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	33.49	26.12	21.27	18.63	25.04	33.77	43.82	56.14	67.43	32.90	21.66	43.42
MAX	146	114	107	99.1	118	208	158	243	263	248	65.7	217
(WY)	1986	1999	1993	1982	1985	1973	1994	1990	1984	1993	1985	1986
MIN	0.003	0.47	0.000	0.26	0.63	1.19	2.86	3.26	4.86	0.91	0.56	0.66
(WY)	1964	1967	1964	1964	1964	1964	1977	1965	1968	1975	1967	1976

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1964 - 2002	
ANNUAL MEAN	59.71		32.59		35.28	
HIGHEST ANNUAL MEAN					89.5	1993
LOWEST ANNUAL MEAN					8.32	1976
HIGHEST DAILY MEAN	1610	Jun 4	739	May 25	4340	Jun 9 1984
LOWEST DAILY MEAN	8.9	Dec 4	8.9	Dec 4	0.00	Oct 1 1963
ANNUAL SEVEN-DAY MINIMUM	12	Dec 3	11	Aug 30	0.00	Oct 1 1963
MAXIMUM PEAK FLOW			3070	May 25	12800	Jun 9 1984
MAXIMUM PEAK STAGE			11.65	May 25	17.78	Jun 9 1984
INSTANTANEOUS LOW FLOW			2.0	Nov 8	.00	many years
ANNUAL RUNOFF (AC-FT)	43230		23590		25560	
10 PERCENT EXCEEDS	108		66		58	
50 PERCENT EXCEEDS	22		16		13	
90 PERCENT EXCEEDS	13		12		1.4	



06910800 MARAIS DES CYGNES RIVER NEAR READING, KS

LOCATION.--Lat 38°34'00", long 95°57'50", in NE $^{1}/_{4}$ SE $^{1}/_{4}$ SW $^{1}/_{4}$ sec.15, T.17 S., R.13 E., Lyon County, Hydrologic Unit 10290101, on left bank at downstream side of county highway bridge, 1.9 mi downstream from confluence of One Hundred and Fortytwo Mile Creek and Elm Creek, 4.3 mi upstream from Duck Creek, 3.0 mi north of Reading, and at mile 467.0.

DRAINAGE AREA.--177 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is 1,048.32 ft above NGVD of 1929 (U.S. Army Corps of Engineers bench mark).

REMARKS.--Records good. Satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 9	0300	*4,010	*17.57	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

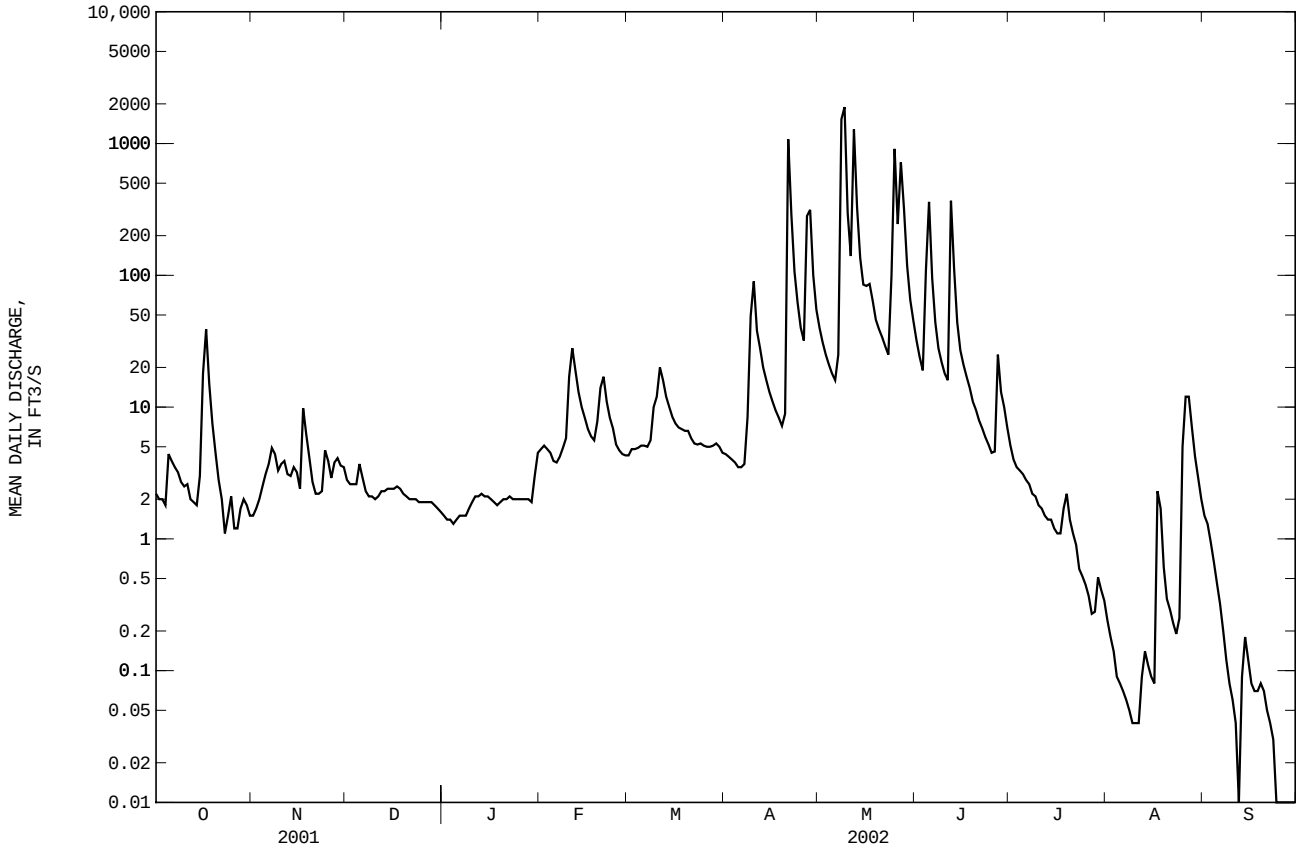
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.2	1.5	2.8	1.5	4.8	4.3	4.4	40	32	5.1	0.24	1.5
2	2.0	1.7	2.6	1.4	5.1	4.8	4.2	31	24	4.0	0.18	1.3
3	2.0	2.0	2.6	1.4	4.8	4.8	4.0	25	19	3.5	0.14	0.95
4	1.8	2.5	2.6	1.3	4.5	4.9	3.8	21	109	3.3	0.09	0.67
5	4.4	3.1	3.7	1.4	3.9	5.1	3.5	18	361	3.1	0.08	0.46
6	3.9	3.7	2.9	1.5	3.8	5.1	3.5	16	95	2.8	0.07	0.32
7	3.5	4.9	2.3	1.5	4.2	5.0	3.7	25	44	2.6	0.06	0.20
8	3.2	4.4	2.1	1.5	4.9	5.6	8.4	1530	28	2.2	0.05	0.12
9	2.7	3.3	2.1	1.7	5.8	10	49	1890	22	2.1	0.04	0.08
10	2.5	3.7	2.0	1.9	17	12	90	297	18	1.8	0.04	0.06
11	2.6	3.9	2.1	2.1	28	20	38	140	16	1.7	0.04	0.04
12	2.0	3.1	2.3	2.1	19	16	28	1280	368	1.5	0.09	0.01
13	1.9	3.0	2.3	2.2	13	12	20	328	113	1.4	0.14	0.09
14	1.8	3.5	2.4	2.1	10	10	16	135	44	1.4	0.11	0.18
15	3.0	3.2	2.4	2.1	8.3	8.4	13	85	27	1.2	0.09	0.12
16	18	2.4	2.4	2.0	6.8	7.5	11	83	21	1.1	0.08	0.08
17	39	9.8	2.5	1.9	6.0	7.0	9.4	86	17	1.1	2.3	0.07
18	15	6.2	2.4	1.8	5.6	6.8	8.3	64	14	1.7	1.7	0.07
19	7.5	4.1	2.2	1.9	7.8	6.6	7.2	46	11	2.2	0.61	0.08
20	4.5	2.7	2.1	2.0	14	6.6	8.9	39	9.5	1.4	0.35	0.07
21	2.8	2.2	2.0	2.0	17	5.8	1080	34	7.9	1.1	0.29	0.05
22	2.0	2.2	2.0	2.1	11	5.3	291	29	6.9	0.90	0.23	0.04
23	1.1	2.3	2.0	2.0	8.3	5.2	107	25	5.9	0.59	0.19	0.03
24	1.5	4.7	1.9	2.0	6.9	5.3	62	99	5.2	0.52	0.25	0.01
25	2.1	3.9	1.9	2.0	5.2	5.1	40	911	4.5	0.45	5.0	0.01
26	1.2	2.9	1.9	2.0	4.7	5.0	32	245	4.6	0.37	12	0.01
27	1.2	3.8	1.9	2.0	4.4	5.0	282	721	25	0.27	12	0.00
28	1.7	4.1	1.9	2.0	4.3	5.1	314	317	13	0.28	7.0	0.00
29	2.0	3.6	1.8	1.9	---	5.3	100	118	10	0.51	4.2	0.00
30	1.8	3.5	1.7	3.0	---	5.0	55	65	7.0	0.41	2.9	0.00
31	1.5	---	1.6	4.5	---	4.5	---	45	---	0.34	2.0	---
MEAN	4.594	3.530	2.239	1.961	8.539	7.068	89.91	283.5	49.42	1.643	1.695	0.221
MAX	39	9.8	3.7	4.5	28	20	1080	1890	368	5.1	12	1.5
MIN	1.1	1.5	1.6	1.3	3.8	4.3	3.5	16	4.5	0.27	0.04	0.00
MED	2.1	3.4	2.1	2.0	5.9	5.3	18	83	18	1.4	0.19	0.07
AC-FT	282	210	138	121	474	435	5350	17430	2940	101	104	13

06910800 MARAIS DES CYGNES RIVER NEAR READING, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	79.19	83.72	55.67	46.41	97.59	150.5	172.8	242.3	201.3	86.26	24.14	65.36
MAX	773	978	276	208	424	744	778	1766	1173	875	156	828
(WY)	1986	1999	1993	1974	1985	1973	1983	1982	1977	1993	1977	1973
MIN	0.000	0.000	0.000	0.000	0.013	0.66	0.74	13.6	0.58	0.27	0.000	0.000
(WY)	1989	1989	1992	1992	1992	1989	1981	1980	1989	1980	1991	1991

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1970 - 2002	
ANNUAL MEAN	57.64		38.12		108.6	
HIGHEST ANNUAL MEAN					296	1999
LOWEST ANNUAL MEAN					8.37	1991
HIGHEST DAILY MEAN	3710	Jun 21	1890	May 9	25000	May 29 1982
LOWEST DAILY MEAN	0.04	Jan 2	0.00	Sep 27	0.00	Sep 8 1976
ANNUAL SEVEN-DAY MINIMUM	0.06	Jan 1	0.00	Sep 24	0.00	Sep 8 1976
MAXIMUM PEAK FLOW			4010	May 9	67400	May 29 1982
MAXIMUM PEAK STAGE			17.57	May 9	27.47	May 29 1982
INSTANTANEOUS LOW FLOW			0.00	Sep 27	.00	many years
ANNUAL RUNOFF (AC-FT)	41730		27600		78680	
10 PERCENT EXCEEDS	88		44		167	
50 PERCENT EXCEEDS	6.1		3.5		14	
90 PERCENT EXCEEDS	0.50		0.16		0.14	



06910997 MELVERN LAKE NEAR MELVERN, KS

LOCATION.--Lat 38°30'34", long 95°42'36", in NW $^1/_4$ SW $^1/_4$ SW $^1/_4$ sec.1, T.18 S., R.15 E., Osage County, Hydrologic Unit 10290101, in control tower of Melvern Dam on Marais des Cygnes River, 4.0 mi west of Melvern, and at mile 447.7.

DRAINAGE AREA.--349 mi^2.

PERIOD OF RECORD.--November 1972 to current year.

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929 (levels by U.S. Army Corps of Engineers).

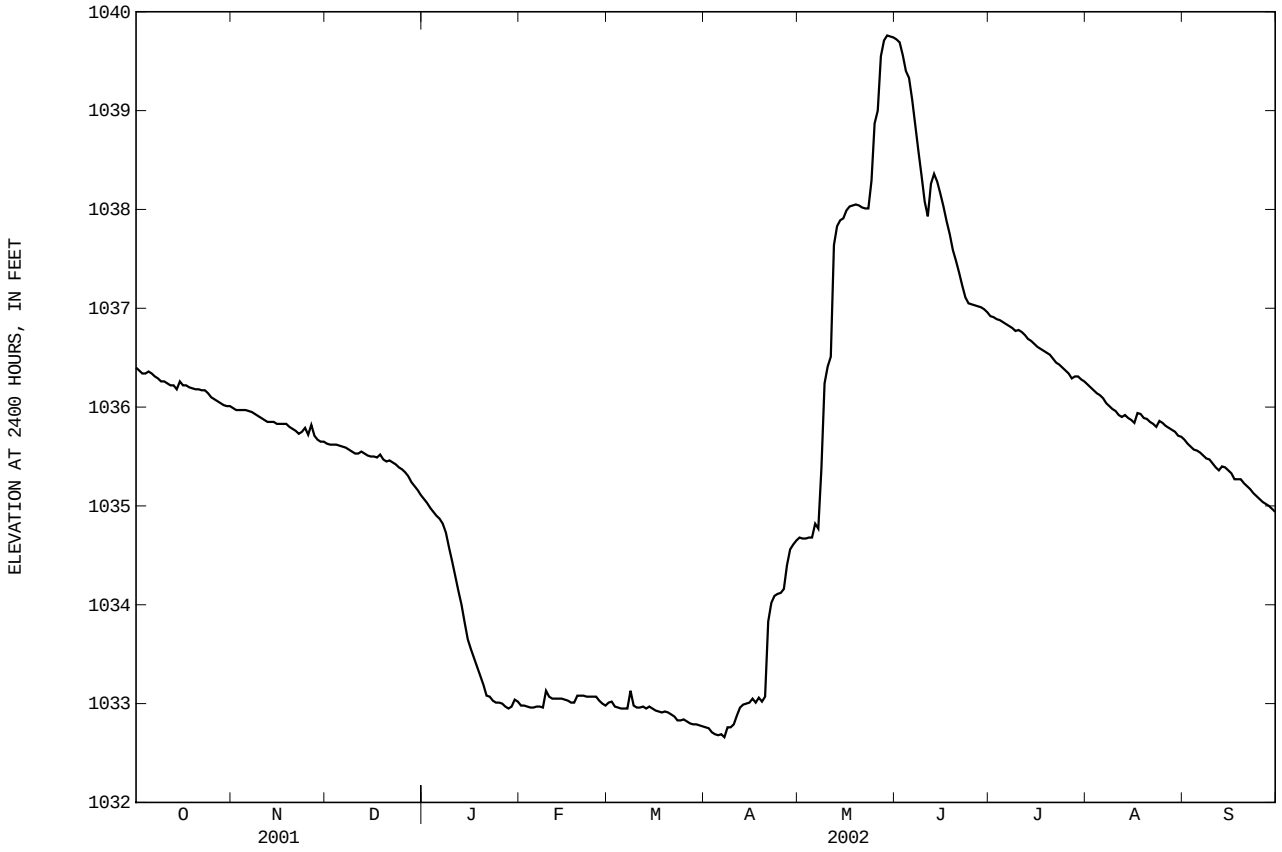
REMARKS.--Reservoir is formed by compacted earthfill dam. Storage began in July 1972. Conservation pool elevation first reached Apr. 4, 1975. Total capacity, 920,600 acre-ft, consisting of the following: Dead storage, 26 acre-ft below elevation 962.0 ft; conservation pool, 154,400 acre-ft between elevations 962.0 ft and 1,036.0 ft; flood-control pool, 258,600 acre-ft between elevations 1,036.0 ft and 1,057.0 ft; and surcharge pool, 507,600 acre-ft between elevations 1,057.0 ft and 1,073.0 ft. Reservoir is used to store water for flood control, irrigation, and recreation. Satellite telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 1,053.45 ft June 13, 1995, contents, 316,300 acre-ft; minimum elevation since conservation pool first reached, 1,029.86 ft Feb. 11, 1992, contents, 115,800 acre-ft.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 1,039.78 ft May 30, contents, 182,200 acre-ft; minimum elevation, 1,032.65 ft Apr. 7 contents, 132,400 acre-ft.

Capacity table (elevation, in feet, and total contents, in acre-feet)
(Computed by U.S. Army Corps of Engineers in 1963)

1,030	116,600	1,040	184,000
1,035	147,600		



06910997 MELVERN LAKE NEAR MELVERN, KS--Continued

ELEVATION, in FT (NGVD), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1036.40	1035.99	1035.63	1035.07	1032.98	1033.01	1032.76	1034.68	1039.72	1036.92	1036.23	1035.67
2	1036.37	1035.97	1035.62	1035.03	1032.98	1033.02	1032.75	1034.67	1039.69	1036.91	1036.20	1035.63
3	1036.34	1035.97	1035.62	1034.98	1032.97	1032.97	1032.71	1034.67	1039.56	1036.89	1036.17	1035.60
4	1036.34	1035.97	1035.62	1034.94	1032.96	1032.96	1032.69	1034.68	1039.40	1036.88	1036.14	1035.57
5	1036.36	1035.97	1035.61	1034.90	1032.96	1032.95	1032.68	1034.68	1039.33	1036.86	1036.12	1035.56
6	1036.34	1035.96	1035.60	1034.87	1032.97	1032.95	1032.69	1034.82	1039.11	1036.84	1036.09	1035.54
7	1036.31	1035.95	1035.59	1034.82	1032.97	1032.95	1032.66	1034.77	1038.85	1036.82	1036.04	1035.51
8	1036.29	1035.93	1035.57	1034.73	1032.96	1033.13	1032.76	1035.38	1038.59	1036.80	1036.01	1035.48
9	1036.26	1035.91	1035.55	1034.58	1033.13	1032.98	1032.76	1036.24	1038.34	1036.77	1035.98	1035.47
10	1036.26	1035.89	1035.53	1034.44	1033.07	1032.96	1032.79	1036.41	1038.08	1036.78	1035.96	1035.43
11	1036.24	1035.87	1035.53	1034.29	1033.05	1032.96	1032.88	1036.51	1037.93	1036.76	1035.92	1035.39
12	1036.22	1035.85	1035.55	1034.14	1033.05	1032.97	1032.96	1037.64	1038.26	1036.73	1035.90	1035.36
13	1036.22	1035.85	1035.53	1034.00	1033.05	1032.95	1032.99	1037.83	1038.36	1036.69	1035.92	1035.40
14	1036.18	1035.85	1035.51	1033.82	1033.05	1032.97	1033.00	1037.89	1038.28	1036.67	1035.89	1035.39
15	1036.26	1035.83	1035.50	1033.65	1033.04	1032.95	1033.01	1037.91	1038.16	1036.64	1035.87	1035.36
16	1036.22	1035.83	1035.50	1033.55	1033.03	1032.93	1033.05	1037.99	1038.03	1036.61	1035.84	1035.33
17	1036.22	1035.83	1035.49	1033.46	1033.01	1032.92	1033.01	1038.03	1037.88	1036.59	1035.94	1035.27
18	1036.20	1035.83	1035.52	1033.37	1033.01	1032.91	1033.06	1038.04	1037.75	1036.57	1035.93	1035.27
19	1036.19	1035.80	1035.47	1033.28	1033.08	1032.92	1033.02	1038.05	1037.59	1036.55	1035.89	1035.27
20	1036.18	1035.78	1035.45	1033.19	1033.08	1032.91	1033.07	1038.04	1037.48	1036.53	1035.88	1035.23
21	1036.18	1035.76	1035.46	1033.08	1033.08	1032.89	1033.83	1038.02	1037.36	1036.49	1035.85	1035.20
22	1036.17	1035.73	1035.44	1033.07	1033.07	1032.87	1034.02	1038.01	1037.23	1036.45	1035.83	1035.17
23	1036.17	1035.75	1035.42	1033.03	1033.07	1032.83	1034.09	1038.01	1037.11	1036.43	1035.80	1035.13
24	1036.14	1035.79	1035.39	1033.01	1033.07	1032.83	1034.11	1038.29	1037.05	1036.40	1035.86	1035.10
25	1036.10	1035.72	1035.37	1033.01	1033.07	1032.84	1034.12	1038.87	1037.04	1036.37	1035.84	1035.07
26	1036.08	1035.82	1035.34	1033.00	1033.03	1032.82	1034.16	1039.00	1037.03	1036.34	1035.81	1035.04
27	1036.06	1035.71	1035.30	1032.97	1033.00	1032.80	1034.40	1039.55	1037.02	1036.29	1035.79	1035.02
28	1036.04	1035.67	1035.24	1032.95	1032.98	1032.79	1034.56	1039.71	1037.01	1036.31	1035.77	1035.00
29	1036.02	1035.65	1035.20	1032.97	---	1032.79	1034.61	1039.76	1036.99	1036.31	1035.75	1034.97
30	1036.01	1035.65	1035.16	1033.04	---	1032.78	1034.65	1039.75	1036.96	1036.28	1035.71	1034.94
31	1036.01	---	1035.11	1033.02	---	1032.77	---	1039.74	---	1036.26	1035.70	---
MEAN	1036.21	1035.84	1035.46	1033.82	1033.03	1032.91	1033.33	1037.34	1038.04	1036.60	1035.92	1035.31
MAX	1036.40	1035.99	1035.63	1035.07	1033.13	1033.13	1034.65	1039.76	1039.72	1036.92	1036.23	1035.67
MIN	1036.01	1035.65	1035.11	1032.95	1032.96	1032.77	1032.66	1034.67	1036.96	1036.26	1035.70	1034.94
(+)	154,400	152,000	148,300	134,700	134,400	133,100	145,200	181,900	161,100	156,200	152,300	147,200
(#)	-2,800	-2,400	-3,700	-13,600	-300	-1,300	+12,100	+36,700	-20,800	-4,900	-3,900	-5,100

CAL YR 2001 ..... (#) +24,900
WTR YR 2002 ..... (#) -10,000

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

06911490 SALT CREEK AT LYNDON, KS

LOCATION.--Lat 38°36'07", long 95°41'05", in SE $^{1}/_{4}$ SE $^{1}/_{4}$ NW $^{1}/_{4}$ sec.06, T.17 S., R.16 E., Osage County, Hydrologic Unit 10290101, on left bank at upstream side of Interstate Highway 75 bridge, 0.25 mi south of Lyndon, and at mile 16.6.

DRAINAGE AREA.--97.8 mi^2.

PERIOD OF RECORD.--Otober 1999 to current year.

GAGE.--Water-stage recorder. Datum of gage is 979.79 ft above NGVD of 1929. Prior to Oct. 1, 1999, recording gage at site 0.5 mi north and 2.5 mi east of present site.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 10,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 25	0400	*4,320	*8.65	No peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.4	0.86	0.95	e1.6	5.4	4.0	3.8	37	29	3.1	0.38	0.10
2	3.1	0.91	0.98	1.1	5.0	4.4	3.6	30	22	2.5	0.51	0.06
3	2.8	0.95	0.96	1.1	5.6	3.8	2.9	25	18	2.2	0.79	0.02
4	3.4	1.2	1.1	1.5	6.3	3.7	2.8	21	26	2.0	0.83	0.04
5	4.8	1.2	1.5	2.1	5.6	4.6	2.6	19	265	1.7	0.48	0.21
6	3.1	1.4	1.3	2.1	9.3	5.5	2.8	17	69	1.6	0.33	0.17
7	3.7	1.7	1.5	1.8	15	6.0	3.0	23	37	1.5	0.35	0.13
8	2.0	1.5	2.5	1.6	20	7.5	9.3	504	26	1.4	0.29	0.11
9	1.9	1.9	2.1	1.9	29	18	47	1080	22	1.3	0.27	0.08
10	2.3	2.0	1.8	2.0	21	29	40	141	21	1.5	0.24	0.05
11	2.3	2.4	1.5	1.9	13	22	24	71	49	1.7	0.21	0.02
12	3.4	2.4	1.9	1.7	9.4	14	75	2520	1210	1.7	0.26	0.00
13	4.0	2.3	2.0	2.0	6.8	11	37	307	141	1.6	0.63	0.00
14	4.0	2.7	1.9	1.8	6.3	9.1	23	109	59	1.4	0.57	0.0
15	13	2.7	1.5	1.8	5.3	7.2	17	63	36	1.1	0.41	0.00
16	34	2.6	1.5	1.9	4.8	6.6	13	93	27	1.0	0.37	0.00
17	15	2.8	1.5	1.8	4.2	6.0	12	93	21	0.85	1.2	0.00
18	7.1	3.0	1.6	1.7	3.9	5.8	10	60	17	0.66	0.59	0.00
19	4.1	2.1	1.8	2.2	8.9	5.6	8.9	39	12	0.67	0.49	0.00
20	2.6	1.9	1.9	2.1	19	4.9	9.4	34	8.5	0.65	0.52	0.00
21	2.3	2.2	2.0	2.2	21	4.3	1310	29	7.3	0.59	0.46	0.00
22	2.7	2.3	2.0	2.2	18	3.1	210	24	6.0	0.77	0.37	0.00
23	2.7	2.4	1.9	2.5	13	3.3	76	21	4.7	1.1	0.45	0.00
24	3.8	2.9	1.9	2.2	13	3.5	47	53	3.9	0.78	0.61	0.00
25	3.6	2.0	1.8	2.2	11	3.8	32	1940	3.4	0.54	0.87	0.00
26	2.6	1.7	1.8	2.2	8.1	3.4	29	168	3.5	0.51	0.55	0.00
27	1.7	1.3	1.6	2.2	6.2	3.5	351	639	3.7	0.50	0.46	0.00
28	1.2	1.5	1.7	2.1	4.1	3.5	286	197	3.3	0.51	0.43	0.00
29	1.1	1.3	e1.7	2.7	---	3.9	77	80	3.4	0.71	0.34	0.00
30	0.95	1.2	e1.7	6.1	---	3.5	47	50	3.7	0.44	0.27	0.00
31	0.68	---	e1.7	5.7	---	3.5	---	37	---	0.41	0.16	---
MEAN	4.624	1.911	1.664	2.194	10.65	7.032	93.74	275.0	71.95	1.193	0.474	0.033
MAX	34	3.0	2.5	6.1	29	29	1310	2520	1210	3.1	1.2	0.21
MIN	0.68	0.86	0.95	1.1	3.9	3.1	2.6	17	3.3	0.41	0.16	0.00
AC-FT	284	114	102	135	591	432	5580	16910	4280	73	29	2.0

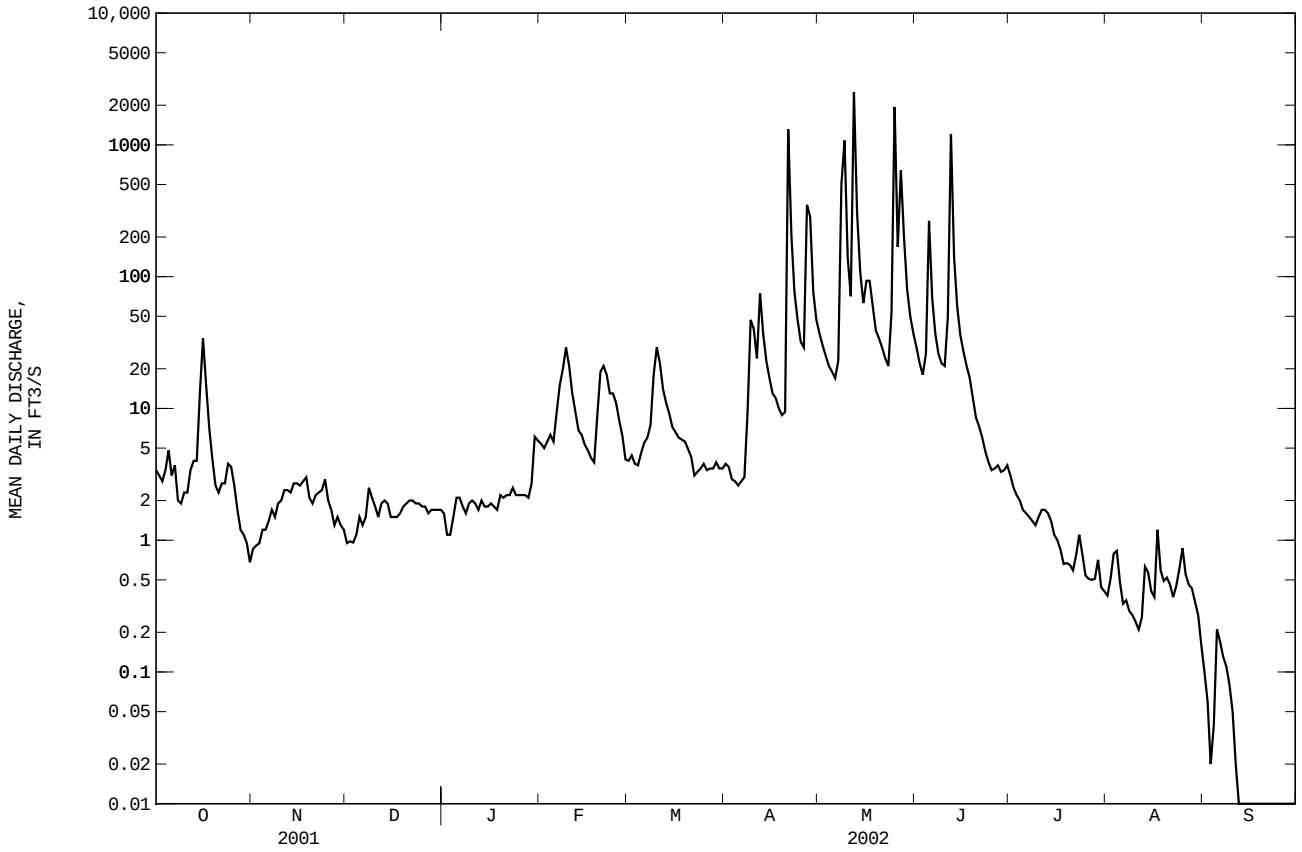
06911490 SALT CREEK AT LYNDON, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.456	4.099	35.70	3.510	55.69	48.54	38.63	106.1	78.69	1.327	1.762	25.72
MAX	4.62	10.4	105	8.25	106	89.0	93.7	275	161	2.01	4.70	77.1
(WY)	2002	2000	2000	2000	2000	2000	2002	2002	2001	2001	2001	2001
MIN	0.000	0.018	0.062	0.087	10.7	7.03	8.72	7.12	2.71	0.77	0.11	0.000
(WY)	2001	2001	2001	2001	2002	2002	2001	2000	2000	2000	2000	2000

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 2000 - 2002	
ANNUAL MEAN	32.58		39.41		33.32	
HIGHEST ANNUAL MEAN					39.4	2002
LOWEST ANNUAL MEAN					28.7	2000
HIGHEST DAILY MEAN	1120	Jun 20	2520	May 12	2520	May 12 2002
LOWEST DAILY MEAN	0.00	Jan 2	0.00	Sep 12	0.00	Aug 25 2000
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Sep 12	0.00	Aug 25 2000
MAXIMUM PEAK FLOW			4320	May 25	4320	May 25 2002
MAXIMUM PEAK STAGE			8.65	May 25	8.65	May 25 4003
INSTANTANEOUS LOW FLOW			0.00	Sep 4	0.00	Aug 28 2000
ANNUAL RUNOFF (AC-FT)	23590		28530		24140	
10 PERCENT EXCEEDS	38		38		40	
50 PERCENT EXCEEDS	3.0		2.5		2.7	
90 PERCENT EXCEEDS	0.55		0.28		0.01	

e Estimated



06911900 DRAGOON CREEK NEAR BURLINGAME, KS

LOCATION.--Lat 38°42'30", long 95°50'20", in SE $^1/_4$ SE $^1/_4$ sec.27, T.15 S., R.14 E., Osage County, Hydrologic Unit 10290101, on left bank 110 ft downstream from city of Burlingame pumping station and dam, 0.2 mi downstream from bridge on U.S. Highway 56, 2.0 mi downstream from Plum Creek, and 3.0 mi south of Burlingame.

WATER-DISCHARGE RECORDS

DRAINAGE AREA.--114 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is 1,016.06 ft above NGVD of 1929. Prior to June 8, 1960, nonrecording gage at bridge 180 ft upstream at present datum.

REMARKS.--Records good. Satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since at least 1900, 23.4 ft June 26, 1946, from information by local residents.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Apr 21	0800	1,950	9.14	May 27	1400	*2,230	*10.24
May 8	1200	1,880	8.85	Jun 4	1900	1,630	7.84
May 9	0200	2,040	9.47				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

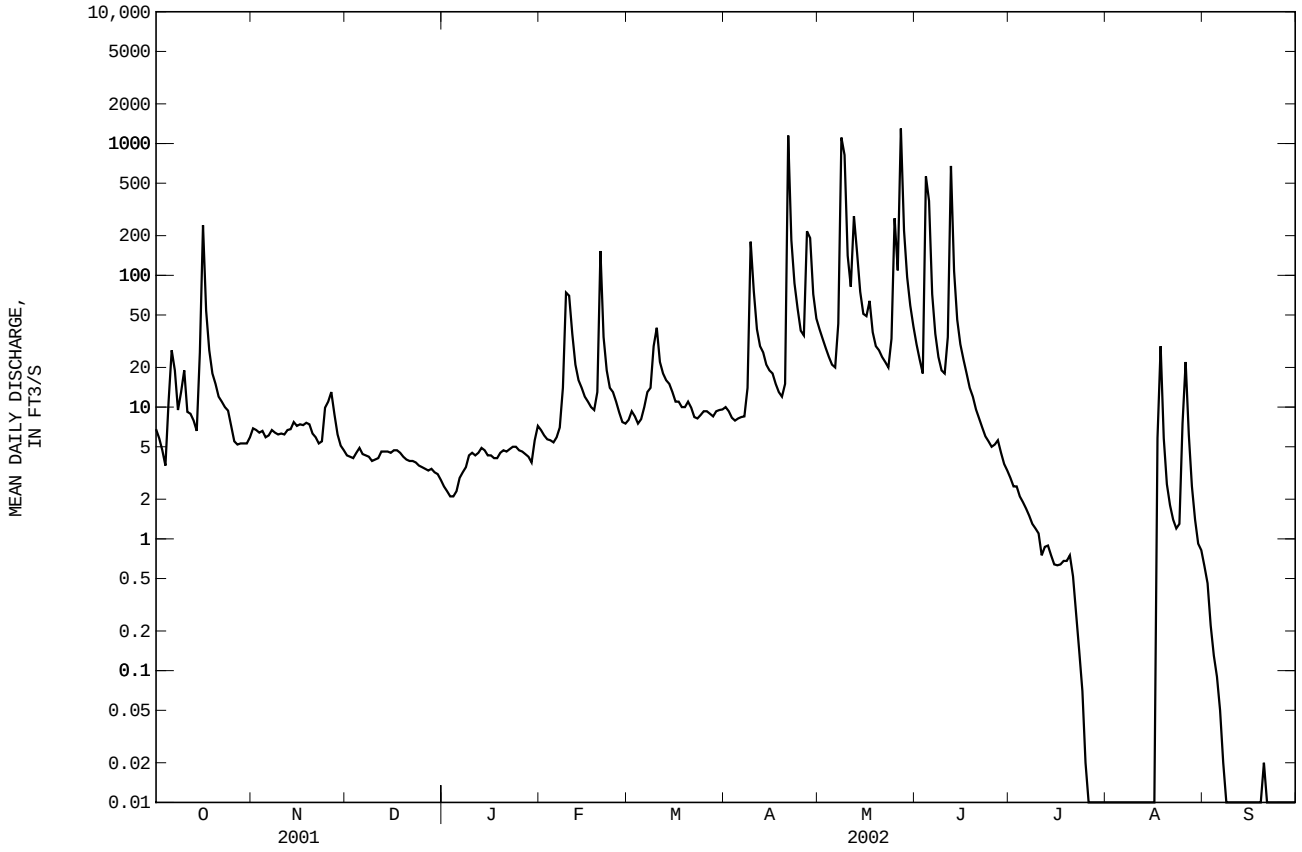
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.8	6.9	4.3	2.5	6.7	8.0	10	39	30	2.9	0.00	0.62
2	5.8	6.7	4.2	2.3	6.1	9.3	9.3	33	23	2.5	0.00	0.46
3	4.7	6.4	4.1	2.1	5.7	8.5	8.3	28	18	2.5	0.00	0.22
4	3.6	6.6	4.5	2.1	5.6	7.5	7.9	24	563	2.1	0.00	0.13
5	11	5.9	4.9	2.3	5.4	8.1	8.2	21	367	1.9	0.00	0.09
6	27	6.1	4.4	2.9	5.9	10	8.4	20	72	1.7	0.00	0.05
7	19	6.7	4.3	3.2	7.0	13	8.5	43	36	1.5	0.00	0.02
8	9.5	6.4	4.2	3.5	14	14	14	1110	24	1.3	0.00	0.00
9	13	6.2	3.9	4.3	74	29	180	818	19	1.2	0.00	0.00
10	19	6.3	4.0	4.5	70	40	76	141	18	1.1	0.00	0.00
11	9.2	6.2	4.1	4.3	36	22	39	82	34	0.75	0.00	0.00
12	8.9	6.7	4.6	4.5	21	18	29	281	676	0.87	0.00	0.00
13	7.9	6.8	4.6	4.9	16	16	26	149	108	0.89	0.00	0.00
14	6.6	7.7	4.6	4.7	14	15	21	75	46	0.75	0.00	0.01
15	26	7.2	4.5	4.3	12	13	19	51	30	0.64	0.00	0.00
16	240	7.4	4.7	4.3	11	11	18	49	23	0.63	0.00	0.00
17	54	7.3	4.7	4.1	10	11	15	64	18	0.64	5.8	0.00
18	27	7.6	4.5	4.1	9.5	10	13	37	14	0.68	29	0.00
19	18	7.4	4.2	4.5	13	10	12	29	12	0.68	5.8	0.0
20	15	6.3	4.0	4.7	153	11	15	27	9.6	0.75	2.6	0.02
21	12	5.9	3.9	4.6	34	9.9	1150	24	8.2	0.52	1.8	0.00
22	11	5.3	3.9	4.8	19	8.4	185	22	7.0	0.27	1.4	0.00
23	10	5.5	3.8	5.0	14	8.2	87	20	6.0	0.14	1.2	0.00
24	9.4	9.9	3.6	5.0	13	8.7	56	33	5.5	0.07	1.3	0.00
25	7.2	11	3.5	4.7	11	9.3	38	271	5.0	0.02	7.5	0.00
26	5.5	13	3.4	4.6	9.1	9.3	35	109	5.2	0.00	22	0.00
27	5.2	8.8	3.3	4.4	7.7	8.9	216	1300	5.6	0.00	6.2	0.00
28	5.3	6.2	3.4	4.2	7.5	8.5	192	219	4.5	0.00	2.5	0.00
29	5.3	5.1	3.2	3.8	---	9.3	72	97	3.7	0.00	1.4	0.00
30	5.3	4.7	3.1	5.6	---	9.5	47	59	3.3	0.01	0.92	0.00
31	5.9	---	2.8	7.2	---	9.6	---	41	---	0.00	0.82	---
MEAN	19.81	7.007	4.039	4.129	21.83	12.39	87.19	171.5	73.15	0.871	2.911	0.054
MAX	240	13	4.9	7.2	153	40	1150	1300	676	2.9	29	0.62
MIN	3.6	4.7	2.8	2.1	5.4	7.5	7.9	20	3.3	0.00	0.00	0.00
MED	9.4	6.7	4.1	4.3	12	9.9	24	49	18	0.68	0.00	0.00
AC-FT	1220	417	248	254	1210	762	5190	10540	4350	54	179	3.2

06911900 DRAGOON CREEK NEAR BURLINGAME, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	50.57	49.34	31.51	27.35	51.72	94.80	115.2	139.9	144.6	52.85	15.23	36.55
MAX	447	621	186	182	249	511	600	1008	856	652	186	339
(WY)	1986	1999	1974	1962	1985	1973	1983	1995	1977	1993	1968	1973
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.21	0.002	0.009	0.000	0.000
(WY)	1965	1967	1967	1977	1992	1967	1977	1989	1989	1991	1966	1966

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1961 - 2002	
ANNUAL MEAN	61.77		33.75		67.38	
HIGHEST ANNUAL MEAN					175	1999
LOWEST ANNUAL MEAN					5.54	1989
HIGHEST DAILY MEAN	2060	Jun 21	1300	May 27	13400	May 29 1982
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Jul 26	0.00	Aug 14 1962
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Jul 31	0.00	Aug 14 1962
MAXIMUM PEAK FLOW			2230	May 27	34400	May 29 1982
MAXIMUM PEAK STAGE			10.24	May 27	22.80	May 17 1995
INSTANTANEOUS LOW FLOW			0.00	Jul 25	.00	many years
ANNUAL RUNOFF (AC-FT)	44720		24430		48820	
10 PERCENT EXCEEDS	83		46		92	
50 PERCENT EXCEEDS	7.7		6.3		7.9	
90 PERCENT EXCEEDS	0.46		0.00		0.00	



06911900 DRAGOON CREEK NEAR BURLINGAME, KS--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to June 1990, 2000 to current year.

REMARKS.--Unpublished records of intermittent sediment samples are available on the Internet at http://ks.waterdata.usgs.gov/nwis. Sediment samples are collected only at selected flow conditions.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)
MAR						
07...	1430	13	298	4.5	42	1.5
MAY						
30...	1100	57	404	21.0	88	13.5
JUN						
05...	1040	245	262	19.5	272	180
12...	1025	957	223	22.0	1400	3630
26...	1110	4.5	468	28.0	16	.20
JUL						
17...	1100	.69	468	26.0	58	.11

06912490 POMONA LAKE NEAR QUENEMO, KS

LOCATION.--Lat 38°38'51", long 95°33'50", in NE $^{1}/_{4}$ SE $^{1}/_{4}$ NE $^{1}/_{4}$ sec.19, T.16 S., R.17 E., Osage County, Hydrologic Unit 10290101, in control tower at dam on Hundred and Ten Mile Creek, 5.0 mi northwest of Quenemo, and at mile 7.9.

DRAINAGE AREA.--322 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929 (U.S. Army Corps of Engineers bench mark).

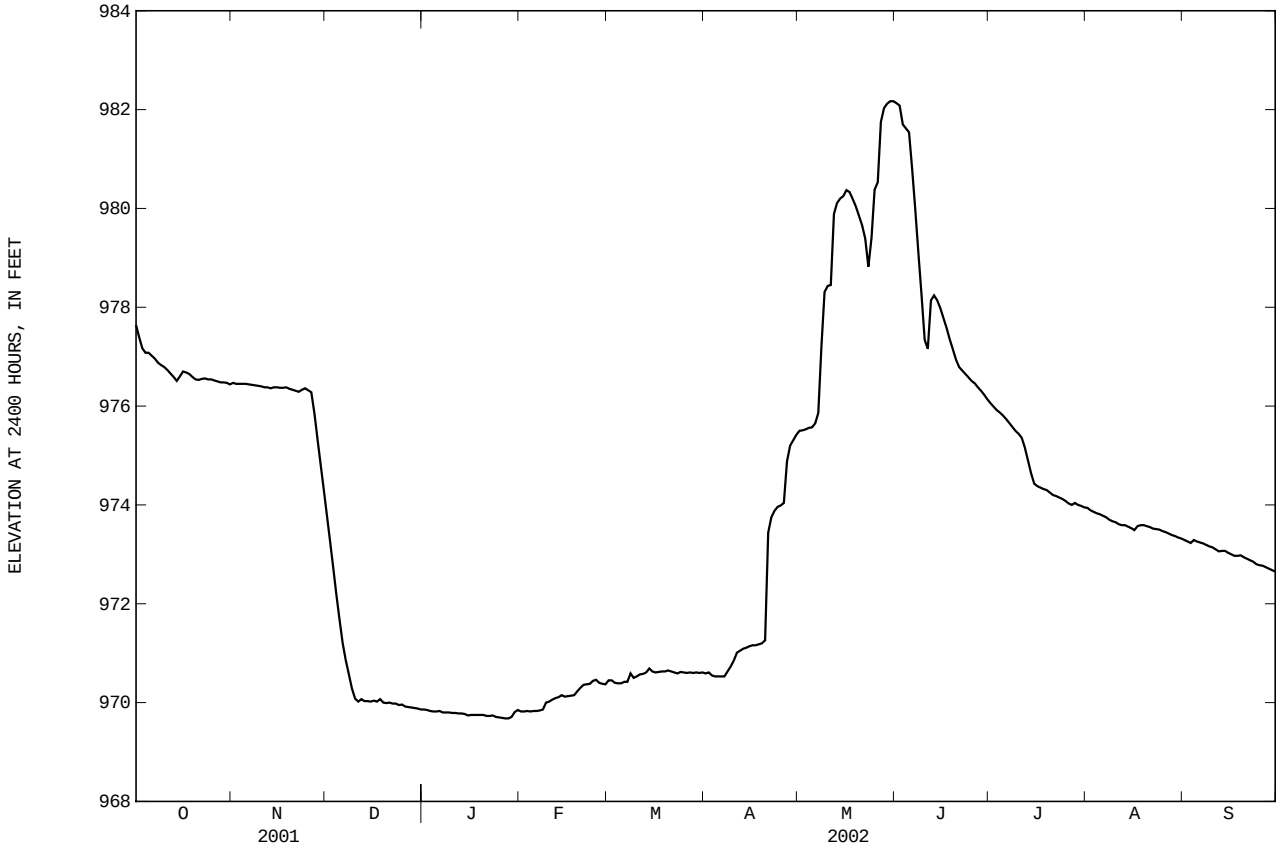
REMARKS.--Reservoir is formed by compacted earthfill dam. Storage began Oct. 18, 1963. Conservation pool elevation was first reached on June 4, 1965. Total capacity, 498,500 acre-ft, consisting of the following: Sedimentation, 25,610 acre-ft below elevation 960.5 ft; conservation pool, 41,030 acre-ft between elevations 960.5 ft and 974.0 ft; flood-control pool, 176,500 acre-ft between elevations 974.0 ft and 1,003.0 ft; and surcharge pool, 255,400 acre-ft between elevations 1,003.0 ft and 1,025.4 ft. Reservoir is used for flood control, conservation, and recreation. Figures given herein represent total contents. Satellite telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 998.40 ft June 12, 1995, contents, 203,200 acre-ft; minimum elevation since conservation pool was first filled, 969.60 ft Mar. 29, 30, 1967, contents, 54,260 acre-ft, from capacity table then in use.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 982.19 ft May 31, contents, 100,900 acre-ft; minimum elevation, 969.66 ft Jan. 22, contents, 48,680 acre-ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Computed by U.S. Army Corps of Engineers on basis of resurvey made in 1989)
Note.--Effective date of new capacity table Apr. 1, 1990.

965	34,440	980	90,000
970	49,820	985	118,600
975	68,150	990	145,200



06912490 POMONA LAKE NEAR QUENEMO, KS--Continued

ELEVATION, in FT (NGVD), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	977.64	976.47	973.78	969.86	969.82	970.45	970.59	975.50	982.13	976.06	973.94	973.29
2	977.39	976.45	973.26	969.85	969.82	970.45	970.61	975.51	982.08	975.99	973.89	973.26
3	977.17	976.45	972.73	969.83	969.83	970.40	970.55	975.53	981.70	975.92	973.86	973.23
4	977.08	976.45	972.19	969.82	969.82	970.39	970.53	975.56	981.62	975.87	973.83	973.29
5	977.08	976.45	971.69	969.82	969.83	970.39	970.53	975.57	981.54	975.81	973.81	973.26
6	977.02	976.44	971.21	969.83	969.83	970.42	970.53	975.65	980.79	975.74	973.78	973.24
7	976.96	976.43	970.86	969.80	969.84	970.42	970.53	975.86	979.97	975.66	973.75	973.22
8	976.88	976.42	970.57	969.80	969.86	970.59	970.63	977.20	979.09	975.58	973.70	973.19
9	976.83	976.41	970.28	969.80	970.00	970.50	970.73	978.31	978.24	975.50	973.67	973.16
10	976.79	976.40	970.08	969.79	970.02	970.53	970.85	978.43	977.34	975.44	973.65	973.14
11	976.73	976.38	970.02	969.79	970.06	970.57	971.01	978.45	977.16	975.36	973.61	973.10
12	976.66	976.38	970.07	969.78	970.09	970.58	971.05	979.89	978.14	975.16	973.59	973.06
13	976.59	976.36	970.03	969.78	970.11	970.61	971.09	980.11	978.24	974.90	973.59	973.07
14	976.51	976.38	970.03	969.77	970.15	970.69	971.11	980.20	978.14	974.64	973.56	973.07
15	976.60	976.38	970.02	969.74	970.12	970.63	971.14	980.25	977.98	974.43	973.53	973.03
16	976.70	976.37	970.04	969.75	970.13	970.61	971.16	980.37	977.78	974.38	973.49	973.00
17	976.68	976.37	970.02	969.75	970.14	970.62	971.16	980.33	977.58	974.35	973.57	972.97
18	976.65	976.38	970.07	969.75	970.15	970.63	971.18	980.19	977.35	974.32	973.59	972.97
19	976.59	976.35	970.00	969.75	970.23	970.63	971.20	980.04	977.15	974.30	973.59	972.98
20	976.54	976.33	969.99	969.75	970.30	970.65	971.26	979.85	976.94	974.25	973.57	972.94
21	976.53	976.31	970.00	969.73	970.36	970.63	973.44	979.66	976.79	974.20	973.55	972.91
22	976.55	976.29	969.98	969.73	970.37	970.61	973.75	979.39	976.72	974.18	973.52	972.88
23	976.56	976.33	969.98	969.74	970.38	970.59	973.88	978.82	976.65	974.15	973.51	972.85
24	976.54	976.36	969.95	969.71	970.44	970.62	973.96	979.40	976.58	974.12	973.50	972.80
25	976.54	976.32	969.96	969.70	970.46	970.61	973.99	980.38	976.51	974.08	973.47	972.78
26	976.52	976.28	969.92	969.69	970.40	970.60	974.04	980.53	976.46	974.03	973.45	972.77
27	976.50	975.85	969.91	969.68	970.38	970.61	974.88	981.75	976.38	974.00	973.42	972.74
28	976.48	975.32	969.90	969.68	970.37	970.60	975.20	982.03	976.31	974.04	973.39	972.71
29	976.48	974.81	969.89	969.71	---	970.61	975.31	982.12	976.23	974.00	973.37	972.68
30	976.47	974.30	969.88	969.81	---	970.60	975.42	982.17	976.14	973.98	973.34	972.65
31	976.44	---	969.86	969.85	---	970.61	---	982.17	---	973.95	973.32	---
MEAN	976.73	976.21	970.52	969.77	970.12	970.56	972.04	979.07	978.19	974.79	973.59	973.01
MAX	977.64	976.47	973.78	969.86	970.46	970.69	975.42	982.17	982.13	976.06	973.94	973.29
MIN	976.44	974.30	969.86	969.68	969.82	970.39	970.53	975.50	976.14	973.95	973.32	972.65
(+)	74,080	65,370	49,350	49,320	51,080	51,900	69,850	100,800	72,820	64,020	61,620	59,130
(#)	-6,220	-8,710	-16,020	-30	+1,760	+820	+17,950	+30,950	-27,980	-8,800	-2,400	-2,490

CAL YR 2001 ..... (#) -5,550
WTR YR 2002 ..... (#) -21,170

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

06912500 HUNDRED AND TEN MILE CREEK NEAR QUENEMO, KS

LOCATION.--Lat 38°38'41", long 95°33'34", in NE $^1/_4$ NW $^1/_4$ SW $^1/_4$ sec.20, T.16 S., R.17 E., Osage County, Hydrologic Unit 10290101, on left bank 800 ft downstream from outlet works of Pomona Dam, 4.5 mi northwest of Quenemo, and at mile 7.7.

DRAINAGE AREA.--322 mi^2.

PERIOD OF RECORD.--September 1939 to current year. Prior to October 1941, published as "Dragoon Creek."

REVISED RECORDS.--WSP 1116: 1942.

GAGE.--Water-stage recorder. Datum of gage is 919.05 ft above NGVD of 1929 (U.S. Army Corps of Engineers bench mark). See WSP 1919 for history of changes prior to Apr. 11, 1963.

REMARKS.--Records good. Flow completely regulated since 1964 by Pomona Lake (station 06912490), 0.2 mi upstream. Satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since at least 1919, that of July 11, 1951, from information by local resident.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

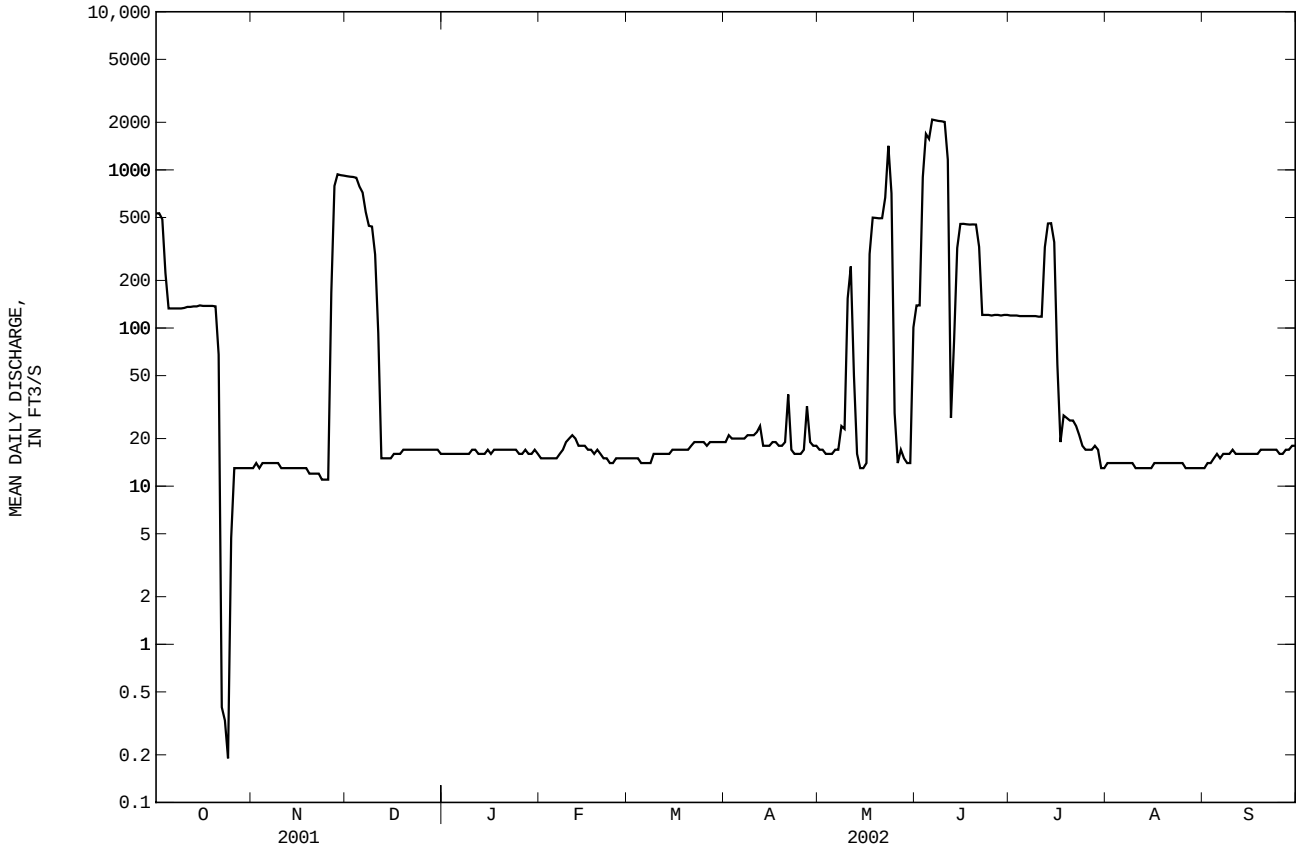
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	530	13	912	16	15	15	19	17	139	120	14	13
2	532	14	906	16	15	15	21	17	139	120	14	14
3	487	13	902	16	15	15	20	16	898	120	14	14
4	223	14	891	16	15	15	20	16	1690	119	14	15
5	133	14	785	16	15	14	20	16	1570	119	14	16
6	133	14	719	16	15	14	20	17	2080	119	14	15
7	133	14	542	16	16	14	20	17	2060	119	14	16
8	133	14	443	16	17	14	21	24	2040	119	14	16
9	133	14	438	16	19	16	21	23	2030	119	14	16
10	134	13	292	17	20	16	21	154	2010	118	13	17
11	136	13	93	17	21	16	22	245	1160	118	13	16
12	136	13	15	16	20	16	24	50	27	325	13	16
13	137	13	15	16	18	16	18	16	83	458	13	16
14	137	13	15	16	18	16	18	13	321	460	13	16
15	139	13	15	17	18	17	18	13	455	349	13	16
16	138	13	16	16	17	17	19	14	456	59	14	16
17	138	13	16	17	17	17	19	294	453	19	14	16
18	138	13	16	17	16	17	18	499	451	28	14	16
19	138	12	17	17	17	17	18	497	452	27	14	17
20	137	12	17	17	16	17	19	494	451	26	14	17
21	68	12	17	17	15	18	38	495	326	26	14	17
22	0.40	12	17	17	15	19	17	669	121	24	14	17
23	0.33	11	17	17	14	19	16	1420	121	21	14	17
24	0.19	11	17	17	14	19	16	710	121	18	14	17
25	4.7	11	17	16	15	19	16	29	120	17	14	16
26	13	167	17	16	15	18	17	14	121	17	13	16
27	13	792	17	17	15	19	32	17	121	17	13	17
28	13	938	17	16	15	19	19	15	120	18	13	17
29	13	926	17	16	---	19	18	14	121	17	13	18
30	13	920	17	17	---	19	18	14	121	13	13	18
31	13	---	16	16	---	19	---	101	---	13	13	---
MEAN	132.1	135.5	233.9	16.42	16.36	16.81	20.10	191.9	679.3	105.2	13.61	16.13
MAX	532	938	912	17	21	19	38	1420	2080	460	14	18
MIN	0.19	11	15	16	14	14	16	13	27	13	13	13
AC-FT	8130	8060	14380	1010	908	1030	1200	11800	40420	6470	837	960

06912500 HUNDRED AND TEN MILE CREEK NEAR QUENEMO, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	133.3	139.3	122.9	86.01	109.2	198.9	277.8	274.4	377.4	288.2	90.32	83.75
MAX	1196	1520	1113	506	847	984	2476	1645	2141	3096	1296	1331
(WY)	1942	1999	1999	1962	1973	1987	1944	1999	1982	1951	1993	1951
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.033	5.04	1.22	0.023	0.000	0.000
(WY)	1940	1940	1940	1940	1940	1940	1954	1954	1953	1954	1940	1953

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1940 - 2002	
ANNUAL MEAN	173.9		131.5		181.9	
HIGHEST ANNUAL MEAN					554	1999
LOWEST ANNUAL MEAN					3.65	1956
HIGHEST DAILY MEAN	2590	Jun 26	2080	Jun 6	27700	Jul 11 1951
LOWEST DAILY MEAN	0.19	Oct 24	0.19	Oct 24	0.00	Oct 1 1939
ANNUAL SEVEN-DAY MINIMUM	6.4	Oct 22	6.4	Oct 22	0.00	Oct 1 1939
MAXIMUM PEAK FLOW			2170	May 23	38600	Jul 11 1951
MAXIMUM PEAK STAGE			10.59	May 23	28.47	Jul 11 1951
INSTANTANEOUS LOW FLOW			0.15	Oct 24	.00	some years
ANNUAL RUNOFF (AC-FT)	125900		95210		131800	
10 PERCENT EXCEEDS	538		451		434	
50 PERCENT EXCEEDS	23		17		20	
90 PERCENT EXCEEDS	13		13		1.2	



06913000 MARAIS DES CYGNES RIVER NEAR POMONA, KS

LOCATION.--Lat 38°35'03", long 95°27'12", in SE $^{1}/_{4}$ NE $^{1}/_{4}$ SE $^{1}/_{4}$ sec.7, T.17 S., R.18 E., Franklin County, Hydrologic Unit 10290101, on right bank at downstream side of county highway bridge, 1.5 mi south of Pomona, 4.7 mi upstream from Miller Dam, 5.7 mi downstream from Hundred and Ten Mile Creek, and at mile 418.1.

DRAINAGE AREA.--1,040 mi^2.

PERIOD OF RECORD.--July 1922 to February 1938, October 1968 to current year. Prior to October 1968, published as "near Quenemo."

REVISED RECORDS.--WSP 1310: 1924(M), 1929, 1931(M), 1934, 1935(M).

GAGE.--Water-stage recorder. Datum of gage is 893.74 ft above NGVD of 1929. July 1922 to February 1938, nonrecording gage 1.7 mi upstream at datum 891.36 ft above NGVD of 1929 (levels by U.S. Army Corps of Engineers).

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow regulated since 1973 by Melvern Lake (station 06910997) and since 1964 by Pomona Lake (station 06912490). Diversions upstream from station for irrigation. Satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	626	24	1130	e145	45	58	53	222	422	162	38	34
2	624	22	1130	e145	e48	57	53	182	387	166	38	35
3	618	22	1120	144	e52	48	49	153	542	163	38	34
4	412	25	1120	e150	56	52	51	130	2910	162	39	31
5	175	25	1070	e155	76	e54	54	115	2430	159	39	32
6	169	27	938	158	74	56	54	104	3480	158	39	34
7	171	27	832	155	70	60	54	101	3470	157	37	34
8	167	26	527	154	79	61	61	356	3420	155	38	34
9	165	36	520	386	89	66	69	2060	3390	154	37	35
10	165	45	475	530	108	78	119	1010	3370	155	38	35
11	165	45	235	522	95	96	121	702	3050	156	37	36
12	164	45	69	522	77	93	523	2450	3690	225	37	35
13	161	45	47	523	67	82	835	2970	2320	502	40	37
14	160	45	46	522	61	74	306	609	1290	504	41	40
15	173	45	45	521	57	70	204	335	1310	492	40	39
16	186	45	44	517	54	65	153	262	1230	192	38	38
17	228	45	44	360	52	62	122	426	1160	45	43	38
18	198	45	44	327	50	62	107	879	1130	46	45	39
19	188	42	43	329	57	61	98	799	1090	53	43	43
20	173	40	42	328	85	60	93	747	1070	52	40	42
21	161	41	43	327	120	59	1610	716	961	52	38	39
22	47	42	43	327	105	56	2250	715	625	52	39	38
23	16	43	42	170	89	55	511	1510	586	49	39	39
24	22	45	42	50	78	56	298	1380	566	44	39	39
25	25	44	40	45	71	56	208	3920	269	43	39	38
26	28	44	44	46	64	55	166	2990	168	43	37	44
27	42	570	e68	45	59	55	327	1850	165	42	35	41
28	33	1140	e140	45	59	54	1560	2130	163	42	35	41
29	26	1140	e138	46	---	54	546	661	164	48	36	40
30	26	1140	e140	52	---	54	296	410	163	44	34	40
31	26	---	140	51	---	53	---	345	---	39	34	---
MEAN	178.7	165.7	335.5	251.5	71.32	62.00	365.0	1008	1500	140.5	38.39	37.47
MAX	626	1140	1130	530	120	96	2250	3920	3690	504	45	44
MIN	16	22	40	45	45	48	49	101	163	39	34	31
AC-FT	10990	9860	20630	15470	3960	3810	21720	61960	89240	8640	2360	2230

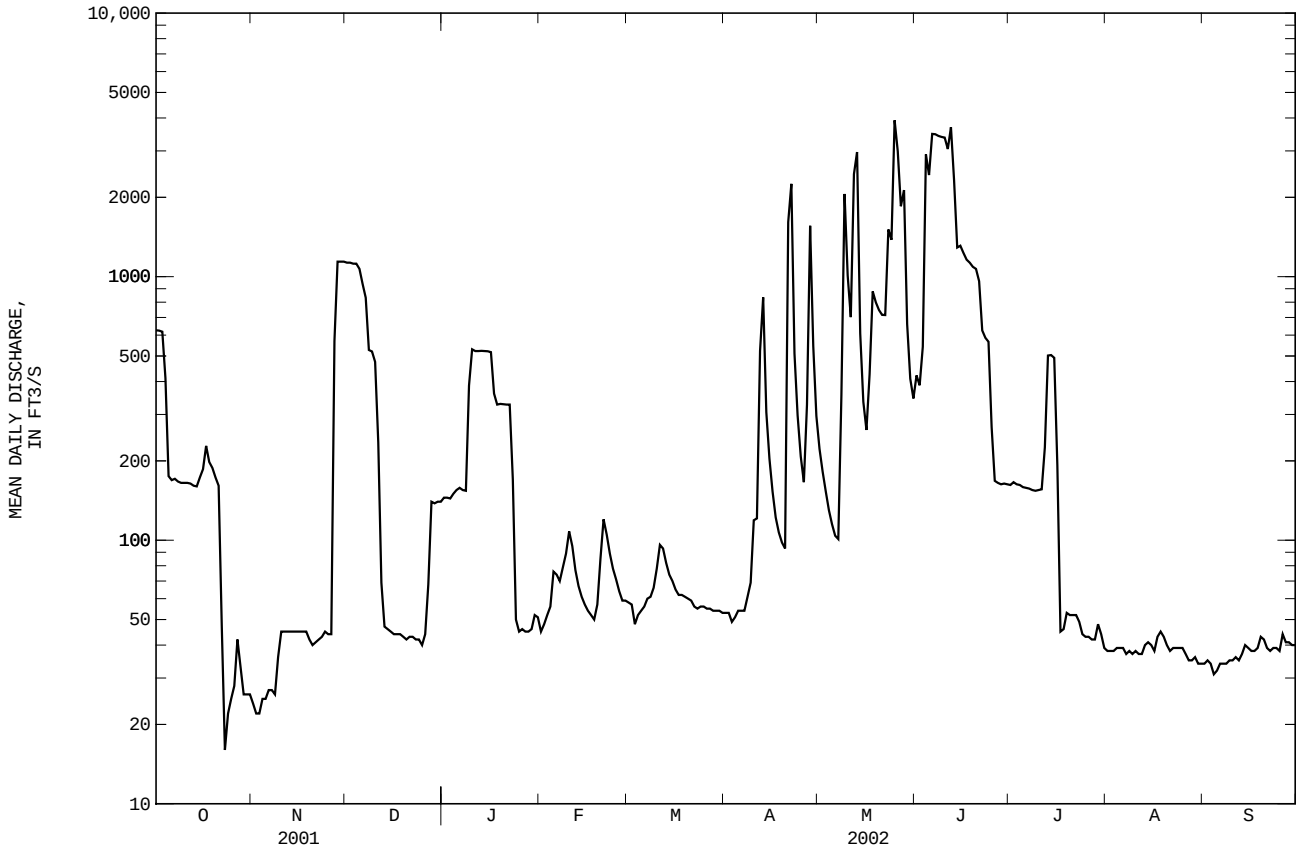
06913000 MARAIS DES CYGNES RIVER NEAR POMONA, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1923 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	394.5	607.2	448.7	273.4	419.5	619.7	931.1	1023	1368	619.5	233.0	215.4
MAX	4204	6256	3275	1342	2224	3772	3722	4717	5587	3206	2807	1436
(WY)	1986	1999	1999	1973	1973	1973	1984	1999	1982	1969	1993	1973
MIN	0.29	1.00	0.87	1.00	1.32	1.87	8.00	59.3	8.93	0.42	0.000	0.87
(WY)	1938	1938	1938	1938	1938	1934	1936	2000	1936	1936	1934	1931

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1923 - 2002	
ANNUAL MEAN	405.3		346.5		599.0	
HIGHEST ANNUAL MEAN					2092	1999
LOWEST ANNUAL MEAN					55.6	1934
HIGHEST DAILY MEAN	4240	Feb 25	3920	May 25	40600	Nov 2 1998
LOWEST DAILY MEAN	16	Oct 23	16	Oct 23	0.00	Jul 27 1926
ANNUAL SEVEN-DAY MINIMUM	24	Oct 30	24	Oct 30	0.00	Jul 16 1934
MAXIMUM PEAK FLOW			6110	May 25	69400	Nov 17 1928
MAXIMUM PEAK STAGE			17.31	May 25	38.38	Nov 17 1928
INSTANTANEOUS LOW FLOW			13	Oct 23	.00	many years
ANNUAL RUNOFF (AC-FT)	293500		250900		433900	
10 PERCENT EXCEEDS	1160		1070		1700	
50 PERCENT EXCEEDS	124		69		78	
90 PERCENT EXCEEDS	38		37		6.4	

e Estimated



06913500 MARAIS DES CYGNES RIVER NEAR OTTAWA, KS

LOCATION.--Lat 38°37'07", long 95°16'04", in NW $^1/_4$ SW $^1/_4$ NW $^1/_4$ sec.36, T.16 S., R.19 E., Franklin County, Hydrologic Unit 10290101, on right bank at downstream side of Main Street Bridge, on U.S. Highway 59, 1.0 mi downstream of Eightmile Creek, and at mile 398.0.

DRAINAGE AREA.--1,250 mi^2, approximately.

PERIOD OF RECORD.--August 1902 to October 1905, October 1918 to current year. Published as Osage River at Ottawa 1902-05, and as Osage River near Ottawa 1918-47.

REVISED RECORDS.--WSP 1006: 1923, 1927, 1929. WSP 1440: 1904-05, 1922, 1929(M), 1935, 1941-43, 1944-45(M), drainage area.

GAGE.--Water-stage recorder. Datum of gage is 857.68 ft above NGVD of 1929. Aug. 26, 1902, to Oct. 31, 1905, nonrecording 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 downstream at datum 0.47 ft higher. Sept. 5, 1962, to Aug. 8, 1971, water-stage recorder at sewage disposal plant at datum 857.68 ft. Aug. 9, 1971, to July 23, 1987, water-stage recorder outside sewage disposal plant at same datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow regulated since 1973 by Melvern Lake (station 06910997) and since 1964 by Pomona Lake (station 06912490). Many small diversions upstream from station. Satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--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 lower than that in 1951 according to same information.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 7,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 25	2300	*6,880	*21.37	No peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	603	25	1090	e136	57	63	56	289	466	160	32	32
2	600	22	1080	e136	58	66	55	227	431	160	33	31
3	596	19	1080	e136	66	55	51	188	389	161	34	30
4	499	21	1070	e136	67	50	49	158	2120	164	36	31
5	233	22	1060	e136	73	66	51	138	2460	154	39	31
6	162	22	912	e136	80	62	52	128	3010	155	38	31
7	169	22	869	e136	74	64	55	217	3200	154	36	32
8	167	21	551	133	76	66	66	875	3140	153	31	32
9	164	22	498	210	88	72	76	2670	3140	149	30	30
10	159	37	491	502	128	75	100	1720	3110	147	32	34
11	156	40	286	e510	123	98	138	833	3040	148	33	33
12	155	38	119	497	96	102	265	3440	3660	152	34	28
13	153	36	51	497	81	92	1040	4670	3070	447	43	29
14	150	36	47	498	70	80	407	1170	1600	518	42	34
15	174	37	46	498	65	73	230	515	1260	515	40	33
16	194	37	45	497	61	68	163	372	1250	325	35	30
17	252	39	44	393	59	64	127	459	1180	84	41	33
18	209	42	45	301	58	63	109	924	1120	39	42	36
19	188	40	44	303	68	64	99	888	1080	48	43	41
20	181	37	45	306	92	63	101	788	1060	49	37	38
21	165	35	40	303	123	61	1450	747	989	48	35	35
22	104	35	40	303	117	58	3110	711	730	47	35	32
23	37	37	38	232	98	57	873	1120	594	48	34	31
24	28	46	38	67	86	55	407	1600	584	47	33	31
25	28	43	39	46	78	55	267	4600	408	43	33	32
26	27	41	39	44	71	54	204	4760	196	37	34	34
27	35	266	41	44	65	54	457	2120	253	35	35	37
28	39	1030	112	42	63	55	2070	2910	220	35	32	36
29	30	1100	e136	41	---	55	960	1010	174	43	33	33
30	25	1090	e136	57	---	55	424	550	165	39	31	33
31	25	---	e136	66	---	56	---	398	---	34	33	---
MEAN	184.1	144.6	331.2	236.8	80.04	65.19	450.4	1329	1470	139.9	35.45	32.77
MAX	603	1100	1090	510	128	102	3110	4760	3660	518	43	41
MIN	25	19	38	41	57	50	49	128	165	34	30	28
AC-FT	11320	8600	20370	14560	4450	4010	26800	81710	87470	8600	2180	1950

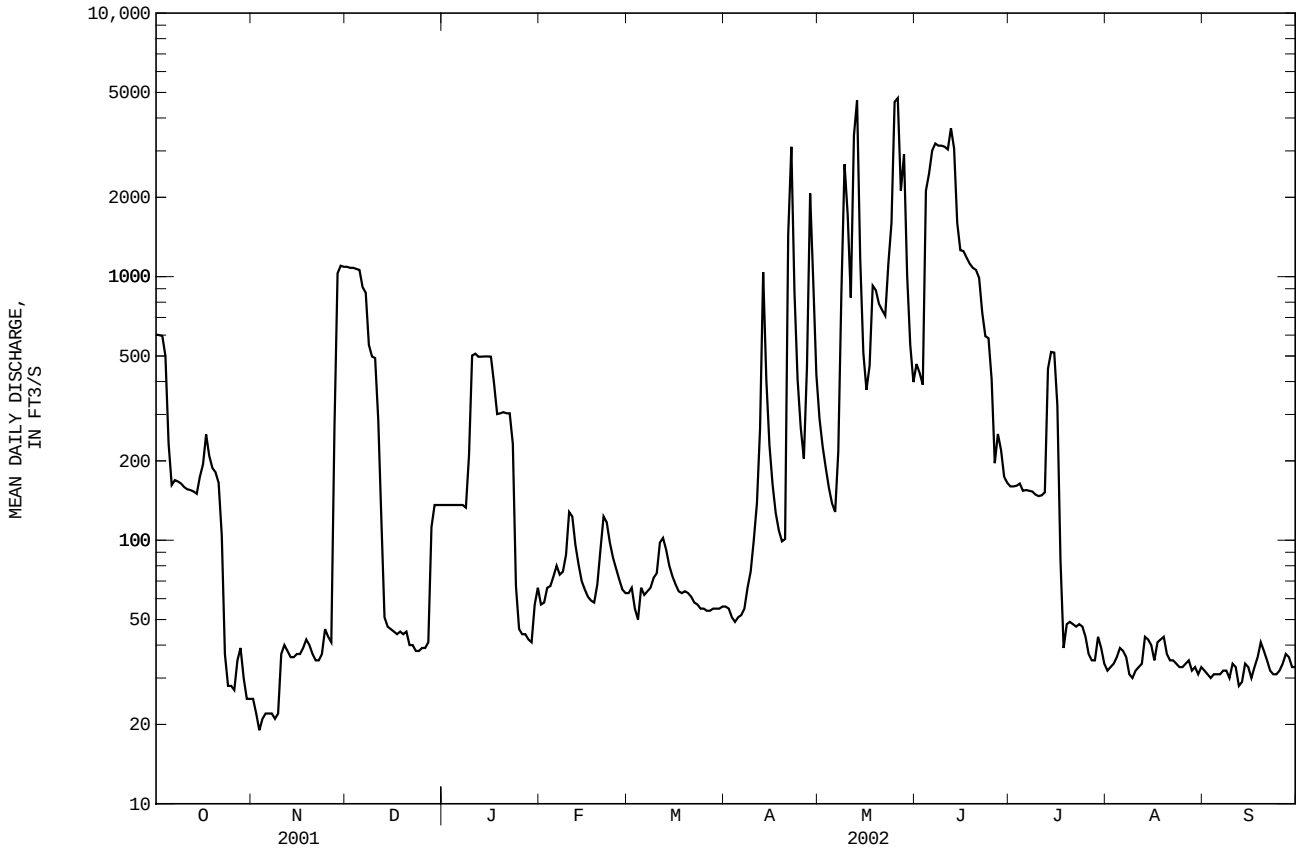
06913500 MARAIS DES CYGNES RIVER NEAR OTTAWA, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1903 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	521.8	575.0	404.9	301.3	422.6	759.6	1118	1135	1478	844.7	331.4	411.1
MAX	6546	6913	3820	2011	2578	4422	8859	5170	6143	13580	3683	4581
(WY)	1942	1999	1945	1941	1949	1973	1944	1904	1904	1951	1950	1951
MIN	0.032	0.33	0.065	0.23	1.14	1.88	9.52	51.6	7.87	0.19	0.52	0.000
(WY)	1940	1940	1940	1940	1940	1956	1956	1965	1936	1940	1936	1939

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1903 - 2002	
ANNUAL MEAN	456.9		375.7		695.6	
HIGHEST ANNUAL MEAN					2332	1999
LOWEST ANNUAL MEAN					26.0	1956
HIGHEST DAILY MEAN	5830	Jun 21	4760	May 26	134000	Jul 12 1951
LOWEST DAILY MEAN	19	Nov 3	19	Nov 3	0.00	Jun 27 1920
ANNUAL SEVEN-DAY MINIMUM	21	Nov 2	21	Nov 2	0.00	Jul 1 1933
MAXIMUM PEAK FLOW			6880	May 25	142000	Jul 11 1951
MAXIMUM PEAK STAGE			21.37	May 25	42.50	Jul 11 1951
INSTANTANEOUS LOW FLOW			19	Nov 2	.00	at times
ANNUAL RUNOFF (AC-FT)	330800		272000		503900	
10 PERCENT EXCEEDS	1190		1060		1650	
50 PERCENT EXCEEDS	150		75		95	
90 PERCENT EXCEEDS	36		32		4.0	

e Estimated



06914100 POTTAWATOMIE CREEK NEAR SCIPIO, KS

LOCATION.--Lat 38°20'57", long 95°12'12", in NW $^1/_4$ SW $^1/_4$ SE $^1/_4$ sec.33, T.19 S., R.20 E., Anderson County, Hydrologic Unit 10290101, on right downstream side of bridge on NW Norton Road and at mile 33.9.

DRAINAGE AREA.--343 mi^2.

PERIOD OF RECORD.--October 2001 to September 2002. Prior to October 2001, published as “near Garnett”.

GAGE.--Water-stage recorder. Datum of gage is 865.00 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since at least 1858, that of Sept. 13, 1961, from information by local newspaper.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 6,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 25	1600	*6,810	*25.63	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e11	e2.4	e0.95	e1.3	e2.6	14	4.8	148	256	6.7	1.2	1.7
2	e9.8	e2.3	e0.86	e1.2	e6.2	14	4.7	112	195	5.8	0.86	1.4
3	e7.8	e2.2	e0.98	e1.1	30	14	4.1	88	132	5.2	0.68	1.1
4	e5.9	e2.1	e0.91	e1.1	77	14	3.7	72	93	5.6	0.52	0.96
5	e8.6	e2.0	e0.98	e1.1	69	14	4.1	57	90	87	0.51	0.84
6	e6.4	e1.9	e1.0	e1.2	50	14	4.4	49	92	22	0.39	0.80
7	e4.3	e1.8	e1.1	e1.2	36	15	4.9	49	91	11	0.37	0.68
8	e4.5	e1.7	e1.1	e1.3	27	20	6.2	1110	81	9.2	0.37	0.58
9	e4.5	e1.7	e1.1	e1.3	20	24	8.0	2450	74	7.5	0.34	0.49
10	e4.5	e1.6	e1.2	e1.3	15	23	8.5	1100	80	6.3	0.31	0.41
11	e4.7	e1.5	e1.2	e1.3	12	20	8.9	379	69	42	0.29	e0.41
12	e4.7	e1.4	e1.2	e1.3	10	18	11	1590	1810	262	0.26	e0.39
13	e4.2	e1.3	e1.2	e1.2	9.2	16	17	1890	3340	133	0.48	e0.41
14	e4.5	e1.2	e1.1	e1.2	8.9	14	65	570	1100	41	1.1	e0.40
15	e6.9	e1.1	e1.1	e1.2	8.0	13	47	276	348	22	1.8	e0.39
16	e3.4	e1.1	e1.0	e1.2	7.2	12	32	204	239	16	2.2	e0.40
17	e3.5	e1.1	e0.98	e1.4	6.8	10	25	179	192	9.6	3.8	e0.42
18	e3.5	e0.99	e0.94	1.5	6.4	9.3	22	207	130	6.3	5.1	e0.40
19	e3.5	e0.95	e0.88	1.7	8.4	9.4	18	169	89	4.7	5.0	e0.40
20	e3.5	e0.87	e0.88	1.8	110	9.9	17	135	65	3.7	4.7	e0.39
21	e3.4	e0.75	e0.88	1.8	235	10	66	105	49	2.7	4.3	e0.39
22	e3.3	e0.79	e0.91	1.8	124	9.0	363	78	38	1.9	3.6	e0.39
23	e3.1	e0.91	e0.98	2.0	59	8.2	231	62	30	1.7	3.2	e0.40
24	e2.9	e0.91	e1.0	2.1	40	7.9	115	587	23	4.0	3.2	e0.40
25	e2.8	e0.87	e1.1	1.9	30	7.7	72	5980	18	7.9	3.2	e0.39
26	e2.7	e0.83	e1.1	1.8	23	7.3	49	6100	15	4.2	2.9	e0.38
27	e2.7	e0.83	e1.3	1.8	18	7.0	353	e3510	14	2.2	2.5	e0.38
28	e2.6	e0.83	e1.3	e1.4	15	6.5	1880	e2500	13	1.4	2.2	e0.36
29	e2.6	e0.91	e1.4	e0.65	---	6.2	484	1500	10	2.9	1.9	e0.33
30	e2.5	e0.91	e1.4	e0.56	---	5.7	212	811	8.1	2.1	1.8	e0.33
31	e2.5	---	e1.4	e1.0	---	5.2	---	375	---	1.6	1.8	---
MEAN	4.542	1.325	1.078	1.378	37.99	12.20	138.0	1047	292.8	23.85	1.964	0.557
MAX	11	2.4	1.4	2.1	235	24	1880	6100	3340	262	5.1	1.7
MIN	2.5	0.75	0.86	0.56	2.6	5.2	3.7	49	8.1	1.4	0.26	0.33
AC-FT	279	79	66	85	2110	750	8210	64350	17420	1470	121	33

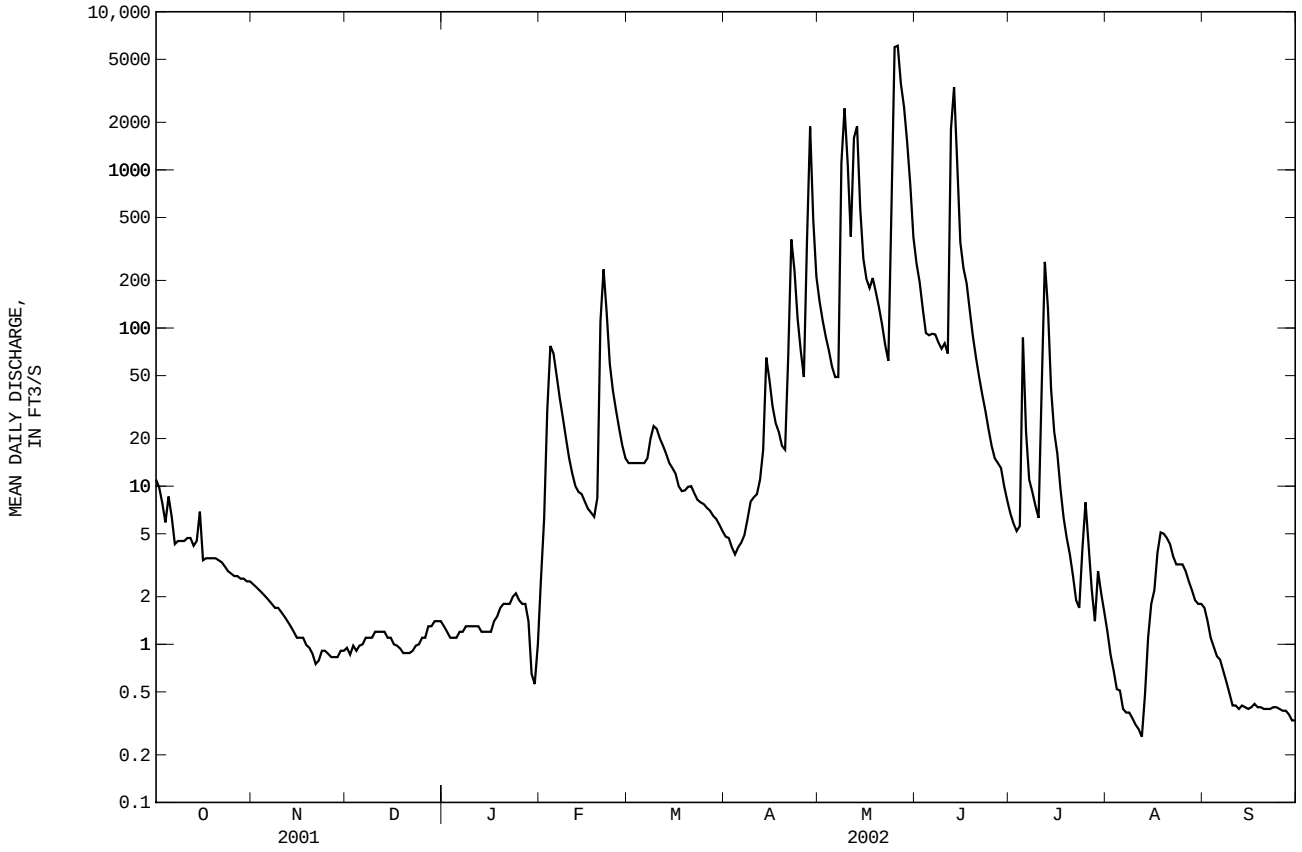
06914100 POTTAWATOMIE CREEK NEAR SCIPIO, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2002 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	4.542	1.325	1.078	1.378	37.99	12.20	138.0	1047	292.8	23.85	1.964	0.557
MAX	4.54	1.33	1.08	1.38	38.0	12.2	138	1047	293	23.8	1.96	0.56
(WY)	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002
MIN	4.54	1.33	1.08	1.38	38.0	12.2	138	1047	293	23.8	1.96	0.56
(WY)	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002

SUMMARY STATISTICS	FOR 2002 WATER YEAR	
ANNUAL MEAN	131.2	
HIGHEST DAILY MEAN	6100	May 26
LOWEST DAILY MEAN	0.26	Aug 12
ANNUAL SEVEN-DAY MINIMUM	0.33	Aug 29
MAXIMUM PEAK FLOW	6810	May 25
MAXIMUM PEAK STAGE	25.63	May 25
INSTANTANEOUS LOW FLOW	0.20	Aug 12
ANNUAL RUNOFF (AC-FT)	94980	
10 PERCENT EXCEEDS	156	
50 PERCENT EXCEEDS	4.3	
90 PERCENT EXCEEDS	0.68	

e Estimated



06914950 BIG BULL CREEK NEAR EDGERTON, KS

LOCATION.--Lat 38°45'12", long 94°58'34", in SW $^{1}/_{4}$ NE $^{1}/_{4}$ SW $^{1}/_{4}$ sec.9, T.15 S., R.22 E., Johnson County, Hydrologic Unit 10290102, located on right bank at upstream side of southbound Interstate Highway 35 bridge, 1.5 mi east of Edgerton.

DRAINAGE AREA.--28.7 mi^2.

PERIOD OF RECORD.--July 1993 to current year.

GAGE.--Water-stage recorder. Datum of gage is 925.04 ft above NGVD of 1929.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.5	1.4	1.3	2.5	8.8	2.3	1.4	8.3	5.0	1.3	0.77	0.69
2	1.6	1.2	1.2	2.5	10	2.7	1.7	6.1	3.9	1.2	0.59	0.63
3	2.5	1.9	1.2	2.6	16	2.4	1.6	4.5	3.1	1.2	0.49	0.54
4	3.5	2.3	1.2	2.5	17	2.1	1.4	3.5	105	1.3	0.47	0.46
5	9.7	3.8	1.2	2.6	8.4	2.6	1.3	3.1	61	1.5	0.38	0.64
6	6.1	4.2	1.3	2.7	6.2	3.2	1.3	3.4	18	1.4	0.39	0.67
7	3.1	3.5	1.8	2.9	5.6	2.9	1.3	65	9.8	1.3	0.42	4.1
8	2.2	3.8	2.0	4.1	5.3	3.0	2.9	164	5.8	1.3	0.31	1.9
9	1.6	3.0	2.0	2.6	5.3	7.3	6.0	171	5.4	1.2	0.22	0.95
10	1.3	2.6	2.2	2.5	4.5	5.3	4.0	29	6.2	1.1	0.19	1.1
11	1.7	2.4	2.2	2.3	3.7	4.5	3.4	45	5.5	0.92	0.25	1.3
12	1.5	2.5	2.9	2.3	3.4	3.9	3.1	976	76	1.0	0.24	1.2
13	1.4	2.3	3.9	2.3	2.9	3.5	2.5	70	13	1.2	1.0	2.6
14	1.6	3.1	3.3	2.4	2.6	3.0	2.3	28	7.1	1.0	0.36	5.3
15	22	4.4	2.9	2.3	2.5	2.7	2.0	18	5.0	0.88	0.26	2.5
16	22	3.1	2.8	2.3	2.3	2.5	2.1	24	5.5	0.90	0.76	1.4
17	7.5	2.2	2.7	2.4	2.4	2.1	3.5	40	3.9	0.69	1.7	1.3
18	4.4	1.8	2.6	2.2	2.5	2.0	2.0	24	2.6	0.21	1.8	1.0
19	3.0	1.7	2.3	2.5	7.1	2.0	2.1	13	2.2	0.08	1.7	2.1
20	2.0	1.7	1.9	2.6	33	1.8	4.2	9.1	1.9	1.0	1.6	2.5
21	2.2	1.6	1.9	2.8	14	2.8	267	7.2	1.7	0.32	1.4	1.6
22	2.1	1.5	2.0	2.9	7.9	1.8	33	5.7	1.5	1.4	0.69	1.3
23	2.1	1.7	2.1	2.7	5.3	2.0	16	4.8	1.5	1.6	0.21	1.4
24	3.2	1.7	2.0	2.7	4.1	1.5	10	68	1.5	1.1	0.07	1.4
25	5.8	1.5	2.0	2.5	3.2	1.6	7.2	960	e1.2	0.81	0.00	1.1
26	6.6	1.5	2.2	2.4	2.8	1.6	6.1	47	e1.1	0.64	0.33	0.74
27	5.4	1.3	2.3	2.4	2.4	1.6	169	41	1.4	e1.0	5.3	0.33
28	4.7	1.2	2.3	2.6	2.3	2.4	54	29	1.5	e1.1	3.6	0.16
29	4.3	1.2	2.2	2.8	---	2.1	19	16	1.5	e1.1	2.2	0.12
30	4.2	1.2	2.2	4.7	---	1.7	12	10	1.4	1.2	1.4	0.07
31	2.5	---	2.3	9.3	---	1.6	---	6.7	---	1.0	0.87	---
MEAN	4.623	2.243	2.142	2.868	6.839	2.661	21.45	93.56	12.01	1.031	0.967	1.370
MAX	22	4.4	3.9	9.3	33	7.3	267	976	105	1.6	5.3	5.3
MIN	1.3	1.2	1.2	2.2	2.3	1.5	1.3	3.1	1.1	0.08	0.00	0.07
AC-FT	284	133	132	176	380	164	1280	5750	714	63	59	82

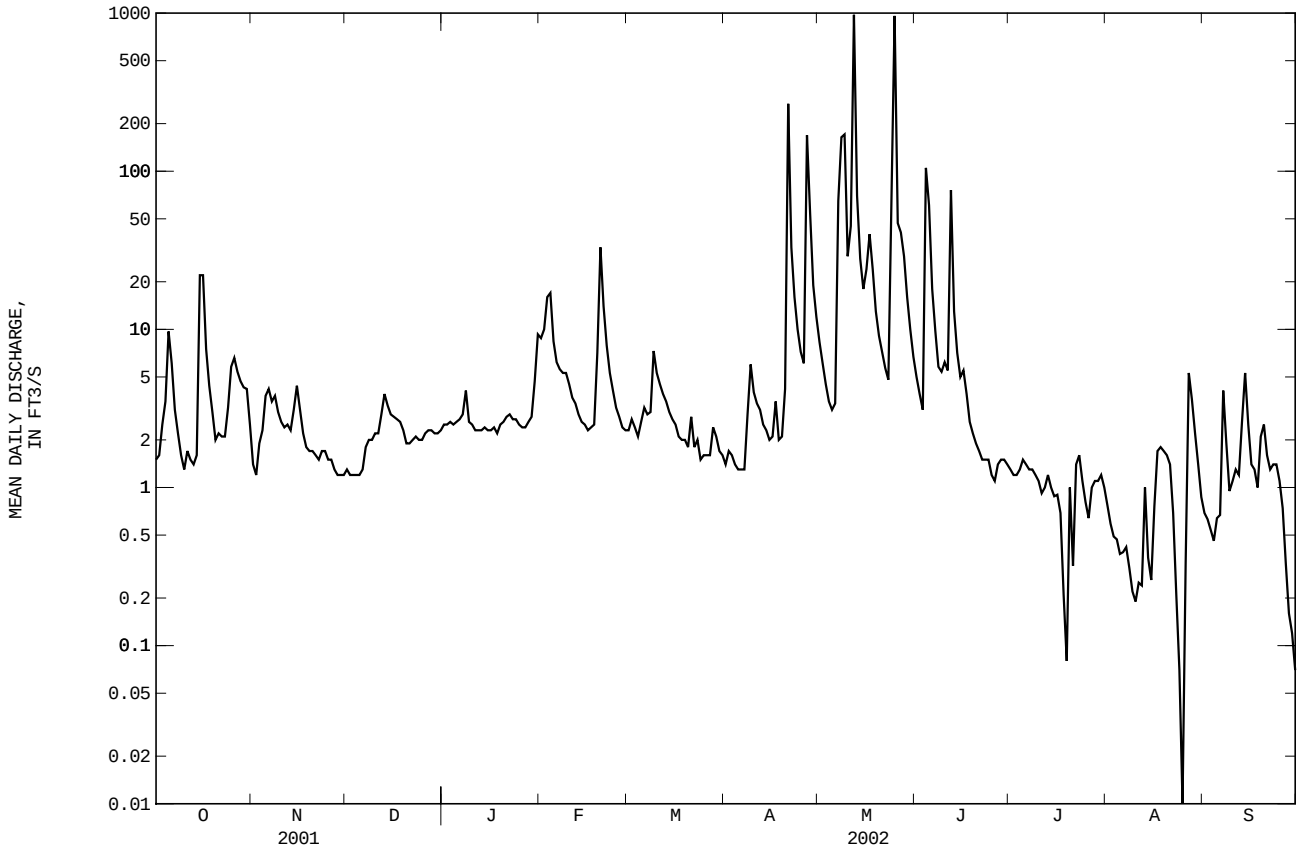
06914950 BIG BULL CREEK NEAR EDGERTON, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	18.96	29.08	11.94	4.936	19.55	16.94	40.46	61.09	39.49	7.655	4.182	14.75
MAX	107	139	38.7	14.3	69.0	59.2	119	246	74.9	22.6	18.6	91.8
(WY)	1999	1999	1998	1999	1997	1998	1994	1995	1996	1998	1996	1998
MIN	0.34	0.88	0.92	0.80	0.74	0.73	1.32	3.28	9.14	0.85	0.73	0.59
(WY)	1996	1996	1996	1996	1996	1996	1996	2001	1998	1997	2000	1995

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1994 - 2002	
ANNUAL MEAN	14.03		12.73		22.35	
HIGHEST ANNUAL MEAN					45.8	1999
LOWEST ANNUAL MEAN					8.99	2000
HIGHEST DAILY MEAN	653	Jun 20	976	May 12	2520	May 17 1995
LOWEST DAILY MEAN	0.29	Jul 26	0.00	Aug 25	0.00	Sep 11 1997
ANNUAL SEVEN-DAY MINIMUM	0.60	Aug 10	0.29	Aug 6	0.08	Sep 14 1994
MAXIMUM PEAK FLOW			3000	May 25	4960	Oct 4 1998
MAXIMUM PEAK STAGE			11.73	May 25	14.54	Oct 4 1998
INSTANTANEOUS LOW FLOW			0.00	Aug 16	0.00	Sep 11 1997
ANNUAL RUNOFF (AC-FT)	10160		9220		16190	
10 PERCENT EXCEEDS	21		12		24	
50 PERCENT EXCEEDS	3.1		2.3		2.7	
90 PERCENT EXCEEDS	1.1		0.79		0.59	

e Estimated



06914990 LITTLE BULL CREEK NEAR SPRING HILL, KS

LOCATION.--Lat 38°45'11", long 94°52'10", in NW $^{1}/_{4}$ NW $^{1}/_{4}$ NW $^{1}/_{4}$ sec.16, T.15 S., R.23 E., Johnson County, Hydrologic Unit 10290102, located on right bank at downstream side of county highway bridge, 0.3 mi west of intersection of 207th Street and Clare Road, 4 mi south and 3.2 mi east of Gardner.

DRAINAGE AREA.--8.81 mi^2, approximately.

PERIOD OF RECORD.--October 1993 to current year.

GAGE.--Water-stage recorder. Datum of gage is 925.244 ft above NGVD of 1929.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.86	0.34	0.50	e0.50	54	1.5	1.3	5.6	1.9	0.31	0.75	0.42
2	0.66	0.37	0.49	e0.50	56	1.9	1.6	4.1	1.4	0.31	0.43	0.34
3	0.76	0.37	0.41	e0.50	51	1.6	1.9	3.1	0.95	0.42	0.43	0.28
4	0.86	0.39	0.43	e0.50	21	1.4	1.8	2.6	6.3	0.42	0.43	0.32
5	21	0.34	0.56	e0.50	4.7	2.1	1.7	2.3	5.6	0.57	0.33	0.63
6	5.7	0.31	0.46	0.59	3.2	4.3	1.8	4.8	1.3	0.35	0.31	0.41
7	2.1	0.41	0.46	0.84	2.7	2.4	2.2	95	0.89	0.28	0.37	0.42
8	1.1	0.39	0.45	1.1	2.5	2.4	13	121	0.71	0.32	0.32	0.45
9	0.90	0.35	0.42	1.1	2.5	19	22	89	0.94	0.35	0.27	0.36
10	0.68	0.39	0.37	1.1	1.7	4.1	4.5	17	1.5	0.34	0.28	0.27
11	1.2	0.37	0.36	0.84	1.1	2.7	2.8	71	0.90	0.34	0.32	0.31
12	0.80	0.31	0.63	0.67	1.2	2.4	2.3	311	3.8	0.43	0.62	0.40
13	0.67	0.34	2.5	0.51	1.0	2.3	2.1	30	0.98	0.56	2.9	0.47
14	0.54	0.54	0.73	0.50	0.97	2.4	1.6	11	0.77	0.41	0.90	12
15	31	0.55	0.51	0.48	1.0	2.1	1.3	6.6	0.69	0.27	0.49	1.0
16	7.7	0.54	0.51	0.49	0.88	1.9	1.1	10	0.54	0.29	0.47	0.66
17	1.4	0.55	0.47	0.49	0.81	2.0	1.0	14	0.46	0.33	0.59	0.63
18	0.85	0.54	0.47	0.52	0.73	1.8	0.82	5.7	0.49	0.40	0.68	1.4
19	0.70	0.42	0.46	0.48	17	1.8	5.2	2.6	0.43	2.6	0.45	5.0
20	0.54	0.53	0.49	0.54	42	2.0	10	2.0	0.40	1.9	0.42	1.9
21	0.45	0.52	0.52	0.42	6.4	2.8	130	1.8	0.40	0.57	0.40	1.3
22	0.39	0.57	0.49	0.55	3.1	3.1	16	1.6	0.38	0.40	0.37	0.87
23	0.44	0.54	0.45	0.62	2.8	3.5	8.6	1.9	0.38	0.37	0.32	0.72
24	0.43	0.51	0.38	0.61	2.2	2.6	5.6	9.0	0.33	0.38	0.36	0.72
25	0.33	0.44	0.33	0.55	1.6	1.4	2.8	150	0.30	0.34	0.43	0.76
26	0.31	0.44	0.33	0.56	1.3	1.5	3.5	17	0.30	0.25	0.29	0.83
27	0.37	0.45	0.42	0.57	1.2	3.4	105	26	0.56	0.21	0.34	0.61
28	0.36	0.44	0.51	0.44	1.5	4.5	31	9.0	0.44	0.23	0.42	0.84
29	0.34	0.49	0.47	0.55	---	2.8	9.9	5.0	0.37	1.0	0.45	0.74
30	0.33	0.46	0.40	2.0	---	1.8	7.3	3.4	0.36	0.60	0.62	0.45
31	0.38	---	0.62	63	---	1.3	---	2.6	---	0.62	0.44	---
MEAN	2.715	0.440	0.535	2.665	10.22	2.929	13.32	33.41	1.159	0.522	0.523	1.184
MAX	31	0.57	2.5	63	56	19	130	311	6.3	2.6	2.9	12
MIN	0.31	0.31	0.33	0.42	0.73	1.3	0.82	1.6	0.30	0.21	0.27	0.27
AC-FT	167	26	33	164	567	180	793	2050	69	32	32	70

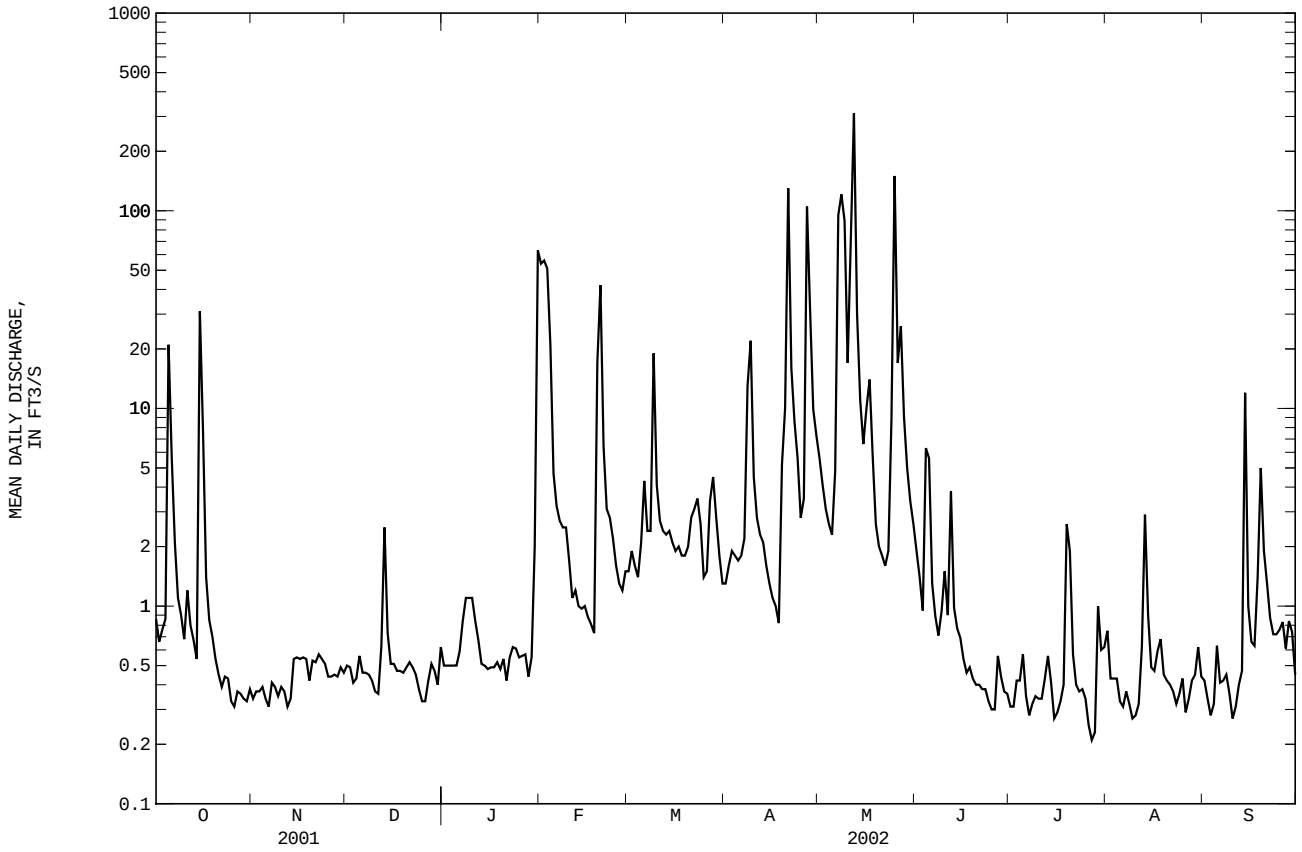
06914990 LITTLE BULL CREEK NEAR SPRING HILL, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	6.901	9.368	3.987	2.622	10.04	6.159	13.99	21.73	16.70	2.525	3.012	3.938
MAX	22.6	37.5	10.3	5.64	33.2	20.9	46.6	88.4	31.8	8.63	11.9	19.1
(WY)	1999	1999	1999	2001	1997	1998	1994	1995	1996	1998	1996	1998
MIN	0.44	0.44	0.32	0.42	0.63	0.46	0.44	1.62	1.16	0.42	0.16	0.44
(WY)	1996	2002	2001	1996	1996	1996	1996	2000	2002	1994	2000	1995

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1994 - 2002	
ANNUAL MEAN	7.603		5.785		8.374	
HIGHEST ANNUAL MEAN					12.8	1999
LOWEST ANNUAL MEAN					2.21	2000
HIGHEST DAILY MEAN	298	Jun 20	311	May 12	930	May 17 1995
LOWEST DAILY MEAN	0.18	Jan 24	0.21	Jul 27	0.00	Aug 30 2000
ANNUAL SEVEN-DAY MINIMUM	0.26	Jan 18	0.31	Jul 22	0.01	Sep 4 2000
MAXIMUM PEAK FLOW			1220	May 12	1670	Jun 16 1997
MAXIMUM PEAK STAGE			13.22	May 12	15.70	Jun 16 1997
INSTANTANEOUS LOW FLOW			0.20	Jul 27	0.00	Aug 22 2000
ANNUAL RUNOFF (AC-FT)	5500		4190		6070	
10 PERCENT EXCEEDS	17		7.5		10	
50 PERCENT EXCEEDS	2.0		0.66		1.4	
90 PERCENT EXCEEDS	0.35		0.34		0.32	

e Estimated



06914995 HILLSDALE LAKE NEAR HILLSDALE, KS

LOCATION.--Lat 38°39'36", long 94°53'50", in NE $^1/_4$ SW $^1/_4$ NW $^1/_4$ sec.17, T.16 S., R.23 E., Miami County, Hydrologic Unit 10290102, in control tower at dam on Big Bull Creek, 2.5 mi west of Hillsdale, and at mile 18.2.

DRAINAGE AREA.--144 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929 (U.S. Army Corps of Engineers bench mark).

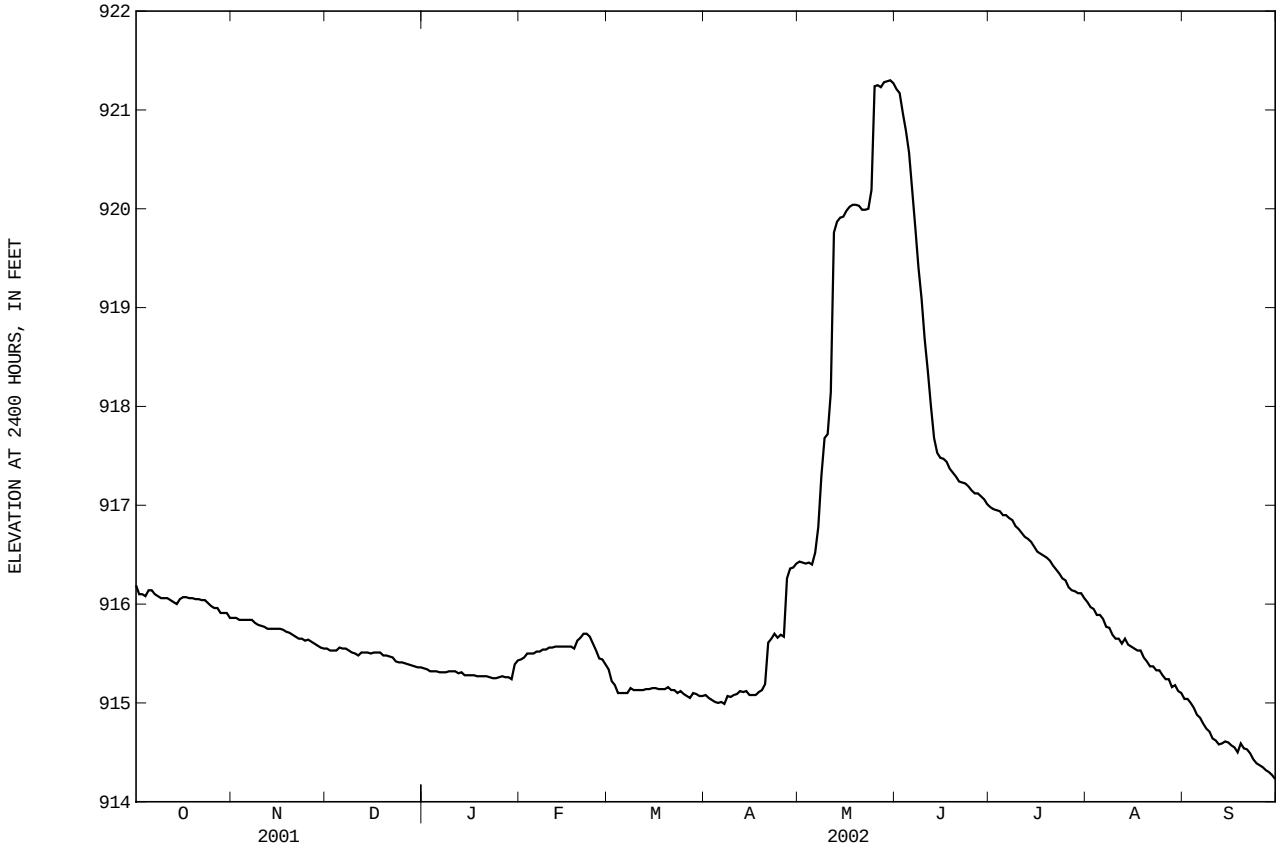
REMARKS.--Reservoir is formed by compacted earthfill dam. Storage began Sept. 19, 1981. Conservation pool elevation was first reached on Feb. 23, 1985. Total capacity, 315,600 acre-ft, consisting of the following: Conservation pool, 76,270 acre-ft between elevations 860.0 ft and 917.0 ft; flood-control pool, 83,570 acre-ft between elevations 917.0 ft and 931.0 ft; and surcharge pool, 155,800 acre-ft between elevations 931.0 ft and 948.0 ft. Reservoir is used for flood control, water supply, water-quality control, fish and wildlife, and recreation. Figures given herein represent total contents. Satellite telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 928.49 ft Oct. 20, 1986, contents, 141,900 acre-ft; minimum elevation since conservation pool first filled, 904.91 ft Dec. 14, 1987, contents, 33,740 acre-ft.

EXTREMES FOR CURRENT OF RECORD.--Maximum elevation, 921.31 ft May 26, contents, 97,810 acre-ft; minimum elevation, 914.21 ft Sept. 30, contents, 64,240 acre-ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey made in 1969 by U.S. Army Corps of Engineers)

914	63,390	920	90,870
916	71,790	922	101,600
918	80,940		



06914995 HILLSDALE LAKE NEAR HILLSDALE, KS--Continued

ELEVATION, in FT (NGVD), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	916.19	915.86	915.55	915.35	915.44	915.34	915.08	916.43	921.21	916.98	916.02	915.04
2	916.10	915.86	915.53	915.34	915.46	915.22	915.05	916.42	921.17	916.96	915.97	915.04
3	916.10	915.84	915.53	915.32	915.50	915.18	915.03	916.41	920.97	916.95	915.95	915.00
4	916.08	915.84	915.53	915.32	e915.50	915.10	915.01	916.42	920.79	916.94	915.89	914.95
5	916.14	915.84	915.56	915.32	e915.50	915.10	915.00	916.40	920.57	916.90	915.89	914.88
6	916.14	915.84	915.55	915.31	e915.52	915.10	915.01	916.52	920.19	916.90	915.85	914.85
7	916.10	915.84	915.55	915.31	e915.52	915.10	914.99	916.78	919.81	916.87	915.77	914.79
8	916.08	915.81	915.53	915.31	e915.54	915.15	915.07	917.30	919.41	916.85	915.76	914.74
9	916.06	915.79	915.51	915.32	e915.54	915.13	915.06	917.68	919.09	916.79	915.69	914.71
10	916.06	915.78	915.50	915.32	e915.56	915.13	915.08	917.72	918.68	916.76	915.65	914.64
11	916.06	915.77	915.48	915.32	e915.56	915.13	915.09	918.14	918.36	916.72	915.65	914.62
12	916.04	915.75	915.51	915.30	915.57	915.13	915.12	919.76	918.00	916.68	915.60	914.58
13	916.02	915.75	915.51	915.31	915.57	915.14	915.11	919.87	917.68	916.66	915.65	914.59
14	916.00	915.75	915.51	915.28	915.57	915.14	915.12	919.91	917.53	916.63	915.59	914.61
15	916.05	915.75	915.50	915.28	915.57	915.15	915.08	919.92	917.48	916.58	915.57	914.60
16	916.07	915.75	915.51	915.28	915.57	915.15	915.08	919.98	917.47	916.53	915.55	914.57
17	916.07	915.74	915.51	915.28	915.57	915.14	915.08	920.02	917.44	916.51	915.53	914.55
18	916.06	915.72	915.51	915.27	915.55	915.14	915.11	920.04	917.37	916.49	915.53	914.50
19	916.06	915.71	915.48	915.27	915.63	915.14	915.13	920.04	917.33	916.47	915.46	914.59
20	916.05	915.69	915.48	915.27	915.66	915.16	915.19	920.03	917.29	916.44	915.42	914.54
21	916.05	915.67	915.47	915.27	915.70	915.13	915.61	919.99	917.24	916.39	915.37	914.53
22	916.04	915.65	915.46	915.26	915.70	915.13	915.65	919.99	917.23	916.35	915.37	914.49
23	916.04	915.65	915.42	e915.25	915.67	915.10	915.70	920.00	917.22	916.31	915.33	914.43
24	916.01	915.63	915.41	e915.25	915.60	915.12	915.66	920.19	917.19	916.26	915.33	914.39
25	915.98	915.64	915.41	e915.26	915.53	915.09	915.69	921.24	917.15	916.24	915.28	914.37
26	915.96	915.62	915.40	915.27	915.45	915.07	915.67	921.25	917.12	916.17	915.24	914.35
27	915.96	915.60	915.39	915.26	915.44	915.05	916.26	921.23	917.12	916.14	915.24	914.32
28	915.91	915.58	915.38	915.26	915.39	915.10	916.36	921.28	917.09	916.13	915.16	914.30
29	915.91	915.56	915.37	915.24	---	915.09	916.37	921.29	917.06	916.11	915.18	914.27
30	915.91	915.55	915.36	915.39	---	915.07	916.41	921.30	917.01	916.11	915.12	914.23
31	915.86	---	915.36	915.43	---	915.07	---	921.27	---	916.06	915.10	---
MEAN	916.04	915.73	915.48	915.30	915.55	915.13	915.36	919.19	918.31	916.54	915.54	914.60
MAX	916.19	915.86	915.56	915.43	915.70	915.34	916.41	921.30	921.21	916.98	916.02	915.04
MIN	915.86	915.55	915.36	915.24	915.39	915.05	914.99	916.40	917.01	916.06	915.10	914.23
(+)	71,180	69,840	69,020	69,320	69,150	67,790	73,600	97,590	76,320	72,050	67,920	64,320
(#)	-1,450	-1,340	-820	+300	-170	-1,360	+5,810	+23,990	-21,270	-4,270	-4,130	-3,600

CAL YR 2001 ..... (#) -170
WTR YR 2002 ..... (#) -8,310

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

e Estimated

06915000 BIG BULL CREEK NEAR HILLSDALE, KS

LOCATION.--Lat 38°38'12", long 94°53'29", in SW $^1/_4$ SW $^1/_4$ SE $^1/_4$ sec.20, T.16 S., R.23 E., Miami County, Hydrologic Unit 10290102, on right bank 1.0 mi upstream from Tenmile Creek, 3.0 mi southwest of Hillsdale, and at mile 16.2.

DRAINAGE AREA.--147 mi^2.

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.

REVISED RECORDS.--WSP 1919: 1958. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder. Datum of gage is 854.49 ft above NGVD of 1929. Prior to July 29, 1958, water-stage recorder and nonrecording gage operated 1,850 ft downstream at datum 6.00 ft lower. All records from this site were later discredited.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Flow completely regulated since 1981 by Hillsdale Lake (station 06914995), 2.0 mi upstream. Satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since 1910, 21.2 ft July 11, 1951, present site and datum, discharge, 45,200 ft^3/s, on basis of slope-area measurement of peak flow.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	13	5.6	5.9	4.8	244	9.3	11	83	26	37	37
2	20	13	5.7	5.1	4.0	241	9.3	11	83	26	37	37
3	12	13	5.8	3.8	3.7	241	9.2	11	526	26	36	37
4	12	13	5.8	3.3	3.1	146	9.2	11	967	26	37	36
5	13	14	5.7	3.1	2.8	62	8.9	11	688	26	37	32
6	11	14	5.6	3.0	2.7	33	8.9	11	1130	26	37	25
7	12	12	5.6	2.9	2.4	9.2	8.7	35	1130	26	36	25
8	11	6.1	5.5	3.0	2.5	9.4	9.5	e64	1120	26	35	25
9	11	5.9	5.6	2.8	2.6	10	9.5	e70	1120	26	35	25
10	11	6.1	5.6	2.6	2.5	9.7	8.8	30	1110	26	36	25
11	11	6.0	5.7	2.3	2.3	9.4	8.8	e55	1110	26	35	26
12	11	6.1	6.2	2.3	2.3	9.6	12	e70	1110	26	36	26
13	11	6.1	5.7	2.1	2.2	9.5	9.4	46	913	25	37	26
14	11	6.1	5.6	2.1	2.2	9.4	9.2	43	411	25	36	26
15	13	6.1	5.6	1.9	2.2	9.7	9.3	43	71	25	35	26
16	12	6.1	5.6	2.0	1.9	9.6	9.4	46	71	24	35	26
17	12	6.1	5.6	1.8	2.0	9.5	8.8	46	71	28	36	26
18	12	6.2	5.7	2.0	2.1	9.5	8.9	45	71	30	35	26
19	12	6.1	5.6	2.0	2.9	9.4	9.3	44	71	34	35	27
20	12	6.1	5.6	1.9	2.8	9.6	11	44	43	38	35	26
21	12	6.1	5.6	1.8	1.9	9.0	26	44	25	39	35	29
22	12	6.1	5.8	1.8	66	8.8	9.8	44	25	37	35	29
23	12	6.3	5.7	2.0	179	8.7	8.8	45	26	37	35	30
24	12	6.5	5.7	1.9	175	8.8	8.4	e46	26	37	35	28
25	13	6.1	6.1	1.9	172	9.0	7.8	e70	26	38	35	28
26	12	5.7	6.1	2.0	169	8.8	8.3	201	26	38	37	28
27	12	5.6	6.2	2.0	169	8.7	e70	575	26	39	37	28
28	13	5.6	6.0	2.1	211	8.9	15	269	26	39	37	28
29	13	5.6	5.9	2.1	---	9.0	12	49	26	38	37	28
30	13	5.6	6.1	2.8	---	9.2	11	49	26	38	37	28
31	13	---	6.0	5.3	---	9.2	---	64	---	38	37	---
MEAN	12.55	7.677	5.761	2.632	42.75	38.66	12.15	71.06	405.2	30.94	35.97	28.30
MAX	22	14	6.2	5.9	211	244	70	575	1130	39	37	37
MIN	11	5.6	5.5	1.8	1.9	8.7	7.8	11	25	24	35	25
AC-FT	772	457	354	162	2370	2380	723	4370	24110	1900	2210	1680

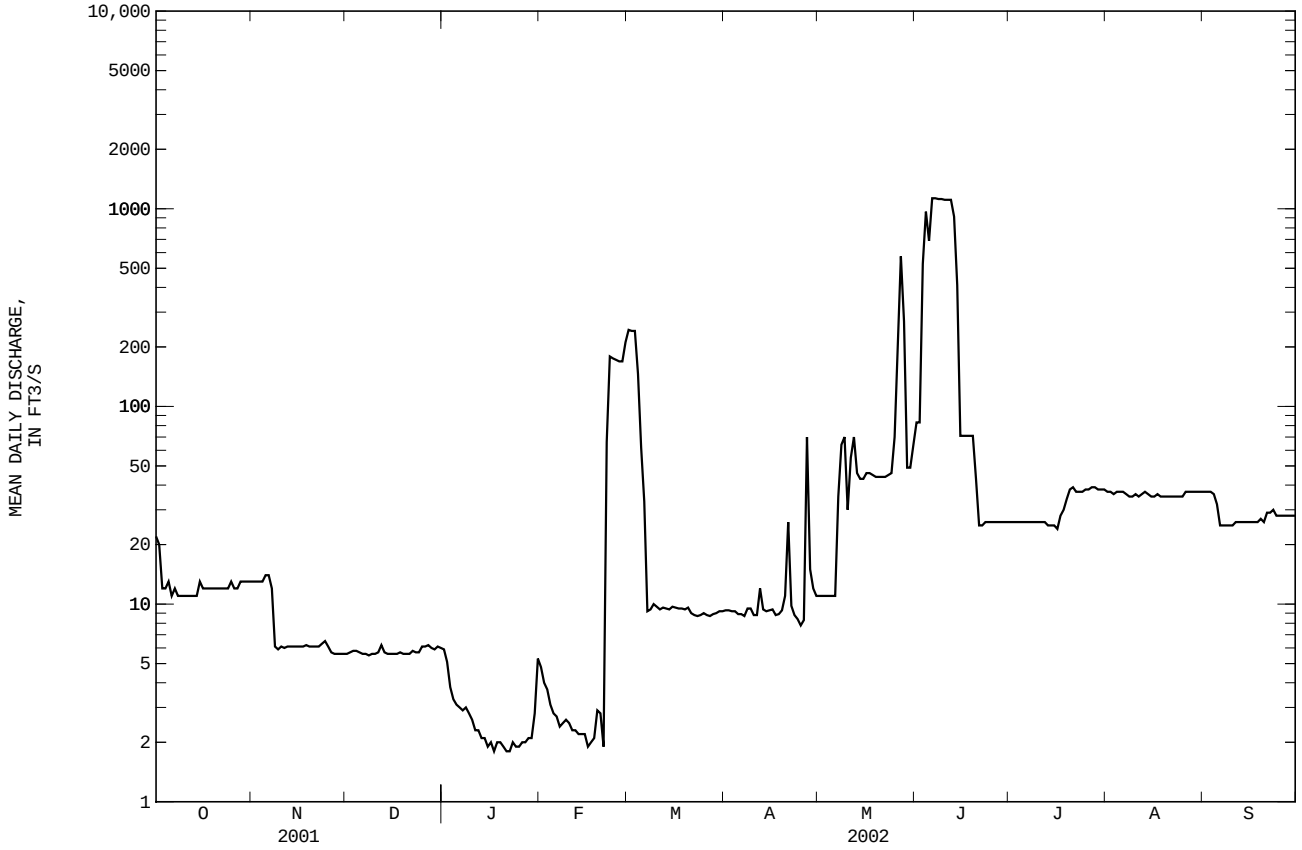
06915000 BIG BULL CREEK NEAR HILLSDALE, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1959 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	92.86	77.36	95.70	69.70	60.95	125.2	103.1	138.0	251.5	84.59	41.47	78.04
MAX	773	612	688	408	389	1057	368	492	1061	744	730	1019
(WY)	1974	1962	1987	1993	1982	1973	1987	1993	1995	1984	1993	1961
MIN	0.000	0.000	0.000	0.000	0.18	0.43	1.77	7.90	8.23	0.011	0.000	0.000
(WY)	1964	1964	1964	1964	1981	1964	1981	1965	1959	1980	1975	1963

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1959 - 2002	
ANNUAL MEAN	62.77		57.32		101.6	
HIGHEST ANNUAL MEAN					271	1973
LOWEST ANNUAL MEAN					12.0	1989
HIGHEST DAILY MEAN	527	Jun 26	1130	Jun 6	18000	Sep 13 1961
LOWEST DAILY MEAN	4.8	Jan 22	1.8	Jan 17	0.00	Sep 11 1959
ANNUAL SEVEN-DAY MINIMUM	5.2	Jan 20	1.9	Jan 16	0.00	Sep 11 1959
MAXIMUM PEAK FLOW			1190	Jun 4	39600	Sep 13 1961
MAXIMUM PEAK STAGE			5.99	Jun 4	20.85	Sep 13 1961
INSTANTANEOUS LOW FLOW			1.8	Jan 15	.00	many years
ANNUAL RUNOFF (AC-FT)	45440		41500		73580	
10 PERCENT EXCEEDS	260		68		224	
50 PERCENT EXCEEDS	22		12		15	
90 PERCENT EXCEEDS	5.7		2.8		0.38	

e Estimated



06915800 MARAIS DES CYGNES RIVER AT LA CYGNE, KS

LOCATION.--Lat 38°20'43", long 94°46'19", in SE $^{1}/_{4}$ SE $^{1}/_{4}$ SE $^{1}/_{4}$ sec.32, T.19 S., R.24 E., Linn County, Hydrologic Unit 10290102, on right bank at upstream side of bridge on Kansas Highway 152, at west edge of La Cygne, and at mile 331.9.

DRAINAGE AREA.--2,669 mi^2.

PERIOD OF RECORD.--October 1984 to current year.

GAGE.--Water-stage recorder. Datum of gage is 776.21 ft above NGVD of 1929 (levels by National Weather Service).

REMARKS.--Records good except those for estimated daily discharges, which are poor. Natural flow slightly affected since 1964 by Pomona Lake (station 06912490), since 1973 by Melvern Lake (station 06910997), and by numerous small diversions upstream from station. Satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 13, 1951, reached a stage of 36.19 ft, present datum, discharge not determined; information supplied by National Weather Service.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 10,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 10	0145	11,100	20.30	May 27	1800	*16,100	*25.64
May 13	2245	12,700	22.06				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	685	62	1250	e134	e281	305	100	1670	1870	244	91	70
2	674	e57	e1260	e138	e299	343	96	1090	1420	229	88	69
3	662	e55	1240	e145	e288	346	94	855	1190	225	82	70
4	654	e57	e1250	145	e278	332	87	703	1710	228	78	83
5	699	54	1240	146	294	285	84	584	3260	238	76	64
6	542	e49	1230	155	310	195	81	513	3880	228	77	79
7	304	e48	1090	e156	e288	206	84	677	4400	244	78	63
8	239	e48	1000	e145	e252	183	91	3260	4630	252	78	53
9	227	e51	740	e145	221	189	106	8060	4590	224	76	50
10	214	e57	583	153	e198	209	138	10300	5240	212	74	58
11	199	56	575	405	e200	209	168	6070	4950	203	71	59
12	187	50	448	595	249	208	215	7250	5060	203	70	58
13	e188	e58	260	e565	222	234	302	12200	7460	569	85	61
14	e184	e62	143	e570	e172	227	1130	11700	8390	766	165	89
15	e186	e63	94	e570	e147	203	852	5510	4780	795	108	70
16	e223	e63	80	581	e130	180	528	2480	2690	700	97	69
17	e326	e62	e84	578	123	160	397	1950	2290	577	93	69
18	381	e62	e77	529	116	150	296	1900	1960	290	97	65
19	338	e62	e74	370	138	142	238	2210	1750	159	88	76
20	279	e69	e71	350	360	135	210	1990	1610	115	87	95
21	250	e69	e71	e338	412	127	261	1640	1470	105	85	82
22	228	e69	e71	e334	562	119	2190	1450	1330	104	85	82
23	205	63	e69	348	692	113	4390	1310	1060	109	89	58
24	134	60	e64	333	623	109	2330	2850	809	101	89	48
25	81	e69	e61	202	478	107	1120	8730	765	95	79	52
26	60	e76	57	e100	392	105	752	14500	675	93	74	49
27	53	e79	58	e71	343	104	788	15800	386	88	71	49
28	53	77	e61	65	313	103	4020	15700	316	83	56	52
29	54	917	e61	62	---	106	5320	12500	353	98	65	54
30	62	1260	107	77	---	104	3400	5600	278	102	69	53
31	64	---	e141	175	---	108	---	2800	---	92	70	---
MEAN	278.5	129.5	439.0	280.0	299.3	182.1	995.6	5286	2686	250.7	83.58	64.97
MAX	699	1260	1260	595	692	346	5320	15800	8390	795	165	95
MIN	53	48	57	62	116	103	81	513	278	83	56	48
AC-FT	17130	7700	27000	17220	16620	11200	59240	325000	159800	15410	5140	3870

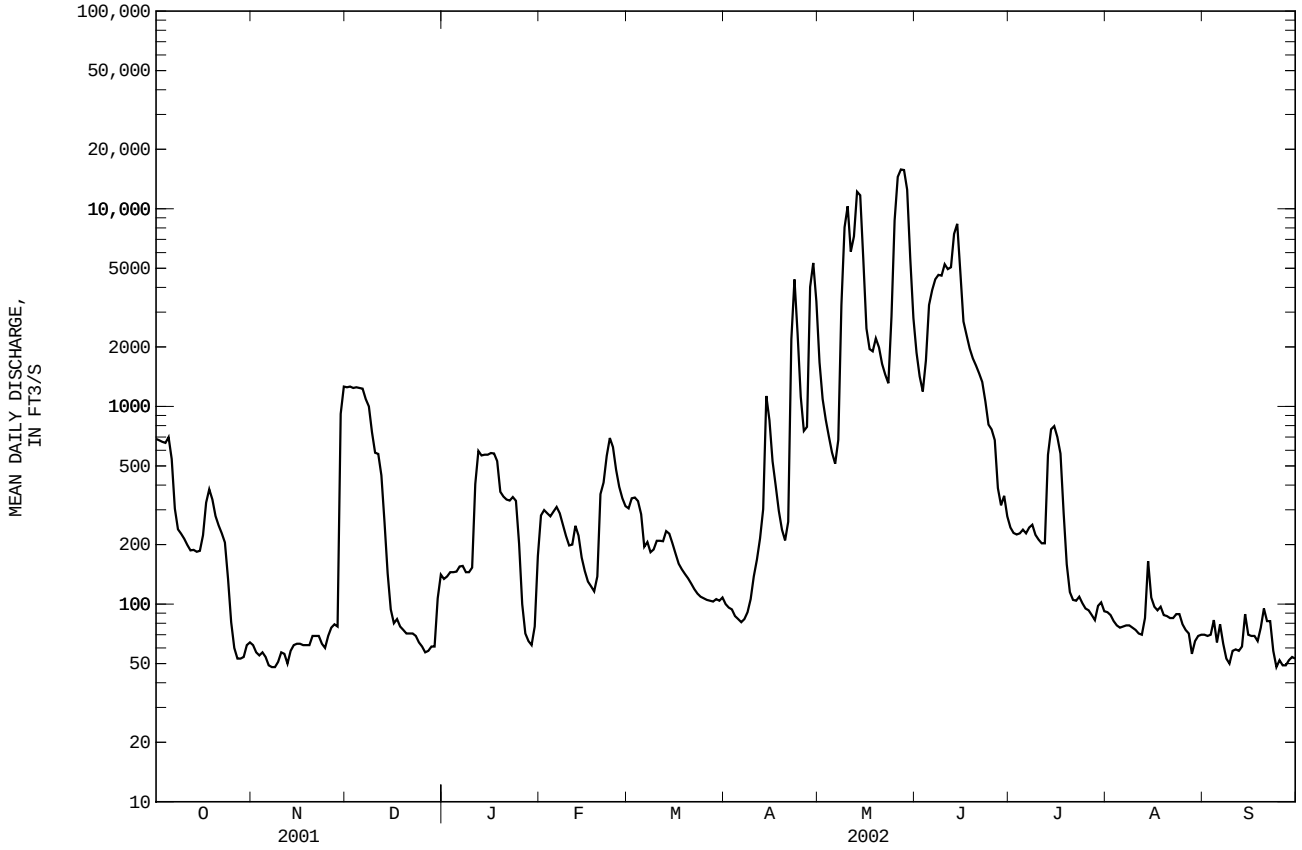
06915800 MARAIS DES CYGNES RIVER AT LA CYGNE, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1985 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2119	2406	1980	981.6	1710	2344	2742	4015	3471	1913	881.2	952.5
MAX	12290	13630	8038	4631	8653	9746	6920	11640	11020	12060	4120	4627
(WY)	1987	1999	1993	1993	1985	1987	1999	1995	1995	1993	1993	1993
MIN	49.0	59.6	50.3	56.0	64.2	66.1	83.6	222	112	144	48.2	52.8
(WY)	1992	1996	2001	1996	1996	1996	1996	2000	1988	1991	1991	1991

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1985 - 2002	
ANNUAL MEAN	1092		919.0		2127	
HIGHEST ANNUAL MEAN					5540	1993
LOWEST ANNUAL MEAN					313	1991
HIGHEST DAILY MEAN	13400	Jun 7	15800	May 27	60600	Nov 4 1998
LOWEST DAILY MEAN	45	Jan 1	48	Nov 7	1.0	Oct 4 1984
ANNUAL SEVEN-DAY MINIMUM	47	Jan 1	51	Sep 24	1.8	Oct 1 1984
MAXIMUM PEAK FLOW			16100	May 27	66700	Nov 4 1998
MAXIMUM PEAK STAGE			25.64	May 27	33.49	Nov 4 1998
INSTANTANEOUS LOW FLOW			46	Sep 24	36	Nov 7 1988
ANNUAL RUNOFF (AC-FT)	790600		665300		1541000	
10 PERCENT EXCEEDS	2590		2200		5880	
50 PERCENT EXCEEDS	304		189		476	
90 PERCENT EXCEEDS	57		61		61	

e Estimated



06916600 MARAIS DES CYGNES RIVER NEAR KANSAS-MISSOURI STATE LINE, KS

LOCATION.--Lat 38°13'21", long 94°40'04", in NE $^1/_4$ SE $^1/_4$ NW $^1/_4$ sec.16, T.21 S., R.25 E., Linn County, Hydrologic Unit 10290102, on right bank 1.7 mi downstream from Big Sugar Creek, 6.8 mi upstream from Kansas-Missouri State line, and at mile 313.5.

WATER-DISCHARGE RECORDS

DRAINAGE AREA.--3,230 mi^2, approximately.

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

GAGE.--Water-stage recorder. Datum of gage is 757.06 ft above NGVD of 1929. Prior to Jan. 15, 1959, nonrecording gage 6.8 mi downstream at datum 15.62 ft lower.

REMARKS.--Records good. Natural flow slightly affected since 1964 by Pomona Lake (station 06912490), since 1973 by Melvern Lake (station 06910997), and by retention of overbank flow in wildlife refuge ponds, capacity, 5,500 acre-ft, power developments, and by numerous small diversions upstream from station. Satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 14, 1951, reached a stage of 41.2 ft, from floodmark, discharge, 148,000 ft^3/s, from rating curve extended above 110,000 ft^3/s on basis of velocity-area study. Flood of Nov. 18, 1928, reached a stage about 3.7 ft lower, discharge, 106,000 ft^3/s.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 10,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 10	0600	15,000	19.86	May 27	0600	*19,700	*24.45
May 13	2030	15,300	20.12				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

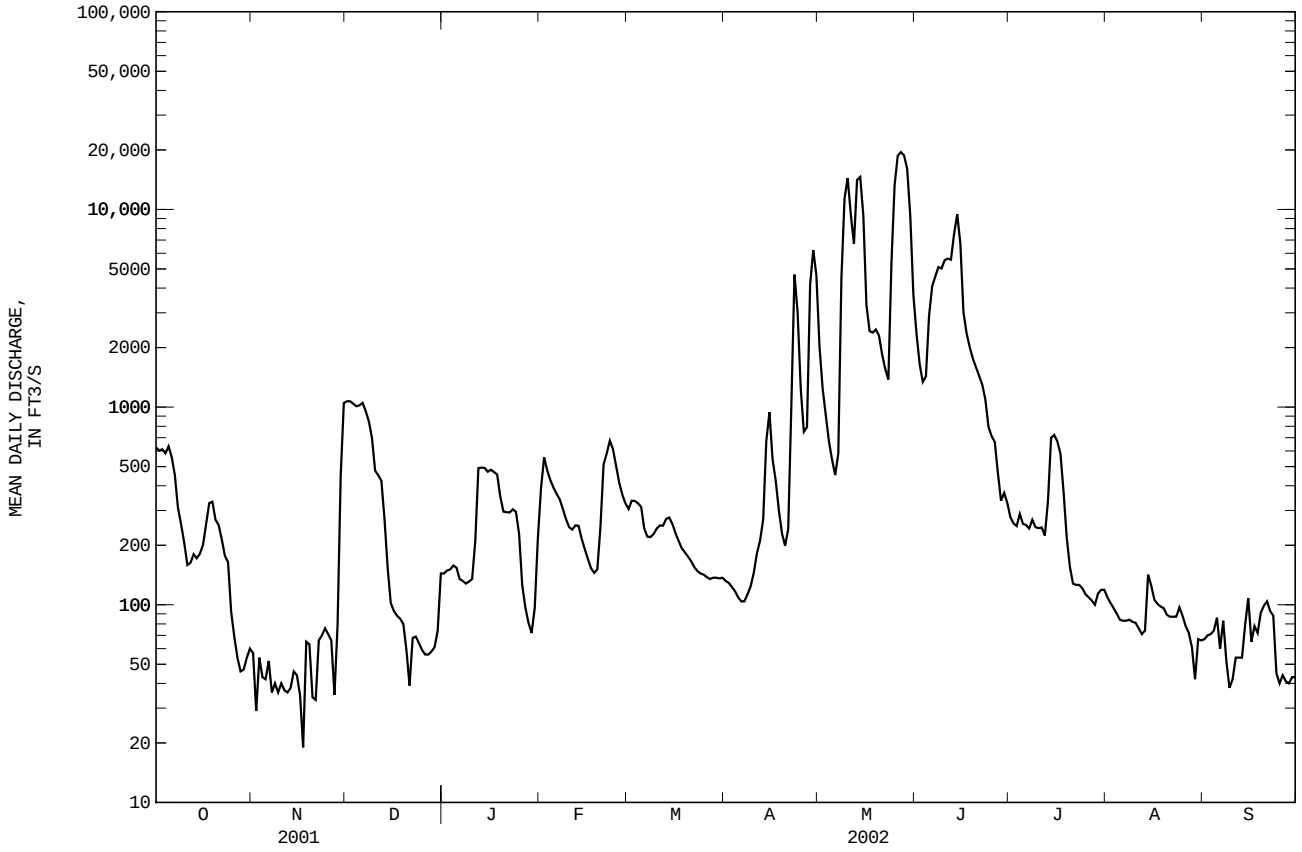
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	625	57	1070	144	387	305	132	2020	2350	277	109	67
2	603	29	1070	149	557	336	129	1240	1650	258	102	70
3	612	54	1040	151	478	335	123	910	1340	250	96	71
4	584	43	1010	158	427	326	117	673	1430	288	90	74
5	633	42	1020	154	391	313	109	543	2890	257	84	86
6	559	52	1050	135	364	243	104	453	4090	253	83	60
7	453	36	954	132	341	221	104	581	4580	243	83	83
8	309	40	846	128	305	220	113	4490	5110	269	84	52
9	255	36	697	131	271	228	124	11400	5030	247	82	38
10	206	40	477	135	247	243	145	14400	5540	244	81	42
11	159	37	452	210	240	252	182	9440	5640	246	76	54
12	163	36	424	491	252	251	211	6690	5570	224	71	54
13	180	38	272	494	251	272	270	14100	7520	335	74	54
14	172	46	154	492	216	276	674	14600	9450	699	142	79
15	181	44	102	471	191	256	941	9330	6730	723	125	108
16	201	35	93	482	170	230	546	3280	3020	670	106	65
17	256	19	88	469	153	210	425	2420	2360	580	101	78
18	327	65	85	456	145	193	302	2380	2010	370	98	72
19	332	63	80	352	151	184	230	2470	1760	218	96	91
20	269	34	59	296	248	175	199	2300	1590	156	89	99
21	253	33	39	294	512	166	241	1850	1440	128	87	104
22	214	66	68	293	583	155	1020	1560	1300	126	87	93
23	177	70	69	304	676	148	4680	1380	1090	126	87	88
24	164	76	64	295	613	144	3020	5430	794	121	97	45
25	92	71	59	228	504	142	1240	13300	713	113	88	40
26	69	66	56	126	414	138	750	18700	666	109	78	44
27	54	35	56	97	360	135	792	19500	464	105	72	41
28	46	79	58	81	325	137	4170	18800	336	100	61	40
29	47	449	61	72	---	137	6230	16100	368	114	42	43
30	54	1050	74	96	---	136	4650	9290	328	119	67	43
31	60	---	144	217	---	137	---	3670	---	119	66	---
MEAN	268.0	94.70	380.4	249.5	349.0	214.3	1066	6881	2905	260.9	87.23	65.93
MAX	633	1050	1070	494	676	336	6230	19500	9450	723	142	108
MIN	46	19	39	72	145	135	104	453	328	100	42	38
AC-FT	16480	5640	23390	15340	19380	13180	63420	423100	172900	16040	5360	3920

06916600 MARAIS DES CYGNES RIVER NEAR KANSAS-MISSOURI STATE LINE, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1959 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1867	2091	1492	1081	1761	2832	3333	3560	4348	1777	702.5	1427
MAX	15030	13830	9470	5023	9357	15760	12900	13560	14740	14540	4392	13300
(WY)	1987	1999	1993	1993	1985	1973	1983	1995	1967	1993	1968	1961
MIN	3.94	5.63	1.56	3.08	9.32	6.73	30.6	165	97.6	21.3	12.6	14.6
(WY)	1964	1964	1964	1964	1964	1964	1981	1965	1988	1980	1963	1963

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1959 - 2002	
ANNUAL MEAN	1265		1075		2186	
HIGHEST ANNUAL MEAN					6283	1993
LOWEST ANNUAL MEAN					361	1991
HIGHEST DAILY MEAN	17700	Jun 7	19500	May 27	61400	Oct 4 1986
LOWEST DAILY MEAN	19	Nov 17	19	Nov 17	0.00	Oct 12 1963
ANNUAL SEVEN-DAY MINIMUM	36	Nov 11	36	Nov 11	0.00	Nov 13 1963
MAXIMUM PEAK FLOW			19700	May 27	64100	Oct 4 1986
MAXIMUM PEAK STAGE			24.45	May 27	34.31	Oct 4 1986
INSTANTANEOUS LOW FLOW			17	Nov 17	.00	many years
ANNUAL RUNOFF (AC-FT)	915500		778100		1583000	
10 PERCENT EXCEEDS	2810		2400		5980	
50 PERCENT EXCEEDS	343		210		477	
90 PERCENT EXCEEDS	56		54		40	



06916600 MARAIS DES CYGNES RIVER NEAR KANSAS-MISSOURI STATE LINE, KS--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1969-73, 1976-82, 2000 to current year.

REMARKS.--Unpublished records of intermittent sediment samples are available on the Internet at http://ks.waterdata.usgs.gov/nwis. Sediment samples are collected only at selected flow conditions.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
MAR							
11...	1415	245	392	6.0	41	27.0	--
APR							
25...	1200	1250	374	16.0	556	1880	--
29...	1530	6490	--	--	1210	21200	99
MAY							
10...	1115	14200	248	18.0	889	34100	--
20...	1525	2300	423	23.0	198	1230	--
28...	1515	18700	237	20.5	211	10700	96

06917000 LITTLE OSAGE RIVER AT FULTON, KS

LOCATION.--Lat 38°01'09", long 94°42'48", in SE $^1/_4$ NE $^1/_4$ NE $^1/_4$ sec.25, T.23 S., R.24 E., Bourbon County, Hydrologic Unit 10290103, on right bank at downstream side of county highway bridge, 0.8 mi north of Fulton.

DRAINAGE AREA.--295 mi^2.

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

REVISED RECORDS.--WSP 1440: 1949(P), 1950(M). WDR KS-75-1: 1974.

GAGE.--Water-stage recorder. Datum of gage is 776.37 ft above NGVD of 1929. Prior to May 28, 1952, nonrecording gage at present site and datum.

REMARKS.--Records fair except those for estimated daily discharge, which are poor. Satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Apr 27	1900	3,060	14.39	May 25	1400	*7,000	*22.03
May 9	1600	5,250	18.41	Jun 12	2345	3,970	15.46

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	2.3	3.0	2.2	179	14	9.1	174	169	26	e2.0	0.09
2	2.6	3.1	3.0	2.1	122	16	8.2	144	137	22	e1.6	0.08
3	2.4	4.4	3.0	2.1	99	16	7.3	117	111	19	e1.4	0.07
4	2.8	3.7	2.2	1.9	75	15	6.4	92	86	17	e1.2	0.07
5	178	3.0	1.7	2.1	57	16	5.7	73	85	16	e1.0	0.07
6	119	3.5	1.6	2.2	44	22	5.5	61	138	13	e0.80	0.07
7	81	3.6	1.4	2.4	37	26	5.5	982	122	11	e0.70	0.06
8	35	3.1	1.3	2.5	32	25	6.6	2630	85	10	0.59	0.06
9	23	3.5	1.3	2.6	28	27	7.2	4470	242	8.9	0.45	0.05
10	30	3.9	1.2	2.5	25	30	7.5	1850	165	8.8	0.36	0.04
11	35	4.0	1.1	2.6	22	29	7.9	474	80	17	0.35	0.03
12	15	3.8	1.4	2.6	20	28	12	474	2220	11	0.33	0.02
13	9.2	3.5	2.2	2.4	18	26	14	2050	2350	6.7	0.31	0.02
14	6.2	3.7	4.1	2.4	17	25	12	840	2150	4.8	0.28	0.03
15	11	3.8	4.1	2.4	15	23	11	339	536	3.8	0.28	0.05
16	44	4.7	3.5	2.4	14	21	9.8	599	268	3.3	0.31	0.04
17	20	4.7	3.2	2.3	13	20	9.7	1110	192	e3.1	0.48	0.03
18	10	5.8	3.1	2.3	12	19	8.9	572	146	e2.8	0.65	0.03
19	5.4	6.2	2.9	2.7	13	19	8.7	308	117	e2.8	0.59	0.15
20	3.2	5.7	2.6	3.2	24	18	258	215	88	e3.4	0.52	0.20
21	3.2	4.8	2.2	3.2	27	17	783	174	67	e4.3	0.49	0.20
22	7.0	4.1	2.4	3.1	22	15	204	145	51	e3.2	0.42	0.14
23	7.0	4.0	3.3	3.4	22	14	126	124	42	e2.5	0.36	0.11
24	6.5	4.7	3.2	3.6	21	13	88	2070	36	e1.6	0.37	0.09
25	5.2	10	2.9	3.7	20	12	61	6510	32	e1.1	0.33	0.07
26	5.2	5.8	2.8	3.4	18	12	49	3460	28	e1.2	0.26	0.06
27	4.6	5.1	2.6	3.1	16	11	1420	1300	45	e1.4	0.22	0.04
28	4.1	4.5	2.6	3.1	14	11	1820	1500	119	e1.3	0.19	0.03
29	2.6	3.9	2.4	3.2	---	11	423	465	60	e3.7	0.16	0.03
30	2.5	3.3	2.3	36	---	9.9	221	290	34	e2.6	0.12	0.02
31	2.3	---	2.2	507	---	9.7	---	216	---	e2.3	0.11	---
MEAN	22.09	4.340	2.477	20.02	36.64	18.41	187.2	1091	333.4	7.600	0.556	0.068
MAX	178	10	4.1	507	179	30	1820	6510	2350	26	2.0	0.20
MIN	1.8	2.3	1.1	1.9	12	9.7	5.5	61	28	1.1	0.11	0.02
MED	6.5	4.0	2.6	2.6	22	17	10	474	114	3.8	0.37	0.06
AC-FT	1360	258	152	1230	2040	1130	11140	67100	19840	467	34	4.1

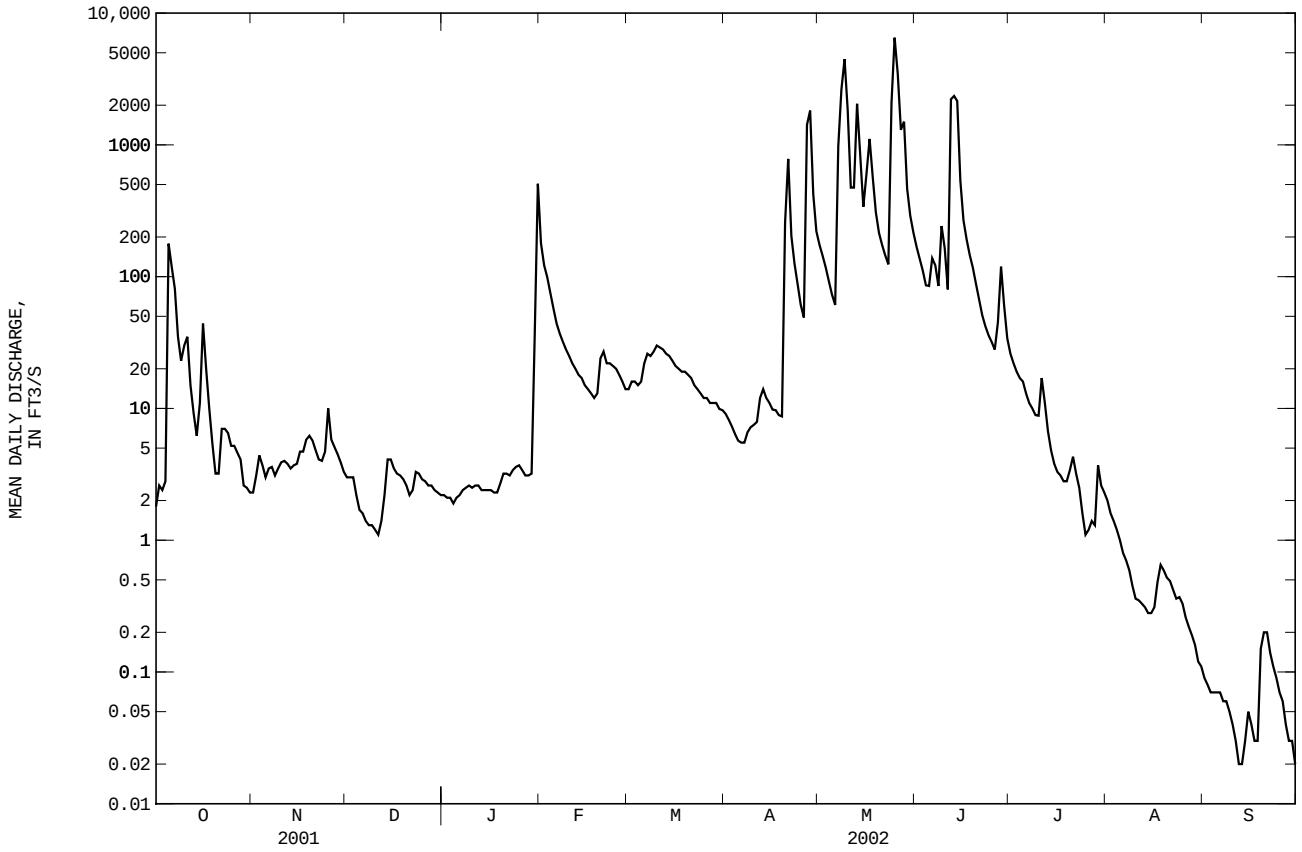
06917000 LITTLE OSAGE RIVER AT FULTON, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	193.4	226.4	146.9	134.8	229.3	347.5	389.3	343.2	353.1	229.7	61.39	181.5
MAX	3327	1867	1170	715	1378	2254	2681	2206	1982	2128	699	2377
(WY)	1987	1993	1993	1973	1985	1973	1994	1995	1970	1951	1950	1951
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.77	9.05	3.38	0.042	0.000	0.000
(WY)	1954	1953	1957	1957	1964	1964	1996	1962	1972	1954	1953	1953

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1949 - 2002	
ANNUAL MEAN	190.9		144.7		235.4	
HIGHEST ANNUAL MEAN					656	1993
LOWEST ANNUAL MEAN					9.21	1953
HIGHEST DAILY MEAN	6020	Feb 25	6510	May 25	51800	Oct 3 1986
LOWEST DAILY MEAN	0.36	Sep 16	0.02	Sep 12	0.00	Oct 12 1949
ANNUAL SEVEN-DAY MINIMUM	0.66	Aug 22	0.03	Sep 11	0.00	Oct 3 1952
MAXIMUM PEAK FLOW			7000	May 25	62800	Oct 3 1986
MAXIMUM PEAK STAGE			22.03	May 25	35.21	Oct 3 1986
INSTANTANEOUS LOW FLOW			0.01	Sep 13	.00	many years
ANNUAL RUNOFF (AC-FT)	138200		104700		170600	
10 PERCENT EXCEEDS	264		197		391	
50 PERCENT EXCEEDS	13		5.8		30	
90 PERCENT EXCEEDS	1.3		0.27		0.20	

e Estimated



06917240 MARMATON RIVER AT UNIONTOWN, KS

LOCATION.--Lat 37°50'08", long 94°58'52", in SE $^1/_4$ SE $^1/_4$ SW $^1/_4$ sec.27, T.25 S., R.22 E., Bourbon County, Hydrologic Unit 10290104, on left bank at downstream side of U.S. Highway 3 bridge, 0.9 mi south of Uniontown, and at mile 73.5.

DRAINAGE AREA.--84.0 mi^2.

PERIOD OF RECORD.--April 2001 to September 2001.

GAGE.--Water-stage recorder. Datum of gage is 870.00 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good. Flow affected at times, usually in September, by draining of Bourbon County State Lake located about 5.0 mi upstream fo gage. Satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jun 12	1500	*2,260	*10.21	No peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

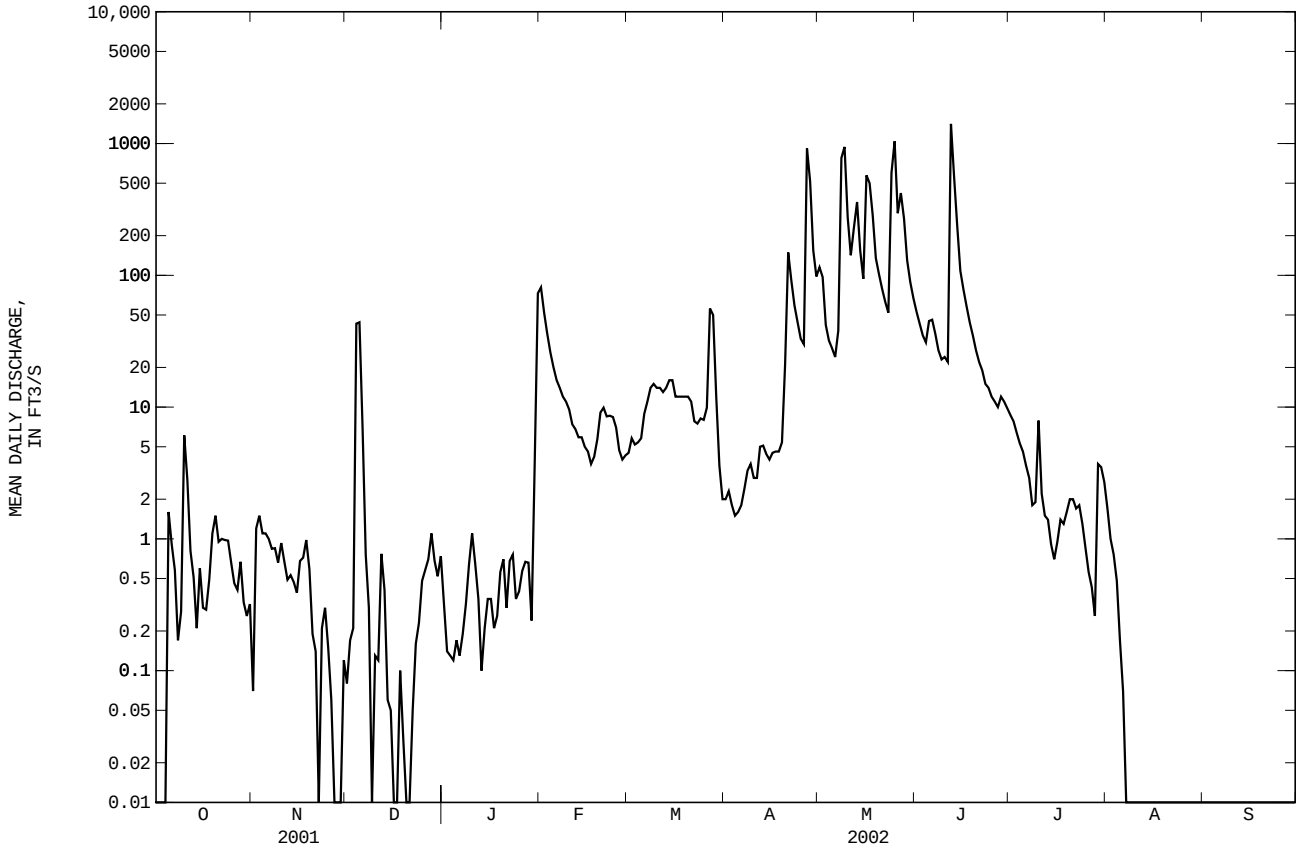
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.01	0.07	0.08	0.32	81	4.5	2.0	115	53	8.7	1.7	0.00
2	0.00	1.2	0.17	0.14	52	5.8	2.3	97	43	7.8	1.0	0.00
3	0.00	1.5	0.21	0.13	36	5.2	1.8	42	35	6.4	0.76	0.00
4	0.00	1.1	43	0.12	26	5.4	1.5	32	31	5.3	0.48	0.00
5	1.6	1.1	44	0.17	20	5.8	1.6	28	45	4.6	0.17	0.00
6	0.91	1.0	6.8	0.13	16	8.9	1.8	24	46	3.6	0.07	0.00
7	0.58	0.84	0.76	0.19	14	11	2.4	38	36	2.9	0.00	0.00
8	0.17	0.85	0.30	0.32	12	14	3.3	778	27	1.8	0.00	0.00
9	0.28	0.66	0.01	0.64	11	15	3.7	943	23	1.9	0.00	0.00
10	6.1	0.93	0.13	1.1	9.6	14	2.9	277	24	7.9	0.00	0.00
11	2.8	0.67	0.12	0.64	7.4	14	2.9	142	22	2.2	0.00	0.00
12	0.81	0.49	0.77	0.35	6.8	13	5.0	231	1410	1.5	0.00	0.00
13	0.51	0.53	0.41	0.10	5.9	14	5.1	360	561	1.4	0.00	0.00
14	0.21	0.47	0.06	0.21	5.9	16	4.4	154	237	0.91	0.00	0.00
15	0.60	0.39	0.05	0.35	5.0	16	4.0	94	108	0.70	0.00	0.00
16	0.30	0.68	0.00	0.35	4.6	12	4.5	574	78	0.95	0.00	0.00
17	0.29	0.72	0.01	0.21	3.7	12	4.6	500	58	1.4	0.00	0.00
18	0.49	0.98	0.10	0.26	4.2	12	4.6	285	44	1.3	0.00	0.00
19	1.1	0.59	0.03	0.56	5.7	12	5.4	135	35	1.6	0.00	0.00
20	1.5	0.19	0.00	0.70	9.1	12	21	102	27	2.0	0.00	0.00
21	0.95	0.14	0.01	0.30	9.9	11	149	79	22	2.0	0.00	0.00
22	1.0	0.01	0.05	0.68	8.5	7.8	91	63	19	1.7	0.00	0.00
23	0.98	0.21	0.16	0.76	8.6	7.5	59	52	15	1.8	0.00	0.00
24	0.97	0.30	0.23	0.35	8.4	8.2	44	598	14	1.3	0.00	0.00
25	0.66	0.15	0.48	0.40	7.0	8.0	33	1040	12	0.85	0.00	0.00
26	0.46	0.06	0.58	0.57	4.7	9.9	30	296	11	0.56	0.00	0.00
27	0.41	0.00	0.70	0.67	4.0	56	918	421	10	0.43	0.00	0.00
28	0.67	0.00	1.1	0.66	4.3	50	515	269	12	0.26	0.00	0.00
29	0.33	0.00	0.68	0.24	---	12	155	130	11	3.7	0.00	0.00
30	0.26	0.12	0.52	3.8	---	3.6	98	89	9.8	3.5	0.00	0.00
31	0.32	---	0.74	73	---	2.0	---	67	---	2.7	0.00	---
MEAN	0.815	0.532	3.299	2.852	13.97	12.86	72.56	259.8	102.6	2.699	0.135	0.000
MAX	6.1	1.5	44	73	81	56	918	1040	1410	8.7	1.7	0.00
MIN	0.00	0.00	0.00	0.10	3.7	2.0	1.5	24	9.8	0.26	0.00	0.00
AC-FT	50	32	203	175	776	791	4320	15980	6110	166	8.3	0.00

06917240 MARMATON RIVER AT UNIONTOWN, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2001 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.815	0.532	3.299	2.852	13.98	12.86	63.91	141.6	126.6	42.04	3.846	2.747
MAX	0.82	0.53	3.30	2.85	14.0	12.9	72.6	260	151	81.4	7.56	5.49
(WY)	2002	2002	2002	2002	2002	2002	2002	2002	2001	2001	2001	2001
MIN	0.82	0.53	3.30	2.85	14.0	12.9	55.3	23.3	103	2.70	0.13	0.000
(WY)	2002	2002	2002	2002	2002	2002	2001	2001	2002	2002	2002	2002

SUMMARY STATISTICS	FOR 2002 WATER YEAR		WATER YEARS 2001 - 2002	
ANNUAL MEAN	39.51		39.51	
HIGHEST ANNUAL MEAN			39.5	2002
LOWEST ANNUAL MEAN			39.5	2002
HIGHEST DAILY MEAN	1410	Jun 12	1530	Jul 27 2001
LOWEST DAILY MEAN	0.00	Oct 2	0.00	Sep 30 2001
ANNUAL SEVEN-DAY MINIMUM	0.00	Aug 7	0.00	Aug 7 2002
MAXIMUM PEAK FLOW	2260	Jun 12	2900	Jul 27 2001
MAXIMUM PEAK STAGE	10.21	Jun 12	11.72	Jul 27 2001
INSTANTANEOUS LOW FLOW	0.00	Oct 1	0.00	Jul 20 2001
ANNUAL RUNOFF (AC-FT)	28600		28620	
10 PERCENT EXCEEDS	69		69	
50 PERCENT EXCEEDS	1.4		1.4	
90 PERCENT EXCEEDS	0.00		0.00	



06917380 MARMATON RIVER NEAR MARMATON, KS

LOCATION.--Lat 37°49'03", long 94°47'30", in SW $^1/_4$ NE $^1/_4$ NW $^1/_4$ sec.4, T.26 S., R.24 E., Bourbon County, Hydrologic Unit 10290104, on left bank 150 ft downstream from Cedar Creek, 2.0 mi southeast of Marmaton, and at mile 55.7.

DRAINAGE AREA.--292 mi^2.

PERIOD OF RECORD.--May 1971 to current year.

GAGE.--Water-stage recorder. Datum of gage is 780.66 ft above NGVD of 1929.

REMARKS.--Records good. Flow affected at times, usually in September, by draining of Bourbon County State Lake located about 14.5 mi upstream of gage. Satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Apr 27	1900	5,880	19.09	May 25	0800	4,780	16.81
May 8	1100	*11,500	*28.90	Jun 12	1100	3,330	13.50
May 24	1600	3,200	13.16				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

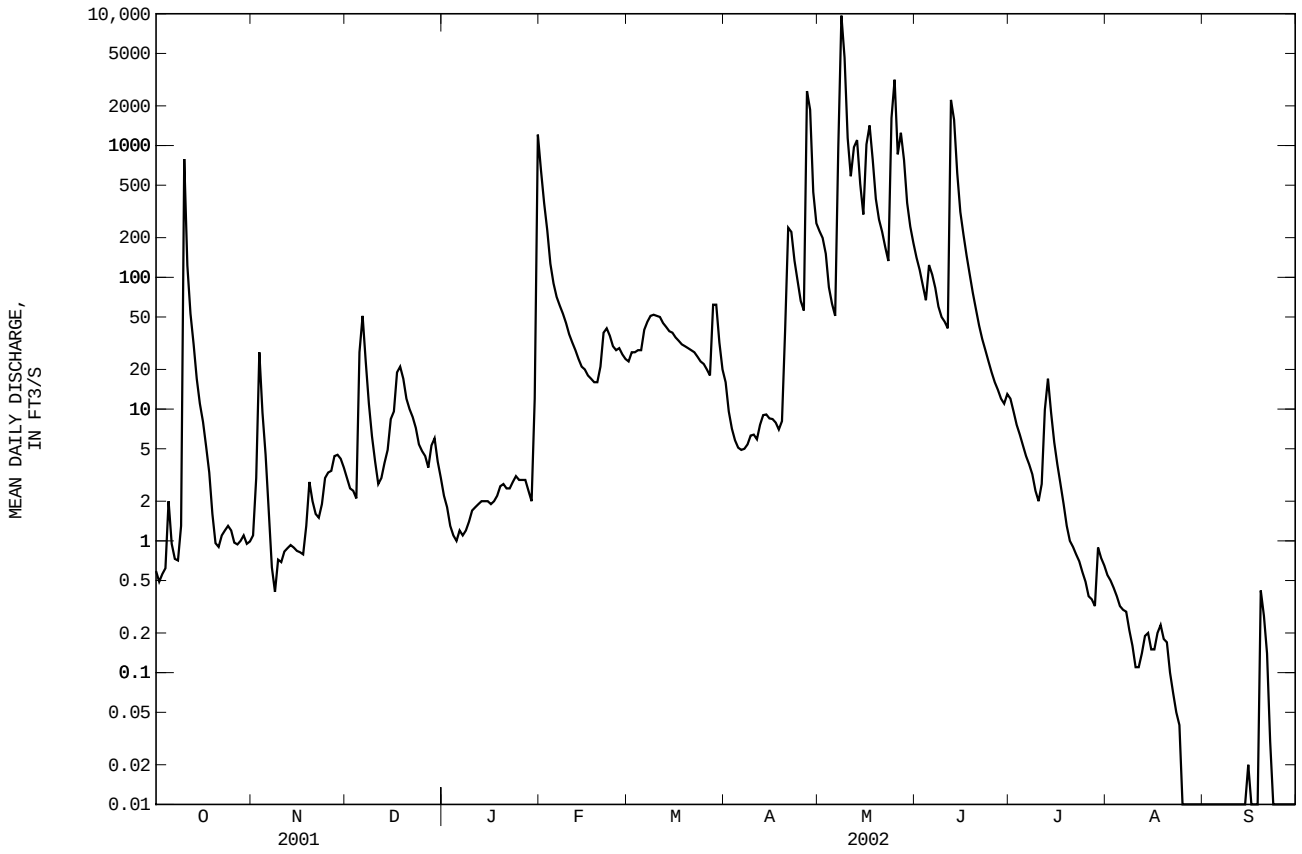
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.59	1.1	3.0	2.2	649	23	16	224	141	12	0.55	0.00
2	0.49	3.0	2.5	1.8	366	27	9.6	199	114	9.6	0.50	0.00
3	0.56	27	2.4	1.3	228	27	7.1	151	87	7.6	0.44	0.00
4	0.62	9.4	2.1	1.1	127	28	5.8	84	67	6.4	0.38	0.00
5	2.0	4.5	27	1.0	90	28	5.1	63	124	5.3	0.32	0.00
6	0.95	1.7	51	1.2	71	40	4.9	51	105	4.4	0.30	0.00
7	0.73	0.63	23	1.1	61	46	5.0	966	83	3.8	0.29	0.00
8	0.71	0.41	11	1.2	53	51	5.4	9680	60	3.2	0.21	0.00
9	1.3	0.72	6.2	1.4	45	52	6.3	4650	50	2.4	0.16	0.00
10	790	0.69	4.0	1.7	37	51	6.4	1140	46	2.0	0.11	0.00
11	123	0.83	2.7	1.8	32	50	5.9	585	41	2.7	0.11	0.00
12	53	0.88	3.0	1.9	28	45	7.6	973	2220	9.9	0.14	0.00
13	31	0.93	3.9	2.0	24	42	9.0	1100	1570	17	0.19	0.00
14	17	0.89	4.9	2.0	21	39	9.1	512	619	9.4	0.20	0.00
15	11	0.84	8.4	2.0	20	38	8.5	300	313	5.6	0.15	0.02
16	8.0	0.82	9.6	1.9	18	35	8.4	1020	211	3.8	0.15	0.00
17	5.2	0.79	19	2.0	17	33	7.9	1420	146	2.7	0.20	0.00
18	3.3	1.3	21	2.2	16	31	7.0	781	105	1.9	0.23	0.00
19	1.6	2.8	17	2.6	16	30	8.1	394	76	1.3	0.18	0.42
20	0.96	2.0	12	2.7	21	29	39	275	57	1.0	0.17	0.27
21	0.90	1.6	10	2.5	38	28	238	222	43	0.90	0.10	0.14
22	1.1	1.5	8.7	2.5	41	27	221	170	34	0.79	0.07	0.03
23	1.2	1.9	7.2	2.8	36	25	134	133	28	0.70	0.05	0.00
24	1.3	3.0	5.4	3.1	30	23	94	1620	23	0.58	0.04	0.00
25	1.2	3.3	4.8	2.9	28	22	66	3160	19	0.49	0.01	0.00
26	0.97	3.4	4.4	2.9	29	20	56	858	16	0.38	0.00	0.00
27	0.94	4.4	3.6	2.9	26	18	2590	1250	14	0.36	0.00	0.00
28	1.0	4.5	5.3	2.4	24	62	1870	776	12	0.32	0.00	0.00
29	1.1	4.2	6.0	2.0	---	62	444	367	11	0.89	0.00	0.00
30	0.95	3.6	4.0	12	---	32	257	243	13	0.74	0.00	0.00
31	0.99	---	3.0	1210	---	20	---	182	---	0.65	0.00	---
MEAN	34.31	3.088	9.552	41.33	78.29	34.97	205.1	1082	214.9	3.832	0.169	0.029
MAX	790	27	51	1210	649	62	2590	9680	2220	17	0.55	0.42
MIN	0.49	0.41	2.1	1.0	16	18	4.9	51	11	0.32	0.00	0.00
AC-FT	2110	184	587	2540	4350	2150	12200	66540	12790	236	10	1.7

06917380 MARMATON RIVER NEAR MARMATON, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	266.4	358.2	224.5	177.1	305.0	481.4	472.4	392.3	401.8	178.6	80.47	179.9
MAX	3884	1523	997	980	1627	2603	3139	2002	1652	2071	793	1895
(WY)	1987	1975	1993	1973	1985	1973	1994	1990	1977	1992	1985	1998
MIN	0.029	0.029	0.079	0.047	0.097	0.10	0.057	14.3	1.03	0.11	0.057	0.029
(WY)	1981	1981	1981	1981	1981	1981	1981	1980	1980	1980	1980	2002

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1972 - 2002	
ANNUAL MEAN	167.8		143.2		292.4	
HIGHEST ANNUAL MEAN					644	1987
LOWEST ANNUAL MEAN					63.0	1996
HIGHEST DAILY MEAN	5930	Feb 25	9680	May 8	67900	Oct 3 1986
LOWEST DAILY MEAN	0.37	Aug 29	0.00	Aug 26	0.00	Aug 25 1978
ANNUAL SEVEN-DAY MINIMUM	0.54	Aug 23	0.00	Aug 26	0.00	Oct 13 1978
MAXIMUM PEAK FLOW			11500	May 8	106000	Oct 3 1986
MAXIMUM PEAK STAGE			28.90	May 8	42.87	Oct 3 1986
INSTANTANEOUS LOW FLOW			0.00	Aug 21	0.00	Aug 1 1978
ANNUAL RUNOFF (AC-FT)	121500		103700		211800	
10 PERCENT EXCEEDS	273		223		458	
50 PERCENT EXCEEDS	16		5.3		40	
90 PERCENT EXCEEDS	0.94		0.06		0.47	



ARKANSAS RIVER BASIN

07137000 FRONTIER DITCH NEAR COOLIDGE, KS

LOCATION.--Lat 38°02'18", long 102°02'19", in SW $^{1}/_{4}$ SE $^{1}/_{4}$ NE $^{1}/_{4}$ sec.21, T.23 S., R.43 W., Hamilton County, Hydrologic Unit 11030001, on left bank 0.3 mi east of Colorado-Kansas State line, 0.5 mi downstream from Holly drain diversion, 1.5 mi west of Coolidge, and 2.3 mi downstream from diversion of the Arkansas River.

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

REVISED RECORDS.--WSP 1731: 1951.

GAGE.--Water-stage recorders and Parshall flume. Datum of gage is 3,343.14 ft above NGVD of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are fair. This ditch diverts water from the Arkansas River in Colorado for use in Kansas. These records and records for the Arkansas River near Coolidge represent total flow of the Arkansas River at the Colorado-Kansas State line. Satellite telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 84 ft^3/s Aug. 1, 1975; no flow many days each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	24	23	0.0	0.0	0.0	0.0	30	20	20	26	23
2	24	22	24	0.0	0.0	0.0	0.0	33	17	22	25	23
3	25	22	25	0.0	0.0	0.0	0.0	25	16	26	24	22
4	29	21	25	0.0	0.0	0.0	0.0	25	17	27	21	22
5	29	20	25	0.0	0.0	0.0	0.0	26	17	27	29	22
6	27	20	25	0.0	0.0	0.0	0.0	e26	17	28	22	23
7	24	19	25	0.0	0.0	0.0	0.0	e26	16	24	19	23
8	22	20	24	0.0	0.0	0.0	0.0	26	17	28	20	22
9	19	18	24	0.0	0.0	0.0	0.0	26	15	27	17	26
10	18	17	25	0.0	0.0	0.0	0.0	26	15	27	17	21
11	21	17	25	0.0	0.0	0.0	0.0	26	14	27	16	21
12	26	19	25	0.0	0.0	0.0	0.0	26	14	28	14	21
13	27	26	12	0.0	0.0	0.0	0.0	26	16	27	14	21
14	27	26	0.08	0.0	0.0	0.0	0.0	26	16	26	13	21
15	26	24	0.0	0.0	0.0	0.0	15	26	17	25	12	21
16	26	24	0.0	0.0	0.0	0.0	27	26	16	26	11	19
17	26	23	0.0	0.0	0.0	0.0	25	26	16	23	12	19
18	23	24	0.0	0.0	0.0	0.0	26	26	14	20	15	20
19	22	24	0.0	0.0	0.0	0.0	26	25	19	21	16	20
20	22	26	0.0	0.0	0.0	0.0	26	24	25	31	17	20
21	24	27	0.0	0.0	0.0	0.0	25	23	25	31	16	20
22	24	27	0.0	0.0	0.0	0.0	23	23	25	32	14	20
23	26	27	0.0	0.0	0.0	0.0	19	21	24	30	16	20
24	25	27	0.0	0.0	0.0	0.0	15	24	24	29	16	20
25	26	26	0.0	0.0	0.0	0.0	12	25	24	28	17	20
26	25	26	0.0	0.0	0.0	0.0	11	25	24	30	18	15
27	24	e23	0.0	0.0	0.0	0.0	18	24	23	36	16	0.05
28	25	e23	0.0	0.0	0.0	0.0	26	25	21	33	17	0.00
29	25	e23	0.0	0.0	---	0.0	26	24	23	37	26	0.00
30	25	23	0.0	0.0	---	0.0	25	24	22	32	22	0.00
31	24	---	0.0	0.0	---	0.0	---	23	---	32	17	---
MEAN	24.52	22.93	9.906	0.000	0.000	0.000	11.50	25.39	18.97	27.74	17.90	18.17
MAX	29	27	25	0.00	0.00	0.00	27	33	25	37	29	26
MIN	18	17	0.00	0.00	0.00	0.00	0.00	21	14	20	11	0.00
AC-FT	1510	1360	609	0.00	0.00	0.00	684	1560	1130	1710	1100	1080

CAL YR 2001 MEAN 14.34 MAX 53 MIN 0.00 AC-FT 10380
WTR YR 2002 MEAN 14.84 MAX 37 MIN 0.00 AC-FT 10740

e Estimated

07137500 ARKANSAS RIVER NEAR COOLIDGE, KS

LOCATION.--Lat 38°01'34", long 102°00'41", in NW 1/4 NE 1/4 NW 1/4 sec.26, T.23 S., R.43 W., Hamilton County, Hydrologic Unit 11030001, on right bank at downstream side of county highway bridge, 1.0 mi south of Coolidge, 1.9 mi downstream from Colorado-Kansas State line, and at mile 1,099.3 .

WATER-DISCHARGE RECORDS

DRAINAGE AREA.--25,410 mi^2, of which 1,708 mi^2 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.

REVISED RECORDS.--WSP 1341: 1903, drainage area.

GAGE.--Water-stage recorder. Datum of gage is 3,330.84 ft above NGVD of 1929. May 5 to Oct. 31, 1903, nonrecording gage, and Mar. 1 to May 31, 1921, water-stage recorder at present site at different datum. Oct. 1, 1950, to Mar. 31, 1966, water-stage recorder at site 0.3 mi upstream at datum 3.00 ft higher.

REMARKS.--Records good except those for estimated daily discharge, which are poor. Combined flow of river and Frontier Ditch (station 07137000) represents entire flow that enters Kansas. Flow regulated since Oct. 1948 by John Martin Reservoir (station 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, and return flow from irrigated areas. Satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

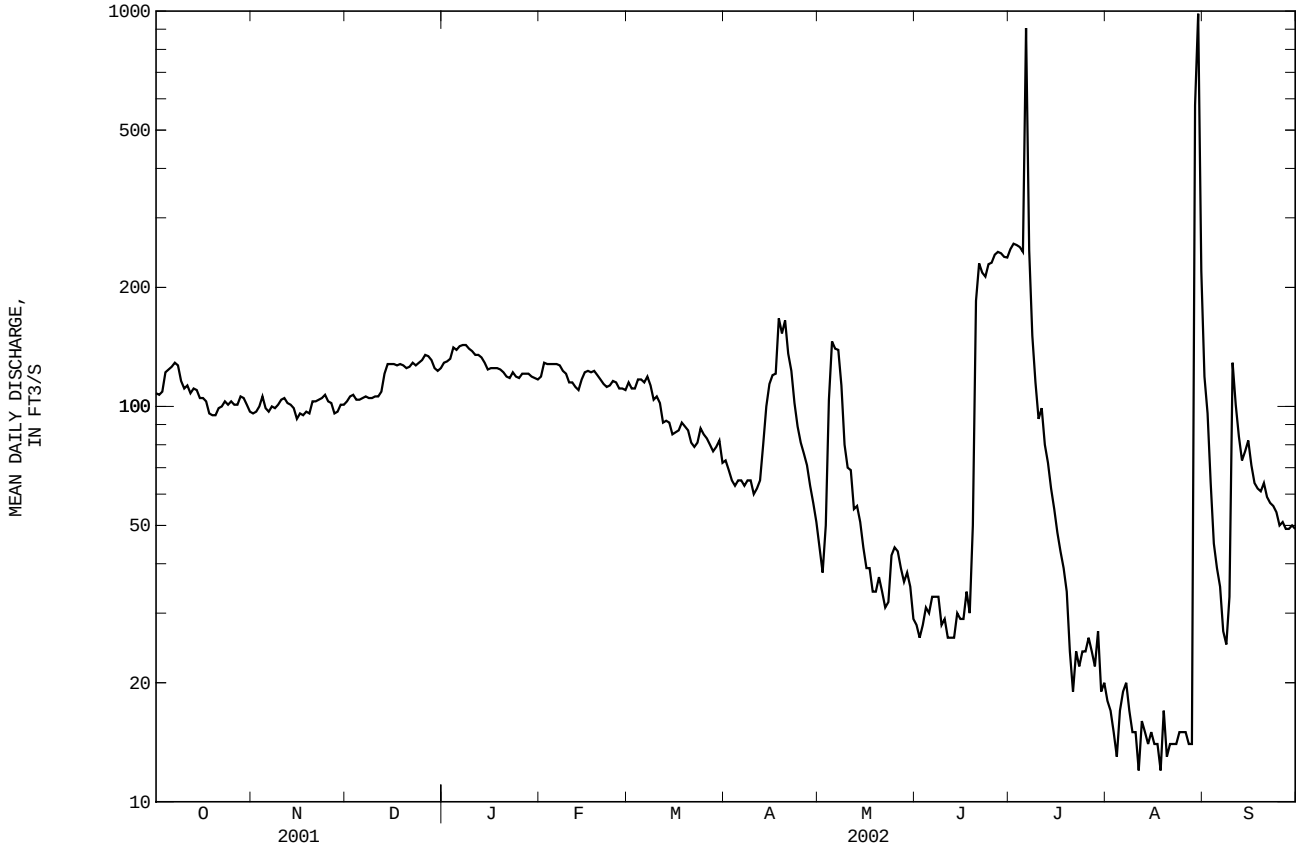
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	108	96	103	129	e119	115	73	44	28	250	18	119
2	107	97	106	130	e129	111	69	38	26	258	17	96
3	109	100	107	132	e128	111	65	50	28	256	15	e64
4	122	106	104	141	e128	117	63	104	31	253	13	e45
5	124	99	104	139	e128	117	65	146	30	246	17	39
6	126	97	105	142	e128	115	65	140	33	906	19	35
7	129	100	106	143	127	119	63	139	33	248	20	27
8	127	99	105	143	123	113	65	113	33	151	17	25
9	116	101	105	140	121	104	65	80	28	115	15	33
10	111	104	106	138	115	106	60	70	29	93	15	129
11	113	105	106	135	115	102	62	69	26	99	12	101
12	108	102	109	135	112	91	65	55	26	80	16	84
13	111	101	121	133	e110	92	80	56	26	72	15	73
14	110	99	128	129	117	91	100	51	30	62	14	77
15	105	93	128	124	e122	85	114	44	29	55	15	82
16	105	96	128	125	123	86	120	39	29	48	14	71
17	103	95	127	125	122	87	121	39	34	43	14	64
18	96	97	128	125	123	91	167	34	30	39	12	62
19	95	96	127	124	120	89	153	34	50	34	17	61
20	95	103	125	122	117	87	165	37	185	24	13	64
21	99	103	126	119	114	81	136	34	230	19	14	59
22	100	104	129	118	112	79	123	31	218	24	14	57
23	103	105	127	122	113	81	102	32	213	22	14	56
24	101	107	129	119	116	88	89	42	229	24	15	54
25	103	103	131	118	115	85	81	44	231	24	15	50
26	101	102	135	121	111	83	76	43	242	26	15	51
27	101	96	134	e121	111	80	71	39	246	24	14	49
28	106	97	131	e121	110	77	63	36	244	22	14	49
29	105	101	125	e119	---	79	57	38	239	27	578	50
30	101	101	123	e118	---	82	51	35	238	19	985	49
31	97	---	125	e117	---	72	---	29	---	20	220	---
MEAN	107.6	100.2	119.1	128.0	118.9	94.06	88.30	57.58	103.1	115.6	71.16	62.50
MAX	129	107	135	143	129	119	167	146	246	906	985	129
MIN	95	93	103	117	110	72	51	29	26	19	12	25
AC-FT	6620	5960	7330	7870	6600	5780	5250	3540	6140	7110	4380	3720

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	135.9	123.3	128.5	135.8	141.6	136.0	217.9	323.7	491.2	363.1	335.4	182.6
MAX	332	424	534	972	602	658	1221	2478	8221	2255	1979	1079
(WY)	1998	1998	1998	1998	1966	1998	1987	1999	1965	1995	1965	1965
MIN	1.97	1.53	3.94	3.14	5.52	5.63	9.43	6.61	4.20	3.59	1.94	0.90
(WY)	1979	1979	1979	1979	1978	1978	1979	1963	1954	1974	1964	1960

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1951 - 2002	
ANNUAL MEAN	233.1		97.09		226.6	
HIGHEST ANNUAL MEAN					1012	1965
LOWEST ANNUAL MEAN					19.8	1979
HIGHEST DAILY MEAN	1170	Jul 15	985	Aug 30	101000	Jun 18 1965
LOWEST DAILY MEAN	89	Sep 14	12	Aug 11	0.00	Jul 9 1954
ANNUAL SEVEN-DAY MINIMUM	95	Sep 9	14	Aug 16	0.00	Jul 9 1954
MAXIMUM PEAK FLOW			2270	Jul 6	158000	Jun 17 1965
MAXIMUM PEAK STAGE			7.32	Jul 6	14.80	Jun 17 1965
INSTANTANEOUS LOW FLOW			11	Aug 19	.00	many years
ANNUAL RUNOFF (AC-FT)	168700		70290		164200	
10 PERCENT EXCEEDS	552		135		461	
50 PERCENT EXCEEDS	173		100		130	
90 PERCENT EXCEEDS	101		24		10	

e Estimated



07137500 ARKANSAS RIVER NEAR COOLIDGE, KS--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964-68, 1970-73, 1975-81, July 1999 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: November 1963 to September 1968, January 1976 to September 1981, October 2000 to current year.
WATER TEMPERATURE: November 1963 to September 1968, October 1976 to September 1981, July 1999 to current year.

INSTRUMENTATION.--Multiparameter water-quality monitor.

REMARKS.--Records fair. Interruptions in record are due to ice conditions or malfunction of the recording instrument or sensors.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 6,800 miscrosiemens/cm, Mar. 29, 1978; minimum, 184 microsiemens/cm, Aug. 30, 2002.
WATER TEMPERATURE: Maximum, 34.5°C, July 20, 1976; minimum, -0.1°C, Nov. 28, 2001.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 4,860 microsiemens/cm, Apr. 11; minimum, 184 microsiemens/cm, Aug. 30.
WATER TEMPERATURE: Maximum, 34.2°C, Aug. 4; minimum, -0.1°C, on many days.

SPECIFIC CONDUCTANCE FROM DCP, in US/CM @ 25C, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	4040	3980	4010	4210	4100	4150	4290	4240	4260	---	---	---
2	4070	4000	4020	4180	4100	4150	4320	4260	4290	---	---	---
3	4030	3970	4000	4180	4110	4130	4260	4230	4240	---	---	---
4	---	---	---	4150	4110	4120	4290	4190	4220	---	---	---
5	---	---	---	4230	4150	4190	4200	4180	4190	---	---	---
6	---	---	---	4250	4180	4230	4230	4190	4210	---	---	---
7	---	---	---	4220	4150	4200	4230	4200	4210	---	---	---
8	---	---	---	4230	4200	4210	4260	4210	4230	---	---	---
9	---	---	---	4260	4210	4230	4280	4210	4240	4110	4080	4100
10	---	---	---	4220	4190	4210	4270	4190	4230	4080	4070	4080
11	4160	4090	4120	4210	4160	4180	4250	4170	4210	4120	4060	4080
12	4180	4110	4140	4170	4160	4170	4200	4120	4170	4110	4070	4090
13	4160	4110	4130	4190	4160	4170	4170	4080	4130	4140	4090	4120
14	4170	4100	4140	4170	4150	4160	4190	4050	4120	4170	4110	4140
15	4180	4130	4150	4270	4160	4200	4070	3980	4030	4190	4130	4160
16	4160	4120	4140	4220	4200	4210	4000	3930	3970	4200	4150	4170
17	4150	4110	4130	4230	4200	4210	3960	3890	3930	4210	4140	4180
18	4170	4120	4140	4240	4220	4230	3940	3880	3900	4250	4170	4200
19	4160	4130	4140	4260	4240	4240	---	---	---	4270	4170	4210
20	4190	4150	4170	4280	4240	4250	---	---	---	4240	4180	4210
21	4170	4130	4140	4270	4240	4250	---	---	---	4290	4160	4210
22	4160	4090	4120	4270	4240	4250	---	---	---	4220	4140	4180
23	4120	4080	4100	4240	4160	4210	---	---	---	4180	4140	4160
24	4140	4080	4110	4220	4180	4200	---	---	---	4210	4120	4150
25	4110	4010	4060	4260	4220	4240	---	---	---	4220	4060	4160
26	4060	4010	4030	4330	4260	4290	---	---	---	4090	3970	4050
27	4110	4060	4080	4390	4310	4340	---	---	---	4020	3980	4000
28	4100	4040	4070	4440	4300	4360	---	---	---	4040	3980	4010
29	4070	4040	4050	4390	4270	4320	---	---	---	4020	3980	4000
30	4080	4030	4060	4330	4250	4290	---	---	---	4010	3960	3990
31	4110	4050	4080	---	---	---	---	---	---	4000	3710	3880
MONTH	---	---	---	4440	4100	4220	---	---	---	---	---	---

07137500 ARKANSAS RIVER NEAR COOLIDGE, KS--Continued

SPECIFIC CONDUCTANCE FROM DCP, in US/CM @ 25C, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	3920	3720	3810	4290	4200	4230	4560	4490	4520	4500	4380	4430
2	3830	3760	3800	4600	4260	4390	4570	4510	4540	4420	4390	4410
3	3900	3810	3870	4560	4220	4370	4590	4500	4530	4400	3840	4280
4	3960	3890	3930	4400	4160	4260	4640	4500	4570	3840	3190	3430
5	4010	3950	3980	4200	4120	4150	4660	4540	4580	---	---	---
6	4040	3980	4020	4210	4130	4160	4600	4550	4580	---	---	---
7	4080	3980	4030	---	---	---	4650	4600	4630	---	---	---
8	4100	3990	4050	---	---	---	4630	4520	4600	3820	3400	3610
9	4140	4040	4090	---	---	---	4810	4580	4670	4060	3820	3970
10	4300	4140	4210	---	---	---	4840	4760	4810	4200	4060	4160
11	4220	4160	4190	---	---	---	4860	4810	4840	4180	3920	4040
12	4200	4150	4180	---	---	---	4860	4640	4720	4230	4120	4190
13	4200	4140	4170	---	---	---	4800	4140	4480	4260	4160	4220
14	4170	4120	4150	4380	4320	4360	4190	3920	4100	4310	4180	4220
15	4150	4100	4120	4440	4360	4400	3920	3570	3730	4360	4190	4280
16	4170	4100	4130	4400	4330	4370	3580	3460	3500	4350	4130	4260
17	4150	4090	4120	4420	4350	4380	3720	3460	3580	4280	4140	4200
18	4120	4100	4110	4450	4330	4370	3740	3480	3620	4310	4220	4270
19	4140	4110	4130	4440	4340	4390	3610	3460	3550	4340	4260	4290
20	4170	4120	4140	4430	4350	4410	3460	3360	3400	4270	4170	4220
21	4160	4130	4150	4550	4430	4490	3860	3380	3650	4420	4190	4260
22	4200	4130	4160	4550	4420	4480	4150	3810	4010	4520	4380	4450
23	4170	4120	4140	4520	4440	4490	4360	4100	4220	4490	4400	4430
24	4150	4120	4130	4440	4370	4400	4400	4280	4330	4440	3300	3980
25	4180	4120	4150	4420	4350	4390	4480	4370	4410	4260	4010	4180
26	4420	4140	4250	4470	4400	4440	4500	4370	4430	4340	4210	4250
27	4320	4210	4280	4530	4410	4460	4470	4340	4380	4320	4260	4300
28	4300	4210	4250	4550	4480	4510	4420	4330	4380	4480	4260	4330
29	---	---	---	4560	4420	4510	4410	4360	4380	4470	4300	4390
30	---	---	---	4440	4340	4400	4480	4380	4420	4460	4310	4370
31	---	---	---	4500	4310	4440	---	---	---	4430	4340	4370
MONTH	4420	3720	4100	---	---	---	4860	3360	4270	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	4430	4320	4360	3270	3170	3220	4350	4140	4210	2700	2190	2440
2	4550	4310	4400	3300	3190	3250	4350	4190	4240	---	---	---
3	4540	4330	4450	3290	3200	3240	4360	4160	4260	---	---	---
4	4580	4430	4490	3280	3230	3260	4350	4220	4300	---	---	---
5	4520	4400	4440	3310	3230	---	4280	4120	4220	---	---	---
6	4480	4320	4380	3420	630	---	4330	4140	4240	4100	3700	3900
7	4430	4210	4310	3490	2030	2960	4360	4090	4210	4170	3780	3960
8	4290	4090	4220	3950	3480	3730	4360	4190	4280	4180	3840	4010
9	4370	4090	4270	4130	3820	3940	4340	4190	4280	4220	790	3850
10	4440	4170	4300	4170	3840	3980	4320	4200	4270	3240	790	2640
11	4370	4290	4320	3900	3380	3630	4350	4200	4270	3440	2690	3160
12	4360	4180	4280	4040	3740	3870	4280	4160	4210	3820	3220	3530
13	4390	4040	4270	4040	3620	3810	4290	4110	4230	4080	3820	3980
14	4490	4220	4330	4170	3560	3810	4340	4220	4280	4040	2860	3940
15	4540	4230	4340	---	3320	---	4340	4190	4270	3840	2830	3480
16	4330	4080	4210	---	---	---	4330	4230	4270	4070	3840	3980
17	4080	3890	3990	4420	4220	---	4330	4260	4290	4150	4050	4100
18	4080	3900	3990	4440	4340	4400	4340	4270	4290	4140	4090	4100
19	4050	3080	3850	4500	4370	4440	4290	4140	4190	---	---	---
20	3080	2760	2920	4420	4340	4370	4320	4160	4240	---	---	---
21	3180	2960	3080	4440	4360	4390	---	---	---	---	---	---
22	3360	3120	3230	4410	4360	4390	---	---	---	---	---	---
23	3290	2860	3040	4420	4320	4370	---	---	---	---	---	---
24	3180	3010	3120	4420	4290	4340	4280	3980	4180	---	---	---
25	3260	3080	3170	4340	4190	4270	4160	3950	4060	---	---	---
26	3110	3010	3060	4210	4010	4120	4240	4060	4150	---	---	---
27	3100	2990	3040	4280	4050	4170	4260	4150	4200	---	---	---
28	3180	3020	3100	4200	4000	4100	4250	4080	4190	---	---	---
29	3160	3090	3140	4200	3520	3940	4180	360	2120	---	---	---
30	3260	3110	3180	4440	4140	4250	1310	184	746	---	---	---
31	---	---	---	4370	4140	4190	2210	1310	1880	---	---	---
MONTH	4580	2760	3840	---	---	---	---	---	---	---	---	---

07137500 ARKANSAS RIVER NEAR COOLIDGE, KS--Continued

WATER TEMPERATURE FROM DCP, in (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	22.5	14.8	18.2	15.8	9.6	12.7	7.6	2.3	4.7	---	---	---
2	22.9	14.2	18.3	15.3	8.6	11.8	6.2	2.6	4.6	---	---	---
3	21.8	14.6	17.9	13.9	11.1	12.4	9.4	5.0	6.8	---	---	---
4	---	---	---	16.8	11.9	13.8	9.8	3.9	7.0	---	---	---
5	---	---	---	17.0	10.7	13.7	9.8	6.2	7.9	---	---	---
6	---	---	---	16.6	10.3	13.3	8.1	3.6	5.8	---	---	---
7	---	---	---	15.9	9.6	12.6	7.8	3.1	5.2	---	---	---
8	---	---	---	11.2	7.1	9.2	6.4	1.7	3.9	8.6	---	---
9	---	---	---	12.2	4.6	8.2	6.5	0.8	3.5	7.6	4.8	6.1
10	---	---	---	13.0	6.3	9.4	5.8	1.3	3.5	8.4	5.2	6.7
11	17.2	10.2	13.5	13.5	6.9	10.0	7.0	2.1	4.6	7.6	2.2	4.8
12	13.7	9.0	11.2	14.5	9.8	11.6	6.1	2.5	4.2	7.1	2.2	4.7
13	15.4	6.7	10.5	14.4	9.3	11.5	4.8	0.8	2.7	7.0	3.2	4.8
14	16.6	9.0	12.4	13.6	10.8	12.0	5.3	0.0	2.4	6.3	1.4	3.7
15	14.9	8.6	11.6	14.9	9.5	11.9	6.5	2.1	4.2	4.6	0.3	2.6
16	15.8	7.1	11.2	12.5	11.0	11.8	6.4	2.4	4.3	5.2	0.3	2.7
17	17.5	8.5	12.6	15.3	10.9	12.6	6.4	1.5	3.8	5.6	0.4	2.8
18	14.8	10.0	12.3	13.7	8.6	11.1	6.1	3.1	4.5	4.4	-0.1	2.0
19	16.2	7.6	11.6	10.9	5.8	8.1	---	---	---	5.1	-0.1	2.2
20	16.4	8.7	12.4	10.1	3.8	6.9	---	---	---	5.2	0.0	2.4
21	16.1	9.2	12.6	9.5	4.2	6.8	---	---	---	6.0	-0.1	2.5
22	18.1	11.8	14.4	8.8	3.8	6.4	---	---	---	8.4	1.3	4.5
23	17.5	10.5	13.9	9.4	6.9	8.0	---	---	---	5.7	2.4	3.7
24	14.2	9.3	11.5	9.4	5.0	7.0	---	---	---	5.2	-0.1	2.5
25	13.5	6.3	9.6	10.2	4.7	6.9	---	---	---	7.3	-0.1	3.1
26	13.2	6.4	9.5	6.6	1.8	4.2	---	---	---	9.5	2.2	5.6
27	15.0	6.6	10.4	3.4	-0.1	1.3	---	---	---	8.8	3.8	6.2
28	16.0	9.1	12.4	3.7	-0.1	1.1	---	---	---	7.6	2.5	5.1
29	15.3	10.2	12.4	4.5	-0.1	1.9	---	---	---	5.5	1.9	3.1
30	15.5	9.4	12.3	6.7	0.5	3.4	---	---	---	1.9	0.0	1.0
31	16.5	11.9	13.8	---	---	---	---	---	---	3.3	-0.1	0.9
MONTH	---	---	---	17.0	-0.1	9.1	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	2.9	-0.1	0.8	5.5	-0.1	1.6	21.9	8.6	14.7	25.3	12.6	17.5
2	4.3	-0.1	1.6	1.0	-0.1	0	14.5	6.1	9.1	22.3	9.6	14.8
3	5.9	-0.1	2.6	3.0	-0.1	0.7	14.3	3.6	8.0	24.4	10.8	17.0
4	6.4	0.1	3.1	8.6	-0.1	3.3	16.9	3.1	9.3	20.8	13.3	16.8
5	6.1	1.6	3.9	11.9	2.4	6.8	19.8	5.7	12.2	23.9	14.2	18.7
6	8.2	1.6	4.7	12.6	3.6	7.7	19.2	9.7	13.7	25.4	15.4	20.1
7	9.5	2.1	5.6	11.7	3.9	7.4	18.5	10.6	14.3	23.2	15.8	19.2
8	10.1	3.3	6.6	10.5	3.6	7.1	15.3	11.7	13.4	22.6	14.4	18.0
9	6.7	0.6	3.3	9.9	-0.1	4.4	22.5	9.7	14.9	21.1	11.6	15.9
10	5.6	0.0	2.1	12.0	2.4	6.9	21.2	10.4	15.3	20.2	9.4	14.4
11	8.8	0.7	4.3	13.2	6.2	9.1	21.5	10.9	15.9	25.3	15.1	19.1
12	6.8	2.6	4.6	14.7	4.8	9.4	22.9	11.9	16.8	17.1	11.6	14.1
13	9.1	1.4	4.9	15.2	6.8	10.6	24.7	13.2	18.2	23.6	8.6	15.4
14	7.7	3.3	5.2	14.4	6.0	9.4	24.2	13.7	18.5	22.2	11.8	16.4
15	9.5	2.3	5.8	13.2	3.9	7.9	23.0	13.5	18.0	26.8	11.9	18.1
16	10.0	1.6	5.7	12.7	3.4	7.7	20.3	14.0	16.8	24.9	13.3	18.2
17	11.1	4.2	7.4	14.6	4.7	9.2	21.1	11.8	16.2	22.5	12.5	16.4
18	11.0	7.0	8.8	15.1	4.4	9.3	22.0	12.2	16.5	24.8	11.8	17.1
19	10.5	5.5	7.8	14.4	5.8	9.3	17.3	9.0	12.5	26.0	11.4	17.4
20	11.8	3.9	7.7	17.2	4.3	10.4	12.5	9.0	10.0	23.8	11.8	17.0
21	10.4	5.0	7.5	10.4	1.6	6.0	19.3	7.3	12.5	23.6	11.9	16.8
22	11.8	2.5	7.0	12.7	1.4	6.6	20.7	10.4	15.4	27.0	13.0	18.6
23	12.7	5.6	9.0	15.4	3.6	9.1	23.2	11.4	16.9	23.7	10.3	16.4
24	11.1	6.6	8.5	11.1	4.2	6.9	20.0	9.4	14.9	13.9	9.9	11.3
25	7.3	0.6	3.9	7.8	2.5	4.8	15.8	8.5	11.7	24.5	8.8	15.6
26	3.7	-0.1	1.1	15.7	1.7	8.0	19.8	6.9	12.2	25.5	13.2	18.8
27	7.0	-0.1	2.4	19.2	5.8	11.9	22.5	11.5	16.0	20.6	14.3	17.4
28	9.4	-0.1	4.3	19.3	8.0	13.3	22.7	9.8	15.9	27.7	13.4	19.7
29	---	---	---	18.7	7.3	12.6	21.3	10.9	15.7	21.9	16.4	19.4
30	---	---	---	18.9	7.6	12.8	25.0	11.3	17.4	22.1	16.5	19.6
31	---	---	---	19.6	7.0	12.9	---	---	---	22.5	16.8	19.8
MONTH	12.7	-0.1	5.0	19.6	-0.1	7.8	25.0	3.1	14.4	27.7	8.6	17.3

07137500 ARKANSAS RIVER NEAR COOLIDGE, KS--Continued

WATER TEMPERATURE FROM DCP, in (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	22.7	18.8	20.8	28.8	21.8	25.1	26.5	18.0	21.4	26.2	18.9	22.3
2	22.0	18.6	20.2	29.2	22.5	25.6	29.6	15.8	21.0	---	---	---
3	22.9	15.8	19.2	29.2	22.8	25.9	30.6	18.1	23.3	---	---	---
4	20.5	16.5	18.4	26.0	22.1	23.5	34.2	18.9	24.7	---	---	---
5	21.1	16.8	18.4	---	20.7	---	29.3	17.9	23.4	27.4	---	---
6	23.8	17.2	20.1	24.9	19.5	---	27.6	17.7	22.1	27.9	17.9	22.2
7	24.8	17.9	21.3	27.0	21.0	23.9	27.4	17.3	21.7	26.3	17.4	21.4
8	25.4	17.3	21.0	29.5	21.2	24.9	27.8	17.4	22.0	26.7	17.6	21.3
9	31.0	17.9	23.3	31.2	20.8	25.6	28.8	18.4	22.3	23.8	17.6	20.6
10	30.1	18.2	23.3	30.9	21.3	25.7	31.4	17.2	22.8	17.9	16.7	17.4
11	31.4	17.3	23.7	31.1	20.5	25.2	33.7	18.2	24.7	23.0	16.5	19.2
12	31.2	17.6	23.6	30.3	19.8	24.6	28.0	17.9	22.5	26.4	17.6	21.6
13	24.8	17.4	20.8	30.1	19.6	24.2	27.1	16.0	20.0	24.2	18.1	21.3
14	27.6	14.8	20.2	30.3	19.0	23.9	29.1	14.7	21.0	21.7	17.6	19.6
15	27.0	16.8	20.6	29.8	18.9	23.4	28.5	17.2	21.5	23.8	15.3	19.4
16	29.7	14.1	20.9	29.4	18.6	23.3	28.9	18.2	23.1	23.9	15.5	19.6
17	31.5	15.9	22.8	30.4	18.4	23.4	22.2	14.2	18.5	24.7	15.8	20.2
18	33.0	17.2	23.8	31.3	18.8	23.8	31.6	14.1	20.8	21.3	16.5	18.0
19	30.6	19.1	23.0	30.6	19.1	23.8	27.0	17.9	21.5	19.8	---	---
20	27.0	19.2	22.2	30.7	19.1	23.7	28.2	17.7	22.2	22.1	12.0	16.9
21	27.4	20.4	23.7	33.6	18.3	24.9	---	18.2	---	21.7	13.4	17.3
22	26.3	20.6	23.4	27.1	19.6	23.0	---	---	---	20.8	11.5	15.9
23	26.1	19.9	23.0	30.1	17.2	22.7	---	---	---	22.3	12.1	16.9
24	28.0	21.1	24.3	32.4	18.7	24.4	28.2	18.3	22.3	23.8	13.6	18.2
25	29.4	22.0	25.4	31.2	18.9	24.0	28.5	18.8	23.1	24.1	13.8	18.1
26	28.3	21.5	25.0	32.8	19.6	24.5	31.1	18.2	22.9	22.0	12.7	16.7
27	28.8	22.2	25.6	33.0	19.5	24.8	28.1	17.2	21.1	21.9	11.2	16.3
28	29.0	22.6	25.4	34.0	19.8	25.3	25.6	17.9	20.7	19.0	14.6	16.6
29	28.5	21.3	24.7	30.8	18.9	24.1	19.4	12.6	16.5	20.2	14.1	17.0
30	28.6	21.4	24.7	28.9	18.6	23.0	22.2	14.4	18.6	23.9	13.4	18.0
31	---	---	---	32.5	17.6	23.3	25.3	19.0	21.8	---	---	---
MONTH	33.0	14.1	22.4	---	17.2	---	---	---	---	---	---	---

07138000 ARKANSAS RIVER AT SYRACUSE, KS

LOCATION.--Lat 37°57'58", long 101°45'23", in NW 1/4 SE 1/4 NW 1/4 sec.18, T.24 S., R.40 W., Hamilton County, Hydrologic Unit 11030001, on left bank at downstream side of bridge on U.S. Highway 270, 0.5 mi south of Syracuse, and at mile 1,080.9.

DRAINAGE AREA.--25,763 mi^2, of which 1,857 mi^2 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 above NGVD of 1929. See WSP 1921 for history of changes prior to Nov. 15, 1956.

REMARKS.--Records good. Flow moderately regulated since Oct. 1948 by John Martin Reservoir (station 07130000). Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals, diversions for irrigation, and return flow from irrigated areas. Satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in October 1908 reached a stage of about 11.7 ft from information by local newspaper, discharge, about 87,000 ft^3/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	108	96	114	117	116	124	81	58	32	192	12	146
2	106	95	117	e118	113	126	79	54	29	200	11	88
3	100	95	121	e120	122	119	76	51	27	203	9.8	63
4	104	99	120	e123	129	122	74	64	27	203	8.7	47
5	114	107	121	e129	130	123	72	118	26	214	7.8	37
6	115	93	119	e129	132	124	72	145	25	373	6.8	28
7	121	93	120	e131	133	120	70	149	25	462	6.0	22
8	122	91	119	131	130	128	71	150	25	235	6.2	18
9	120	90	117	131	128	121	76	122	26	167	5.9	16
10	109	91	118	129	120	118	72	99	24	131	6.1	40
11	106	98	113	128	120	118	68	88	24	156	5.0	80
12	104	103	113	127	123	110	73	78	23	110	4.8	75
13	109	106	117	125	122	103	78	68	27	88	4.3	63
14	115	110	120	122	121	101	97	66	24	75	4.0	56
15	113	108	122	119	125	97	116	58	24	64	3.8	62
16	106	101	122	118	126	94	134	50	23	56	3.7	66
17	109	96	121	118	129	93	130	47	21	48	3.4	50
18	102	93	121	115	131	96	132	44	22	42	3.1	44
19	100	99	121	114	131	95	162	40	20	38	3.0	44
20	99	92	122	114	128	93	167	39	46	31	2.8	47
21	100	99	122	113	125	91	169	40	117	25	2.5	50
22	103	107	122	113	124	88	147	37	134	20	2.6	42
23	104	117	125	112	124	85	127	34	140	20	2.9	40
24	105	119	124	111	124	91	104	36	152	18	2.7	37
25	102	116	126	111	124	93	93	48	166	17	2.7	29
26	105	114	129	113	121	89	86	51	178	16	2.7	23
27	103	109	130	117	115	89	79	48	186	17	2.5	22
28	108	101	129	118	120	84	79	46	189	16	2.4	22
29	114	103	125	117	---	82	77	43	189	15	6.5	22
30	105	113	120	118	---	86	64	41	187	15	647	25
31	99	---	117	118	---	85	---	38	---	13	296	---
MEAN	107.4	101.8	120.9	120.0	124.5	102.8	97.50	66.13	71.93	105.8	35.12	46.80
MAX	122	119	130	131	133	128	169	150	189	462	647	146
MIN	99	90	113	111	113	82	64	34	20	13	2.4	16
AC-FT	6610	6060	7430	7380	6910	6320	5800	4070	4280	6510	2160	2780

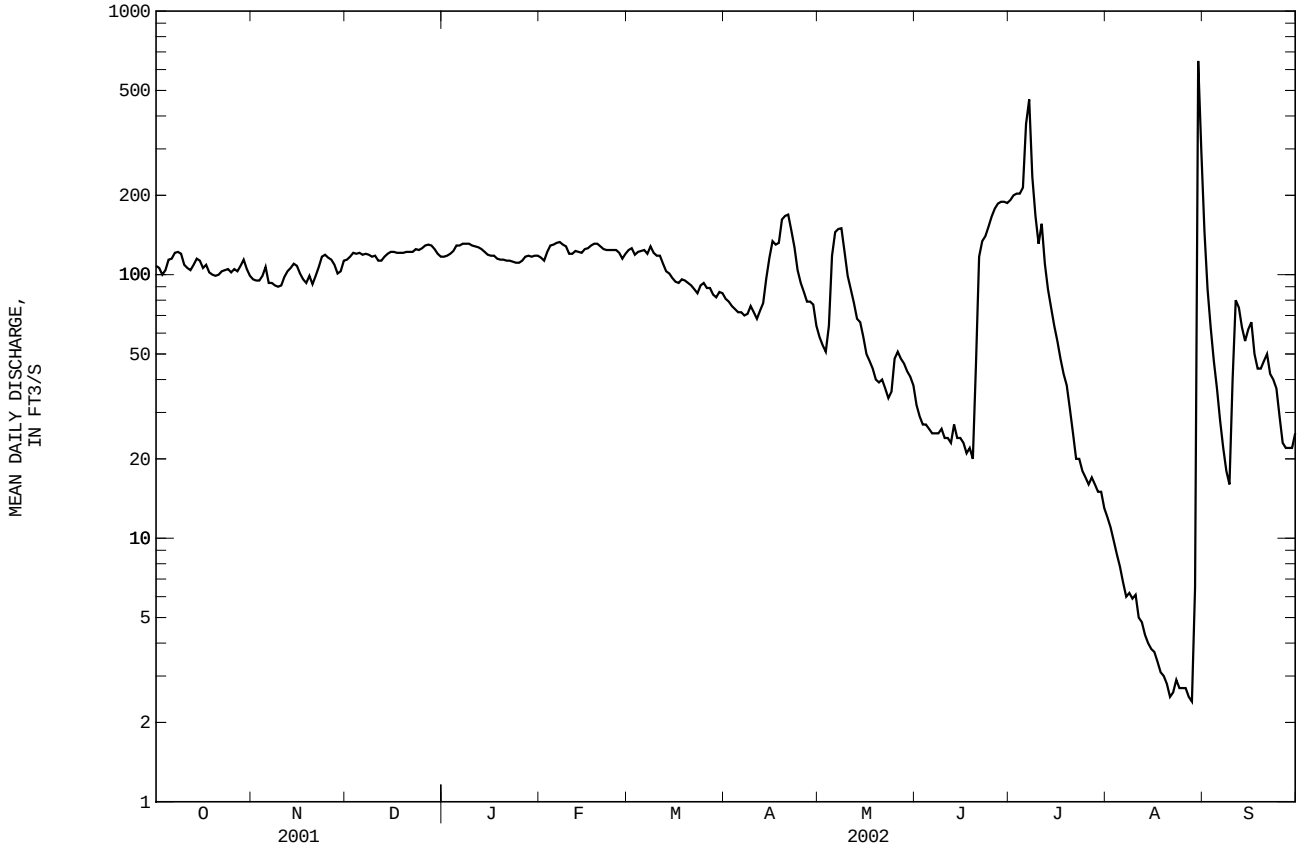
07138000 ARKANSAS RIVER AT SYRACUSE, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1903 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	194.3	151.3	150.8	163.1	166.9	145.4	294.4	454.7	794.6	454.3	487.2	240.6
MAX	2401	1200	669	1100	976	641	5962	5070	9499	3030	4365	1720
(WY)	1924	1942	1924	1924	1924	1998	1942	1942	1921	1921	1923	1923
MIN	0.31	0.75	0.69	1.19	0.98	1.70	3.24	5.42	7.04	2.10	0.50	0.19
(WY)	1975	1975	1975	1979	1978	1978	1979	1937	1954	1940	1974	1974

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1903 - 2002	
ANNUAL MEAN	218.8		91.59		297.8	
HIGHEST ANNUAL MEAN					1950	1942
LOWEST ANNUAL MEAN					14.0	1979
HIGHEST DAILY MEAN	826	Jul 15	647	Aug 30	109000	Jun 18 1965
LOWEST DAILY MEAN	85	May 17	2.4	Aug 28	0.03	Sep 27 1974
ANNUAL SEVEN-DAY MINIMUM	94	Nov 6	2.6	Aug 22	0.06	Sep 21 1974
MAXIMUM PEAK FLOW			956	Jul 7	174000	Jun 17 1965
MAXIMUM PEAK STAGE			6.40	Jul 7	19.75	Jun 17 1965
INSTANTANEOUS LOW FLOW			2.1	Aug 18	0.00	Aug 17 1946
ANNUAL RUNOFF (AC-FT)	158400		66310		215800	
10 PERCENT EXCEEDS	480		131		520	
50 PERCENT EXCEEDS	179		101		130	
90 PERCENT EXCEEDS	103		17		7.7	

e Estimated



07138020 ARKANSAS RIVER AT KENDALL, KS

LOCATION.--Lat 37°55'48", long 101°32'56", in SW $^{1}/_{4}$ SE $^{1}/_{4}$ sec.25, T.24 S., R.39 W., Hamilton County, Hydrologic Unit 11030001, on left upstream side of county road bridge, 0.24 mi south of Kendall, and at mile 1,066.7.

DRAINAGE AREA.--26,028 mi^2, of which 1,886 mi^2 is probably noncontributing.

PERIOD OF RECORD.--April 1979 to September 1982. June 2000 to current year.

GAGE.--Water-stage recorder. Datum of gage is 3,130.00 ft above NGVD of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow moderately regulated since October 1948 by John Martin Reservoir (station 07130000). Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals, diversions for irrigation, and return flow from irrigated areas. Satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	113	101	115	128	130	121	92	72	43	180	20	153
2	111	99	116	128	130	e112	91	68	40	188	18	104
3	108	99	118	124	135	e108	89	64	37	194	16	83
4	106	99	122	124	137	e114	87	63	36	197	14	66
5	109	104	122	130	135	e131	84	79	34	201	12	55
6	113	102	122	131	136	137	84	109	33	205	11	46
7	113	98	124	133	137	128	82	121	31	435	11	39
8	118	97	125	133	136	129	82	125	30	253	9.9	32
9	120	97	126	136	132	127	80	116	29	183	9.1	28
10	113	96	127	141	131	124	82	100	28	148	11	33
11	109	98	126	143	126	122	78	90	27	148	9.0	48
12	107	103	124	142	126	122	79	85	26	128	8.4	61
13	105	106	126	141	125	114	79	79	28	110	8.2	60
14	112	109	130	139	123	110	84	e76	29	97	7.6	54
15	113	111	131	136	125	108	96	e71	30	84	6.8	51
16	109	108	130	133	125	104	108	e68	27	76	6.3	55
17	109	105	132	132	127	102	116	e64	26	70	5.7	52
18	108	100	131	132	129	101	112	e60	25	64	5.6	45
19	104	101	132	130	126	102	127	e56	26	60	5.3	44
20	103	102	132	131	126	102	134	e53	28	55	5.2	45
21	102	102	132	131	126	100	144	e52	52	50	4.1	46
22	106	106	132	129	124	98	136	e48	96	45	2.6	45
23	105	112	133	128	123	96	125	45	117	41	3.6	43
24	105	118	133	129	122	95	111	47	129	38	2.1	40
25	105	119	135	128	121	99	101	46	143	34	1.8	36
26	106	117	136	127	119	99	94	52	152	30	2.2	33
27	108	116	135	129	115	98	90	51	166	28	2.4	29
28	107	112	136	131	117	96	83	50	173	27	1.6	27
29	111	108	134	129	---	94	82	48	175	26	1.4	26
30	111	114	132	129	---	94	77	47	177	23	192	26
31	105	---	130	130	---	96	---	45	---	22	298	---
MEAN	108.8	105.3	128.4	131.8	127.3	109.1	96.97	69.35	66.43	111.0	22.96	50.17
MAX	120	119	136	143	137	137	144	125	177	435	298	153
MIN	102	96	115	124	115	94	77	45	25	22	1.4	26
AC-FT	6690	6270	7890	8110	7070	6710	5770	4260	3950	6820	1410	2990

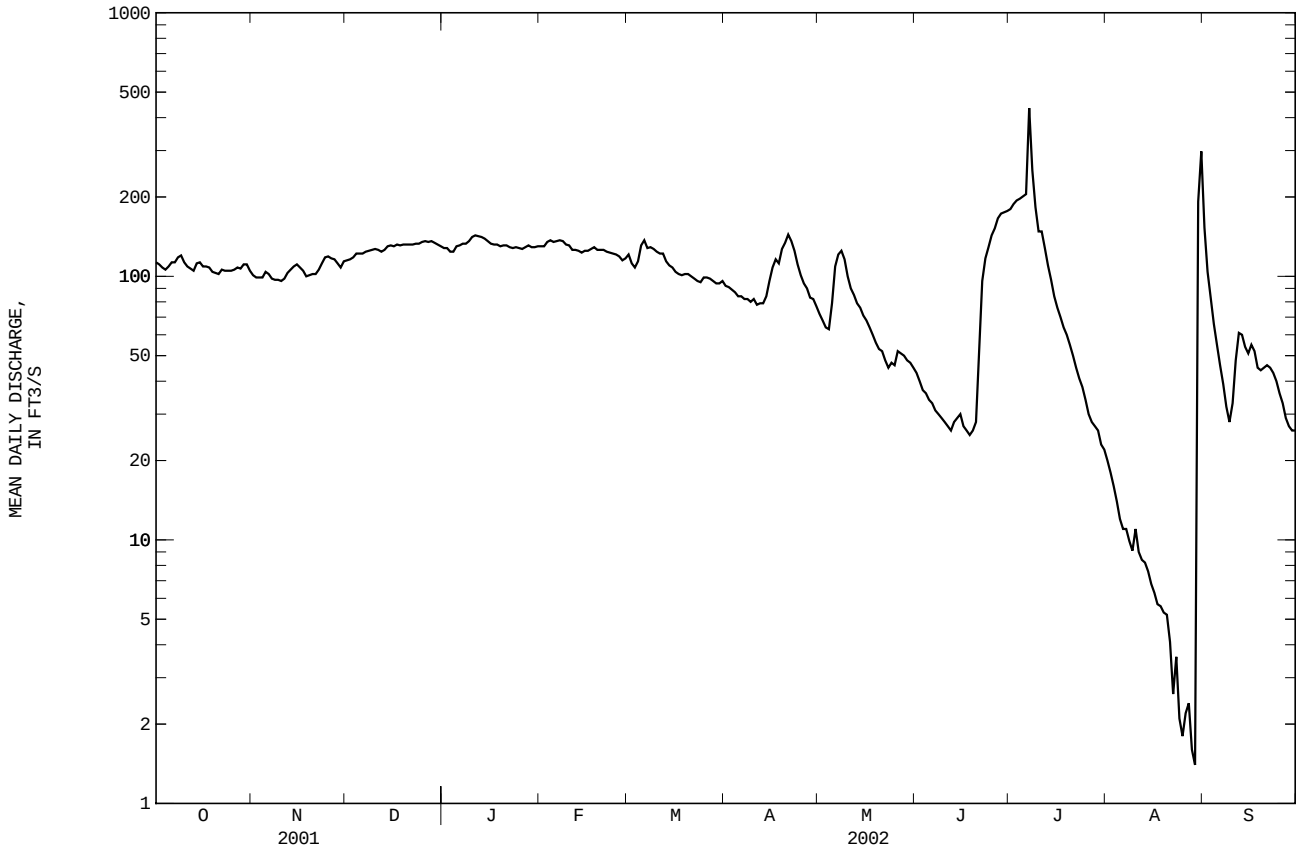
07138020 ARKANSAS RIVER AT KENDALL, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	84.96	77.01	82.29	83.85	86.76	84.59	81.13	105.6	241.1	361.2	247.0	115.1
MAX	276	220	196	186	201	186	165	241	592	637	466	171
(WY)	2001	2001	2001	2001	2001	2001	2001	2001	2000	2000	2000	2000
MIN	0.000	0.000	0.000	0.000	5.24	19.8	16.9	22.7	17.6	97.4	23.0	30.0
(WY)	1980	1980	1980	1980	1980	1980	1982	1982	1981	1981	2002	1980

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1980 - 2002	
ANNUAL TOTAL	80970		34254.9			
ANNUAL MEAN	221.8		93.85		123.0	
HIGHEST ANNUAL MEAN					251	2001
LOWEST ANNUAL MEAN					64.1	1981
HIGHEST DAILY MEAN	749	Jul 16	435	Jul 7	984	Jul 19 2000
LOWEST DAILY MEAN	92	Sep 16	1.4	Aug 29	0.00	Oct 1 1979
ANNUAL SEVEN-DAY MINIMUM	98	Sep 11	2.2	Aug 23	0.00	Oct 1 1979
MAXIMUM PEAK FLOW			590	Jul 7	1060	Jul 19 2000
MAXIMUM PEAK STAGE			8.21	Jul 7	9.37	Jul 19 2000
INSTANTANEOUS LOW FLOW			1.2	Aug 26	.00	many years
ANNUAL RUNOFF (AC-FT)	160600		67940		89070	
10 PERCENT EXCEEDS	475		135		318	
50 PERCENT EXCEEDS	182		105		72	
90 PERCENT EXCEEDS	106		26		6.6	

e Estimated



07138070 ARKANSAS RIVER AT DEERFIELD, KS

LOCATION.--Lat 37°58'11", long 101°17'42", in NW $^1/_4$ SW $^1/_4$ NE $^1/_4$ sec.14, T.24 S., R.35 W., Kearney County, Hydrologic Unit 11030001, on right downstream end of bridge on paved county road about 0.75 mi southwest of Deerfield and at mile 1,039.8.

DRAINAGE AREA.--26,964 mi^2.

PERIOD OF RECORD.--October 1998 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,920.00 ft above NGVD of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow moderately regulated since October 1948 by John Martin Reservoir (station 07130000). Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals, diversions for irrigation, and return flow from irrigated areas. Satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40	63	101	99	e50	100	5.5	49	0.00	0.00	0.00	0.00
2	33	60	98	e100	60	e50	5.0	46	0.00	0.00	0.00	0.00
3	35	60	97	e100	63	e46	4.5	43	0.00	0.00	0.00	0.00
4	30	60	97	e100	88	e60	4.2	40	0.00	0.00	0.00	0.00
5	27	60	98	e100	e108	e70	3.8	39	0.00	0.00	0.00	0.00
6	29	64	98	e100	e110	e100	3.5	42	0.00	0.00	0.00	0.00
7	35	67	99	e100	e110	e150	3.2	54	0.00	0.00	0.00	0.00
8	29	66	99	e91	e110	116	3.1	62	0.00	17	0.00	0.00
9	23	67	100	e76	e110	109	2.6	66	0.00	41	0.00	0.00
10	20	67	101	e56	e110	107	4.4	67	0.00	40	0.00	0.00
11	18	66	101	e52	e110	102	7.3	61	0.00	44	0.00	0.00
12	19	67	100	49	e110	100	2.2	54	0.00	43	0.00	0.00
13	28	69	100	43	112	98	1.6	50	0.00	40	0.00	0.00
14	42	69	100	38	111	94	1.3	46	0.00	35	0.00	0.00
15	49	78	103	e36	109	90	1.5	42	0.00	30	0.00	0.00
16	54	72	102	35	109	87	3.0	39	0.00	24	0.00	0.00
17	58	71	102	45	111	86	5.5	36	0.00	20	0.00	0.00
18	58	71	103	78	111	78	2.5	33	0.00	16	0.00	0.00
19	58	70	102	95	111	46	2.7	31	0.00	13	0.00	0.00
20	57	62	103	107	69	31	7.0	24	0.00	9.5	0.00	0.00
21	55	69	99	108	48	25	13	14	0.00	6.2	0.00	0.00
22	54	72	60	107	38	21	20	8.4	0.30	5.2	0.00	0.00
23	55	76	44	98	33	18	30	4.9	2.5	1.2	0.00	0.00
24	54	81	37	100	28	16	31	4.1	5.8	0.00	0.00	0.00
25	55	83	57	105	e33	e15	30	2.2	8.1	0.00	0.00	0.00
26	56	84	74	105	e40	e13	42	0.74	9.2	0.00	0.00	0.00
27	58	79	95	89	e49	e11	50	0.16	3.3	0.00	0.00	0.00
28	59	82	101	52	e75	e9.2	51	0.00	0.00	0.00	0.00	0.00
29	60	82	101	42	---	e8.2	51	0.00	0.00	0.00	0.00	0.00
30	63	e85	101	e40	---	7.3	51	0.00	0.00	0.00	0.00	0.00
31	66	---	98	e40	---	6.3	---	0.00	---	0.00	0.00	---
MEAN	44.42	70.73	92.61	76.97	83.07	60.32	14.78	30.92	0.973	12.42	0.000	0.000
MAX	66	85	103	108	112	150	51	67	9.2	44	0.00	0.00
MIN	18	60	37	35	28	6.3	1.3	0.00	0.00	0.00	0.00	0.00
AC-FT	2730	4210	5690	4730	4610	3710	879	1900	58	764	0.00	0.00

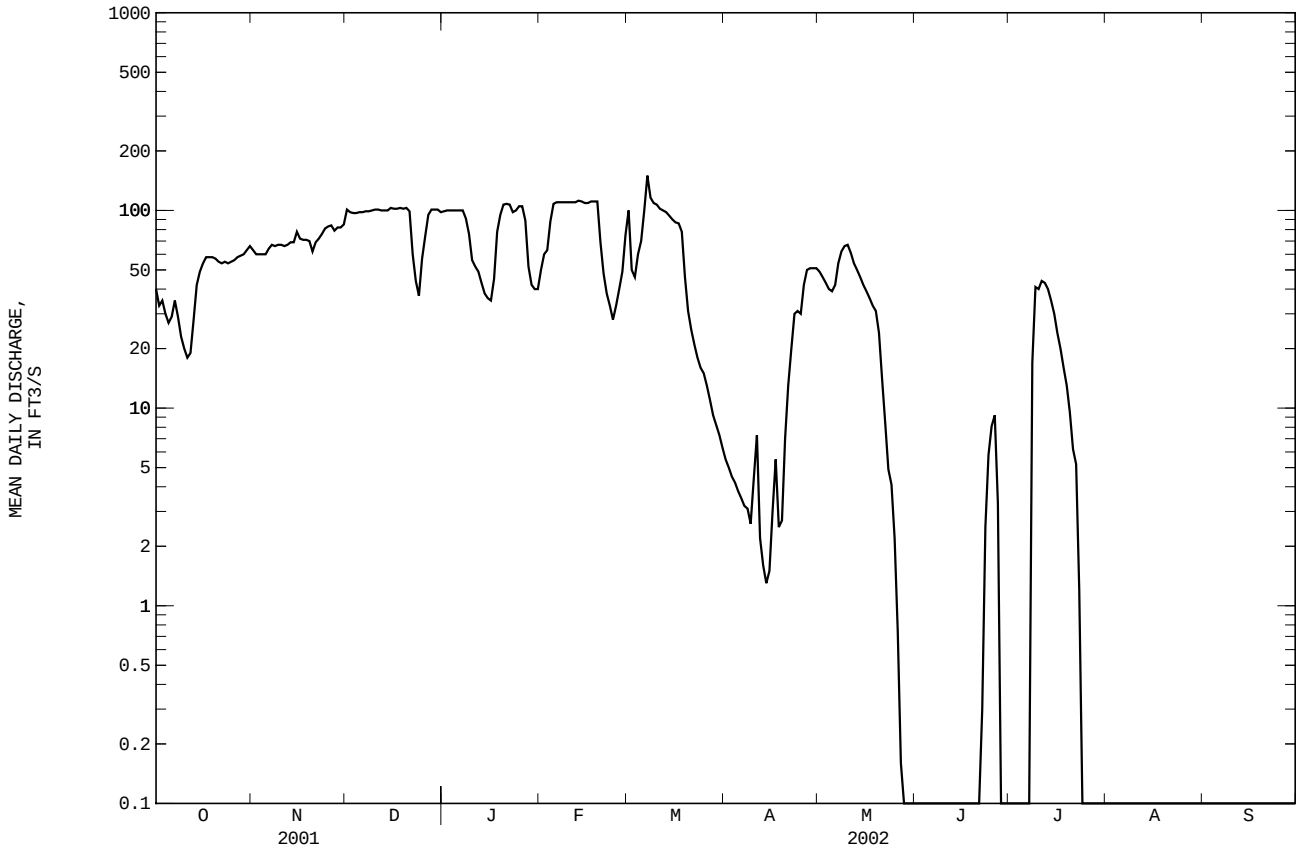
07138070 ARKANSAS RIVER AT DEERFIELD, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	172.3	219.4	191.5	165.2	195.8	199.9	165.8	626.4	642.8	230.4	291.7	118.0
MAX	309	317	277	206	312	386	263	2083	2147	535	884	325
(WY)	2000	1999	2000	2000	2000	2000	1999	1999	1999	1999	1999	1999
MIN	44.4	70.7	92.6	77.0	83.1	60.3	14.8	30.9	0.97	12.4	0.000	0.000
(WY)	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1999 - 2002	
ANNUAL MEAN	138.1		40.46		268.6	
HIGHEST ANNUAL MEAN					637	1999
LOWEST ANNUAL MEAN					40.5	2002
HIGHEST DAILY MEAN	1470	May 30	150	Mar 7	2630	Jun 13 1999
LOWEST DAILY MEAN	18	Oct 11	0.00	May 28	0.00	May 28 2002
ANNUAL SEVEN-DAY MINIMUM	25	Oct 7	0.00	May 28	0.00	May 28 2002
MAXIMUM PEAK FLOW			e150	Mar 7	2740	May 24 1999
MAXIMUM PEAK STAGE			b7.72	Mar 7	12.32	May 24 1999
INSTANTANEOUS LOW FLOW			0.00	May 28	0.00	May 28 2002
ANNUAL RUNOFF (AC-FT)	99990		29290		194600	
10 PERCENT EXCEEDS	199		101		384	
50 PERCENT EXCEEDS	121		35		175	
90 PERCENT EXCEEDS	58		0.00		13	

e Estimated
b Backwater from ice



07139000 ARKANSAS RIVER AT GARDEN CITY, KS

LOCATION.--Lat 37°57'21", long 100°52'37", in NW 1/4 SE 1/4 NW 1/4 sec.19, T.24 S., R.32 W., Finney County, Hydrologic Unit 11030001, on left bank at downstream side of bridge on U.S. Highway 82, 0.5 mi south of Garden City, and at mile 1,024.2.

DRAINAGE AREA.--27,071 mi^2, of which 2,368 mi^2 is probably noncontributing.

PERIOD OF RECORD.--June 1922 to June 1970, October 1986 to current year. July 1970 to September 1986, flood hydrograph record.

GAGE.--Water-stage recorder. Datum of gage is 2,815.43 ft above NGVD of 1929. Prior to May 9, 1957, water-stage recorder at site 60 ft downstream at datum 9.0 ft higher. May 9, 1957, to July 9, 1964, water-stage recorder at present site at datum 9.0 ft higher. July 9, 1964, to Apr. 8, 1976, water-stage recorder at present site at datum 6.0 ft higher. Apr. 8, 1976, to Sept. 30, 1986, water-stage recorder at present site at datum 3.0 ft higher.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Flow moderately regulated since Oct. 1948 by John Martin Reservoir (station 07130000). Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals, diversions for irrigation, and return flow from irrigated areas. Satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 600 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 2	1400	*165	*6.38	No peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.0	22	e40	e80	e15	52	0.0	0.0	0.00	0.00	0.00	0.00
2	0.0	22	e50	e80	0.0	55	0.0	0.0	0.00	0.00	0.00	0.00
3	0.0	25	e60	e80	0.0	47	0.0	0.0	0.00	0.00	0.00	0.00
4	0.0	33	e70	e80	e30	46	0.0	0.0	0.00	0.00	0.00	0.00
5	0.0	33	69	e80	e56	70	0.0	0.0	0.00	0.00	0.00	0.00
6	0.0	35	68	e80	e88	61	0.0	0.0	0.00	0.00	0.00	0.00
7	0.0	42	65	e80	e92	134	0.0	0.0	0.00	0.00	0.00	0.00
8	0.0	37	65	e80	e90	104	0.0	0.0	0.00	0.00	0.00	0.00
9	0.0	28	67	e76	e87	e100	0.0	0.0	0.00	0.00	0.00	0.00
10	0.0	26	71	e66	e84	e100	0.0	0.0	0.00	0.00	0.00	0.00
11	0.0	27	73	46	e82	102	0.0	0.0	0.00	0.00	0.00	0.00
12	0.0	30	66	41	79	104	0.0	0.0	0.00	0.00	0.00	0.00
13	0.0	32	69	37	72	98	0.0	0.0	0.00	0.00	0.00	0.00
14	0.0	28	77	25	69	90	0.0	0.0	0.00	0.00	0.00	0.00
15	0.0	29	76	e23	72	74	0.0	0.0	0.00	0.00	0.00	0.00
16	0.0	31	72	e21	74	e70	0.0	0.0	0.00	0.00	0.00	0.00
17	0.0	31	74	e19	80	66	0.0	0.0	0.00	0.00	0.00	0.00
18	0.0	30	75	15	78	64	0.0	0.0	0.00	0.00	0.00	0.00
19	0.0	23	77	23	74	44	0.0	0.0	0.00	0.00	0.00	0.00
20	0.0	20	81	50	69	23	0.0	0.0	0.00	0.00	0.00	0.00
21	0.0	18	83	78	43	e10	0.0	0.0	0.00	0.00	0.00	0.00
22	0.0	20	61	e92	31	14	0.0	0.0	0.00	0.00	0.00	0.00
23	0.0	24	53	81	24	6.6	0.0	0.0	0.00	0.00	0.00	0.00
24	0.0	30	e26	68	17	4.5	0.0	0.0	0.00	0.00	0.00	0.00
25	0.0	35	e13	71	11	2.1	0.0	0.0	0.00	0.00	0.00	0.00
26	0.0	38	e12	97	e1.0	1.1	0.0	0.0	0.00	0.00	0.00	0.00
27	0.0	e40	e60	82	e4.0	0.26	0.0	0.0	0.00	0.00	0.00	0.00
28	0.0	e40	e90	54	24	0.0	0.0	0.0	0.00	0.00	0.00	0.00
29	0.0	e40	e90	e47	---	0.0	0.0	0.0	0.00	0.00	0.00	0.00
30	0.0	e40	e80	e38	---	0.0	0.0	0.0	0.00	0.00	0.00	0.00
31	5.9	---	e80	e30	---	0.0	---	0.0	---	0.00	0.00	---
MEAN	0.190	30.30	64.94	58.71	51.64	49.76	0.000	0.000	0.000	0.000	0.000	0.000
MAX	5.9	42	90	97	92	134	0.00	0.00	0.00	0.00	0.00	0.00
MIN	0.00	18	12	15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	12	1800	3990	3610	2870	3060	0.00	0.00	0.00	0.00	0.00	0.00

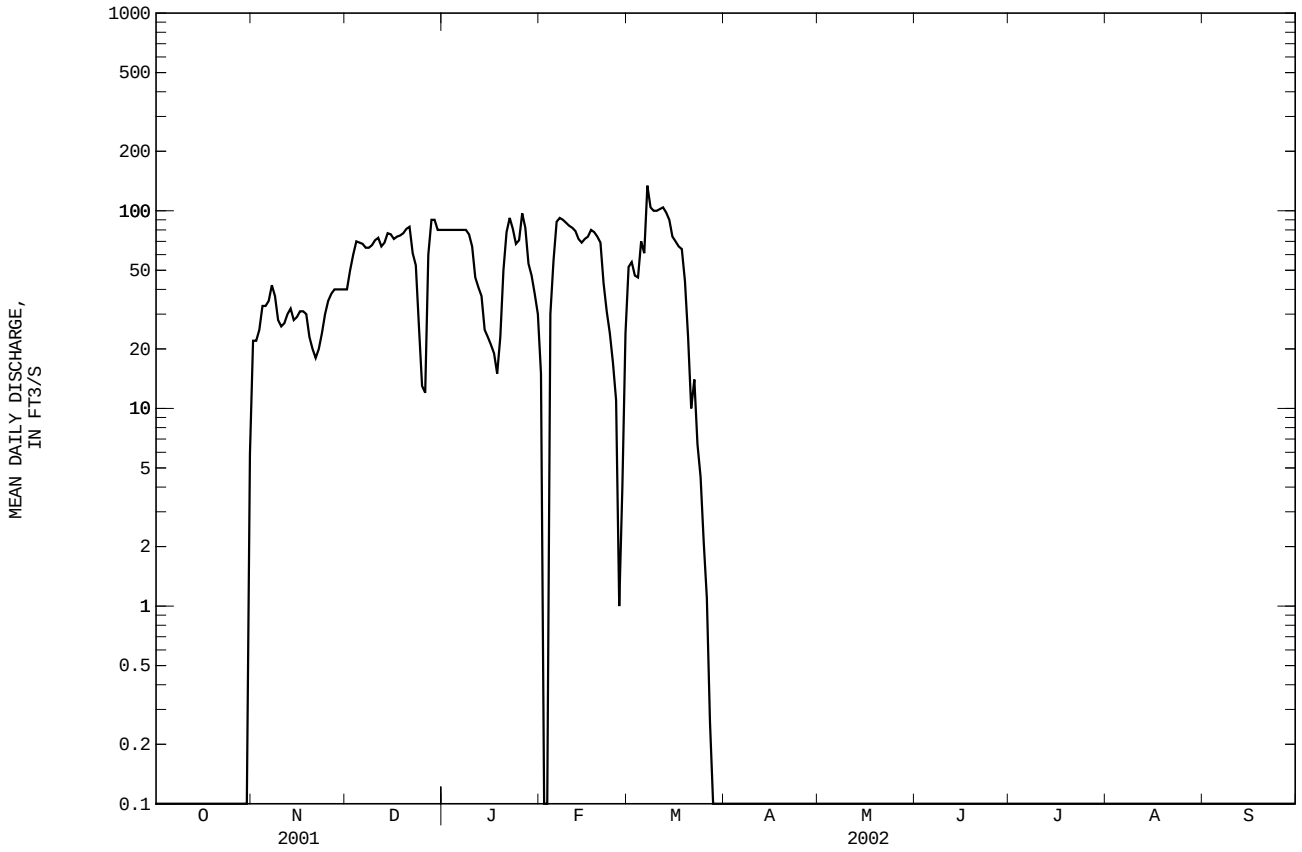
07139000 ARKANSAS RIVER AT GARDEN CITY, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1923 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	127.2	118.8	124.1	137.8	133.1	113.1	176.3	274.5	476.5	195.3	258.8	109.9
MAX	2751	1023	673	843	850	903	5556	4693	6859	1696	3949	1611
(WY)	1924	1942	1924	1998	1924	1924	1942	1942	1965	1947	1923	1923
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1938	1991	1991	1992	1992	1935	1935	1937	1934	1926	1924	1926

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1923 - 2002	
ANNUAL MEAN	94.11		21.20		188.0	
HIGHEST ANNUAL MEAN					1690	1942
LOWEST ANNUAL MEAN					0.000	1992
HIGHEST DAILY MEAN	1570	May 30	134	Mar 7	104000	Jun 19 1965
LOWEST DAILY MEAN	0.00	May 13	0.00	Oct 1	0.00	Oct 1 1922
ANNUAL SEVEN-DAY MINIMUM	0.00	Jul 1	0.00	Oct 1	0.00	Oct 1 1922
MAXIMUM PEAK FLOW			165	Mar 2	130000	Jun 19 1965
MAXIMUM PEAK STAGE			6.38	Mar 2	16.30	Jun 19 1965
INSTANTANEOUS LOW FLOW			0.00	Oct 1	.00	most years
ANNUAL RUNOFF (AC-FT)	68140		15350		136200	
10 PERCENT EXCEEDS	189		77		339	
50 PERCENT EXCEEDS	60		0.00		22	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

e Estimated



07139500 ARKANSAS RIVER AT DODGE CITY, KS

LOCATION.--Lat 37°44'41", long 100°01'57", in SW 1/4 SW 1/4 NW 1/4 sec.35, T.26 S., R.25 W., Ford County, Hydrologic Unit 11030003, on left bank at downstream side of bridge on Fourteenth Avenue in Dodge City, and at mile 970.9.

DRAINAGE AREA.--30,600 mi^2, of which 5,583 mi^2 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 1909-32 are contained in reports of U.S. Weather Bureau.

REVISED RECORDS.--WSP 1341: 1903(M), 1904, 1905(M), 1947(M).

GAGE.--Water-stage recorder. Datum of gage is 2,468.71 ft above NGVD of 1929. Nov. 28, 1902, to Aug. 10, 1906, nonrecording gage at site 0.7 mi downstream at datum about 4.00 ft higher. Sept. 1 to Nov. 5, 1944, nonrecording gage and Nov. 6, 1944, to Sept. 30, 1975, recording gage at site 0.7 mi downstream and datum 1.00 ft lower. Oct. 1, 1975, to March 16, 1981, recording gage at site 0.7 mi downstream at datum 4.00 ft lower.

REMARKS.--Records good. Flow moderately regulated since Oct. 1948 by John Martin Reservoir (station 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. Satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)

No peak greater than base discharge.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
MEAN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MAX	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

07139500 ARKANSAS RIVER AT DODGE CITY, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1903 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	92.93	79.06	82.73	93.32	113.1	114.1	147.0	242.3	395.0	137.9	99.94	70.52
MAX	1986	455	351	651	590	502	3130	5771	5370	1848	851	1146
(WY)	1905	1947	1966	1998	1998	1966	1905	1905	1965	1947	1965	1965
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1904	1977	1977	1977	1977	1977	1981	1981	1981	1983	1976	1903

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1903 - 2002	
ANNUAL MEAN	15.63		0.000		138.8	
HIGHEST ANNUAL MEAN					1354	1905
LOWEST ANNUAL MEAN					0.000	1990
HIGHEST DAILY MEAN	261	Jun 13	0.00	Oct 1	70300	Jun 20 1965
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 1	0.00	Apr 8 1903
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 1	0.00	Apr 10 1903
MAXIMUM PEAK FLOW			0.00	Oct 1	82000	Jun 19 1965
MAXIMUM PEAK STAGE			5.88	Oct 1	14.68	Jun 19 1965
INSTANTANEOUS LOW FLOW			0.00	Oct 1	.00	many years
ANNUAL RUNOFF (AC-FT)	11310		0.00		100500	
10 PERCENT EXCEEDS	39		0.00		265	
50 PERCENT EXCEEDS	0.00		0.00		37	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

07140000 ARKANSAS RIVER NEAR KINSLEY, KS

LOCATION.--Lat 37°55'33", long 99°22'31", in SW $^{1}/_{4}$ SE $^{1}/_{4}$ sec.26, T.24 S., R.19 W., Edwards County, Hydrologic Unit 11030004, on right bank at downstream side of bridge on U.S. Highway 50, 2.0 mi east of Kinsley, and at mile 920.3.

DRAINAGE AREA.--31,066 mi^2, of which 5,660 mi^2 is probably noncontributing.

PERIOD OF RECORD.--September 1944 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,141.64 ft above NGVD of 1929. Prior to Nov. 10, 1944, nonrecording gage, and Nov. 10, 1944, to Dec. 31, 1975, water-stage recorder, both at present site and datum 3.00 ft higher.

REMARKS.--Records poor. Flow moderately regulated since 1943 by John Martin Reservoir (station 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.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct 3	0600	*2.3	*3.75	No peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

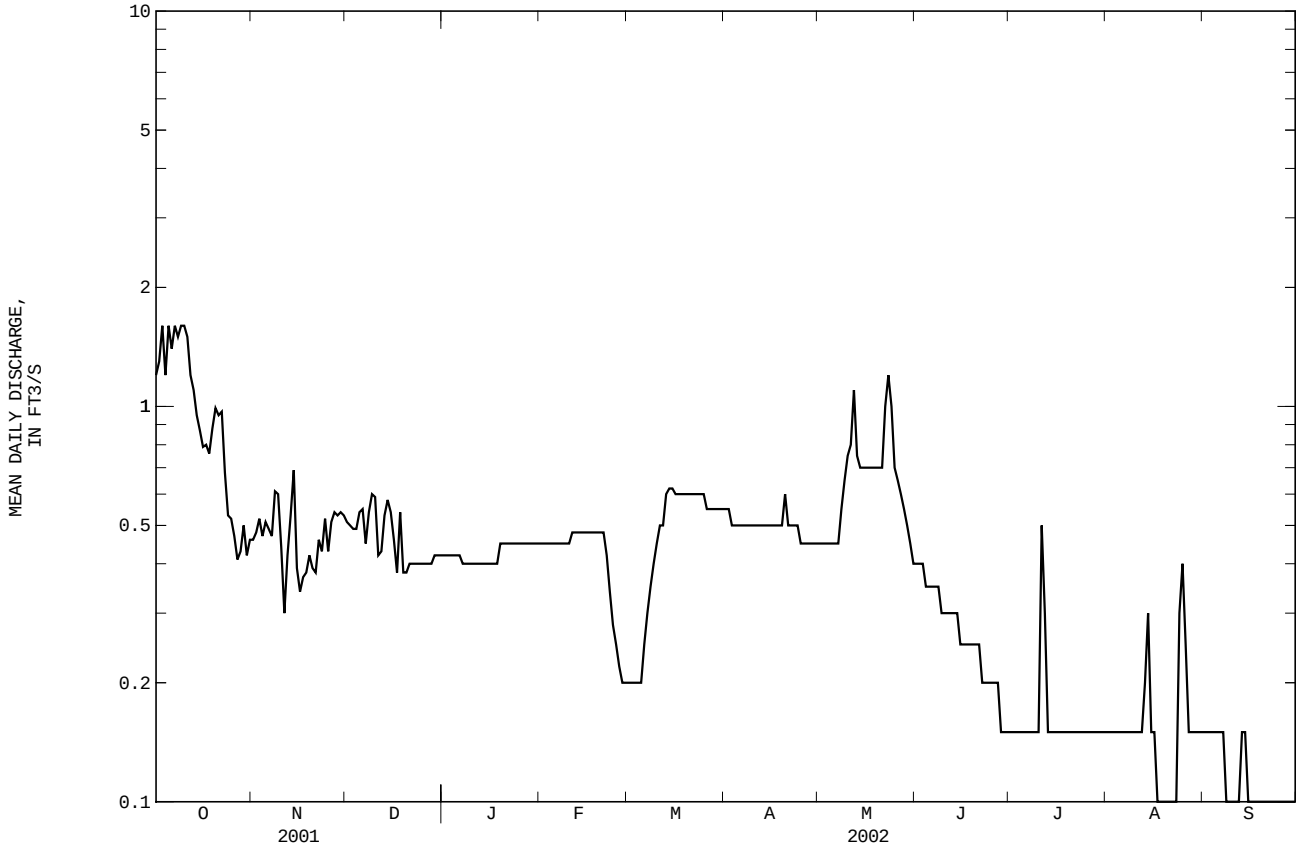
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	0.46	0.51	e0.42	e0.45	e0.20	e0.55	e0.45	e0.40	e0.15	e0.15	e0.15
2	1.3	0.48	0.50	e0.42	e0.45	e0.20	e0.55	e0.45	e0.40	e0.15	e0.15	e0.15
3	1.6	0.52	0.49	e0.42	e0.45	e0.20	e0.50	e0.45	e0.40	e0.15	e0.15	e0.15
4	1.2	0.47	0.49	e0.42	e0.45	e0.20	e0.50	e0.45	e0.35	e0.15	e0.15	e0.15
5	1.6	0.51	0.54	e0.42	e0.45	e0.20	e0.50	e0.45	e0.35	e0.15	e0.15	e0.15
6	1.4	0.49	0.55	e0.42	e0.45	e0.25	e0.50	e0.45	e0.35	e0.15	e0.15	e0.15
7	1.6	0.47	0.45	e0.40	e0.45	e0.30	e0.50	e0.45	e0.35	e0.15	e0.15	e0.15
8	1.5	0.61	0.54	e0.40	e0.45	e0.35	e0.50	e0.55	e0.35	e0.15	e0.15	e0.10
9	1.6	0.60	0.60	e0.40	e0.45	e0.40	e0.50	e0.65	e0.30	e0.15	e0.15	e0.10
10	1.6	0.44	0.59	e0.40	e0.45	e0.45	e0.50	e0.75	e0.30	e0.15	e0.15	e0.10
11	1.5	0.30	0.42	e0.40	e0.48	e0.50	e0.50	e0.80	e0.30	e0.50	e0.15	e0.10
12	1.2	0.42	0.43	e0.40	e0.48	e0.50	e0.50	e1.1	e0.30	e0.30	e0.15	e0.10
13	1.1	0.53	0.53	e0.40	e0.48	e0.60	e0.50	e0.75	e0.30	e0.15	e0.20	e0.15
14	0.95	0.69	0.58	e0.40	e0.48	e0.62	e0.50	e0.70	e0.30	e0.15	e0.30	e0.15
15	0.87	0.39	0.54	e0.40	e0.48	e0.62	e0.50	e0.70	e0.25	e0.15	e0.15	e0.10
16	0.79	0.34	0.46	e0.40	e0.48	e0.60	e0.50	e0.70	e0.25	e0.15	e0.15	e0.10
17	0.80	0.37	0.38	e0.40	e0.48	e0.60	e0.50	e0.70	e0.25	e0.15	e0.10	e0.10
18	0.76	0.38	0.54	e0.40	e0.48	e0.60	e0.50	e0.70	e0.25	e0.15	e0.10	e0.10
19	0.88	0.42	0.38	e0.45	e0.48	e0.60	e0.50	e0.70	e0.25	e0.15	e0.10	e0.10
20	0.99	0.39	e0.38	e0.45	e0.48	e0.60	e0.60	e0.70	e0.25	e0.15	e0.10	e0.10
21	0.95	0.38	e0.40	e0.45	e0.48	e0.60	e0.50	e0.70	e0.25	e0.15	e0.10	e0.10
22	0.97	0.46	e0.40	e0.45	e0.42	e0.60	e0.50	e1.0	e0.20	e0.15	e0.10	e0.10
23	0.68	0.43	e0.40	e0.45	e0.34	e0.60	e0.50	e1.2	e0.20	e0.15	e0.10	e0.10
24	0.53	0.52	e0.40	e0.45	e0.28	e0.60	e0.50	e1.0	e0.20	e0.15	e0.30	e0.10
25	0.52	0.43	e0.40	e0.45	e0.25	e0.60	e0.45	e0.70	e0.20	e0.15	e0.40	e0.10
26	0.47	0.51	e0.40	e0.45	e0.22	e0.55	e0.45	e0.65	e0.20	e0.15	e0.25	e0.10
27	0.41	0.54	e0.40	e0.45	e0.20	e0.55	e0.45	e0.60	e0.20	e0.15	e0.15	e0.10
28	0.43	0.53	e0.40	e0.45	e0.20	e0.55	e0.45	e0.55	e0.15	e0.15	e0.15	e0.10
29	0.50	0.54	e0.42	e0.45	---	e0.55	e0.45	e0.50	e0.15	e0.15	e0.15	e0.10
30	0.42	0.53	e0.42	e0.45	---	e0.55	e0.45	e0.45	e0.15	e0.15	e0.15	e0.10
31	0.46	---	e0.42	e0.45	---	e0.55	---	e0.40	---	e0.15	e0.15	---
MEAN	0.993	0.472	0.463	0.425	0.417	0.480	0.497	0.658	0.272	0.166	0.161	0.115
MAX	1.6	0.69	0.60	0.45	0.48	0.62	0.60	1.2	0.40	0.50	0.40	0.15
MIN	0.41	0.30	0.38	0.40	0.20	0.20	0.45	0.40	0.15	0.15	0.10	0.10
AC-FT	61	28	28	26	23	30	30	40	16	10	9.9	6.8

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	84.48	92.23	93.19	103.3	125.2	130.8	131.1	176.2	278.1	155.6	97.11	95.90
MAX	736	465	399	599	610	585	901	2189	3937	1985	765	1154
(WY)	1966	1966	1966	1998	1998	1966	1973	1951	1965	1947	1965	1965
MIN	0.14	0.007	0.000	0.000	0.000	0.000	0.000	0.089	0.17	0.013	0.16	0.12
(WY)	1993	1995	1995	1995	1995	1995	1995	1992	1992	1986	2002	2002

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1945 - 2002	
ANNUAL MEAN	18.21		0.428		130.1	
HIGHEST ANNUAL MEAN					608	1951
LOWEST ANNUAL MEAN					0.17	1992
HIGHEST DAILY MEAN	181	Jun 14	1.6	Oct 3	36000	Jun 21 1965
LOWEST DAILY MEAN	0.30	Nov 11	0.10	Aug 17	0.00	Aug 31 1982
ANNUAL SEVEN-DAY MINIMUM	0.38	Nov 15	0.10	Aug 17	0.00	Aug 31 1982
MAXIMUM PEAK FLOW			2.3	Oct 3	49800	Jun 21 1965
MAXIMUM PEAK STAGE			3.75	Oct 3	17.60	Jun 21 1965
INSTANTANEOUS LOW FLOW			0.10	Aug 17	0.00	Jul 28 1977
ANNUAL RUNOFF (AC-FT)	13180		310		94250	
10 PERCENT EXCEEDS	37		0.70		275	
50 PERCENT EXCEEDS	5.0		0.43		55	
90 PERCENT EXCEEDS	0.47		0.15		0.89	

e Estimated



07140850 PAWNEE RIVER NEAR BURDETT, KS

LOCATION.--Lat 38°12'24", long 99°38'35", in NW $^{1}/_{4}$ SW $^{1}/_{4}$ SW $^{1}/_{4}$ sec.21, T.21 S., R.21 W., Hodgeman County, Hydrologic Unit 11030006, on right bank at downstream side of county highway bridge, 3.2 mi north of Gray, 6.5 mi west and 1.2 mi north of Burdett.

DRAINAGE AREA.--1,091 mi^2.

PERIOD OF RECORD.--October 1981 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,102.55 ft above NGVD of 1929.

REMARKS.--Records good. Natural flow affected by ground-water withdrawals, diversions for irrigation, and return flow from irrigated areas. Satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

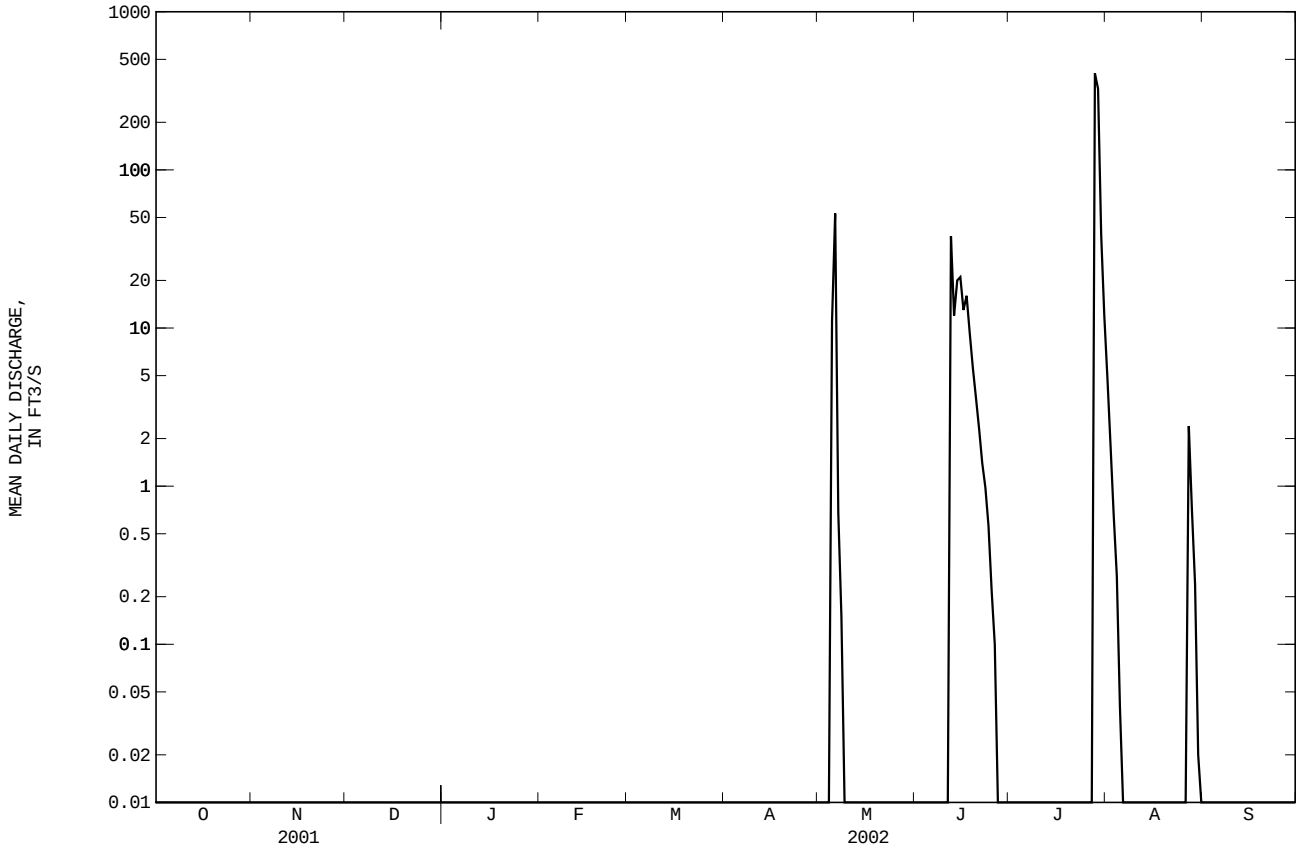
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	4.8	0.00
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	1.8	0.00
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.66	0.00
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.27	0.00
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11	0.00	0.00	0.04	0.00
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	53	0.00	0.00	0.00	0.00
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.68	0.00	0.00	0.00	0.00
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.15	0.00	0.00	0.00	0.00
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	38	0.00	0.00	0.00
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12	0.00	0.00	0.00
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20	0.00	0.00	0.00
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21	0.00	0.00	0.00
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13	0.00	0.00	0.00
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16	0.00	0.00	0.00
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.3	0.00	0.00	0.00
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.6	0.00	0.00	0.00
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	0.00	0.00	0.00
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.00	0.00	0.00
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.00	0.00	0.00
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.98	0.00	0.00	0.00
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.56	0.00	0.00	0.00
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.22	0.00	0.00	0.00
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.10	0.00	0.00	0.00
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	2.4	0.00
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	408	0.71	0.00
29	0.0	0.0	0.0	0.0	---	0.0	0.0	0.0	0.00	326	0.24	0.00
30	0.0	0.0	0.0	0.0	---	0.0	0.0	0.0	0.00	39	0.02	0.00
31	0.0	---	0.0	0.0	---	0.0	---	0.0	---	12	0.00	---
MEAN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.091	4.802	25.32	0.353	0.000
MAX	0.00	0.00	0.00	0.00	0.00	0.00	0.00	53	38	408	4.8	0.00
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	129	286	1560	22	0.00

07140850 PAWNEE RIVER NEAR BURDETT, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.883	2.547	1.256	1.425	4.576	8.234	10.21	6.884	11.54	40.41	23.10	13.88
MAX	10.9	31.5	8.79	10.1	71.1	100	106	55.0	89.1	539	166	73.8
(WY)	1994	1997	1998	1998	1993	1993	1987	1996	1996	1993	1997	2001
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1982	1982	1982	1982	1982	1983	1982	1982	1982	1983	1983	1982

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1982 - 2002	
ANNUAL MEAN	7.595		2.753		10.55	
HIGHEST ANNUAL MEAN					72.3	1993
LOWEST ANNUAL MEAN					0.000	1988
HIGHEST DAILY MEAN	1390	Sep 18	408	Jul 28	3830	Jul 21 1993
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 1	0.00	Oct 1 1981
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 1	0.00	Oct 1 1981
MAXIMUM PEAK FLOW			895	Jul 28	4290	Jul 21 1993
MAXIMUM PEAK STAGE			14.81	Jul 28	27.38	Jul 21 1993
INSTANTANEOUS LOW FLOW			0.00	Oct 1	.00	many days
ANNUAL RUNOFF (AC-FT)	5500		1990		7640	
10 PERCENT EXCEEDS	1.3		0.00		9.5	
50 PERCENT EXCEEDS	0.00		0.00		0.00	
90 PERCENT EXCEEDS	0.00		0.00		0.00	



07141175 BUCKNER CREEK NEAR BURDETT, KS

LOCATION.--Lat 38°09'45", long 99°38'33", in NW $^1/_4$ SW $^1/_4$ SW $^1/_4$ sec.4, T.22 S., R.21 W., Hodgeman County, Hydrologic Unit 11030006, on right bank at downstream side and 100 ft south of bridge 4 mi east of Hanson and 0.2 mi north or 7 mi west of Burdett and 0.2 north, and at mile 8.5.

DRAINAGE AREA.--735 mi^2.

PERIOD OF RECORD.--October 1995 to current year.

GAGE.--Water-stage recorders. Datum of gage is 2,098.00 ft above NGVD of 1929, from topographic map.

REMARKS.--Records poor. Satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Aug 14	0500	*228	*10.22	No peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.0	0.0	0.0	e0.00	e0.0	0.0	0.0	0.00	0.00	0.00	0.00	16
2	0.0	0.0	0.0	e0.00	e0.0	0.0	0.0	0.00	0.00	0.00	0.00	6.1
3	0.0	0.0	e0.00	e0.00	e0.0	0.0	0.0	0.00	0.00	0.00	0.00	1.9
4	0.0	0.0	e0.00	e0.0	e0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.50
5	0.0	0.0	e0.0	e0.0	e0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.08
6	0.0	0.0	e0.0	e0.0	e0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00
7	0.0	0.0	e0.0	e0.0	e0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00
8	0.0	0.0	e0.0	e0.0	e0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00
9	0.0	0.0	e0.0	e0.0	e0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00
10	0.0	0.0	0.0	e0.0	e0.0	0.0	0.0	0.00	0.00	e0.00	0.00	0.00
11	0.0	0.0	0.0	e0.0	e0.0	0.0	0.0	0.00	0.00	e0.00	0.00	0.00
12	0.0	0.0	0.0	e0.0	e0.0	0.0	0.0	0.00	0.21	e0.00	0.00	0.00
13	0.0	0.0	0.0	e0.0	e0.0	0.0	0.0	0.00	0.04	e0.00	0.00	0.00
14	0.0	0.0	0.0	e0.0	e0.0	0.0	0.0	0.00	0.00	e0.00	140	0.00
15	0.0	0.0	0.0	e0.0	e0.0	0.0	0.0	0.00	0.00	e0.00	65	0.00
16	0.0	0.0	0.0	e0.0	0.0	0.0	0.0	0.00	0.00	e0.00	41	0.00
17	0.0	0.0	0.0	e0.0	0.0	0.0	0.0	0.00	0.00	e0.00	27	0.00
18	0.0	0.0	0.0	e0.0	0.0	0.0	0.0	0.00	0.00	e0.00	14	0.00
19	0.0	0.0	0.0	e0.0	0.0	0.0	0.0	0.00	0.00	e0.00	5.3	0.00
20	0.0	0.0	0.0	e0.0	0.0	0.0	0.0	0.00	0.00	e0.00	2.7	0.00
21	0.0	0.0	0.0	e0.0	0.0	0.0	0.0	0.00	0.00	0.00	1.7	0.00
22	0.0	0.0	0.0	e0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.18	0.00
23	0.0	0.0	0.0	e0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.0	0.00
24	0.0	0.0	0.0	e0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00
25	0.0	0.0	e0.0	e0.0	0.0	0.0	0.0	0.00	0.00	0.00	4.2	0.00
26	0.0	0.0	e0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	65	0.00
27	0.0	0.0	e0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	31	0.00
28	0.0	0.0	e0.0	e0.0	0.0	0.0	0.0	0.00	0.00	0.00	21	0.00
29	0.0	0.0	e0.0	e0.00	---	0.0	0.0	0.00	0.00	0.00	23	0.00
30	0.0	0.0	e0.0	e0.00	---	0.0	0.0	0.00	0.00	0.00	24	0.00
31	0.0	---	e0.0	e0.00	---	0.0	---	0.00	---	0.00	28	---
MEAN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.008	0.000	15.91	0.819
MAX	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.00	140	16
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.5	0.00	978	49

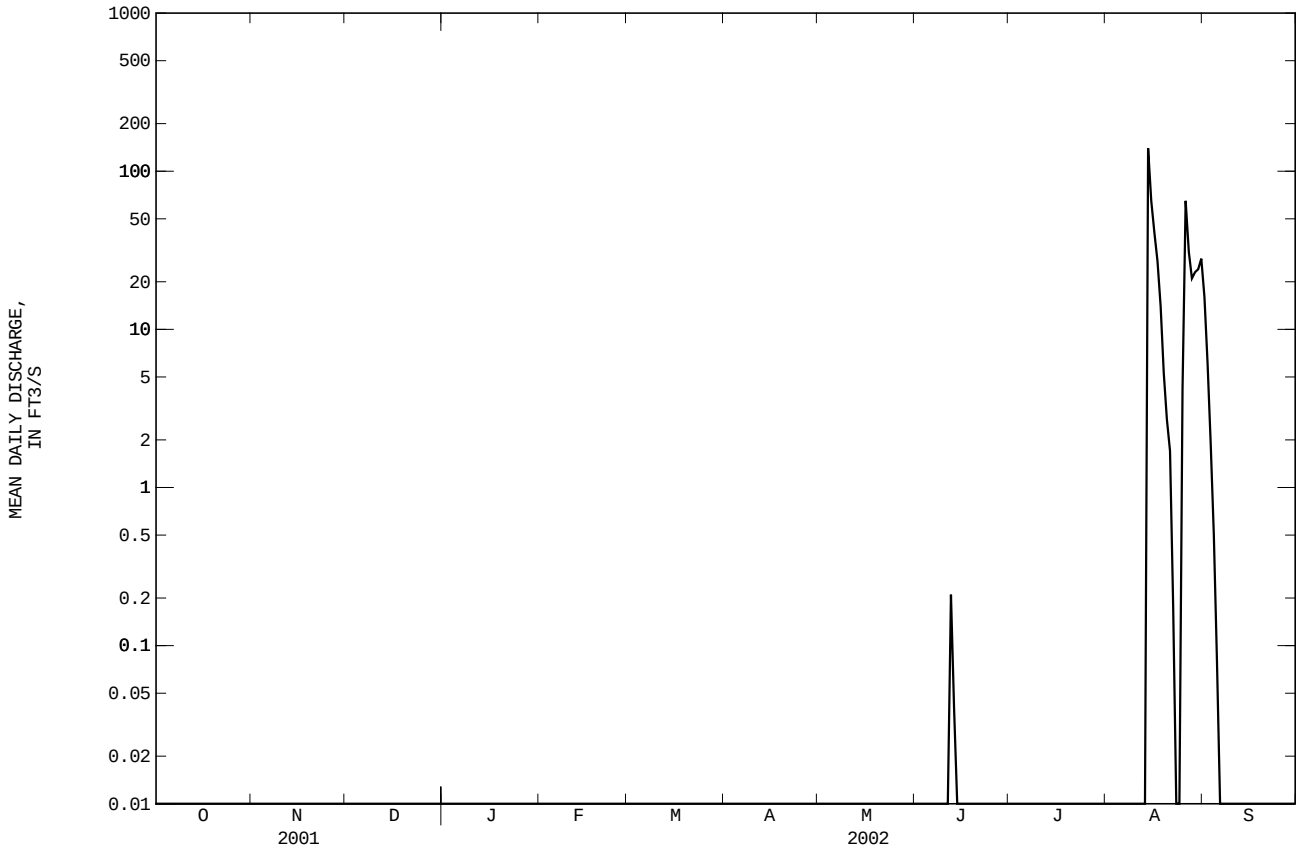
07141175 BUCKNER CREEK NEAR BURDETT, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	17.12	33.51	8.649	10.03	10.72	15.14	15.17	22.68	23.15	20.13	65.18	58.12
MAX	81.8	198	27.5	29.6	32.5	57.1	41.9	44.4	63.6	93.8	286	362
(WY)	1998	1997	1997	1998	1998	1998	1998	1996	1997	1996	1996	1996
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.008	0.000	0.014	0.000
(WY)	1996	1996	1996	1996	2002	2002	1996	2002	2002	2002	2001	2000

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1996 - 2002	
ANNUAL MEAN	7.704		1.419		24.99	
HIGHEST ANNUAL MEAN					68.7	1996
LOWEST ANNUAL MEAN					1.42	2002
HIGHEST DAILY MEAN	534	May 31	140	Aug 14	2160	Sep 21 1996
LOWEST DAILY MEAN	0.00	Jul 5	0.00	Oct 1	0.00	Oct 1 1995
ANNUAL SEVEN-DAY MINIMUM	0.00	Jul 5	0.00	Oct 1	0.00	Oct 1 1995
MAXIMUM PEAK FLOW			228	Aug 14	2360	Nov 17 1996
MAXIMUM PEAK STAGE			10.22	Aug 14	24.39	Nov 17 1996
INSTANTANEOUS LOW FLOW			0.00	Oct 1	0.00	Dec 6 1995
ANNUAL RUNOFF (AC-FT)	5580		1030		18110	
10 PERCENT EXCEEDS	5.7		0.00		31	
50 PERCENT EXCEEDS	0.35		0.00		4.8	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

e Estimated



07141200 PAWNEE RIVER AT ROZEL, KS

LOCATION.--Lat 38°12'26", long 99°24'18", in SW $^{1}/_{4}$ SW $^{1}/_{4}$ sec.22, T.21 S., R.19 W., Pawnee County, Hydrologic Unit 11030005, on left bank at downstream side of highway bridge, 1.2 mi north of U.S. Highway 156 on county road at west edge of Rozel, 16.6 mi west of Larned, and at mile 30.6.

DRAINAGE AREA.--2,148 mi^2, of which 138 mi^2 is probably noncontributing.

PERIOD OF RECORD.--April to September 1924 (gage heights and discharge measurements only), October 1924 to September 1995 published as "near Larned," and October 1995 to current year. Monthly discharge only for some periods, published in WSP 1311.

REVISED RECORDS.--WSP 1177: 1949. WSP 1241: 1927-28(M), 1935, 1940, 1943. WSP 1341: Drainage area.

GAGE.--Water-stage recorders. Datum of gage is 2,040.24 ft above NGVD of 1929. June 3, 1959, to June 6, 1990, at site 5.8 mi downstream at datum 0.66 ft higher. See WSP 1921 for history of changes prior to June 2, 1959.

REMARKS.--Records fair. Natural flow affected by ground-water withdrawals, diversions for irrigation, and return flow from irrigated areas. Satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 900 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jul 29	1930	*695	*16.66	No peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.4	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12	23
2	4.7	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.8	22
3	3.3	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.9	12
4	2.6	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.65	5.7
5	2.4	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	2.8
6	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.5
7	1.5	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.67
8	1.2	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
9	0.97	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
10	0.64	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.41	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.21	0.0	0.00	0.00	0.00	0.00	0.00	0.00	54	0.00	0.00	0.00
13	0.10	0.0	0.00	0.00	0.00	0.00	0.00	0.00	39	0.00	0.00	0.00
14	0.04	0.0	0.00	0.00	0.00	0.00	0.00	0.00	10	0.00	0.00	0.00
15	0.01	0.0	0.00	0.00	0.00	0.00	0.00	0.00	3.0	0.00	57	0.00
16	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	8.0	0.00	58	0.00
17	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	20	0.00	36	0.00
18	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	10	0.00	24	0.00
19	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	9.2	0.00	15	0.00
20	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.00	8.4	0.00
21	0.0	e0.0	0.00	0.00	0.00	0.00	0.00	0.00	4.8	0.00	5.1	0.00
22	0.0	e0.0	0.00	0.00	0.00	0.00	0.00	0.00	2.4	0.00	3.2	0.00
23	0.0	e0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.77	0.00	1.9	0.00
24	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00	1.1	0.00
25	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.00	0.50	0.00
26	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00
27	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	23	0.00
28	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	36	0.00
29	0.0	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	394	21	0.00
30	0.0	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	217	17	0.00
31	0.0	---	0.00	0.00	---	0.00	---	0.00	---	31	16	---
MEAN	0.854	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.671	20.71	11.06	2.260
MAX	6.4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	54	394	58	23
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	337	1270	680	135

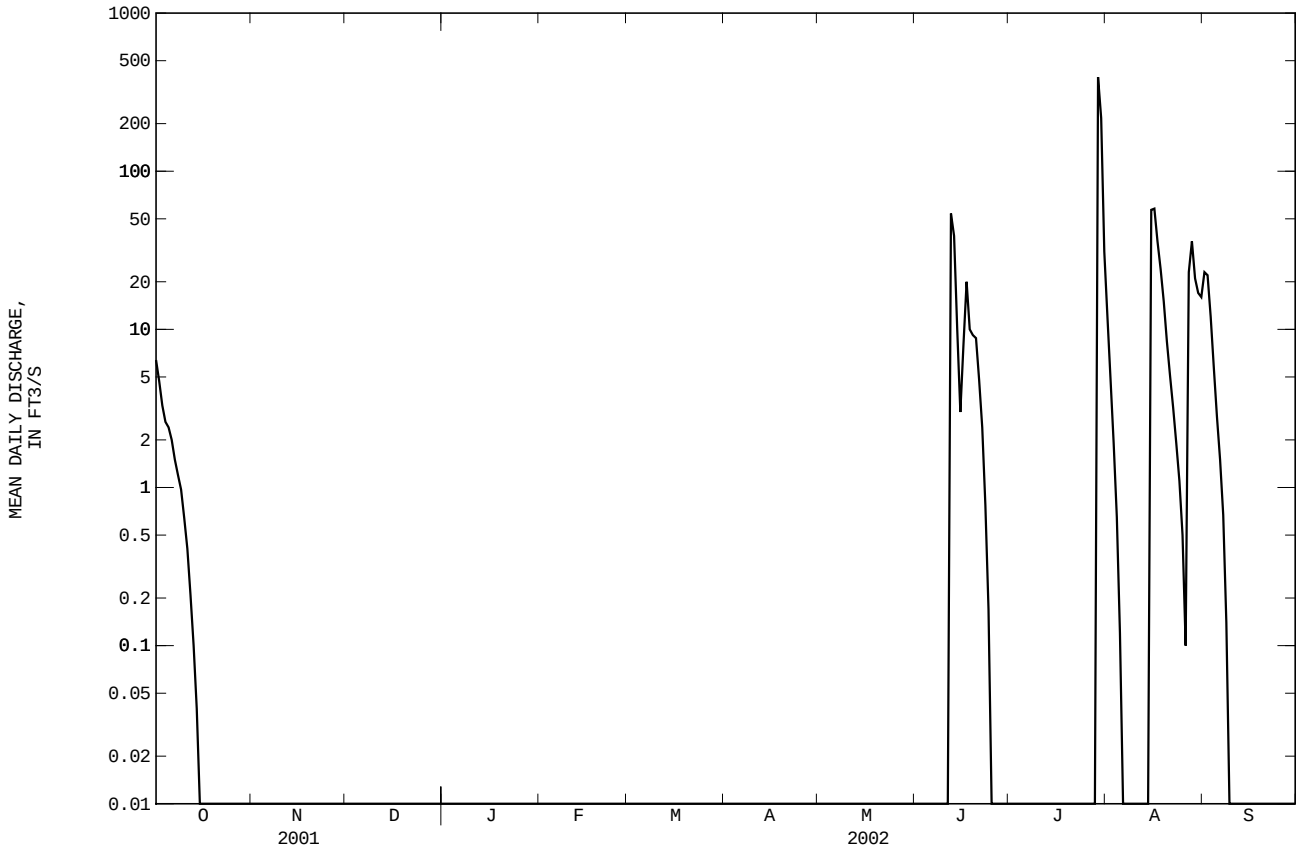
07141200 PAWNEE RIVER AT ROZEL, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1925 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	49.03	17.04	7.143	7.017	11.36	29.65	47.91	95.50	150.6	156.5	106.4	52.91
MAX	1185	320	63.5	59.7	304	552	640	1286	2298	2264	2536	447
(WY)	1947	1997	1974	1952	1949	1960	1973	1935	1951	1958	1950	1962
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1940	1940	1955	1956	1957	1957	1935	1956	1966	1976	1946	1939

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1925 - 2002	
ANNUAL MEAN	25.01		3.422		61.48	
HIGHEST ANNUAL MEAN					549	1951
LOWEST ANNUAL MEAN					0.000	1991
HIGHEST DAILY MEAN	2260	Sep 19	394	Jul 29	14300	Jul 28 1958
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 16	0.00	May 5 1926
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 16	0.00	Jul 10 1930
MAXIMUM PEAK FLOW			695	Jul 29	16300	Jul 28 1958
MAXIMUM PEAK STAGE			16.66	Jul 29	33.75	Jul 22 1993
INSTANTANEOUS LOW FLOW			0.00	Oct 15	.00	most years
ANNUAL RUNOFF (AC-FT)	18100		2480		44540	
10 PERCENT EXCEEDS	11		2.7		57	
50 PERCENT EXCEEDS	0.10		0.00		3.0	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

e Estimated



07141220 ARKANSAS RIVER NEAR LARNED, KS

LOCATION.--Lat 38°12'13", long 99°00'05", in SE $^1/_4$ SE $^1/_4$ SE $^1/_4$ sec.19, T.21 S., R.15 W., Pawnee County, Hydrologic Unit 11030004, on right bank at downstream side of county bridge, 1 mi north and 5.1 mi east of Larned, and at mile 904.5.

DRAINAGE AREA.-34,002 mi^2, of which 5,871 mi^2 is probably noncontributing.

PERIOD OF RECORD.--October 1998 to September 1999.

GAGE.--Water-stage recorder. Datum of gage is 1,943.33 ft above NGVD of 1929.

REMARKS.--Records fair. Flow moderately regulated since 1943 by John Martin Reservoir (station 07130000). Natural flow affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals, diversions for irrigation, and return flow from irrigated areas. Satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct 1	0100	*52	*4.08	No peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

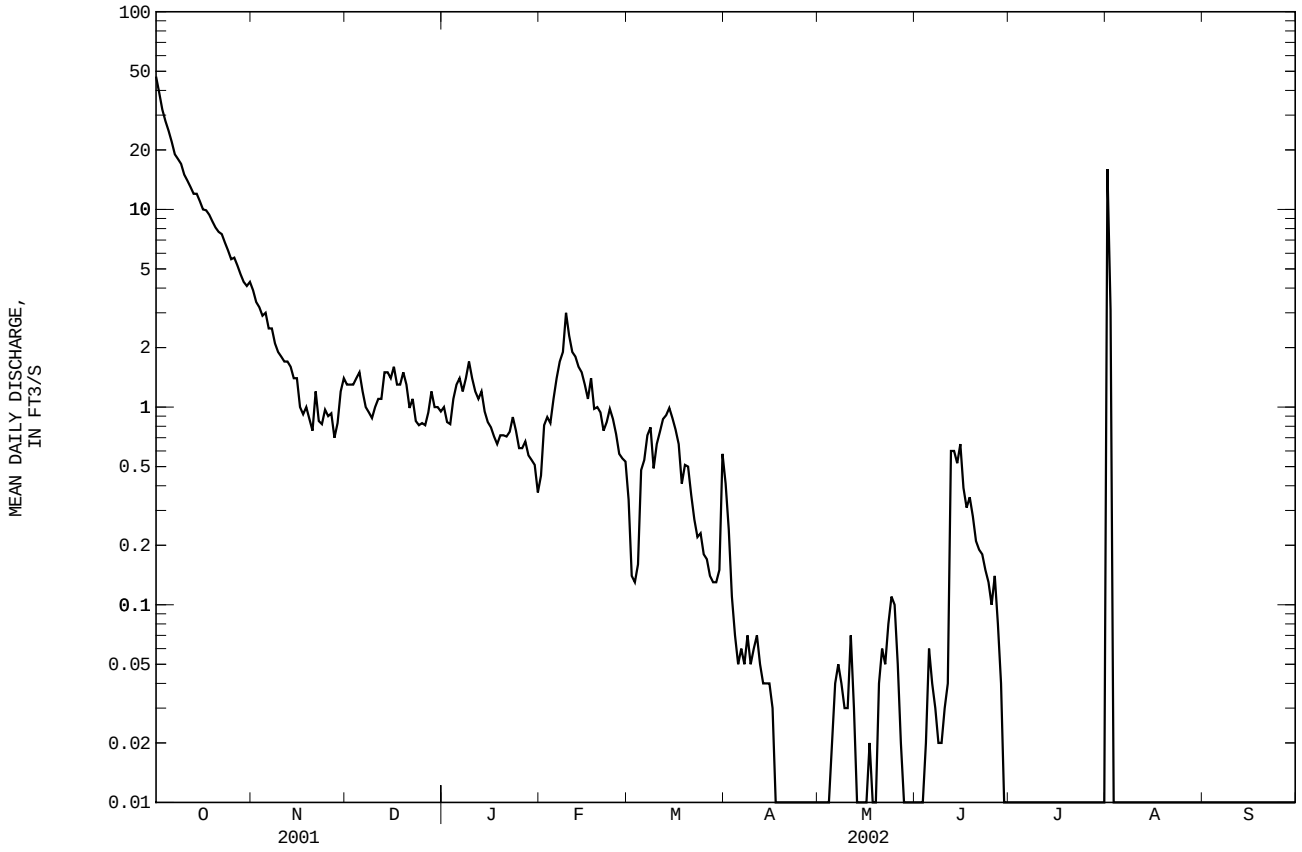
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	47	3.9	1.3	1.0	0.45	0.34	0.41	0.00	0.00	0.00	16	0.00
2	39	3.4	1.3	0.84	0.81	0.14	0.24	0.00	0.00	0.00	3.1	0.00
3	32	3.2	1.3	0.82	0.89	0.13	0.11	0.00	0.00	0.00	0.00	0.00
4	28	2.9	1.4	1.1	0.83	0.16	0.07	0.01	0.02	0.00	0.00	0.00
5	25	3.0	1.5	1.3	1.1	0.48	0.05	0.02	0.06	0.00	0.00	0.00
6	22	2.5	1.2	1.4	1.4	0.54	0.06	0.04	0.04	0.00	0.00	0.00
7	19	2.5	1.0	1.2	1.7	0.72	0.05	0.05	0.03	0.00	0.00	0.00
8	18	2.1	0.94	1.4	1.9	0.79	0.07	0.04	0.02	0.00	0.00	0.00
9	17	1.9	0.88	1.7	3.0	0.49	0.05	0.03	0.02	0.00	0.00	0.00
10	15	1.8	1.0	1.4	2.3	0.65	0.06	0.03	0.03	0.00	0.00	0.00
11	14	1.7	1.1	1.2	1.9	0.75	0.07	0.07	0.04	0.00	0.00	0.00
12	13	1.7	1.1	1.1	1.8	0.87	0.05	0.03	0.60	0.00	0.00	0.00
13	12	1.6	1.5	1.2	1.6	0.91	0.04	0.00	0.60	0.00	0.00	0.00
14	12	1.4	1.5	0.95	1.5	0.99	0.04	0.00	0.52	0.00	0.00	0.00
15	11	1.4	1.4	0.84	1.3	0.88	0.04	0.00	0.65	0.00	0.00	0.00
16	10	1.0	1.6	0.79	1.1	0.77	0.03	0.00	0.39	0.00	0.00	0.00
17	9.9	0.92	1.3	0.71	1.4	0.65	0.01	0.02	0.31	0.00	0.00	0.00
18	9.4	1.0	1.3	0.65	0.98	0.41	0.00	0.00	0.35	0.00	0.00	0.00
19	8.7	0.87	1.5	0.72	1.0	0.51	0.00	0.01	0.28	0.00	0.00	0.00
20	8.1	0.76	1.3	0.72	0.94	0.50	0.00	0.04	0.21	0.00	0.00	0.00
21	7.7	1.2	0.99	0.71	0.76	0.36	0.00	0.06	0.19	0.00	0.00	0.00
22	7.5	0.85	1.1	0.75	0.84	0.27	0.00	0.05	0.18	0.00	0.00	0.00
23	6.8	0.82	0.85	0.89	0.98	0.22	0.00	0.08	0.15	0.00	0.00	0.00
24	6.2	0.97	0.81	0.76	0.87	0.23	0.00	0.11	0.13	0.00	0.00	0.00
25	5.6	0.90	0.83	0.62	0.73	0.18	0.00	0.10	0.10	0.00	0.00	0.00
26	5.7	0.93	0.81	0.62	0.58	0.17	0.00	0.05	0.14	0.00	0.00	0.00
27	5.2	0.70	0.94	0.67	0.55	0.14	0.00	0.02	0.08	0.00	0.00	0.00
28	4.7	0.83	1.2	0.57	0.53	0.13	0.00	0.00	0.04	0.00	0.00	0.00
29	4.3	1.2	1.0	0.54	---	0.13	0.00	0.00	0.01	0.00	0.00	0.00
30	4.1	1.4	1.0	0.51	---	0.15	0.00	0.00	0.00	0.00	0.00	0.00
31	4.3	---	0.95	0.37	---	0.58	---	0.00	---	0.00	0.00	---
MEAN	13.94	1.645	1.158	0.905	1.205	0.459	0.048	0.028	0.173	0.000	0.616	0.000
MAX	47	3.9	1.6	1.7	3.0	0.99	0.41	0.11	0.65	0.00	16	0.00
MIN	4.1	0.70	0.81	0.37	0.45	0.13	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	857	98	71	56	67	28	2.9	1.7	10	0.00	38	0.00

07141220 ARKANSAS RIVER NEAR LARNED, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	58.10	76.67	65.85	60.24	78.68	136.1	165.7	324.8	499.8	205.8	126.6	103.4
MAX	154	175	140	134	150	347	307	911	1662	678	449	222
(WY)	2000	1999	2000	2000	1999	2000	1999	1999	1999	1999	1999	2001
MIN	11.0	1.65	1.16	0.90	1.20	0.46	0.048	0.028	0.17	0.000	0.62	0.000
(WY)	2001	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1999 - 2002	
ANNUAL MEAN	63.51		1.699		158.5	
HIGHEST ANNUAL MEAN					413	1999
LOWEST ANNUAL MEAN					1.70	2002
HIGHEST DAILY MEAN	2100	Sep 20	47	Oct 1	2100	Sep 20 2001
LOWEST DAILY MEAN	0.14	Sep 14	0.00	Apr 18	0.00	Apr 18 2002
ANNUAL SEVEN-DAY MINIMUM	0.33	Sep 10	0.00	Apr 18	0.00	Apr 18 2002
MAXIMUM PEAK FLOW			52	Oct 1	2340	Sep 20 2001
MAXIMUM PEAK STAGE			4.08	Oct 1	10.90	Sep 20 2001
INSTANTANEOUS LOW FLOW			0.00	Apr 20	0.00	Apr 20 2002
ANNUAL RUNOFF (AC-FT)	45980		1230		114800	
10 PERCENT EXCEEDS	134		3.0		376	
50 PERCENT EXCEEDS	16		0.24		48	
90 PERCENT EXCEEDS	0.98		0.00		0.05	



07141300 ARKANSAS RIVER AT GREAT BEND, KS

LOCATION.--Lat 38°21'11", long 98°45'50", in SW $^1/_4$ NW $^1/_4$ SE $^1/_4$ sec.33, T.19 S., R.13 W., Barton County, Hydrologic Unit 11030004, on left bank, top of levee, at downstream side of bridge on U.S. Highway 281, 0.5 mi south of Great Bend, 4.5 mi upstream from Walnut Creek, and at mile 873.2.

DRAINAGE AREA.--34,356 mi^2, of which 6,002 mi^2 is probably noncontributing.

PERIOD OF RECORD.--September 1940 to current year. Fragmentary gage-height records collected at same site, at datum 3.0 ft higher, 1906, 1908-12, are contained in reports of U.S. Weather Bureau.

REVISED RECORDS.--WSP 1341: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,835.19 ft above NGVD of 1929 (levels by U.S. Army Corps of Engineers). Prior to Oct. 1, 1975, at datum 4.00 ft higher.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow moderately regulated since Oct. 1948 by John Martin Reservoir (station 07130000). Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals, diversions for irrigation, and return flow from irrigated areas. Satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,300 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct 1	0200	*88	*1.91	No peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	81	23	15	12	e12	12	13	7.5	6.4	e6.0	2.0	1.2
2	71	23	15	12	12	e12	14	7.5	6.3	7.1	2.1	1.2
3	63	22	15	12	12	e12	14	7.4	6.0	5.5	2.0	1.3
4	57	21	15	12	13	e13	15	7.5	6.5	4.8	1.9	1.2
5	53	21	14	12	13	15	16	7.7	6.6	4.9	2.0	1.0
6	49	21	14	12	13	14	15	7.7	5.8	5.0	1.7	1.1
7	46	21	14	12	13	14	12	7.8	5.7	4.6	1.6	0.94
8	43	20	13	12	12	14	13	7.7	5.6	4.3	1.7	0.88
9	41	20	13	12	13	e13	13	7.8	5.8	3.9	1.9	0.85
10	39	20	13	12	12	13	12	7.9	5.6	3.9	2.0	1.0
11	37	19	13	12	12	13	12	8.8	5.5	3.7	1.8	1.1
12	36	19	14	12	12	14	11	10	11	3.0	2.6	1.1
13	35	18	14	12	13	12	10	8.9	8.2	2.8	3.6	1.2
14	34	19	14	13	13	12	10	9.1	7.5	2.7	2.7	1.9
15	32	18	14	13	13	12	9.7	9.4	14	2.7	2.2	2.1
16	31	17	14	13	13	12	9.5	9.1	14	2.5	2.1	1.5
17	30	17	14	13	13	12	8.8	9.7	9.3	2.7	2.1	1.2
18	30	18	14	13	13	12	9.0	9.1	8.3	2.5	2.2	1.2
19	29	17	14	13	13	13	8.7	8.6	7.6	2.3	1.8	1.4
20	28	17	13	14	13	12	8.6	8.8	7.8	2.4	1.9	1.2
21	28	15	14	15	13	12	8.8	8.9	7.7	2.6	1.9	1.2
22	28	16	13	15	13	12	7.5	8.9	7.5	3.2	2.0	1.2
23	28	16	13	14	13	12	7.3	8.6	7.6	2.7	1.9	1.1
24	27	15	12	14	13	12	7.5	9.3	7.0	3.0	9.5	0.98
25	26	14	13	14	13	12	7.1	8.8	7.9	3.1	3.5	1.1
26	26	14	12	14	e13	12	7.2	8.6	7.5	2.9	2.2	0.85
27	25	14	13	14	e12	11	7.6	8.0	7.8	3.0	1.9	1.2
28	25	14	13	14	12	12	7.1	7.5	e8.3	4.7	1.6	1.3
29	25	14	12	14	---	12	7.1	7.4	e7.4	3.5	1.5	1.3
30	24	15	12	e12	---	12	7.2	7.2	e6.9	2.4	1.2	1.6
31	24	---	12	e12	---	12	---	6.9	---	2.1	1.2	---
MEAN	37.13	17.93	13.48	12.90	12.68	12.48	10.29	8.326	7.637	3.565	2.268	1.213
MAX	81	23	15	15	13	15	16	10	14	7.1	9.5	2.1
MIN	24	14	12	12	12	11	7.1	6.9	5.5	2.1	1.2	0.85
AC-FT	2280	1070	829	793	704	768	612	512	454	219	139	72

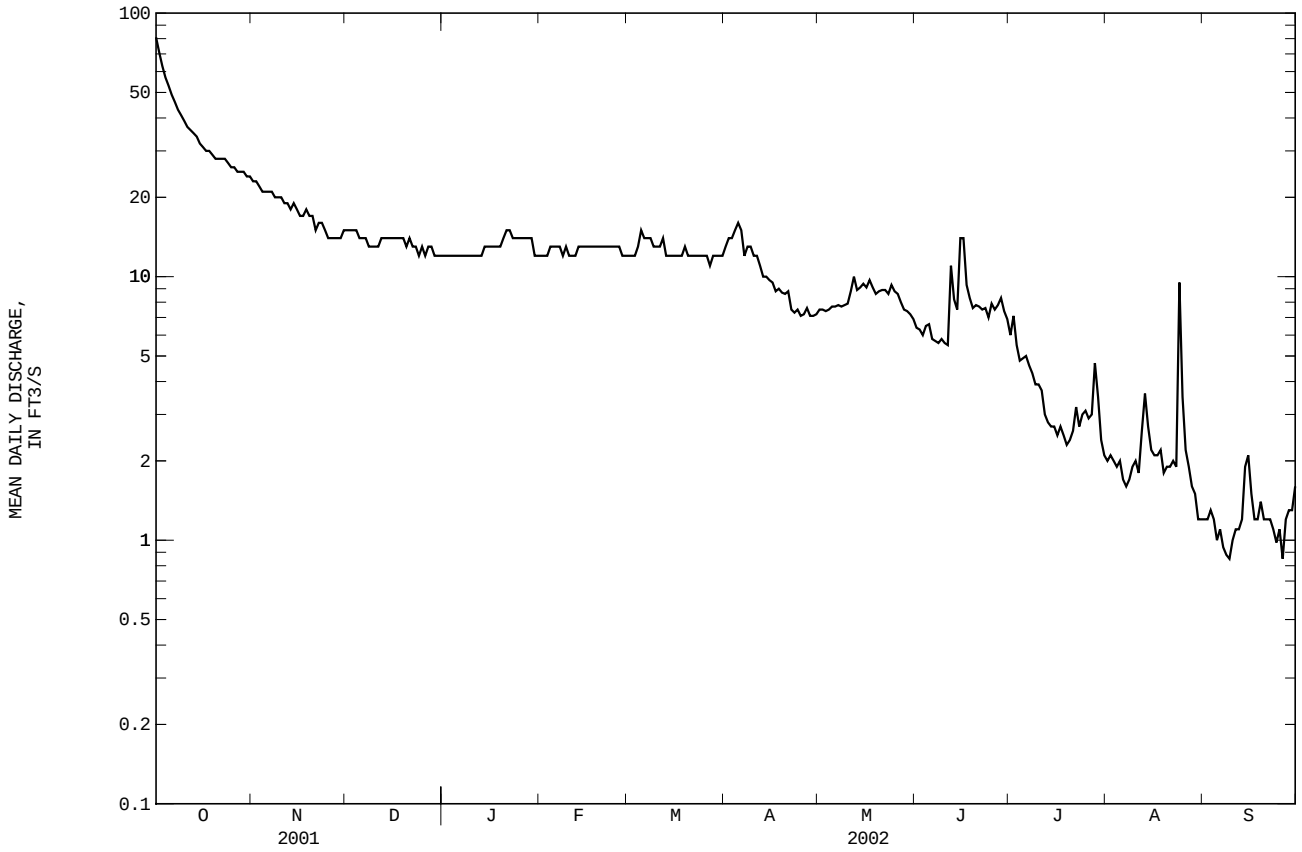
07141300 ARKANSAS RIVER AT GREAT BEND, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	172.9	163.9	129.0	133.7	171.1	221.8	269.0	385.6	572.6	461.9	284.5	213.5
MAX	1304	1170	589	707	843	1560	2646	6047	4089	4033	3247	1347
(WY)	1974	1997	1942	1943	1949	1973	1973	1942	1951	1951	1950	1950
MIN	0.39	0.33	0.80	0.38	1.75	1.11	1.46	1.09	3.05	1.72	0.13	0.38
(WY)	1985	1981	1981	1981	1981	1981	1981	1992	1991	1991	1946	1984

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1941 - 2002	
ANNUAL MEAN	125.2		11.68		265.2	
HIGHEST ANNUAL MEAN					1565	1942
LOWEST ANNUAL MEAN					2.46	1985
HIGHEST DAILY MEAN	2600	Jun 10	81	Oct 1	21800	Jun 23 1965
LOWEST DAILY MEAN	9.6	Jan 2	0.85	Sep 9	0.00	Oct 25 1940
ANNUAL SEVEN-DAY MINIMUM	9.9	Jan 1	0.98	Sep 5	0.00	Aug 2 1946
MAXIMUM PEAK FLOW			88	Oct 1	27800	Jun 23 1965
MAXIMUM PEAK STAGE			1.91	Oct 1	17.70	Jun 15 1981
INSTANTANEOUS LOW FLOW			0.44	Sep 26	.00	at times
ANNUAL RUNOFF (AC-FT)	90620		8450		192200	
10 PERCENT EXCEEDS	229		21		535	
50 PERCENT EXCEEDS	27		12		81	
90 PERCENT EXCEEDS	11		1.8		4.1	

e Estimated



07141750 WET WALNUT WATERSHED STRUCTURE NO. 39 NEAR BAZINE, KS

LOCATION.--Lat 38°29'48", long 99°47'06", in SW $^{1}/_{4}$ SW $^{1}/_{4}$ NE $^{1}/_{4}$ sec.08, T.18 S., R.22 W., Ness County, Hydrologic Unit 11030008, on upstream face of dam, 5.7 mi northwest of Bazine.

DRAINAGE AREA.--17 mi^2.

PERIOD OF RECORD.--November 1994 to current year

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929 (levels by Natural Resources Conservation Service).

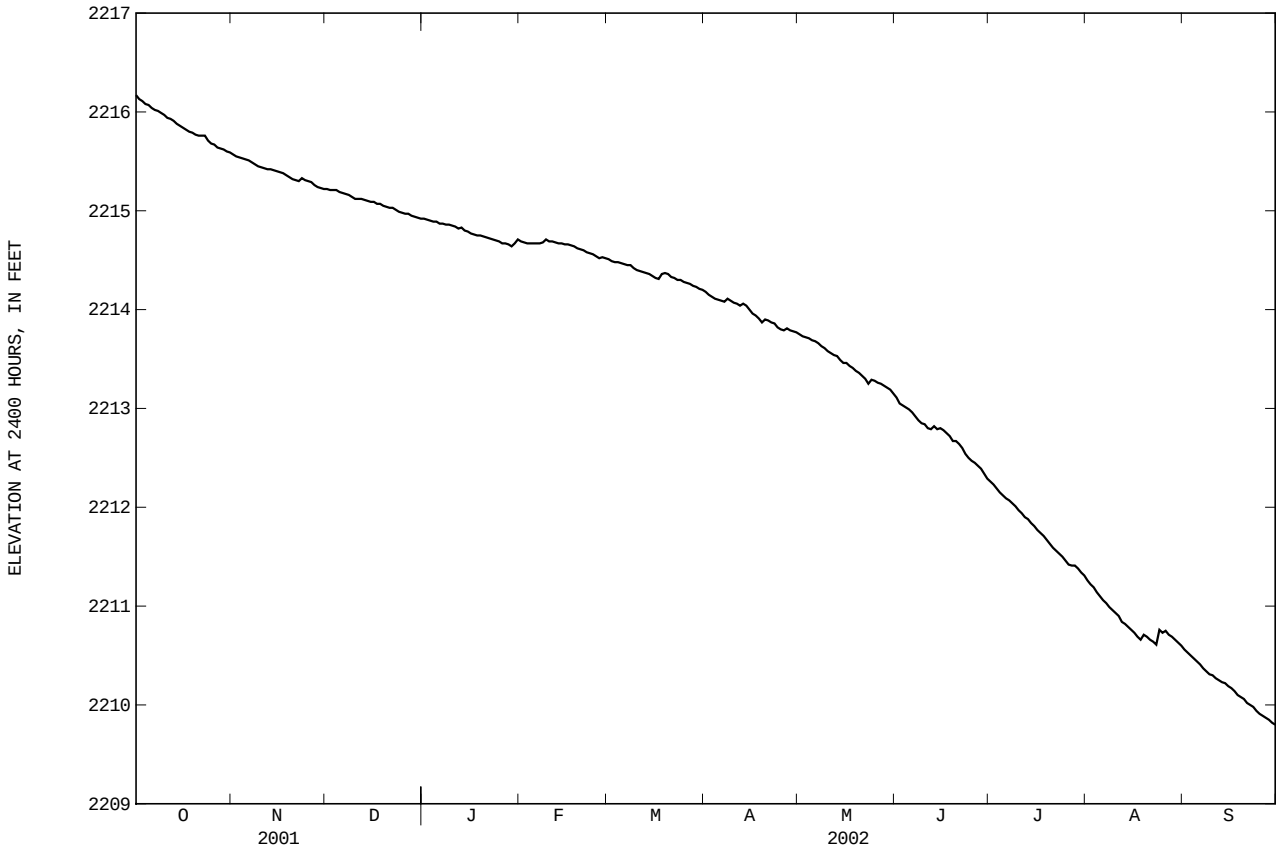
REMARKS.--Records good. Water elevation not recorded below 2,208.29 ft. Satellite telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 2,221.58 ft Aug. 3, 1999, contents, 571 acre-ft.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 2,216.19 ft Oct. 1, contents, 158 acre-ft; minimum elevation, 2,209.79 ft Sept. 30, contents, 7.1 acre-ft.

Capacity table (elevation, in feet, and contents, in acre-ft)
(Based on field survey by Natural Resources Conservation Service)

2,209	4.06	2,215	108
2,211	16.7	2,217	199
2,213	51.1		



07141750 WET WALNUT WATERSHED STRUCTURE NO. 39 NEAR BAZINE, KS--Continued

ELEVATION, in FT (NGVD), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2216.17	2215.57	2215.22	2214.92	2214.69	2214.51	2214.18	2213.75	2213.11	2212.26	2211.26	2210.56
2	2216.13	2215.55	2215.21	2214.91	2214.68	2214.49	2214.15	2213.73	2213.05	2212.23	2211.22	2210.53
3	2216.11	2215.54	2215.21	2214.90	2214.67	2214.48	2214.13	2213.72	2213.03	2212.19	2211.19	2210.50
4	2216.08	2215.53	2215.21	2214.89	2214.67	2214.48	2214.11	2213.71	2213.01	2212.15	2211.14	2210.47
5	2216.07	2215.52	2215.19	2214.89	2214.67	2214.47	2214.10	2213.69	2212.99	2212.12	2211.10	2210.44
6	2216.04	2215.51	2215.18	2214.87	2214.67	2214.46	2214.09	2213.68	2212.96	2212.09	2211.06	2210.41
7	2216.02	2215.49	2215.17	2214.87	2214.67	2214.45	2214.08	2213.66	2212.92	2212.07	2211.03	2210.37
8	2216.01	2215.47	2215.16	2214.86	2214.68	2214.45	2214.11	2213.63	2212.88	2212.04	2210.99	2210.34
9	2215.99	2215.45	2215.14	2214.86	2214.71	2214.42	2214.09	2213.61	2212.85	2212.01	2210.96	2210.31
10	2215.97	2215.44	2215.12	2214.85	2214.69	2214.40	2214.07	2213.58	2212.84	2211.97	2210.93	2210.30
11	2215.94	2215.43	2215.12	2214.84	2214.69	2214.39	2214.06	2213.56	2212.80	2211.94	2210.90	2210.27
12	2215.93	2215.42	2215.12	2214.82	2214.68	2214.38	2214.04	2213.54	2212.79	2211.90	2210.84	2210.25
13	2215.91	2215.42	2215.11	2214.83	2214.67	2214.37	2214.06	2213.53	2212.82	2211.88	2210.82	2210.23
14	2215.88	2215.41	2215.10	2214.80	2214.67	2214.36	2214.04	2213.49	2212.79	2211.84	2210.79	2210.22
15	2215.86	2215.40	2215.09	2214.79	2214.66	2214.34	2214.00	2213.46	2212.80	2211.81	2210.76	2210.19
16	2215.84	2215.39	2215.09	2214.77	2214.66	2214.32	2213.96	2213.46	2212.78	2211.77	2210.73	2210.17
17	2215.82	2215.38	2215.07	2214.76	2214.65	2214.31	2213.94	2213.43	2212.75	2211.74	2210.69	2210.14
18	2215.80	2215.36	2215.07	2214.75	2214.64	2214.36	2213.91	2213.41	2212.72	2211.71	2210.66	2210.10
19	2215.79	2215.34	2215.05	2214.75	2214.62	2214.37	2213.87	2213.38	2212.67	2211.67	2210.71	2210.08
20	2215.77	2215.32	2215.04	2214.74	2214.61	2214.36	2213.90	2213.36	2212.67	2211.63	2210.69	2210.06
21	2215.76	2215.31	2215.03	2214.73	2214.60	2214.33	2213.89	2213.33	2212.64	2211.59	2210.66	2210.02
22	2215.76	2215.30	2215.03	2214.72	2214.58	2214.32	2213.87	2213.30	2212.60	2211.56	2210.64	2210.00
23	2215.76	2215.33	2215.01	2214.71	2214.57	2214.30	2213.86	2213.25	2212.54	2211.53	2210.61	2209.98
24	2215.71	2215.31	2214.99	2214.70	2214.56	2214.30	2213.82	2213.29	2212.50	2211.50	2210.76	2209.94
25	2215.68	2215.30	2214.98	2214.69	2214.54	2214.28	2213.80	2213.28	2212.47	2211.46	2210.73	2209.91
26	2215.67	2215.29	2214.97	2214.67	2214.52	2214.27	2213.79	2213.26	2212.45	2211.42	2210.75	2209.89
27	2215.64	2215.26	2214.97	2214.67	2214.53	2214.26	2213.81	2213.25	2212.42	2211.41	2210.71	2209.87
28	2215.63	2215.24	2214.95	2214.66	2214.52	2214.24	2213.79	2213.23	2212.39	2211.41	2210.69	2209.85
29	2215.62	2215.23	2214.94	2214.64	---	2214.23	2213.78	2213.21	2212.34	2211.38	2210.66	2209.82
30	2215.60	2215.22	2214.93	2214.67	---	2214.21	2213.77	2213.19	2212.29	2211.34	2210.63	2209.80
31	2215.59	---	2214.92	2214.71	---	2214.20	---	2213.15	---	2211.31	2210.60	---
MEAN	2215.86	2215.39	2215.08	2214.78	2214.64	2214.36	2213.97	2213.45	2212.73	2211.77	2210.84	2210.17
MAX	2216.17	2215.57	2215.22	2214.92	2214.71	2214.51	2214.18	2213.75	2213.11	2212.26	2211.26	2210.56
MIN	2215.59	2215.22	2214.92	2214.64	2214.52	2214.20	2213.77	2213.15	2212.29	2211.31	2210.60	2209.80
(+)	131	116	105	97.8	91.8	82.6	69.9	54.3	38.2	20.8	12.6	7.2
(#)	-27	-15	-11	-7.2	-6.0	-9.2	-12.7	-15.6	-16.1	-17.4	-8.2	-5.4

CAL YR 2001 ..... (#) -47.0
WTR YR 2002 ..... (#) -151

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

07141770 WALNUT CREEK NEAR ALEXANDER, KS

LOCATION.--Lat 38°27'53", long 99°37'20", in NW $^{1}/_{4}$ NW $^{1}/_{4}$ NW $^{1}/_{4}$ sec.26, T.18 S., R.21 W., Ness County, Hydrologic Unit 11030008, at right bank of downstream side of bridge, 3.6 mi west of Alexander, and at mile 105.0.

DRAINAGE AREA.--1,025 mi^2.

PERIOD OF RECORD.--November 1994 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,068.19 ft above NGVD of 1929.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 700 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jul 28	2200	*188	*5.33	No peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.3	4.7	5.5	6.4	e6.7	e6.6	6.9	6.8	3.5	0.91	7.2	0.96
2	6.8	4.3	5.7	e6.4	6.8	e6.6	6.7	6.6	4.3	0.94	3.9	0.77
3	6.1	7.0	6.2	6.6	7.3	e6.6	6.6	6.4	3.6	1.3	2.0	0.91
4	5.7	5.7	6.5	6.4	7.4	e6.7	6.8	5.6	2.0	1.5	1.3	1.1
5	5.2	5.1	6.5	6.6	7.3	7.1	6.8	3.0	2.2	1.5	0.80	1.1
6	4.7	5.1	6.2	7.0	7.4	e7.0	6.6	2.2	2.7	1.4	0.63	1.1
7	5.3	5.5	6.2	e7.0	e7.5	e7.0	6.6	2.2	1.2	1.4	1.1	1.0
8	4.9	5.3	6.1	7.0	8.1	e7.0	6.8	2.8	1.1	1.2	0.87	1.0
9	4.5	4.5	5.6	7.4	e7.9	e7.1	7.1	2.0	1.1	0.97	0.98	1.0
10	4.1	4.6	5.5	7.7	e7.9	7.4	7.5	2.1	1.0	0.83	0.93	1.0
11	3.6	4.7	5.9	7.6	e8.3	6.8	7.5	4.5	1.1	0.80	0.85	1.1
12	3.9	4.8	6.1	7.5	8.9	6.7	7.9	3.4	1.8	0.71	0.91	1.1
13	4.3	5.1	6.2	7.3	8.6	7.1	8.0	2.1	18	0.81	0.93	1.1
14	4.0	4.7	6.4	7.2	8.1	6.6	8.5	2.1	20	0.87	0.97	1.1
15	3.8	4.4	6.5	6.9	8.0	6.8	7.8	2.0	19	0.98	0.89	1.1
16	3.1	4.2	6.3	6.6	7.8	7.0	7.0	2.8	9.5	1.0	0.94	1.1
17	3.4	4.6	6.2	6.4	7.8	7.0	6.9	5.4	7.9	0.90	0.95	1.1
18	3.8	4.0	6.4	e6.3	7.6	6.7	6.6	4.6	7.6	0.72	0.95	1.1
19	3.6	3.7	6.2	e6.3	7.3	7.2	6.0	4.5	4.9	0.77	1.0	1.1
20	3.9	3.9	6.2	6.5	7.1	7.3	6.0	4.5	4.1	0.70	1.0	1.0
21	6.0	3.9	6.4	e6.6	7.5	7.6	6.4	4.3	3.9	0.76	1.0	1.1
22	4.8	4.0	6.7	6.7	7.2	7.6	6.2	4.3	3.1	0.83	0.96	1.1
23	5.4	4.6	6.4	6.8	7.2	7.0	6.1	3.8	2.8	0.70	0.95	1.2
24	2.8	5.3	e5.9	6.9	7.3	6.8	6.3	4.5	2.9	0.82	15	1.2
25	2.9	4.8	5.8	e6.7	7.1	6.6	5.9	4.9	2.4	0.70	5.8	1.1
26	3.3	5.0	5.9	6.6	e6.7	6.7	5.9	4.6	2.0	0.77	5.1	1.1
27	4.5	5.1	6.2	7.1	e6.5	7.0	6.5	4.8	1.8	0.86	8.7	1.1
28	4.3	4.4	6.4	7.1	6.6	6.6	6.5	4.8	1.7	37	4.9	1.1
29	4.3	4.6	e6.3	7.0	---	6.5	6.5	4.9	1.6	76	3.3	1.1
30	4.8	4.7	6.3	e6.7	---	6.7	6.6	4.3	1.3	42	1.9	1.0
31	6.1	---	6.4	e6.6	---	6.7	---	4.3	---	15	1.2	---
MEAN	4.555	4.743	6.165	6.835	7.496	6.906	6.783	4.035	4.670	6.311	2.513	1.065
MAX	7.3	7.0	6.7	7.7	8.9	7.6	8.5	6.8	20	76	15	1.2
MIN	2.8	3.7	5.5	6.3	6.5	6.5	5.9	2.0	1.0	0.70	0.63	0.77
AC-FT	280	282	379	420	416	425	404	248	278	388	155	63

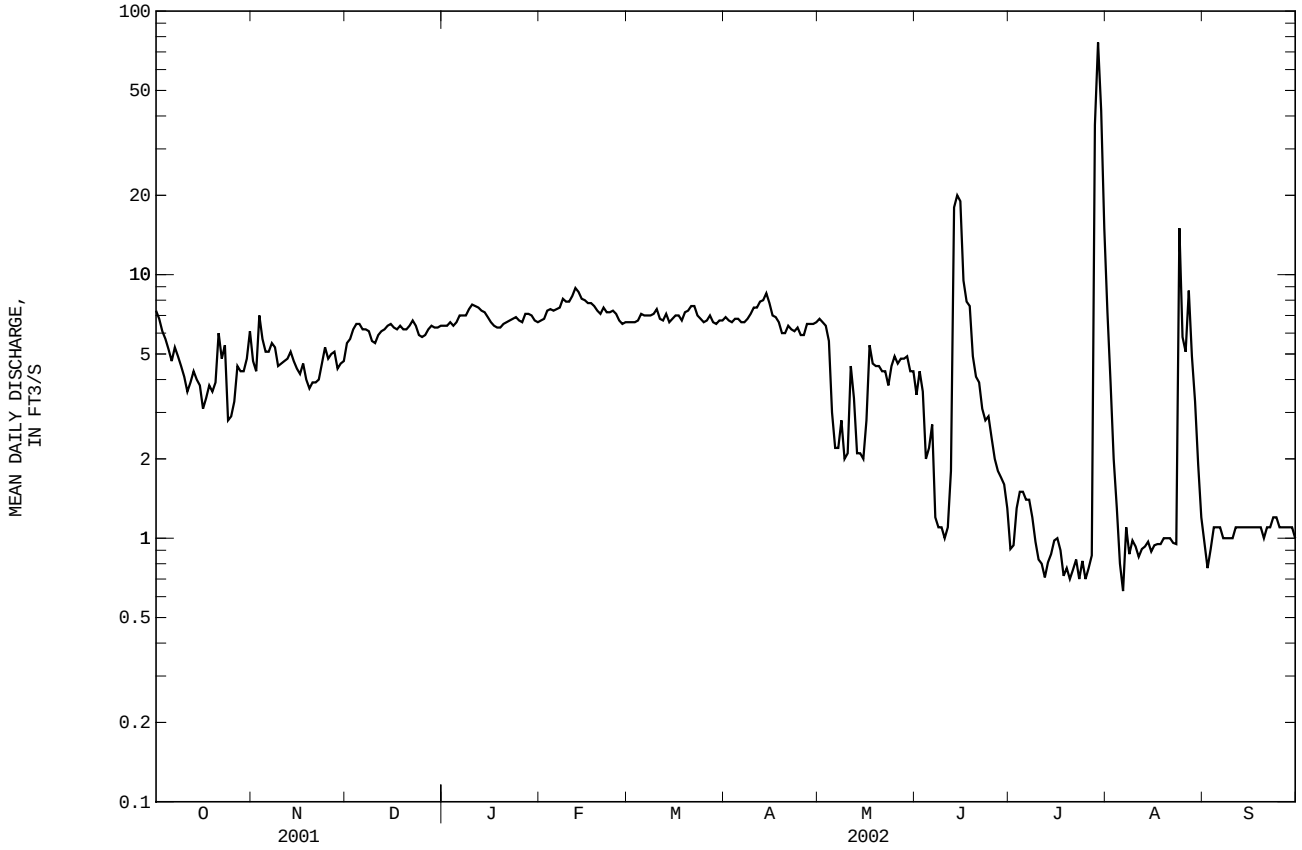
07141770 WALNUT CREEK NEAR ALEXANDER, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	8.958	17.46	9.801	9.708	11.06	18.72	14.79	17.73	44.75	36.10	48.09	22.04
MAX	22.6	67.5	18.4	13.7	16.5	50.2	26.7	49.1	148	87.3	116	100
(WY)	1997	1997	1997	1997	1998	2000	1998	1996	1996	1999	1999	1996
MIN	3.50	4.74	6.16	6.84	7.50	6.91	5.55	4.04	4.67	1.20	0.90	1.06
(WY)	1996	2002	2002	2002	2002	2002	1996	2002	2002	2001	2001	2002

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1996 - 2002	
ANNUAL MEAN	16.71		5.164		21.64	
HIGHEST ANNUAL MEAN					37.7	1996
LOWEST ANNUAL MEAN					5.16	2002
HIGHEST DAILY MEAN	1250	Jun 8	76	Jul 29	1550	Jun 1 1996
LOWEST DAILY MEAN	0.64	Jul 8	0.63	Aug 6	0.52	Jul 17 1997
ANNUAL SEVEN-DAY MINIMUM	0.70	Aug 2	0.75	Jul 19	0.70	Aug 2 2001
MAXIMUM PEAK FLOW			188	Jul 28	3070	Jun 1 1996
MAXIMUM PEAK STAGE			5.33	Jul 28	21.19	Jun 1 1996
INSTANTANEOUS LOW FLOW			0.51	Jul 12	0.51	Aug 3 2001
ANNUAL RUNOFF (AC-FT)	12100		3740		15680	
10 PERCENT EXCEEDS	13		7.4		27	
50 PERCENT EXCEEDS	7.0		5.3		9.2	
90 PERCENT EXCEEDS	0.85		0.98		3.0	

e Estimated



07141778 WET WALNUT WATERSHED STRUCTURE NO. 17 NEAR NEKOMA, KS

LOCATION.--Lat 38°24'58", long 99°28'40", in NE $^{1}/_{4}$ SE $^{1}/_{4}$ SW $^{1}/_{4}$ sec.12, T.19 S., R.20 W., Rush County, Hydrologic Unit 11030008, on upstream face of dam, 4.8 mi southwest of Nekoma.

DRAINAGE AREA.--9.1 mi^2.

PERIOD OF RECORD.--November 1994 to current year.

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929 (levels by Natural Resources Conservation Service).

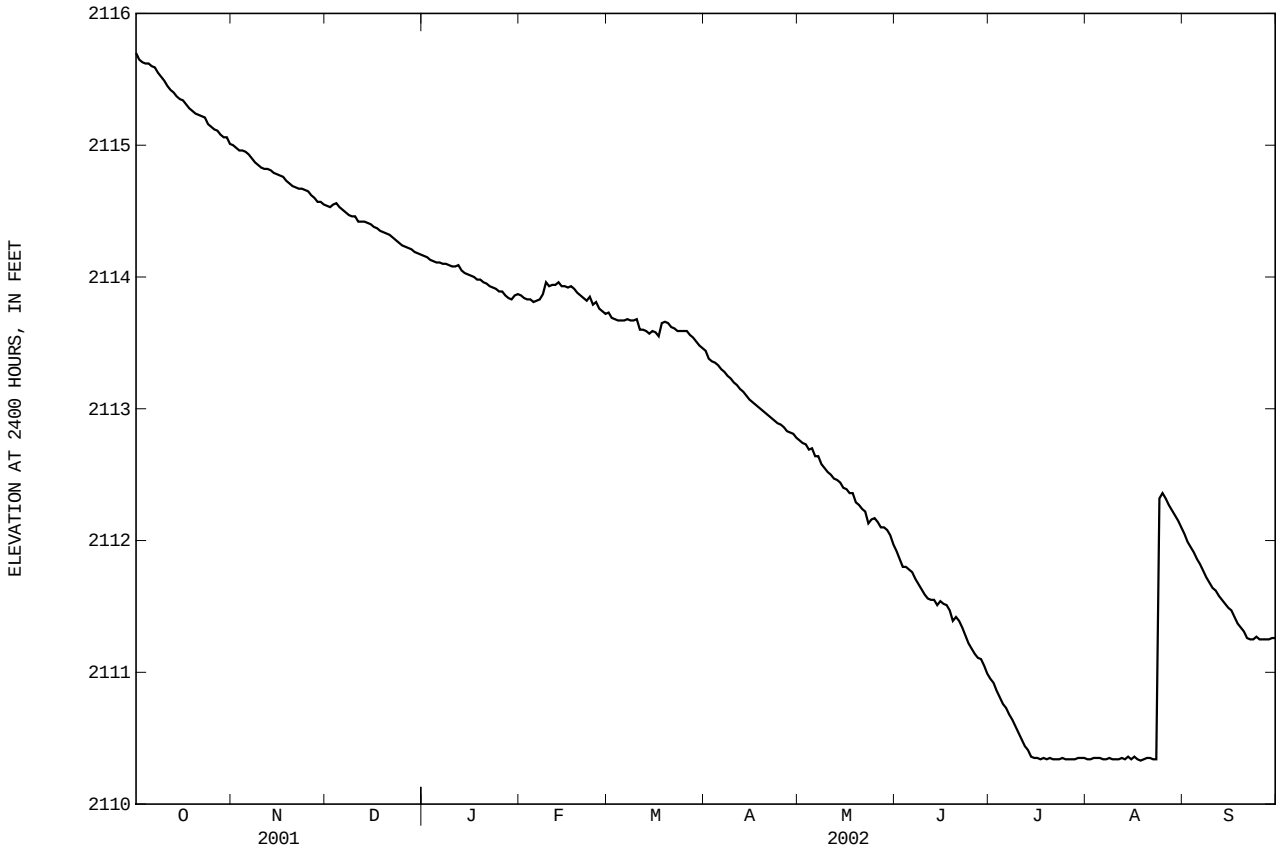
REMARKS.--Records fair. Water elevation not recorded below 2,110.34 ft. Satellite telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 2,126.24 ft Nov. 11, 1997, contents, 740 acre-ft.

EXTREMES FOR CURRENT YEAR.--Maximum elevation 2,115.72 ft Oct. 1, contents, 99.8 acre-ft, minimum elevation, 2,110.33 ft July 16, contents, 17.0 acre-ft.

Capacity table (elevation, in feet, and contents, in acre-ft)
(Based on field survey by Natural Resources Conservation Service)

2,110	15.1	2,120	279
2,115	79.6		



07141778 WET WALNUT WATERSHED STRUCTURE NO. 17 NEAR NEKOMA, KS--Continued

ELEVATION, in FT (NGVD), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2115.70	2115.00	2114.54	2114.16	2113.86	2113.73	2113.44	2112.76	2111.92	2110.95	<2110.34	2112.05
2	2115.65	2114.98	2114.53	2114.15	2113.84	2113.69	2113.38	2112.74	2111.86	2110.92	<2110.34	2111.99
3	2115.63	2114.96	2114.55	2114.13	2113.83	2113.68	2113.36	2112.73	2111.80	2110.86	<2110.35	2111.95
4	2115.62	2114.96	2114.56	2114.12	2113.83	2113.67	2113.35	2112.69	2111.80	2110.81	<2110.35	2111.91
5	2115.62	2114.95	2114.53	2114.11	2113.81	2113.67	2113.33	2112.70	2111.78	2110.76	<2110.35	2111.86
6	2115.60	2114.93	2114.51	2114.11	2113.82	2113.67	e2113.30	2112.64	e2111.76	2110.73	<2110.34	2111.82
7	2115.59	2114.90	2114.49	2114.10	2113.83	2113.68	e2113.28	2112.64	e2111.71	2110.68	<2110.34	2111.77
8	2115.55	2114.87	2114.47	2114.10	2113.87	2113.67	e2113.25	2112.58	e2111.67	2110.64	<2110.35	2111.72
9	2115.52	2114.85	2114.46	2114.09	2113.96	2113.67	e2113.23	2112.55	e2111.63	2110.59	<2110.34	2111.68
10	2115.49	2114.83	2114.46	2114.08	2113.93	2113.68	e2113.20	2112.52	2111.59	2110.54	<2110.34	2111.64
11	2115.45	2114.82	2114.42	2114.08	2113.94	2113.60	e2113.18	2112.50	2111.56	2110.49	<2110.34	2111.62
12	2115.42	2114.82	2114.42	2114.09	2113.94	2113.60	e2113.15	2112.47	2111.55	2110.44	<2110.35	2111.58
13	2115.40	2114.81	2114.42	2114.05	2113.96	2113.59	e2113.13	2112.46	2111.55	2110.41	<2110.34	2111.55
14	2115.37	2114.79	2114.41	2114.03	2113.93	2113.57	e2113.10	2112.44	2111.51	2110.36	<2110.36	2111.52
15	2115.35	2114.78	2114.40	2114.02	2113.93	2113.59	e2113.07	2112.40	2111.54	<2110.35	<2110.34	2111.49
16	2115.34	2114.77	2114.38	2114.01	2113.92	2113.58	e2113.05	2112.39	2111.52	<2110.35	<2110.36	2111.47
17	2115.31	2114.76	2114.37	2114.00	2113.93	2113.55	e2113.03	2112.36	2111.51	<2110.34	<2110.34	2111.42
18	2115.28	2114.73	2114.35	2113.98	2113.91	2113.65	e2113.01	2112.36	2111.47	<2110.35	<2110.33	2111.37
19	2115.26	2114.71	2114.34	2113.98	2113.88	2113.66	e2112.99	2112.29	2111.39	<2110.34	<2110.34	2111.34
20	2115.24	2114.69	2114.33	2113.96	2113.86	2113.65	e2112.97	2112.27	2111.42	<2110.35	<2110.35	2111.31
21	2115.23	2114.68	2114.32	2113.95	2113.84	2113.62	e2112.95	2112.24	2111.39	<2110.34	<2110.35	<2111.26
22	2115.22	2114.67	2114.30	2113.93	2113.82	2113.61	e2112.93	2112.22	2111.34	<2110.34	<2110.34	<2111.25
23	2115.21	2114.67	2114.28	2113.92	2113.85	2113.59	e2112.91	2112.13	2111.28	<2110.34	<2110.34	<2111.25
24	2115.16	2114.66	2114.26	2113.91	2113.79	2113.59	e2112.89	2112.16	2111.22	<2110.35	2112.32	<2111.27
25	2115.14	2114.65	2114.24	2113.89	2113.81	2113.59	e2112.88	2112.17	2111.18	<2110.34	2112.36	<2111.25
26	2115.12	2114.62	2114.23	2113.89	2113.76	2113.59	e2112.86	2112.14	2111.14	<2110.34	2112.32	<2111.25
27	2115.11	2114.60	2114.22	2113.86	2113.74	2113.56	e2112.83	2112.10	2111.11	<2110.34	2112.27	<2111.25
28	2115.08	2114.57	2114.21	2113.84	2113.72	2113.54	e2112.82	2112.10	2111.10	<2110.34	2112.23	<2111.25
29	2115.06	2114.57	2114.19	2113.83	---	2113.51	2112.81	2112.08	2111.05	<2110.35	2112.19	<2111.26
30	2115.06	2114.55	2114.18	2113.86	---	2113.48	2112.78	2112.04	2110.99	<2110.35	2112.15	<2111.26
31	2115.01	---	2114.17	2113.87	---	2113.46	---	2111.97	---	<2110.35	2112.10	---
MEAN	2115.35	2114.77	2114.37	2114.00	2113.86	2113.61	2113.08	2112.38	2111.48	2110.49	2110.83	2111.52
MAX	2115.70	2115.00	2114.56	2114.16	2113.96	2113.73	2113.44	2112.76	2111.92	2110.95	2112.36	2112.05
MIN	2115.01	2114.55	2114.17	2113.83	2113.72	2113.46	2112.78	2111.97	2110.99	2110.34	2110.33	2111.25
(+)	79.9	69.1	61.3	55.8	53.2	49.1	39.6	30.7	21.5	--	32.0	--
(#)	-19.9	-10.8	-7.8	-5.5	-2.6	-4.1	-9.5	-8.9	-9.2	--	--	--

CAL YR 2001 ..... (#) +5.5
WTR YR 2002 ..... (#) --

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

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

e Estimated
-- Not determined

07141780 WALNUT CREEK AT NEKOMA, KS

LOCATION.--Lat 38°28'37", long 99°26'13", in SW $^{1}/_{4}$ NW $^{1}/_{4}$ NW $^{1}/_{4}$ sec.21, T.18 S., R.19 W., Rush County, Hydrologic Unit 11030008, on right bank at downstream side of bridge 1,000 ft north of State Highway 96, 7.0 mi west of Rush Center.

DRAINAGE AREA.--1,256 mi^2, of which 104 mi^2 is probably noncontributing.

PERIOD OF RECORD.--October 1969 to current year. Published as "near Rush Center" October 1969 to September 1995.

GAGE.--Water-stage recorder. Elevation of gage is 2,030 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Natural flow affected by ground-water withdrawals, diversions for irrigation, and return flow from irrigated areas. Satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jul 29	2330	*72	*8.87	No peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.4	9.4	7.9	e8.7	e9.4	e9.0	10	10	5.5	1.9	16	1.9
2	8.6	9.4	8.0	e8.6	e10	e9.1	10	9.9	5.2	1.8	6.7	2.4
3	7.9	8.6	8.4	e8.6	10	9.3	9.9	9.7	4.7	1.6	3.6	2.3
4	7.8	8.5	8.7	e8.5	11	9.9	9.8	9.5	4.7	1.4	2.0	1.9
5	7.6	10	8.9	e8.4	11	9.6	9.9	9.2	4.7	1.4	1.2	1.8
6	7.2	8.1	9.0	e8.4	11	9.9	10	8.6	4.3	1.5	0.82	e1.6
7	7.0	7.1	8.8	e8.6	e11	9.9	10	6.8	3.4	1.6	0.47	e1.4
8	e6.8	7.0	8.3	e8.8	11	10	11	5.7	3.7	1.6	0.30	e1.2
9	e6.5	7.2	8.3	e9.2	e11	10	11	5.5	3.1	1.5	0.11	e1.0
10	e6.3	7.6	8.3	e9.8	e11	11	10	5.8	2.6	1.4	0.04	e0.80
11	e6.1	7.9	8.0	e10	e11	10	10	5.7	2.4	1.1	0.09	0.64
12	e5.9	7.7	8.1	11	e11	9.7	11	5.4	2.2	0.85	0.17	0.65
13	e5.6	7.5	8.4	11	11	9.5	11	6.3	2.3	0.82	0.30	0.65
14	e5.4	7.5	8.5	10	11	9.7	12	6.4	4.3	0.73	0.27	0.67
15	e5.2	7.8	8.5	9.8	11	10	12	5.8	15	0.71	0.12	0.76
16	5.0	7.7	8.7	9.7	10	9.4	12	5.5	14	0.71	0.06	0.74
17	4.7	7.2	8.7	9.5	10	9.5	11	5.2	10	0.69	0.03	0.68
18	4.9	7.0	8.7	e9.4	10	9.9	10	5.4	7.2	0.71	0.00	0.72
19	5.0	7.2	8.7	9.4	10	11	10	6.9	6.5	0.78	0.00	0.70
20	5.6	6.7	8.8	9.6	9.7	10	10	6.7	7.1	0.66	0.00	0.58
21	6.0	6.6	8.8	e9.4	9.3	10	10	6.3	4.9	0.56	0.00	0.44
22	6.4	6.9	8.9	e9.2	9.0	10	10	6.3	3.7	0.51	0.00	0.37
23	8.0	7.1	e8.8	e9.0	9.5	11	10	6.3	3.5	0.40	0.00	0.39
24	6.4	7.4	e8.8	e9.0	9.4	11	9.9	6.8	3.0	0.35	4.4	0.41
25	6.8	7.5	9.0	e9.0	9.0	10	9.7	6.1	2.7	0.38	24	0.43
26	6.8	8.0	9.1	e9.0	e8.8	9.7	9.7	6.3	2.8	0.34	9.3	0.47
27	5.4	7.6	8.8	e9.0	e8.8	9.6	11	6.4	2.7	0.41	3.4	0.68
28	6.7	7.6	9.2	e9.0	e9.0	9.9	11	6.0	2.4	0.66	4.8	0.56
29	7.8	7.6	9.1	e9.0	---	9.9	10	5.8	2.2	12	4.9	0.48
30	8.3	7.8	e8.8	e9.0	---	9.6	10	5.5	2.0	48	3.3	0.40
31	8.6	---	e8.8	e9.0	---	9.4	---	5.7	---	31	2.6	---
MEAN	6.635	7.707	8.639	9.245	10.14	9.887	10.40	6.694	4.760	3.809	2.870	0.924
MAX	9.4	10	9.2	11	11	11	12	10	15	48	24	2.4
MIN	4.7	6.6	7.9	8.4	8.8	9.0	9.7	5.2	2.0	0.34	0.00	0.37
AC-FT	408	459	531	568	563	608	619	412	283	234	176	55

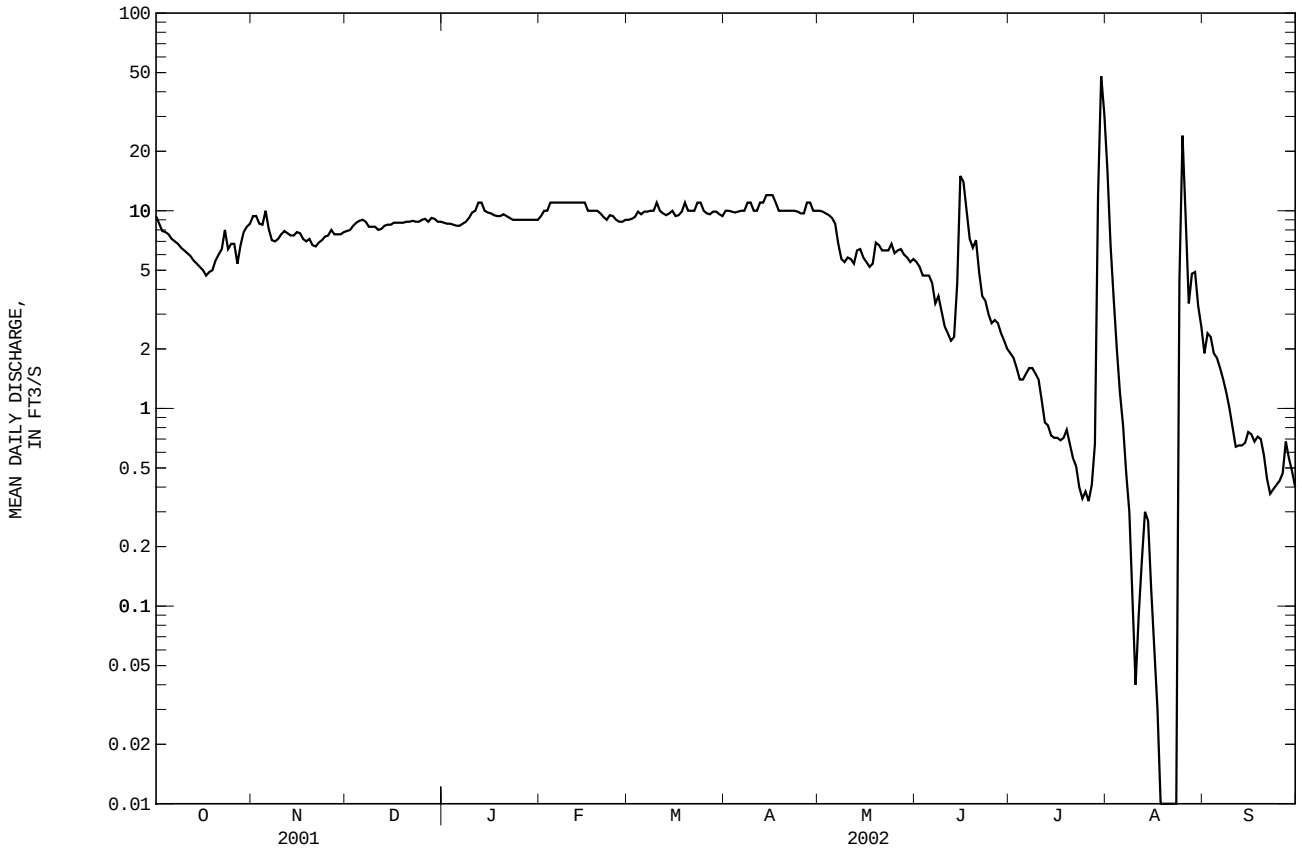
07141780 WALNUT CREEK AT NEKOMA, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	6.822	8.994	5.393	6.441	9.750	36.45	39.38	18.48	47.43	71.04	27.55	16.93
MAX	60.4	125	29.5	61.1	88.0	349	553	96.2	308	969	164	150
(WY)	1974	1997	1974	1974	1993	1973	1987	1973	2001	1993	1999	1972
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1971	1971	1971	1971	1978	1978	1972	1983	1977	1977	1970	1970

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1970 - 2002	
ANNUAL MEAN	35.65		6.791		24.63	
HIGHEST ANNUAL MEAN					129	1993
LOWEST ANNUAL MEAN					0.000	1983
HIGHEST DAILY MEAN	2440	Jun 9	48	Jul 30	5690	Jul 22 1993
LOWEST DAILY MEAN	2.3	Sep 1	0.00	Aug 18	0.00	May 21 1970
ANNUAL SEVEN-DAY MINIMUM	2.6	Aug 10	0.00	Aug 17	0.00	Jul 24 1970
MAXIMUM PEAK FLOW			72	Jul 29	5790	Jul 21 1993
MAXIMUM PEAK STAGE			8.87	Jul 29	34.00	Jul 21 1993
INSTANTANEOUS LOW FLOW			0.00	Aug 11	.00	many years
ANNUAL RUNOFF (AC-FT)	25810		4920		17840	
10 PERCENT EXCEEDS	27		10		29	
50 PERCENT EXCEEDS	10		7.8		1.7	
90 PERCENT EXCEEDS	4.1		0.65		0.00	

e Estimated



07141890 WET WALNUT WATERSHED STRUCTURE NO. 2 NEAR OTIS, KS

LOCATION.--Lat 38°30'40", long 99°04'25", in SE $^{1}/_{4}$ SE $^{1}/_{4}$ NW $^{1}/_{4}$ sec.03, T.18 S., R.16 W., Rush County, Hydrologic Unit 11030008, on upstream face of dam, 1.5 mi south and 1 mi west of Otis.

DRAINAGE AREA.-5.9 mi^2.

PERIOD OF RECORD.--November 1994 to current year.

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929 (levels by Natural Resources Conservation Service).

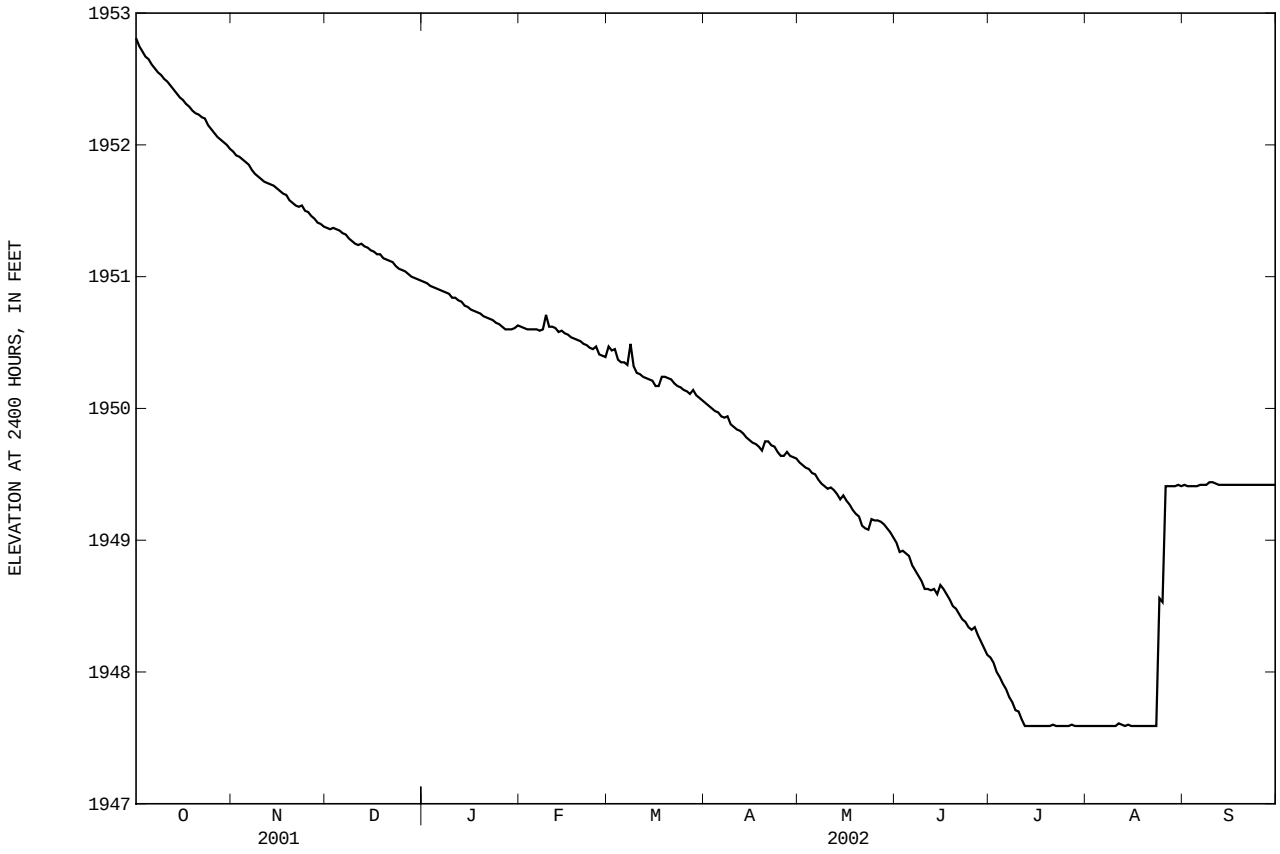
REMARKS.--Records fair. Water elevation is not recorded below 1947.59 ft Oct. 1 to Aug. 25, and below 1,949.41 Aug. 26, to Sept. 30. Satellite telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation 1,962.11 ft Nov. 16, 1997, contents, 543 acre-ft.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 1,952.85 ft Oct. 1, contents, 66.9 acre-ft; minimum elevation, 1,947.59 ft, July 12, contents, 5.2 acre-ft.

Capacity table (elevation, in feet, and contents, in acre-ft)
(Based on field survey by Natural Resources Conservation Service)

1,947	4.00	1,955	129
1,950	17.3		



07141890 WET WALNUT WATERSHED STRUCTURE NO. 2 NEAR OTIS, KS--Continued

ELEVATION, in FT (NGVD), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1952.81	1951.95	1951.37	1950.96	1950.62	1950.47	e1950.04	1949.59	1948.98	1948.11	<1947.59	<1949.42
2	1952.75	1951.92	1951.36	1950.95	1950.61	1950.44	e1950.02	1949.57	1948.91	1948.07	<1947.59	<1949.41
3	1952.71	1951.91	1951.37	1950.93	1950.60	1950.45	e1950.00	1949.55	1948.92	1948.00	<1947.59	<1949.41
4	1952.67	1951.89	1951.36	1950.92	1950.60	1950.37	e1949.98	1949.54	1948.90	1947.96	<1947.59	<1949.41
5	1952.65	1951.87	1951.35	1950.91	1950.60	1950.35	e1949.97	1949.51	1948.88	1947.91	<1947.59	<1949.41
6	1952.61	1951.85	1951.33	1950.90	1950.60	1950.35	e1949.94	1949.50	1948.81	1947.87	<1947.59	<1949.42
7	1952.58	1951.81	1951.32	1950.89	1950.59	1950.33	e1949.93	1949.46	1948.77	1947.81	<1947.59	<1949.42
8	1952.55	1951.78	1951.29	1950.88	1950.60	1950.49	e1949.94	1949.43	1948.73	1947.77	<1947.59	<1949.42
9	1952.53	1951.76	1951.27	1950.87	1950.71	1950.32	e1949.88	1949.41	1948.69	1947.71	<1947.59	<1949.44
10	1952.50	1951.74	1951.25	1950.84	1950.62	1950.27	e1949.86	1949.39	1948.63	1947.70	<1947.59	<1949.44
11	1952.48	1951.72	1951.24	1950.84	1950.62	1950.26	e1949.84	1949.40	1948.63	1947.64	<1947.61	<1949.43
12	1952.45	1951.71	1951.25	1950.82	1950.61	1950.24	e1949.83	e1949.38	1948.62	<1947.59	<1947.60	<1949.42
13	1952.42	1951.70	1951.23	1950.81	1950.58	1950.23	e1949.81	e1949.35	1948.63	<1947.59	<1947.59	<1949.42
14	1952.39	1951.69	1951.22	1950.78	1950.59	1950.22	e1949.78	e1949.31	1948.59	<1947.59	<1947.60	<1949.42
15	1952.36	1951.67	1951.20	1950.77	1950.57	1950.21	e1949.76	e1949.34	1948.66	<1947.59	<1947.59	<1949.42
16	1952.34	1951.65	1951.19	1950.75	1950.56	1950.17	e1949.74	e1949.30	1948.63	<1947.59	<1947.59	<1949.42
17	1952.31	1951.63	1951.17	1950.74	1950.54	1950.17	e1949.73	e1949.27	1948.59	<1947.59	<1947.59	<1949.42
18	1952.29	1951.62	1951.17	1950.73	1950.53	1950.24	e1949.71	e1949.23	1948.55	<1947.59	<1947.59	<1949.42
19	1952.26	1951.58	1951.14	1950.72	1950.52	1950.24	1949.68	e1949.20	1948.50	<1947.59	<1947.59	<1949.42
20	1952.24	1951.56	1951.13	1950.70	1950.51	e1950.23	1949.75	1949.18	1948.48	<1947.59	<1947.59	<1949.42
21	1952.23	1951.54	1951.12	1950.69	1950.49	e1950.22	1949.75	1949.11	1948.44	<1947.60	<1947.59	<1949.42
22	1952.21	1951.53	1951.11	1950.68	1950.48	e1950.19	1949.72	1949.09	e1948.40	<1947.59	<1947.59	<1949.42
23	1952.20	1951.54	1951.08	1950.67	1950.46	e1950.17	1949.71	1949.08	e1948.38	<1947.59	<1947.59	<1949.42
24	1952.15	1951.50	1951.06	1950.65	1950.45	e1950.16	1949.67	1949.16	e1948.34	<1947.59	1948.56	<1949.42
25	1952.12	1951.49	1951.05	1950.64	1950.47	e1950.14	1949.64	1949.15	e1948.32	<1947.59	1948.53	<1949.42
26	1952.09	1951.46	1951.04	1950.62	1950.41	e1950.13	1949.64	1949.15	e1948.34	<1947.59	<1949.41	<1949.42
27	1952.06	1951.44	1951.02	1950.60	1950.40	e1950.11	1949.67	1949.14	e1948.28	<1947.60	<1949.41	<1949.42
28	1952.04	1951.41	1951.00	1950.60	1950.39	e1950.14	1949.64	1949.12	1948.23	<1947.59	<1949.41	<1949.42
29	1952.02	1951.40	1950.99	1950.60	---	e1950.10	1949.63	1949.09	1948.18	<1947.59	<1949.41	<1949.42
30	1952.00	1951.38	1950.98	1950.61	---	e1950.08	1949.62	1949.06	1948.13	<1947.59	<1949.42	<1949.42
31	1951.97	---	1950.97	1950.63	---	e1950.06	---	1949.02	---	<1947.59	<1949.41	---
MEAN	1952.35	1951.66	1951.18	1950.77	1950.55	1950.24	1949.80	1949.29	1948.57	1947.69	1948.01	1949.42
MAX	1952.81	1951.95	1951.37	1950.96	1950.71	1950.49	1950.04	1949.59	1948.98	1948.11	1949.42	1949.44
MIN	1951.97	1951.38	1950.97	1950.60	1950.39	1950.06	1949.62	1949.02	1948.13	1947.59	1947.59	1949.41
(+)	49.1	35.9	28.9	24.1	21.3	17.8	14.1	10.3	6.4	--	--	--
(#)	-17.8	-13.2	-7.0	-4.8	-2.8	-3.5	-3.7	-3.8	-3.9	--	--	--

CAL YR 2001 ..... (#) +1.2
WTR YR 2002 ..... (#) --

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

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

e Estimated
-- Not determined

07141900 WALNUT CREEK AT ALBERT, KS

LOCATION.--Lat 38°27'40", long 99°00'50", in SW $^1/_4$ NW $^1/_4$ NW $^1/_4$ sec.29, T.18 S., R.15 W., Barton County, Hydrologic Unit 11030008, on left bank at downstream side of county highway bridge, 0.2 mi north of Albert, 14 mi northwest of Great Bend, and at mile 43.0.

WATER-DISCHARGE RECORDS

DRAINAGE AREA.--1,410 mi^2, approximately, of which 104 mi^2 is probably noncontributing.

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

GAGE.--Water-stage recorder. Datum of gage is 1,897.37 ft above NGVD of 1929 (U.S. Army Corps of Engineers bench mark).

REMARKS.--Records good except those for estimated daily discharges, which are poor. Natural flow affected by ground-water withdrawals, diversions for irrigation, and return flow from irrigated areas.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in August 1927 reached a stage of 21.3 ft, 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).

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jun 15	2200	*96	*5.28	No peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	14	18	18	e21	20	18	19	13	4.2	9.4	3.8
2	25	14	18	19	22	e19	18	19	12	3.7	25	3.1
3	23	15	18	19	22	e19	17	18	11	3.0	21	2.4
4	22	15	18	19	22	e19	17	17	11	2.5	13	2.1
5	21	15	19	19	22	e19	17	17	11	2.1	7.6	1.8
6	20	15	19	20	22	19	17	17	10	1.7	4.8	1.2
7	19	14	19	e20	23	19	17	16	8.7	1.6	3.3	0.63
8	19	18	18	20	23	e18	18	16	7.8	1.4	2.4	0.30
9	19	16	18	20	e22	e18	18	16	7.6	1.2	1.7	0.15
10	18	14	19	21	e22	e17	19	15	7.8	1.0	1.2	0.08
11	18	14	18	e20	e22	17	19	14	7.2	0.94	0.75	0.06
12	18	15	19	20	22	17	19	13	7.1	0.77	0.84	0.04
13	18	15	19	20	24	19	18	13	6.8	0.66	2.1	0.04
14	18	16	19	21	25	19	17	13	6.3	0.56	1.1	0.08
15	18	16	19	20	24	19	18	12	19	0.46	1.1	0.05
16	18	15	19	20	23	18	19	12	21	0.39	1.1	0.04
17	18	16	19	19	22	17	19	13	13	0.30	0.64	0.03
18	18	16	19	e19	22	18	19	12	14	0.26	0.33	0.02
19	19	16	19	e19	22	20	19	12	15	0.21	0.19	0.01
20	20	15	19	e19	21	21	20	11	14	0.16	0.13	0.02
21	17	15	19	e19	21	22	20	12	11	0.12	0.07	0.02
22	17	16	19	e19	20	20	20	12	9.6	0.08	0.05	0.01
23	16	17	19	19	20	19	19	13	9.2	0.06	0.05	0.00
24	17	18	e19	19	20	19	19	14	9.1	0.04	1.2	0.00
25	17	17	e18	e19	19	19	18	14	7.7	0.02	8.6	0.00
26	15	17	e18	19	19	20	17	14	6.2	0.59	5.0	0.00
27	15	16	18	19	e19	19	18	14	6.3	3.0	4.0	0.61
28	13	16	e18	20	19	19	18	14	5.7	17	3.7	1.8
29	13	e16	e18	20	---	22	19	14	5.2	21	2.2	1.8
30	13	e16	e18	e20	---	19	20	13	4.6	13	3.1	1.9
31	14	---	18	e20	---	18	---	13	---	6.2	4.6	---
MEAN	18.19	15.60	18.55	19.52	21.61	18.97	18.37	14.26	9.930	2.846	4.202	0.736
MAX	28	18	19	21	25	22	20	19	21	21	25	3.8
MIN	13	14	18	18	19	17	17	11	4.6	0.02	0.05	0.00
AC-FT	1120	928	1140	1200	1200	1170	1090	877	591	175	258	44

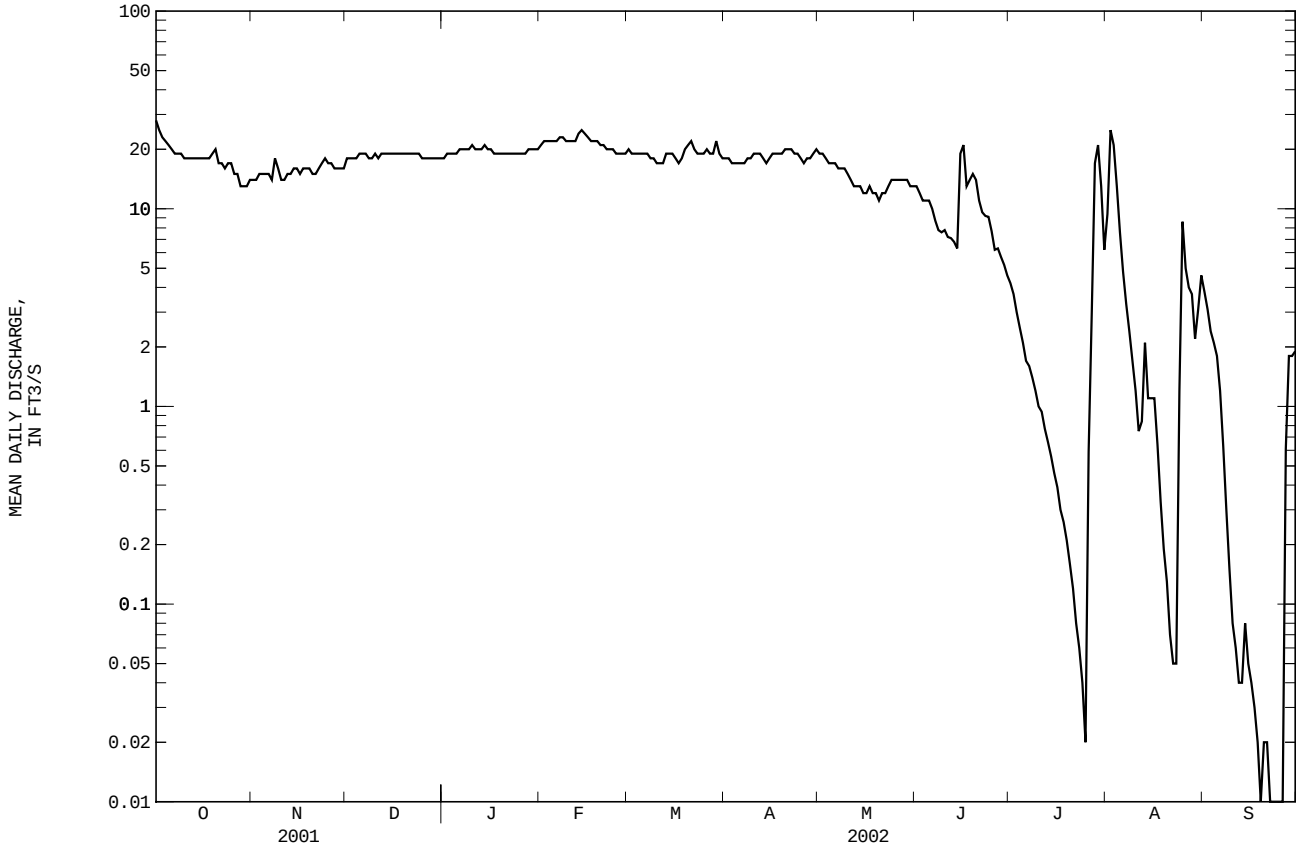
07141900 WALNUT CREEK AT ALBERT, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1959 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	31.67	21.84	10.64	11.20	18.61	58.79	57.22	44.92	100.0	98.93	59.32	78.83
MAX	492	352	89.7	116	271	576	779	248	1015	1038	508	1370
(WY)	1960	1997	1974	1974	1993	1960	1987	2001	1967	1993	1961	1959
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1965	1967	1967	1978	1981	1967	1981	1966	1985	1980	1983	1964

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1959 - 2002	
ANNUAL MEAN	108.1		13.52		49.40	
HIGHEST ANNUAL MEAN					189	1993
LOWEST ANNUAL MEAN					0.085	1983
HIGHEST DAILY MEAN	2540	Jun 11	28	Oct 1	10300	Sep 23 1959
LOWEST DAILY MEAN	4.4	Aug 30	0.00	Sep 23	0.00	Jul 29 1961
ANNUAL SEVEN-DAY MINIMUM	5.0	Aug 27	0.01	Sep 20	0.00	Jul 5 1963
MAXIMUM PEAK FLOW			96	Jun 15	12700	Sep 22 1959
MAXIMUM PEAK STAGE			5.28	Jun 15	25.75	Sep 22 1959
INSTANTANEOUS LOW FLOW			0.00	Jul 26	.00	most years
ANNUAL RUNOFF (AC-FT)	78270		9790		35790	
10 PERCENT EXCEEDS	152		20		61	
50 PERCENT EXCEEDS	19		17		3.0	
90 PERCENT EXCEEDS	11		0.52		0.00	

e Estimated



07141900 WALNUT CREEK AT ALBERT, KS--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1962 to June 1985, 2000 to current year.

REMARKS.--Unpublished records of intermittent sediment samples are available on the Internet at http://ks.waterdata.usgs.gov/nwis. Sediment samples are collected only at selected flow conditions.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)
OCT						
02...	1545	25	750	16.0	133	9.0
FEB						
12...	1430	22	1350	2.0	18	1.0
AUG						
02...	1130	25	1170	23.5	141	9.4

07142020 WALNUT CREEK BELOW CHEYENNE BOTTOMS DIVERSION NEAR GREAT BEND, KS

LOCATION.--Lat 38°25'08", long 98°45'53", in SW $^{1}/_{4}$ NW $^{1}/_{4}$ NE $^{1}/_{4}$ sec.09, T.19 S., R.13 W., Barton County, Hydrologic Unit 11030008, on left bank at downstream side of Cheyenne Bottoms diversion gate structure, 3 mi north of Great Bend, and at mile 13.5.

DRAINAGE AREA.--1,500 mi^2, does not include Dry Walnut Creek Basin, or any portion of the Arkansas River Basin above the Dundee diversion.

PERIOD OF RECORD.--October 1994 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,830.00 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	12	0.93	e0.58	e0.24	e0.50	0.42	0.60	0.82	0.05	0.49	0.20
2	26	13	0.93	e0.55	e0.24	e0.50	0.33	0.59	0.82	0.04	0.39	0.08
3	22	12	0.94	e0.54	e0.24	e0.50	0.28	0.67	0.93	0.03	0.32	0.06
4	21	14	0.96	0.50	e0.24	e0.50	0.22	0.63	0.93	0.01	0.76	0.29
5	20	11	0.88	0.53	e0.24	e0.52	0.22	0.79	0.88	0.02	1.1	0.28
6	18	e0.58	0.86	0.54	e0.24	0.53	0.20	0.94	0.77	0.0	1.3	0.24
7	17	e0.58	0.85	0.62	e0.24	0.48	0.20	1.7	0.74	0.01	1.3	0.25
8	16	0.54	0.81	0.55	e0.25	0.47	0.23	1.6	0.69	0.00	0.71	0.22
9	15	0.45	0.80	0.49	e0.26	0.48	0.21	1.2	0.62	0.00	0.51	0.00
10	15	0.46	0.77	0.47	e0.27	0.44	0.26	1.1	0.70	0.00	0.43	0.00
11	14	0.46	0.76	0.56	e0.28	0.57	0.30	1.0	0.77	e0.00	0.28	0.00
12	14	0.41	0.75	0.47	e0.30	0.68	0.46	1.4	0.79	e0.00	0.37	0.00
13	13	1.6	0.75	0.49	e0.32	0.56	0.52	1.4	0.92	e0.00	0.47	0.00
14	12	3.8	0.73	0.48	e0.33	0.45	0.58	1.2	0.83	e0.00	0.35	0.00
15	12	3.8	0.70	0.45	e0.36	0.43	0.63	1.1	0.71	e0.00	0.27	0.00
16	11	3.8	0.69	0.53	0.38	0.41	0.67	0.99	1.1	e0.00	0.15	0.00
17	11	3.8	0.68	0.52	0.43	0.36	0.65	0.95	5.0	e0.00	0.01	0.00
18	11	3.8	0.64	0.51	0.40	0.36	0.68	0.93	4.4	0.00	0.00	0.00
19	12	3.3	0.64	0.46	0.39	0.35	0.62	0.92	1.6	0.00	0.00	0.00
20	12	3.0	0.62	0.46	0.55	0.28	0.57	0.87	0.61	0.00	0.00	0.00
21	12	2.9	0.62	0.50	0.59	0.30	0.53	0.84	0.35	0.00	0.00	0.00
22	13	2.7	0.60	0.42	0.61	0.38	0.50	0.98	0.20	0.00	0.00	0.00
23	13	1.9	0.55	0.28	0.61	0.34	0.50	1.1	0.12	0.00	0.00	0.00
24	13	1.8	0.50	0.26	0.59	0.33	0.60	1.2	0.04	0.00	0.00	0.00
25	12	1.7	0.55	0.27	0.51	0.32	0.61	1.0	0.07	0.00	0.00	0.00
26	13	1.3	0.58	0.25	0.47	0.32	0.53	0.96	0.03	0.00	0.21	0.00
27	14	1.2	0.58	0.31	0.46	0.38	0.47	0.92	0.10	0.00	2.2	0.00
28	15	0.98	e0.58	0.26	0.48	0.37	0.43	0.81	0.19	0.00	1.6	0.00
29	14	0.94	e0.59	0.24	---	0.38	0.45	0.76	0.14	0.00	0.81	0.00
30	12	0.94	0.61	e0.24	---	0.46	0.57	0.78	0.11	0.00	0.47	0.00
31	12	---	e0.60	e0.24	---	0.52	---	0.89	---	0.59	0.36	---
MEAN	14.94	3.625	0.711	0.438	0.376	0.435	0.448	0.994	0.866	0.024	0.479	0.054
MAX	28	14	0.96	0.62	0.61	0.68	0.68	1.7	5.0	0.59	2.2	0.29
MIN	11	0.41	0.50	0.24	0.24	0.28	0.20	0.59	0.03	0.00	0.00	0.00
AC-FT	918	216	44	27	21	27	27	61	52	1.5	29	3.2

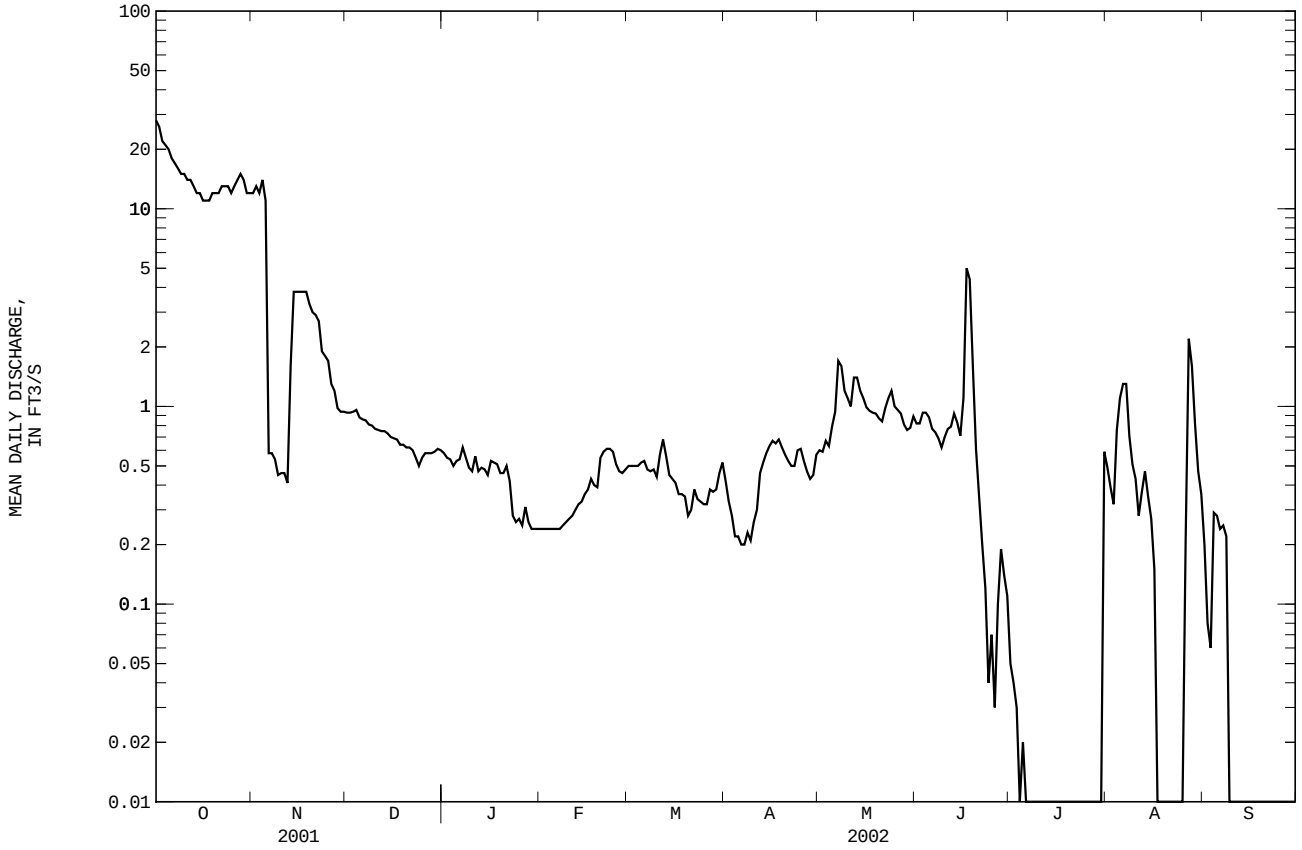
07142020 WALNUT CREEK BELOW CHEYENNE BOTTOMS DIVERSION NEAR GREAT BEND, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	12.64	31.02	11.34	12.51	18.34	34.07	47.90	80.82	101.1	71.84	86.62	35.92
MAX	30.0	169	56.5	37.8	59.2	103	122	195	360	238	201	153
(WY)	1997	1997	1997	1997	1998	2000	1998	1995	2001	1999	1999	1996
MIN	0.043	0.086	0.065	0.052	0.050	0.054	0.050	0.99	0.87	0.024	0.48	0.054
(WY)	1996	1995	1995	1995	1995	1995	1995	2002	2002	2002	2002	2002

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1995 - 2002	
ANNUAL MEAN	67.79		1.969		45.45	
HIGHEST ANNUAL MEAN					69.7	1999
LOWEST ANNUAL MEAN					1.97	2002
HIGHEST DAILY MEAN	809	Jun 11	28	Oct 1	809	Jun 11 2001
LOWEST DAILY MEAN	0.41	Nov 12	0.00	Jul 6	0.00	Oct 1 1995
ANNUAL SEVEN-DAY MINIMUM	0.50	Nov 6	0.00	Jul 8	0.00	Jul 8 2002
MAXIMUM PEAK FLOW			29	Oct 1	1170	Sep 18 2001
MAXIMUM PEAK STAGE			9.95	Oct 1	21.58	Sep 18 2001
INSTANTANEOUS LOW FLOW			0.00	Jun 24	0.00	Oct 1 1995
ANNUAL RUNOFF (AC-FT)	49080		1430		32930	
10 PERCENT EXCEEDS	167		7.4		98	
50 PERCENT EXCEEDS	11		0.51		11	
90 PERCENT EXCEEDS	0.93		0.00		0.07	

e Estimated



07142300 RATTLESNAKE CREEK NEAR MACKSVILLE, KS

LOCATION.--Lat 37°52'18", long 98°52'33", in SW $^{1}/_{4}$ SW $^{1}/_{4}$ sec.16, T.25 S., R.14 W., Stafford County, Hydrologic Unit 11030009, on left bank at downstream side of county highway bridge, 8 mi southeast of Macksville, and at mile 87.5.

DRAINAGE AREA.--784 mi^2, of which about 428 mi^2 is probably noncontributing.

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

GAGE.--Water-stage recorder. Datum of gage is 1,963.46 ft above NGVD of 1929 (Stafford County bench mark). Prior to July 14, 1960, nonrecording gage and crest-stage gages at same site and datum.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Aug 17	1600	*36	*3.84	No peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.9	3.8	5.6	6.0	e7.0	e7.6	8.0	7.7	5.2	0.16	0.00	0.00
2	3.8	4.1	5.2	5.9	e6.8	e7.4	8.0	7.5	4.6	0.20	0.00	0.00
3	3.8	4.3	5.1	6.3	e7.2	e7.2	7.7	7.3	3.9	0.15	0.00	0.00
4	3.9	4.5	5.1	6.4	7.2	e7.0	7.8	7.2	5.2	0.12	0.00	0.00
5	4.2	4.3	4.9	6.5	7.4	e7.6	7.8	7.0	5.9	0.13	0.00	0.00
6	4.4	4.3	4.7	6.3	7.4	8.0	7.7	6.7	5.2	0.10	0.00	0.00
7	4.4	4.6	4.7	6.3	7.4	8.1	8.0	6.8	4.8	0.07	0.00	0.00
8	4.2	4.4	4.7	6.6	7.6	8.3	8.5	8.4	4.4	0.11	0.00	0.00
9	4.4	4.5	4.7	6.6	8.1	8.7	8.3	7.7	4.0	0.08	0.00	0.00
10	4.2	4.9	5.0	6.5	8.0	8.1	7.9	7.4	3.7	0.05	0.00	0.00
11	4.3	5.1	5.1	6.4	7.6	8.0	7.7	9.4	3.6	0.21	0.00	0.00
12	4.5	5.3	5.2	6.5	7.7	7.8	7.4	17	5.1	0.06	0.00	0.00
13	4.5	5.4	5.1	6.6	7.5	8.3	7.3	12	4.8	0.08	0.05	0.00
14	4.3	5.4	5.2	6.6	7.5	8.7	7.4	9.6	4.1	0.06	0.00	0.08
15	4.2	5.3	5.3	6.7	7.5	8.6	7.3	8.6	3.9	0.02	0.00	0.00
16	4.1	5.3	5.2	6.8	7.5	8.3	7.1	8.4	4.2	0.00	0.00	0.00
17	4.3	5.4	5.1	6.7	7.4	8.4	7.0	7.9	3.8	0.00	19	0.00
18	4.4	6.1	5.4	6.8	7.7	8.5	6.9	7.8	3.4	0.00	17	0.00
19	4.4	5.4	5.1	7.0	7.8	8.7	6.9	7.7	2.9	0.00	3.7	0.00
20	4.4	5.3	5.3	6.9	7.7	8.7	8.6	7.5	2.5	0.00	0.50	0.00
21	4.3	5.5	5.4	6.9	7.6	8.5	11	7.3	2.4	0.00	0.00	0.00
22	4.5	5.5	5.3	7.3	7.5	8.3	8.8	7.0	2.4	0.00	0.00	0.00
23	4.3	5.5	5.1	7.2	7.6	8.2	8.4	6.9	1.9	0.00	0.00	0.00
24	3.8	5.6	5.3	7.2	8.1	8.5	8.2	7.1	1.4	0.00	0.67	0.00
25	3.6	5.5	5.5	7.1	7.9	8.3	7.7	7.1	1.2	0.00	0.34	0.00
26	3.7	5.7	5.7	7.3	e7.8	8.3	7.9	6.8	1.3	0.00	0.02	0.00
27	3.8	5.4	5.8	7.3	e7.4	8.3	8.1	6.7	1.1	0.00	0.0	0.00
28	3.9	5.4	5.7	7.5	e7.0	8.2	7.5	6.9	0.68	0.31	0.00	0.00
29	4.2	5.7	5.5	e7.4	---	8.2	7.6	6.6	0.28	0.07	0.00	0.00
30	3.9	5.9	5.7	e7.2	---	8.1	7.9	6.0	0.13	0.00	0.00	0.00
31	3.8	---	5.9	e7.0	---	8.0	---	5.6	---	0.00	0.00	---
MEAN	4.142	5.113	5.245	6.768	7.532	8.158	7.880	7.858	3.266	0.064	1.332	0.003
MAX	4.5	6.1	5.9	7.5	8.1	8.7	11	17	5.9	0.31	19	0.08
MIN	3.6	3.8	4.7	5.9	6.8	7.0	6.9	5.6	0.13	0.00	0.00	0.00
AC-FT	255	304	323	416	418	502	469	483	194	3.9	82	0.2

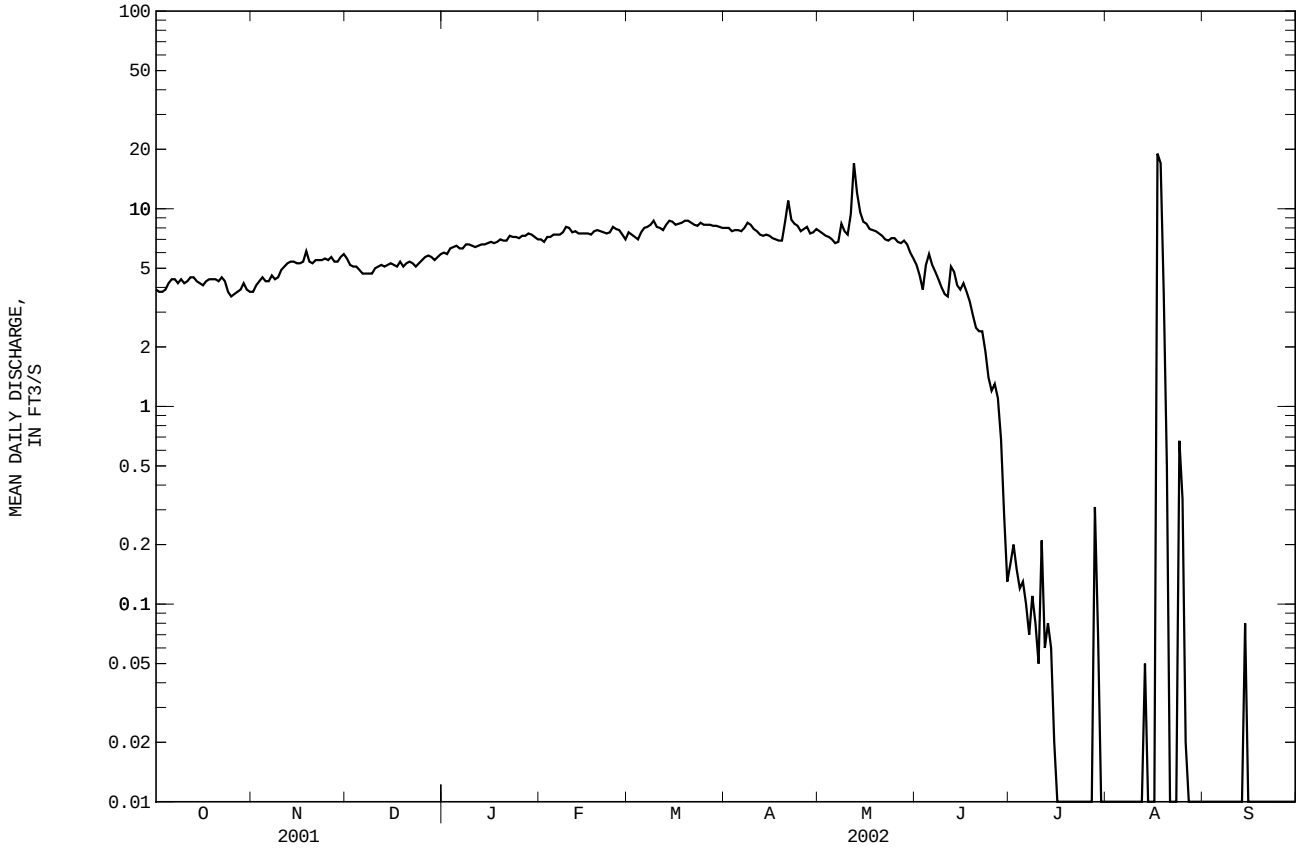
07142300 RATTLESNAKE CREEK NEAR MACKSVILLE, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	22.65	18.40	18.22	17.87	19.89	30.30	28.91	33.98	37.54	22.49	16.38	35.34
MAX	322	118	124	94.1	89.7	188	247	156	248	179	68.4	671
(WY)	1974	1974	1974	1974	1974	1973	1973	1995	1975	1993	1975	1973
MIN	0.000	0.011	0.11	0.12	0.093	0.099	0.19	0.067	3.27	0.019	0.000	0.000
(WY)	1992	1992	1992	1992	1992	1992	1992	1992	2002	1991	1991	1991

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1960 - 2002	
ANNUAL MEAN	14.06		4.765		25.15	
HIGHEST ANNUAL MEAN					110	1973
LOWEST ANNUAL MEAN					1.46	1991
HIGHEST DAILY MEAN	263	May 7	19	Aug 17	7330	Sep 27 1973
LOWEST DAILY MEAN	0.79	Aug 27	0.00	Jul 16	0.00	Sep 5 1982
ANNUAL SEVEN-DAY MINIMUM	0.81	Aug 22	0.00	Jul 16	0.00	Aug 12 1988
MAXIMUM PEAK FLOW			36	Aug 17	17700	Sep 26 1973
MAXIMUM PEAK STAGE			3.84	Aug 17	11.02	Sep 26 1973
INSTANTANEOUS LOW FLOW			0.00	Jul 6	.00	at times
ANNUAL RUNOFF (AC-FT)	10180		3450		18220	
10 PERCENT EXCEEDS	24		8.1		39	
50 PERCENT EXCEEDS	9.6		5.3		15	
90 PERCENT EXCEEDS	1.9		0.00		1.1	

e Estimated



07142575 RATTLESNAKE CREEK NEAR ZENITH, KS

LOCATION.--Lat 38°05'37", long 98°32'45", in SW $^{1}/_{4}$ SW $^{1}/_{4}$ NW $^{1}/_{4}$ sec.33, T.22 S., R.11 W., Stafford County, Hydrologic Unit 11030009, on left bank at downstream side of county highway bridge, 3.0 mi west and 9.5 mi north of Zenith, and at mile 19.3.

WATER-DISCHARGE RECORDS

DRAINAGE AREA.--1,047 mi^2, of which 519 mi^2 is noncontributing.

PERIOD OF RECORD.--May 1973 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 1,790 ft above NGVD of 1929, from topographic map. Prior to Aug. 9, 1995, water-stage recorder at site 2.8 mi downstream at different datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Natural flow affected by ground-water withdrawals, diversions for irrigation, and return flow from irrigated areas. Satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 400 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jun 12	1900	*136	*13.63	No peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.4	8.6	14	e12	e14	e20	21	22	11	7.4	4.2	5.1
2	7.5	8.6	15	e10	e16	e21	20	21	11	8.2	4.0	3.8
3	7.1	8.9	15	e14	e18	e22	20	21	9.7	8.7	4.1	4.1
4	7.2	9.2	16	e15	e20	e23	20	21	9.6	7.6	3.7	4.3
5	7.4	9.5	15	e16	e22	e24	20	20	11	7.4	3.4	4.2
6	7.4	9.7	15	e20	e24	26	20	19	9.7	7.2	3.3	4.0
7	7.4	9.8	15	e24	e25	27	21	19	9.2	6.7	3.5	3.1
8	7.3	9.9	15	e24	27	26	21	18	9.2	6.5	3.4	3.1
9	7.5	11	15	e22	30	e25	22	18	9.1	6.3	3.3	3.0
10	7.6	11	15	20	31	e24	23	18	8.8	6.5	3.5	4.0
11	7.5	12	15	19	30	24	21	18	9.1	8.1	3.4	3.8
12	7.8	12	15	18	29	24	21	24	86	8.1	5.0	3.9
13	7.8	13	16	18	28	23	21	29	81	7.2	17	3.4
14	7.6	14	16	e16	27	23	21	24	35	6.5	20	3.9
15	6.8	13	16	e17	26	23	21	23	26	6.3	12	5.5
16	5.3	12	16	e18	25	23	20	21	71	6.1	8.2	3.5
17	4.5	13	15	19	25	22	20	21	48	5.7	7.4	3.4
18	4.8	13	15	19	25	22	20	19	27	5.4	7.1	3.3
19	5.4	13	15	19	24	23	20	19	21	5.2	6.5	3.4
20	5.6	13	16	18	24	23	23	18	18	5.0	6.3	3.3
21	6.0	13	17	18	24	23	34	17	16	4.5	6.0	3.0
22	6.5	13	17	18	23	23	31	16	15	4.8	5.6	2.9
23	6.9	13	e11	19	23	23	27	16	13	5.2	5.3	3.0
24	7.2	14	e10	19	23	23	25	16	12	4.6	7.8	3.3
25	7.6	14	e12	19	23	22	24	16	11	4.3	7.3	3.5
26	7.6	14	e14	18	e22	23	24	15	9.6	4.1	6.5	3.6
27	8.1	e10	e14	19	e20	22	23	15	9.2	4.2	6.0	4.0
28	8.3	e8.0	e14	19	e18	21	22	14	8.6	5.1	5.7	4.1
29	8.2	e16	e15	18	---	21	22	14	8.0	5.6	5.6	4.1
30	8.6	e16	e14	e14	---	21	21	13	7.5	5.1	5.5	5.3
31	9.1	---	e12	e12	---	21	---	12	---	4.6	5.3	---
MEAN	7.129	11.84	14.68	17.77	23.79	22.94	22.30	18.61	21.01	6.071	6.319	3.763
MAX	9.1	16	17	24	31	27	34	29	86	8.7	20	5.5
MIN	4.5	8.0	10	10	14	20	20	12	7.5	4.1	3.3	2.9
AC-FT	438	705	902	1090	1320	1410	1330	1140	1250	373	389	224

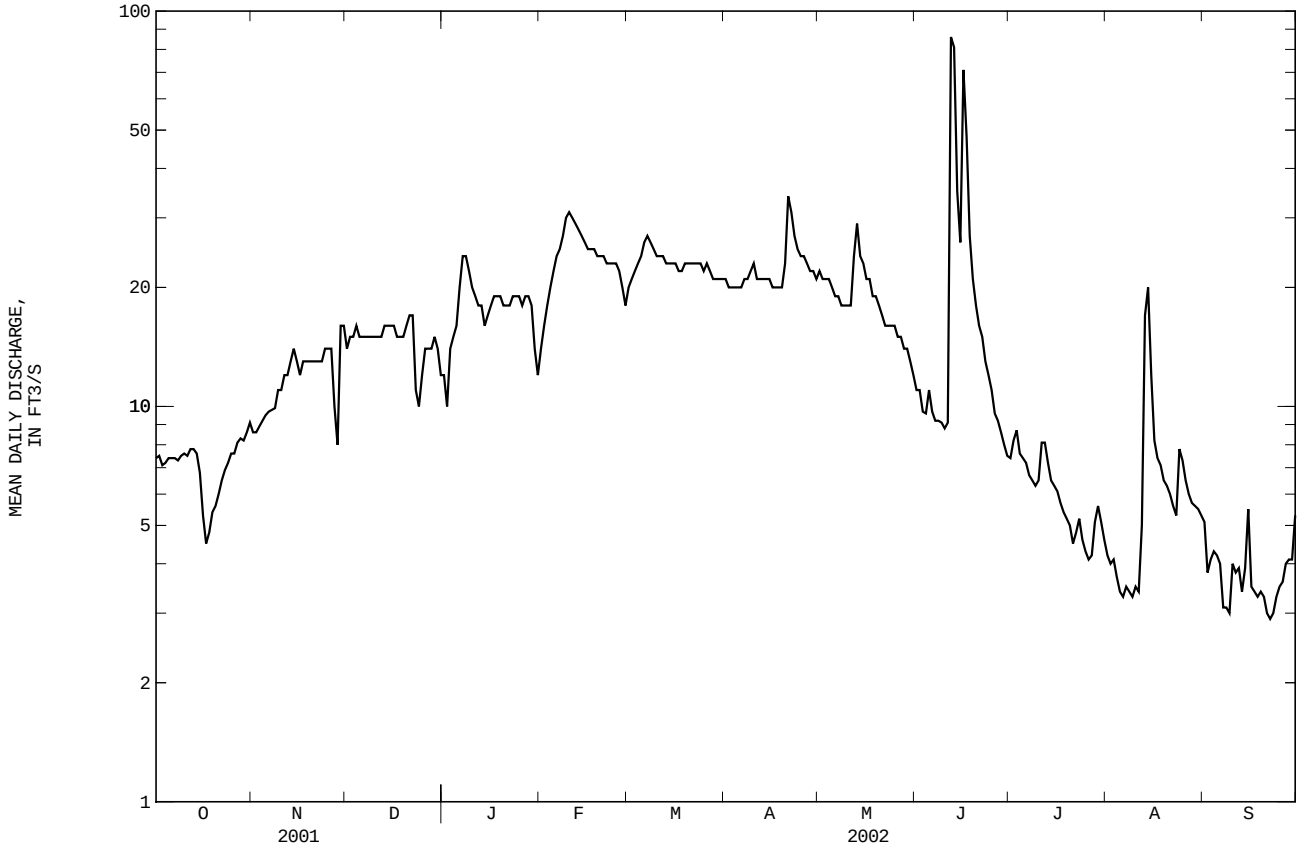
07142575 RATTLESNAKE CREEK NEAR ZENITH, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	42.52	32.64	38.27	36.86	44.03	62.82	64.30	75.21	78.91	73.00	20.85	17.49
MAX	691	185	270	192	141	207	272	371	596	1099	79.5	93.3
(WY)	1974	1974	1974	1974	1974	1987	1976	1995	1993	1993	1975	1996
MIN	0.046	3.27	5.56	6.48	6.64	7.78	6.47	5.24	10.2	1.54	0.88	0.091
(WY)	1992	1985	1992	1992	1992	1992	1992	1992	1991	1991	1991	1991

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1974 - 2002	
ANNUAL MEAN	39.26		14.61		48.95	
HIGHEST ANNUAL MEAN					186	1993
LOWEST ANNUAL MEAN					6.59	1991
HIGHEST DAILY MEAN	554	Jun 9	86	Jun 12	13600	Jul 19 1993
LOWEST DAILY MEAN	3.5	Sep 12	2.9	Sep 22	0.00	Sep 14 1984
ANNUAL SEVEN-DAY MINIMUM	4.1	Sep 10	3.2	Sep 18	0.00	Sep 11 1991
MAXIMUM PEAK FLOW			136	Jun 12	29300	Jul 18 1993
MAXIMUM PEAK STAGE			13.63	Jun 12	17.18	Jul 2 1999
INSTANTANEOUS LOW FLOW			2.8	Sep 7	0.00	Sep 14 1984
ANNUAL RUNOFF (AC-FT)	28420		10580		35460	
10 PERCENT EXCEEDS	77		24		81	
50 PERCENT EXCEEDS	21		14		28	
90 PERCENT EXCEEDS	6.6		4.2		4.7	

e Estimated



07142575 RATTLESNAKE CREEK NEAR ZENITH, KS--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1998 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: November 1998 to current year.
pH: November 1998 to current year.
WATER TEMPERATURE: November 1998 to current year.
DISSOLVED OXYGEN: November 1998 to current year.
TURBIDITY: November 1998 to current year.

INSTRUMENTATION.--Multiparameter water-quality monitor.

REMARKS.--Records fair. Interruptions in record are due to ice conditions or malfunction of the recording instrument or sensors. Instruments used to measure turbidity conform to ISO 7027 standards.

EXTREMES FOR PERIOD OF RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 11,600 microsiemens/cm, Sept. 9, 2002; minimum, 164 microsiemens/cm, Mar. 25, 2000.
pH: Maximum, 9.4 standard units, Aug. 4, 2000; minimum, 7.2 standard units, June 10, 2001.
WATER TEMPERATURE: Maximum, 38.0°C, July 10, 2002; minimum, -0.1°C, Dec. 31, 1998.
DISSOLVED OXYGEN: Maximum 19.3 mg/L, Aug. 6, 1999; minimum, 3.2 mg/L, Aug. 25, 1999.
TURBIDITY: Maximum, 1,100 NTU, Aug. 12, 2002; minimum, 4 NTU, Sept. 15, 2000.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 11,600 microsiemens/cm, Sept. 9; minimum, 1,030 microsiemens/cm, June 13.
pH: Maximum, 9.4 units, Aug. 7; minimum, 7.5 units, many days.
WATER TEMPERATURE: Maximum, 38.0°C, July 10; minimum, -0.2°C, Jan. 20.
DISSOLVED OXYGEN: Maximum, 15.2 mg/L, Oct. 19; minimum, 2.6 mg/L, June 12.
TURBIDITY: Maximum, 1,100 NTU, Aug. 12; minimum, 3.6 NTU, many days.

SPECIFIC CONDUCTANCE FROM DCP, in US/CM @ 25C, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	8050	7940	7980	8040	7940	7980	5900	5630	5740	---	---	---
2	8190	8050	8100	7970	7870	7910	5760	5420	5570	---	---	---
3	8270	8140	8170	7890	7780	7840	5450	5090	5280	---	---	---
4	8230	8090	8140	7780	7670	7710	5110	4940	5040	---	---	---
5	8160	7940	8100	7680	7610	7660	4950	4870	4920	---	---	---
6	8170	8050	8110	7640	7540	7590	5060	4910	5000	---	---	---
7	8120	7980	8060	7580	7390	7490	5030	4930	4980	---	---	---
8	8090	8020	8060	7540	7410	7500	5060	4960	5000	---	---	---
9	8210	8020	8100	7430	7180	7360	5110	5020	5070	---	---	---
10	8240	8110	8170	7180	6680	6940	5270	5080	5180	---	---	---
11	8170	8050	8100	6680	6430	6570	5360	5250	5290	---	---	---
12	8060	8000	8030	6640	6430	6540	5300	5180	5230	4240	4100	4160
13	8100	7980	8030	6430	6180	6340	5180	5050	5120	4360	4240	4330
14	8070	7980	8030	6180	6010	6070	5130	4840	4950	4480	4140	4380
15	8480	7970	8110	6010	5880	5940	4980	4750	4880	4330	4140	4220
16	9200	8070	8750	5900	5850	5880	4940	4640	4780	4460	4220	4370
17	9490	9200	9360	5900	5830	5870	4980	4670	4770	4610	4380	4520
18	9490	8280	8820	5850	5760	5800	5100	4780	5000	4680	4460	4570
19	8610	8260	8510	5830	5780	5810	5200	5080	5140	4880	4430	4610
20	8870	8580	8760	5930	5760	5840	5270	5080	5170	5520	4360	4820
21	8820	8760	8790	5760	5440	5610	5240	4980	5110	5160	4340	4670
22	8860	8720	8800	5660	5610	5640	5140	4800	4990	5490	4290	4710
23	8770	8690	8730	5650	5580	5620	5240	4870	5080	5340	3900	4440
24	8750	8540	8660	5590	5480	5540	5740	4920	5310	4340	4060	4170
25	8720	8440	8570	5660	5500	5590	6000	4750	5420	4420	4260	4340
26	---	---	---	5600	5460	5520	5840	4850	5350	4540	4410	4450
27	---	---	---	6240	5420	5800	5700	4740	5290	4870	4330	4520
28	---	---	---	6840	5420	6220	5600	4980	5410	4460	4310	4400
29	8120	7940	8030	6440	5540	5920	5380	4700	5080	4450	4370	4400
30	8120	8040	8080	6050	5350	5800	5360	4540	4960	4850	4450	4640
31	8120	8020	8080	---	---	---	---	---	---	5680	4340	4970
MONTH	---	---	---	8040	5350	6460	---	---	---	---	---	---

07142575 RATTLESNAKE CREEK NEAR ZENITH, KS--Continued

SPECIFIC CONDUCTANCE FROM DCP, in US/CM @ 25C, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	6140	4340	4880	5200	4280	4560	4310	4120	4220	4270	3910	4080
2	4960	4190	4430	5740	4360	5030	4370	4170	4290	4450	4180	4330
3	4480	4010	4260	5790	4320	4850	4460	4210	4330	4430	4210	4330
4	4170	3730	3970	4590	4140	4360	4340	4200	4260	4420	4190	4310
5	4050	3780	3900	4320	3180	3920	4390	4280	4350	4500	4280	4400
6	4050	3500	3680	4060	3440	3870	4390	4250	4360	4570	4320	4460
7	3870	3580	3770	3810	3370	3610	4340	4230	4290	4560	4380	4480
8	4370	3480	3840	3740	3370	3560	4260	4000	4110	4640	4440	4560
9	3670	3290	3510	4920	3430	3960	4010	3830	3930	4700	4500	4610
10	4370	3050	3430	4690	3380	3970	3830	3730	3770	4810	4580	4680
11	3660	2910	3250	4680	3850	4110	4100	3760	3960	4810	4290	4660
12	4090	3080	3420	4250	3970	4110	4150	4020	4100	4290	3150	3950
13	3540	3240	3460	4090	3960	4040	4260	4050	4160	3230	2330	2680
14	3830	3540	3760	4150	4060	4100	4260	4090	4210	3400	2570	3030
15	4100	3830	3970	4220	4060	4130	4140	3960	4080	3470	3170	3310
16	4040	3980	4010	4140	4040	4100	4140	3980	4090	3600	3290	3460
17	4100	3700	4020	4190	4050	4120	4120	3790	4010	3830	3520	3710
18	4030	3700	3880	4180	4040	4140	4030	---	---	---	3800	---
19	4140	4030	4110	4090	3980	4040	3800	3640	3720	---	---	---
20	4160	4110	4140	4180	3980	4070	3750	3300	3570	---	---	---
21	4140	4090	4120	4110	4040	4080	3510	2640	3170	5020	---	---
22	4210	4130	4170	4220	4070	4180	2730	2260	2540	5120	4940	5020
23	4250	4190	4220	4290	4180	4240	2850	2680	2750	5180	5020	5080
24	4300	4170	4260	4340	4250	4310	3070	2830	2960	5240	5010	5120
25	4440	4260	4340	4320	4250	4300	3350	---	---	5210	5070	5130
26	6340	4440	4930	4260	4070	4150	3550	3320	3430	5290	5080	5190
27	5450	4410	4830	4220	4130	4190	3700	3450	3560	5190	5020	5130
28	5450	3930	4500	4380	4200	4280	3780	---	---	5300	5150	5230
29	---	---	---	4210	4020	4140	3840	---	---	5280	5050	5210
30	---	---	---	4250	4050	4160	4040	---	---	---	---	---
31	---	---	---	4240	4050	4160	---	---	---	---	---	---
MONTH	6340	2910	4040	5790	3180	4160	4460	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	8600	8470	8530	8290	7900	8130	9590	9310	9450
2	---	---	---	8470	7080	7940	8550	8290	8440	11100	9590	10600
3	6860	---	---	7930	6710	7250	8800	8370	8570	10400	9790	10000
4	6980	6590	6780	8180	6910	7720	9210	8800	9030	9850	9630	9730
5	6880	6590	6750	8410	8180	8280	9750	9110	9410	9920	9690	9810
6	6910	6730	6820	8560	8350	8430	9780	9530	9650	9900	9710	9830
7	6910	6750	6850	8560	7630	8140	9880	9520	9650	11300	9900	11000
8	6920	6710	6840	9290	8250	8870	9520	9270	9450	11400	10700	11000
9	6810	6460	6640	8980	8780	8880	9270	9050	9190	11600	10700	11100
10	7100	6640	6820	9010	6780	8480	9050	8720	8870	11300	9270	10100
11	7510	4420	6930	8060	6390	7600	8860	8660	8730	10100	9380	9920
12	4760	1120	2370	7450	6110	6710	8740	3500	7500	10100	9810	9950
13	1730	1030	1230	7930	6860	7320	3830	2750	3380	10900	9300	10100
14	3670	1730	2850	8570	7930	8360	4400	2920	3440	10900	6410	9680
15	4710	3320	4130	8700	8570	8630	6200	4390	5020	8550	6380	7600
16	3320	1800	2370	8860	8700	8740	8450	6190	7590	9370	8550	9130
17	3350	1890	2500	9040	8860	8950	8900	8450	8720	9380	8680	8950
18	4640	3350	4100	9200	8960	9080	9010	8820	8900	9780	9260	9660
19	5720	4640	5230	9280	9060	9210	9090	8780	8940	10000	9330	9640
20	6580	5720	6210	9400	9250	9340	8990	8720	8830	10100	9290	9690
21	7180	6560	6880	9550	9370	9480	9220	8800	8990	10700	10100	10400
22	7470	7090	7290	9550	8700	9150	9070	8700	8790	10900	10600	10700
23	7860	7300	7530	8950	8500	8800	9110	8720	8830	10800	10200	10500
24	7980	7680	7830	8600	8140	8290	8780	6440	7110	10200	9780	9950
25	8190	7930	8060	9190	8600	8940	7130	6300	6570	9980	9730	9830
26	8320	8160	8250	9390	9120	9240	7990	6870	7600	9900	9600	9730
27	8370	8200	8300	9320	9090	9260	8410	7990	8100	9600	9420	9520
28	8450	8320	8370	9090	7740	8390	8850	8410	8690	9460	9380	9410
29	8560	8360	8460	7940	6360	7040	9170	8820	9000	9690	9420	9550
30	8600	8460	8540	6740	5940	6320	9300	9050	9170	9820	8960	9340
31	---	---	---	7900	6120	7270	9440	9220	9320	---	---	---
MONTH	---	---	---	9550	5940	8340	9880	2750	8180	11600	6380	9860

07142575 RATTLESNAKE CREEK NEAR ZENITH, KS--Continued

PH, WH, FIELD, in (STANDARD UNITS), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	9.1	8.2	8.7	8.5	8.1	8.3	8.4	8.3	8.3	7.8	7.7	7.7
2	9.0	8.2	8.7	8.5	8.1	8.3	8.4	8.3	8.3	---	---	---
3	9.0	8.3	8.6	8.4	8.0	8.2	8.5	8.3	8.3	---	---	---
4	8.9	8.2	8.6	8.4	8.0	8.2	8.6	8.3	8.4	---	---	---
5	8.8	8.3	8.6	8.4	8.0	8.2	8.6	8.2	8.4	---	---	---
6	8.8	8.4	8.6	8.4	8.0	8.2	8.6	8.3	8.4	---	---	---
7	8.8	8.3	8.6	8.4	8.0	8.2	8.6	8.3	8.4	---	---	---
8	8.9	8.3	8.6	8.3	8.1	8.2	8.6	8.3	8.4	---	---	---
9	9.0	8.2	8.6	8.3	8.2	8.2	8.6	8.3	8.4	---	---	---
10	8.9	8.1	8.6	8.3	8.2	8.2	8.5	8.3	8.4	---	---	---
11	8.9	8.2	8.6	8.3	8.2	8.2	8.5	8.2	8.3	---	---	---
12	8.9	8.2	8.6	8.2	8.1	8.2	8.4	8.2	8.3	8.8	8.6	8.7
13	8.7	8.2	8.5	8.3	8.1	8.2	8.5	8.2	8.3	8.8	8.6	8.7
14	8.8	8.2	8.5	8.4	8.2	8.2	8.5	8.2	8.3	8.8	8.6	8.7
15	8.8	8.1	8.5	8.4	8.2	8.3	8.5	8.2	8.3	8.8	8.7	8.7
16	8.7	8.1	8.4	8.4	8.2	8.3	8.6	8.2	8.3	8.8	8.7	8.7
17	8.7	8.0	8.4	8.3	8.1	8.2	8.5	8.2	8.3	8.7	8.5	8.6
18	8.9	8.0	8.4	8.3	8.1	8.2	8.4	8.2	8.2	8.6	8.5	8.6
19	8.9	8.1	8.6	8.4	8.2	8.3	8.4	8.1	8.2	8.6	8.5	8.6
20	8.9	8.0	8.5	8.4	8.3	8.3	8.4	8.1	8.2	8.6	8.5	8.6
21	8.9	8.0	8.6	8.5	8.3	8.4	8.4	8.0	8.2	8.6	8.5	8.6
22	8.8	8.0	8.5	8.5	8.3	8.4	8.4	8.1	8.2	8.6	8.5	8.6
23	8.7	8.0	8.3	8.5	8.2	8.3	8.3	8.1	8.2	8.7	8.6	8.6
24	8.6	8.0	8.3	8.5	8.3	8.4	8.3	8.0	8.2	8.7	8.6	8.6
25	8.5	8.1	8.3	8.5	8.3	8.4	8.3	8.0	8.2	8.6	8.5	8.6
26	8.4	8.1	8.3	8.6	8.3	8.4	8.2	8.1	8.2	8.7	8.5	8.6
27	8.5	8.1	8.3	8.5	8.3	8.4	8.2	8.0	8.1	8.7	8.5	8.6
28	8.5	8.1	8.3	8.4	8.2	8.3	8.2	8.1	8.1	8.7	8.5	8.6
29	8.6	8.1	8.3	8.4	8.2	8.3	8.2	8.1	8.1	8.6	8.4	8.5
30	8.6	8.1	8.3	8.4	8.3	8.3	8.2	8.0	8.1	8.5	8.4	8.4
31	8.5	8.1	8.3	---	---	---	8.0	7.8	7.9	8.4	8.2	8.3
MAX	9.1	8.4	8.7	8.6	8.3	8.4	8.6	8.3	8.4	---	---	---
MIN	8.4	8.0	8.3	8.2	8.0	8.2	8.0	7.8	7.9	---	---	---

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		FEBRUARY			MARCH			APRIL			MAY	
1	8.4	8.2	8.3	8.3	8.2	8.3	8.6	8.3	8.4	8.8	8.1	8.5
2	8.2	8.1	8.2	8.2	8.1	8.2	8.6	8.3	8.5	8.8	8.4	8.6
3	8.2	8.1	8.2	8.2	8.0	8.1	8.6	8.4	8.5	8.8	8.2	8.5
4	8.3	8.2	8.3	8.1	8.0	8.0	8.7	8.3	8.5	8.7	8.2	8.5
5	8.4	8.3	8.3	8.3	8.1	8.2	8.7	8.3	8.5	8.7	8.1	8.5
6	8.5	8.4	8.4	8.4	8.3	8.3	8.5	8.3	8.4	8.7	8.1	8.4
7	8.5	8.4	8.4	8.4	8.3	8.4	8.6	8.3	8.4	8.8	7.9	8.3
8	8.5	8.4	8.4	8.4	8.3	8.4	8.6	8.3	8.4	8.8	8.1	8.4
9	8.5	8.4	8.4	8.4	8.3	8.4	8.7	8.3	8.4	8.8	8.1	8.5
10	8.4	8.3	8.4	8.5	8.3	8.4	8.6	8.3	8.4	8.7	8.1	8.4
11	8.4	8.3	8.4	8.5	8.4	8.4	8.7	8.3	8.5	8.6	8.1	8.3
12	8.4	8.3	8.4	8.5	8.4	8.4	8.8	8.3	8.5	8.3	8.0	8.1
13	8.4	8.3	8.4	8.5	8.3	8.4	8.7	8.3	8.5	8.3	8.0	8.1
14	8.4	8.3	8.4	8.6	8.3	8.4	8.7	8.3	8.5	8.6	8.0	8.3
15	8.4	8.3	8.4	8.6	8.4	8.4	8.8	8.3	8.5	8.6	8.2	8.3
16	8.4	8.3	8.4	8.6	8.3	8.4	8.8	8.2	8.5	8.4	8.1	8.2
17	8.5	8.3	8.4	8.6	8.3	8.4	8.8	8.3	8.5	8.5	8.2	8.3
18	8.5	8.3	8.4	8.6	8.3	8.4	8.8	8.2	8.6	8.5	8.2	8.3
19	8.5	8.3	8.4	8.5	8.3	8.4	8.9	8.3	8.6	8.6	8.1	8.3
20	8.5	8.3	8.4	8.5	8.3	8.4	8.7	8.4	8.5	8.6	8.2	8.4
21	8.5	8.3	8.4	8.5	8.3	8.4	8.5	8.1	8.3	8.6	8.2	8.4
22	8.5	8.3	8.4	8.5	8.3	8.4	8.6	8.0	8.3	8.6	8.2	8.4
23	8.5	8.3	8.4	8.5	8.3	8.4	8.8	8.3	8.6	8.6	8.2	8.4
24	8.6	8.3	8.4	8.4	8.3	8.4	8.8	8.3	8.4	8.5	8.2	8.4
25	8.5	8.3	8.4	8.4	8.3	8.4	8.8	8.4	8.5	8.6	8.3	8.4
26	8.4	8.2	8.3	8.5	8.3	8.4	8.7	8.4	8.6	8.7	8.2	8.4
27	8.3	8.2	8.2	8.5	8.3	8.4	8.8	8.3	8.5	8.7	8.2	8.4
28	8.3	8.2	8.2	8.5	8.3	8.4	8.8	8.4	8.6	8.7	8.1	8.4
29	---	---	---	8.6	8.3	8.4	8.8	8.3	8.6	8.8	8.1	8.4
30	---	---	---	8.6	8.2	8.4	8.8	8.2	8.5	8.7	8.1	8.4
31	---	---	---	8.6	8.3	8.4	---	---	---	8.7	8.1	8.4
MAX	8.6	8.4	8.4	8.6	8.4	8.4	8.9	8.4	8.6	8.8	8.4	8.6
MIN	8.2	8.1	8.2	8.1	8.0	8.0	8.5	8.0	8.3	8.3	7.9	8.1

07142575 RATTLESNAKE CREEK NEAR ZENITH, KS--Continued

PH, WH, FIELD, in (STANDARD UNITS), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	8.8	8.1	8.4	8.6	7.9	8.3	8.9	7.7	8.3	8.9	8.0	8.4
2	8.8	8.1	8.5	8.6	7.9	8.2	9.0	7.8	8.4	8.7	7.9	8.2
3	8.7	8.2	8.4	8.8	7.9	8.4	9.2	7.8	8.4	9.1	7.9	8.3
4	8.5	8.0	8.2	8.7	7.9	8.4	9.1	7.8	8.4	9.2	7.9	8.4
5	8.6	8.0	8.3	8.8	7.9	8.4	---	7.8	---	8.9	7.9	8.3
6	8.8	8.0	8.4	8.9	7.9	8.4	9.3	---	---	8.9	7.8	8.2
7	8.9	8.0	8.5	9.0	7.9	8.6	9.4	7.9	8.6	8.5	7.7	8.1
8	8.8	8.0	8.5	8.8	7.9	8.5	9.4	7.9	8.6	8.6	7.7	8.1
9	8.8	8.0	8.4	8.7	7.9	8.4	9.2	7.9	8.5	8.6	7.7	8.0
10	8.8	8.0	8.3	8.7	7.8	8.3	9.3	7.9	8.5	8.8	7.8	8.3
11	8.8	7.8	8.3	8.9	7.7	7.9	9.2	7.9	8.6	8.8	7.8	8.3
12	7.8	7.6	7.7	8.9	7.9	8.6	9.3	7.8	8.3	8.6	7.8	8.2
13	7.6	7.5	7.5	8.8	8.0	8.6	7.9	7.6	7.7	8.5	7.8	8.0
14	8.0	7.5	7.7	8.9	7.9	8.6	8.0	7.5	7.7	8.3	7.8	8.0
15	8.1	7.7	7.8	8.9	8.0	8.6	8.5	7.8	7.9	8.8	7.8	8.2
16	7.7	7.5	7.5	8.8	8.0	8.5	8.8	7.9	8.3	8.6	7.8	8.1
17	7.9	7.5	7.6	8.8	7.9	8.4	8.6	7.9	8.3	8.7	7.8	8.1
18	8.3	7.8	8.0	8.8	7.8	8.3	8.9	8.0	8.4	8.7	7.9	8.2
19	8.6	8.0	8.2	8.8	7.7	8.3	8.9	8.0	8.5	8.5	7.8	8.1
20	8.7	8.1	8.4	8.8	7.8	8.3	8.9	7.9	8.5	8.7	7.8	8.1
21	8.8	8.1	8.5	8.9	7.8	8.4	9.0	8.0	8.5	8.7	7.8	8.2
22	8.7	8.1	8.5	9.0	7.8	8.5	9.0	8.0	8.4	8.6	7.8	8.1
23	8.9	8.1	8.5	8.9	7.8	8.4	9.0	7.9	8.4	8.6	7.8	8.0
24	8.9	8.1	8.5	8.7	7.8	8.3	9.0	7.8	8.2	8.8	7.8	8.3
25	8.8	8.0	8.5	8.9	7.8	8.2	8.9	7.8	8.3	8.8	8.0	8.3
26	8.6	7.9	8.4	8.9	7.8	8.3	8.9	7.9	8.4	8.8	7.9	8.4
27	8.7	7.9	8.4	8.8	7.8	8.3	8.9	8.0	8.4	8.7	8.0	8.4
28	8.6	7.9	8.3	9.0	7.8	8.3	8.9	7.9	8.4	8.7	8.0	8.4
29	8.7	7.8	8.3	8.9	7.8	8.5	9.0	7.9	8.5	8.7	8.0	8.4
30	8.7	7.9	8.3	8.8	7.9	8.4	8.9	8.0	8.4	8.7	8.0	8.4
31	---	---	---	8.8	7.7	8.2	8.9	8.0	8.4	---	---	---
MAX	8.9	8.2	8.5	9.0	8.0	8.6	---	---	---	9.2	8.0	8.4
MIN	7.6	7.5	7.5	8.6	7.7	7.9	---	---	---	8.3	7.7	8.0

WATER TEMPERATURE FROM DCP, in (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	25.6	13.8	19.0	20.4	11.7	15.4	7.4	-0.1	2.9	0.5	0.3	0.4
2	23.2	13.0	17.5	18.5	9.8	13.8	7.8	0.9	4.1	---	---	---
3	25.3	12.6	18.0	19.8	13.0	15.8	11.9	3.0	7.2	---	---	---
4	23.1	13.2	17.2	21.7	13.2	16.6	15.7	9.0	12.3	---	---	---
5	18.7	10.2	13.6	20.7	12.3	16.0	14.1	7.2	12.3	---	---	---
6	19.6	7.5	12.9	20.9	12.8	16.2	10.7	4.2	7.1	---	---	---
7	19.3	8.6	13.4	19.1	11.8	15.0	9.6	3.2	5.9	---	---	---
8	22.6	10.1	15.6	13.7	6.7	9.7	7.4	1.5	4.1	---	---	---
9	23.5	15.8	18.8	13.0	3.1	7.7	7.1	0.4	3.4	---	---	---
10	19.9	13.6	16.9	15.6	5.4	9.9	6.8	0.3	3.4	---	---	---
11	21.8	10.2	15.3	16.5	6.6	11.3	7.3	1.1	4.1	---	---	---
12	18.2	11.2	14.2	15.1	11.9	13.5	7.1	4.7	6.1	7.2	1.0	3.8
13	18.9	8.5	13.2	16.2	14.4	15.0	6.0	3.3	4.4	8.2	1.6	4.1
14	19.1	9.1	13.4	18.7	14.6	16.1	6.6	0.7	3.4	6.3	0.4	3.2
15	14.9	8.6	11.5	18.7	12.3	15.1	8.5	1.8	5.0	3.5	-0.1	1.7
16	18.6	4.7	10.5	17.3	11.2	14.0	7.8	4.4	6.5	4.3	0.3	2.2
17	18.0	6.1	11.4	14.9	12.7	13.8	7.8	0.9	4.2	4.7	0.7	2.2
18	17.8	8.2	12.1	16.1	9.6	13.5	7.8	1.9	4.2	0.7	-0.1	0
19	20.0	6.8	12.7	10.9	4.9	7.8	5.3	-0.1	2.2	4.6	-0.1	1.2
20	21.1	8.8	14.5	10.2	2.0	5.9	6.5	-0.1	2.6	5.3	-0.2	1.6
21	19.7	13.2	16.1	11.0	4.4	7.5	7.0	0.9	3.8	6.6	-0.2	2.3
22	19.4	14.2	16.1	12.8	5.2	8.7	5.8	1.5	4.2	8.5	0.2	3.9
23	22.1	11.4	16.0	15.0	9.1	11.5	2.3	-0.1	0.6	6.3	1.4	3.7
24	16.6	9.9	12.9	10.4	5.7	8.0	-0.1	-0.1	-0.1	5.6	-0.1	2.4
25	14.8	5.6	9.9	8.5	3.8	6.1	0.1	-0.1	0	6.9	-0.1	2.6
26	15.7	5.0	9.7	7.7	0.5	5.3	0.0	-0.1	0	9.1	0.9	4.5
27	14.5	5.1	9.3	1.6	-0.1	0.3	0.1	-0.1	0.0	8.1	2.1	5.1
28	18.0	7.0	11.9	0.1	-0.1	0	0.6	-0.1	0.0	5.2	0.1	2.6
29	20.3	10.5	14.5	0.1	-0.1	0	-0.1	-0.1	-0.1	2.3	-0.1	0.4
30	18.1	10.7	14.0	2.3	-0.1	0.6	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
31	17.9	11.2	14.1	---	---	---	0.3	-0.1	0	-0.1	-0.1	-0.1
MONTH	25.6	4.7	14.1	21.7	-0.1	10.3	15.7	-0.1	3.7	---	---	---

07142575 RATTLESNAKE CREEK NEAR ZENITH, KS--Continued

WATER TEMPERATURE FROM DCP, in (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	0.0	-0.1	0	0.8	-0.1	0.2	22.6	9.1	15.5	20.3	12.6	17.7
2	0.1	-0.1	0	0.0	-0.1	0	16.5	5.5	10.8	22.1	10.0	15.4
3	0.1	-0.1	0	0.2	-0.1	0.0	14.2	2.1	7.5	22.9	12.2	16.9
4	0.1	-0.1	0.0	0.2	-0.1	0.0	15.8	5.2	9.7	24.2	13.6	18.4
5	0.0	-0.1	0.0	5.5	-0.1	1.4	18.4	6.0	11.7	24.1	15.7	19.8
6	0.0	-0.1	0.0	10.4	0.3	4.6	11.8	9.2	10.2	30.9	18.6	23.9
7	7.1	-0.1	2.2	8.6	3.0	5.3	11.8	9.0	10.2	28.0	20.7	23.9
8	8.6	1.3	4.6	7.7	0.7	5.0	13.5	10.6	11.7	28.4	17.4	21.7
9	5.4	0.5	3.0	6.1	-0.1	2.0	20.2	7.8	13.4	23.9	13.3	18.1
10	4.6	-0.1	1.4	8.5	-0.1	3.7	21.1	10.8	15.6	20.1	13.2	16.3
11	5.9	-0.1	2.4	8.6	1.9	4.8	23.6	14.3	18.2	27.4	15.6	20.2
12	5.7	1.3	3.5	12.7	2.0	7.0	24.4	14.3	18.5	19.1	12.2	14.6
13	8.3	0.3	3.9	16.3	5.4	10.3	21.9	14.5	17.1	22.8	10.1	15.9
14	7.6	1.2	4.0	13.7	5.9	9.8	25.0	13.8	18.9	24.1	14.5	18.9
15	9.5	1.5	5.2	11.8	2.6	6.7	26.1	16.4	20.7	25.0	14.3	19.0
16	11.2	2.0	6.2	12.5	3.1	7.3	24.8	17.9	20.8	24.1	16.4	19.8
17	11.2	3.6	7.0	14.8	5.0	9.3	25.4	14.6	19.4	23.0	13.6	17.9
18	8.0	5.0	6.5	14.7	6.5	10.4	28.2	18.3	---	25.2	13.0	18.6
19	8.7	5.6	7.6	11.5	6.0	8.6	22.9	13.5	16.1	21.8	15.2	18.4
20	11.5	3.0	6.9	15.9	4.8	9.5	13.5	9.8	10.9	24.8	14.6	18.9
21	10.4	3.8	7.0	9.6	1.1	5.2	18.7	8.2	12.8	24.8	14.4	18.6
22	12.1	2.7	7.0	10.5	0.0	4.7	21.6	11.8	16.3	24.4	14.1	18.8
23	12.5	4.5	8.2	13.1	1.5	6.9	23.8	14.2	---	23.4	16.3	19.1
24	10.4	4.2	7.9	8.9	3.0	6.4	20.3	14.9	18.0	16.3	10.6	13.0
25	4.2	-0.1	1.0	3.0	0.5	2.0	19.3	11.2	14.9	26.4	8.7	16.5
26	0.4	-0.1	0.0	12.0	-0.1	5.0	13.3	10.2	11.3	27.4	14.4	20.5
27	0.3	-0.1	0.0	16.5	3.7	9.7	21.7	9.9	14.9	25.6	17.2	21.6
28	3.4	-0.1	0.7	19.9	7.9	13.4	23.3	11.0	16.7	29.8	18.5	23.3
29	---	---	---	18.2	8.7	13.6	23.8	13.5	18.6	31.7	18.1	24.2
30	---	---	---	18.5	8.9	13.3	26.6	15.9	20.4	33.3	20.0	25.8
31	---	---	---	19.4	8.4	13.3	---	---	---	33.1	20.7	26.2
MONTH	12.5	-0.1	3.4	19.9	-0.1	6.4	28.2	2.1	---	33.3	8.7	19.4

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	31.5	20.1	24.9	26.0	20.2	22.7	37.0	22.8	28.2	30.9	20.4	25.0
2	30.6	19.4	24.4	26.1	20.6	22.5	33.7	18.8	25.2	35.5	19.6	26.1
3	29.2	19.1	23.5	30.4	21.2	25.0	33.8	22.8	27.5	33.5	19.1	25.8
4	22.5	17.0	18.6	31.6	21.2	25.9	34.1	21.8	26.9	32.8	20.9	26.1
5	25.7	15.7	19.3	31.2	21.3	25.5	34.5	22.0	27.0	32.8	21.0	26.0
6	30.2	15.6	22.2	33.2	22.1	27.0	33.0	21.0	26.5	32.9	21.0	25.9
7	31.2	16.9	23.4	33.6	22.5	27.6	35.6	22.0	27.4	31.5	20.6	25.1
8	31.3	19.4	24.6	34.8	22.5	28.4	35.7	22.4	27.9	30.8	19.6	24.0
9	31.4	21.4	25.4	36.3	23.3	28.6	27.9	22.2	24.3	27.7	19.8	23.1
10	31.3	22.4	25.4	38.0	23.9	28.6	34.3	20.5	26.0	29.2	20.3	23.6
11	33.8	21.4	26.3	34.3	22.7	27.6	32.7	21.0	26.0	31.8	18.1	23.8
12	28.4	20.2	24.0	29.7	21.8	25.4	31.7	20.1	24.8	27.4	19.0	22.2
13	26.7	23.5	25.3	32.3	20.1	25.3	25.9	17.6	21.2	26.4	18.1	21.2
14	28.8	20.1	24.1	34.8	21.1	27.2	28.3	18.8	23.1	23.1	18.5	20.2
15	24.9	18.0	21.0	34.1	21.5	26.9	33.0	18.7	---	27.8	14.1	20.2
16	26.5	16.4	20.9	31.5	21.6	26.5	31.4	22.9	26.5	29.7	14.2	20.9
17	29.1	21.1	24.6	34.4	21.2	27.4	25.9	19.8	22.9	28.5	15.2	21.0
18	29.0	20.6	24.2	36.3	22.8	28.6	32.5	19.5	24.5	30.1	18.2	22.5
19	29.2	20.0	24.0	35.9	23.0	28.7	32.7	21.8	26.5	19.9	15.6	17.6
20	28.9	20.8	24.7	35.4	23.5	28.4	32.0	22.4	26.0	26.8	11.6	18.5
21	31.6	21.7	26.0	33.8	21.8	26.9	32.3	21.4	25.9	28.1	14.2	19.4
22	31.2	21.5	25.9	31.3	22.7	26.5	34.6	21.9	27.4	27.2	11.6	18.2
23	31.0	20.0	25.0	33.4	20.8	26.7	34.9	22.6	27.5	28.6	12.0	19.1
24	30.6	20.3	24.7	35.9	22.1	27.9	32.7	20.8	26.0	23.8	13.7	17.7
25	34.0	21.1	26.8	36.2	22.0	28.1	34.1	21.8	27.3	25.1	12.2	17.5
26	33.9	22.5	26.7	33.6	22.2	26.9	32.4	21.5	26.5	26.2	13.7	18.3
27	35.8	21.9	28.4	34.4	21.6	26.4	33.3	20.5	26.0	25.7	13.2	17.6
28	35.3	23.3	28.7	34.3	22.6	26.6	34.9	20.9	26.7	26.2	14.6	19.2
29	33.3	22.4	27.2	35.0	21.5	27.3	32.5	21.9	26.6	25.4	15.8	19.4
30	32.6	22.1	26.5	34.4	21.7	27.1	31.6	21.3	25.5	28.0	16.5	21.0
31	---	---	---	35.4	22.4	28.0	32.0	20.8	25.4	---	---	---
MONTH	35.8	15.6	24.6	38.0	20.1	26.8	37.0	17.6	---	35.5	11.6	21.5

07142575 RATTLESNAKE CREEK NEAR ZENITH, KS--Continued

OXYGEN DISSOLVED FROM DCP, in (MG/L), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	11.9	6.7	8.8	10.4	7.4	8.6	13.5	11.6	12.8	---	---	---
2	9.9	6.7	8.2	10.3	7.5	8.7	13.1	11.4	12.3	---	---	---
3	9.9	6.4	8.2	10.0	7.1	8.2	12.5	10.0	11.5	---	---	---
4	9.8	6.4	8.0	10.1	7.0	8.1	11.3	8.7	10.0	---	---	---
5	9.6	7.8	8.7	9.5	7.0	8.0	12.1	8.6	10.1	---	---	---
6	10.1	7.6	8.9	9.2	7.1	7.9	13.6	10.2	11.7	---	---	---
7	9.9	7.8	8.7	9.2	7.2	8.1	13.8	10.8	12.1	---	---	---
8	9.6	7.0	8.5	10.4	7.6	9.6	14.3	11.4	12.8	---	---	---
9	9.9	7.0	7.9	11.3	9.3	10.3	14.2	12.0	13.0	---	---	---
10	11.9	7.0	9.0	10.9	8.7	9.8	14.2	11.0	12.4	---	---	---
11	11.9	7.6	9.5	10.8	8.2	9.5	13.0	10.6	11.8	---	---	---
12	12.4	7.8	9.6	9.5	7.9	8.6	12.6	10.4	11.1	13.7	11.8	12.6
13	11.2	8.3	9.7	9.5	7.8	8.3	14.2	10.7	12.1	13.3	11.4	12.3
14	12.8	8.4	10.2	9.9	7.9	8.6	13.9	11.3	12.4	13.8	11.5	12.7
15	11.9	8.4	10.3	10.5	7.9	8.9	13.3	10.5	11.9	14.0	12.3	13.1
16	13.4	9.5	11.4	10.8	8.1	9.1	14.2	10.3	11.8	13.8	12.3	13.0
17	12.7	9.1	10.9	10.3	8.2	8.9	14.5	11.2	12.6	13.8	12.6	13.1
18	13.1	8.8	10.6	10.6	8.4	9.2	14.3	11.3	12.3	14.3	12.9	13.6
19	15.2	8.2	11.0	12.0	9.6	11.0	14.3	11.5	12.8	14.1	12.9	13.4
20	14.7	7.7	10.5	12.7	10.5	11.6	14.1	11.6	12.7	13.7	12.4	13.1
21	14.5	7.5	10.1	12.3	10.1	11.2	13.8	10.9	12.2	13.8	12.0	13.0
22	14.0	7.4	9.6	12.1	9.6	10.8	13.4	10.7	11.9	13.5	11.2	12.4
23	13.1	7.4	9.6	11.4	9.0	9.9	14.2	11.9	13.2	13.5	11.3	12.5
24	11.3	7.4	9.6	11.4	9.1	10.4	14.5	12.7	13.4	13.9	12.3	12.9
25	11.7	9.0	10.4	12.8	10.5	11.5	14.0	12.5	13.3	14.0	11.8	12.9
26	11.9	9.3	10.6	12.8	10.3	11.6	14.1	12.9	13.4	13.5	11.2	12.3
27	11.8	9.4	10.4	14.0	12.8	13.5	13.5	12.6	13.0	13.2	11.2	12.1
28	11.1	8.0	9.8	14.2	13.5	13.8	13.5	12.5	12.9	14.0	11.2	12.7
29	11.5	7.6	8.9	13.8	13.4	13.6	13.8	13.1	13.5	14.4	12.3	13.5
30	10.4	7.7	8.8	13.4	12.4	13.1	14.4	12.9	13.6	14.4	12.9	13.6
31	10.0	7.7	8.8	---	---	---	---	---	---	14.9	11.8	13.3
MONTH	15.2	6.4	9.5	14.2	7.0	10.0	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	14.3	12.4	13.2	13.3	12.4	12.9	12.1	7.9	10.2	12.7	7.7	9.7
2	13.5	12.5	12.9	12.9	11.8	12.3	12.1	8.0	10.8	12.9	7.9	10.8
3	13.8	12.3	12.9	13.4	12.3	12.7	13.7	10.7	12.4	12.3	7.5	9.7
4	14.1	12.7	13.3	12.8	12.4	12.6	13.6	10.1	11.9	12.3	7.2	9.4
5	13.9	13.0	13.3	13.1	11.6	12.5	13.3	9.3	11.4	11.2	6.8	8.6
6	14.0	12.8	13.3	12.8	10.7	11.9	12.2	9.4	10.8	12.1	5.8	8.6
7	13.4	11.6	12.5	12.3	10.7	11.6	12.4	10.1	11.3	10.1	5.7	7.3
8	13.0	11.0	12.1	12.4	10.7	11.5	12.3	9.8	10.8	11.0	6.6	8.4
9	13.2	11.0	12.2	13.6	11.2	12.7	13.3	9.1	11.2	12.0	7.2	9.3
10	13.9	12.4	13.3	13.5	11.3	12.3	11.4	8.7	9.9	10.8	7.2	8.8
11	13.6	11.9	13.0	12.7	11.1	11.9	12.3	8.2	9.9	9.9	6.3	8.1
12	13.1	11.9	12.5	12.7	10.0	11.5	13.0	8.2	10.1	9.5	6.5	8.2
13	13.4	11.6	12.5	11.9	9.0	10.6	13.0	8.2	9.9	9.8	6.9	8.8
14	13.1	11.4	12.3	11.5	9.1	10.3	12.4	7.9	10.1	9.7	6.9	8.1
15	13.0	11.0	12.0	12.6	10.5	11.5	11.4	7.6	9.1	9.4	6.7	7.9
16	12.7	10.5	11.7	12.6	10.3	11.4	11.1	7.7	9.1	8.9	6.7	7.6
17	12.4	10.2	11.2	12.2	9.6	10.9	12.7	7.8	9.8	9.6	6.8	8.3
18	12.0	10.2	11.0	11.7	9.1	10.4	13.0	7.2	10.0	9.9	6.7	8.3
19	11.9	10.0	10.8	11.6	9.1	10.5	13.1	6.9	---	9.5	6.7	8.1
20	12.6	10.3	11.4	12.5	9.7	11.1	11.8	9.7	10.8	9.8	6.9	8.3
21	12.4	10.3	11.3	13.4	9.8	12.1	12.7	9.2	11.0	10.2	7.0	8.3
22	12.7	10.2	11.4	13.7	11.2	12.6	11.5	8.8	10.1	10.0	7.6	8.8
23	12.4	9.8	11.1	13.0	10.0	11.7	12.3	8.2	---	10.0	7.7	8.7
24	11.7	9.8	10.9	12.0	10.0	11.2	12.0	7.8	---	11.0	8.0	9.7
25	13.9	11.2	12.9	13.6	12.0	13.0	14.0	---	---	12.1	7.2	10.2
26	14.3	11.6	13.5	14.0	10.9	12.8	12.8	9.9	---	10.9	6.8	8.8
27	14.0	12.9	13.5	12.5	9.3	11.0	12.5	9.0	11.1	10.8	6.8	8.6
28	13.3	11.8	12.7	12.1	8.6	10.4	14.2	8.7	11.2	11.0	6.4	8.4
29	---	---	---	11.8	8.7	10.2	14.2	8.2	10.9	10.9	6.0	8.4
30	---	---	---	12.3	9.0	10.5	13.7	7.8	10.2	10.8	5.6	8.1
31	---	---	---	12.7	8.9	10.7	---	---	---	10.7	5.7	7.9
MONTH	14.3	9.8	12.3	14.0	8.6	11.6	14.2	---	---	12.9	5.6	8.7

07142575 RATTLESNAKE CREEK NEAR ZENITH, KS--Continued

OXYGEN DISSOLVED FROM DCP, in (MG/L), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	10.5	5.9	8.0	10.0	5.8	8.0	9.4	3.1	6.1	11.1	5.7	8.1
2	10.0	6.0	7.9	11.4	6.1	8.1	12.0	2.9	7.7	10.9	4.5	7.6
3	11.0	6.0	8.2	11.4	5.9	8.2	11.0	2.9	6.3	11.2	4.1	7.6
4	11.4	6.3	8.5	11.1	5.5	8.0	11.5	3.2	6.9	13.6	4.1	8.0
5	14.1	7.3	10.3	10.0	5.0	7.5	10.8	3.4	---	12.0	4.9	7.6
6	13.2	6.9	10	10.5	5.7	8.0	13.8	4.3	---	12.2	4.9	7.9
7	12.3	6.5	9.3	11.5	5.7	8.4	13.0	3.5	7.3	9.5	4.6	6.8
8	10.9	6.3	8.5	11.8	5.7	8.3	13.8	3.5	8.0	10.0	5.1	7.2
9	10.1	6.2	7.9	11.6	5.8	8.4	13.0	3.8	7.4	10.0	4.6	7.0
10	9.8	6.1	7.7	11.8	4.9	7.8	14.2	3.2	8.3	10.1	4.9	7.0
11	11.1	5.4	7.9	13.9	4.7	8.8	13.0	3.1	7.7	10.9	4.9	7.8
12	6.2	2.6	4.0	12.5	4.6	8.4	12.2	4.5	8.0	10.9	5.5	7.8
13	4.5	2.8	3.8	11.4	5.6	8.3	6.0	3.3	5.1	11.0	6.1	7.9
14	7.6	4.4	6.2	11.9	5.6	8.3	---	---	---	11.0	6.2	7.8
15	8.6	5.9	7.3	12.1	5.7	8.5	10.6	---	---	12.7	6.8	9.4
16	6.7	5.4	5.9	11.0	5.7	8.3	9.9	4.8	7.0	11.6	6.3	8.8
17	7.8	5.4	6.5	11.1	5.0	8.0	10.3	5.5	7.3	11.2	6.5	8.5
18	9.2	6.3	7.7	11.3	4.7	7.7	12.8	5.0	8.1	12.0	6.6	8.9
19	10.2	7.2	8.7	10.8	4.7	7.3	10.2	4.2	7.0	12.1	6.8	9.4
20	11.7	7.1	9.3	11.0	4.7	7.4	10.4	4.2	6.8	13.1	6.9	10.0
21	11.6	6.6	9.0	10.2	4.8	7.2	9.2	4.3	6.5	12.7	7.2	9.8
22	10.5	6.6	8.4	10.6	4.3	7.3	10.3	3.6	6.5	13.3	7.2	10.4
23	---	---	---	10.1	3.6	6.8	11.2	3.6	6.7	13.5	6.8	10.1
24	---	---	---	9.5	3.6	6.5	10.8	3.3	6.4	13.0	7.3	10.1
25	---	---	---	10.8	4.2	7.2	8.8	3.3	5.7	13.0	7.5	10.3
26	---	---	---	10.6	4.7	7.3	10.5	3.0	6.7	13.8	7.6	10.1
27	12.5	6.2	---	11.3	4.2	7.6	11.6	4.0	7.5	13.7	7.4	10.2
28	12.2	6.3	8.8	10.9	3.7	6.7	12.0	4.2	7.6	12.9	7.0	9.8
29	11.3	6.6	8.6	11.8	3.2	7.0	11.8	4.6	7.6	12.4	6.6	9.0
30	10.4	5.7	8.1	11.1	3.1	6.9	11.5	5.1	7.5	---	---	---
31	---	---	---	10.4	3.1	6.8	11.5	5.5	8.1	---	---	---
MONTH	---	---	---	13.9	3.1	7.7	---	---	---	---	---	---

TURBIDITY, FIELD FROM DCP, in (NTU), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	29	14	20	11	4.5	7.0	62	31	41	---	---	---
2	23	12	18	11	4.0	6.1	36	19	27	---	---	---
3	24	12	17	14	4.4	6.2	25	20	22	---	---	---
4	24	15	18	17	5.8	7.8	37	23	29	---	---	---
5	24	13	16	12	5.9	7.4	43	28	34	---	---	---
6	20	10	15	12	5.9	7.4	28	13	20	---	---	---
7	19	10	14	11	6.9	8.2	18	12	16	---	---	---
8	21	8.5	14	17	5.5	9.3	25	11	15	---	---	---
9	24	8.1	16	17	6.4	8.6	24	11	15	---	---	---
10	13	7.2	9.1	17	6.2	8.7	18	9.2	13	---	---	---
11	15	6.9	10	19	7.2	10	15	9.4	11	27	---	27
12	12	4.3	7.5	15	8.9	11	17	9.2	11	31	17	23
13	12	4.5	7.9	34	9.9	22	12	8.2	9.6	19	16	17
14	13	4.1	8.1	47	34	41	19	9.1	11	57	16	24
15	---	---	---	44	25	35	16	9.3	11	57	23	34
16	---	---	---	36	25	30	20	9.3	12	35	22	26
17	---	---	---	48	27	33	15	9.4	12	25	16	20
18	15	---	---	36	25	31	17	8.9	11	26	13	19
19	16	8.7	12	39	18	29	14	9.6	11	27	16	20
20	15	9.0	12	20	14	17	17	9.8	12	28	12	19
21	15	8.0	12	19	12	16	21	13	17	28	16	22
22	17	10	12	17	10	13	34	17	21	26	18	21
23	16	9.3	12	26	15	21	25	15	20	34	19	27
24	16	8.3	11	47	22	32	39	10	20	39	21	29
25	13	7.1	9.3	25	14	18	36	7.5	16	30	15	22
26	12	5.3	8.2	19	13	16	26	8.3	15	26	18	21
27	12	4.8	7.5	36	12	---	36	10	20	45	19	27
28	11	5.4	8.1	31	10	18	62	14	27	38	22	29
29	11	5.3	7.8	43	18	29	52	19	28	27	16	22
30	14	7.2	10	70	22	42	---	---	---	19	8.4	12
31	17	9.1	11	---	---	---	---	---	---	13	3.6	8.3
MONTH	---	---	---	70	4.0	---	---	---	---	---	---	---

07142575 RATTLESNAKE CREEK NEAR ZENITH, KS--Continued

TURBIDITY, FIELD FROM DCP, in (NTU), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	26	12	18	120	32	60	60	46	52	47	26	35
2	24	19	21	87	21	44	100	58	78	46	16	27
3	39	22	31	62	38	48	58	33	43	39	26	32
4	43	28	34	38	25	32	39	29	33	35	27	31
5	32	25	29	140	23	58	45	29	37	42	27	32
6	41	22	28	74	45	60	60	45	52	37	25	31
7	50	28	39	78	42	60	56	32	42	58	32	44
8	51	40	46	96	42	60	47	32	42	63	44	52
9	86	46	69	100	31	55	74	45	56	74	31	47
10	110	42	68	88	46	72	99	68	85	65	26	35
11	100	42	58	58	32	47	96	63	78	88	30	46
12	58	39	49	48	31	38	75	62	68	140	59	82
13	51	31	40	51	31	42	77	58	65	160	95	120
14	50	31	40	65	41	55	73	54	63	130	70	92
15	39	25	32	71	34	56	90	58	70	110	77	88
16	39	25	32	82	29	45	91	61	74	110	84	92
17	45	25	35	51	29	39	120	44	62	140	87	110
18	48	35	40	51	31	41	91	56	---	97	68	82
19	49	34	38	64	40	53	68	41	---	88	73	82
20	51	24	38	55	29	45	73	23	42	87	57	71
21	44	25	34	99	34	67	98	68	82	94	50	73
22	38	24	31	53	26	38	110	71	---	87	56	71
23	39	25	32	49	23	32	100	56	---	78	51	62
24	50	31	39	66	25	44	92	44	61	60	29	40
25	91	33	51	60	30	44	55	33	---	59	20	37
26	40	16	22	40	14	30	28	19	---	73	40	56
27	46	24	31	40	26	34	37	17	25	65	40	54
28	94	23	46	50	33	44	41	27	34	66	41	55
29	---	---	---	94	49	63	59	28	38	67	36	54
30	---	---	---	66	48	56	53	28	35	96	39	56
31	---	---	---	60	39	48	---	---	---	86	42	61
MONTH	110	12	38	140	14	49	120	17	---	160	16	60

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	62	35	50	21	12	15	29	7.0	14	24	8.9	16
2	52	28	42	120	14	31	16	---	---	28	6.2	11
3	45	22	38	46	23	31	---	---	---	35	7.2	14
4	37	21	29	30	14	19	---	---	---	20	9.7	12
5	43	18	32	17	11	14	9.3	---	---	18	9.6	13
6	37	19	29	31	9.4	18	8.5	3.8	6.5	20	10	14
7	38	16	26	26	16	21	16	3.6	6.5	19	7.3	12
8	43	19	30	30	16	20	7.4	3.6	5.1	15	6.4	9.7
9	50	28	37	21	11	15	9.0	3.4	5.1	14	6.6	10
10	45	27	37	180	8.9	43	14	4.1	6.9	34	11	17
11	690	27	100	110	24	49	27	6.6	14	23	11	16
12	550	220	340	51	23	37	1100	15	140	27	8.6	15
13	220	150	170	27	14	19	630	---	---	72	7.9	19
14	150	80	110	21	9.4	16	---	---	---	80	6.3	27
15	270	69	120	23	11	16	---	---	---	96	20	51
16	220	120	170	23	12	16	---	21	---	---	---	---
17	120	81	100	26	11	15	30	11	18	---	---	---
18	81	61	73	25	11	15	36	11	18	---	---	---
19	65	40	53	21	10	14	25	11	16	---	---	---
20	42	20	28	16	8.8	12	21	11	14	---	---	---
21	29	14	19	25	9.2	16	19	8.6	14	11	4.2	8.1
22	19	12	15	25	9.2	14	32	11	17	16	3.8	7.9
23	17	9.1	13	22	12	16	25	7.4	15	21	4.6	10
24	19	8.6	14	21	8.4	13	470	14	97	19	5.2	9.8
25	28	9.7	16	15	7.1	9.1	79	34	53	21	7.2	12
26	23	13	16	27	5.6	12	48	22	30	29	10	16
27	27	14	18	9.1	4.2	6.5	27	---	---	49	18	30
28	35	15	21	21	4.2	11	---	---	---	---	---	---
29	22	14	18	31	11	19	---	---	---	---	---	---
30	31	12	18	24	8.7	16	---	12	---	---	---	---
31	---	---	---	14	6.3	9.1	27	12	18	---	---	---
MONTH	690	8.6	59	180	4.2	19	---	---	---	---	---	---

07142680 ARKANSAS RIVER NEAR NICKERSON, KS

LOCATION.--Lat 38°08'42", long 98°06'39", in SE $^{1}/_{4}$ SW $^{1}/_{4}$ SE $^{1}/_{4}$ sec.8, T.22 S., R.7 W., Reno County, Hydrologic Unit 11030010, on left bank at upstream side of State highway bridge, 1.5 mi west of Nickerson, and at mile 825.8.

DRAINAGE AREA.--36,015 mi^2, of which 6,571 mi^2 is probably noncontributing.

PERIOD OF RECORD.--July 1997 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,581.63 ft above NGVD of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow slightly regulated since 1948 by John Martin Reservoir (station 07130000). Extensive diversions upstream from station for irrigation. Satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Aug 13	0300	*1,660	*13.06	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	269	124	90	84	e72	77	69	76	61	75	47	80
2	254	122	90	85	76	74	69	74	59	76	47	76
3	241	122	90	84	79	e70	68	73	58	80	47	74
4	230	120	91	87	78	e68	68	72	60	77	47	71
5	224	120	91	84	78	80	69	72	62	75	46	69
6	213	118	90	84	79	79	69	71	60	72	46	67
7	205	117	90	84	80	76	70	72	58	70	45	65
8	197	112	88	84	82	77	75	69	57	68	44	64
9	193	108	88	84	85	75	76	68	56	65	53	62
10	187	106	87	83	85	73	73	66	55	64	49	62
11	180	106	87	82	81	73	73	71	55	69	44	61
12	175	106	88	82	82	73	72	81	74	69	80	68
13	171	106	88	82	81	74	73	73	89	66	990	70
14	166	105	88	81	80	74	73	70	79	64	436	68
15	162	104	88	81	80	72	72	70	122	62	273	78
16	156	103	88	80	79	71	72	74	274	60	212	65
17	153	102	87	79	79	71	72	77	211	59	188	62
18	148	103	87	78	78	72	74	72	166	57	155	61
19	146	100	87	77	79	76	72	69	139	55	126	60
20	144	98	87	78	77	76	83	69	127	54	111	58
21	143	98	87	77	75	75	91	67	116	53	101	57
22	141	98	87	77	75	72	87	65	104	56	91	56
23	140	99	87	77	75	72	84	65	96	53	85	55
24	136	98	86	77	82	72	83	67	94	52	132	54
25	132	95	86	76	77	71	79	67	93	50	108	52
26	129	96	87	76	73	70	79	65	90	49	100	53
27	126	92	86	77	72	72	81	65	87	48	112	53
28	126	90	85	76	74	72	78	64	86	49	101	53
29	125	90	85	77	---	71	77	64	82	49	92	52
30	125	90	85	e76	---	70	76	65	78	49	87	51
31	124	---	87	e74	---	69	---	63	---	48	83	---
MEAN	169.7	104.9	87.68	80.10	78.32	73.13	75.23	69.55	94.93	61.06	134.8	62.57
MAX	269	124	91	87	85	80	91	81	274	80	990	80
MIN	124	90	85	74	72	68	68	63	55	48	44	51
AC-FT	10440	6240	5390	4930	4350	4500	4480	4280	5650	3750	8290	3720

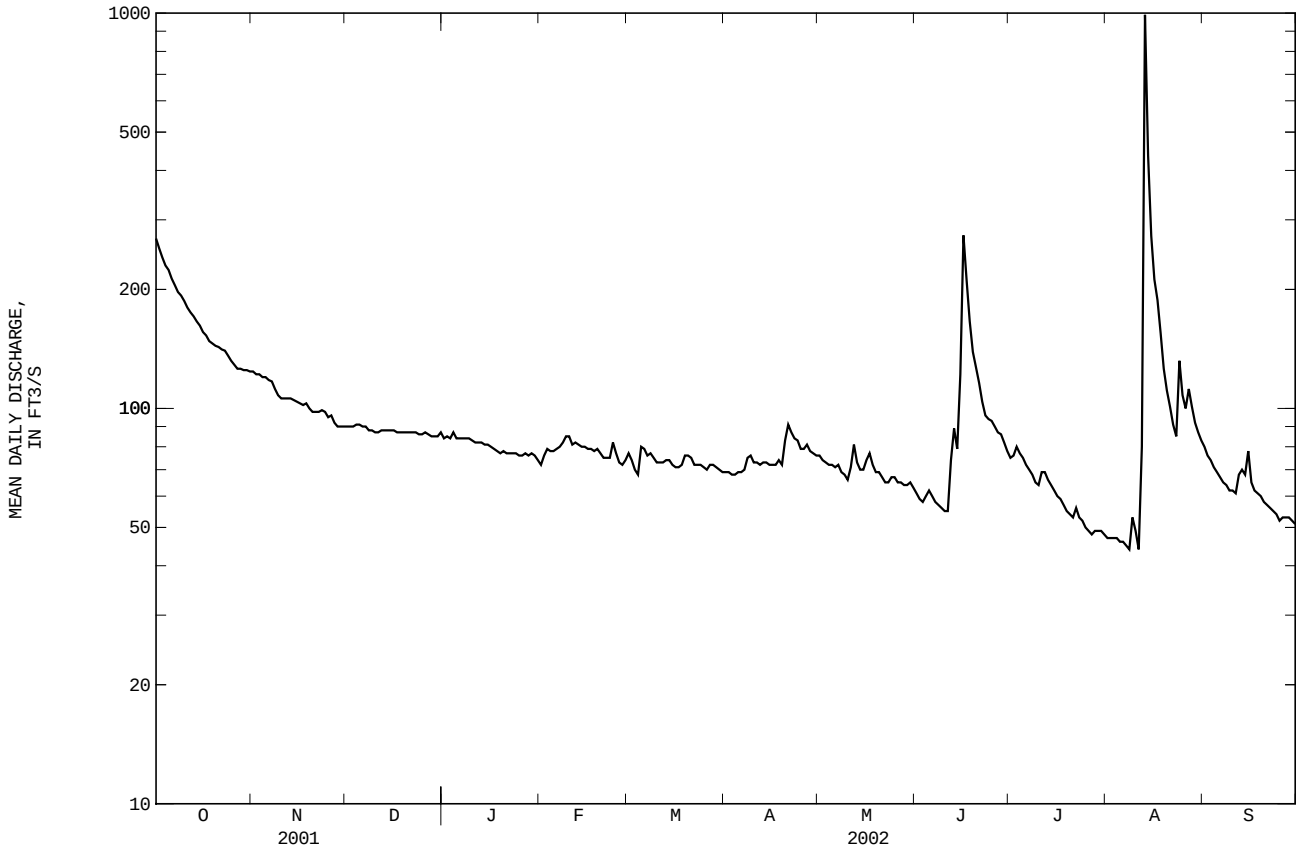
07142680 ARKANSAS RIVER NEAR NICKERSON, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1998 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	201.8	248.5	210.4	253.1	371.3	508.2	622.1	562.8	784.6	482.7	344.9	209.8
MAX	299	412	378	604	892	977	1414	957	1935	1455	895	372
(WY)	1998	1998	1998	1998	1998	1998	1998	1999	1999	1999	1999	1999
MIN	97.7	105	87.7	80.1	78.3	73.1	75.2	69.5	94.9	61.1	104	62.6
(WY)	2001	2002	2002	2002	2002	2002	2002	2002	2002	2002	2001	2002

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1998 - 2002	
ANNUAL MEAN	306.9		91.18		399.5	
HIGHEST ANNUAL MEAN					682	1999
LOWEST ANNUAL MEAN					91.2	2002
HIGHEST DAILY MEAN	3760	Jun 12	990	Aug 13	3760	Jun 12 2001
LOWEST DAILY MEAN	73	Sep 14	44	Aug 8	44	Aug 8 2002
ANNUAL SEVEN-DAY MINIMUM	77	Sep 9	46	Aug 2	46	Aug 2 2002
MAXIMUM PEAK FLOW			1660	Aug 13	3870	Jun 12 2001
MAXIMUM PEAK STAGE			13.06	Aug 13	15.50	Jun 12 2001
INSTANTANEOUS LOW FLOW			43	Aug 11	43	Aug 11 2002
ANNUAL RUNOFF (AC-FT)	222200		66010		289400	
10 PERCENT EXCEEDS	577		130		902	
50 PERCENT EXCEEDS	168		77		267	
90 PERCENT EXCEEDS	87		57		77	

e Estimated



07143300 COW CREEK NEAR LYONS, KS

LOCATION.--Lat 38°18'30", long 98°11'30", in SW $^1/_4$ NW $^1/_4$ SE $^1/_4$ sec.15, T.20 S., R.8 W., Rice County, Hydrologic Unit 11030011, on left bank near downstream side of Missouri Pacific Railroad bridge, 500 ft downstream from Little Cow Creek, 3.0 mi south of Lyons, and at mile 33.0.

DRAINAGE AREA.--728 mi^2, includes 229 mi^2 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.

REVISED RECORDS.--WSP 877: 1938(M). WSP 1117: Drainage area. WSP 1177: 1950(M).

GAGE.--Water-stage recorder. Datum of gage is 1,628.16 ft above NGVD of 1929 (levels by U.S. Army 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 upstream at same datum. October 1959, to Mar. 12, 1962, crest-stage gage at present site and datum.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Natural flow affected by releases from Cheyenne Bottoms, which in turn is affected by diversions from Arkansas River and Walnut Creek, and by periodic discharges from salt plant immediately upstream. Satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1928, 22.75 ft July 11, 1929, from information by Missouri Pacific Railroad Co.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,200 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Aug 13	1900	*3,520	*18.27	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	9.9	9.0	8.9	e8.6	13	11	13	11	6.1	2.4	7.7
2	14	9.9	9.2	8.9	e10	15	11	12	10	7.0	2.8	7.3
3	13	9.7	9.6	9.4	e11	13	10	11	9.3	6.9	3.0	6.8
4	12	9.9	10	9.5	e10	13	9.8	11	8.5	8.3	2.8	6.4
5	15	9.9	10	9.5	e11	13	9.9	11	8.3	9.4	2.3	5.9
6	12	9.6	9.8	10	12	13	10	11	8.2	8.2	2.3	5.7
7	13	11	9.6	11	12	14	10	10	7.9	6.7	2.2	5.2
8	12	9.5	9.2	11	14	14	15	9.5	7.7	6.0	2.1	4.9
9	11	9.2	9.2	10	16	15	16	9.1	7.5	5.5	2.2	4.9
10	10	9.5	e9.2	11	18	13	15	8.4	7.2	5.9	2.1	4.6
11	10	10	e9.0	11	19	13	16	9.3	8.2	5.8	2.1	4.4
12	10	11	9.3	10	15	14	15	9.4	351	4.3	30	5.4
13	9.7	14	9.6	11	15	13	13	8.8	300	4.2	2530	5.6
14	9.2	15	9.5	11	14	12	12	9.1	68	4.2	2810	9.0
15	9.3	10	e9.9	10	14	12	12	8.8	47	4.3	1900	7.5
16	9.4	10	e9.9	9.8	14	12	12	128	572	4.2	755	5.9
17	9.9	9.6	e9.9	9.5	13	12	11	246	542	4.1	140	4.8
18	9.7	9.2	9.8	9.4	13	12	16	106	354	4.2	53	4.4
19	9.5	e9.0	9.1	9.7	13	13	11	41	129	4.1	32	4.1
20	9.7	8.8	9.2	9.8	13	14	28	23	45	4.0	21	4.0
21	9.6	8.8	9.2	9.9	14	14	41	17	26	3.7	15	4.2
22	9.5	9.0	9.2	9.8	36	14	24	14	18	3.2	12	4.0
23	9.3	9.1	9.0	9.8	32	14	17	13	13	3.0	10	3.9
24	9.1	9.0	8.9	9.9	26	13	14	12	10	2.9	352	3.7
25	8.9	9.1	9.6	9.9	21	12	13	12	9.2	3.5	672	3.6
26	8.5	8.8	9.1	9.7	e16	12	12	12	8.0	3.7	125	3.5
27	8.8	9.2	9.2	9.7	e15	12	13	20	7.7	3.1	35	3.4
28	9.5	8.8	9.2	9.6	e14	12	14	20	7.3	3.1	18	3.5
29	9.5	8.9	11	9.8	---	12	13	15	6.6	3.3	12	3.6
30	9.7	9.0	9.3	e9.0	---	11	12	13	6.0	2.9	10	3.2
31	11	---	8.9	e8.8	---	11	---	13	---	2.8	8.4	---
MEAN	10.51	9.813	9.439	9.881	15.70	12.90	14.56	27.63	87.12	4.794	308.6	5.037
MAX	15	15	11	11	36	15	41	246	572	9.4	2810	9.0
MIN	8.5	8.8	8.9	8.8	8.6	11	9.8	8.4	6.0	2.8	2.1	3.2
AC-FT	646	584	580	608	872	793	866	1700	5180	295	18980	300

07143300 COW CREEK NEAR LYONS, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	69.84	28.78	20.02	21.09	48.71	80.37	84.27	129.0	150.5	131.3	89.01	93.22
MAX	1025	244	281	343	480	954	766	1038	1491	1503	794	1895
(WY)	1974	1974	1974	1974	1993	1973	1973	1995	1965	1993	1950	1973
MIN	0.31	1.65	2.13	1.00	1.97	3.82	2.36	2.30	3.90	1.79	0.65	0.34
(WY)	1992	1992	1940	1940	1940	1991	1992	1992	1940	1991	1991	1991

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1938 - 2002	
ANNUAL MEAN	118.1		43.37		79.67	
HIGHEST ANNUAL MEAN					377	1973
LOWEST ANNUAL MEAN					10.1	1946
HIGHEST DAILY MEAN	2440	Sep 19	2810	Aug 14	16800	Sep 27 1973
LOWEST DAILY MEAN	3.6	Sep 14	2.1	Aug 8	0.00	Jul 13 1938
ANNUAL SEVEN-DAY MINIMUM	4.3	Sep 8	2.2	Aug 5	0.14	Aug 16 1946
MAXIMUM PEAK FLOW			3520	Aug 13	24100	Sep 26 1973
MAXIMUM PEAK STAGE			18.27	Aug 13	20.38	Sep 26 1973
INSTANTANEOUS LOW FLOW			1.9	Aug 6	.00	at times
ANNUAL RUNOFF (AC-FT)	85470		31400		57720	
10 PERCENT EXCEEDS	192		20		132	
50 PERCENT EXCEEDS	14		9.9		12	
90 PERCENT EXCEEDS	8.0		4.2		3.3	

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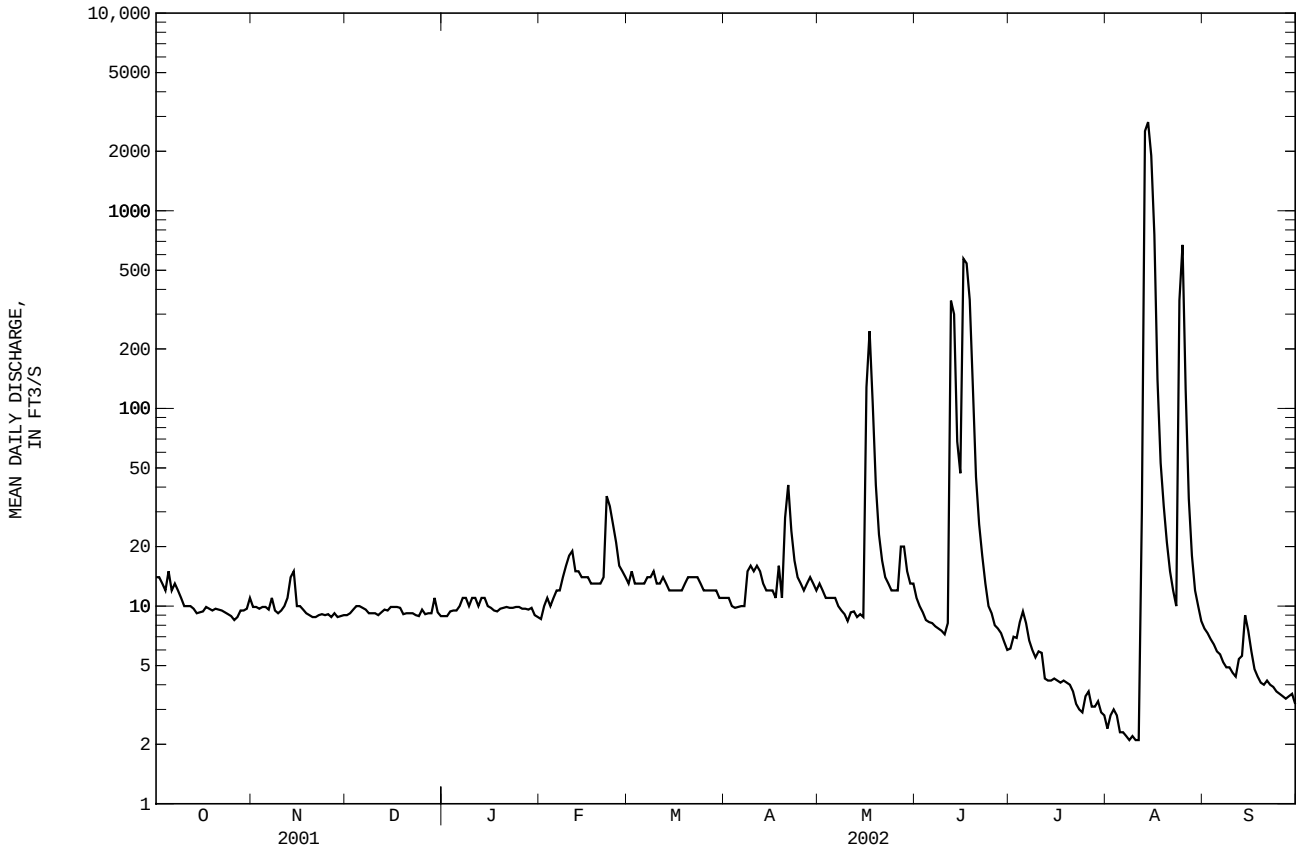

07143330 ARKANSAS RIVER NEAR HUTCHINSON, KS

LOCATION.--Lat 37°56'47", long 97°46'29", in SW $^{1}/_{4}$ NW $^{1}/_{4}$ SW $^{1}/_{4}$ sec.21, T.24 S., R.4 W., Reno County, Hydrologic Unit 11030010, on right bank at downstream side of county highway bridge, 3.0 mi north of Haven, 4.5 mi downstream from Cow Creek, 11 mi southeast of Hutchinson, and at mile 800.3.

DRAINAGE AREA.--38,910 mi^2, of which 7,186 mi^2 is probably noncontributing.

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

REVISED RECORDS.--WDR KS-74-1: 1973(M).
GAGE.--Water-stage recorder. Datum of gage is 1,454.10 ft above NGVD of 1929. Prior to June 22, 1960, nonrecording gage at present site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow slightly regulated since 1943 by John Martin Reservoir (station 07130000). Extensive diversions upstream from station for irrigation. Satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,800 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jun 16	0800	2,010	5.74	Aug 17	0200	2,590	6.23
Aug 13	unknown	*6,090	*8.25				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	391	173	149	128	e100	135	106	145	123	160	70	240
2	358	173	150	114	e120	e130	111	142	117	161	67	228
3	337	e170	154	115	142	e120	108	140	114	158	64	221
4	323	e169	155	124	132	e120	108	135	160	150	58	216
5	340	e168	153	134	134	e130	107	132	186	140	53	205
6	307	e167	153	127	134	147	107	128	134	134	55	199
7	289	e164	149	120	133	140	112	126	118	126	53	193
8	281	e160	146	129	141	139	124	129	111	122	50	187
9	270	e161	142	133	160	137	128	141	104	120	51	184
10	262	164	142	134	154	131	122	125	98	119	e50	176
11	255	166	142	133	142	129	123	130	105	121	e60	167
12	250	165	148	133	141	128	121	310	540	120	e90	199
13	240	168	145	132	139	129	119	219	372	121	e3600	200
14	231	170	138	133	139	128	118	171	488	117	3550	191
15	224	168	136	130	129	128	118	149	464	114	2210	207
16	213	170	137	131	133	125	120	143	1800	112	2280	190
17	209	164	135	130	132	123	117	231	1290	110	2520	182
18	208	165	136	127	130	125	121	468	992	107	1950	167
19	204	159	132	131	140	134	126	342	648	102	823	159
20	202	156	129	126	136	129	164	253	448	97	431	147
21	199	157	128	126	132	126	218	193	319	91	362	140
22	196	157	126	130	129	121	305	159	252	94	313	134
23	192	155	121	130	127	120	268	145	212	93	279	131
24	186	153	117	128	130	122	199	144	197	88	545	126
25	178	153	115	126	148	120	168	145	199	83	614	119
26	179	156	112	125	139	119	155	132	193	79	760	117
27	177	155	126	125	127	117	157	130	185	75	639	114
28	175	150	123	127	130	116	154	129	180	75	383	108
29	176	147	116	127	---	116	146	127	175	82	311	98
30	175	149	112	121	---	114	145	136	167	74	270	91
31	175	---	111	e110	---	110	---	132	---	72	246	---
MEAN	238.8	161.7	134.8	127.1	134.8	126.1	143.2	172.0	349.7	110.2	735.7	167.9
MAX	391	173	155	134	160	147	305	468	1800	161	3600	240
MIN	175	147	111	110	100	110	106	125	98	72	50	91
AC-FT	14680	9620	8290	7810	7480	7750	8520	10570	20810	6780	45240	9990

07143330 ARKANSAS RIVER NEAR HUTCHINSON, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	534.8	362.5	285.9	273.6	390.6	660.1	709.9	664.4	887.1	776.2	501.9	500.6
MAX	7342	1586	1841	1520	1868	4086	5865	2727	5299	6279	1749	3345
(WY)	1974	1974	1974	1974	1993	1973	1973	1995	1965	1993	1993	1973
MIN	40.8	52.1	59.6	69.2	64.2	80.7	73.3	56.5	167	62.0	53.1	51.5
(WY)	1965	1992	1992	1992	1992	1992	1989	1992	1988	1991	1991	1964

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1960 - 2002	
ANNUAL MEAN	541.1		217.6		546.0	
HIGHEST ANNUAL MEAN					1667	1974
LOWEST ANNUAL MEAN					108	1991
HIGHEST DAILY MEAN	5000	Jun 13	3600	Aug 13	24200	Sep 30 1973
LOWEST DAILY MEAN	100	Sep 14	50	Aug 8	28	Oct 14 1980
ANNUAL SEVEN-DAY MINIMUM	107	Sep 10	53	Aug 4	33	Oct 9 1980
MAXIMUM PEAK FLOW			6090	Aug 13	24700	Sep 28 1973
MAXIMUM PEAK STAGE			8.25	Aug 13	12.95	Sep 28 1973
INSTANTANEOUS LOW FLOW			45	Aug 5	27	Oct 13 1980
ANNUAL RUNOFF (AC-FT)	391700		157500		395600	
10 PERCENT EXCEEDS	1250		295		1140	
50 PERCENT EXCEEDS	276		139		275	
90 PERCENT EXCEEDS	137		108		96	

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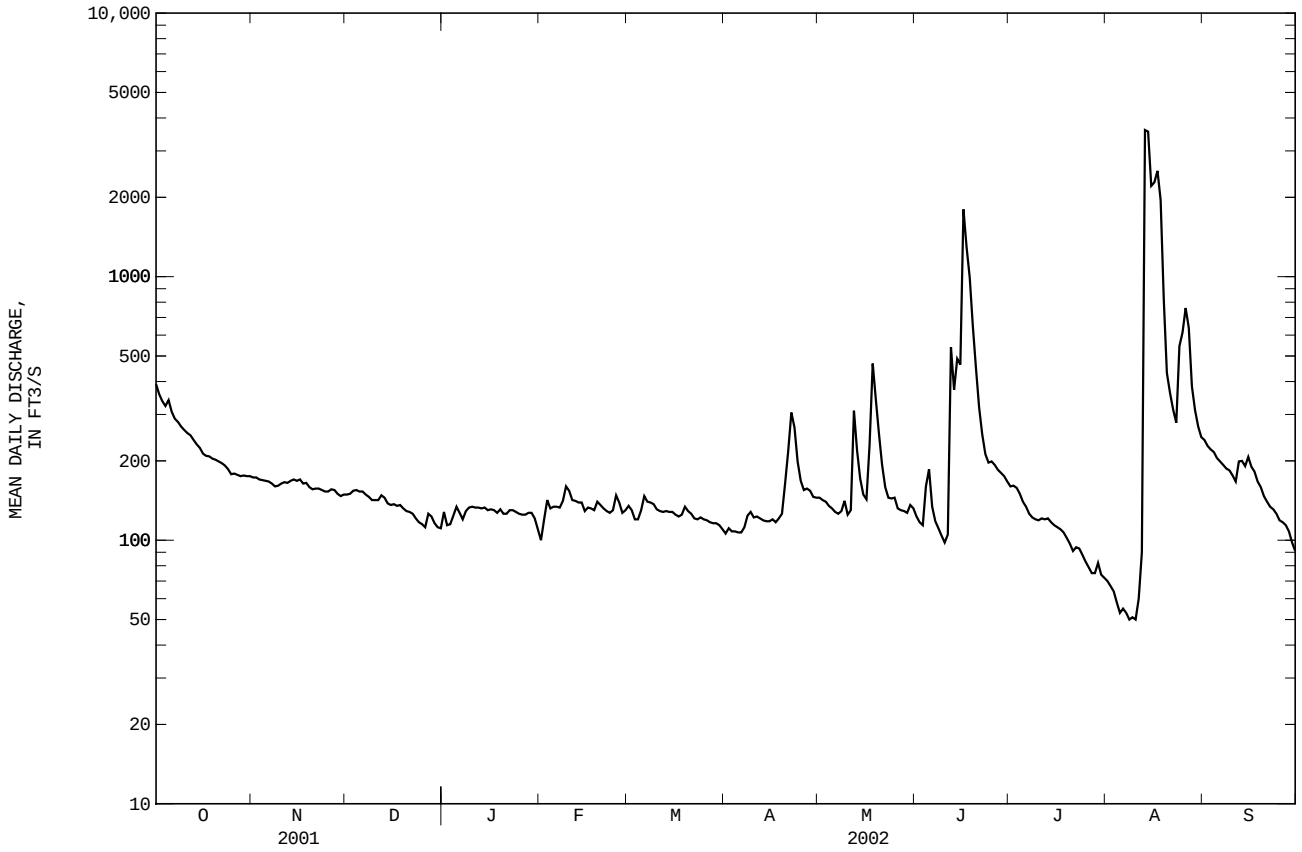

07143375 ARKANSAS RIVER NEAR MAIZE, KS

LOCATION.--Lat 37°46'53", long 97°23'33", in NW $^1/_4$ NE $^1/_4$ NE $^1/_4$ sec.23, T.26 S., R.1 W., Sedgwick County, Hydrologic Unit 11030010, on right bank at downstream side of county highway bridge, 4.0 mi east of Maize, 3.5 mi south-southwest of Valley Center, 2.8 mi downstream from Little Arkansas River Floodway Diversion channel, and at mile 772.2.

DRAINAGE AREA.--39,110 mi^2, of which 7,186 mi^2 is probably noncontributing.

PERIOD OF RECORD.--March 1987 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1317.08 ft above NGVD of 1929 (Wichita-Valley Center Flood Control Project).

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Flow slightly regulated since Oct. 1948 by John Martin Reservoir (station 07130000). Extensive diversions upstream from station for irrigation. Natural flow is significantly altered, since May 1957, by diversion from the Little Arkansas River into the stream upstream from station during high-flow events. Satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jun 13	0245	*9,290	*11.12	Aug 14	0500	4,780	9.59
Jun 16	2000	8,040	10.74				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	525	138	126	e86	107	e110	99	151	113	193	53	199
2	479	133	127	e90	160	e100	91	138	102	192	60	179
3	450	132	132	e100	221	e100	90	129	95	197	52	170
4	434	136	135	e110	208	e94	92	132	131	182	46	170
5	449	135	130	e120	214	e100	93	129	236	165	45	164
6	422	134	113	e130	181	e110	89	134	241	154	43	152
7	400	134	120	e145	170	166	110	137	172	150	42	153
8	385	136	116	e140	153	163	128	245	155	142	39	149
9	379	142	117	e140	158	166	123	159	154	131	39	145
10	370	146	114	137	153	164	100	150	139	123	39	145
11	347	149	113	126	153	152	95	138	135	129	43	138
12	320	147	121	130	150	137	107	380	2370	119	57	143
13	299	144	120	135	153	131	115	376	6370	117	641	161
14	275	142	114	129	153	130	114	304	2070	115	4070	163
15	254	142	112	127	161	122	107	249	1450	110	2680	159
16	241	138	109	137	156	125	111	213	5370	105	2030	156
17	214	138	106	138	159	128	121	199	5550	100	2350	151
18	198	142	99	141	153	123	109	899	3970	97	2250	146
19	184	131	96	148	173	133	110	560	2380	90	1500	143
20	179	133	99	150	156	135	123	413	986	83	702	136
21	176	133	99	128	138	120	192	356	698	78	460	126
22	183	131	105	118	126	116	199	290	529	81	353	121
23	176	129	86	113	122	111	353	252	432	82	292	118
24	166	122	94	111	116	109	272	255	372	75	453	116
25	154	103	101	111	116	100	216	399	332	69	633	112
26	144	113	e96	111	e120	100	199	298	304	e68	553	109
27	142	104	e96	110	e110	92	189	207	276	e64.0	651	107
28	140	104	e90	114	e110	93	171	171	241	e81.0	491	103
29	141	127	e90	129	---	94	168	147	216	e121	343	99
30	139	132	e86	125	---	101	160	131	196	e58	273	95
31	132	---	e86	31	---	105	---	125	---	57	230	---
MEAN	274.1	132.3	108.0	121.3	151.8	120.3	141.5	253.7	1193	113.8	694.0	140.9
MAX	525	149	135	150	221	166	353	899	6370	197	4070	199
MIN	132	103	86	31	107	92	89	125	95	57	39	95
AC-FT	16850	7870	6640	7460	8430	7400	8420	15600	70980	7000	42670	8390

07143375 ARKANSAS RIVER NEAR MAIZE, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	316.1	648.7	288.0	257.4	563.5	724.1	613.3	1230	1339	1359	680.2	439.5
MAX	758	4999	756	775	2831	2998	2076	6416	4603	12920	1995	1393
(WY)	1997	1999	1997	1998	1993	2000	1998	1993	1995	1993	1993	1996
MIN	7.65	41.6	45.5	58.3	53.1	72.8	64.3	49.6	138	23.9	16.2	31.7
(WY)	1992	1992	1992	1992	1992	1991	1989	1992	1991	1991	1991	1991

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1988 - 2002	
ANNUAL MEAN	767.7		286.9		705.4	
HIGHEST ANNUAL MEAN					2756	1993
LOWEST ANNUAL MEAN					83.6	1991
HIGHEST DAILY MEAN	12300	Jun 9	6370	Jun 13	42500	Jul 15 1993
LOWEST DAILY MEAN	41	Sep 14	31	Jan 31	3.5	Oct 17 1991
ANNUAL SEVEN-DAY MINIMUM	47	Sep 10	41	Aug 5	4.0	Oct 14 1991
MAXIMUM PEAK FLOW			9290	Jun 13	45900	Nov 1 1998
MAXIMUM PEAK STAGE			11.12	Jun 13	16.93	Nov 1 1998
INSTANTANEOUS LOW FLOW			23	Jan 31	3.4	Oct 16 1991
ANNUAL RUNOFF (AC-FT)	555800		207700		511000	
10 PERCENT EXCEEDS	1800		399		1230	
50 PERCENT EXCEEDS	329		136		285	
90 PERCENT EXCEEDS	96		92		66	

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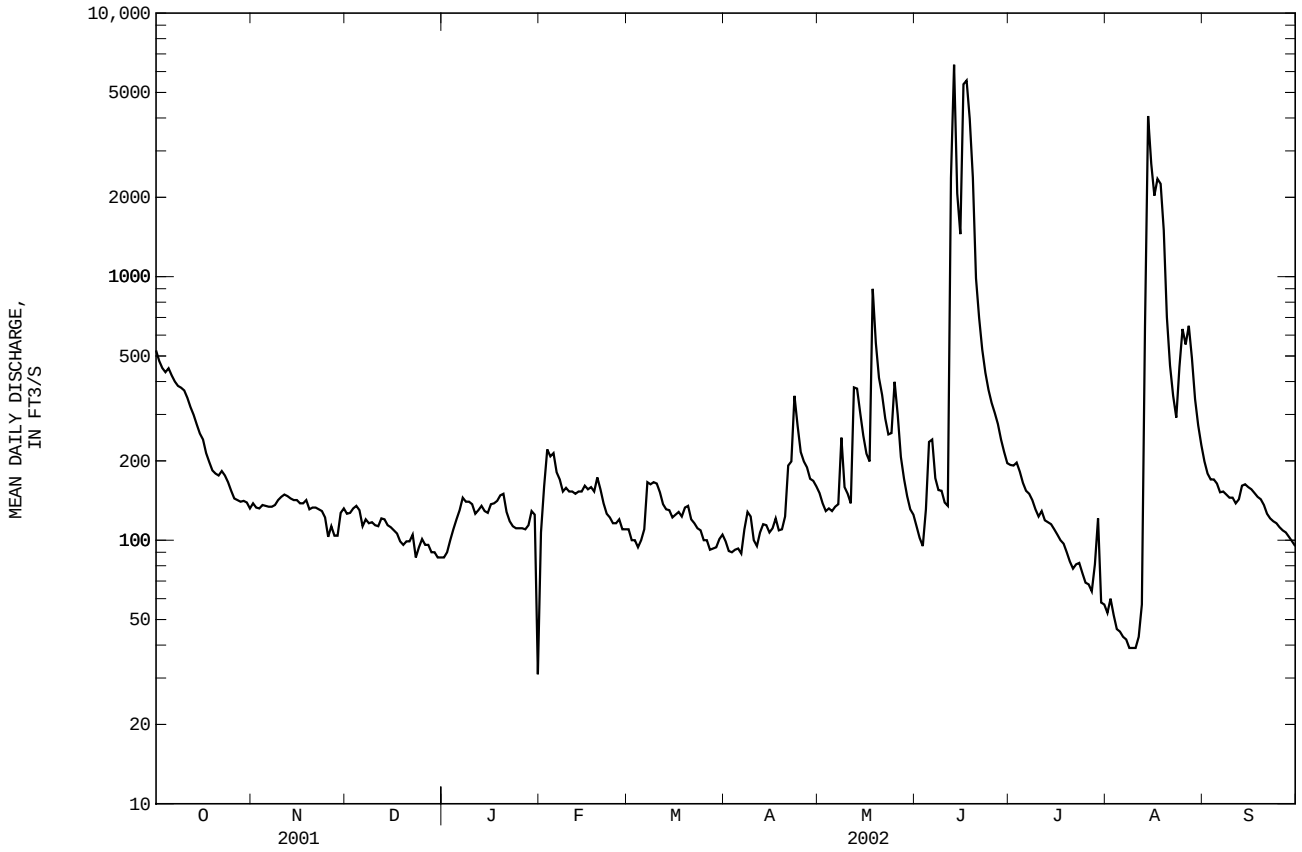


07143665 LITTLE ARKANSAS RIVER AT ALTA MILLS, KS

LOCATION.--Lat 38°06'44", long 97°35'30", in SW $^1/_4$ NW $^1/_4$ NW $^1/_4$ sec.30, T.22 S., R.2 W., Harvey County, Hydrologic Unit 11030012, on right bank at downstream side of county highway bridge, 0.4 mi south of Alta Mills, 0.8 mi downstream from Sand Creek, and at mile 50.1.

DRAINAGE AREA.--736 mi^2, of which 55 mi^2 is probably noncontributing.

PERIOD OF RECORD.--June 1973 to current year.

REVISED RECORDS.--WDR KS-74-1: 1974(M). KS-80-1: 1980(M). KS-86-1: 1986(M).

GAGE.--Water-stage recorder. Datum of gage is 1,391.40 ft above NGVD of 1929.

REMARKS.--Records good. Natural flow of stream affected by ground-water withdrawals for irrigation and return flow from irrigated areas. Satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Apr 22	1400	1,920	12.66	Jun 12	2100	1,980	12.87
May 17	2300	2,720	15.13	Jun 17	1500	*3,020	*15.97

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

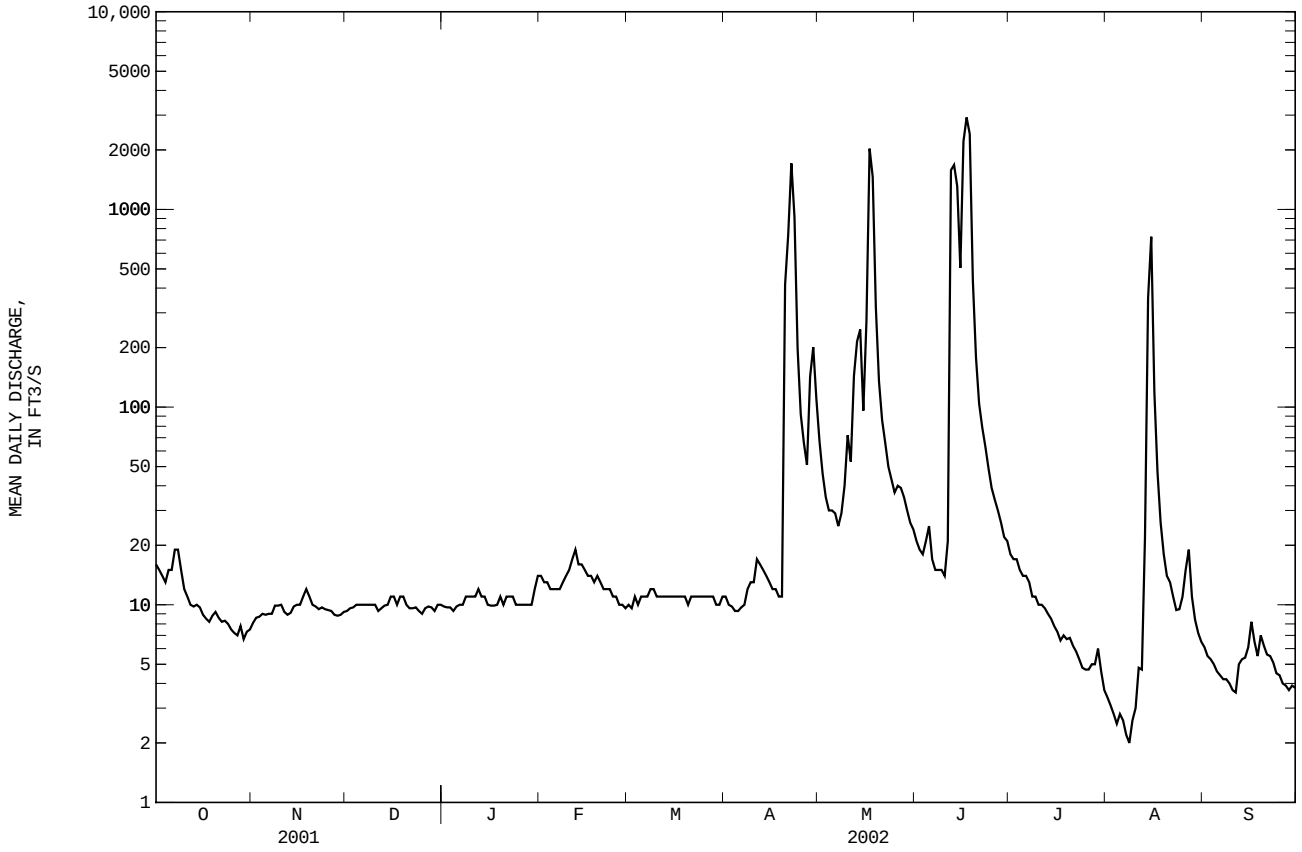
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	8.1	9.3	9.8	14	10	11	67	21	18	3.4	6.1
2	15	8.6	9.6	9.7	13	9.6	10	46	19	17	3.1	5.5
3	14	8.7	9.7	9.7	13	11	9.8	35	18	17	2.8	5.3
4	13	9.0	10	9.3	12	10	9.3	30	21	15	2.5	5.0
5	15	8.9	10	9.8	12	11	9.3	30	25	14	2.8	4.6
6	15	9.0	10	10	12	11	9.7	29	17	14	2.6	4.4
7	19	9.0	10	10	12	11	10	25	15	13	2.2	4.2
8	19	9.9	10	11	13	12	12	29	15	11	2.0	4.2
9	15	9.9	10	11	14	12	13	40	15	11	2.6	4.0
10	12	10	10	11	15	11	13	72	14	10	3.0	3.7
11	11	9.2	9.3	11	17	11	17	53	21	10	4.8	3.6
12	10	8.9	9.6	12	19	11	16	144	1580	9.6	4.7	5.0
13	9.8	9.1	9.9	11	16	11	15	215	1680	9.0	22	5.3
14	10	9.8	10	11	16	11	14	247	1310	8.5	358	5.4
15	9.7	10	11	10	15	11	13	96	506	7.8	728	6.1
16	8.9	10	11	9.9	14	11	12	272	2210	7.3	119	8.2
17	8.5	11	10	9.9	14	11	12	2030	2920	6.6	47	6.5
18	8.2	12	11	10	13	11	11	1460	2410	7.0	26	5.5
19	8.8	11	11	11	14	11	11	321	438	6.7	18	7.0
20	9.2	10	10	10	13	10	416	135	178	6.8	14	6.2
21	8.6	9.8	9.6	11	12	11	745	86	104	6.2	13	5.6
22	8.2	9.5	9.6	11	12	11	1710	66	79	5.8	11	5.5
23	8.3	9.7	9.7	11	12	11	917	50	63	5.3	9.4	5.1
24	8.0	9.5	9.3	10	11	11	198	43	49	4.8	9.5	4.5
25	7.5	9.4	9.0	10	11	11	92	37	39	4.7	11	4.4
26	7.2	9.3	9.6	10	10	11	66	40	34	4.7	15	4.0
27	7.0	8.9	9.8	10	10	11	51	39	30	5.0	19	3.9
28	7.8	8.8	9.7	10	9.6	11	143	35	26	5.0	11	3.7
29	6.7	8.9	9.3	10	---	10	201	30	22	6.0	8.4	3.9
30	7.3	9.2	10	12	---	10	110	26	21	4.6	7.2	3.8
31	7.5	---	10	14	---	11	---	24	---	3.7	6.5	---
MEAN	10.68	9.503	9.903	10.52	13.16	10.86	162.6	188.8	463.3	8.874	48.05	5.007
MAX	19	12	11	14	19	12	1710	2030	2920	18	728	8.2
MIN	6.7	8.1	9.0	9.3	9.6	9.6	9.3	24	14	3.7	2.0	3.6
AC-FT	657	565	609	647	731	668	9670	11610	27570	546	2950	298

07143665 LITTLE ARKANSAS RIVER AT ALTA MILLS, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	209.6	183.9	56.92	40.20	152.7	374.8	252.5	396.7	405.1	303.8	193.3	114.6
MAX	2314	1983	505	340	1240	2489	990	2496	1816	3900	1032	868
(WY)	1974	1999	1974	1974	1993	1987	1974	1995	1977	1993	1987	1977
MIN	0.19	3.92	3.76	4.98	4.02	6.11	4.63	7.58	10.8	2.13	2.59	1.79
(WY)	1992	1991	1991	1991	1992	1991	1992	1992	1994	1991	1984	1984

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1974 - 2002	
ANNUAL MEAN	222.7		78.08		224.0	
HIGHEST ANNUAL MEAN					935	1993
LOWEST ANNUAL MEAN					16.2	1991
HIGHEST DAILY MEAN	4750	Feb 26	2920	Jun 17	15300	Nov 2 1998
LOWEST DAILY MEAN	3.6	Sep 14	2.0	Aug 8	0.00	Aug 15 1991
ANNUAL SEVEN-DAY MINIMUM	3.9	Sep 10	2.5	Aug 3	0.02	Oct 7 1991
MAXIMUM PEAK FLOW			3020	Jun 17	30100	Oct 12 1973
MAXIMUM PEAK STAGE			15.97	Jun 17	27.42	Oct 12 1973
INSTANTANEOUS LOW FLOW			1.9	Aug 9	0.00	Aug 15 1991
ANNUAL RUNOFF (AC-FT)	161200		56530		162300	
10 PERCENT EXCEEDS	240		66		318	
50 PERCENT EXCEEDS	19		11		22	
90 PERCENT EXCEEDS	7.1		5.2		4.9	



07143672 LITTLE ARKANSAS RIVER AT HIGHWAY 50 NEAR HALSTEAD, KS

LOCATION.--Lat 38°01'43", long 97°32'25", in NW $^1/_4$ NE $^1/_4$ NE $^1/_4$ sec.28, T.23 S., R.02 W., Harvey County, Hydrologic Unit 11030012, on left bank at downstream side of State Highway 50, 3.4 mi upstream of Black Kettle Creek, 2 mi north and 1.3 mi west of Halstead, and at mile 41.4.

WATER-DISCHARGE RECORDS

DRAINAGE AREA.--759 mi^2, of which about 74 mi^2 is probably noncontributing.

PERIOD OF RECORD.--May 1995 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,370.55 ft above NGVD of 1929.

REMARKS.--Records good except those for low-flow periods in August and September and estimated daily discharges, which are poor. Natural flow of stream affected by ground-water withdrawals for irrigation and return flow from irrigated areas. Satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Apr 22	2300	1,680	13.90	Jun 13	0600	2,400	15.99
May 18	0300	2,840	17.17	Jun 17	2000	*3,080	*18.02

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	15	15	15	19	17	16	90	29	23	2.8	5.0
2	22	15	15	15	19	16	15	59	27	23	2.8	4.4
3	21	15	16	15	19	16	14	44	24	22	2.7	3.3
4	20	16	16	15	18	17	e13	38	42	20	2.8	2.8
5	22	17	17	15	18	18	e13	35	37	16	2.6	2.3
6	22	17	16	16	18	18	e14	36	26	17	2.3	1.9
7	22	17	17	15	18	18	e15	32	23	16	1.5	1.7
8	27	16	16	16	19	19	e16	32	22	14	2.1	1.6
9	24	16	16	16	20	17	17	42	22	12	2.2	1.5
10	20	17	16	17	20	17	17	73	21	12	2.8	1.3
11	18	17	16	17	20	17	19	76	24	15	2.9	1.2
12	18	17	16	17	24	18	19	180	1080	12	4.0	1.6
13	17	17	16	17	23	18	17	216	2110	9.9	9.6	3.2
14	17	17	16	17	22	18	17	337	1680	9.9	241	5.3
15	17	16	17	16	21	17	17	155	771	9.7	853	6.3
16	16	16	16	16	20	17	17	152	2300	8.8	239	6.7
17	15	17	16	15	20	17	16	1530	2960	7.0	64	7.7
18	15	17	16	15	20	17	15	2040	2810	7.1	27	6.7
19	15	17	16	16	20	17	14	514	759	7.8	15	6.7
20	16	16	16	16	20	17	283	250	274	7.5	9.9	7.9
21	16	16	16	16	20	16	748	154	166	7.4	8.9	7.1
22	16	16	15	17	20	16	1260	90	115	6.9	7.9	6.8
23	16	16	14	16	20	17	1280	61	90	6.4	6.5	7.0
24	16	16	14	16	19	17	315	53	68	5.2	7.0	6.8
25	16	15	14	15	17	16	117	47	55	4.5	6.5	6.2
26	16	15	15	16	16	16	72	44	46	3.9	9.4	6.0
27	16	14	15	16	17	16	53	48	40	4.0	15	6.0
28	15	13	15	15	17	16	112	43	32	4.1	11	6.2
29	15	14	14	15	---	16	253	38	26	5.0	7.0	6.1
30	14	14	15	17	---	15	168	34	24	4.8	5.5	6.1
31	14	---	15	18	---	15	---	31	---	4.4	5.3	---
MEAN	17.97	15.90	15.58	15.94	19.43	16.84	165.4	212.1	523.4	10.53	50.97	4.780
MAX	27	17	17	18	24	19	1280	2040	2960	23	853	7.9
MIN	14	13	14	15	16	15	13	31	21	3.9	1.5	1.2
AC-FT	1100	946	958	980	1080	1040	9840	13040	31150	647	3130	284

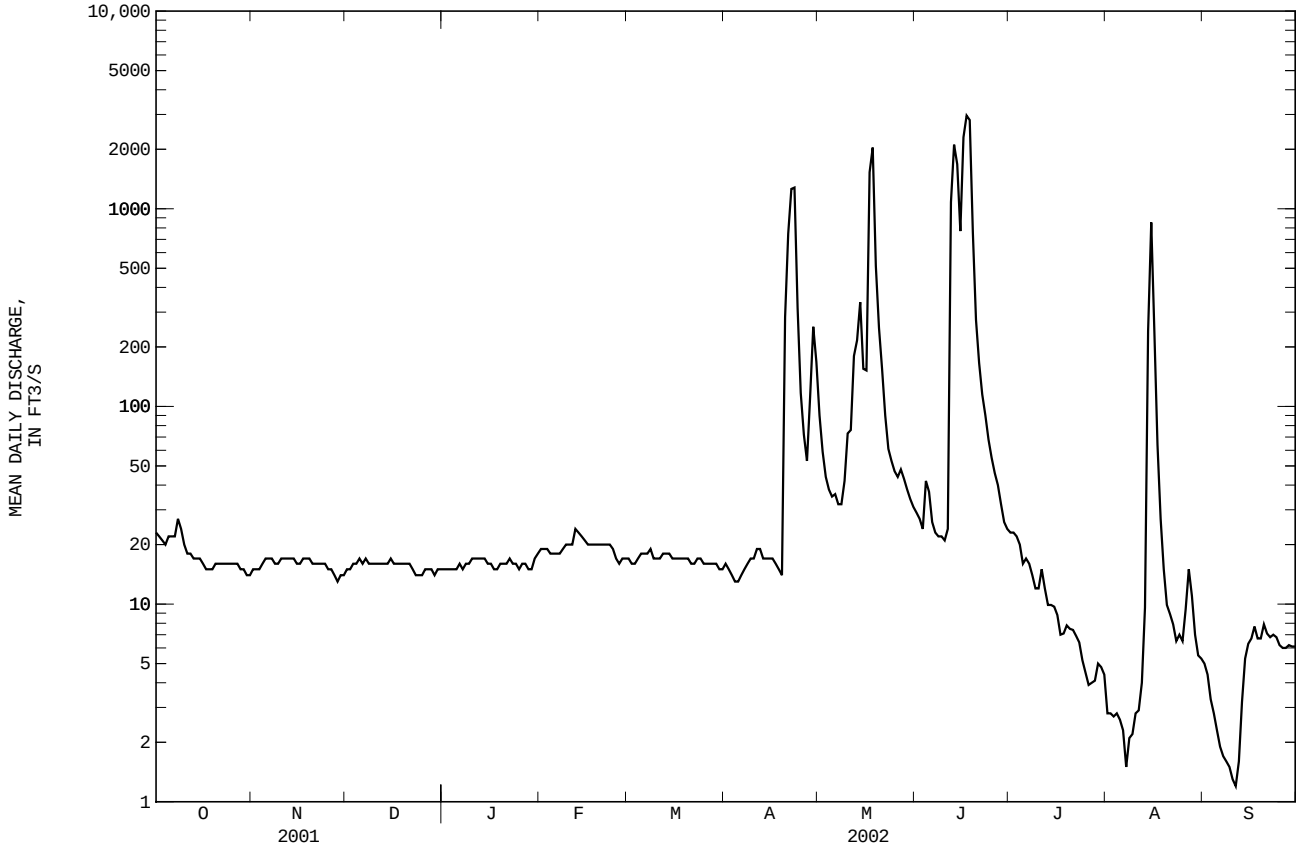
07143672 LITTLE ARKANSAS RIVER AT HIGHWAY 50 NEAR HALSTEAD, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	116.0	319.5	64.05	47.11	219.7	449.8	262.7	225.1	455.3	251.0	204.6	146.7
MAX	425	1818	247	122	636	1551	815	327	1030	876	620	360
(WY)	1999	1999	1998	1999	2001	2000	1999	1999	2001	1999	1999	1997
MIN	13.2	15.4	15.6	15.9	18.6	15.7	14.8	36.3	41.1	10.5	9.63	4.78
(WY)	1997	1996	2002	2002	1996	1996	1996	2001	1998	2002	2001	2002

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1996 - 2002	
ANNUAL MEAN	244.1		88.67		229.5	
HIGHEST ANNUAL MEAN					528	1999
LOWEST ANNUAL MEAN					88.7	2002
HIGHEST DAILY MEAN	4900	Feb 26	2960	Jun 17	9570	Nov 3 1998
LOWEST DAILY MEAN	5.3	Aug 23	1.2	Sep 11	1.2	Sep 11 2002
ANNUAL SEVEN-DAY MINIMUM	7.3	Aug 19	1.5	Sep 6	1.5	Sep 6 2002
MAXIMUM PEAK FLOW			3080	Jun 17	10300	Nov 2 1998
MAXIMUM PEAK STAGE			18.02	Jun 17	27.13	Nov 2 1998
INSTANTANEOUS LOW FLOW			0.98	Aug 7	0.98	Aug 7 2002
ANNUAL RUNOFF (AC-FT)	176700		64200		166300	
10 PERCENT EXCEEDS	311		82		461	
50 PERCENT EXCEEDS	24		16		32	
90 PERCENT EXCEEDS	11		5.8		11	

e Estimated



07143672 LITTLE ARKANSAS RIVER AT HIGHWAY 50 NEAR HALSTEAD, KS--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--May 1998 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: May 1998 to current year.
pH: May 1998 to current year.
WATER TEMPERATURE: May 1998 to current year.
DISSOLVED OXYGEN: October 1998 to current year.
TURBIDITY: October 1998 to current year.

INSTRUMENTATION.--Multparameter water-quality monitor.

REMARKS.--Records good. Interruptions in record are due to ice conditions or malfunction of the recording instrument or sensors. Instruments used to measure turbidity conform to ISO 7027 standards

EXTREMES FOR PERIOD OF RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 2,290 microsiemens, May 11, 2002; minimum, 85 microsiemens, Nov. 1, 1998.
pH: Maximum, 9.0 standard units, July 8, 2001; minimum, 6.6 standard units, Oct. 5, 1998.
WATER TEMPERATURE: Maximum, 33.1°C, Aug. 1, 2002; minimum, 0.0°C, Jan. 3, 1999.
DISSOLVED OXYGEN: Maximum 21.9 mg/L, July 10, 2001; minimum, 3.2 mg/L, Aug. 31, 1999.
TURBIDITY: Maximum, >1,500 NTU, Oct. 18, 1998; minimum, 1.0 NTU, Jan. 8, 2002.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 2,290 microsiemens/cm, May 11; minimum, 96 microsiemens/cm, June 16.
pH: Maximum, 8.9 units, Aug. 29; minimum, 6.6 units, June 16.
WATER TEMPERATURE: Maximum, 33.1°C, Aug. 1; minimum, 0.1°C, Jan. 3.
DISSOLVED OXYGEN: Maximum, 21.3 mg/L, Feb. 13; minimum, 4.0 mg/L, June 13.
TURBIDITY: Maximum, 1,400 NTU, many days; minimum, 1.0 NTU, Jan. 8.

SPECIFIC CONDUCTANCE FROM DCP, in US/CM @ 25C, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	575	544	559	1030	973	998	1530	1500	1510	1430	1410	1420
2	601	574	586	973	930	950	1500	1470	1480	1520	1430	1470
3	625	601	613	930	908	915	1470	1400	1440	1560	1520	1550
4	657	625	640	933	909	917	1400	1380	1390	1540	1520	1530
5	682	638	656	970	933	950	1410	1360	1390	1550	1510	1540
6	726	682	709	1050	970	1000	1440	1400	1420	1520	1500	1510
7	766	726	743	1160	1050	1100	---	1430	---	1560	1510	1540
8	806	766	794	1240	1160	1200	1480	---	---	1550	1490	1520
9	843	804	814	1300	1240	1270	1490	1480	1480	1500	1460	1480
10	1310	843	1090	1340	1300	1320	1490	1460	1480	1540	1480	1500
11	1480	1310	1410	1340	1330	1340	1460	1420	1440	1620	1540	1590
12	1490	1420	1470	1350	1340	1350	1420	1400	1400	1600	1520	1560
13	1420	1290	1360	1350	1300	1330	1400	1400	1400	1540	1490	1520
14	1290	1160	1230	1300	1260	1280	1430	1400	1420	1550	1500	1520
15	1160	1090	1130	1260	1250	1250	1430	1410	1420	1540	1510	1530
16	1090	1060	1070	1260	1250	1260	1470	1430	1450	1510	1480	1490
17	1060	1040	1050	1290	1260	1270	1470	1450	1460	1510	1490	1500
18	1040	1010	1020	1320	1290	1300	1450	1440	1440	1510	1480	1500
19	1010	1000	1010	1360	1320	1340	1520	1450	1490	1480	1440	1450
20	1020	990	1010	1370	1360	1360	1540	1520	1530	1450	1380	1420
21	990	959	976	1390	1360	1370	1530	1480	1500	1390	1370	1380
22	961	943	954	1420	1390	1410	1480	1460	1470	1430	1380	1400
23	943	932	937	1410	1380	1390	1460	1440	1450	1440	1400	1420
24	974	936	956	1400	1380	1390	1490	1460	1480	1420	1400	1400
25	982	973	977	1390	1370	1380	1470	1410	1440	1440	1410	1420
26	973	967	970	1370	1350	1360	1440	1410	1430	1460	1430	1450
27	1000	969	985	1370	1360	1360	1430	1400	1420	1450	1420	1440
28	1080	1000	1040	1400	1370	1390	1430	1390	1410	1420	1400	1420
29	1120	1080	1110	1460	1400	1430	1440	1400	1430	1410	1380	1400
30	1120	1080	1110	1520	1460	1500	1450	1430	1440	1380	1330	1350
31	1080	1030	1050	---	---	---	1470	1420	1450	1420	1340	1390
MONTH	1490	544	969	1520	908	1260	---	---	---	1620	1330	1470

07143672 LITTLE ARKANSAS RIVER AT HIGHWAY 50 NEAR HALSTEAD, KS--Continued

SPECIFIC CONDUCTANCE FROM DCP, in US/CM @ 25C, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	1460	1420	1450	1400	1370	1380	1440	1400	1430	574	471	517
2	1440	1400	1420	1410	1390	1400	1440	1420	1430	629	574	613
3	1500	1440	1470	1430	1390	1410	1460	1400	1430	621	597	604
4	1450	1410	1430	1400	1360	1390	1440	1370	1410	635	601	617
5	1470	1420	1450	1380	1360	1370	1400	1370	1380	702	635	668
6	1480	1440	1470	1480	1380	1440	1370	1360	1360	774	702	741
7	1450	1380	1420	1480	1430	1460	1360	1350	1350	810	737	785
8	1400	1370	1390	1450	1400	1430	1350	1280	1310	737	717	725
9	1380	1370	1380	1430	1400	1420	1350	1270	1320	849	736	788
10	1400	1370	1390	1450	1430	1440	1360	1340	1350	1090	693	836
11	1450	1370	1400	1510	1450	1480	1360	1350	1360	2290	984	1750
12	1500	1450	1480	1540	1500	1520	1380	1350	1360	1410	275	892
13	1570	1490	1530	1500	1420	1470	1470	1380	1430	479	290	394
14	1610	1490	1560	1430	1380	1410	1580	1470	1540	912	433	544
15	1630	1560	1610	1390	1340	1370	1580	1430	1520	501	410	458
16	1610	1590	1600	1390	1350	1370	1460	1390	1430	453	367	408
17	1590	1500	1530	1400	1380	1390	1400	1280	1320	367	109	198
18	1510	1480	1500	1440	1390	1410	1360	1260	1310	265	168	201
19	1480	1440	1450	1480	1430	1450	1370	1320	1350	321	261	282
20	1460	1390	1420	1500	1430	1470	1750	730	1260	380	321	359
21	1420	1390	1410	1480	1440	1460	869	212	382	435	380	414
22	1430	1400	1420	1440	1400	1420	375	187	243	486	435	459
23	1430	1410	1410	1420	1400	1400	216	182	190	547	486	515
24	1490	1430	1470	1410	1370	1390	294	216	265	592	515	565
25	1500	1480	1490	1440	1390	1420	396	294	357	652	582	622
26	1480	1460	1470	1450	1420	1430	462	396	431	715	652	675
27	1460	1380	1420	1440	1400	1420	518	462	489	815	715	762
28	1390	1370	1380	1440	1420	1430	625	518	559	937	815	870
29	---	---	---	1460	1420	1440	883	459	628	1060	937	999
30	---	---	---	1420	1400	1420	733	463	541	1090	1060	1070
31	---	---	---	1440	1400	1420	---	---	---	1090	1000	1070
MONTH	1630	1370	1460	1540	1340	1420	1750	182	1060	2290	109	658

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	1120	896	1060	716	681	700	944	934	939	638	627	633
2	1160	900	1080	751	686	727	938	915	926	642	633	637
3	1210	974	1110	796	718	774	920	899	909	637	634	636
4	1210	351	1000	806	796	802	903	885	894	638	620	632
5	1170	943	1110	821	797	809	889	880	886	626	605	621
6	1180	1060	1160	834	821	829	888	---	---	645	617	633
7	1170	1100	1150	827	792	816	---	---	---	672	645	659
8	1120	782	1040	813	792	803	---	877	---	692	671	681
9	1020	761	915	839	798	818	878	873	876	729	678	707
10	1060	906	1010	859	807	831	881	874	877	---	692	---
11	1130	757	1060	822	768	796	877	840	867	---	---	---
12	1140	106	332	860	793	835	896	826	870	---	---	---
13	228	180	193	857	832	840	892	664	786	---	---	---
14	357	191	221	856	827	844	1200	191	790	933	847	882
15	229	154	198	846	815	834	266	147	190	971	933	951
16	210	96	121	819	802	812	462	266	395	1050	971	1010
17	157	113	145	829	808	818	474	391	435	1110	1040	1070
18	183	157	168	845	822	834	455	392	420	1220	1110	1170
19	250	183	217	870	830	852	500	455	479	1290	1210	1250
20	292	250	276	890	866	878	515	491	504	1330	1290	1300
21	356	288	313	907	878	897	530	515	524	1380	1330	1360
22	420	356	392	888	838	865	549	522	535	1390	1380	1380
23	468	420	444	881	830	857	555	513	540	1380	1350	1370
24	500	468	484	904	878	895	567	517	548	1350	1320	1330
25	533	500	515	905	867	892	590	519	563	1320	1310	1310
26	570	533	551	941	872	913	701	525	635	1310	1290	1300
27	616	570	590	951	941	947	772	701	744	1290	1280	1280
28	635	616	628	957	638	925	771	690	736	1280	1270	1280
29	647	635	642	927	787	896	690	678	682	1270	1250	1270
30	681	646	664	959	923	939	678	647	664	1250	1240	1250
31	---	---	---	959	923	942	649	624	636	---	---	---
MONTH	1210	96	626	959	638	846	---	---	---	---	---	---

07143672 LITTLE ARKANSAS RIVER AT HIGHWAY 50 NEAR HALSTEAD, KS--Continued

PH, WH, FIELD FROM DCP, in (STANDARD UNITS), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	7.6	7.6	7.6	8.0	7.9	7.9	8.0	8.0	8.0	8.3	8.2	8.3
2	7.7	7.6	7.6	8.0	7.8	7.9	8.0	8.0	8.0	8.3	8.2	8.3
3	7.7	7.6	7.6	7.9	7.8	7.9	8.0	8.0	8.0	8.3	8.2	8.3
4	7.8	7.7	7.7	8.0	7.8	7.9	8.0	7.9	8.0	8.3	8.2	8.3
5	8.0	---	---	7.9	7.8	7.8	8.0	7.9	8.0	8.3	8.2	8.3
6	8.1	7.9	8.0	7.9	7.8	7.8	8.0	8.0	8.0	8.4	8.2	8.3
7	8.2	8.0	8.0	7.9	7.8	7.8	8.0	---	---	8.4	8.2	8.3
8	8.3	8.0	8.2	7.9	7.8	7.8	---	---	---	8.3	8.2	8.3
9	8.2	8.1	8.2	7.8	7.7	7.8	---	---	---	8.3	8.2	8.3
10	8.4	8.2	8.3	7.8	7.7	7.7	---	---	---	8.3	8.2	8.3
11	8.3	8.2	8.3	7.7	7.7	7.7	---	---	---	8.3	8.2	8.3
12	8.4	8.2	8.3	7.7	7.6	7.7	8.3	8.2	8.2	8.3	8.2	8.3
13	8.4	8.2	8.3	7.7	7.6	7.6	8.2	8.2	8.2	8.4	8.2	8.3
14	8.5	8.2	8.3	7.7	7.7	7.7	8.3	8.2	8.3	8.3	8.2	8.2
15	8.4	8.2	8.3	7.8	7.6	7.7	8.3	8.2	8.3	8.3	8.1	8.2
16	8.3	8.1	8.2	7.8	7.8	7.8	8.3	8.2	8.2	8.2	8.1	8.2
17	8.4	8.1	8.3	7.8	7.8	7.8	8.3	8.2	8.2	8.2	8.1	8.2
18	8.4	8.2	8.3	7.8	7.8	7.8	8.4	8.2	8.3	8.2	8.1	8.2
19	8.4	8.2	8.4	7.9	7.8	7.9	8.3	8.3	8.3	8.3	8.1	8.2
20	8.4	8.2	8.3	7.9	7.9	7.9	8.3	8.2	8.3	8.3	8.2	8.3
21	8.4	8.2	8.3	7.9	7.9	7.9	8.4	8.2	8.3	8.3	8.2	8.3
22	8.3	8.2	8.3	7.9	7.9	7.9	8.4	8.3	8.3	8.3	8.2	8.2
23	8.3	8.1	8.2	8.0	7.9	7.9	8.4	8.3	8.3	8.4	8.2	8.3
24	8.1	8.0	8.1	7.9	7.9	7.9	8.4	8.3	8.4	8.4	8.2	8.3
25	8.1	8.0	8.0	8.0	7.9	8.0	8.4	8.3	8.3	8.3	8.2	8.3
26	8.0	7.9	8.0	8.0	8.0	8.0	8.3	8.3	8.3	8.3	8.2	8.3
27	8.0	7.9	8.0	8.1	8.0	8.0	8.3	8.2	8.3	8.4	8.2	8.3
28	8.0	8.0	8.0	8.0	8.0	8.0	8.3	8.2	8.3	8.4	8.2	8.3
29	8.0	7.9	8.0	8.0	8.0	8.0	8.3	8.3	8.3	8.4	8.3	8.3
30	8.0	7.9	8.0	8.0	8.0	8.0	8.3	8.2	8.3	8.4	8.2	8.3
31	8.1	8.0	8.0	---	---	---	8.3	8.2	8.3	8.4	8.2	8.3
MAX	8.5	---	---	8.1	8.0	8.0	---	---	---	8.4	8.3	8.3
MIN	7.6	---	---	7.7	7.6	7.6	---	---	---	8.2	8.1	8.2

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		FEBRUARY			MARCH			APRIL			MAY	
1	8.4	8.3	8.3	8.5	8.3	8.3	8.2	8.0	8.2	7.6	7.5	7.5
2	8.4	8.3	8.3	8.3	8.2	8.3	8.2	8.0	8.1	7.6	7.6	7.6
3	8.4	8.2	8.3	8.3	8.2	8.2	8.3	8.1	8.2	7.6	7.6	7.6
4	8.5	8.3	8.4	8.3	8.2	8.2	8.3	8.2	8.2	7.7	7.6	7.6
5	8.7	8.4	8.5	8.3	8.1	8.2	8.3	8.1	8.2	7.9	7.6	7.7
6	8.8	8.5	8.6	8.4	8.1	8.2	8.2	8.1	8.2	8.1	7.7	7.8
7	8.8	8.6	8.7	8.4	8.2	8.3	8.2	8.0	8.1	8.3	7.8	8.0
8	8.6	8.5	8.6	8.4	8.2	8.3	8.2	8.0	8.1	8.3	7.8	8.0
9	8.6	8.5	8.6	8.4	8.3	8.4	8.4	8.1	8.3	8.5	7.9	8.1
10	8.7	8.5	8.6	8.6	8.3	8.4	8.4	8.2	8.3	8.4	8.0	8.0
11	8.7	8.5	8.6	8.6	8.4	8.5	8.4	8.2	8.3	8.1	7.8	8.0
12	8.7	8.5	8.6	8.6	8.5	8.5	8.3	8.1	8.2	7.9	7.3	7.8
13	8.7	8.4	8.5	8.6	8.5	8.5	8.3	8.1	8.2	7.5	7.3	7.4
14	8.6	8.3	8.5	8.6	8.5	8.5	8.3	8.2	8.3	7.6	7.4	7.5
15	8.6	8.3	8.5	8.5	8.4	8.4	8.3	8.1	8.2	7.6	7.5	7.5
16	8.6	8.4	8.5	8.5	8.3	8.4	8.2	8.1	8.2	7.5	7.3	7.5
17	8.5	8.3	8.5	8.4	8.3	8.4	8.2	8.1	8.2	7.3	6.7	6.9
18	8.5	8.3	8.4	8.4	8.2	8.3	8.2	8.1	8.1	7.1	6.8	6.9
19	8.5	8.3	8.5	8.3	8.2	8.2	8.1	7.9	8.0	7.3	7.1	7.2
20	8.6	8.4	8.5	8.3	8.2	8.3	8.0	7.3	7.8	7.4	7.3	7.3
21	8.6	8.4	8.5	8.4	8.2	8.3	7.4	7.1	7.2	7.5	7.4	7.4
22	8.6	8.4	8.5	8.4	8.2	8.3	7.3	7.0	7.2	7.5	7.5	7.5
23	8.6	8.4	8.5	8.3	8.2	8.2	7.1	7.0	7.0	7.6	7.5	7.6
24	8.5	8.4	8.5	8.3	8.1	8.2	7.2	7.1	7.2	7.6	7.5	7.6
25	8.6	8.4	8.5	8.3	8.2	8.2	7.4	7.2	7.3	7.6	7.6	7.6
26	8.5	8.5	8.5	8.4	8.2	8.3	7.5	7.4	7.4	7.6	7.6	7.6
27	8.5	8.4	8.5	8.4	8.2	8.3	7.5	7.4	7.5	7.7	7.6	7.7
28	8.5	8.4	8.5	8.4	8.2	8.3	7.6	7.5	7.6	7.8	7.7	7.7
29	---	---	---	8.4	8.2	8.3	7.6	7.4	7.5	8.0	7.7	7.8
30	---	---	---	8.4	8.3	8.4	7.5	7.5	7.5	8.2	7.8	7.9
31	---	---	---	8.4	8.2	8.3	---	---	---	8.3	7.9	8.0
MAX	8.8	8.6	8.7	8.6	8.5	8.5	8.4	8.2	8.3	8.5	8.0	8.1
MIN	8.4	8.2	8.3	8.3	8.1	8.2	7.1	7.0	7.0	7.1	6.7	6.9

07143672 LITTLE ARKANSAS RIVER AT HIGHWAY 50 NEAR HALSTEAD, KS--Continued

PH, WH, FIELD FROM DCP, in (STANDARD UNITS), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	8.5	8.0	8.2	8.5	8.2	8.4	8.6	8.5	8.6	8.8	8.5	8.7
2	8.4	8.0	8.2	8.4	8.1	8.3	8.6	8.6	8.6	8.8	8.5	8.6
3	8.4	8.0	8.3	8.4	8.2	8.2	8.6	8.5	8.6	8.6	8.5	8.6
4	8.4	7.6	7.9	8.3	8.1	8.3	8.6	8.5	8.6	8.6	8.3	8.5
5	8.0	7.8	7.9	8.3	8.1	8.2	8.6	8.5	8.6	8.6	8.3	8.5
6	7.9	7.9	7.9	8.2	8.1	8.2	8.7	8.5	8.6	8.5	8.3	8.4
7	8.0	7.8	7.9	8.2	8.1	8.2	8.6	8.5	8.6	8.4	8.2	8.3
8	8.2	7.9	8.0	8.3	8.1	8.2	8.7	8.6	8.6	8.3	8.2	8.2
9	8.2	8.0	8.1	8.3	8.1	8.2	8.7	8.6	8.6	8.3	8.2	8.3
10	8.2	8.0	8.2	8.3	8.1	8.2	8.6	8.5	8.5	8.3	8.1	8.2
11	8.3	8.1	8.2	8.3	8.1	8.2	8.5	8.4	8.5	8.3	8.1	8.2
12	8.3	6.9	7.1	8.2	8.1	8.2	8.5	8.5	8.5	8.2	8.1	8.2
13	7.0	6.9	6.9	8.2	8.1	8.2	8.5	8.2	8.4	8.2	8.1	8.1
14	7.2	7.0	7.1	8.3	8.1	8.2	8.6	7.6	8.4	8.2	8.1	8.1
15	7.3	7.1	7.2	8.3	8.1	8.2	7.6	7.4	7.4	8.2	8.0	8.1
16	7.5	6.6	6.9	8.3	8.2	8.3	7.8	7.5	7.6	8.1	8.0	8.0
17	6.8	6.6	6.7	8.4	8.2	8.3	7.8	7.8	7.8	8.2	8.0	8.1
18	6.9	6.8	6.8	8.4	8.3	8.3	7.8	7.8	7.8	8.2	8.1	8.1
19	7.2	6.9	7.1	8.4	8.3	8.3	7.9	7.8	7.9	8.2	8.1	8.2
20	7.3	7.2	7.3	8.4	8.3	8.4	8.1	7.9	7.9	8.1	8.0	8.1
21	7.4	7.3	7.3	8.4	8.3	8.4	8.1	8.0	8.0	8.1	8.0	8.1
22	7.5	7.4	7.4	8.4	8.3	8.4	8.3	8.0	8.1	8.2	8.1	8.1
23	7.5	7.5	7.5	8.4	8.3	8.4	8.7	8.0	8.2	8.2	8.1	8.2
24	7.6	7.5	7.6	8.4	8.4	8.4	8.6	8.1	8.2	8.2	8.2	8.2
25	7.7	7.6	7.6	8.4	8.4	8.4	8.8	8.4	8.5	8.2	8.2	8.2
26	7.8	7.6	7.7	8.4	8.4	8.4	8.7	8.4	8.5	8.3	8.1	8.2
27	8.1	7.7	7.9	8.4	8.4	8.4	8.7	8.3	8.6	8.2	8.1	8.2
28	8.3	7.8	8.0	8.5	8.4	8.5	8.8	8.4	8.6	8.2	8.1	8.1
29	8.5	8.0	8.2	8.5	8.4	8.4	8.9	8.5	8.7	8.2	8.0	8.1
30	8.6	8.0	8.4	8.5	8.3	8.4	8.9	8.5	8.7	8.1	8.0	8.1
31	---	---	---	8.6	8.4	8.4	8.9	8.5	8.7	---	---	---
MAX	8.6	8.1	8.4	8.6	8.4	8.5	8.9	8.6	8.7	8.8	8.5	8.7
MIN	6.8	6.6	6.7	8.2	8.1	8.2	7.6	7.4	7.4	8.1	8.0	8.0

WATER TEMPERATURE FROM DCP, in (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	18.9	17.1	18.2	15.7	14.3	15.1	5.5	4.0	4.8	1.7	0.8	1.2
2	18.7	17.3	18.1	15.3	13.8	14.7	6.1	4.2	5.3	1.2	0.3	0.6
3	19.0	17.2	18.1	15.4	14.2	14.9	9.4	5.9	7.7	0.9	0.1	0.4
4	19.5	18.4	18.9	16.2	14.4	15.3	12.4	9.4	10.9	1.0	0.2	0.6
5	18.5	15.6	16.3	16.0	14.0	15.1	13.7	11.1	12.8	2.9	0.9	1.9
6	15.9	14.3	15.2	16.5	14.4	15.6	11.1	8.4	9.2	3.0	2.2	2.6
7	15.8	14.6	15.2	16.4	15.0	15.8	---	7.4	---	2.2	1.0	1.6
8	16.7	13.9	15.4	15.5	11.8	13.5	7.7	---	---	3.8	1.5	2.6
9	17.2	16.2	16.7	11.8	9.9	10.8	6.7	5.6	6.2	4.2	3.4	3.9
10	17.3	16.2	16.8	12.2	10.0	11.2	6.4	5.2	5.9	4.8	3.9	4.3
11	16.6	14.8	15.8	12.7	10.7	11.8	6.5	5.3	6.0	3.9	2.4	3.2
12	16.2	15.0	15.8	13.0	11.9	12.6	7.4	6.5	7.0	4.6	3.3	3.9
13	16.3	15.0	15.7	14.0	13.0	13.5	7.3	6.1	6.6	4.7	3.3	4.0
14	15.5	13.8	14.6	14.7	13.9	14.2	6.1	5.2	5.6	4.6	3.5	4.1
15	14.3	12.7	13.7	14.4	13.2	13.9	6.9	5.0	5.8	3.5	2.4	3.0
16	13.0	11.0	12.2	14.3	12.9	13.7	7.6	6.7	7.3	4.0	3.2	3.6
17	13.6	11.4	12.6	14.7	13.6	14.2	6.7	5.2	5.8	3.6	2.7	3.1
18	13.8	12.0	13.0	14.5	13.5	14.3	6.3	5.0	5.6	3.1	1.9	2.2
19	13.8	11.8	13.0	13.5	9.8	11.5	5.9	4.4	4.9	3.3	1.9	2.5
20	14.6	12.1	13.5	9.8	8.2	8.9	5.0	3.7	4.4	3.5	2.0	2.8
21	16.7	14.1	15.4	9.8	8.1	9.1	6.0	4.4	5.2	4.0	2.2	3.1
22	17.0	16.0	16.5	10.5	9.0	9.9	6.6	4.8	6.0	5.0	3.1	4.1
23	16.7	15.1	16.0	12.4	10.4	11.4	4.8	2.3	3.3	5.0	3.8	4.4
24	16.2	14.1	15.2	11.9	9.2	10.7	2.5	1.4	2.0	4.0	2.6	3.3
25	14.1	12.1	12.9	9.2	7.9	8.6	2.2	1.0	1.7	4.0	2.2	3.2
26	12.2	10.6	11.6	9.6	8.0	9.0	2.0	0.9	1.6	5.5	3.4	4.5
27	11.7	10.2	11.1	8.0	4.8	6.0	3.4	1.7	2.5	6.4	4.6	5.6
28	12.9	10.4	11.8	4.8	3.2	3.7	3.0	2.1	2.6	6.2	3.8	4.8
29	14.4	12.1	13.4	4.2	2.9	3.5	2.4	1.0	1.5	3.8	1.9	3.1
30	15.2	13.5	14.4	5.1	3.5	4.3	1.1	0.4	0.8	1.9	0.1	0.5
31	14.9	13.5	14.4	---	---	---	1.2	0.3	0.7	1.6	0.1	0.7
MONTH	19.5	10.2	14.9	16.5	2.9	11.6	---	---	---	6.4	0.1	2.9

07143672 LITTLE ARKANSAS RIVER AT HIGHWAY 50 NEAR HALSTEAD, KS--Continued

WATER TEMPERATURE FROM DCP, in (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	2.3	1.2	1.8	5.6	2.6	4.7	16.7	12.5	14.7	17.9	16.3	17.4
2	3.0	1.6	2.2	2.6	0.3	1.4	16.6	11.2	14.0	18.4	14.7	16.4
3	3.5	2.4	3.0	2.2	0.2	1.1	11.8	9.0	10.6	18.1	14.1	16.2
4	3.2	2.2	2.8	3.6	0.6	2.0	12.9	9.7	11.3	19.7	15.2	17.5
5	3.2	2.9	3.0	6.5	3.6	5.1	13.9	10.3	12.3	21.2	16.1	18.9
6	3.6	2.8	3.2	7.6	5.4	6.5	13.3	11.0	12.1	24.0	19.0	21.4
7	4.8	3.1	3.9	7.2	5.3	6.0	11.3	10.4	10.8	23.5	20.7	22.1
8	5.2	3.2	4.3	8.7	7.0	7.6	11.9	11.3	11.5	23.3	20.2	21.8
9	5.2	3.2	4.5	7.6	3.6	5.3	14.6	10.3	12.4	21.8	18.2	20.1
10	3.7	2.1	3.0	7.1	4.7	5.9	16.6	13.4	15.1	20.7	17.4	18.8
11	4.7	2.4	3.4	8.2	5.9	7.1	17.8	15.8	16.7	20.3	16.8	18.4
12	5.1	3.7	4.4	9.4	6.6	8.1	18.3	15.3	17.0	18.8	15.5	17.3
13	5.0	3.0	4.2	10.8	8.3	9.6	18.2	16.2	17.1	16.5	14.2	15.4
14	5.3	3.4	4.4	12.2	10.4	11.1	20.7	16.4	18.4	17.0	15.2	16.2
15	5.9	4.2	5.2	10.7	8.1	9.3	22.1	19.1	20.7	18.9	15.9	17.3
16	6.6	4.4	5.6	9.5	8.0	8.8	21.7	20.2	20.8	20.6	17.5	18.7
17	7.1	5.3	6.3	11.3	8.4	9.9	22.9	19.3	21.1	19.0	16.2	17.3
18	7.9	6.4	6.9	11.2	10.3	10.8	24.4	21.5	22.9	17.7	17.0	17.3
19	9.3	7.9	8.7	11.1	9.2	10.5	23.9	17.8	20.9	17.6	16.6	17.1
20	8.8	6.8	8.0	11.0	8.0	9.6	18.5	14.0	16.3	18.2	16.5	17.2
21	9.1	7.4	8.3	10.9	7.0	8.5	14.0	12.7	13.4	19.5	16.8	17.9
22	8.7	7.0	8.0	8.5	5.4	7.1	13.7	11.5	12.5	19.1	17.1	18.1
23	9.3	7.5	8.4	9.6	6.8	8.2	15.9	13.7	15.2	19.0	17.3	18.2
24	10.3	8.6	9.4	10.5	8.4	9.7	17.8	15.9	16.6	18.1	15.6	16.8
25	8.8	3.8	6.2	8.4	5.1	6.4	17.6	15.3	16.5	19.4	14.6	16.8
26	3.8	1.6	2.4	8.6	4.2	6.4	15.3	13.7	14.6	20.5	15.4	18.1
27	3.9	1.3	2.6	11.1	7.5	9.4	17.0	12.9	14.6	21.7	18.3	19.9
28	5.8	3.2	4.5	13.3	10.0	11.8	17.7	12.7	15.0	22.6	20.0	21.3
29	---	---	---	14.4	11.9	13.2	16.6	14.6	15.9	24.7	20.2	22.5
30	---	---	---	14.5	12.0	13.4	18.3	16.5	17.2	25.9	21.6	23.8
31	---	---	---	14.6	11.8	13.4	---	---	---	27.1	22.9	25.1
MONTH	10.3	1.2	5.0	14.6	0.2	8.0	24.4	9.0	15.6	27.1	14.1	18.8

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	27.1	23.5	25.5	27.8	24.6	25.3	33.1	27.0	29.8	27.0	25.0	26.1
2	27.2	23.6	25.6	25.0	23.8	24.4	31.3	27.0	29.1	27.7	25.4	26.5
3	26.8	23.7	25.5	27.2	24.1	25.4	31.1	27.6	29.2	27.8	25.3	26.7
4	26.4	18.4	22.6	27.7	25.1	26.4	31.0	27.9	29.3	28.4	25.8	27.1
5	22.0	20.5	21.2	27.9	25.6	26.9	31.0	27.8	29.3	28.4	25.9	27.2
6	23.8	19.8	21.8	28.6	25.7	27.2	31.0	27.3	29.1	28.7	26.0	27.2
7	24.6	21.1	22.9	29.2	26.6	28.0	32.8	25.8	29.3	28.2	25.8	26.9
8	25.4	22.9	24.2	29.8	26.9	28.5	31.3	26.8	28.9	27.7	25.2	26.3
9	26.2	23.9	25.1	31.0	27.3	29.2	28.2	26.4	27.2	26.1	24.3	25.4
10	26.9	24.6	25.7	31.0	28.1	29.6	27.5	25.4	26.2	27.8	24.5	25.7
11	26.6	24.0	25.5	29.4	27.0	28.3	28.2	24.9	26.5	26.7	23.3	24.7
12	24.0	21.4	22.4	28.2	25.6	26.6	26.9	25.3	26.2	23.7	22.0	22.6
13	24.2	22.8	23.4	26.0	24.1	25.1	25.8	22.2	23.6	22.2	21.1	21.7
14	23.9	22.7	23.6	27.6	24.0	25.9	24.5	20.5	22.8	22.5	21.4	21.7
15	23.1	19.8	21.7	28.5	25.1	26.9	21.1	18.5	19.9	22.4	20.2	21.2
16	20.2	17.5	18.1	27.9	25.4	26.8	23.6	21.0	22.2	21.3	19.3	20.4
17	20.0	17.9	18.9	29.2	26.1	27.5	24.3	23.2	23.6	22.8	20.2	21.5
18	21.5	20.0	20.8	29.9	27.0	28.4	26.4	22.8	24.4	24.2	22.1	23.1
19	23.4	21.4	22.4	30.5	27.6	29.1	27.7	23.9	25.9	23.4	20.2	22.0
20	23.9	22.6	23.3	30.8	28.2	29.5	28.1	26.0	27.1	20.4	18.6	19.7
21	25.8	23.3	24.4	30.3	27.7	29.1	27.6	25.8	26.8	22.7	19.4	20.5
22	27.3	24.3	25.5	29.1	27.7	28.5	28.3	25.8	27.2	21.5	18.8	19.8
23	27.8	23.9	25.6	29.1	26.4	27.8	29.8	26.6	28.2	20.8	17.5	19.0
24	27.9	23.6	25.7	30.3	26.1	28.1	28.4	25.9	27.4	19.9	17.5	18.7
25	27.7	24.1	26.0	30.3	26.4	28.3	28.4	25.4	27.0	20.1	17.7	18.9
26	28.3	24.7	26.6	30.7	27.1	28.6	28.0	25.4	27.0	21.5	18.2	19.6
27	29.1	24.9	27.0	30.5	26.6	28.4	28.0	25.9	27.1	20.1	17.8	18.8
28	29.5	25.7	27.7	30.0	25.6	28.2	27.6	25.2	26.6	20.0	17.5	18.8
29	29.3	25.8	27.7	29.0	25.9	27.3	28.0	25.7	27.0	21.6	19.1	20.3
30	28.7	25.9	27.5	29.7	26.3	28.0	27.1	25.6	26.5	22.6	20.4	21.4
31	---	---	---	30.2	27.2	28.7	26.7	24.9	25.9	---	---	---
MONTH	29.5	17.5	24.1	31.0	23.8	27.6	33.1	18.5	26.7	28.7	17.5	22.6

07143672 LITTLE ARKANSAS RIVER AT HIGHWAY 50 NEAR HALSTEAD, KS--Continued

OXYGEN DISSOLVED FROM DCP, in (MG/L), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	8.2	7.3	7.7	8.6	7.3	8.0	12.9	11.5	12.3	18.2	15.7	17.2
2	8.6	7.4	7.9	9.0	6.9	8.0	13.2	11.6	12.5	18.4	15.7	17.3
3	8.8	7.5	8.1	8.5	7.1	7.9	12.8	11.5	12.1	18.5	16.1	17.5
4	9.2	7.6	8.4	9.4	6.7	8.0	11.6	10.2	10.7	18.8	15.8	17.4
5	10.4	8.9	9.6	9.0	6.8	7.9	10.3	9.2	9.7	18.0	15.2	16.9
6	10.7	8.5	9.5	8.5	6.6	7.6	11.2	9.4	10.3	17.9	14.3	16.3
7	10.9	8.6	9.7	8.3	6.3	7.2	---	---	---	18.5	14.8	16.7
8	11.3	8.5	9.9	8.7	6.8	7.7	---	---	---	18.5	14.8	16.8
9	10.1	8.3	9.3	9.1	7.6	8.3	---	---	---	16.8	13.8	15.5
10	11.1	8.1	9.5	9.1	7.7	8.5	---	---	---	16.2	13.3	15.0
11	11.1	8.8	10.0	8.9	7.6	8.3	13.8	---	---	16.9	13.8	15.5
12	10.9	8.3	9.8	8.4	7.2	7.6	13.3	11.5	12.0	---	---	---
13	11.1	8.1	9.7	7.4	6.8	7.1	13.5	11.2	12.2	---	---	---
14	11.8	8.3	10.2	7.4	6.9	7.2	14.4	12.2	13.4	15.6	---	---
15	11.2	8.5	9.9	8.4	6.6	7.6	14.2	12.4	13.5	16.9	12.9	15.1
16	11.8	8.8	10.4	8.7	7.3	8.1	13.6	11.2	11.8	16.2	13.1	15.0
17	12.1	9.1	10.7	8.8	7.4	8.2	14.6	11.4	12.9	18.0	13.7	15.8
18	12.5	9.1	10.9	8.4	7.5	7.8	15.2	12.8	14.1	18.0	14.9	16.8
19	12.8	9.6	11.4	9.7	7.7	8.7	15.2	12.8	14.1	20.1	15.2	17.8
20	12.9	9.4	11.3	10.4	8.7	9.6	15.8	13.2	14.6	20.8	16.4	18.9
21	12.4	9.3	11.0	10.3	9.0	9.7	16.2	13.4	15.0	20.8	16.3	18.9
22	11.3	8.8	10.0	10.0	8.7	9.5	15.4	12.6	13.7	19.8	16.3	18.5
23	10.6	8.0	9.4	9.6	8.5	9.2	16.7	13.2	14.9	20.9	15.7	18.4
24	9.6	7.9	8.8	9.1	8.1	8.6	17.4	14.8	16.2	21.0	17.4	19.5
25	9.0	7.8	8.2	11.2	8.8	10.0	17.4	15.1	16.5	20.2	16.8	18.8
26	8.6	7.6	8.1	11.2	9.7	10.6	17.2	15.0	16.4	19.0	15.6	17.2
27	9.0	7.8	8.4	12.1	10.1	11.1	17.1	14.8	16.2	18.2	14.4	16.4
28	9.2	8.0	8.6	12.6	11.2	12.0	18.1	14.5	16.4	18.2	14.1	16.3
29	8.6	7.6	8.2	12.9	11.5	12.3	18.1	15.2	16.9	---	---	---
30	8.6	7.3	8.0	12.8	11.5	12.2	19.0	15.8	17.6	---	---	---
31	9.2	7.6	8.4	---	---	---	18.8	16.2	17.7	---	---	---
MONTH	12.9	7.3	9.4	12.9	6.3	8.8	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	14.2	11.8	12.5	12.8	8.9	10.7	7.5	7.3	7.4
2	---	---	---	16.1	11.9	13.8	12.3	7.7	9.9	7.7	7.3	7.5
3	---	---	---	17.0	13.3	15.0	13.3	9.0	11.0	8.1	7.3	7.7
4	---	---	---	16.9	13.4	15.0	13.3	9.7	11.5	8.5	7.4	7.8
5	---	---	---	16.5	12.5	14.4	13.6	9.4	11.3	9.6	7.3	8.2
6	---	---	---	17.6	11.9	14.6	12.0	9.4	10.6	11.3	7.1	8.6
7	19.8	---	---	16.5	12.6	14.4	11.6	9.0	10.3	12.2	6.7	9.0
8	19.1	15.0	17.1	15.6	11.8	13.7	11.2	8.6	9.9	12.8	6.6	9.2
9	18.2	13.5	15.9	16.4	11.3	13.8	14.6	8.9	11.5	15.3	7.0	10.4
10	18.9	13.3	16.0	16.5	12.6	14.6	14.2	9.7	11.9	10.8	7.7	9.2
11	19.0	14.4	16.8	17.7	11.9	14.7	12.9	8.0	10.4	10.1	7.9	8.8
12	20.7	13.5	17.0	17.4	12.4	14.9	12.4	7.4	9.7	8.3	7.2	7.5
13	21.3	14.2	17.5	17.1	12.0	14.5	12.0	7.9	9.8	8.2	7.5	7.9
14	20.1	13.2	16.6	16.1	10.9	13.4	13.3	7.8	10.3	7.9	7.6	7.8
15	20.7	13.1	16.7	13.9	10.5	12.2	11.4	6.8	8.9	8.0	7.6	7.8
16	20.4	13.4	16.9	13.8	10.2	12.0	9.4	5.9	7.7	7.6	6.7	7.4
17	19.0	12.9	16.0	13.6	10.1	11.7	9.0	5.1	7.2	6.7	5.1	5.8
18	16.8	12.2	14.7	12.2	9.1	10.7	10.9	4.9	7.6	6.8	5.4	5.9
19	17.0	11.2	14.3	10.5	8.3	9.3	---	4.3	---	7.6	6.8	7.2
20	18.3	11.8	15.0	13.9	8.9	11.2	---	---	---	8.0	7.6	7.8
21	16.7	12.1	14.5	14.4	9.8	12.1	---	---	---	7.9	7.8	7.9
22	16.6	11.5	14.1	15.1	10.9	12.8	7.3	6.2	6.8	7.9	7.7	7.8
23	16.5	11.2	13.9	14.6	10.6	12.5	6.8	6.3	6.6	7.8	7.4	7.7
24	15.3	10.8	13.2	12.5	9.0	11.1	7.4	6.8	7.1	8.3	7.6	7.9
25	15.3	10.6	12.9	12.6	10.0	11.3	7.6	7.3	7.4	8.4	7.8	8.1
26	15.8	12.3	14.0	16.2	11.4	13.5	7.9	7.6	7.8	8.6	7.7	8.1
27	16.3	12.7	14.5	15.0	11.3	13.1	8.2	7.6	8.0	8.8	7.5	8.1
28	16.2	12.5	14.3	14.9	9.9	12.4	8.3	7.7	8.0	8.9	7.3	8.1
29	---	---	---	14.4	9.6	12.0	8.0	7.5	7.8	10.7	7.3	8.7
30	---	---	---	13.8	9.2	11.6	7.7	7.5	7.6	12.7	7.2	9.6
31	---	---	---	14.4	9.4	11.7	---	---	---	15.9	7.0	10.6
MONTH	---	---	---	17.7	8.3	12.9	---	---	---	15.9	5.1	8.1

07143672 LITTLE ARKANSAS RIVER AT HIGHWAY 50 NEAR HALSTEAD, KS--Continued

OXYGEN DISSOLVED FROM DCP, in (MG/L), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	17.0	7.0	11.3	10.5	6.4	8.5	9.6	6.7	8.0	10.7	6.8	8.9
2	13.4	6.8	10.1	9.5	6.2	7.8	9.4	6.1	7.8	10.2	6.7	8.4
3	14.0	6.5	9.9	10.6	6.3	8.3	8.7	6.0	7.3	9.4	6.4	7.9
4	10.6	5.6	6.9	9.1	5.9	7.5	8.3	5.5	6.9	9.3	6.7	8.0
5	7.8	5.7	6.9	7.9	5.6	6.8	8.4	5.7	7.0	8.5	6.5	7.6
6	9.1	6.8	7.8	8.5	5.5	6.9	8.2	5.3	6.8	7.8	6.1	7.0
7	10.2	6.7	8.3	8.9	5.4	7.0	8.7	5.3	6.8	7.2	5.7	6.5
8	11.7	6.9	9.2	8.9	5.4	7.1	9.2	5.7	7.3	7.0	5.6	6.3
9	11.9	7.1	9.5	8.7	5.2	6.9	8.6	5.8	7.2	7.2	5.7	6.4
10	11.9	6.7	9.3	8.9	5.2	6.8	9.2	5.8	7.2	8.3	6.2	7.1
11	10.4	6.3	8.3	10.0	5.0	7.1	9.1	6.7	7.8	8.6	6.0	7.1
12	8.1	4.2	5.2	8.5	5.5	7.1	8.9	6.4	7.8	7.9	6.2	6.9
13	4.3	4.0	4.1	9.2	6.0	7.5	8.8	7.0	7.8	8.4	6.8	7.5
14	5.2	4.3	4.7	9.6	6.4	7.9	9.7	4.7	7.1	8.4	6.8	7.4
15	7.2	5.2	6.1	9.4	6.1	7.7	6.9	5.4	6.4	8.5	6.9	7.6
16	6.7	5.4	5.9	8.7	6.2	7.4	7.7	6.7	7.3	8.6	7.2	7.8
17	5.4	4.5	4.9	8.8	6.1	7.5	7.5	6.9	7.3	8.9	7.1	8.1
18	4.8	4.6	4.6	8.8	5.9	7.4	7.4	6.9	7.1	9.4	7.2	8.2
19	6.1	4.8	5.6	8.7	5.8	7.3	7.1	6.6	6.9	8.4	6.9	7.4
20	6.3	6.1	6.2	8.6	5.6	7.2	7.5	5.9	6.6	8.9	7.1	7.8
21	6.4	6.2	6.3	9.0	5.8	7.3	7.7	6.3	6.9	9.2	7.5	8.3
22	6.3	6.2	6.2	9.0	5.9	7.4	7.6	5.6	6.3	8.9	7.5	8.2
23	6.4	6.1	6.3	8.6	5.7	7.1	8.9	5.1	6.5	9.2	7.7	8.4
24	6.7	6.1	6.4	9.1	6.1	7.6	---	---	---	9.0	7.9	8.4
25	7.0	6.1	6.5	9.1	6.6	7.7	---	---	---	8.9	7.8	8.3
26	7.7	6.0	6.8	8.9	6.5	7.7	---	---	---	9.4	7.4	8.3
27	9.3	6.1	7.4	9.2	6.4	7.6	8.9	---	---	8.7	7.2	8.0
28	11.2	6.0	8.2	8.9	6.5	7.6	10.3	6.0	7.8	9.0	6.9	8.0
29	12.7	6.2	9.1	8.8	5.8	7.3	10.6	6.1	8.3	8.8	7.7	8.2
30	12.6	6.3	9.3	9.0	6.0	7.6	11.4	6.7	8.8	8.2	6.9	7.5
31	---	---	---	9.2	6.2	7.7	11.2	6.9	9.2	---	---	---
MONTH	17.0	4.0	7.2	10.6	5.0	7.4	---	---	---	10.7	5.6	7.7

TURBIDITY, FIELD FROM DCP, in (NTU), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	72	54	64	22	17	19	6.4	4.9	5.7	5.8	2.5	3.6
2	56	45	51	23	18	20	7.4	5.0	5.8	5.2	3.2	3.9
3	47	34	41	23	18	20	17	6.6	12	6.1	3.2	4.3
4	36	31	34	21	16	18	28	17	22	7.3	3.9	5.1
5	96	41	62	20	14	16	40	28	31	7.0	4.1	4.9
6	41	26	32	18	14	16	33	16	24	5.9	2.1	4.2
7	28	24	26	23	16	18	22	---	---	6.0	2.1	4.2
8	35	23	28	21	16	19	---	9.2	---	6.5	1.0	4.2
9	26	18	22	19	12	16	10	7.4	8.9	7.1	1.8	4.4
10	22	14	18	17	12	14	9.0	5.6	7.3	6.4	2.4	4.4
11	17	12	15	23	17	20	8.9	5.1	6.9	6.0	2.6	4.2
12	21	17	19	24	20	23	13	8.9	11	6.3	2.3	4.0
13	23	17	20	24	16	20	14	7.4	11	6.5	2.4	3.7
14	25	19	20	20	14	16	7.5	5.0	6.4	7.2	3.5	4.9
15	26	21	23	17	14	15	12	5.0	7.8	3.7	2.4	3.2
16	24	18	21	22	16	19	18	12	16	6.1	2.3	4.6
17	19	16	18	27	21	24	16	7.9	12	4.9	3.4	4.0
18	18	14	15	28	23	26	10	8.2	9.0	5.1	2.3	3.6
19	15	11	13	28	16	22	11	6.2	9.2	2.5	2.0	2.2
20	13	9.7	11	17	14	15	8.5	5.6	6.9	3.8	2.1	2.8
21	17	12	14	18	14	16	9.0	5.6	6.6	4.6	2.3	3.3
22	18	15	16	24	18	20	12	8.2	11	6.9	4.1	5.8
23	18	14	16	30	23	27	8.2	3.2	5.7	10	4.4	7.4
24	20	16	18	32	20	27	6.3	3.7	4.8	5.3	2.8	3.6
25	19	14	16	20	14	15	6.6	4.0	4.9	6.7	2.8	4.5
26	14	10	12	24	15	18	7.8	4.3	5.3	9.9	6.7	8.6
27	14	11	12	19	14	17	5.3	3.4	4.5	11	7.5	9.3
28	19	13	15	15	11	14	5.5	3.3	3.9	11	3.7	7.9
29	21	17	19	19	7.1	12	6.9	3.5	4.6	5.7	3.7	4.6
30	21	18	20	7.8	5.6	6.7	7.1	2.8	4.2	6.5	4.5	5.7
31	20	16	18	---	---	---	6.6	2.6	4.2	6.9	4.9	5.9
MONTH	96	9.7	24	32	5.6	18	---	---	---	11	1.0	4.7

07143672 LITTLE ARKANSAS RIVER AT HIGHWAY 50 NEAR HALSTEAD, KS--Continued

TURBIDITY, FIELD FROM DCP, in (NTU), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	5.8	4.1	4.9	22	17	19	57	45	52	290	200	240
2	5.6	3.5	4.0	18	15	16	68	54	60	200	140	170
3	5.5	4.0	4.7	16	14	15	55	43	47	150	130	140
4	6.2	4.8	5.5	19	14	16	52	44	48	130	100	120
5	8.2	5.8	7.3	27	17	22	56	50	53	110	75	92
6	11	7.6	8.1	32	25	27	56	50	53	85	50	71
7	14	9.1	11	28	21	25	52	46	49	72	49	59
8	18	10	13	37	25	28	86	48	57	77	49	62
9	17	12	15	34	20	26	64	48	55	70	48	61
10	15	12	13	30	20	24	56	50	53	120	48	85
11	17	12	14	32	27	29	62	54	57	>1300	56	>130
12	18	14	16	33	28	30	63	53	58	>1300	160	>490
13	16	11	13	38	30	33	54	48	52	>1300	500	>890
14	16	12	14	40	34	37	55	41	47	1000	540	680
15	18	14	16	40	34	37	69	43	48	550	400	460
16	19	13	16	37	30	33	68	43	---	1100	370	470
17	19	16	17	38	29	32	---	---	---	>1300	1100	>1300
18	21	18	20	38	32	35	---	---	---	>1300	700	>840
19	30	21	27	39	31	35	---	---	---	790	490	620
20	25	19	22	32	26	28	---	---	---	500	360	430
21	26	23	24	32	23	28	>1300	1100	>1300	360	290	310
22	26	24	25	30	23	25	>1300	1000	>1200	290	200	240
23	28	26	27	37	30	33	1000	540	710	200	140	170
24	31	27	29	44	37	41	600	410	490	530	110	170
25	29	18	24	40	22	32	410	300	360	150	79	100
26	26	17	19	36	19	24	300	220	260	80	66	72
27	24	17	20	42	36	38	230	180	210	69	54	62
28	18	16	17	46	41	43	360	170	190	60	45	54
29	---	---	---	49	42	46	1100	360	640	59	33	44
30	---	---	---	47	37	41	410	290	340	44	29	36
31	---	---	---	47	37	40	---	---	---	39	26	31
MONTH	31	3.5	16	49	14	30	---	---	---	1300	26	280

> Actual value is known to be greater than the value shown

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	36	25	30	54	36	45	72	34	51	67	44	57
2	78	28	42	190	42	73	58	36	49	67	41	56
3	47	37	41	83	39	52	61	37	51	73	42	58
4	>1300	40	>200	---	---	---	56	39	50	76	40	58
5	130	93	110	---	---	---	66	40	51	68	44	56
6	99	66	84	59	42	50	61	40	53	69	44	57
7	92	54	71	50	35	43	71	31	44	64	50	58
8	72	47	60	46	34	42	60	36	47	67	54	60
9	67	45	55	46	29	38	53	42	47	68	46	57
10	60	43	51	60	35	44	53	37	46	58	45	53
11	1000	44	110	69	41	53	51	36	43	63	39	52
12	>1400	680	>1200	60	41	51	120	40	53	65	49	56
13	>1400	630	>900	55	39	48	270	53	100	62	50	56
14	760	520	640	64	40	53	>1400	60	>340	63	47	54
15	1300	370	630	56	40	48	>1400	720	>1100	60	40	49
16	>1400	930	>1200	85	44	58	720	430	540	52	38	46
17	1300	700	990	60	39	49	470	340	390	56	44	50
18	800	470	660	67	39	50	360	260	320	57	36	48
19	580	460	510	65	38	50	260	200	240	56	45	51
20	480	320	410	54	36	46	200	150	190	54	41	47
21	320	220	270	52	33	43	160	140	150	46	32	41
22	220	160	180	90	36	54	150	120	140	52	40	46
23	160	130	140	51	30	42	130	98	110	47	34	42
24	150	120	130	48	28	39	200	85	130	62	44	49
25	120	95	110	72	40	51	110	67	89	57	41	48
26	100	82	94	76	46	61	83	63	73	56	35	43
27	110	66	80	75	44	58	78	69	74	57	34	43
28	69	50	60	250	51	79	81	62	72	46	36	41
29	73	40	55	180	53	95	80	52	68	45	31	36
30	61	35	46	95	42	57	76	47	65	48	32	39
31	---	---	---	86	51	66	72	44	61	---	---	---
MONTH	1400	25	310	---	---	---	1400	31	160	76	31	50

> Actual value is known to be greater than the value shown

07144100 LITTLE ARKANSAS RIVER NEAR SEDGWICK, KS

LOCATION.--Lat 37°52'59", long 97°25'27", in NE $^1/_4$ NW $^1/_4$ NW $^1/_4$ sec.15, T.25 S., R.01 W., Sedgwick County, Hydrologic Unit 11030012, on left bank at downstream side of county highway bridge, 2.1 mi south of Sedgwick, and at mile 23.7.

WATER-DISCHARGE RECORDS

DRAINAGE AREA.--1,239 mi^2, of which about 74 mi^2 is probably noncontributing.

PERIOD OF RECORD.--October 1993 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,340.00 ft above NGVD of 1929.

REMARKS.--Records good Sept. 1-30, fair Oct. 1 to Aug. 31, and periods of estimated daily discharges, which are poor. Natural flow of stream affected by ground-water withdrawals, diversions for irrigation, and return flow from irrigated areas. Satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,700 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 18	0900	2,890	11.78	Jun 16	1700	5,150	15.91
Jun 12	2100	*10,200	*21.13				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	54	29	34	35	41	35	30	157	52	47	8.4	15
2	49	29	34	33	41	33	30	e105	48	47	9.2	15
3	44	29	34	36	40	35	28	88	44	54	9.0	15
4	42	29	34	35	39	35	28	77	51	54	9.5	14
5	74	29	32	35	40	36	27	71	587	43	8.8	13
6	67	29	31	36	40	37	27	75	233	36	8.0	13
7	48	29	32	34	40	38	30	74	116	37	7.7	13
8	48	28	33	35	41	39	35	86	75	34	4.8	12
9	49	30	33	35	48	49	71	85	58	29	7.2	12
10	44	30	34	36	52	44	42	130	50	65	6.2	13
11	38	30	35	36	48	37	39	175	46	29	7.1	12
12	35	30	35	36	46	36	94	e893	4990	29	e9.5	11
13	33	31	35	37	48	38	e72	e528	5580	25	32	11
14	31	32	35	36	48	37	45	475	2730	22	50	11
15	31	32	35	39	47	34	39	325	1670	21	738	13
16	31	32	35	38	45	33	36	173	4390	19	e537	14
17	30	31	35	37	44	32	36	1510	3980	17	103	13
18	30	33	35	37	42	32	34	2680	3390	15	52	15
19	30	32	34	39	42	33	33	1050	1800	14	36	15
20	31	32	35	38	47	34	48	398	516	15	28	14
21	32	31	34	36	42	31	946	214	277	13	22	14
22	32	31	34	37	39	31	1580	141	181	15	21	13
23	31	32	32	37	39	33	1780	109	134	14	19	12
24	29	33	31	36	38	34	707	199	111	11	20	11
25	27	33	31	35	36	33	241	429	97	9.0	21	12
26	27	31	32	34	35	32	e150	137	85	8.7	18	11
27	27	30	34	35	34	31	e110	97	74	9.6	20	11
28	28	30	34	34	34	31	e88	84	64	8.8	26	11
29	28	32	34	35	---	31	e270	73	56	12	21	10
30	28	34	34	37	---	31	257	62	51	13	e18	10
31	28	---	33	45	---	30	---	57	---	8.1	16	---
MEAN	37.29	30.77	33.65	36.26	42.00	34.68	231.8	347.0	1051	24.97	61.08	12.63
MAX	74	34	35	45	52	49	1780	2680	5580	65	738	15
MIN	27	28	31	33	34	30	27	57	44	8.1	4.8	10
AC-FT	2290	1830	2070	2230	2330	2130	13790	21340	62550	1540	3760	752

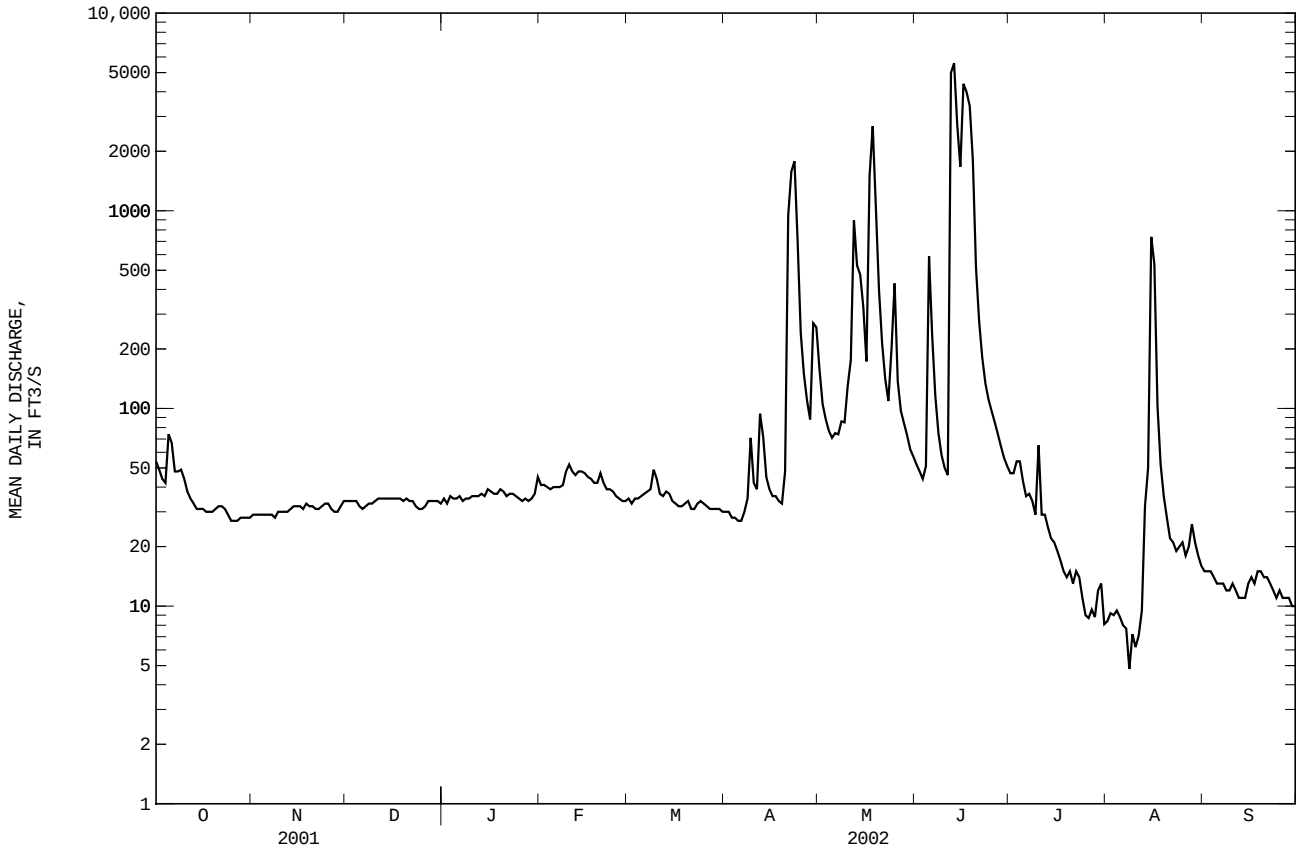
07144100 LITTLE ARKANSAS RIVER NEAR SEDGWICK, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	220.1	489.8	129.8	77.65	322.7	518.2	331.9	766.3	956.8	320.3	234.8	232.0
MAX	893	3319	412	219	1391	2218	1260	4423	2927	921	747	666
(WY)	1999	1999	1998	1999	2001	2000	1999	1995	1995	1999	1999	2001
MIN	8.92	19.9	18.8	21.4	19.5	34.5	38.6	53.5	50.6	25.0	15.8	9.13
(WY)	1995	1995	1995	1995	1995	1996	1996	1994	1994	2002	1994	1994

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1994 - 2002	
ANNUAL MEAN	436.5		161.1		382.5	
HIGHEST ANNUAL MEAN					859	1999
LOWEST ANNUAL MEAN					69.3	1994
HIGHEST DAILY MEAN	11500	Feb 25	5580	Jun 13	17600	Nov 2 1998
LOWEST DAILY MEAN	13	Aug 15	4.8	Aug 8	4.8	Aug 8 2002
ANNUAL SEVEN-DAY MINIMUM	15	Aug 9	7.1	Aug 5	7.1	Aug 5 2002
MAXIMUM PEAK FLOW			10200	Jun 12	17600	Nov 1 1998
MAXIMUM PEAK STAGE			21.13	Jun 12	25.82	Nov 1 1998
INSTANTANEOUS LOW FLOW			3.9	Aug 8	3.5	Aug 19 1998
ANNUAL RUNOFF (AC-FT)	316000		116600		277100	
10 PERCENT EXCEEDS	703		153		687	
50 PERCENT EXCEEDS	54		35		63	
90 PERCENT EXCEEDS	21		13		20	

e Estimated



07144100 LITTLE ARKANSAS RIVER NEAR SEDGWICK, KS--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1998 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: May 1998 to current year.
pH: May 1998 to current year.
WATER TEMPERATURE: May 1998 to current year.
DISSOLVED OXYGEN: October 1998 to current year.
TURBIDITY: October 1998 to current year.

INSTRUMENTATION.--Multiparameter water-quality monitor.

REMARKS.--Records good. Interruptions in record are due to ice conditions or malfunction of the recording instrument or sensors. Instruments used to measure turbidity conform to ISO 7027 standards.

EXTREMES FOR PERIOD OF RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 1,540 microsiemens/cm, May 13, 1998; minimum, 36 microsiemens/cm, Sept. 18, 2001.
pH: Maximum, 9.0 standard units, July 6, 2001; minimum, 6.7 standard units, June 20, 1999.
WATER TEMPERATURE: Maximum, 35.3°C, July 4, 1998; minimum, 0.0°C, Jan. 2, 1999.
DISSOLVED OXYGEN: Maximum 23.5 mg/L, Aug. 16, 1999; minimum, 0.1 mg/L, Aug. 4, 1999.
TURBIDITY: Maximum, >2,000 NTU, June 6, 2001; minimum, 1.1 NTU, Jan. 19, 2002.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 1,150 microsiemens/cm, Mar. 3; minimum, 92 microsiemens/cm, June 12.
pH: Maximum, 8.9 units, May 31, June 1; minimum, 7.0 units, June 12.
WATER TEMPERATURE: Maximum, 32.8°C, Aug. 7; minimum, 0.0°C, on several days.
DISSOLVED OXYGEN: Maximum, 21.1 mg/L, Jan. 20; minimum, 3.4 mg/L, June 12.
TURBIDITY: Maximum, 1,700 NTU, May 17; minimum, 1.1 ntu, Jan. 19.

SPECIFIC CONDUCTANCE FROM DCP, in US/CM @ 25C, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	526	484	506	843	837	840	1040	1020	1030	1110	1050	1080
2	547	505	526	848	839	845	1040	1030	1030	1110	1060	1080
3	541	521	529	861	848	854	1040	1010	1020	1110	1060	1090
4	557	481	545	868	861	866	1020	1000	1010	1110	1090	1100
5	584	481	517	884	868	878	1020	991	1010	1090	1030	1070
6	612	429	473	904	884	894	1020	992	1010	1040	1010	1020
7	531	435	481	913	904	909	1050	1010	1040	1040	1000	1020
8	579	531	555	905	882	892	1060	1020	1050	1070	---	---
9	612	577	594	892	859	880	1060	1030	1040	---	---	---
10	640	605	623	870	843	861	1040	1000	1020	1040	---	---
11	677	640	658	854	828	845	1050	1000	1020	---	---	---
12	703	676	691	849	838	845	1010	976	1000	1090	921	1020
13	720	703	713	859	849	853	1030	994	1010	---	925	---
14	736	720	728	892	858	874	---	990	---	1070	---	---
15	738	733	736	929	892	909	1030	1000	1020	1070	1040	1060
16	753	734	741	962	929	949	1050	1020	1030	1090	1040	1060
17	854	753	800	988	962	977	1060	1020	1050	1070	1050	1060
18	948	854	902	1000	988	995	1040	989	1030	1090	1070	1080
19	995	948	977	1020	1000	1010	1030	993	1020	1140	1040	1090
20	997	961	982	1030	1010	1020	1030	990	1010	1100	1060	1080
21	964	934	954	1010	987	1000	1020	1000	1010	1110	1040	1070
22	941	906	927	992	974	984	1020	1010	1020	1110	1040	1070
23	911	882	899	976	954	969	1040	1010	1030	1070	1060	1060
24	882	866	873	968	953	962	1050	1020	1040	1070	1060	1060
25	866	852	858	983	968	976	1070	1010	1040	1070	1040	1050
26	857	854	855	999	974	989	1080	999	1040	1070	1020	1040
27	857	847	853	1020	999	1010	1090	1000	1050	1030	1010	1020
28	852	846	849	1030	1020	1020	1070	1030	1050	1010	1010	1010
29	852	848	850	1040	1020	1030	1100	1030	1070	1020	1010	1020
30	856	849	852	1040	1030	1030	1110	1020	1070	1020	966	995
31	853	841	849	---	---	---	1100	1040	1080	1030	994	1010
MONTH	997	429	739	1040	828	932	---	976	---	---	---	---

07144100 LITTLE ARKANSAS RIVER NEAR SEDGWICK, KS--Continued

SPECIFIC CONDUCTANCE FROM DCP, in US/CM @ 25C, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	1030	981	1000	1080	1040	1050	1020	920	993	719	551	651
2	1050	988	1020	1090	1050	1060	1030	890	972	551	528	535
3	1040	990	1010	1150	1050	1100	1050	950	1000	580	542	562
4	1030	987	1010	1130	1080	1110	---	987	---	635	580	611
5	1030	970	991	1120	1020	1060	---	---	---	664	635	654
6	1010	986	995	1040	1010	1020	1060	1040	1060	667	662	664
7	1020	994	1010	1030	1010	1020	1060	1040	1050	665	655	664
8	1020	999	1000	1040	1010	1030	1050	977	1030	684	604	644
9	1020	1020	1020	1020	970	1010	1010	818	923	732	684	713
10	1020	986	1010	1000	954	983	902	832	865	731	661	702
11	997	957	978	976	942	952	958	902	930	666	595	625
12	993	969	980	1030	976	999	988	697	895	---	---	---
13	1020	993	1010	1040	1020	1030	853	782	821	---	511	---
14	1020	1000	1020	1050	1030	1040	881	839	856	755	351	437
15	1020	1010	1020	1050	1040	1040	922	881	902	765	496	545
16	1040	1020	1030	1060	1040	1050	922	857	894	522	459	484
17	1070	1040	1060	1060	1040	1050	888	869	880	526	150	338
18	1080	1070	1070	1070	1060	1070	906	884	899	279	154	199
19	1080	1060	1070	1080	1070	1070	956	894	928	286	220	263
20	1110	1070	1090	1070	1040	1060	1020	920	966	335	283	304
21	1100	1080	1100	1070	1020	1040	---	---	---	403	335	371
22	1110	1070	1100	1040	1020	1030	---	---	---	441	403	423
23	1090	1040	1060	1030	1020	1020	250	207	214	471	441	461
24	1060	1040	1060	1040	1020	1030	280	210	239	471	253	386
25	1070	1060	1070	1070	1030	1050	360	280	322	296	189	234
26	1080	1060	1070	1080	1060	1070	426	---	---	487	296	397
27	1110	1060	1080	1070	1050	1060	481	426	452	560	487	539
28	1120	1040	1070	1060	1030	1050	539	481	513	591	558	578
29	---	---	---	1040	1000	1030	624	521	565	644	583	628
30	---	---	---	1040	1000	1020	793	500	630	688	641	672
31	---	---	---	1030	959	1010	---	---	---	725	672	709
MONTH	1120	957	1040	1150	942	1040	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	780	714	751	---	---	---	765	569	693	---	---	---
2	845	729	813	643	628	637	725	558	626	---	---	---
3	870	805	841	658	641	648	702	584	619	736	722	729
4	914	830	878	641	585	605	---	---	---	757	736	746
5	903	321	439	597	574	586	717	683	703	771	757	762
6	457	328	403	651	585	624	741	701	718	788	759	775
7	462	438	450	696	651	669	756	713	735	791	776	784
8	532	459	497	730	694	706	763	756	758	792	783	788
9	689	532	619	724	690	709	764	746	757	800	782	791
10	756	689	719	870	653	703	761	742	755	798	786	793
11	790	653	768	730	660	705	778	760	769	798	788	793
12	769	92	358	754	728	745	---	---	---	795	743	775
13	232	133	183	753	735	745	---	---	---	781	758	768
14	279	191	215	744	658	726	675	509	640	781	769	776
15	229	179	215	751	688	715	1060	163	482	786	765	773
16	179	145	157	762	741	755	313	187	243	783	746	764
17	179	152	166	753	711	732	448	313	391	754	734	748
18	197	177	188	738	693	717	---	448	---	734	715	722
19	236	195	215	753	693	727	---	---	---	727	699	714
20	292	236	267	763	743	754	---	---	---	716	703	706
21	319	292	308	762	711	746	---	---	---	730	712	723
22	369	319	347	751	677	738	---	---	---	734	716	722
23	422	369	392	737	572	677	---	---	---	723	710	714
24	469	422	445	741	609	696	---	---	---	743	723	732
25	509	469	491	751	646	728	---	---	---	764	743	752
26	570	505	538	766	714	750	---	---	---	772	761	766
27	576	519	549	765	752	759	645	601	628	779	765	772
28	---	---	---	768	704	754	624	601	610	792	779	786
29	586	550	---	732	710	721	633	603	621	804	792	797
30	---	---	---	743	722	732	689	633	659	821	804	812
31	---	---	---	753	616	734	---	687	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

07144100 LITTLE ARKANSAS RIVER NEAR SEDGWICK, KS--Continued

PH, WH, FIELD FROM DCP, in (STANDARD UNITS), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	7.9	7.8	7.8	8.2	7.9	8.0	8.1	8.0	8.1	8.1	7.7	8.0
2	8.0	7.8	7.9	8.1	7.8	8.0	8.2	8.0	8.1	7.9	7.7	7.8
3	8.0	7.8	7.9	8.0	7.8	7.9	8.2	8.0	8.2	7.9	7.7	7.8
4	8.1	7.8	8.0	8.1	7.8	7.9	8.2	8.0	8.2	7.9	7.7	7.8
5	8.0	7.8	8.0	8.1	7.8	8.0	8.2	8.0	8.2	8.0	7.7	7.9
6	7.8	7.6	7.7	8.1	7.8	8.0	8.2	8.0	8.2	8.0	7.7	7.9
7	8.0	7.6	7.7	8.1	7.8	8.0	8.3	8.0	8.2	8.0	7.8	7.9
8	8.2	7.8	7.9	8.1	7.9	8.0	8.3	8.0	8.2	8.0	7.8	7.9
9	8.2	8.0	8.1	8.2	7.9	8.0	8.3	8.1	8.2	8.0	7.8	8.0
10	8.3	8.0	8.1	8.2	7.9	8.1	8.3	8.1	8.2	8.1	7.7	8.0
11	8.3	8.0	8.1	8.1	7.9	8.1	8.3	8.1	8.3	8.1	7.7	7.9
12	8.3	8.0	8.2	8.1	7.9	8.0	8.3	8.1	8.2	8.1	7.8	7.9
13	8.3	8.0	8.2	8.0	7.8	7.9	8.2	8.0	8.1	8.2	7.8	8.0
14	8.3	8.0	8.2	8.0	7.9	7.9	8.3	8.0	8.2	8.2	7.8	8.0
15	8.2	8.0	8.2	8.0	7.9	8.0	8.4	8.1	8.3	8.2	7.8	8.0
16	8.2	8.0	8.1	8.1	7.8	8.0	8.3	8.0	8.1	8.2	7.9	8.1
17	8.3	8.0	8.1	8.0	7.8	8.0	8.2	7.9	8.0	8.2	7.9	8.1
18	8.3	8.0	8.2	8.0	7.8	7.9	8.3	8.0	8.2	8.2	7.9	8.1
19	8.3	8.1	8.2	8.1	7.8	7.9	8.2	8.0	8.2	8.2	7.9	8.0
20	8.5	8.1	8.3	8.1	7.9	8.0	8.3	8.0	8.2	8.2	8.0	8.1
21	8.5	8.1	8.3	8.2	7.9	8.1	8.3	8.0	8.2	8.2	7.9	8.1
22	8.4	8.1	8.3	8.2	7.9	8.1	8.2	8.0	8.2	8.2	8.0	8.1
23	8.4	8.0	8.2	8.2	7.9	8.1	8.2	8.0	8.2	8.2	8.0	8.2
24	8.3	8.0	8.2	8.2	7.9	8.0	8.2	7.9	8.1	8.2	7.8	8.0
25	8.1	7.9	8.1	8.2	7.8	8.0	8.0	7.9	8.0	8.0	7.8	8.0
26	8.0	7.9	8.0	8.2	7.9	8.1	8.0	7.9	8.0	8.0	7.7	7.9
27	8.1	7.8	8.0	8.2	8.0	8.2	8.1	7.8	8.0	8.0	7.8	8.0
28	8.1	7.9	8.0	8.2	8.0	8.1	8.0	7.8	8.0	8.0	7.8	7.9
29	8.1	7.9	8.0	8.2	8.0	8.1	8.0	7.8	8.0	7.9	7.7	7.8
30	8.1	7.9	8.1	8.1	8.0	8.1	8.0	7.8	8.0	7.8	7.7	7.8
31	8.2	8.0	8.1	---	---	---	8.0	7.8	8.0	7.9	7.6	7.8
MAX	8.5	8.1	8.3	8.2	8.0	8.2	8.4	8.1	8.3	8.2	8.0	8.2
MIN	7.8	7.6	7.7	8.0	7.8	7.9	8.0	7.8	8.0	7.8	7.6	7.8

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		FEBRUARY			MARCH			APRIL			MAY	
1	7.9	7.7	7.8	8.0	7.8	7.9	8.4	8.2	8.3	7.6	7.6	7.6
2	7.9	7.7	7.8	8.0	7.8	7.9	8.6	8.2	8.4	7.7	7.6	7.7
3	8.0	7.7	7.8	8.0	7.8	7.9	8.6	8.4	8.5	7.7	7.7	7.7
4	7.9	7.7	7.8	7.9	7.8	7.9	8.5	8.3	8.4	7.8	7.7	7.7
5	7.8	7.7	7.8	8.0	7.8	7.9	8.7	8.3	8.4	8.0	7.7	7.8
6	7.9	7.6	7.8	8.1	7.8	7.9	8.7	8.4	8.6	8.2	7.8	7.9
7	7.9	7.6	7.8	8.2	7.8	8.0	8.6	8.3	8.6	8.1	7.8	8.0
8	8.0	7.7	7.8	8.3	7.8	8.0	8.6	8.2	8.4	8.2	7.8	8.0
9	8.0	7.7	7.9	8.3	8.1	8.3	8.4	8.0	8.2	8.8	8.0	8.2
10	8.2	7.8	8.0	8.3	7.8	8.1	8.1	8.0	8.1	8.8	8.3	8.6
11	8.3	7.9	8.1	8.1	7.7	7.9	8.3	8.1	8.2	8.4	8.1	8.3
12	8.4	8.0	8.2	8.1	7.7	7.9	8.3	8.0	8.2	---	---	---
13	8.4	8.0	8.2	8.0	7.7	7.9	8.2	8.1	8.1	---	---	---
14	8.4	8.0	8.2	8.1	7.8	8.0	8.2	8.0	8.1	7.8	7.6	7.7
15	8.4	8.0	8.2	8.3	8.1	8.1	8.3	8.1	8.1	7.8	7.7	7.8
16	8.4	8.0	8.2	8.3	8.1	8.2	8.4	8.1	8.2	7.8	7.8	7.8
17	8.4	8.0	8.2	8.2	8.1	8.1	8.4	8.1	8.3	7.8	7.2	7.6
18	8.4	8.0	8.3	8.1	7.9	8.0	8.5	8.2	8.3	7.4	7.3	7.3
19	8.4	8.0	8.2	8.1	7.9	8.0	8.4	8.2	8.3	7.6	7.4	7.5
20	8.5	8.0	8.2	8.1	8.0	8.0	8.3	8.2	8.2	7.7	7.6	7.7
21	8.5	8.0	8.3	8.4	8.0	8.2	---	---	---	7.8	7.7	7.8
22	8.5	8.1	8.3	8.3	8.1	8.2	---	---	7.4	7.9	7.8	7.9
23	8.5	8.0	8.3	8.2	8.0	8.1	7.4	7.2	7.3	7.9	7.8	7.9
24	8.3	7.9	8.2	8.2	7.9	8.1	7.4	7.3	7.3	7.9	7.5	7.8
25	8.2	7.8	8.1	8.2	8.1	8.1	7.5	7.4	7.5	7.7	7.4	7.5
26	8.3	8.0	8.1	8.2	8.0	8.2	---	---	---	7.8	7.6	7.7
27	8.2	8.0	8.1	8.2	8.0	8.1	7.7	7.6	7.7	8.0	7.8	7.9
28	8.0	7.9	8.0	8.3	8.0	8.1	7.7	7.7	7.7	8.1	7.9	8.0
29	---	---	---	8.5	8.1	8.3	7.8	7.7	7.7	8.4	8.0	8.1
30	---	---	---	8.6	8.2	8.4	7.7	7.6	7.6	8.7	8.1	8.3
31	---	---	---	8.5	8.2	8.4	---	---	---	8.9	8.2	8.6
MAX	8.5	8.1	8.3	8.6	8.2	8.4	---	---	---	---	---	---
MIN	7.8	7.6	7.8	7.9	7.7	7.9	---	---	---	---	---	---

07144100 LITTLE ARKANSAS RIVER NEAR SEDGWICK, KS--Continued

PH, WH, FIELD FROM DCP, in (STANDARD UNITS), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	8.9	8.4	8.8	8.5	8.1	8.3	8.7	8.1	8.3	8.8	8.3	8.5
2	8.8	8.4	8.7	8.3	8.0	8.2	8.7	8.2	8.4	8.6	8.2	8.4
3	8.8	8.4	8.6	8.3	8.0	8.2	8.7	8.2	8.4	8.5	8.1	8.3
4	8.6	8.1	8.2	8.4	7.9	8.2	8.8	8.2	8.4	8.5	8.0	8.2
5	8.1	7.6	7.6	8.6	8.0	8.2	8.8	8.2	8.4	8.5	8.1	8.3
6	7.8	7.6	7.7	8.7	8.1	8.4	8.6	8.2	8.4	8.6	8.1	8.3
7	7.8	7.8	7.8	8.7	8.1	8.5	8.6	8.1	8.4	8.6	8.2	8.3
8	7.9	7.8	7.8	8.6	8.1	8.4	8.6	8.1	8.3	8.6	8.2	8.4
9	8.3	7.9	8.0	8.7	8.1	8.4	8.5	8.1	8.3	8.6	8.2	8.4
10	8.6	8.1	8.2	8.6	7.9	8.2	8.6	8.1	8.2	8.5	8.1	8.3
11	8.6	8.2	8.4	8.4	8.0	8.2	8.6	8.1	8.2	8.6	8.2	8.3
12	8.5	7.0	7.3	8.4	8.1	8.3	---	---	---	8.4	8.1	8.2
13	7.2	7.0	7.1	8.4	8.1	8.3	---	---	---	8.3	8.0	8.1
14	7.3	7.2	7.2	8.4	8.1	8.3	7.9	7.8	7.8	8.2	8.0	8.0
15	7.4	7.2	7.3	8.5	8.2	8.3	8.1	7.4	7.8	8.2	7.9	8.1
16	7.2	7.0	7.1	8.5	8.3	8.3	7.6	7.5	7.5	8.2	8.0	8.1
17	7.1	7.0	7.0	8.6	8.3	8.4	7.8	7.6	7.7	8.3	8.0	8.1
18	7.2	7.1	7.2	8.8	8.3	8.5	7.8	7.6	7.8	8.4	8.1	8.2
19	7.4	7.2	7.3	8.8	8.4	8.6	7.8	7.6	7.7	8.3	8.1	8.2
20	7.6	7.4	7.5	8.8	8.4	8.6	7.9	7.7	7.7	8.2	8.0	8.0
21	7.7	7.6	7.6	8.8	8.4	8.6	8.0	7.8	7.9	8.2	8.0	8.1
22	7.8	7.7	7.8	8.6	8.4	8.5	8.2	7.8	7.9	8.3	8.0	8.1
23	7.9	7.8	7.8	8.8	8.2	8.4	8.4	7.8	8.0	8.4	8.0	8.1
24	7.9	7.8	7.9	8.8	8.2	8.5	8.6	8.0	8.2	8.4	8.0	8.1
25	8.0	7.8	7.8	8.8	8.2	8.4	8.5	8.1	8.4	8.4	8.0	8.2
26	8.2	7.8	7.9	8.8	8.3	8.5	8.4	8.0	8.3	8.4	8.0	8.2
27	8.4	7.9	8.1	8.8	8.4	8.6	8.4	7.9	8.2	8.4	8.1	8.2
28	8.6	8.0	8.3	8.7	8.4	8.6	8.6	7.9	8.3	8.3	8.0	8.2
29	8.8	8.2	8.5	8.7	8.2	8.5	8.7	8.0	8.5	8.4	8.1	8.2
30	8.7	8.2	8.5	8.6	8.1	8.4	8.6	8.2	8.4	8.3	8.1	8.2
31	---	---	---	8.5	8.1	8.3	8.7	8.2	8.4	---	---	---
MAX	8.9	8.4	8.8	8.8	8.4	8.6	---	---	---	8.8	8.3	8.5
MIN	7.1	7.0	7.0	8.3	7.9	8.2	---	---	---	8.2	7.9	8.0

WATER TEMPERATURE FROM DCP, in (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	19.8	17.0	18.5	16.1	14.6	15.3	5.2	3.3	4.3	1.2	0.2	0.7
2	19.4	16.8	18.3	16.0	14.2	15.2	6.6	4.0	5.4	0.9	0.0	0.4
3	19.5	16.7	18.2	16.0	14.9	15.5	10.7	6.6	8.6	1.0	0.0	0.4
4	20.3	18.2	19.2	16.8	14.9	15.9	14.1	10.7	12.4	1.0	0.1	0.5
5	19.1	14.8	16.5	16.8	14.9	15.9	15.7	12.9	14.6	2.1	0.6	1.3
6	15.7	13.1	14.5	17.0	15.0	16.1	12.9	9.8	10.9	2.1	1.0	1.6
7	15.8	13.3	14.6	16.7	15.3	16.1	9.8	8.1	8.8	1.6	0.3	1.1
8	17.1	13.7	15.4	15.6	11.7	13.6	8.3	6.1	7.0	3.5	1.1	2.2
9	18.0	16.5	17.2	11.7	9.4	10.5	6.1	4.7	5.5	3.7	2.8	3.3
10	18.0	17.1	17.7	11.6	9.4	10.7	5.7	4.2	5.1	4.7	3.6	4.1
11	17.5	15.3	16.5	12.2	10.1	11.3	6.3	4.6	5.5	4.3	2.5	3.6
12	16.8	15.4	16.3	13.2	11.9	12.4	7.8	6.3	7.1	4.8	3.6	4.2
13	16.5	14.8	15.8	14.4	13.2	13.8	7.6	6.7	7.1	5.0	3.4	4.2
14	15.6	13.8	14.7	15.5	14.3	14.8	6.7	5.8	6.3	4.8	3.6	4.3
15	14.6	12.6	13.7	15.5	13.9	14.8	7.1	5.4	6.2	3.9	2.5	3.4
16	12.9	10.7	12.0	14.9	13.3	14.3	7.6	7.0	7.4	4.1	3.4	3.8
17	13.3	11.2	12.4	15.1	14.0	14.6	7.0	5.3	6.1	4.0	2.9	3.4
18	13.6	11.7	12.8	14.8	13.9	14.5	7.0	5.0	6.0	3.2	1.8	2.2
19	14.2	11.9	13.1	13.9	9.7	11.6	6.3	4.4	5.1	2.9	1.8	2.3
20	15.3	12.6	14.0	9.7	7.6	8.5	4.9	3.5	4.3	3.4	1.4	2.5
21	17.7	15.0	16.2	8.9	7.1	8.1	6.4	4.0	4.9	3.8	1.8	2.9
22	18.0	17.1	17.6	9.9	7.9	9.0	6.6	4.9	6.1	5.7	3.2	4.3
23	17.9	16.1	17.2	12.5	9.9	11.4	4.9	2.5	3.6	5.8	4.7	5.3
24	17.3	14.5	15.9	12.2	9.6	11.0	2.5	1.3	1.9	4.7	3.2	4.1
25	14.5	12.4	13.2	9.8	8.3	9.2	1.8	0.6	1.3	4.4	2.3	3.5
26	12.6	10.8	11.8	10.2	7.9	9.4	1.5	0.3	1.0	5.5	3.1	4.4
27	11.8	10.0	11.0	7.9	4.5	5.7	2.4	0.8	1.6	6.9	4.5	5.8
28	12.8	10.1	11.6	4.5	2.7	3.2	2.4	1.1	1.8	6.8	5.0	5.6
29	14.5	11.9	13.2	3.1	2.0	2.6	2.0	0.6	1.1	5.0	2.8	4.0
30	15.4	13.4	14.4	4.1	2.4	3.3	1.0	0.3	0.7	2.8	0.0	0.8
31	15.3	13.6	14.6	---	---	---	1.1	0.0	0.5	1.4	0.0	0.7
MONTH	20.3	10.0	15.1	17.0	2.0	11.6	15.7	0.0	5.4	6.9	0.0	2.9

07144100 LITTLE ARKANSAS RIVER NEAR SEDGWICK, KS--Continued

WATER TEMPERATURE FROM DCP, in (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	1.9	0.0	1.0	4.9	2.5	4.1	17.9	12.8	15.5	18.8	16.7	18.0
2	2.9	0.5	1.7	2.5	0.0	1.1	17.4	11.9	14.5	18.3	14.3	16.3
3	3.9	1.8	2.9	2.2	0.0	1.0	12.1	8.6	10.7	19.1	14.9	17.0
4	4.1	2.3	3.3	3.5	0.0	1.7	13.0	9.1	11.2	21.3	16.1	18.6
5	4.1	3.2	3.5	6.1	2.0	4.1	14.7	9.9	12.4	22.7	18.3	20.5
6	4.0	3.0	3.5	8.4	4.6	6.5	14.0	11.3	12.3	25.6	20.8	23.1
7	5.3	3.4	4.3	9.3	6.0	7.4	11.3	10.4	10.8	25.2	21.8	23.2
8	6.6	3.5	5.2	11.6	8.7	9.8	12.0	11.2	11.5	23.0	19.6	21.4
9	6.5	4.7	5.8	9.6	4.6	6.6	15.6	10.1	12.7	21.6	17.6	19.8
10	4.9	3.0	4.0	7.9	4.6	6.2	18.3	13.4	15.7	20.4	17.2	18.5
11	4.9	2.4	3.7	8.9	5.4	7.2	19.2	16.0	17.5	22.0	17.2	19.2
12	5.5	3.5	4.5	10.5	6.6	8.7	19.2	16.3	17.7	---	---	---
13	6.4	3.7	5.1	12.9	8.6	10.8	17.9	15.8	17.0	19.2	---	---
14	6.3	4.0	5.2	14.3	11.4	12.8	21.7	16.1	18.6	18.9	15.5	17.5
15	7.3	4.6	6.0	12.3	8.8	10.4	23.8	19.0	21.3	20.3	16.0	18.1
16	7.8	4.8	6.4	10.0	7.7	8.7	22.7	20.2	21.2	20.7	18.6	19.6
17	8.4	5.6	7.1	11.3	7.4	9.4	24.1	19.4	21.6	20.3	17.7	18.5
18	8.8	6.7	7.6	11.4	9.7	10.7	25.1	21.3	23.1	18.1	16.6	17.5
19	10.8	8.8	9.7	11.3	9.9	10.8	24.3	18.4	21.2	18.3	16.9	17.6
20	10.2	7.8	9.1	11.7	8.4	10.1	18.4	14.7	16.0	19.1	16.6	17.7
21	9.8	7.4	8.8	11.3	6.3	8.6	---	---	---	20.2	16.6	18.4
22	9.3	6.6	8.2	8.5	4.7	6.8	14.5	---	---	19.4	17.6	18.5
23	9.8	7.1	8.6	10.0	5.6	7.9	16.3	13.2	14.5	19.6	17.9	18.8
24	11.1	8.3	9.6	12.4	9.3	10.8	18.0	16.1	16.8	18.8	13.6	16.2
25	9.4	3.9	6.7	10.5	5.4	7.5	17.4	14.5	16.2	17.0	11.9	14.2
26	3.9	0.9	1.9	9.0	3.9	6.5	---	---	---	22.2	16.4	19.0
27	2.9	0.3	1.7	12.1	6.9	9.5	17.8	12.8	14.8	23.4	19.5	21.5
28	5.0	1.3	3.2	15.5	10.2	12.9	19.2	14.6	16.9	24.2	20.8	22.6
29	---	---	---	16.5	13.0	15.0	19.0	15.8	17.5	26.5	20.7	23.4
30	---	---	---	16.3	13.1	14.9	19.2	16.1	17.7	28.0	22.6	25.2
31	---	---	---	16.2	12.4	14.5	---	---	---	29.0	23.9	26.6
MONTH	11.1	0.0	5.3	16.5	0.0	8.5	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	28.7	24.4	26.6	27.5	24.3	25.1	32.7	26.9	29.5	28.0	25.1	26.5
2	28.4	24.0	26.3	24.7	23.1	23.9	31.7	26.7	29.2	28.3	24.9	26.5
3	27.6	23.5	25.7	26.2	22.9	24.5	31.4	27.7	29.4	28.7	25.3	27.0
4	26.6	20.3	23.2	28.7	24.4	26.4	30.9	27.8	29.3	29.3	25.8	27.4
5	20.3	18.7	19.3	29.5	25.7	27.6	30.9	27.6	29.2	28.9	25.9	27.4
6	23.2	18.0	20.3	29.6	25.8	27.8	30.8	26.9	28.8	29.0	26.1	27.3
7	26.0	20.0	22.8	30.2	26.5	28.4	32.8	27.1	29.4	28.4	25.8	27.0
8	27.2	22.4	24.7	31.0	26.9	29.0	30.8	26.3	28.6	27.7	25.1	26.4
9	27.8	24.1	25.9	32.0	27.6	29.8	29.5	26.0	27.1	26.4	24.5	25.6
10	28.5	24.6	26.4	32.2	27.7	30.0	28.5	25.0	26.1	27.9	24.6	25.8
11	27.6	24.8	26.2	30.6	27.2	29.0	28.4	24.4	26.4	27.1	23.5	25.0
12	26.3	21.3	22.8	29.2	26.0	26.9	---	---	---	24.2	22.1	23.0
13	23.6	22.3	22.9	26.3	23.9	25.2	---	---	---	22.6	21.2	22.0
14	24.1	23.0	23.5	27.8	23.8	25.7	25.7	20.4	22.9	22.2	21.0	21.6
15	23.6	19.7	22.3	28.7	25.1	26.8	24.6	21.0	22.4	23.1	19.5	21.0
16	19.7	18.1	18.7	28.1	25.8	27.0	24.2	21.0	22.5	22.8	19.0	20.9
17	20.3	18.7	19.3	28.7	25.5	27.1	24.6	23.3	23.9	23.9	20.2	22.0
18	21.4	20.2	20.6	30.4	26.4	28.2	27.4	22.9	24.9	24.9	21.7	23.3
19	23.9	21.1	22.3	31.3	27.0	29.0	29.3	25.0	27.2	24.1	19.8	21.8
20	25.7	22.6	24.1	31.1	27.7	29.2	29.3	26.9	28.3	21.7	18.2	19.9
21	26.8	23.4	25.1	30.5	27.0	28.6	28.0	25.7	27.1	23.6	19.2	20.9
22	27.5	24.6	26.0	29.6	27.1	28.1	28.9	25.4	27.3	22.1	18.9	20.2
23	27.7	24.4	26.0	30.1	26.0	27.9	30.3	26.8	28.5	21.4	17.8	19.4
24	28.6	24.4	26.4	30.7	26.0	28.1	28.7	26.0	27.6	20.6	17.8	19.2
25	29.2	24.9	27.0	30.5	26.3	28.3	29.2	25.7	27.5	20.9	18.0	19.5
26	29.6	25.5	27.6	30.4	26.7	28.4	29.1	25.9	27.4	22.7	18.7	20.3
27	30.3	25.7	28.1	30.4	25.6	27.9	28.6	25.9	27.4	21.1	18.2	19.3
28	30.4	26.5	28.6	28.6	26.0	27.3	29.0	25.3	27.3	21.1	17.9	19.5
29	30.2	26.7	28.5	29.4	24.9	26.9	28.9	26.0	27.6	22.7	19.6	21.1
30	29.0	26.1	27.7	30.4	25.9	27.9	27.8	25.8	26.8	23.3	20.5	21.9
31	---	---	---	30.9	26.8	28.8	27.9	24.7	26.3	---	---	---
MONTH	30.4	18.0	24.5	32.2	22.9	27.6	---	---	---	29.3	17.8	23.0

07144100 LITTLE ARKANSAS RIVER NEAR SEDGWICK, KS--Continued

OXYGEN DISSOLVED FROM DCP, in (MG/L), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	8.4	7.6	8.0	11.1	7.8	9.7	16.0	12.2	14.4	19.3	14.7	16.9
2	8.8	7.7	8.2	11.4	7.7	9.9	15.9	11.9	14.2	19.1	14.6	16.9
3	9.6	7.8	8.5	10.8	7.6	9.3	14.8	11.1	13.1	18.9	14.8	16.9
4	10.2	7.5	8.7	11.5	7.0	9.6	12.3	9.1	10.7	18.8	14.6	16.7
5	9.4	7.9	8.6	11.9	7.6	10.2	11.4	8.1	9.9	18.2	14.0	16.1
6	8.1	7.2	7.7	11.6	7.6	10.0	13.0	8.4	10.9	17.9	13.5	15.7
7	10.2	7.7	8.8	11.2	7.4	9.7	15.1	10.1	12.7	18.3	13.5	15.9
8	11.1	8.7	9.7	11.5	7.9	10.1	16.3	10.9	13.8	18.6	13.6	16.0
9	10.5	8.2	9.2	13.8	8.8	11.5	16.5	11.9	14.5	17.5	12.8	15.2
10	11.8	7.8	9.7	14.1	9.4	12.1	16.6	12.2	14.7	17.2	12.3	14.8
11	13.2	8.0	10.5	13.8	9.2	11.9	16.0	12.0	14.4	17.4	12.4	14.9
12	12.0	8.4	10.6	12.7	8.8	10.1	14.1	10.9	12.5	17.3	12.3	14.9
13	12.5	8.5	10.5	9.6	7.8	8.9	13.2	10.0	11.8	17.9	12.5	15.2
14	13.3	8.7	10.8	10.0	7.5	8.9	15.9	10.6	13.4	17.8	12.3	15.4
15	12.2	8.9	10.6	12.7	7.7	10.5	15.8	11.5	14.0	19.9	14.0	17.0
16	13.2	9.4	11.2	12.5	8.7	10.8	14.2	10.7	12.0	20.0	14.1	17.3
17	13.0	9.6	11.4	11.4	8.5	10.3	15.9	10.3	13.1	21.0	14.6	17.9
18	14.2	9.3	11.7	10.5	8.1	9.1	16.9	11.6	14.3	19.2	15.4	17.7
19	14.5	9.6	12.0	12.7	8.4	10.7	16.1	11.6	14.0	20.9	15.0	18.0
20	15.2	9.4	12.3	14.4	10.1	12.4	17.2	12.3	14.9	21.1	15.4	18.4
21	15.6	8.9	12.2	15.1	10.7	13.2	17.3	12.4	14.9	18.7	14.5	16.8
22	13.3	7.7	10.9	15.0	10.5	13.1	14.6	11.2	13.2	16.1	12.1	13.8
23	13.6	7.6	10.6	13.3	9.7	11.7	16.9	11.7	14.4	---	---	---
24	13.4	7.8	10.6	11.8	8.3	9.5	18.0	13.2	15.8	14.2	---	---
25	12.2	8.3	10.7	13.5	8.6	11.1	18.4	14.1	16.4	14.6	11.1	12.9
26	12.4	9.2	10.9	13.2	9.8	11.9	18.6	14.4	16.6	14.2	11.1	12.7
27	12.7	9.6	11.3	14.8	10.6	12.9	18.3	14.2	16.4	13.3	10.6	12.1
28	12.8	9.9	11.4	15.8	12.0	14.1	18.6	13.7	16.3	13.6	10.0	11.9
29	12.7	9.1	11.1	16.4	12.8	14.8	18.5	13.7	16.2	13.4	10.9	12.4
30	12.2	8.8	10.8	16.0	12.8	14.6	19.1	14.3	16.8	14.4	11.6	13.0
31	12.1	8.6	10.4	---	---	---	19.4	14.9	17.3	15.5	12.4	13.9
MONTH	15.6	7.2	10.3	16.4	7.0	11.1	19.4	8.1	14.1	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	15.9	13.0	14.3	---	---	---	16.4	8.8	12.6	7.3	7.2	7.3
2	16.2	12.9	14.5	---	---	---	15.2	8.1	11.6	8.0	7.3	7.7
3	15.9	12.5	14.2	---	---	---	17.7	9.8	13.7	7.8	7.4	7.7
4	15.6	12.1	13.8	---	---	---	17.0	10.7	14.0	8.0	7.3	7.6
5	14.7	12.0	13.4	---	---	---	18.3	10.6	14.4	8.6	7.0	7.7
6	15.1	12.0	13.5	15.5	---	---	14.8	10.0	12.4	10.0	6.8	8.1
7	15.1	11.8	13.4	14.2	10.8	12.5	14.5	9.5	12.0	9.0	6.4	7.7
8	14.2	11.7	13.0	13.0	9.6	11.3	13.4	9.1	11.3	10.9	7.0	8.5
9	14.0	10.6	12.2	15.6	10.1	12.2	11.4	8.1	9.3	17.9	7.2	11.4
10	16.7	11.9	14.0	13.6	10.4	12.0	8.6	7.8	8.3	16.6	9.0	11.6
11	16.9	12.9	14.9	10.6	9.5	10.3	9.6	7.4	8.3	10.1	8.1	8.9
12	17.6	12.7	15.1	10.4	9.3	9.9	8.7	7.0	7.6	---	---	---
13	17.8	12.7	15.1	10.4	9.2	9.7	7.7	7.2	7.4	8.3	---	---
14	17.1	12.2	14.7	12.0	8.7	10.1	9.3	7.2	8.0	8.0	7.3	7.7
15	17.4	12.0	14.5	13.2	8.9	11.0	10.4	6.3	8.2	8.0	7.3	7.8
16	18.1	12.0	14.8	14.7	10.1	12.2	10.2	6.1	8.0	7.4	7.1	7.2
17	17.4	11.8	14.5	14.9	10.7	12.7	12.1	5.8	8.6	7.3	5.6	6.6
18	15.8	11.0	13.4	12.8	10.1	11.4	12.6	6.0	9.0	6.8	5.6	6.0
19	16.2	9.6	12.9	10.8	8.5	9.6	10.1	5.3	7.8	7.7	6.8	7.5
20	17.9	9.7	13.5	13.2	8.7	10.8	9.1	7.0	8.1	8.0	7.7	7.9
21	18.2	10.9	14.5	14.0	10.0	12.0	---	---	---	8.2	7.7	7.9
22	19.1	11.7	15.2	15.5	11.4	13.3	---	---	---	8.2	7.7	8.0
23	19.1	11.7	15.3	14.8	11.4	13.0	7.4	7.2	7.3	8.0	7.7	7.9
24	18.0	11.2	14.5	12.9	9.9	11.5	7.5	7.3	7.4	9.1	7.7	8.3
25	16.7	10.8	13.8	12.7	9.3	11.0	7.8	7.3	7.6	9.3	8.2	9.0
26	15.9	13.0	14.5	16.2	11.4	13.6	---	---	---	8.2	7.5	7.9
27	---	---	---	14.1	11.2	12.7	8.4	7.5	8.1	8.0	7.4	7.6
28	---	---	---	16.0	9.4	12.6	7.7	7.3	7.5	8.8	7.4	8.0
29	---	---	---	17.8	9.1	13.5	8.2	7.3	7.8	11.2	7.5	9.1
30	---	---	---	19.3	9.5	14.3	8.0	7.3	7.7	15.9	7.2	10.8
31	---	---	---	16.4	8.9	12.8	---	---	---	18.7	7.1	12.1
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

07144100 LITTLE ARKANSAS RIVER NEAR SEDGWICK, KS--Continued

OXYGEN DISSOLVED FROM DCP, in (MG/L), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	18.5	6.8	11.9	10.8	5.8	8.3	19.4	7.1	11.9	15.6	8.0	11.2
2	16.1	5.9	10.4	9.9	6.2	8.0	18.4	7.1	11.9	14.6	7.3	10.3
3	15.4	5.9	10	11.2	6.4	8.7	16.8	7.6	11.7	12.9	7.0	9.7
4	9.7	5.4	6.6	11.8	6.1	8.6	16.2	6.9	11.0	12.9	6.6	9.5
5	7.1	6.0	6.5	14.0	6.1	9.7	16.5	6.7	11.0	12.9	6.9	9.8
6	7.5	7.1	7.4	16.7	6.5	10.9	15.0	7.2	10.9	10.9	7.0	9.0
7	7.4	7.1	7.3	16.2	6.2	10.8	13.6	6.0	9.9	11.2	6.5	8.6
8	7.7	6.9	7.3	16.3	6.0	10.6	13.8	5.6	9.2	10.6	6.6	8.4
9	10.0	6.8	8.2	17.4	6.0	11.0	12.8	5.6	8.7	10.7	6.6	8.5
10	12.9	6.8	9.4	12.8	5.0	7.7	15.0	5.7	9.2	11.2	6.6	8.7
11	13.0	6.5	9.3	12.4	4.9	8.2	13.5	6.8	10.0	11.2	6.5	8.7
12	9.5	3.4	5.1	12.1	5.9	8.9	---	---	---	9.6	6.8	7.8
13	5.2	3.5	4.4	12.4	6.8	9.3	8.3	---	---	9.4	6.6	7.9
14	6.4	5.2	5.8	13.8	7.6	10.2	7.7	5.5	6.4	9.3	6.8	7.7
15	7.8	6.4	7.0	13.4	7.6	10.1	6.8	5.8	6.3	9.7	6.5	7.9
16	7.6	6.2	6.8	13.2	7.8	10.3	7.0	6.7	6.9	9.5	7.3	8.4
17	6.2	5.7	6.1	14.4	8.0	10.8	7.0	6.7	6.8	9.8	7.2	8.5
18	6.2	5.6	6.0	18.3	8.6	12.7	6.8	6.3	6.6	10.8	6.9	8.6
19	7.1	6.2	6.8	20.8	8.8	14.6	6.3	5.7	6.0	8.9	6.0	7.7
20	7.4	7.0	7.2	20.1	9.1	14.0	6.7	5.4	6.0	10.7	7.2	8.7
21	---	---	---	20.1	8.7	13.7	7.6	5.9	6.7	10.7	7.6	8.9
22	---	---	---	16.4	7.8	11.9	8.9	6.4	7.5	11.1	7.7	9.1
23	---	---	---	19.9	7.7	13.1	10.8	6.2	8.2	12.7	8.2	10.1
24	7.0	---	---	20.5	8.3	13.8	10.5	6.5	8.1	13.2	8.8	10.7
25	7.7	6.1	6.8	19.0	8.5	13.2	11.9	6.5	8.9	13.0	8.7	10.7
26	8.9	6.1	7.4	16.2	8.1	12.0	12.2	6.8	9.1	14.3	8.6	10.8
27	10.7	6.2	8.1	19.2	7.0	12.1	11.8	6.5	9.0	13.8	8.7	10.8
28	13.2	6.2	9.3	14.4	7.6	10.9	13.5	6.1	9.3	13.9	9.1	11.2
29	15.7	6.2	10.5	16.9	6.3	10.9	14.4	6.2	9.6	13.9	9.0	11.2
30	13.4	5.9	9.4	16.1	7.0	11.2	12.4	6.9	9.6	13.1	8.5	10.5
31	---	---	---	15.2	7.5	11.1	15.5	7.5	10.7	---	---	---
MONTH	---	---	---	20.8	4.9	10.9	---	---	---	15.6	6.0	9.3

TURBIDITY, FIELD FROM DCP, in (NTU), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	94	64	73	15	9.9	12	5.5	2.8	3.3	3.2	2.8	3.0
2	75	60	67	15	10	12	5.6	2.9	3.9	3.5	3.2	3.3
3	60	45	53	16	11	13	13	4.3	7.5	4.0	3.1	3.4
4	49	42	45	17	10	14	29	10	16	3.5	2.9	3.2
5	280	49	110	20	8.4	13	36	15	22	3.3	2.6	3.0
6	230	130	170	18	9.8	14	24	6.7	14	3.3	2.5	2.8
7	130	58	90	21	11	15	7.3	2.2	4.5	3.2	2.5	2.7
8	59	40	49	19	8.5	13	3.5	1.8	2.5	3.5	2.5	2.9
9	48	37	42	11	4.9	7.6	2.5	1.6	2.1	3.4	2.3	2.9
10	44	27	36	11	5.9	7.5	2.6	1.6	2.0	5.9	2.4	3.6
11	33	24	28	15	6.8	10	3.5	1.6	2.6	4.0	3.2	3.6
12	32	21	26	16	9.2	13	6.9	3.3	5.5	7.8	3.6	4.8
13	27	19	22	19	11	16	9.1	3.4	6.5	4.7	2.8	4.0
14	26	15	19	21	12	16	5.9	2.9	4.2	6.6	4.6	5.0
15	20	13	16	19	7.5	12	5.1	2.9	3.4	6.0	3.4	4.5
16	15	10	12	20	9.6	14	9.0	5.0	6.6	4.7	3.4	4.2
17	17	11	13	29	14	19	11	3.0	5.6	5.6	2.0	3.8
18	18	9.9	12	26	15	20	5.8	3.1	3.9	3.0	1.2	2.1
19	17	9.0	11	24	6.7	14	6.6	2.5	4.4	3.3	1.1	1.9
20	16	11	12	7.0	3.4	5.0	3.5	2.3	2.9	6.9	1.3	2.6
21	17	12	14	4.9	3.6	4.0	4.4	2.4	3.2	3.3	1.9	2.4
22	16	12	15	9.6	3.8	5.2	8.8	3.7	5.9	7.6	3.1	5.5
23	18	14	15	17	9.6	13	3.9	2.6	3.4	10	7.2	8.6
24	18	15	16	22	12	17	3.2	2.3	2.8	7.6	3.2	4.7
25	16	10	12	16	7.4	11	3.1	2.3	2.8	4.3	2.5	3.3
26	11	7.3	8.9	11	6.1	8.6	3.8	2.3	2.9	6.9	3.0	4.8
27	9.7	6.7	7.9	6.1	2.6	4.0	3.9	2.7	3.2	10	6.0	7.4
28	10	7.3	8.8	4.3	2.7	3.4	4.0	2.7	3.2	11	5.3	7.9
29	14	9.5	11	5.1	3.1	3.8	4.0	2.6	3.1	6.9	3.0	4.3
30	14	10	12	4.8	3.0	3.9	3.5	2.6	3.0	5.4	2.0	3.1
31	15	9.3	12	---	---	---	3.5	2.6	3.1	5.5	2.6	3.4
MONTH	280	6.7	34	29	2.6	11	36	1.6	5.2	11	1.1	4.0

07144100 LITTLE ARKANSAS RIVER NEAR SEDGWICK, KS--Continued

TURBIDITY, FIELD FROM DCP, in (NTU), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	6.4	3.6	4.3	10	7.7	9.0	47	32	39	300	240	260
2	4.2	2.7	3.8	11	7.8	9.3	51	32	39	250	190	220
3	5.3	2.7	3.5	10	7.5	9.1	36	24	29	190	140	170
4	5.8	3.4	4.5	9.8	7.5	8.9	33	23	27	140	98	120
5	6.6	3.1	4.8	12	7.4	9.5	38	28	33	110	78	98
6	5.4	3.0	3.6	23	11	16	43	29	36	100	56	81
7	10	4.7	6.9	26	21	23	34	21	28	81	52	69
8	12	7.0	9.4	37	23	27	36	23	28	110	53	80
9	15	10	13	39	26	31	70	36	48	60	32	49
10	15	8.9	11	29	22	25	54	29	42	90	32	54
11	12	7.7	9.7	30	21	24	45	30	36	240	90	170
12	12	8.5	10	27	21	24	160	36	75	---	---	---
13	16	10	12	29	21	25	91	55	69	390	---	---
14	21	11	13	32	25	28	68	54	61	1200	370	770
15	23	11	14	30	18	23	68	43	57	720	380	500
16	18	11	14	21	12	16	79	49	63	420	280	380
17	25	12	16	21	12	14	73	42	56	>1700	270	>1100
18	25	16	18	32	21	27	62	42	52	>1700	850	>1300
19	30	16	23	39	30	34	66	47	59	910	630	760
20	36	18	24	38	26	33	180	40	60	630	450	530
21	27	15	21	38	19	27	---	180	---	450	320	380
22	26	11	16	26	12	16	>1400	---	---	320	260	300
23	28	12	17	28	16	21	>1400	760	>1100	260	210	230
24	34	16	23	34	28	31	870	480	620	1500	210	670
25	36	13	21	37	15	27	520	380	450	1600	540	1100
26	14	9.9	12	24	14	17	---	270	---	540	170	310
27	10	8.0	9.0	30	22	25	270	210	240	170	110	140
28	9.8	7.8	8.7	40	28	33	210	160	190	120	78	110
29	---	---	---	44	28	35	300	160	230	94	52	81
30	---	---	---	35	26	31	650	300	400	83	40	65
31	---	---	---	43	32	37	---	---	---	70	36	54
MONTH	36	2.7	12	44	7.4	23	---	---	---	---	---	---

> Actual value is known to be greater than the value shown

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	64	35	49	51	33	42	43	20	34	93	59	77
2	66	39	52	48	34	40	44	22	33	100	53	75
3	100	43	54	47	35	41	49	27	35	95	52	72
4	110	47	65	60	38	49	64	31	41	87	43	67
5	890	110	630	55	38	47	60	27	38	85	40	63
6	610	280	430	54	29	44	74	29	38	80	34	57
7	280	190	240	53	28	40	47	31	40	70	34	52
8	190	130	160	48	29	37	56	38	48	75	40	56
9	130	68	100	51	28	36	59	41	50	76	37	55
10	96	54	77	81	31	52	62	41	52	72	36	53
11	82	50	67	58	30	45	66	44	56	73	41	55
12	>1700	64	>560	60	33	45	---	---	---	74	45	59
13	910	570	740	51	29	41	---	82	---	73	40	57
14	840	600	680	47	27	37	110	95	100	70	40	57
15	>1700	510	>820	53	27	39	>1500	100	>840	76	43	58
16	>1700	610	>960	49	25	37	1100	580	850	66	46	55
17	1200	720	1000	42	24	33	580	410	490	67	48	57
18	1100	680	840	36	23	30	410	---	---	74	56	63
19	740	480	570	37	23	28	---	230	---	70	52	59
20	500	---	---	40	26	32	240	170	220	61	48	54
21	---	250	---	43	26	34	210	140	180	57	44	51
22	250	180	220	44	28	37	170	110	150	59	46	52
23	180	130	160	49	29	38	150	100	130	51	42	47
24	130	110	120	50	29	40	170	110	140	61	44	51
25	120	84	110	48	31	40	160	87	120	54	48	52
26	110	68	92	48	32	41	---	72	---	54	43	47
27	89	56	74	56	29	43	110	67	93	54	45	49
28	78	39	60	52	29	43	120	62	90	56	44	49
29	58	36	48	54	28	43	110	53	81	59	47	52
30	53	34	44	40	23	33	100	64	86	59	54	57
31	---	---	---	38	23	31	100	52	80	---	---	---
MONTH	---	---	---	81	23	39	---	---	---	100	34	57

> Actual value is known to be greater than the value shown

07144200 LITTLE ARKANSAS RIVER AT VALLEY CENTER, KS

LOCATION.--Lat 37°49'56", long 97°23'16", river gage is in NE $^1/_4$ NW $^1/_4$ SW $^1/_4$ sec.36, T.25 S., R.1 W., Sedgwick County, Hydrologic Unit 11030012, on right bank at downstream side of county highway bridge, 0.5 mi west of Valley Center, and at mile 17.5. Little Arkansas River Floodway gage is in NE $^1/_4$ NE $^1/_4$ NE $^1/_4$ sec.34, T.25 S., R.1 W., on right bank at downstream side of county highway bridge, and 1.2 mi northwest of river gage.

DRAINAGE AREA.--1,327 mi^2, of which about 77 mi^2 is probably noncontributing.

PERIOD OF RECORD.--June 1922 to current year. Monthly discharge only for some periods, published in WSP 1311.

REVISED RECORDS.--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.

GAGE.--River gage is water-stage recorder. Datum of river gage is 1,325.66 ft above NGVD of 1929. Prior to Feb. 12, 1935, nonrecording gage at site 2.0 mi downstream at different datum. Feb. 12, 1935, to July 1, 1951, water-stage recorder, July 2, 1951, to Feb. 16, 1952, nonrecording gage, and Feb. 17, 1952, to Sept. 30, 1974, water-stage recorder at present site and at datum 2.00 ft higher. Floodway gage is water-stage recorder. Datum of floodway gage is 1,340.00 ft above NGVD of 1929 (levels by Wichita-Valley Center Flood Control Project).

REMARKS.--Records good except those for estimated daily discharges, which are poor. Natural flow affected by diversions and ground-water withdrawal for irrigation and municipal supply. Satellite telemeter at river station and floodway station. Since May 1957, part of high-water flow by-passes river gage through floodway channel for which separate records are computed; figures representing combined discharge are given herein. Discharge through floodway occurred only on the days given in the following table:

Date	Discharge (ft^3/s)	Date	Discharge (ft^3/s)	Date	Discharge (ft^3/s)	Date	Discharge (ft^3/s)	Date	Discharge (ft^3/s)
May 17	42	June 12	3,020	June 14	1,230	June 16	3,410	June 18	2,120
May 18	801	June 13	4,420	June 15	655	June 17	2,980	June 19	881
May 19	12								

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jun 13	0000	*11,700	--	Jun 16	1700	6,010	--

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	70	32	37	e38	e42	39	34	184	72	67	13	11
2	66	34	37	e38	44	e37	36	119	65	61	13	11
3	58	34	39	e37	44	e36	33	92	57	62	8.8	11
4	53	36	41	e37	42	e35	33	78	56	62	10	9.8
5	75	35	42	38	43	37	32	71	547	49	9.7	9.5
6	92	36	41	38	43	37	30	68	310	40	7.7	9.5
7	60	36	40	38	44	38	32	67	145	43	6.5	9.3
8	55	34	40	39	44	40	39	74	93	39	4.8	8.9
9	61	37	40	40	49	45	74	69	72	32	2.9	8.6
10	53	36	40	41	56	53	57	88	62	70	4.5	9.0
11	48	36	41	39	53	40	47	133	52	33	4.9	8.7
12	44	36	41	41	50	37	121	800	4390	30	12	8.1
13	42	37	41	40	51	38	128	634	6960	25	78	8.4
14	41	38	42	41	52	37	66	468	2960	22	82	8.4
15	40	38	41	39	50	36	50	365	1920	19	600	9.6
16	38	38	42	38	50	35	45	186	4970	18	687	12
17	37	37	42	37	48	34	44	1100	4420	15	175	11
18	36	39	42	36	47	34	41	2970	3620	12	87	13
19	35	39	40	38	47	35	39	1340	2150	11	55	14
20	35	39	41	37	49	36	40	497	731	15	34	11
21	37	37	41	39	46	35	682	267	381	14	24	12
22	37	37	41	39	43	32	1370	179	249	20	21	12
23	36	38	40	38	42	33	1800	139	183	20	19	9.7
24	35	41	39	37	42	34	847	268	147	17	21	9.3
25	32	39	39	37	42	34	297	1220	126	12	22	9.6
26	31	38	39	36	41	34	171	321	108	10	18	9.6
27	31	37	39	35	39	34	132	145	97	11	19	9.1
28	31	36	40	36	39	35	109	113	87	11	25	8.9
29	33	36	40	36	---	35	243	96	78	17	22	8.7
30	33	37	39	e37	---	34	296	85	72	18	16	8.7
31	31	---	e38	e39	---	35	---	77	---	14	13	---
MEAN	45.35	36.77	40.16	38.03	45.79	36.58	232.3	397.2	1173	28.68	68.25	9.980
MAX	92	41	42	41	56	53	1800	2970	6960	70	687	14
MIN	31	32	37	35	39	32	30	67	52	10	2.9	8.1
AC-FT	2790	2190	2470	2340	2540	2250	13820	24420	69780	1760	4200	594

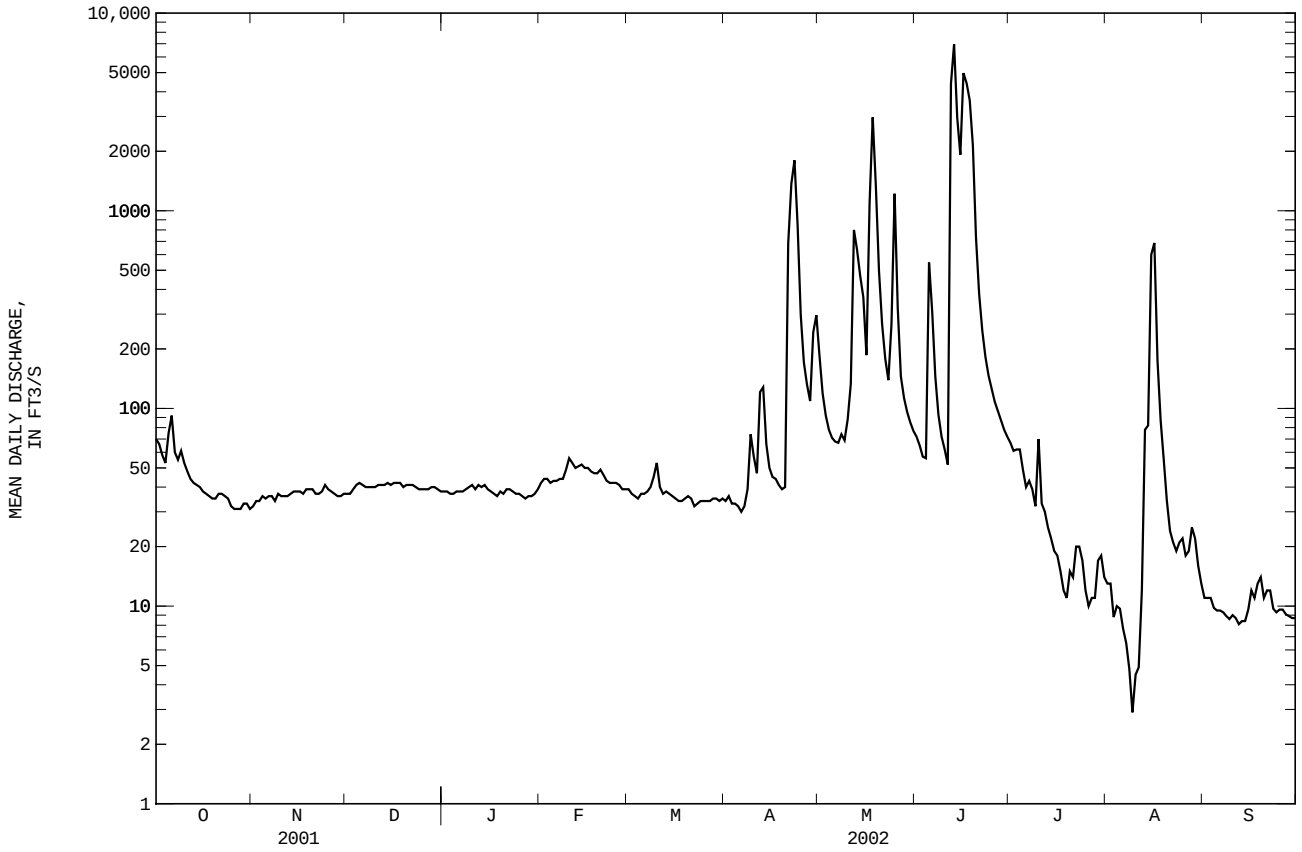
07144200 LITTLE ARKANSAS RIVER AT VALLEY CENTER, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1923 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	270.0	202.9	102.3	88.13	208.8	362.8	389.1	567.6	621.5	458.8	228.6	255.6
MAX	3873	2969	953	589	2241	4392	3857	4710	3076	6794	1996	1471
(WY)	1974	1980	1945	1962	1993	1973	1944	1993	1965	1993	1950	1977
MIN	5.06	10.9	11.2	9.37	11.8	17.0	17.1	17.0	12.5	7.14	4.29	3.49
(WY)	1957	1957	1957	1957	1957	1956	1956	1956	1934	1991	1956	1956

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1923 - 2002	
ANNUAL MEAN	486.7		178.4		313.2	
HIGHEST ANNUAL MEAN					1698	1993
LOWEST ANNUAL MEAN					24.9	1934
HIGHEST DAILY MEAN	14100	Feb 25	6960	Jun 13	28600	Jul 15 1993
LOWEST DAILY MEAN	13	Aug 16	2.9	Aug 9	1.1	Oct 6 1956
ANNUAL SEVEN-DAY MINIMUM	17	Aug 10	5.9	Aug 5	1.9	Oct 5 1956
MAXIMUM PEAK FLOW			11700	Jun 13	32000	Apr 16 1945
MAXIMUM PEAK STAGE					22.05	Apr 16 1945
INSTANTANEOUS LOW FLOW			2.4	Aug 9	0.00	Nov 19 1992
ANNUAL RUNOFF (AC-FT)	352300		129200		226900	
10 PERCENT EXCEEDS	710		183		488	
50 PERCENT EXCEEDS	69		39		59	
90 PERCENT EXCEEDS	24		11		21	

e Estimated



07144300 ARKANSAS RIVER AT WICHITA, KS

LOCATION.--Lat 37°38'41", long 97°20'06", river gage is in SE $^1/_4$ SE $^1/_4$ NE $^1/_4$ sec.5, T.28 S., R.1 E., Sedgwick County, Hydrologic Unit 11030013, on right bank at downstream side of bridge on Broadway Street in Wichita, 3.7 mi downstream from mouth of Little Arkansas River and at mile 759.7. Big Slough-Cowskin Floodway gage is in sec.11, T.27 S., R.1 W., Sedgwick County, on right bank at downstream side of bridge on Zoo Boulevard in Wichita, 1.0 mi downstream from control structure, and 6.5 mi northwest of Broadway Street gage.

DRAINAGE AREA.--40,490 mi^2, of which 7,263 mi^2 is probably noncontributing.

PERIOD OF RECORD.--July 1934 to current year. Gage-height records collected at site 3.2 mi upstream since 1897 are contained in reports of U.S. Weather Bureau.

REVISED RECORDS.--WSP 1241: 1940, 1944. WSP 1341: Drainage area.

GAGE.--River gage is water-stage recorder. Datum of river gage is 1,262.42 ft above NGVD of 1929. Prior to Oct. 1, 1985, at datum 5.00 ft higher than present datum. 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 above NGVD of 1929 (levels by Wichita-Valley Center Flood Control Project).

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow slightly regulated since 1943 by John Martin Reservoir (station 07130000). Natural flow affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals, diversions for irrigation, city of Wichita weir 2.2 mi upstream, and return flow from irrigated areas. Since May 1957, part of high-water flow by-passes river gage through floodway channel for which separate records are computed; figures representing floodway discharge and combined discharge are given herein. Satellite telemeter at station. Discharge through floodway occurred only on days given in the following table:

Date	Discharge (ft^3/s)	Date	Discharge (ft^3/s)	Date	Discharge (ft^3/s)	Date	Discharge (ft^3/s)	Date	Discharge (ft^3/s)
June 12	4.0	June 13	556	June 16	296	June 17	341		

EXTREMES OUTSIDE PERIOD OF RECORD.--Floods of May 18, 1877, and July 8, 1904, reached stages of 21 ft and 20.3 ft, respectively, river gage site and datum then in use (from reports of U.S. Weather Bureau).

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,700 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jun 13	0600	*8,280		Jun 16	2200	7,230	

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	599	209	200	151	137	244	140	474	382	284	83	316
2	549	211	197	149	184	e200	143	362	360	272	88	293
3	512	205	199	e140	240	e160	134	311	346	264	e85	279
4	480	206	203	129	238	e120	139	284	472	250	e82	264
5	688	210	206	170	244	215	137	264	665	233	e80	250
6	491	207	200	209	222	247	135	250	915	222	e77	243
7	426	201	200	178	211	202	165	278	547	204	75	235
8	392	205	197	203	208	238	249	999	372	198	69	225
9	372	198	193	223	221	224	182	534	282	187	67	224
10	365	200	193	193	221	203	189	329	223	186	65	215
11	335	200	195	188	221	198	218	372	194	213	66	202
12	315	203	201	182	219	185	205	1010	1110	175	190	202
13	307	205	197	181	207	180	302	1480	7290	166	452	229
14	284	204	199	172	207	179	212	869	3710	160	3230	233
15	272	204	198	180	211	170	170	809	2780	149	2800	230
16	263	203	195	175	202	174	161	592	4890	140	2610	209
17	249	201	190	178	195	174	164	678	6290	133	2390	206
18	248	224	191	175	197	172	160	2450	4760	129	2250	209
19	244	195	185	182	272	175	158	2570	3540	116	1660	251
20	241	194	186	178	198	174	218	1260	1660	106	921	190
21	242	198	184	185	195	171	404	792	1010	102	658	173
22	237	195	185	180	186	164	1240	600	756	125	525	160
23	237	202	178	184	182	164	1810	519	620	134	455	159
24	226	215	172	179	183	170	1590	949	535	104	964	153
25	217	195	174	175	179	160	667	1500	474	88	745	149
26	212	198	152	177	e170	162	451	1290	428	78	654	151
27	209	192	e150	178	e170	160	504	584	391	73	709	144
28	204	193	e150	179	206	161	346	533	354	148	651	138
29	206	198	152	177	---	154	345	476	330	226	494	136
30	206	200	139	177	---	151	548	428	303	91	406	126
31	197	---	e140	129	---	147	---	401	---	88	352	---
MEAN	323.4	202.4	183.9	176.0	204.5	180.6	382.9	782.2	1533	162.7	772.7	206.5
MAX	688	224	206	223	272	247	1810	2570	7290	284	3230	316
MIN	197	192	139	129	137	120	134	250	194	73	65	126
AC-FT	19880	12040	11310	10820	11360	11100	22780	48090	91220	10000	47510	12290

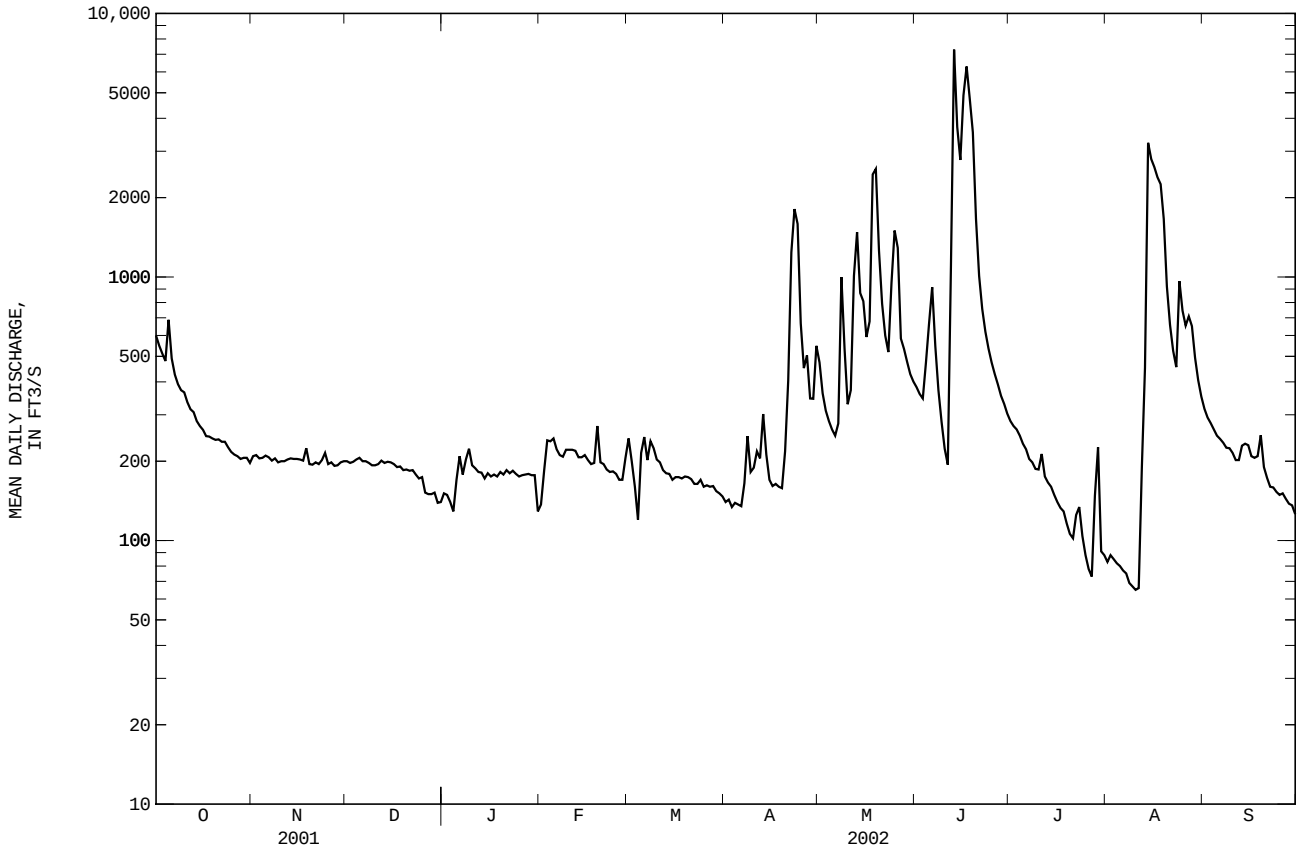
07144300 ARKANSAS RIVER AT WICHITA, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1935 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	917.7	688.4	464.4	430.0	695.1	1164	1243	1668	1982	1624	954.2	870.7
MAX	12900	5957	2963	2153	5278	9361	8498	9215	8851	14620	9202	3932
(WY)	1974	1999	1974	1974	1949	1973	1973	1951	1951	1993	1950	1973
MIN	10.2	30.7	23.4	18.8	53.7	63.2	58.1	119	119	46.8	14.2	7.90
(WY)	1957	1957	1957	1957	1957	1935	1935	1992	1956	1991	1956	1956

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1935 - 2002	
ANNUAL MEAN	1128		426.0		1060	
HIGHEST ANNUAL MEAN					3850	1993
LOWEST ANNUAL MEAN					151	1991
HIGHEST DAILY MEAN	14900	Feb 25	7290	Jun 13	41100	Jul 15 1993
LOWEST DAILY MEAN	133	Sep 14	65	Aug 10	5.0	Oct 5 1956
ANNUAL SEVEN-DAY MINIMUM	143	Sep 10	71	Aug 5	5.4	Oct 2 1956
MAXIMUM PEAK FLOW			8280	Jun 13	48400	Oct 31 1979
INSTANTANEOUS LOW FLOW			59	Aug 8	3.0	Sep 3 1934
ANNUAL RUNOFF (AC-FT)	816400		308400		767700	
10 PERCENT EXCEEDS	2670		723		2260	
50 PERCENT EXCEEDS	450		204		438	
90 PERCENT EXCEEDS	190		140		107	

e Estimated



07144480 COWSKIN CREEK AT 119TH STREET AT WICHITA, KS

LOCATION.--Lat 37°42'05", Long 97°28'49", in SW $^{1}/_{4}$ SW$^{1}/_{4}$ NW$^{1}/_{4}$ sec.18, T.27 S.,R.1 W., Sedgwick County, Hydrologic Unit 11030013, at left downstream end of bridge on 119th St West and at mile 46.1.

DRAINAGE AREA.--86.0 mi^{2}.

PERIOD OF RECORD.--April 2001 to current year.

REVISED RECORDS.--2001(M).

GAGE.--Water-stage rcorder. Datum of gage is 1,312.40 ft above NGVD of 1929 (from city of Wichita benchmark).

REMARKS.--Records poor. Satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.7	1.3	3.7	2.6	2.7	1.4	3.4	3.8	4.0	2.9	3.9	6.7
2	1.5	1.3	3.6	2.4	2.4	1.5	3.7	3.5	3.6	2.9	4.0	6.0
3	1.5	1.4	3.5	2.3	2.4	1.5	3.9	3.4	3.2	2.9	4.1	5.4
4	1.5	1.5	3.4	2.4	2.3	1.5	3.7	3.4	4.0	2.9	4.3	5.0
5	2.1	1.3	3.3	2.5	2.2	1.5	3.7	3.4	3.0	3.0	4.8	4.8
6	1.6	1.4	2.3	2.6	1.8	1.5	3.5	3.5	1.5	3.0	5.1	4.3
7	1.7	1.4	2.0	2.8	1.7	1.4	3.8	4.1	1.5	3.3	6.6	3.9
8	1.7	1.1	1.9	2.5	1.9	1.6	4.3	188	2.1	3.3	6.7	3.6
9	1.6	1.2	1.7	2.4	2.0	1.9	3.8	270	2.2	3.2	6.7	3.4
10	1.5	1.4	1.7	2.6	1.7	1.7	3.7	75	2.5	3.2	6.5	3.5
11	1.4	1.3	1.6	2.6	1.3	1.8	3.6	28	2.5	2.9	6.6	3.8
12	1.5	1.4	1.6	2.5	1.1	2.0	3.7	65	450	2.8	8.0	3.9
13	1.4	1.6	1.6	2.3	0.98	1.9	3.7	119	940	2.9	146	4.1
14	1.3	1.8	1.6	2.3	0.93	1.9	3.8	36	252	2.9	231	5.1
15	e1.2	1.7	1.7	2.2	0.91	1.7	3.6	13	93	2.8	61	4.6
16	e1.2	1.5	1.8	2.2	0.94	1.7	3.5	8.2	996	2.7	30	4.3
17	1.1	1.6	1.9	2.3	0.92	1.9	3.5	6.5	555	2.8	17	3.7
18	1.1	2.2	1.9	2.6	0.99	1.9	3.5	4.5	107	2.7	10	4.1
19	1.3	2.2	2.1	2.5	1.6	2.7	3.5	4.0	41	2.8	8.8	4.4
20	1.2	2.4	2.2	2.4	1.8	3.7	3.9	3.7	21	2.9	8.4	4.2
21	1.2	2.6	2.5	2.2	1.9	3.4	4.2	3.4	12	2.9	7.5	4.0
22	1.2	2.3	3.0	2.2	1.8	3.5	4.0	3.1	8.4	3.1	6.8	3.8
23	1.1	2.5	3.1	2.3	1.8	3.8	4.0	2.9	6.2	3.3	6.5	3.0
24	1.0	2.9	3.1	2.1	1.8	3.8	4.0	4.2	4.8	3.5	162	2.8
25	0.98	2.9	3.1	2.0	1.8	3.8	4.6	88	4.1	3.7	265	2.8
26	1.2	3.1	2.9	1.8	1.9	3.9	4.6	103	3.8	3.9	54	3.0
27	1.2	2.9	2.8	1.6	1.8	3.7	4.8	31	3.4	3.8	21	2.9
28	1.1	3.3	2.8	1.8	1.5	3.6	4.1	14	3.1	4.5	12	2.8
29	1.2	3.4	2.9	1.7	---	3.5	4.0	19	2.8	4.6	9.8	2.8
30	1.2	3.8	2.8	2.1	---	3.5	3.9	11	2.9	3.8	8.4	2.8
31	1.3	---	2.5	2.6	---	3.4	---	5.3	---	3.8	7.4	---
MEAN	1.348	2.023	2.471	2.303	1.674	2.471	3.867	36.48	117.9	3.216	36.77	3.983
MAX	2.1	3.8	3.7	2.8	2.7	3.9	4.8	270	996	4.6	265	6.7
MIN	0.98	1.1	1.6	1.6	0.91	1.4	3.4	2.9	1.5	2.7	3.9	2.8
AC-FT	83	120	152	142	93	152	230	2240	7010	198	2260	237

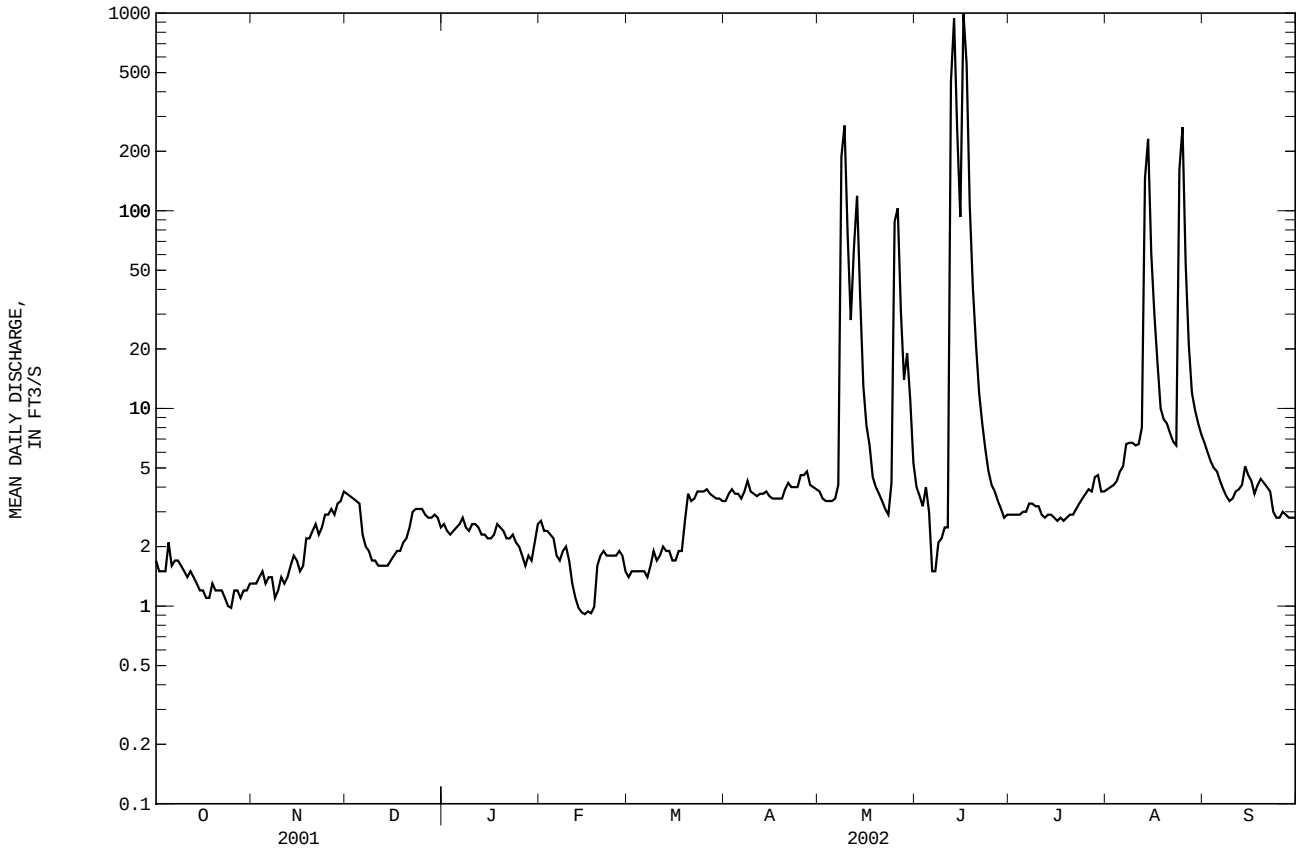
07144480 COWSKIN CREEK AT 119TH STREET AT WICHITA, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2001 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.348	2.023	2.471	2.303	1.674	2.471	5.307	19.98	78.89	2.358	19.27	4.080
MAX	1.35	2.02	2.47	2.30	1.67	2.47	6.75	36.5	118	3.22	36.8	4.18
(WY)	2002	2002	2002	2002	2002	2002	2001	2002	2002	2002	2002	2001
MIN	1.35	2.02	2.47	2.30	1.67	2.47	3.87	3.48	39.9	1.50	1.77	3.98
(WY)	2002	2002	2002	2002	2002	2002	2002	2001	2001	2001	2001	2002

SUMMARY STATISTICS	FOR 2002 WATER YEAR		WATER YEARS 2001 - 2002		
ANNUAL MEAN	17.85		17.85		
HIGHEST ANNUAL MEAN			17.9		2002
LOWEST ANNUAL MEAN			17.9		2002
HIGHEST DAILY MEAN	996	Jun 16	996	Jun 16	2002
LOWEST DAILY MEAN	0.91	Feb 15	0.91	Feb 15	2002
ANNUAL SEVEN-DAY MINIMUM	0.97	Feb 12	0.97	Feb 12	2002
MAXIMUM PEAK FLOW	1420	Jun 16	1420	Jun 16	2002
MAXIMUM PEAK STAGE	18.21	Jun 16	18.21	Jun 16	4003
INSTANTANEOUS LOW FLOW	0.88	Feb 14	0.88	Feb 14	2002
ANNUAL RUNOFF (AC-FT)	12930		12930		
10 PERCENT EXCEEDS	9.2		9.2		
50 PERCENT EXCEEDS	2.9		2.9		
90 PERCENT EXCEEDS	1.4		1.4		

e Estimated



07144550 ARKANSAS RIVER AT DERBY, KS

LOCATION.--Lat 37°32'34", long 97°16'31", in SE $^1/_4$ SW $^1/_4$ NW $^1/_4$ sec.12, T.29 S., R.1 E., Sedgwick County, Hydrologic Unit 11030013, on left bank at downstream side of county highway bridge at west edge of Derby, 0.9 mi downstream from mouth of bypass channel, and at mile 749.5.

DRAINAGE AREA.--40,830 mi^2, of which 7,263 mi^2 is probably noncontributing.

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

GAGE.--Water-stage recorder. Datum of gage is 1,229.95 ft above NGVD of 1929 (city of Wichita bench mark).

REMARKS.--Records good. Flow slightly regulated since 1943 by John Martin Reservoir (station 07130000). Low flow regulated by city of Wichita low-water dam. Natural flow affected by numerous diversions upstream from station. Satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 8	0600	4,670	5.79	Jun 16	0000	8,450	7.58
May 12	0500	5,620	6.30	Jun 17	0200	9,220	7.87
May 24	0600	6,270	6.63	Aug 14	1600	4,210	5.53
Jun 13	1200	*10,800	*8.42				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

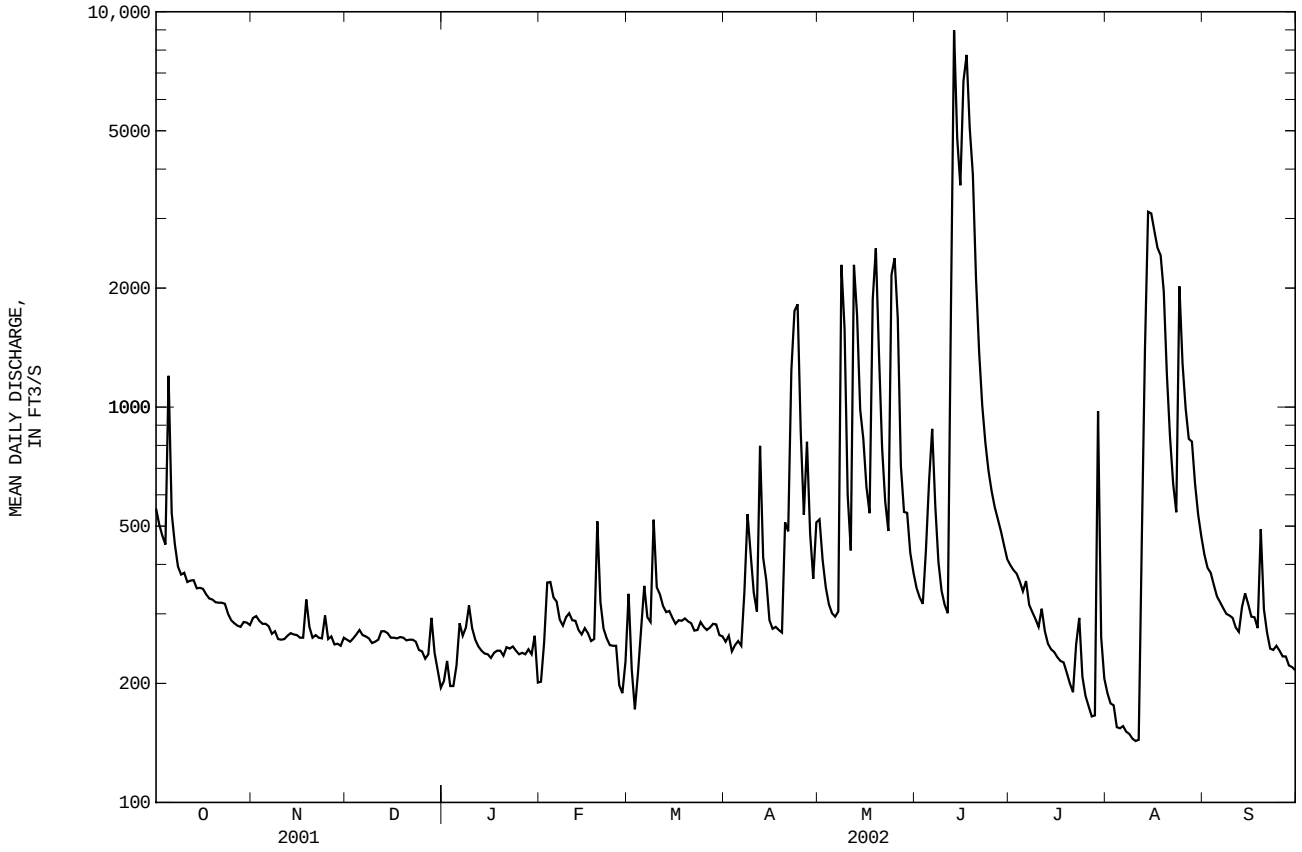
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	554	293	258	203	202	337	255	520	349	398	189	423
2	505	296	255	228	254	217	264	410	330	387	178	392
3	473	288	260	197	360	172	241	350	318	379	176	381
4	449	283	266	197	361	213	250	317	434	362	155	355
5	1200	283	273	222	330	275	256	301	647	342	154	332
6	539	279	265	284	322	353	249	295	881	363	156	321
7	450	267	263	264	290	294	341	304	562	316	151	310
8	395	271	260	277	280	286	536	2290	406	303	149	300
9	377	259	253	315	294	519	425	1580	343	291	145	297
10	381	258	255	276	301	350	339	600	316	278	143	293
11	361	259	258	258	289	336	304	434	301	309	144	277
12	364	264	271	248	288	314	798	2290	1780	271	471	270
13	365	268	271	242	273	303	416	1710	8980	252	1410	312
14	348	266	268	238	266	305	364	984	4780	244	3120	338
15	349	265	261	237	276	293	289	830	3640	240	3090	317
16	347	261	261	232	268	283	275	628	6680	233	2790	295
17	336	261	260	239	256	289	278	539	7780	228	2530	294
18	328	326	262	242	259	288	273	1870	5080	226	2420	276
19	326	278	261	242	514	292	269	2520	3880	213	1960	491
20	321	261	257	235	321	287	511	1360	2120	200	1210	308
21	320	265	258	247	275	284	485	789	1380	190	840	269
22	320	261	258	245	260	272	1240	576	1010	251	641	245
23	318	260	255	248	250	273	1750	486	812	293	542	243
24	300	297	243	242	249	286	1820	2160	690	208	2020	249
25	289	259	241	237	249	278	863	2380	613	186	1290	242
26	284	263	231	239	198	273	534	1680	558	175	992	234
27	280	251	237	237	189	277	817	709	520	165	831	234
28	278	252	293	244	227	283	479	543	484	166	818	222
29	286	249	239	237	---	282	368	540	446	976	639	220
30	285	261	216	264	---	265	511	428	412	262	534	216
31	281	---	195	201	---	263	---	382	---	206	471	---
MEAN	387.4	270.1	255.0	242.5	282.2	291.7	526.7	993.7	1884	287.5	979.3	298.5
MAX	1200	326	293	315	514	519	1820	2520	8980	976	3120	491
MIN	278	249	195	197	189	172	241	295	301	165	143	216
AC-FT	23820	16070	15680	14910	15670	17930	31340	61100	112100	17680	60220	17760

07144550 ARKANSAS RIVER AT DERBY, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1154	997.6	581.7	488.5	830.7	1587	1599	1776	1927	1441	944.1	943.0
MAX	13000	6293	2916	2190	3965	9439	8949	8939	6640	13450	2774	3640
(WY)	1974	1999	1974	1974	1993	1973	1973	1993	1995	1993	1987	1973
MIN	102	162	173	179	163	183	178	237	415	185	168	142
(WY)	1992	1981	1991	1979	1989	1989	1989	1992	1991	1991	1984	1980

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1969 - 2002	
ANNUAL MEAN	1160		558.5		1190	
HIGHEST ANNUAL MEAN					3621	1993
LOWEST ANNUAL MEAN					259	1991
HIGHEST DAILY MEAN	14300	Feb 25	8980	Jun 13	44300	Nov 2 1998
LOWEST DAILY MEAN	177	Sep 14	143	Aug 10	83	Oct 6 1991
ANNUAL SEVEN-DAY MINIMUM	185	Sep 9	149	Aug 5	90	Oct 2 1991
MAXIMUM PEAK FLOW			10800	Jun 13	58300	Nov 2 1998
MAXIMUM PEAK STAGE			8.42	Jun 13	16.45	Nov 2 1998
INSTANTANEOUS LOW FLOW			63	Mar 3	62	Oct 5 1991
ANNUAL RUNOFF (AC-FT)	839800		404300		862000	
10 PERCENT EXCEEDS	2610		987		2550	
50 PERCENT EXCEEDS	528		289		530	
90 PERCENT EXCEEDS	250		224		195	



07144780 NORTH FORK NINNESCAH RIVER ABOVE CHENEY RESERVOIR, KS

LOCATION.--Lat 37°51'49", long 98°00'52", in NE $^{1}/_{4}$ SE $^{1}/_{4}$ NE $^{1}/_{4}$ sec.19, T.25 S., R.6 W., Reno County, Hydrologic Unit 11030014, on right bank at upstream side of county highway bridge, 10 mi south of Hutchinson, 18.1 mi upstream from Cheney Dam, and at mile 33.8.

WATER-DISCHARGE RECORDS

DRAINAGE AREA.--713 mi^2, of which 237 mi^2 is probably noncontributing.

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

GAGE.--Water-stage recorder. Datum of gage is 1,456.05 ft above NGVD of 1929. Prior to Feb. 12, 1996, at site 4 mi downstream, datum 1,431.75 ft above NGVD of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,300 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 12	1300	*1,450	*9.87	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	54	42	63	e53	e40	76	62	76	39	38	13	41
2	50	41	60	e52	e60	28	65	74	32	43	13	35
3	44	41	59	e52	e88	85	59	72	27	64	18	32
4	43	42	57	e56	e80	105	60	71	58	96	15	29
5	61	41	60	e58	114	104	60	69	80	62	13	26
6	59	41	62	e63	99	81	61	69	76	52	11	24
7	52	41	62	e68	90	75	64	68	62	46	11	23
8	48	41	62	81	95	76	74	74	50	41	11	22
9	46	40	63	68	114	80	77	81	40	37	11	22
10	48	44	64	67	123	78	74	80	34	33	13	23
11	47	45	64	66	114	77	72	86	41	40	13	21
12	46	44	65	66	101	76	70	708	336	45	24	24
13	46	46	67	67	92	76	67	329	283	40	655	28
14	41	46	68	67	87	75	75	167	195	37	415	31
15	43	46	68	66	84	73	74	130	263	33	e170	38
16	44	46	68	66	80	71	66	114	565	30	89	40
17	42	45	68	65	78	72	65	111	280	27	72	36
18	44	48	69	e62	77	71	67	105	185	27	58	32
19	45	48	68	e64	81	73	65	91	137	23	44	33
20	45	47	68	67	78	72	68	85	113	20	34	34
21	43	50	68	67	77	72	106	78	101	17	28	33
22	43	52	67	65	75	69	130	73	90	17	23	31
23	44	53	66	64	74	68	98	69	81	21	19	30
24	40	56	e65	63	76	69	84	73	73	22	93	27
25	30	55	e63	60	71	68	76	74	69	19	112	26
26	37	58	e61	61	41	68	77	76	67	16	111	26
27	39	59	e61	61	51	68	82	70	66	13	88	26
28	40	e58	e57	e60	86	67	81	65	60	14	75	28
29	42	e57	e56	e60	---	66	77	59	49	18	66	27
30	42	e58	e55	e58	---	64	76	53	40	16	56	25
31	41	---	e54	e51	---	64	---	48	---	15	48	---
MEAN	44.81	47.70	63.16	62.71	83.07	73.13	74.40	109.6	119.7	32.97	78.13	29.10
MAX	61	59	69	81	123	105	130	708	565	96	655	41
MIN	30	40	54	51	40	28	59	48	27	13	11	21
AC-FT	2760	2840	3880	3860	4610	4500	4430	6740	7120	2030	4800	1730

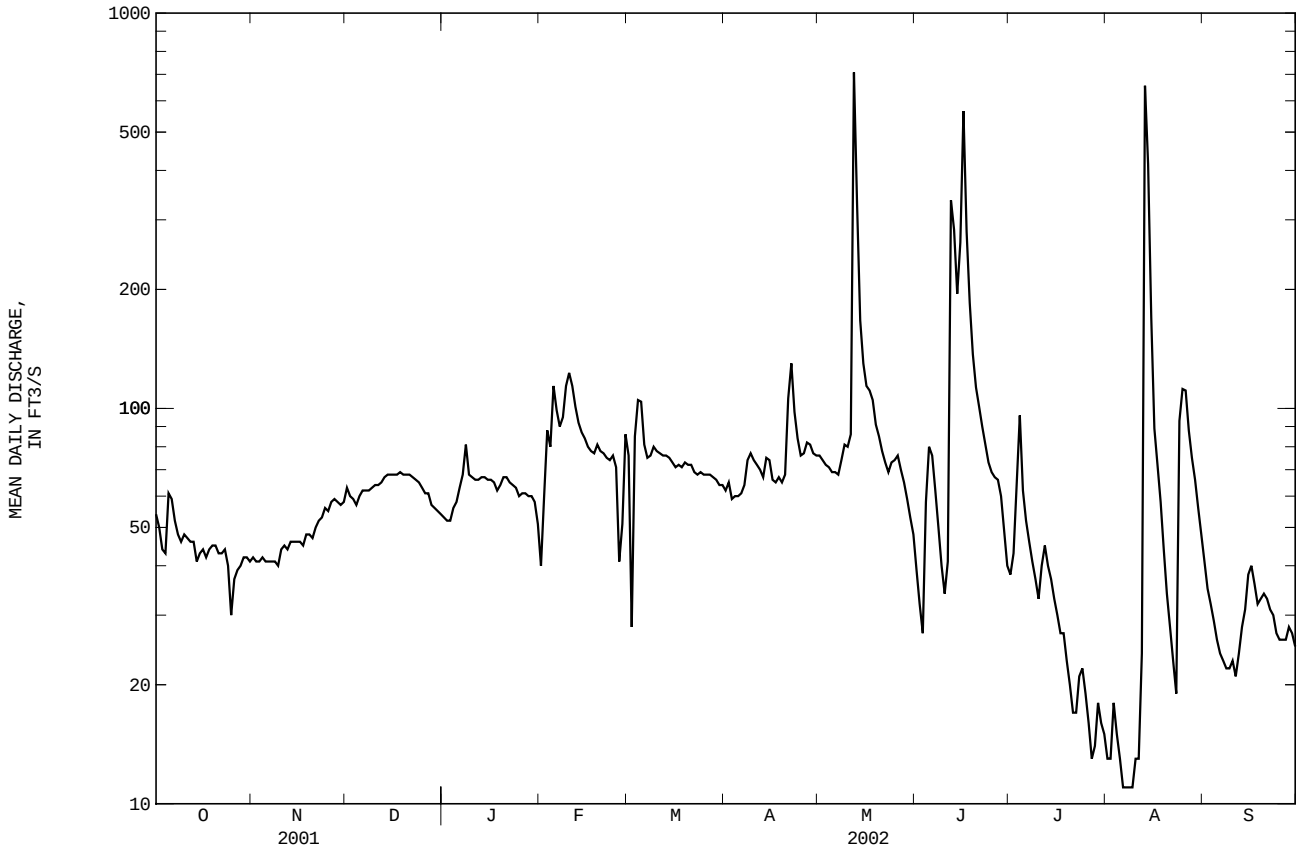
07144780 NORTH FORK NINNESCAH RIVER ABOVE CHENEY RESERVOIR, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	169.2	100.2	99.11	98.73	131.6	209.4	213.3	233.5	191.9	135.5	65.35	98.27
MAX	1632	305	252	202	535	866	1097	1805	820	1392	351	968
(WY)	1980	1982	1974	1980	1993	1987	1974	1995	1995	1987	1977	1977
MIN	15.0	36.0	39.5	50.3	54.7	44.7	48.3	32.5	16.5	13.0	8.08	6.80
(WY)	1992	1967	1967	1977	1967	1967	1972	1967	1966	1968	1968	1971

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1966 - 2002	
ANNUAL MEAN	133.8		68.09		145.6	
HIGHEST ANNUAL MEAN					388	1987
LOWEST ANNUAL MEAN					54.3	1968
HIGHEST DAILY MEAN	1680	Jun 9	708	May 12	39700	Oct 30 1979
LOWEST DAILY MEAN	12	Aug 23	11	Aug 6	0.00	Jul 14 1966
ANNUAL SEVEN-DAY MINIMUM	15	Aug 22	12	Aug 5	0.56	Jul 14 1966
MAXIMUM PEAK FLOW			1450	May 12	87000	Oct 30 1979
MAXIMUM PEAK STAGE			9.87	May 12	11.65	Oct 30 1979
INSTANTANEOUS LOW FLOW			7.2	Feb 26	0.00	Jul 14 1966
ANNUAL RUNOFF (AC-FT)	96890		49300		105400	
10 PERCENT EXCEEDS	255		92		221	
50 PERCENT EXCEEDS	77		61		76	
90 PERCENT EXCEEDS	22		26		24	

e Estimated



07144780 NORTH FORK NINNESCAH RIVER ABOVE CHENEY RESERVOIR, KS--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1998 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: November 1998 to current year.
pH: November 1998 to current year.
WATER TEMPERATURE: November 1998 to current year.
DISSOLVED OXYGEN: November 1998 to current year.
TURBIDITY: November 1998 to current year.

INSTRUMENTATION.--Multiparameter water-quality monitor.

REMARKS.--Records good. Interruptions in record are due to ice conditions or malfunction of the recording instrument or sensors. Instruments used to measure turbidity conform to ISO 7027 standards.

EXTREMES FOR PERIOD OF RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 1,530 microsiemens/cm, Dec. 12, 2000; minimum, 122 microsiemens/cm, Sept. 18, 2001.
pH: Maximum, 9.4 standard units, Sept. 29, 2001; minimum, 7.2 standard units, June 12, 2002.
WATER TEMPERATURE: Maximum, 38.5°C, Aug. 1, 2002; minimum, -0.2°C, Jan. 1, 2002.
DISSOLVED OXYGEN: Maximum 18.4 mg/L, Jan. 27, 2001; minimum, 2.3 mg/L, July 16, 1999.
TURBIDITY: Maximum, >1,700 NTU, Sept. 17, 2001; minimum, 1.1 NTU, Oct. 1, 2001.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 1,510 microsiemens/cm, Jan. 4; minimum, 139 microsiemens/cm, June 12.
pH: Maximum, 9.4 units, Oct. 4; minimum, 7.2 units, June 12.
WATER TEMPERATURE: Maximum, 38.5°C, Aug. 1; minimum, -0.2°C, Jan. 30.
DISSOLVED OXYGEN: Maximum, 16.3 mg/L, Feb. 26; minimum, 3.3 mg/L, Aug. 6.
TURBIDITY: Maximum, 1,700 NTU, Aug. 12; minimum, 5.3 NTU, Sept. 27.

SPECIFIC CONDUCTANCE FROM DCP, in US/CM @ 25C, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	1160	1120	1140	1220	1190	1210	1310	1260	1280	1360	1320	1330
2	1150	1140	1140	1220	1200	1210	1290	1260	1280	1430	1330	1360
3	1150	1120	1150	1220	1180	1200	1300	1270	1290	1460	1370	1410
4	1150	1130	1140	1200	1170	1190	1280	1280	1280	1510	1370	1430
5	1130	1010	1050	1190	1170	1180	1290	1260	1270	1400	1210	1290
6	1070	1030	1050	1200	1180	1190	1300	1290	1290	1230	1130	1190
7	1150	1070	1120	1220	1180	1200	1300	1280	1290	1310	1130	1240
8	1170	1150	1160	1220	1200	1210	1310	1300	1310	1330	1160	1250
9	1190	1150	1170	1220	1200	1210	1320	1300	1310	1330	1270	1290
10	---	1170	e1180	1220	1190	1200	1320	1300	1310	1280	1270	1280
11	---	---	---	1210	1190	1200	1320	1280	1300	1300	1260	1280
12	1200	---	e1190	1210	1200	1210	1290	1250	1270	1300	1280	1290
13	1210	1190	1200	1230	1200	1210	1250	1240	1250	1300	1260	1280
14	1210	1200	1200	1240	1200	1220	1260	1250	1260	1270	1250	1260
15	1210	1040	1170	1250	1230	1240	1280	1260	1270	1300	1230	1270
16	1150	1040	1120	1250	1230	1240	1300	1280	1280	1280	1250	1270
17	1190	1140	1160	1240	1220	1230	1310	1280	1290	1280	1260	1270
18	1200	1140	1180	1240	1220	1230	1300	1280	1290	1300	1220	1270
19	1160	1150	1160	1260	1220	1250	1340	1300	1320	1260	1230	1250
20	1160	1130	1140	1280	1250	1270	1330	1300	1310	1310	1240	1270
21	1140	1090	1120	1280	1270	1270	1320	1290	1300	1320	1250	1280
22	1110	1020	1090	1270	1260	1270	1300	1290	1290	1310	1280	1290
23	1170	1020	1120	1260	1250	1260	1340	1290	1310	1290	1270	1280
24	1200	1160	1180	1270	1260	1260	1400	1270	1340	1290	1260	1270
25	---	---	e1190	1290	1260	1270	1420	1260	1340	1310	1250	1280
26	---	1110	e1140	1300	1280	1290	1460	1280	1370	1300	1260	1280
27	1220	1180	1210	1330	1300	1310	1360	1250	1310	1290	1250	1270
28	1220	1210	1220	1480	1300	1390	---	1260	e1300	1330	1260	1290
29	1230	1210	1220	1410	1260	1320	1430	1260	1340	1330	1210	1300
30	1230	1210	1220	1300	1260	1270	1390	1280	1340	---	---	---
31	1230	1200	1210	---	---	---	1410	1320	1360	---	---	---
MONTH	---	---	---	1480	1170	1240	---	1240	1300	---	---	---

07144780 NORTH FORK NINNESCAH RIVER ABOVE CHENEY RESERVOIR, KS--Continued

SPECIFIC CONDUCTANCE FROM DCP, in US/CM @ 25C, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	1320	1230	1290	1240	1230	1230	1240	1210	1230
2	---	---	---	---	---	e1270	1260	1220	1230	1260	1230	1250
3	---	---	e1160	1480	1290	1380	1260	1230	1250	1260	1250	1250
4	1210	1140	1170	1460	1280	1370	1240	1220	1230	1260	1240	1250
5	---	---	e1200	1310	1130	1250	1240	1210	1220	1240	1230	1240
6	---	---	---	1310	1130	1260	1240	1210	1220	1250	1230	1240
7	---	---	---	1330	1310	1320	1220	1170	1190	1250	1120	1230
8	---	---	---	1330	1240	1300	1180	1000	1110	1160	1070	1120
9	---	---	---	1290	1220	1240	1100	1020	1080	1310	1110	1180
10	---	---	---	1270	1230	1260	1200	1100	1160	1460	1310	1400
11	---	---	---	1290	1260	1280	1260	1200	1230	1440	320	1280
12	---	---	---	1290	1260	1280	1260	1250	1260	627	266	430
13	---	---	---	1280	1240	1260	1260	1200	1230	884	381	630
14	---	---	---	1260	1240	1250	1220	1160	1180	1130	884	1030
15	---	---	e1370	1270	1250	1260	1260	1160	1220	1190	1130	1170
16	1380	1350	1370	1270	1240	1260	1260	1240	1250	1180	1160	1170
17	1350	1330	1340	1260	1230	1240	1260	1230	1240	---	1090	e1120
18	1340	1290	1340	1280	1230	1260	1230	1180	1200	1180	1130	1140
19	1290	1270	1280	1260	1210	1230	1220	1190	1200	1200	1170	1190
20	1290	1260	1280	1230	1200	1220	1250	1070	1180	1220	1190	1200
21	1310	1280	1290	1290	1220	1250	1080	996	1040	1220	1200	1210
22	1320	1300	1300	1310	1260	1280	1330	1040	1160	1230	1200	1210
23	1310	1290	1310	1290	1260	1270	1420	1330	1400	1220	1190	1210
24	1310	1280	1290	1260	1240	1250	1380	1340	1360	1200	1090	1160
25	1350	1300	1320	1270	1240	1260	1340	1210	1280	1130	1090	1110
26	---	---	e1340	1270	1220	1250	1320	1190	1250	1140	1080	1110
27	---	---	e1270	1270	1250	1260	1260	1090	1190	1160	1090	1130
28	1380	1220	1300	1270	1250	1260	1250	1210	1220	1180	1160	1170
29	---	---	---	1270	1240	1250	1270	1240	1250	1190	1160	1180
30	---	---	---	1240	1220	1230	1260	1230	1250	1190	1160	1170
31	---	---	---	1240	1230	1240	---	---	---	1180	1160	1180
MONTH	---	---	---	---	---	1270	1420	996	1220	---	266	1150

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	1200	---	e1180	1190	1160	1170	1100	---	e1070	1190	1150	1170
2	---	---	---	1180	1130	1160	1090	---	e1060	1200	1180	1190
3	---	---	---	1160	1100	1140	1090	1020	1060	1200	1180	1190
4	---	---	e800	1100	734	832	1080	1010	1040	1190	1160	1170
5	913	803	870	1030	935	987	---	---	e1090	1200	1130	1170
6	1140	913	999	1040	936	1010	---	---	e1110	1210	1150	1180
7	1280	1140	1220	---	---	e990	---	---	e1100	1190	1160	1180
8	1270	1180	1250	---	---	e1020	---	---	e1090	1180	1160	1170
9	1230	1160	1210	---	---	e960	---	---	e1080	1180	1130	1150
10	1180	1130	1160	---	---	e885	---	---	e1070	1140	1110	1130
11	1180	238	1080	---	---	e904	1080	962	1050	1130	---	e1120
12	433	139	298	---	---	e1050	980	295	814	---	---	---
13	763	408	634	---	---	e1060	370	171	252	---	---	e1010
14	1050	763	945	---	---	e1100	534	264	404	1060	1000	1040
15	1100	151	869	---	---	e1150	---	---	---	1050	1020	1030
16	678	234	482	1160	1130	1150	934	251	e587	1090	1040	1060
17	904	678	797	1160	1140	1150	1030	934	993	1170	1090	1130
18	1030	904	965	1160	1080	1140	1070	993	1040	1140	1110	1120
19	1110	1030	1070	1150	1080	1120	1050	627	886	1110	1080	1100
20	1160	1110	1140	1150	1130	1140	912	728	836	1110	1080	1090
21	1180	1060	1130	1180	1140	1150	1080	912	992	1120	1100	1110
22	1080	1020	1060	1180	1090	1120	1100	1030	1070	1130	1100	1120
23	1100	1050	1080	1140	1090	1120	1110	1070	1090	1130	1090	1110
24	1080	1050	1060	1110	1070	1090	1080	457	755	1140	1090	1110
25	1130	1060	1080	1160	1110	1130	974	604	808	1140	1100	1120
26	1140	1050	1100	1170	1140	1150	---	---	---	1130	1080	1100
27	1140	1020	1090	1170	1130	1160	1160	925	1060	1110	1070	1090
28	1130	1010	1090	1160	972	1120	1180	1160	1170	1110	1080	1090
29	1170	1120	1140	1070	934	1020	1180	1110	1150	1100	1070	1090
30	1190	1160	1170	1080	1040	1060	1160	1120	1140	1110	1080	1100
31	---	---	---	1090	1040	1060	1170	1130	1150	---	---	---
MONTH	---	---	---	---	---	1070	---	---	---	---	---	---

e Estimated

07144780 NORTH FORK NINNESCAH RIVER ABOVE CHENEY RESERVOIR, KS--Continued

PH, WH, FIELD FROM DCP, in (STANDARD UNITS), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	9.3	9.2	9.3	8.6	8.3	8.4	8.5	8.4	8.4	8.4	8.4	8.4
2	9.3	9.0	9.1	8.6	8.3	8.4	8.4	8.4	8.4	8.4	8.4	8.4
3	9.1	8.8	9.0	8.7	8.3	8.4	8.5	8.4	8.4	8.4	8.3	8.3
4	9.4	8.9	9.0	8.6	8.3	8.4	8.6	8.4	8.5	8.4	8.3	8.3
5	9.3	9.1	9.2	8.6	8.3	8.4	8.6	8.4	8.5	---	---	---
6	9.3	9.1	9.2	8.6	8.3	8.4	8.5	8.4	8.5	---	---	---
7	9.3	9.2	9.2	8.6	8.3	8.4	8.5	8.4	8.5	---	---	---
8	9.2	8.9	9.1	8.6	8.4	8.5	8.5	8.5	8.5	8.5	---	---
9	8.9	---	---	8.6	8.4	8.4	8.5	8.4	8.5	8.5	8.5	8.5
10	---	---	---	8.6	8.4	8.4	8.5	8.5	8.5	8.5	8.5	8.5
11	---	---	---	8.6	8.4	8.4	8.5	8.5	8.5	8.5	8.5	8.5
12	8.6	---	---	8.5	8.4	8.4	8.5	8.4	8.5	8.5	8.5	8.5
13	8.6	8.3	8.4	8.5	8.3	8.4	8.5	8.4	8.5	8.5	8.5	8.5
14	8.6	8.4	8.5	8.5	8.4	8.4	8.5	8.4	8.5	8.6	8.5	8.5
15	8.6	8.4	8.4	8.6	8.4	8.4	8.5	8.4	8.5	8.5	8.5	8.5
16	8.5	8.3	8.4	8.6	8.4	8.4	8.5	8.4	8.5	8.5	8.5	8.5
17	8.6	8.4	8.5	---	---	---	8.5	8.5	8.5	8.5	8.5	8.5
18	8.6	8.4	8.5	8.5	8.4	8.4	8.5	8.4	8.5	8.5	8.5	8.5
19	8.6	8.3	8.4	8.6	8.4	8.5	8.5	8.5	8.5	8.5	8.4	8.4
20	8.6	8.3	8.4	8.5	8.4	8.5	8.5	8.5	8.5	8.5	8.4	8.5
21	8.7	8.3	8.4	8.5	8.4	8.5	8.5	8.5	8.5	8.5	8.4	8.5
22	8.6	8.3	8.4	8.5	8.4	8.5	8.6	8.5	8.5	8.5	8.4	8.5
23	8.6	8.3	8.4	8.6	8.4	8.5	8.5	8.5	8.5	8.5	8.5	8.5
24	8.6	8.3	8.4	8.5	8.4	8.5	8.5	8.4	8.5	8.5	8.4	8.5
25	---	---	---	8.5	8.4	8.5	8.5	8.4	8.4	8.5	8.4	8.5
26	8.5	---	---	8.6	8.4	8.5	8.5	8.4	8.4	8.5	8.4	8.5
27	8.5	8.3	8.4	8.5	8.4	8.5	8.5	8.4	8.5	8.5	8.5	8.5
28	8.6	8.3	8.4	8.5	8.4	8.4	8.5	8.5	8.5	8.5	8.5	8.5
29	8.6	8.3	8.4	8.4	8.4	8.4	8.5	8.4	8.5	8.5	8.4	8.5
30	8.6	8.3	8.4	8.4	8.4	8.4	8.5	8.4	8.4	8.5	---	---
31	8.6	8.3	8.5	---	---	---	8.4	8.4	8.4	---	---	---
MAX	---	---	---	---	---	---	8.6	8.5	8.5	---	---	---
MIN	---	---	---	---	---	---	8.4	8.4	8.4	---	---	---

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	8.4	8.4	8.4	8.6	8.4	8.5	8.8	8.4	8.6
2	---	---	---	8.4	---	---	8.6	8.4	8.5	8.7	8.5	8.6
3	8.3	8.2	8.3	8.3	8.2	8.2	8.5	8.4	8.5	8.7	8.5	8.6
4	8.3	8.2	8.3	8.3	8.2	8.2	8.6	8.4	8.5	8.7	8.5	8.6
5	---	8.2	---	8.4	8.3	8.3	8.6	8.4	8.5	8.8	8.4	8.6
6	---	---	---	8.5	8.4	8.4	8.6	8.4	8.5	8.7	8.4	8.6
7	---	---	---	8.5	8.5	8.5	8.6	8.4	8.4	8.8	8.4	8.5
8	---	---	---	8.5	8.4	8.5	8.5	8.3	8.4	8.8	8.3	8.6
9	---	---	---	8.5	8.4	8.4	8.5	8.3	8.4	8.7	8.5	8.6
10	---	---	---	8.5	8.4	8.5	8.6	8.4	8.5	8.7	8.4	8.6
11	---	---	---	8.5	8.5	8.5	8.6	8.4	8.5	8.8	7.9	8.5
12	---	---	---	8.5	8.5	8.5	8.6	8.3	8.5	8.0	7.8	7.9
13	---	---	---	8.5	8.5	8.5	8.6	8.3	8.4	8.0	7.9	8.0
14	---	---	---	8.6	8.5	8.5	8.6	8.3	8.4	8.3	8.0	8.2
15	8.4	---	---	8.6	8.5	8.5	8.6	8.3	8.5	8.5	8.3	8.4
16	8.4	8.4	8.4	8.6	8.5	8.5	8.7	8.4	8.5	8.6	8.3	8.4
17	8.5	8.4	8.4	8.6	8.5	8.5	8.7	8.4	8.5	8.6	8.3	8.4
18	8.5	8.4	8.4	8.5	8.4	8.5	8.7	8.4	8.5	8.6	8.3	8.5
19	8.4	8.4	8.4	8.5	8.3	8.4	8.7	8.4	8.5	8.6	8.3	8.5
20	8.4	8.4	8.4	8.5	8.3	8.4	8.5	8.4	8.5	8.6	8.4	8.5
21	8.5	8.4	8.4	8.5	8.4	8.4	8.4	8.2	8.3	8.7	8.4	8.5
22	8.5	8.4	8.4	8.5	8.4	8.4	8.3	8.1	8.2	8.6	8.4	8.5
23	8.5	8.4	8.4	8.5	8.4	8.4	8.5	8.3	8.4	8.7	8.4	8.5
24	8.5	8.4	8.5	8.5	8.4	8.4	8.6	8.4	8.5	8.5	8.3	8.4
25	8.5	8.4	8.5	8.4	8.4	8.4	8.6	8.5	8.6	8.5	8.3	8.4
26	8.4	---	---	8.5	8.3	8.4	8.6	8.5	8.5	8.6	8.3	8.4
27	8.4	8.3	---	8.6	8.4	8.4	8.6	8.4	8.5	8.6	8.4	8.5
28	8.4	8.4	8.4	8.6	8.4	8.5	8.6	8.5	8.5	8.7	8.3	8.5
29	---	---	---	8.6	8.4	8.5	8.7	8.4	8.6	8.7	8.3	8.5
30	---	---	---	8.6	8.4	8.5	8.8	8.4	8.6	8.7	8.3	8.4
31	---	---	---	8.6	8.4	8.5	---	---	---	8.6	8.2	8.4
MAX	---	---	---	8.6	---	---	8.8	8.5	8.6	8.8	8.5	8.6
MIN	---	---	---	8.3	---	---	8.3	8.1	8.2	8.0	7.8	7.9

07144780 NORTH FORK NINNESCAH RIVER ABOVE CHENEY RESERVOIR, KS--Continued

PH, WH, FIELD FROM DCP, in (STANDARD UNITS), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	8.7	8.2	8.5	8.8	8.2	8.5	8.7	8.0	8.1	8.8	8.3	8.6
2	8.7	8.2	8.5	8.8	8.2	8.4	8.8	8.0	8.2	8.8	8.3	8.4
3	---	8.2	---	8.8	8.3	8.6	8.8	7.9	8.3	8.7	8.3	8.5
4	---	8.0	---	8.8	8.1	8.4	8.7	7.8	8.0	8.7	8.0	8.4
5	8.4	8.0	8.2	9.0	8.4	8.7	8.8	7.8	8.2	8.8	7.9	8.4
6	8.6	8.2	8.3	9.0	8.4	8.7	8.5	7.8	8.0	8.9	8.3	8.5
7	8.8	8.3	8.5	9.0	8.3	8.8	9.0	7.6	---	8.9	8.2	8.6
8	8.8	8.4	8.6	9.0	8.3	8.8	9.1	8.1	8.7	8.9	8.3	8.5
9	8.7	8.3	8.5	9.1	8.3	8.7	9.0	8.1	8.5	8.8	8.3	8.5
10	8.7	8.1	8.4	9.0	8.2	8.7	9.0	8.2	8.6	8.9	8.2	8.6
11	8.9	8.0	8.5	9.2	8.2	8.7	9.2	8.2	8.7	8.9	8.3	---
12	8.0	7.2	7.7	9.2	8.4	8.8	9.2	7.8	8.5	8.9	---	---
13	8.0	7.7	7.8	9.0	8.4	8.8	8.2	7.8	8.1	8.9	---	---
14	8.4	7.9	8.1	8.9	8.4	8.6	8.0	8.0	8.0	8.9	8.4	8.5
15	8.5	7.4	8.2	9.3	8.4	8.7	---	---	---	8.9	8.4	8.6
16	7.9	7.6	7.8	9.3	8.6	9.0	8.8	8.0	8.0	8.9	8.1	8.6
17	8.2	7.9	8.0	9.3	8.6	8.9	9.2	8.5	8.8	8.9	8.4	8.6
18	8.6	8.1	8.3	9.2	8.3	8.7	9.2	8.6	8.8	8.9	8.4	8.6
19	8.8	8.3	8.4	8.9	8.2	8.4	9.1	8.3	8.7	8.8	8.4	8.6
20	8.9	8.4	8.6	8.8	8.1	8.5	9.0	8.1	8.5	8.8	8.4	8.6
21	8.8	8.3	8.6	8.8	8.0	8.3	8.7	7.9	8.2	8.8	8.4	8.6
22	8.8	8.1	8.6	8.8	8.0	8.3	9.0	7.8	8.2	8.8	8.4	8.6
23	8.7	8.0	8.4	8.8	8.0	8.4	8.9	8.1	8.3	8.8	---	---
24	8.6	7.9	8.2	8.7	7.8	8.2	8.2	8.0	8.1	8.8	8.3	8.5
25	8.7	---	---	8.7	7.9	8.3	8.1	7.9	7.9	8.8	8.3	8.5
26	8.8	8.1	8.5	8.7	8.0	8.2	8.6	8.0	8.1	8.7	8.2	8.4
27	8.8	8.3	8.5	8.6	7.8	8.1	8.9	8.2	8.5	8.7	8.2	8.4
28	8.7	8.2	8.4	8.7	7.8	8.0	9.0	8.3	8.6	8.6	8.2	8.4
29	8.7	8.1	8.4	8.8	7.8	8.2	9.0	8.3	8.6	8.4	8.1	8.2
30	8.8	8.1	8.4	8.8	7.9	8.2	8.9	8.3	8.6	8.5	8.1	8.2
31	---	---	---	8.9	8.0	8.3	8.9	8.3	8.6	---	---	---
MAX	---	---	---	9.3	8.6	9.0	---	---	---	8.9	---	---
MIN	---	---	---	8.6	7.8	8.0	---	---	---	8.4	---	---

WATER TEMPERATURE FROM DCP, in (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	25.0	14.1	19.2	18.9	13.2	15.6	7.3	0.7	3.5	0.2	0.0	0.0
2	23.1	14.6	18.5	18.8	10.7	14.5	8.8	1.1	4.9	0.1	0.0	0.0
3	24.7	14.3	19.0	20.0	14.2	16.2	13.0	4.5	8.7	0.2	0.0	0.0
4	25.2	15.5	19.6	21.2	13.8	16.8	16.4	10.9	13.7	0.2	0.0	0.0
5	18.2	11.8	14.8	20.5	12.2	16.2	16.4	9.0	14.3	0.5	0.0	0.1
6	19.4	9.4	14.1	20.4	13.4	16.6	11.3	5.2	8.1	0.4	-0.1	0.0
7	19.6	10.7	14.6	19.5	13.0	15.8	10.1	3.9	6.8	0.4	-0.1	0.0
8	21.9	11.3	16.2	14.6	7.7	10.9	7.8	2.4	4.9	4.3	0.0	1.0
9	21.2	16.5	18.4	12.8	4.1	8.4	6.9	0.5	3.6	5.5	1.8	3.9
10	---	14.9	---	15.2	6.0	10.3	7.1	0.9	3.9	7.1	3.3	4.8
11	---	---	---	15.8	7.0	11.4	7.2	1.8	4.7	6.8	0.0	3.5
12	17.9	---	---	15.1	12.3	13.8	7.8	6.1	6.9	7.4	1.8	4.5
13	19.3	10.7	14.5	16.3	14.4	15.1	6.4	4.6	5.3	8.3	2.3	4.8
14	19.2	10.3	14.3	17.6	14.5	15.8	7.5	2.8	4.7	6.5	1.4	3.9
15	15.2	7.5	11.7	18.8	11.8	14.9	8.4	2.9	5.8	3.9	0.0	2.0
16	17.1	6.2	11.6	17.3	11.6	14.3	8.2	5.3	7.2	4.0	1.5	2.7
17	17.4	8.2	12.5	16.4	12.8	14.4	7.8	2.0	4.9	4.6	0.9	2.3
18	17.3	9.6	12.9	16.3	11.9	14.4	8.6	2.4	5.0	0.9	0.0	0.0
19	18.7	8.4	13.5	11.9	6.0	9.0	5.6	0.6	3.1	4.4	0.0	1.3
20	20.1	9.6	15.4	9.4	2.4	5.9	6.2	0.2	3.1	5.7	-0.1	2.1
21	23.4	14.4	18.8	10.9	4.5	7.6	7.2	1.4	4.2	6.3	0.0	2.7
22	19.6	14.0	17.5	12.5	5.6	9.1	6.8	2.2	5.1	8.4	1.1	4.5
23	21.8	12.6	16.8	15.7	10.4	12.7	3.0	0.0	1.1	5.7	2.4	4.1
24	17.6	8.8	13.2	12.1	6.5	9.1	1.4	-0.1	0.3	6.1	0.1	2.7
25	---	---	---	9.4	4.2	6.8	0.7	-0.1	0.1	6.8	0.0	2.8
26	15.4	---	---	9.0	2.6	7.1	0.0	0.0	0.0	8.9	1.1	4.8
27	14.4	5.7	9.8	3.3	0.0	1.4	2.1	0.0	0.5	9.1	2.6	5.9
28	17.2	7.9	12.2	0.6	-0.1	0.0	2.8	-0.1	1.0	6.5	1.9	3.9
29	19.4	10.8	14.8	0.8	-0.1	0.1	0.4	-0.1	0.0	3.1	0.0	1.3
30	18.1	12.2	15.0	4.9	0.0	1.8	0.0	0.0	0.0	0.0	-0.2	---
31	18.2	11.8	14.7	---	---	---	0.0	0.0	0.0	0.0	-0.2	---
MONTH	---	---	---	21.2	-0.1	10.9	16.4	-0.1	4.4	9.1	-0.2	---

07144780 NORTH FORK NINNESCAH RIVER ABOVE CHENEY RESERVOIR, KS--Continued

WATER TEMPERATURE FROM DCP, in (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	0.0	-0.2	0.0	2.8	0.0	1.5	22.7	9.9	16.0	21.4	14.2	18.7
2	0.0	0.0	0.0	0.0	-0.2	---	17.4	7.3	12.4	22.2	10.6	15.7
3	0.2	0.0	0.0	0.3	0.0	0.0	14.5	2.6	8.1	24.5	12.0	17.8
4	0.3	0.0	0.0	0.4	0.0	0.0	15.8	5.3	9.9	26.4	14.5	19.8
5	---	0.0	---	8.5	0.0	2.8	18.9	6.2	12.2	26.2	16.4	21.2
6	---	---	---	10.6	1.6	5.6	13.0	9.5	10.5	31.6	19.5	24.7
7	---	---	---	9.2	3.1	6.1	11.4	8.9	10.0	26.9	21.2	23.8
8	---	---	---	11.6	4.6	8.1	12.9	10.8	11.5	30.3	17.8	22.7
9	---	---	---	7.9	0.0	3.5	20.5	7.7	13.5	25.1	13.6	19.0
10	---	---	---	9.9	1.1	5.2	22.3	11.4	16.5	20.5	14.2	17.2
11	---	---	---	10.9	2.8	6.6	23.0	14.7	18.2	27.4	15.9	20.7
12	---	---	---	13.6	3.3	8.4	23.2	14.3	18.3	19.7	13.6	16.1
13	---	---	---	16.7	6.4	11.4	19.3	13.7	16.1	21.5	11.8	16.3
14	---	---	---	16.0	8.2	11.9	25.6	13.6	19.1	23.4	15.3	19.3
15	9.6	---	---	12.6	3.5	7.9	27.1	17.1	21.6	24.9	15.5	19.9
16	11.0	2.8	6.7	10.2	3.8	6.9	26.0	18.3	21.7	24.1	17.8	20.8
17	11.4	3.8	7.4	15.9	4.6	9.8	27.6	15.9	21.5	23.4	15.3	19.2
18	9.4	5.4	7.4	12.7	8.0	10.5	29.6	19.4	23.4	24.6	13.9	19.0
19	11.1	6.8	9.2	11.1	7.2	9.6	23.0	14.2	17.8	22.2	16.2	19.3
20	11.3	3.9	7.4	16.7	5.3	10.4	14.2	11.6	12.2	24.3	15.6	19.4
21	11.5	4.5	8.0	11.3	3.2	6.7	20.1	9.8	14.6	25.8	15.7	20.3
22	12.1	3.4	7.6	11.2	0.1	5.3	21.8	12.6	17.1	21.8	15.3	18.7
23	12.6	5.0	8.7	13.4	2.7	7.8	21.3	15.0	18.2	22.9	17.2	19.4
24	12.9	5.9	9.1	10.1	4.7	8.3	21.4	15.3	18.6	17.9	12.2	14.6
25	5.9	0.0	2.3	4.7	1.2	2.8	20.0	10.8	15.2	25.8	10.2	17.4
26	---	-0.2	---	12.8	-0.1	5.8	14.4	10.6	12.0	27.6	16.1	21.7
27	---	-0.1	---	16.5	4.4	10.1	22.2	10.3	15.5	25.9	18.4	22.4
28	7.2	0.0	2.2	20.5	7.9	13.8	23.5	11.8	17.4	29.5	20.3	24.3
29	---	---	---	19.0	10.4	14.8	24.1	13.8	19.1	31.9	19.9	25.4
30	---	---	---	18.3	9.5	13.8	26.9	16.2	20.9	33.8	21.6	26.9
31	---	---	---	19.9	8.5	13.8	---	---	---	33.9	22.4	27.6
MONTH	---	---	---	20.5	-0.2	---	29.6	2.6	16.0	33.9	10.2	20.3

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	32.5	21.4	26.5	25.8	21.1	23.2	38.5	24.1	29.5	31.4	22.4	26.5
2	31.6	21.0	26.0	27.5	21.6	23.6	35.2	21.1	27.1	33.7	21.8	27.1
3	---	20.5	---	30.6	22.0	26.0	35.1	24.4	29.0	33.9	22.0	27.5
4	---	---	---	32.4	23.3	27.4	35.0	23.7	28.4	33.4	22.8	27.6
5	23.4	16.9	19.4	31.4	22.9	26.8	34.4	23.4	27.8	32.9	22.6	27.3
6	29.8	17.2	23.0	31.5	23.0	27.3	32.6	22.4	27.4	33.4	23.0	27.6
7	31.5	19.2	24.9	34.9	23.4	28.6	36.6	23.5	---	32.9	22.5	26.8
8	31.2	21.2	25.9	35.9	23.7	29.6	37.1	23.3	---	31.2	21.5	25.5
9	32.5	22.7	26.7	38.0	24.8	30.2	30.9	22.8	---	27.9	20.6	23.9
10	32.3	23.1	26.9	37.7	25.1	30.7	32.1	22.6	25.9	30.9	22.4	25.4
11	32.8	20.9	26.5	34.8	24.5	28.6	34.2	21.9	26.8	28.4	---	---
12	28.2	20.6	23.9	29.9	22.7	25.9	32.6	21.0	25.7	---	---	---
13	27.6	23.7	25.3	29.4	21.3	25.1	22.2	17.9	20.2	24.7	---	---
14	28.6	21.1	24.7	33.0	20.9	26.1	26.3	19.4	22.5	23.3	19.7	21.2
15	25.3	17.6	21.6	34.2	21.9	27.5	---	---	---	27.1	16.2	21.2
16	25.5	17.2	20.8	35.4	22.8	28.3	29.6	24.3	---	27.8	15.5	21.0
17	28.3	20.9	24.4	34.7	22.6	27.9	27.0	---	---	28.0	17.5	22.4
18	27.4	21.5	24.1	36.2	23.8	29.0	31.3	21.6	---	29.9	19.8	23.9
19	29.5	20.7	24.7	36.5	24.2	29.5	34.3	23.1	28.2	22.5	---	---
20	27.1	21.8	24.4	36.7	24.7	29.4	32.2	24.5	27.6	26.1	13.9	---
21	32.0	22.2	26.5	34.8	23.4	27.6	31.5	23.0	26.6	28.7	15.7	---
22	31.8	22.8	26.9	31.4	23.8	27.7	33.1	23.1	27.5	25.9	14.4	19.3
23	31.8	21.4	26.1	34.6	22.3	27.7	35.5	23.7	28.7	26.8	13.3	19.4
24	32.1	21.7	26.4	37.1	22.9	28.9	29.4	22.7	26.1	24.7	14.4	19.1
25	33.7	22.2	27.3	36.3	23.1	29.1	31.6	23.4	27.4	25.2	14.2	19.1
26	33.3	23.3	27.4	34.3	23.9	28.1	---	---	---	27.4	15.3	20.3
27	36.1	22.9	28.8	36.8	22.8	28.4	31.9	23.5	27.5	24.8	14.8	18.6
28	35.8	24.3	29.4	34.7	24.0	27.6	33.2	23.0	27.7	---	15.8	---
29	34.5	23.7	28.5	35.3	22.2	27.6	32.0	24.1	27.7	26.6	17.3	21.2
30	32.8	23.2	27.2	36.0	22.6	28.4	31.2	23.0	26.5	27.6	18.0	22.0
31	---	---	---	36.6	23.9	29.3	31.9	22.1	26.3	---	---	---
MONTH	---	---	---	38.0	20.9	27.8	---	---	---	---	---	---

07144780 NORTH FORK NINNESCAH RIVER ABOVE CHENEY RESERVOIR, KS--Continued

OXYGEN DISSOLVED FROM DCP, in (MG/L), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	10.5	7.7	9.1	9.9	7.7	8.7	12.8	10.9	11.9	14.8	14.3	14.6
2	10.2	7.9	8.9	10.5	8.1	9.1	12.7	10.4	11.5	15.1	14.4	14.8
3	10.2	7.4	8.9	10.4	8.0	8.9	11.3	9.4	10.5	15.1	14.2	14.7
4	10.3	7.6	8.9	10.2	7.4	8.6	9.8	8.5	9.2	14.6	14.2	14.4
5	10.8	8.4	9.8	10.2	7.9	8.9	9.8	8.5	8.9	14.5	12.7	13.9
6	11.4	8.9	10.2	9.8	7.7	8.7	11.4	9.8	10.6	---	---	e13.8
7	11.0	8.8	9.9	10.2	8.2	9.0	12.0	10.3	11.1	14.3	12.6	13.7
8	10.8	8.2	9.6	11.6	8.6	10.5	12.6	10.9	11.7	14.8	11.9	13.3
9	10.1	7.8	8.6	13.0	10.4	11.6	13.2	11.3	12.2	13.1	11.9	12.4
10	---	---	e8.7	12.7	9.6	11.0	13.1	11.2	12.0	12.6	11.8	12.2
11	---	---	e8.9	12.7	9.6	10.8	12.8	11.0	11.8	14.0	11.8	12.8
12	---	---	e9.1	11.1	9.1	10	11.3	10.7	11.0	13.3	11.7	12.4
13	10.5	8.5	9.5	10.4	9.1	9.5	12.1	11.0	11.6	13.0	11.3	12.2
14	10.7	8.6	9.6	10.1	9.0	9.4	12.5	11.2	11.9	13.4	11.7	12.5
15	10.8	9.4	10.1	10.8	8.8	9.7	12.5	10.7	11.6	14.2	12.5	13.4
16	11.7	9.2	10.4	10.9	9.1	9.8	11.6	10.8	11.1	---	---	e12.3
17	11.1	9.0	10	---	---	e9.7	13.0	11.2	12.0	11.8	10.9	11.4
18	10.8	9.0	9.9	10.3	9.2	9.7	12.8	11.2	12.0	12.2	11.5	11.9
19	11.2	8.7	9.9	12.0	9.9	11.2	13.8	11.9	12.8	11.9	10.8	11.4
20	10.9	8.2	9.5	13.2	11.1	12.1	14.3	12.2	13.1	11.8	10.3	11.1
21	10.0	7.5	8.7	12.4	10.1	11.2	13.4	11.5	12.6	11.8	10.2	11.0
22	10.0	7.8	8.7	11.3	9.5	10.4	13.0	11.4	12.1	11.3	9.5	10.5
23	10.7	8.0	8.9	9.8	8.8	9.3	14.5	13.0	13.8	11.1	9.8	10.6
24	10.6	8.2	9.5	10.5	9.0	10.0	14.5	13.9	14.2	12.0	10.5	11.2
25	---	---	e9.7	11.6	10.1	10.9	14.6	13.8	14.3	12.0	10.2	11.2
26	10.8	8.9	9.8	11.7	10.1	10.7	14.6	13.8	14.3	11.5	9.6	10.5
27	11.0	8.8	9.9	13.1	11.7	12.6	14.4	13.0	13.8	11.0	9.3	10.2
28	10.5	8.0	9.3	13.2	12.7	13.1	14.5	13.2	13.9	11.4	9.6	10.7
29	10.3	7.7	9.0	13.1	12.5	12.8	14.8	14.1	14.5	11.9	10.7	11.5
30	10.2	7.9	8.9	12.9	11.5	12.4	14.9	14.4	14.6	13.4	11.7	12.3
31	10.1	7.9	8.8	---	---	---	15.1	14.2	14.7	12.1	9.2	10.4
MONTH	---	---	9.4	---	---	10.3	15.1	8.5	12.3	---	---	12.2

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	e10.1	14.7	13.4	14.1	11.1	8.1	9.7	11.2	7.4	9.2
2	---	---	e11.0	15.6	12.8	14.2	11.9	8.2	10.4	11.4	8.4	10.0
3	11.8	11.0	11.4	15.0	14.1	14.7	13.7	10.5	12.1	10.8	8.1	9.6
4	---	---	e11.9	15.0	13.8	14.5	13.0	10.0	11.5	10.5	7.7	9.2
5	---	---	e11.1	14.9	12.3	13.8	12.7	9.2	11.0	10.3	7.6	8.9
6	---	---	---	13.8	11.1	12.6	12.0	9.7	11.0	10.0	6.8	8.6
7	---	---	---	13.4	11.0	12.4	11.9	10.1	11.1	9.8	6.9	8.4
8	---	---	---	12.3	10.6	11.5	11.3	10.1	10.5	10.1	7.6	8.8
9	---	---	---	15.0	12.3	13.5	11.9	8.7	10.5	10.9	7.9	9.5
10	---	---	---	14.4	11.5	12.9	10.8	8.4	9.5	11.0	8.0	9.5
11	---	---	---	13.4	11.0	12.3	10.5	7.8	9.1	9.9	7.1	8.9
12	---	---	---	13.3	10.2	11.7	10.4	8.0	9.0	8.6	5.8	7.3
13	---	---	---	12.1	9.3	10.7	10.6	8.1	9.4	9.6	7.6	8.7
14	---	---	---	11.2	9.6	10.4	10.4	7.4	9.0	9.1	7.7	8.4
15	---	---	e12.2	13.3	11.0	12.0	9.5	7.4	8.3	9.4	7.4	8.5
16	13.6	11.6	12.5	13.4	11.3	12.3	9.3	7.6	8.3	9.6	7.5	8.7
17	13.5	11.3	12.2	12.8	9.8	11.4	10.0	7.2	8.6	9.9	8.1	9.2
18	12.9	11.2	12.1	11.9	10.0	10.8	9.6	7.1	8.4	10.4	7.8	9.2
19	11.7	11.1	11.3	11.8	10.1	11.0	10.8	7.1	9.1	10.0	7.8	9.0
20	13.1	10.9	12.0	12.8	9.8	11.4	11.1	9.4	10.3	10.0	8.0	9.0
21	13.0	11.2	12.0	13.7	10.1	12.4	11.0	8.1	9.9	10.0	7.9	8.9
22	13.5	11.3	12.3	14.9	11.4	13.1	9.7	7.9	8.9	9.8	8.0	9.0
23	13.0	11.0	12.0	13.7	10.3	12.0	10.0	8.0	9.0	9.7	8.0	8.8
24	12.4	11.2	11.7	12.5	10.5	11.6	10.2	8.0	9.2	10.3	8.1	9.4
25	15.4	12.4	14.3	14.4	12.5	13.8	11.3	---	e10.1	10.6	7.3	9.3
26	16.3	12.6	e14.8	14.8	10.3	12.8	11.1	8.0	9.9	9.6	7.0	8.4
27	16.3	14.2	14.9	12.5	9.3	10.8	10.1	8.0	9.5	9.2	7.1	8.2
28	15.1	12.7	14.0	11.4	8.3	9.9	10.6	8.1	9.3	9.2	6.7	8.0
29	---	---	---	11.0	8.6	9.7	10.3	7.8	9.2	9.1	6.2	7.8
30	---	---	---	11.6	9.1	10.2	10.5	7.4	9.1	8.7	5.2	7.2
31	---	---	---	11.9	8.9	10.4	---	---	---	7.8	5.2	6.5
MONTH	---	---	---	15.6	8.3	12.1	13.7	---	9.7	11.4	5.2	8.7

07144780 NORTH FORK NINNESCAH RIVER ABOVE CHENEY RESERVOIR, KS--Continued

OXYGEN DISSOLVED FROM DCP, in (MG/L), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	10.0	5.4	8.0	---	---	e8.3	9.6	4.5	6.9	10.1	6.8	8.5
2	10.0	6.6	8.3	9.8	7.2	8.5	9.0	4.7	7.4	9.3	5.2	7.7
3	---	---	e7.9	10.1	6.5	8.4	7.9	4.6	6.2	8.5	5.7	6.9
4	---	---	e7.9	8.4	6.5	7.4	---	---	e6.3	7.8	5.6	e6.6
5	8.9	7.6	8.4	9.7	6.6	8.3	---	---	e6.5	---	---	e8.0
6	9.0	7.0	8.2	10.5	6.6	8.7	9.4	3.3	6.8	9.5	6.8	8.0
7	9.2	7.0	8.3	10.3	6.3	8.5	9.8	3.9	7.0	9.8	6.7	8.1
8	9.7	7.0	8.4	10.2	6.3	8.5	10.3	6.6	8.5	9.2	6.9	8.0
9	10.7	6.7	8.6	9.9	6.0	7.9	10.2	6.7	8.0	10.1	7.4	8.7
10	10.5	6.4	8.2	9.2	5.5	7.5	11.0	7.1	8.8	10.6	6.9	8.7
11	11.4	6.3	8.7	10.4	5.6	7.7	10.8	7.0	8.8	---	---	e8.2
12	7.7	5.3	6.0	9.6	6.5	8.2	11.5	6.5	8.9	---	---	e8.8
13	7.0	5.5	6.4	8.9	5.3	7.5	8.3	6.3	7.1	---	---	e9.5
14	8.7	6.5	7.7	8.3	5.0	6.4	8.1	6.5	7.5	11.1	7.9	9.2
15	9.9	6.9	8.2	9.3	5.1	6.6	---	---	e7.6	11.1	8.1	9.6
16	7.6	6.8	7.3	9.8	7.1	8.5	10.1	4.5	7.8	11.6	8.1	9.8
17	8.3	6.8	7.5	10.1	6.8	8.6	12.7	7.8	10.0	11.4	7.9	9.5
18	10.0	6.9	8.3	9.9	6.1	8.3	14.6	7.7	11.1	---	7.7	e8.5
19	11.0	7.2	8.9	9.0	6.3	7.8	14.9	7.4	10.7	11.2	8.0	9.7
20	12.6	7.2	9.6	9.1	6.7	7.9	13.6	7.4	10.3	11.9	8.5	10.2
21	13.8	7.0	10.1	8.9	6.3	7.7	12.9	7.5	10.0	11.5	8.4	9.8
22	13.9	7.0	10.1	9.1	6.4	7.8	12.6	6.6	9.6	11.9	8.8	10.4
23	12.8	6.7	9.7	9.8	6.2	8.1	11.6	5.7	8.7	12.3	8.6	10.5
24	12.1	6.0	9.1	9.6	5.1	7.5	8.5	4.9	6.4	12.4	8.7	10.5
25	10.2	6.0	7.8	9.1	6.4	7.7	7.2	4.2	5.6	12.2	8.7	10.2
26	10.5	5.9	7.9	9.0	6.5	7.7	---	---	---	12.5	8.5	10.2
27	9.1	5.8	7.5	8.8	5.4	7.4	9.9	6.7	8.1	12.8	8.7	10.5
28	---	---	---	8.5	4.9	6.8	11.0	6.6	8.6	11.9	8.3	10.0
29	---	---	---	8.2	3.9	5.8	11.8	6.6	8.9	11.5	8.4	9.7
30	---	---	---	7.7	3.7	5.8	11.6	6.9	9.1	11.0	8.0	9.4
31	---	---	---	8.4	4.1	6.2	11.2	6.9	9.0	---	---	---
MONTH	---	---	---	---	---	7.7	---	---	---	---	---	9.1

e Estimated

TURBIDITY, FIELD FROM YSI 6026, in (NTU), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	22	17	19	49	28	36	29	12	18
2	---	---	---	25	14	18	54	26	37	20	9.9	14
3	---	---	---	39	16	20	38	25	30	26	7.6	15
4	---	---	---	26	15	21	44	31	39	19	9.9	14
5	---	---	---	54	17	22	53	35	43	---	---	e25
6	---	---	---	27	16	21	42	21	26	---	---	e40
7	---	---	---	28	13	20	27	18	21	---	---	e42
8	---	---	---	27	12	17	24	18	21	---	---	e35
9	---	---	---	26	11	14	25	20	22	58	26	38
10	---	---	---	30	12	17	26	19	22	60	22	36
11	---	---	---	50	16	26	24	18	22	49	24	32
12	---	---	e33	42	18	31	24	20	22	44	20	30
13	38	20	29	60	20	35	25	19	22	41	23	28
14	37	14	26	51	24	34	26	21	23	39	22	29
15	35	24	29	42	14	29	28	22	25	---	---	e26
16	60	19	31	29	13	19	30	21	25	---	---	e23
17	60	26	35	---	---	e22	26	22	23	24	21	22
18	69	51	60	68	26	37	30	21	24	27	14	23
19	82	56	66	---	---	e32	27	21	24	33	22	28
20	---	---	e71	20	12	16	26	19	22	38	12	27
21	---	---	e72	25	10	18	33	20	24	37	17	27
22	---	---	e70	29	17	22	31	21	26	37	20	25
23	---	---	e36	34	24	29	30	13	23	30	17	21
24	---	---	e28	39	23	29	42	13	25	25	15	19
25	---	---	e22	26	18	22	43	11	26	24	14	20
26	---	---	e17	31	20	23	41	11	23	22	17	19
27	22	14	17	35	11	24	---	---	e25	19	14	17
28	22	14	18	38	11	19	42	15	30	64	14	30
29	26	17	21	51	8.1	24	37	9.2	21	36	12	20
30	29	17	21	54	12	30	16	9.2	13	---	---	---
31	25	17	19	---	---	---	23	7.4	14	---	---	---
MONTH	---	---	---	---	---	24	---	---	25	---	---	---

07144780 NORTH FORK NINNESCAH RIVER ABOVE CHENEY RESERVOIR, KS--Continued

TURBIDITY, FIELD FROM YSI 6026, in (NTU), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	70	14	45	23	16	20	47	31	42
2	---	---	---	---	---	e20	32	14	20	37	22	29
3	---	---	e31	36	15	25	14	11	12	35	23	28
4	---	---	e28	61	14	35	36	11	16	33	22	27
5	---	---	e36	140	16	79	17	11	13	39	24	28
6	---	---	---	130	48	68	16	11	13	42	25	33
7	---	---	---	50	37	41	16	11	13	55	28	36
8	---	---	---	100	32	46	72	13	27	57	41	49
9	---	---	---	110	47	65	63	27	40	71	36	51
10	---	---	---	48	35	40	89	26	39	65	38	49
11	---	---	---	36	28	30	59	25	29	1400	38	140
12	---	---	---	34	24	28	32	23	27	1100	350	610
13	---	---	---	30	23	27	27	19	24	410	140	250
14	---	---	---	32	25	28	66	26	44	140	73	100
15	---	---	e35	25	18	21	63	46	54	74	57	65
16	40	29	33	19	16	17	82	42	52	63	52	58
17	37	28	32	28	15	19	61	35	44	64	55	59
18	34	26	29	26	18	20	140	44	57	64	52	58
19	37	28	32	29	17	20	190	29	61	58	42	49
20	29	24	26	23	17	20	270	25	68	45	35	40
21	33	24	26	36	21	24	540	51	180	41	31	36
22	29	22	25	---	---	e23	460	150	260	35	28	32
23	26	21	24	37	14	23	290	96	140	34	24	29
24	42	24	28	---	---	e20	200	81	100	32	18	24
25	42	18	30	---	---	e20	---	---	e70	32	18	24
26	---	---	e19	---	---	e19	---	---	e50	49	25	34
27	---	---	e37	22	16	19	140	32	62	46	29	36
28	85	13	45	25	17	20	58	42	50	49	33	38
29	---	---	---	24	17	21	50	33	40	42	33	38
30	---	---	---	21	15	17	51	39	47	50	33	40
31	---	---	---	21	14	17	---	---	---	58	36	44
MONTH	---	---	---	---	---	30	---	---	56	1400	18	70

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	59	31	43	---	---	e37	42	18	24	51	34	43
2	62	30	43	51	32	39	62	14	22	40	28	33
3	---	---	e31	300	46	96	61	25	36	41	23	29
4	---	---	e230	360	130	240	33	14	23	30	13	23
5	170	110	140	130	82	98	22	12	16	34	9.2	17
6	130	69	100	94	68	78	17	9.4	13	78	12	27
7	87	44	63	80	54	64	40	8.5	16	36	16	22
8	66	41	52	78	45	57	30	18	23	20	14	16
9	58	33	45	68	29	50	23	16	19	23	12	15
10	68	32	48	41	22	30	26	15	19	21	11	14
11	1400	31	110	84	26	48	49	15	25	14	7.6	9.8
12	1400	350	600	72	41	52	>1700	17	>90	---	---	e13
13	360	230	260	41	23	31	>1700	700	>1000	---	---	e18
14	230	130	180	38	20	29	740	310	460	---	---	e22
15	930	110	240	47	20	32	---	---	---	---	---	e25
16	1100	200	370	52	26	35	>1700	82	>880	---	---	e21
17	200	130	170	78	26	43	110	---	94	23	14	18
18	130	110	120	78	31	47	260	76	96	22	14	17
19	110	84	99	91	35	56	95	64	75	19	9.3	14
20	95	72	82	---	---	e43	530	62	120	24	9.3	13
21	100	69	82	38	17	26	>1700	530	>1100	17	8.0	13
22	110	73	85	65	15	28	>1700	1600	>1700	18	9.0	12
23	98	61	76	55	23	35	>1700	1500	>1700	14	8.4	11
24	---	---	e71	---	---	e38	>1700	480	>1100	12	7.7	9.6
25	---	---	e62	---	---	e28	750	390	490	10	5.7	7.8
26	90	48	56	---	---	e30	1000	220	520	12	7.3	9.0
27	65	40	51	---	---	e30	220	140	180	9.9	5.3	7.2
28	---	44	e53	---	---	e30	140	99	120	13	6.6	9.4
29	---	---	e45	---	---	e30	100	74	91	15	8.0	10
30	---	---	e40	---	---	e35	77	56	68	11	7.2	9.6
31	---	---	---	42	21	28	62	47	52	---	---	---
MONTH	---	---	120	---	---	50	---	---	---	---	---	17

> Actual value is known to be greater than the value shown

e Estimated

07144790 CHENEY RESERVOIR NEAR CHENEY, KS

LOCATION.--Lat 37°43'34", long 97°47'38", in NW $^1/_4$ NE $^1/_4$ SE $^1/_4$ sec.6, T.27 S., R.4 W., Sedgwick County, Hydrologic Unit 11030014, in control house structure at outlet works of Cheney Dam on North Fork Ninnescah River, 6.0 mi north of Cheney, and at mile 15.9.

WATER-DISCHARGE RECORDS

DRAINAGE AREA.--901 mi^2, of which 237 mi^2 is probably noncontributing.

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

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929 (levels by Bureau of Reclamation).

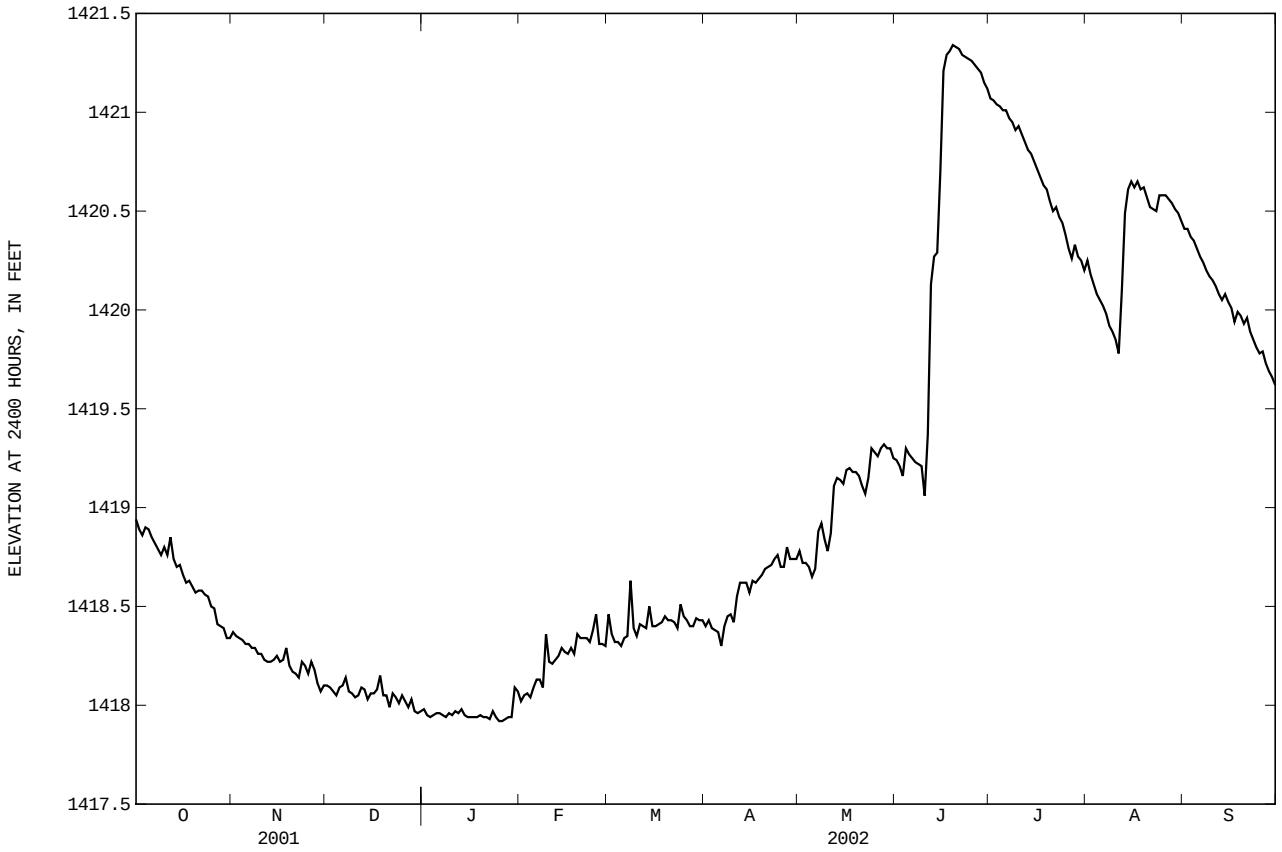
REMARKS.--Reservoir is formed by compacted earthfill dam. Storage began Nov. 17, 1964. Conservation pool elevation was first reached on Nov. 2, 1969. Total capacity, 566,300 acre-ft, consisting of the following: Dead storage, 979 acre-ft below elevation 1,378.5 ft; fish and wildlife storage, 14,310 acre-ft between elevations 1,378.5 ft and 1,392.9 ft; conservation pool, 151,800 acre-ft between elevations 1,392.9 ft and 1,421.6 ft; flood-control pool, 80,860 acre-ft between elevations 1,421.6 ft and 1,429.0 ft, crest of uncontrolled spillway; and uncontrolled storage, 318,300 acre-ft between elevations 1,429.0 ft and 1,447.8 ft. 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. Satellite telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 1,429.40 ft June 11, 1995, contents, 252,980 acre-ft; minimum elevation since conservation pool was first reached, 1,412.33 ft Dec. 2-4, 1971, contents, 93,300 acre-ft.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 1,421.35 ft June 18, contents, 164,700 acre-ft; minimum elevation, 1,417.89 ft Jan. 27, contents, 134,070 acre-ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey by Bureau of Reclamation computed in 1965)

1,417	126,800	1,420	152,200
1,418	135,000	1,421	161,400
1,419	143,400	1,422	170,900



07144790 CHENEY RESERVOIR NEAR CHENEY, KS--Continued

ELEVATION, in FT (NGVD), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1418.94	1418.37	1418.10	1417.98	1418.02	1418.46	1418.40	1418.78	1419.24	1421.07	1420.25	1420.41
2	1418.89	1418.35	1418.09	1417.95	1418.05	1418.36	1418.43	1418.72	1419.21	1421.06	1420.18	1420.41
3	1418.86	1418.34	1418.07	1417.94	1418.06	1418.32	1418.39	1418.72	1419.16	1421.04	1420.13	1420.37
4	1418.90	1418.33	1418.05	1417.95	1418.04	1418.32	1418.38	1418.70	1419.30	1421.03	1420.08	1420.35
5	1418.89	1418.31	1418.09	1417.96	1418.09	1418.30	1418.37	1418.65	1419.27	1421.01	1420.05	1420.31
6	1418.85	1418.31	1418.10	1417.96	1418.13	1418.34	1418.30	1418.69	1419.25	1421.01	1420.02	1420.27
7	1418.82	1418.29	1418.14	1417.95	1418.13	1418.35	1418.40	1418.88	1419.23	1420.97	1419.98	1420.24
8	1418.79	1418.29	1418.07	1417.94	1418.09	1418.63	1418.45	1418.92	1419.22	1420.95	1419.92	1420.20
9	1418.76	1418.26	1418.06	1417.96	1418.36	1418.39	1418.46	1418.84	1419.21	1420.91	1419.89	1420.17
10	1418.80	1418.26	1418.04	1417.95	1418.22	1418.35	1418.42	1418.78	1419.06	1420.93	1419.85	1420.15
11	1418.76	1418.23	1418.05	1417.97	1418.21	1418.41	1418.55	1418.87	1419.37	1420.89	1419.78	1420.12
12	1418.85	1418.22	1418.09	1417.96	1418.23	1418.40	1418.62	1419.11	1420.13	1420.85	1420.10	1420.08
13	1418.74	1418.22	1418.08	1417.98	1418.25	1418.39	1418.62	1419.15	1420.27	1420.81	1420.49	1420.05
14	1418.70	1418.23	1418.03	1417.95	1418.29	1418.50	1418.62	1419.14	1420.29	1420.79	1420.61	1420.08
15	1418.71	1418.25	1418.06	1417.94	1418.27	1418.40	1418.57	1419.12	1420.70	1420.75	1420.65	1420.04
16	1418.66	1418.22	1418.06	1417.94	1418.26	1418.40	1418.63	1419.19	1421.21	1420.71	1420.62	1420.01
17	1418.62	1418.23	1418.08	1417.94	1418.29	1418.41	1418.62	1419.20	1421.29	1420.67	1420.65	1419.94
18	1418.63	1418.29	1418.15	1417.94	1418.26	1418.42	1418.64	1419.18	1421.31	1420.63	1420.61	1419.99
19	1418.60	1418.20	1418.05	1417.95	1418.36	1418.45	1418.66	1419.18	1421.34	1420.61	1420.62	1419.97
20	1418.57	1418.17	1418.05	1417.94	1418.34	1418.43	1418.69	1419.16	1421.33	1420.55	1420.57	1419.93
21	1418.58	1418.16	1417.99	1417.94	1418.34	1418.43	1418.70	1419.11	1421.32	1420.50	1420.52	1419.96
22	1418.58	1418.14	1418.06	1417.93	1418.34	1418.42	1418.71	1419.07	1421.29	1420.52	1420.51	1419.89
23	1418.56	1418.22	1418.04	1417.97	1418.32	1418.39	1418.74	1419.15	1421.28	1420.47	1420.50	1419.85
24	1418.55	1418.20	1418.01	1417.94	1418.38	1418.51	1418.76	1419.30	1421.27	1420.44	1420.58	1419.81
25	1418.50	1418.16	1418.05	1417.92	1418.46	1418.45	1418.70	1419.28	1421.26	1420.38	1420.58	1419.78
26	1418.49	1418.22	1418.02	1417.92	1418.31	1418.43	1418.70	1419.26	1421.24	1420.31	1420.58	1419.79
27	1418.41	1418.18	1417.99	1417.93	1418.31	1418.40	1418.80	1419.30	1421.22	1420.26	1420.56	1419.73
28	1418.40	1418.11	1418.03	1417.94	1418.30	1418.40	1418.74	1419.32	1421.20	1420.33	1420.54	1419.69
29	1418.39	1418.07	1417.97	1417.94	---	1418.44	1418.74	1419.30	1421.15	1420.27	1420.51	1419.66
30	1418.34	1418.10	1417.96	1418.09	---	1418.43	1418.74	1419.30	1421.12	1420.25	1420.49	1419.62
31	1418.34	---	1417.97	1418.07	---	1418.43	---	1419.25	---	1420.20	1420.45	---
MEAN	1418.66	1418.23	1418.05	1417.96	1418.24	1418.41	1418.59	1419.05	1420.39	1420.68	1420.35	1420.03
MAX	1418.94	1418.37	1418.15	1418.09	1418.46	1418.63	1418.80	1419.32	1421.34	1421.07	1420.65	1420.41
MIN	1418.34	1418.07	1417.96	1417.92	1418.02	1418.30	1418.30	1418.65	1419.06	1420.20	1419.78	1419.62
(+)	137,840	135,800	134,720	135,550	137,500	138,600	141,220	145,620	162,510	154,050	156,340	148,880
(#)	-5,410	-2,040	-1,080	+830	+1,950	+1,100	+2,620	+4,400	+16,890	-8,460	+2,290	-7,460

CAL YR 2001 ..... (#) -34,160
WTR YR 2002 ..... (#) +5,630

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

07144790 CHENEY RESERVOIR NEAR CHENEY, KS--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 2001 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: April 2001 to current year.
pH: April 2001 to current year.
WATER TEMPERATURE: April 2001 to current year.
DISSOLVED OXYGEN: April 2001 to current year.
TURBIDITY: April 2001 to current year.

INSTRUMENTATION.--Multiparameter water-quality monitor.

REMARKS.--Records fair. Interruptions in record are due to ice conditions or malfunction of the recording instrument or sensors. Instruments used to measure turbidity conform to ISO 7027 standards.

EXTREMES FOR PERIOD OF RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 922 microsiemens, Mar. 3, 2002; minimum, 736 microsiemenss, June 15, 2001.
pH: Maximum, 9.1 standard units, Apr. 9, 2002; minimum, 7.8 standard units, Sept. 18, 2002.
WATER TEMPERATURE: Maximum, 31.8°C, Aug. 6, 2001; minimum, 0.0°C, Mar. 3, 2002.
DISSOLVED OXYGEN: Maximum 16.6 mg/L, Mar. 5, 2002; minimum, 2.6 mg/L, Aug. 13, 2001.
TURBIDITY: Maximum, 200 NTU, July 16, 2002; minimum, 3.4 NTU, Feb. 17, 2002.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 922 microsiemens/cm, Mar. 3; minimum, 807 microsiemens/cm, Oct. 5.
pH: Maximum, 8.9 units, Feb. 20; minimum, 7.6 units, Oct. 17.
WATER TEMPERATURE: Maximum, 30.7°C, July 10; minimum, 0.0°C, Mar. 3.
DISSOLVED OXYGEN: Maximum, 16.6 mg/L, Mar. 5; minimum, 3.1 mg/L, July 15.
TURBIDITY: Maximum, 200 NTU, July 15; minimum, 3.4 NTU, Feb. 17.

SPECIFIC CONDUCTANCE FROM DCP, in US/CM @ 25C, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	811	809	810	824	821	823	847	845	846	---	---	---
2	810	809	810	823	821	822	847	846	847	---	---	---
3	812	810	810	825	821	821	847	844	845	---	---	---
4	817	811	812	834	819	822	844	843	844	---	---	---
5	812	807	809	821	820	821	844	841	843	---	---	---
6	810	808	809	821	820	821	846	843	844	---	---	---
7	810	810	810	823	821	822	846	842	845	---	---	---
8	812	810	811	825	823	824	848	845	847	---	---	---
9	813	812	813	825	823	824	848	847	848	---	---	---
10	813	810	812	828	824	825	848	846	847	---	---	---
11	813	810	811	826	822	825	850	847	849	---	---	---
12	812	811	811	826	825	825	852	848	850	---	---	---
13	813	811	812	827	825	826	853	849	851	---	---	---
14	814	812	813	830	827	828	852	851	851	---	---	---
15	814	813	813	831	828	830	853	851	852	---	---	---
16	817	813	814	831	829	830	854	852	853	---	---	---
17	814	814	814	831	830	830	855	852	853	---	---	---
18	816	814	815	831	830	830	854	853	853	---	---	---
19	818	815	816	832	831	832	858	854	856	---	---	---
20	816	815	816	833	832	832	857	855	856	---	---	---
21	818	815	816	835	832	834	857	856	857	---	---	---
22	818	816	816	836	835	835	858	856	857	---	---	---
23	819	816	817	837	836	837	862	857	859	---	---	---
24	817	817	817	838	836	837	866	860	863	---	---	---
25	818	817	818	839	838	839	865	860	862	---	---	---
26	819	817	818	840	838	839	872	865	869	---	---	---
27	819	818	819	844	840	842	870	866	868	---	---	---
28	820	819	819	845	843	844	873	867	870	---	---	---
29	820	820	820	846	844	845	876	869	872	---	---	---
30	821	820	820	847	846	846	872	869	870	---	---	---
31	823	820	821	---	---	---	---	---	e874	---	---	---
MONTH	823	807	814	847	819	830	---	---	855	---	---	---

07144790 CHENEY RESERVOIR NEAR CHENEY, KS--Continued

SPECIFIC CONDUCTANCE FROM DCP, in US/CM @ 25C, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	895	892	893	906	903	904	915	914	915
2	---	---	---	915	894	899	906	904	905	916	914	915
3	---	---	---	922	900	909	907	905	906	919	913	916
4	---	---	---	919	904	909	910	906	908	918	915	916
5	---	---	---	904	898	902	910	908	908	919	916	917
6	---	---	---	902	870	896	910	908	909	921	918	920
7	---	---	---	901	885	896	909	907	909	921	909	920
8	---	---	---	900	893	898	909	902	907	918	908	915
9	---	---	---	898	892	896	909	905	907	919	912	916
10	---	---	---	899	897	898	909	908	908	917	916	916
11	---	---	---	898	895	897	909	889	905	918	901	917
12	---	---	---	898	---	e898	906	896	903	914	904	909
13	---	---	---	---	886	e889	905	898	902	915	911	913
14	---	---	---	894	889	891	904	903	904	913	912	913
15	---	---	e880	899	887	891	904	903	904	913	912	913
16	882	880	881	899	889	895	904	903	904	913	910	912
17	881	879	880	902	889	895	905	904	905	912	910	911
18	881	879	880	899	890	895	907	905	905	912	904	910
19	882	876	879	899	892	897	908	906	907	911	902	907
20	881	874	876	906	898	900	908	906	907	910	909	910
21	881	870	876	906	894	901	908	902	905	911	910	910
22	881	877	879	907	902	904	908	907	907	913	911	912
23	881	880	880	905	904	904	908	907	907	914	909	912
24	882	879	881	905	901	903	909	907	908	911	904	909
25	886	879	882	907	903	905	911	908	909	913	903	908
26	916	886	896	909	904	907	913	908	909	909	904	908
27	916	892	900	908	906	907	913	911	912	908	904	906
28	895	891	893	907	---	e907	913	910	911	908	907	907
29	---	---	---	---	902	e903	914	911	912	910	907	909
30	---	---	---	906	904	905	917	913	914	914	903	908
31	---	---	---	907	902	905	---	---	---	908	905	906
MONTH	---	---	---	---	---	900	917	889	907	921	901	912

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	908	905	906	---	843	845	856	848	854	836	835	835
2	909	907	908	848	847	847	855	847	852	837	835	836
3	909	907	908	848	847	847	854	849	851	838	831	835
4	910	901	906	849	847	848	856	851	853	839	832	836
5	906	904	904	850	848	849	---	---	e858	839	837	838
6	906	902	905	850	848	849	---	---	e861	838	836	838
7	913	904	907	851	848	849	868	862	863	841	838	839
8	912	909	910	854	849	851	865	861	862	842	839	841
9	912	909	911	852	848	850	866	862	863	842	840	841
10	913	912	912	868	839	850	865	862	864	843	840	842
11	913	905	912	849	845	847	864	863	863	844	839	842
12	907	886	900	847	844	845	865	856	863	845	841	842
13	898	861	887	847	844	845	857	847	852	846	842	844
14	894	885	891	855	842	846	851	847	850	844	841	843
15	894	882	889	861	848	854	847	846	847	842	840	841
16	889	885	886	854	849	851	847	844	846	846	840	842
17	889	879	886	855	847	850	846	826	834	846	842	844
18	882	854	869	857	849	852	831	823	828	845	842	843
19	854	809	829	855	850	852	832	829	830	842	839	841
20	845	830	836	854	851	853	832	831	832	845	836	839
21	845	841	843	859	851	855	832	829	830	847	838	841
22	843	840	842	870	850	856	830	829	829	848	838	841
23	842	840	841	857	---	853	832	829	831	846	838	842
24	845	841	842	855	852	853	832	827	829	847	838	843
25	845	840	842	856	855	855	831	828	829	849	841	844
26	848	843	844	857	853	855	832	829	830	848	839	844
27	843	831	836	856	852	855	834	829	831	846	839	841
28	841	837	839	856	823	850	835	828	833	845	838	841
29	843	839	840	857	829	845	834	831	833	845	836	840
30	843	840	841	859	852	855	835	831	833	842	837	838
31	---	---	---	860	852	855	836	834	835	---	---	---
MONTH	913	809	876	---	---	851	---	---	844	849	831	841

e Estimated

07144790 CHENEY RESERVOIR NEAR CHENEY, KS--Continued

PH, WH, FIELD FROM DCP, in (STANDARD UNITS), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	8.6	8.5	8.5	8.1	7.7	7.9	---	---	---	---	---	---
2	8.5	8.5	8.5	7.9	7.8	7.8	---	---	---	---	---	---
3	8.6	8.5	8.5	8.3	7.8	8.1	8.4	---	e8.4	---	---	---
4	8.7	8.5	8.6	8.7	8.1	8.3	8.4	8.4	8.4	---	---	---
5	8.6	8.6	8.6	8.5	8.4	8.5	8.4	8.4	8.4	---	---	---
6	8.6	8.6	8.6	8.5	8.4	8.4	8.5	8.4	8.4	---	---	---
7	8.6	8.3	8.4	8.5	8.3	8.4	8.5	8.4	8.4	---	---	---
8	8.3	8.1	8.2	8.4	8.2	8.3	8.5	8.4	8.5	---	---	---
9	8.1	8.1	8.1	8.3	8.2	8.2	8.5	8.5	8.5	---	---	---
10	8.0	7.9	8.0	8.6	8.2	8.3	8.5	8.4	8.4	---	---	---
11	8.0	7.7	7.9	8.5	8.2	8.3	8.5	8.4	8.4	---	---	---
12	7.9	7.7	7.8	8.3	8.2	8.3	8.5	8.4	8.5	---	---	---
13	7.9	7.8	7.8	8.4	8.2	8.3	8.5	8.4	8.4	---	---	---
14	7.9	7.8	7.8	8.5	8.4	8.4	8.5	8.4	8.4	---	---	---
15	7.9	7.8	7.9	8.7	8.4	8.5	8.4	8.4	8.4	---	---	---
16	8.0	7.7	7.8	8.7	8.4	8.4	8.4	8.4	8.4	---	---	---
17	7.7	7.6	7.7	8.5	8.4	8.4	8.5	8.4	8.5	---	---	---
18	7.8	7.6	7.6	8.5	8.4	8.4	8.5	8.4	8.5	---	---	---
19	7.9	7.6	7.7	8.5	8.4	8.5	8.5	8.5	8.5	---	---	---
20	7.8	7.6	7.7	8.5	8.4	8.5	8.5	8.5	8.5	---	---	---
21	7.8	7.6	7.7	8.5	8.4	8.4	8.5	8.4	8.4	---	---	---
22	7.8	7.7	7.7	8.6	8.5	8.6	8.5	8.4	8.5	---	---	---
23	7.9	7.7	7.8	8.6	8.6	8.6	8.5	8.4	8.5	---	---	---
24	7.9	7.8	7.8	8.6	8.6	8.6	8.5	8.5	8.5	---	---	---
25	8.0	7.9	7.9	---	---	---	8.5	8.5	8.5	---	---	---
26	8.0	7.8	7.9	---	---	---	8.5	8.4	8.5	---	---	---
27	7.9	7.8	7.9	---	---	---	8.5	8.4	8.5	---	---	---
28	8.0	7.8	7.9	---	---	---	8.5	8.5	8.5	---	---	---
29	8.0	7.9	7.9	---	---	---	8.5	8.5	8.5	---	---	---
30	8.0	7.9	7.9	---	---	---	8.6	8.5	8.5	---	---	---
31	7.9	7.7	7.9	---	---	---	---	8.5	e8.5	---	---	---
MAX	8.7	8.6	8.6	---	---	---	---	---	---	---	---	---
MIN	7.7	7.6	7.6	---	---	---	---	---	---	---	---	---

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	8.8	8.8	8.8	8.5	8.4	8.5	8.3	8.3	8.3
2	---	---	---	8.8	8.7	8.8	8.5	8.5	8.5	8.4	8.3	8.3
3	---	---	---	8.8	8.7	8.8	8.5	8.5	8.5	8.4	8.3	8.3
4	---	---	---	8.8	8.8	8.8	8.5	8.4	8.5	8.3	8.2	8.3
5	---	---	---	8.8	8.8	8.8	8.5	8.4	8.4	8.3	8.3	8.3
6	---	---	---	8.8	8.8	8.8	8.5	8.4	8.4	8.3	8.3	8.3
7	---	---	---	8.8	8.8	8.8	8.4	8.4	8.4	8.3	8.3	8.3
8	---	---	---	8.8	8.7	8.8	8.5	8.4	8.4	8.3	8.3	8.3
9	---	---	---	8.8	8.7	8.7	8.5	8.4	8.4	8.4	8.3	8.3
10	---	---	---	8.8	8.7	8.7	8.4	8.4	8.4	8.4	8.3	8.3
11	---	---	---	8.7	---	e8.6	8.4	8.4	8.4	8.4	8.4	8.4
12	---	---	---	---	---	e8.6	8.4	8.4	8.4	8.4	8.4	8.4
13	---	---	---	8.7	---	e8.6	8.5	8.4	8.4	8.5	8.4	8.4
14	---	---	---	8.7	8.6	8.6	8.5	8.3	8.4	8.5	8.4	8.5
15	---	---	e8.7	8.7	8.6	8.6	8.4	8.4	8.4	8.5	8.4	8.4
16	8.7	8.6	8.7	8.7	8.6	8.7	8.5	8.4	8.5	8.5	8.4	8.4
17	8.7	8.7	8.7	8.7	8.6	8.7	8.5	8.5	8.5	8.5	8.4	8.5
18	8.8	8.7	8.7	8.7	8.6	8.7	8.6	8.5	8.5	8.5	8.4	8.5
19	8.8	8.8	8.8	8.7	8.6	8.7	8.6	8.5	8.5	8.6	8.4	8.5
20	8.9	8.8	8.8	8.7	8.6	8.6	8.5	8.5	8.5	8.4	8.4	8.4
21	8.9	8.8	8.8	8.7	8.6	8.6	8.5	8.5	8.5	8.5	8.4	8.4
22	8.9	8.8	8.8	8.7	8.6	8.7	8.5	8.5	8.5	8.5	8.4	8.4
23	8.8	8.8	8.8	8.7	8.6	8.7	8.5	8.4	8.5	8.5	8.5	8.5
24	8.8	8.8	8.8	8.7	8.6	8.7	8.5	8.4	8.5	8.5	8.5	8.5
25	8.8	8.8	8.8	8.7	8.7	8.7	8.5	8.4	8.4	8.5	8.5	8.5
26	8.8	8.8	8.8	8.8	8.7	8.7	8.4	8.4	8.4	8.5	8.4	8.5
27	8.8	8.8	8.8	8.8	8.7	8.7	8.5	8.4	8.4	8.5	8.4	8.4
28	8.8	8.8	8.8	---	---	e8.7	8.5	8.4	8.4	8.5	8.4	8.4
29	---	---	---	---	8.4	e8.5	8.4	8.4	8.4	8.5	8.4	8.4
30	---	---	---	8.5	8.4	8.4	8.4	8.3	8.4	8.6	8.4	8.4
31	---	---	---	8.6	8.4	8.5	---	---	---	8.6	8.4	8.5
MAX	---	---	---	---	---	8.8	8.6	8.5	8.5	8.6	8.5	8.5
MIN	---	---	---	---	---	8.4	8.4	8.3	8.4	8.3	8.2	8.3

07144790 CHENEY RESERVOIR NEAR CHENEY, KS--Continued

PH, WH, FIELD FROM DCP, in (STANDARD UNITS), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	8.6	8.4	8.6	8.4	8.1	8.3	8.8	8.5	8.6	8.4	8.3	8.4
2	8.5	8.4	8.4	8.4	8.2	8.3	8.6	8.4	8.5	8.5	8.3	8.4
3	8.5	8.3	8.4	8.4	8.3	8.4	8.7	8.5	8.6	8.8	8.2	8.4
4	8.4	8.3	8.4	8.6	8.2	8.3	8.6	8.5	8.5	8.8	8.4	8.6
5	8.5	8.4	8.4	8.4	8.2	8.3	---	8.4	e8.5	8.6	8.4	8.6
6	8.6	8.3	8.5	8.6	8.2	8.4	8.6	8.3	e8.4	8.8	8.5	8.7
7	8.4	8.2	8.4	8.6	8.3	8.4	8.6	8.2	8.3	8.7	8.3	8.5
8	8.4	8.3	8.4	8.7	8.3	8.5	8.6	8.3	8.5	8.5	8.0	8.4
9	8.4	8.3	8.4	8.7	8.5	8.6	8.6	8.2	8.4	8.5	8.2	8.4
10	8.4	8.4	8.4	8.8	8.6	8.7	8.6	8.2	8.4	8.8	8.2	8.5
11	8.5	8.4	8.5	8.8	8.4	8.7	8.6	8.4	8.5	8.8	8.4	8.6
12	8.6	8.4	8.5	8.8	8.6	8.7	8.6	8.4	8.5	8.6	8.2	8.5
13	8.6	8.4	8.5	8.8	8.5	8.7	8.6	8.4	8.5	8.4	8.1	8.2
14	8.6	8.4	8.5	8.8	8.4	8.6	8.5	8.4	8.4	8.4	8.2	8.4
15	8.6	8.5	8.5	8.6	7.9	8.3	8.5	8.4	8.5	8.6	8.4	8.5
16	8.6	8.4	8.5	8.6	7.9	8.5	8.5	8.4	8.4	8.6	8.4	8.5
17	8.6	8.4	8.5	8.8	8.4	8.6	8.4	8.3	8.4	8.4	8.4	8.4
18	8.5	8.4	8.4	8.8	8.1	8.6	8.5	8.4	8.4	8.6	8.4	8.5
19	8.4	8.3	8.4	8.8	8.2	8.6	8.4	8.3	8.4	8.6	8.5	8.6
20	8.4	8.3	8.3	8.7	8.2	8.6	8.4	8.3	8.4	8.7	8.5	8.6
21	8.4	8.3	8.4	8.6	8.4	8.6	8.5	8.4	8.4	8.8	8.4	8.6
22	8.4	8.3	8.4	8.6	8.3	8.5	8.5	8.4	8.5	8.8	8.4	8.6
23	8.4	8.3	8.4	8.5	8.3	8.5	8.6	8.4	8.5	8.8	8.4	8.5
24	8.4	8.3	8.3	8.6	8.4	8.5	8.5	8.3	8.4	8.5	8.3	8.4
25	8.6	8.3	8.4	8.6	8.3	8.5	8.5	8.3	8.5	8.4	8.2	8.3
26	8.6	8.2	8.5	8.5	8.4	8.5	8.6	8.3	8.4	8.8	8.1	8.5
27	8.8	8.5	8.6	8.5	8.4	8.5	8.6	8.3	8.4	8.9	8.6	8.7
28	8.6	8.4	8.5	8.5	8.4	8.5	8.8	8.3	8.4	8.6	8.6	8.6
29	8.6	8.2	8.5	8.5	8.3	8.5	8.6	8.4	8.6	8.7	8.5	8.6
30	8.4	8.2	8.4	8.6	8.3	8.5	8.6	8.3	8.4	8.7	8.6	8.6
31	---	---	---	8.6	8.4	8.5	8.4	8.2	8.3	---	---	---
MAX	8.8	8.5	8.6	8.8	8.6	8.7	---	8.5	8.6	8.9	8.6	8.7
MIN	8.4	8.2	8.3	8.4	7.9	8.3	---	8.2	8.3	8.4	8.0	8.2

e Estimated

WATER TEMPERATURE FROM DCP, in (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	20.8	19.2	19.8	15.2	13.6	14.1	6.9	6.5	6.6	---	---	---
2	20.0	19.2	19.5	13.9	13.4	13.6	6.7	6.3	6.5	---	---	---
3	19.9	19.1	19.5	15.0	13.7	14.1	7.1	6.6	6.8	---	---	---
4	21.0	19.4	19.8	17.7	13.9	14.7	7.8	7.1	7.4	---	---	---
5	19.4	18.1	18.5	14.6	14.1	14.3	10.0	7.8	8.6	---	---	---
6	18.4	17.7	18.0	14.8	14.2	14.5	10.3	8.4	9.0	---	---	---
7	18.0	17.5	17.8	14.8	14.4	14.6	9.5	8.4	8.7	---	---	---
8	17.5	17.0	17.2	14.6	13.7	14.1	8.6	7.9	8.3	---	---	---
9	17.2	16.9	17.0	13.9	13.3	13.6	8.3	7.9	8.1	---	---	---
10	17.5	16.9	17.1	15.7	13.2	13.9	8.0	7.7	7.8	---	---	---
11	17.7	16.8	17.1	14.5	13.1	13.4	7.7	7.2	7.4	---	---	---
12	17.2	16.6	16.8	13.4	13.2	13.3	7.6	7.1	7.2	---	---	---
13	17.6	16.1	16.7	13.5	13.3	13.4	7.2	6.8	6.9	---	---	---
14	16.6	15.8	16.2	13.9	13.4	13.6	7.0	6.7	6.8	---	---	---
15	16.1	15.0	15.5	15.8	13.5	14.3	6.8	6.6	6.7	---	---	---
16	17.2	14.6	15.3	14.7	13.6	14.0	6.6	6.4	6.5	---	---	---
17	14.7	14.4	14.6	13.8	13.6	13.7	7.6	6.1	6.6	---	---	---
18	15.5	14.3	14.8	14.0	13.6	13.8	6.8	6.2	6.4	---	---	---
19	17.0	14.1	15.1	13.6	12.7	13.0	6.6	5.5	5.9	---	---	---
20	15.0	14.1	14.5	12.7	12.2	12.4	6.5	5.6	5.9	---	---	---
21	15.5	14.4	14.9	12.2	11.9	12.1	5.9	5.7	5.8	---	---	---
22	15.6	14.4	14.8	12.2	11.7	11.9	5.9	5.5	5.7	---	---	---
23	16.9	14.7	15.3	12.0	11.7	11.8	5.5	4.4	4.8	---	---	---
24	15.6	15.1	15.3	11.7	10.7	11.2	4.8	3.2	3.8	---	---	---
25	15.1	14.3	14.6	11.1	10.6	10.9	4.5	3.2	4.0	---	---	---
26	15.4	13.9	14.4	11.0	9.4	10.6	3.2	1.3	2.5	---	---	---
27	14.0	13.6	13.8	9.4	8.0	8.6	3.1	2.1	2.7	---	---	---
28	13.7	13.4	13.6	8.1	7.0	7.4	3.3	2.6	3.0	---	---	---
29	13.8	13.3	13.5	7.2	6.4	6.8	2.8	0.8	1.8	---	---	---
30	13.7	13.5	13.6	6.8	6.3	6.5	2.4	1.8	2.3	---	---	---
31	13.6	13.4	13.5	---	---	---	---	---	---	---	---	---
MONTH	21.0	13.3	16.1	17.7	6.3	12.5	---	---	---	---	---	---

07144790 CHENEY RESERVOIR NEAR CHENEY, KS--Continued

WATER TEMPERATURE FROM DCP, in (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	3.4	2.3	3.1	8.9	7.5	8.3	17.0	14.8	15.4
2	---	---	---	2.6	0.1	1.0	9.5	8.5	9.0	16.5	14.8	15.7
3	---	---	---	0.2	0.0	---	9.4	8.1	8.5	16.6	15.4	15.8
4	---	---	---	0.8	0.2	0.5	9.1	8.0	8.6	15.7	15.1	15.3
5	---	---	---	1.2	0.7	0.9	9.0	8.4	8.6	16.5	15.1	15.7
6	---	---	---	1.8	0.5	1.2	9.0	8.1	8.4	18.8	16.5	17.5
7	---	---	---	2.4	1.6	2.1	9.1	8.7	9.0	18.2	17.0	17.6
8	---	---	---	3.2	2.3	2.6	10.0	8.9	9.2	18.7	17.5	18.1
9	---	---	---	3.2	2.4	2.9	9.6	9.1	9.3	20.4	17.9	18.6
10	---	---	---	3.1	2.6	2.9	10.2	9.0	9.5	18.4	17.9	18.1
11	---	---	---	3.8	2.8	3.1	11.6	10.1	10.9	18.6	18.0	18.3
12	---	---	---	---	---	---	12.7	11.1	11.5	18.5	17.3	18.0
13	---	---	---	5.0	---	---	13.3	11.2	12.2	19.9	16.9	18.1
14	---	---	---	6.8	4.0	4.9	13.4	11.6	12.6	18.7	17.9	18.3
15	---	---	---	6.5	5.3	5.8	14.0	13.1	13.5	18.3	17.8	18.0
16	3.3	2.8	3.1	5.7	5.0	5.3	15.4	13.8	14.6	18.5	17.7	17.9
17	3.7	3.1	3.4	7.2	4.9	5.7	16.1	15.2	15.7	18.3	17.5	17.8
18	4.0	3.4	3.6	5.7	5.0	5.3	17.6	16.0	16.7	20.3	17.4	18.2
19	5.1	4.0	4.5	6.4	5.5	5.7	18.2	16.9	17.5	18.2	17.4	17.8
20	6.3	4.9	5.6	8.8	5.7	6.6	16.9	16.2	16.5	17.8	17.3	17.5
21	7.2	4.8	5.7	6.4	5.5	5.8	16.9	15.3	16.1	18.8	17.5	17.9
22	6.2	5.2	5.6	6.4	5.1	5.7	16.8	16.4	16.6	18.1	17.8	18.1
23	5.9	5.5	5.7	6.1	5.6	5.8	16.5	16.3	16.4	18.5	18.0	18.2
24	6.7	5.5	5.9	7.6	5.8	6.5	16.9	16.3	16.5	18.1	17.2	17.7
25	6.5	4.0	5.4	6.5	5.3	5.7	16.3	15.8	16.1	20.5	16.4	18.1
26	4.1	1.6	2.9	7.6	4.9	6.0	15.8	15.5	15.7	18.0	16.8	17.3
27	2.9	0.3	2.1	6.4	5.8	6.1	15.8	15.1	15.4	18.4	17.2	17.8
28	3.3	2.6	3.0	---	6.0	---	17.4	15.1	15.6	18.9	17.9	18.1
29	---	---	---	---	---	---	17.0	15.1	15.6	21.2	18.1	19.5
30	---	---	---	8.1	6.8	7.4	18.0	14.9	15.4	24.4	18.5	20.5
31	---	---	---	11.6	6.6	8.3	---	---	---	21.5	18.9	20.3
MONTH	---	---	---	---	---	---	18.2	7.5	13.0	24.4	14.8	17.8

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	21.7	18.7	21.0	25.2	24.6	24.8	29.4	27.5	28.1	26.2	25.6	25.9
2	20.5	19.4	19.9	25.6	24.6	24.8	28.2	27.0	27.4	26.8	25.7	26.2
3	21.2	19.3	20.2	25.2	24.7	24.9	28.1	27.1	27.5	26.8	25.7	26.2
4	21.3	20.5	20.9	26.3	24.6	25.1	28.2	27.3	27.7	27.1	25.9	26.5
5	21.3	20.8	21.0	26.0	24.7	25.1	---	---	---	26.9	26.0	26.5
6	22.3	20.6	21.4	25.7	24.9	25.2	---	---	---	27.1	26.1	26.6
7	21.9	20.3	21.0	26.6	25.1	25.6	29.8	26.9	27.5	26.8	25.9	26.4
8	22.4	21.1	21.5	29.8	25.1	26.7	29.6	26.9	27.7	26.2	25.7	25.9
9	22.9	21.6	22.1	29.0	25.9	27.3	28.1	26.8	27.2	26.1	25.7	25.9
10	23.3	22.3	22.8	30.7	26.4	27.6	27.8	26.8	27.2	27.2	25.7	26.2
11	24.1	23.0	23.5	28.7	25.8	27.1	27.5	26.9	27.1	27.3	25.4	26.0
12	24.0	23.5	23.7	27.5	26.3	26.8	27.4	26.5	26.8	25.7	25.2	25.5
13	24.3	23.6	23.9	27.1	26.3	26.8	26.5	25.6	26.1	25.3	24.9	25.1
14	25.0	23.6	24.2	28.2	26.1	26.8	25.9	25.4	25.6	24.9	24.5	24.8
15	24.0	23.2	23.7	27.0	25.4	26.0	25.7	25.2	25.4	24.5	23.7	24.1
16	25.0	22.9	23.5	26.7	25.4	25.9	25.5	25.2	25.4	24.2	23.5	23.8
17	24.3	23.1	23.6	27.3	25.6	26.3	25.2	---	---	23.7	23.2	23.4
18	23.6	22.8	23.1	27.8	25.3	26.5	26.0	---	---	23.6	23.1	23.3
19	23.2	22.6	22.9	28.1	25.7	27.3	25.4	25.2	25.3	23.2	22.4	22.8
20	23.1	22.9	23.0	27.9	25.5	27.0	25.7	25.1	25.3	23.2	21.8	22.5
21	24.1	23.1	23.5	27.4	26.7	27.0	25.9	25.3	25.5	25.4	22.1	23.1
22	24.4	23.8	24.0	27.7	26.5	27.0	26.1	25.4	25.8	22.6	21.3	21.9
23	24.5	23.8	24.1	27.2	26.6	26.8	27.1	25.7	26.0	24.1	21.4	22.0
24	24.4	23.9	24.1	27.5	26.5	26.9	26.3	25.4	25.7	21.6	21.0	21.2
25	25.2	24.1	24.5	27.7	26.1	27.0	26.6	25.4	25.9	21.1	20.8	20.9
26	28.0	23.9	25.6	27.3	27.0	27.2	26.7	25.6	26.0	23.5	20.6	21.6
27	26.4	25.1	25.6	27.9	26.7	27.2	26.0	25.5	25.7	22.3	20.5	21.3
28	26.2	24.6	25.4	27.6	27.1	27.3	27.8	25.5	26.1	20.7	20.3	20.5
29	26.1	24.4	25.4	27.7	26.8	27.2	26.4	25.6	26.1	20.8	20.4	20.6
30	25.6	24.4	25.2	27.9	27.0	27.5	25.9	25.4	25.6	20.8	20.4	20.6
31	---	---	---	28.2	27.3	27.8	26.3	25.4	25.7	---	---	---
MONTH	28.0	18.7	23.1	30.7	24.6	26.5	---	---	---	27.3	20.3	23.9

07144790 CHENEY RESERVOIR NEAR CHENEY, KS--Continued

OXYGEN DISSOLVED FROM DCP, in (MG/L), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	8.4	7.0	7.5	10.9	9.0	9.9	11.9	11.5	11.7	---	---	---
2	7.6	7.0	7.4	10.0	8.9	9.5	11.9	11.5	11.7	---	---	---
3	8.2	7.5	7.8	9.9	9.0	9.4	11.7	11.1	11.4	---	---	---
4	8.7	7.8	8.1	10.9	9.4	10.0	11.4	11.2	11.3	---	---	---
5	8.6	8.2	8.4	10.6	9.6	10	11.3	10.9	11.2	---	---	---
6	9.0	8.2	8.5	10.0	9.5	9.8	11.4	11.1	11.2	---	---	---
7	8.5	8.0	8.3	9.8	9.3	9.5	11.6	11.0	11.2	---	---	---
8	8.6	8.2	8.5	10.1	9.3	9.7	11.4	11.2	11.3	---	---	---
9	8.8	8.5	8.6	10.5	9.7	9.9	11.4	11.1	11.2	---	---	---
10	9.0	8.5	8.7	10.4	9.4	9.8	11.3	11.2	11.2	---	---	---
11	8.9	8.1	8.5	11.1	9.3	9.8	11.3	11.2	11.3	---	---	---
12	8.6	8.0	8.2	9.7	9.4	9.5	11.6	11.2	11.4	---	---	---
13	8.8	8.2	8.5	9.6	9.3	9.4	11.5	11.3	11.4	---	---	---
14	9.1	8.4	8.7	9.8	9.4	9.7	11.5	11.3	11.4	---	---	---
15	9.0	8.4	8.7	10.5	9.2	9.7	11.5	11.3	11.4	---	---	---
16	9.4	8.7	8.9	10.4	9.0	9.7	11.7	11.4	11.6	---	---	---
17	9.0	8.8	8.9	9.4	9.1	9.2	11.7	11.6	11.7	---	---	---
18	9.3	8.8	9.0	9.8	9.1	9.3	11.9	11.6	11.7	---	---	---
19	9.7	8.9	9.2	10.2	9.8	10	12.1	11.8	12.0	---	---	---
20	9.5	8.7	9.0	10.2	9.8	10.0	12.0	11.8	11.9	---	---	---
21	9.5	8.9	9.1	10.2	9.8	10.0	11.9	11.7	11.8	---	---	---
22	9.3	8.6	8.9	10.1	9.7	9.8	12.3	11.9	12.1	---	---	---
23	9.6	8.8	9.1	10.1	9.8	9.9	12.8	12.1	12.5	---	---	---
24	9.5	9.1	9.3	10.6	10.1	10.4	13.1	12.4	12.8	---	---	---
25	9.9	9.2	9.4	10.6	10.3	10.4	13.1	12.5	12.7	---	---	---
26	10.4	9.2	9.6	11.1	10.2	10.5	13.7	12.9	13.2	---	---	---
27	9.5	9.0	9.2	11.5	11.1	11.2	13.6	12.9	13.2	---	---	---
28	9.5	9.2	9.4	11.7	11.4	11.6	13.4	13.0	13.2	---	---	---
29	9.9	9.4	9.6	11.9	11.6	11.8	14.0	13.2	13.6	---	---	---
30	9.7	9.4	9.6	12.0	11.6	11.8	14.1	13.1	13.4	---	---	---
31	9.8	9.6	9.7	---	---	---	---	---	e13.6	---	---	---
MONTH	10.4	7.0	8.8	12.0	8.9	10.0	---	---	12.0	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	14.9	14.5	14.6	13.0	12.2	12.6	9.4	8.5	8.8
2	---	---	---	16.2	14.7	15.5	12.6	11.6	12.0	9.6	9.0	9.3
3	---	---	---	16.2	15.9	16.1	12.5	11.5	11.9	9.3	8.7	9.1
4	---	---	---	16.4	15.9	16.2	12.3	11.1	11.7	9.3	8.4	9.0
5	---	---	---	16.6	16.0	16.2	11.8	10.9	11.4	9.1	8.5	8.8
6	---	---	---	16.4	15.8	16.1	11.8	10.6	11.0	9.5	9.1	9.3
7	---	---	---	16.3	16.0	16.1	11.4	11.0	11.2	9.2	8.7	8.9
8	---	---	---	16.1	15.5	15.9	11.5	10.8	11.1	9.1	8.7	8.9
9	---	---	---	15.9	15.3	15.6	11.9	10.6	11.1	9.7	8.8	9.1
10	---	---	---	15.8	15.7	15.8	11.1	10.6	10.9	8.8	8.4	8.6
11	---	---	---	---	15.6	e15.6	11.2	10.8	11.0	9.2	8.7	8.9
12	---	---	---	---	---	---	11.1	10.7	e10.8	9.4	9.0	9.2
13	---	---	---	13.2	12.9	e13.1	12.2	10.6	11.3	10.2	9.3	9.7
14	---	---	---	12.9	12.3	12.7	11.8	10.5	11.3	10.2	9.5	9.9
15	---	---	e14.0	12.5	12.0	12.3	11.4	10.6	11.0	9.9	9.6	9.7
16	14.5	13.9	14.2	12.5	12.2	12.3	10.6	9.7	10.2	10.3	9.5	9.8
17	14.6	14.2	14.4	12.9	12.2	12.5	10.0	9.5	9.7	10.4	9.6	9.9
18	14.5	14.2	14.3	12.5	12.0	12.3	9.9	9.4	9.6	10.6	9.8	10.1
19	14.6	13.9	14.2	12.4	11.9	12.2	9.4	9.0	9.2	10.5	8.7	9.8
20	14.7	13.5	14.1	12.5	11.6	12.0	9.1	8.8	9.0	9.9	8.8	9.4
21	14.4	13.5	14.1	12.4	11.6	12.1	9.5	8.8	9.2	10.4	9.3	9.7
22	15.0	14.1	14.5	12.8	11.9	12.3	9.2	8.9	9.1	10.0	9.6	9.8
23	14.9	14.4	14.6	12.4	11.9	12.2	9.0	8.7	8.8	10.3	9.7	10.1
24	14.6	13.5	14.3	12.4	11.6	12.0	9.4	8.6	9.0	10.4	10.1	10.3
25	14.1	13.5	13.7	12.0	11.6	11.8	9.1	8.7	8.9	11.2	10.3	10.6
26	15.2	14.0	14.6	12.6	11.6	12.1	8.9	8.6	8.7	10.6	10.0	10.4
27	15.4	14.5	14.9	12.5	11.9	12.2	9.4	8.9	9.2	10.7	10.2	10.4
28	14.9	14.5	14.7	---	11.8	e12.1	9.7	9.4	9.5	10.7	10.2	10.4
29	---	---	---	---	12.5	e12.6	9.5	9.2	9.3	11.6	10.1	10.9
30	---	---	---	13.1	12.3	12.6	9.3	8.5	8.9	13.8	10.6	11.8
31	---	---	---	13.5	12.1	12.7	---	---	---	13.8	11.1	12.4
MONTH	---	---	---	---	---	---	13.0	8.5	10.3	13.8	8.4	9.8

07144790 CHENEY RESERVOIR NEAR CHENEY, KS--Continued

OXYGEN DISSOLVED FROM DCP, in (MG/L), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	13.2	10.0	12.0	7.0	5.5	6.4	11.2	7.5	8.7	8.2	7.0	7.6
2	10.6	9.3	10.0	7.4	5.8	6.5	8.0	6.3	7.2	9.4	7.2	8.1
3	10.5	8.3	9.5	7.7	6.6	7.2	9.1	7.1	8.0	12.4	6.1	8.8
4	9.2	7.0	8.5	9.3	5.9	7.7	9.2	7.2	8.2	11.0	6.4	8.2
5	8.6	4.9	8.0	8.2	6.5	7.4	---	---	e7.6	8.7	6.6	8.1
6	10.1	4.9	7.8	9.8	6.3	8.0	---	---	e7.1	10.4	8.1	9.1
7	9.2	5.8	8.0	10.5	7.1	8.8	8.4	4.8	6.0	9.5	6.0	7.7
8	9.0	8.3	8.6	11.5	6.9	9.3	8.9	5.0	7.0	7.9	3.6	6.3
9	9.2	8.1	8.6	11.8	9.4	10.7	8.4	4.1	6.2	7.7	5.6	6.5
10	9.0	8.2	8.6	12.3	9.4	10.7	8.5	4.2	6.7	10.0	6.3	7.9
11	9.6	8.4	8.9	11.0	7.6	9.6	7.9	6.5	7.2	10.0	6.2	7.7
12	9.9	8.5	8.8	11.0	9.3	10	8.2	6.6	7.1	7.3	4.2	6.3
13	9.3	8.4	8.8	10.7	7.2	9.3	8.4	6.9	7.7	5.8	4.1	4.8
14	9.8	8.4	9.0	12.1	6.0	9.1	8.4	7.1	7.6	6.7	4.5	5.7
15	9.2	8.4	8.7	8.1	3.1	6.2	8.2	7.4	7.8	8.8	6.5	7.4
16	10.2	8.0	8.9	9.4	3.4	7.3	7.8	6.9	7.5	8.6	6.4	7.3
17	9.6	7.9	8.7	12.0	7.1	9.4	7.5	6.5	7.1	6.9	5.5	6.3
18	8.4	7.2	7.8	11.8	3.4	8.4	8.3	---	7.6	8.1	6.4	7.3
19	8.1	7.3	7.7	11.8	5.0	9.4	7.6	6.6	7.1	8.6	7.8	8.2
20	8.0	7.1	7.6	9.3	4.7	8.1	7.6	6.3	7.0	10.0	8.2	8.8
21	8.6	7.6	8.1	9.3	7.2	8.2	8.1	7.1	7.4	10.8	7.2	8.8
22	8.6	8.0	8.2	9.4	6.3	7.9	8.2	7.0	7.7	9.7	6.6	8.0
23	8.4	7.6	8.0	7.8	5.3	7.1	8.8	7.3	7.9	10.6	6.2	7.8
24	8.2	7.5	7.8	8.7	6.3	7.6	8.5	6.0	7.3	7.1	4.8	5.6
25	9.9	7.2	8.3	8.2	5.5	7.2	9.6	7.0	8.2	6.8	4.9	5.8
26	10.6	7.1	8.9	7.7	6.9	7.2	9.6	6.4	8.2	10.0	4.7	6.9
27	14.0	8.8	10.4	8.2	6.6	7.3	9.5	6.4	8.0	12.1	7.5	9.3
28	10.6	7.3	8.9	7.5	6.8	7.2	13.6	6.6	8.4	8.6	7.5	8.1
29	9.7	6.2	8.2	8.1	6.3	7.3	9.5	6.5	8.4	9.3	7.0	8.5
30	8.2	6.2	7.5	8.7	6.9	7.8	8.8	5.7	7.1	9.4	8.6	8.9
31	---	---	---	8.6	7.5	8.1	8.0	5.3	6.8	---	---	---
MONTH	14.0	4.9	8.6	12.3	3.1	8.1	---	---	7.5	12.4	3.6	7.5

e Estimated

TURBIDITY, FIELD YSI 6026 FROM DCP, in (NTU), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	21	13	17	32	14	22	23	18	20	---	---	---
2	33	15	22	27	17	22	22	18	20	---	---	---
3	26	21	23	20	13	16	25	18	22	---	---	---
4	41	18	26	17	13	15	28	22	25	---	---	---
5	38	26	30	20	12	16	64	26	34	---	---	---
6	27	17	22	19	13	16	30	20	25	---	---	---
7	30	18	24	22	16	19	41	18	27	---	---	---
8	39	27	32	35	17	30	39	24	34	---	---	---
9	38	31	33	34	19	27	32	22	27	---	---	---
10	53	25	39	25	18	20	31	24	27	---	---	---
11	34	19	27	21	15	18	34	26	30	---	---	---
12	70	20	25	21	17	19	32	17	27	---	---	---
13	99	26	37	29	19	23	30	22	27	---	---	---
14	47	22	31	31	22	27	26	20	24	---	---	---
15	46	24	35	25	19	21	28	24	26	---	---	---
16	34	23	27	22	17	20	34	21	26	---	---	---
17	30	24	27	26	19	23	28	19	24	---	---	---
18	36	26	30	37	20	25	51	18	27	---	---	---
19	32	20	25	38	29	35	39	24	31	---	---	---
20	25	18	22	29	25	28	26	18	22	---	---	---
21	24	20	23	28	21	24	26	20	24	---	---	---
22	26	17	22	26	21	23	55	25	37	---	---	---
23	22	16	18	30	23	26	51	33	41	---	---	---
24	56	17	36	76	29	52	41	30	36	---	---	---
25	42	20	31	44	28	32	34	24	28	---	---	---
26	27	18	23	55	30	36	38	27	32	---	---	---
27	24	17	21	47	38	43	34	25	29	---	---	---
28	32	20	26	40	32	36	36	17	24	---	---	---
29	32	24	28	33	23	28	34	22	28	---	---	---
30	28	22	26	28	22	25	25	20	22	---	---	---
31	33	25	29	---	---	---	---	---	e20	---	---	---
MONTH	99	13	27	76	12	26	---	---	27	---	---	---

07144790 CHENEY RESERVOIR NEAR CHENEY, KS--Continued

TURBIDITY, FIELD YSI 6026 FROM DCP, in (NTU), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	24	9.1	13	10	7.6	8.6	48	22	33
2	---	---	---	40	16	27	50	7.9	21	41	28	34
3	---	---	---	36	10	20	19	12	16	32	24	27
4	---	---	---	12	7.4	9.2	15	9.7	12	29	20	23
5	---	---	---	9.5	6.8	8.1	14	9.7	11	29	20	25
6	---	---	---	16	6.6	8.8	16	9.8	12	28	24	26
7	---	---	---	13	7.4	9.3	18	12	15	29	23	26
8	---	---	---	56	7.3	13	43	11	18	48	23	28
9	---	---	---	63	12	36	20	10	14	44	24	29
10	---	---	---	15	13	14	15	9.3	12	29	18	23
11	---	---	---	---	---	e13	19	13	15	39	29	34
12	---	---	---	---	---	---	26	12	18	48	30	42
13	---	---	---	---	---	e8.3	18	12	14	40	26	32
14	---	---	---	31	7.9	13	13	12	12	27	22	25
15	---	5.5	e8.8	31	16	21	24	13	18	37	24	27
16	11	3.6	6.1	21	8.9	14	26	17	e20	37	22	26
17	7.0	3.4	5.1	11	6.8	8.3	28	20	23	46	25	32
18	8.2	4.5	6.2	11	5.8	7.6	26	20	23	26	18	22
19	19	4.1	9.2	25	5.4	12	71	22	41	32	17	21
20	16	5.3	9.9	20	11	14	34	25	29	29	16	21
21	36	5.9	14	54	14	20	41	24	31	25	17	21
22	12	5.4	7.6	21	13	16	28	23	25	31	20	26
23	8.3	4.7	6.3	17	13	14	28	22	25	23	---	e20
24	42	6.0	13	41	12	18	78	22	47	29	---	21
25	32	16	22	26	15	18	40	28	32	24	---	e19
26	47	21	36	22	11	13	37	26	31	17	13	14
27	46	10	21	14	10	12	46	35	40	17	12	e14
28	14	8.9	11	---	---	e11	46	28	39	13	10	e12
29	---	---	---	---	8.9	e21	31	21	27	17	12	13
30	---	---	---	14	7.4	10	35	22	27	11	7.1	9.2
31	---	---	---	12	7.0	8.7	---	---	---	8.6	6.9	7.5
MONTH	---	---	---	---	---	---	78	7.6	23	48	---	24

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	8.3	6.6	e7.2	24	15	18	98	---	e57	25	14	18
2	9.2	6.7	7.7	22	18	19	120	17	53	23	13	17
3	14	8.5	10	35	15	18	100	---	e46	24	12	17
4	19	6.9	12	25	14	16	100	16	e49	18	8.8	13
5	10	8.0	9.4	18	14	16	---	---	e21	37	9.6	14
6	16	12	13	25	12	16	---	---	e14	23	8.8	13
7	---	7.1	e8.3	18	9.9	12	18	12	13	68	9.7	15
8	12	7.6	11	15	6.6	10	16	10	12	15	9.6	12
9	13	9.5	e11	20	9.7	13	21	10	14	13	8.0	11
10	17	9.5	13	54	12	20	19	12	14	35	8.4	18
11	24	16	19	44	10	22	20	11	15	18	9.7	16
12	25	16	21	92	11	24	31	16	20	21	12	16
13	27	15	20	94	23	40	31	17	24	20	11	14
14	61	15	25	140	37	71	44	17	20	20	12	16
15	26	13	17	200	77	120	32	18	21	24	14	17
16	20	13	15	200	58	140	27	16	21	19	10	13
17	19	11	13	200	---	e100	36	22	27	24	11	17
18	28	17	20	110	37	65	---	24	27	21	14	17
19	43	24	33	93	30	45	28	19	23	23	16	20
20	47	23	28	51	15	30	22	17	19	25	12	19
21	31	18	22	33	16	21	23	16	19	34	7.5	19
22	75	18	28	34	13	23	23	17	19	26	7.8	19
23	41	22	26	46	14	29	33	15	20	26	8.0	15
24	43	25	31	130	12	39	23	13	19	25	9.9	18
25	47	24	30	91	15	48	20	11	15	22	12	17
26	37	16	28	88	16	59	18	7.8	12	49	10	20
27	41	22	31	94	29	70	23	8.0	14	40	12	18
28	66	19	40	110	16	e58	14	8.8	10	25	12	18
29	98	16	47	120	17	63	21	8.2	12	18	11	16
30	37	12	18	---	---	e46	16	8.9	12	28	16	19
31	---	---	---	---	---	e37	20	12	16	---	---	---
MONTH	---	6.6	20	---	---	42	---	---	22	68	7.5	16

e Estimated

07144795 NORTH FORK NINNESCAH RIVER AT CHENEY DAM, KS

LOCATION.--Lat 37°43'17", long 97°47'39", in NE $^{1}/_{4}$ SW $^{1}/_{4}$ SE $^{1}/_{4}$ sec.6, T.27 S., R.4 W., Sedgwick County, Hydrologic Unit 11030014, on right bank 1,400 ft downstream from Cheney Dam, 6.0 mi north of Cheney, and at mile 15.5.

DRAINAGE AREA.--901 mi^2, of which 237 mi^2 is probably noncontributing.

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

GAGE.--Water-stage recorder and concrete Parshall flume. Datum of gage is 1,366.02 ft above NGVD of 1929 (Bureau of Reclamation bench mark). Prior to Oct. 1, 1973, at datum 1.00 ft higher.

REMARKS.--Records poor. Flow completely regulated since 1964 by Cheney Reservoir (station 07144790), 1,400 ft upstream. Satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.32	0.08	0.08	e0.05	0.04	0.07	0.08	0.16	0.67	0.87	0.33	0.23
2	0.30	0.07	0.09	e0.02	e0.03	0.03	0.08	0.16	0.73	0.90	0.30	0.20
3	0.29	0.07	0.10	e0.02	e0.04	0.02	0.10	0.16	0.74	0.93	0.29	0.23
4	0.31	0.06	0.09	e0.01	0.05	0.11	0.10	0.17	0.87	0.86	0.28	0.21
5	0.47	0.08	0.09	e0.04	0.05	0.12	0.11	0.16	0.53	0.81	0.31	0.20
6	0.35	0.08	0.12	e0.03	0.06	0.07	0.12	0.17	0.57	0.79	0.32	0.20
7	0.43	0.06	0.09	e0.03	0.06	0.05	0.13	0.23	0.58	0.83	0.34	0.19
8	0.42	0.08	e0.09	e0.05	0.07	0.06	0.20	0.73	0.69	0.81	0.31	0.19
9	0.35	0.09	e0.09	e0.05	0.08	0.06	0.94	0.21	0.63	1.0	0.31	0.20
10	0.36	0.08	e0.09	e0.03	0.08	0.02	0.19	0.22	0.53	0.97	0.35	0.14
11	0.45	0.09	e0.09	e0.01	0.03	0.03	0.40	0.33	0.58	0.63	0.30	0.12
12	0.48	e0.09	e0.09	0.01	0.03	0.02	0.22	0.57	1.4	0.64	0.39	0.10
13	0.49	e0.08	e0.09	0.01	0.03	0.02	0.15	0.23	0.50	0.66	1.1	0.10
14	0.50	e0.07	e0.09	0.00	0.03	0.04	0.15	0.27	0.38	0.66	0.30	0.10
15	0.52	e0.06	0.09	0.00	0.03	0.05	0.16	0.32	0.60	0.61	0.26	0.08
16	0.54	e0.05	0.08	0.00	0.02	0.05	0.16	0.39	0.47	0.61	0.27	0.07
17	0.54	0.04	0.08	0.00	0.02	0.05	0.15	0.48	0.38	0.56	0.25	0.09
18	0.50	0.05	0.07	0.00	0.04	0.05	0.15	0.37	0.39	0.58	0.24	0.08
19	0.43	0.06	0.08	0.00	0.06	0.05	0.15	0.36	0.38	0.56	0.23	0.12
20	0.42	0.07	0.07	0.00	0.04	0.05	0.17	0.38	0.38	0.54	0.24	0.12
21	0.37	0.09	0.07	0.00	0.02	0.07	0.19	0.40	0.40	0.51	0.24	0.12
22	0.32	0.09	0.08	0.00	0.02	0.07	0.16	0.43	0.39	0.48	0.24	0.12
23	0.35	0.08	0.07	0.00	0.02	0.07	0.17	0.53	0.38	0.40	0.24	0.12
24	0.39	0.11	0.06	0.00	0.02	0.06	0.16	0.62	0.51	0.41	0.40	0.12
25	0.32	0.12	0.07	0.00	0.03	0.06	0.13	0.59	0.60	0.42	0.26	0.13
26	0.29	0.10	0.07	0.01	0.00	0.07	0.17	0.50	0.63	0.41	0.25	0.13
27	0.34	0.11	0.07	0.02	0.01	0.08	0.20	0.52	0.69	0.41	0.24	0.14
28	0.31	0.07	0.08	0.02	0.05	0.08	0.16	0.52	0.70	0.49	0.23	0.14
29	0.12	0.07	0.08	0.02	---	0.08	0.17	0.51	0.70	0.43	0.25	0.12
30	0.10	0.07	e0.07	0.03	---	0.07	0.15	0.56	0.73	0.33	0.22	0.12
31	0.10	---	e0.07	0.04	---	0.08	---	0.59	---	0.34	0.23	---
MEAN	0.370	0.077	0.082	0.016	0.038	0.058	0.186	0.382	0.591	0.627	0.307	0.141
MAX	0.54	0.12	0.12	0.05	0.08	0.12	0.94	0.73	1.4	1.0	1.1	0.23
MIN	0.10	0.04	0.06	0.00	0.00	0.02	0.08	0.16	0.38	0.33	0.22	0.07
AC-FT	23	4.6	5.1	1.0	2.1	3.6	11	23	35	39	19	8.4

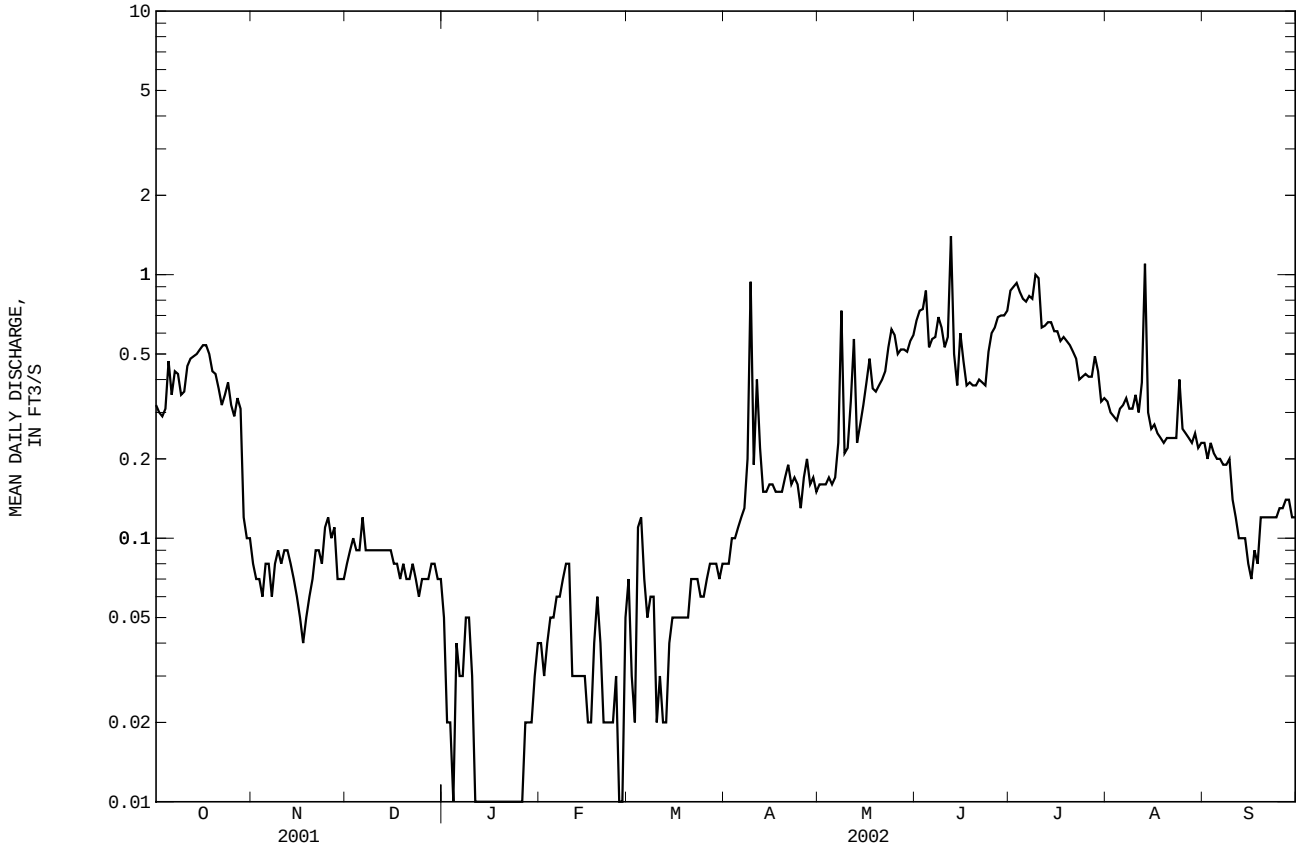
07144795 NORTH FORK NINNESCAH RIVER AT CHENEY DAM, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	110.3	124.7	61.20	63.78	96.90	141.0	219.1	197.1	202.2	112.3	26.30	76.52
MAX	1054	1782	334	360	569	681	933	1142	1504	1162	377	973
(WY)	1974	1980	1993	1998	1993	2001	1973	1993	1995	1987	1993	1977
MIN	0.13	0.077	0.082	0.016	0.038	0.058	0.11	0.14	0.10	0.12	0.11	0.031
(WY)	2001	2002	2002	2002	2002	2002	1965	1965	1966	1966	1985	2000

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1965 - 2002	
ANNUAL MEAN	153.9		0.241		119.0	
HIGHEST ANNUAL MEAN					406	1993
LOWEST ANNUAL MEAN					0.24	2002
HIGHEST DAILY MEAN	1000	Mar 20	1.4	Jun 12	1910	Apr 30 1969
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Jan 14	0.00	May 18 1966
ANNUAL SEVEN-DAY MINIMUM	0.00	Aug 10	0.00	Jan 14	0.00	Aug 16 1980
MAXIMUM PEAK FLOW			4.8	Apr 9	2070	Nov 13 1979
MAXIMUM PEAK STAGE			1.69	Apr 9	5.51	Jul 13 1987
INSTANTANEOUS LOW FLOW			0.00	Jan 14	.00	at times
ANNUAL RUNOFF (AC-FT)	111400		175		86240	
10 PERCENT EXCEEDS	681		0.58		378	
50 PERCENT EXCEEDS	0.96		0.14		0.47	
90 PERCENT EXCEEDS	0.07		0.03		0.14	

e Estimated



07144910 SOUTH FORK NINNESCAH RIVER NEAR PRATT, KS

LOCATION.--Lat 37°38'16", long 98°43'14", in NW $^{1}/_{4}$ NW $^{1}/_{4}$ SW $^{1}/_{4}$ sec.2, T.28 S., R.13 W., Pratt County, Hydrologic Unit 11030015, on left bank at downstream side of county highway bridge, 500 ft southwest of sewage disposal facility at Pratt, 3.3 mi downstream from major left bank tributary, and at mile 135.2.

DRAINAGE AREA.--117 mi^2, approximately.

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

GAGE.--Water-stage recorder. Datum of gage is 1,820.83 ft above NGVD of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow regulated at times by State Fish Hatchery diversion, 0.5 mi upstream. Satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.2	8.0	8.1	8.9	9.2	9.4	9.0	8.0	7.0	9.1	9.1	5.7
2	6.1	7.7	8.2	9.0	9.1	9.3	8.9	8.0	6.7	9.8	8.3	5.5
3	6.1	7.8	8.1	9.2	9.3	9.3	8.9	7.9	6.4	9.9	6.7	5.2
4	6.2	7.6	8.1	9.1	9.2	9.6	9.0	7.8	120	9.4	5.5	4.9
5	6.3	7.7	8.3	9.0	9.4	9.6	9.2	7.8	140	8.5	4.4	4.6
6	6.4	8.6	8.0	9.0	9.5	9.5	9.1	7.8	36	8.2	4.2	4.5
7	6.3	8.1	8.2	8.9	10	9.5	9.3	24	19	7.8	4.0	4.5
8	6.3	7.8	8.2	8.9	12	9.5	19	23	15	7.1	4.0	4.4
9	6.5	7.7	8.2	8.9	13	9.5	11	11	12	6.9	4.2	4.6
10	6.6	8.0	8.2	8.9	11	9.5	9.4	9.4	13	6.8	4.6	4.8
11	6.7	8.0	8.3	8.9	e10	9.6	9.1	19	12	12	4.5	4.8
12	6.6	8.0	8.3	8.8	e10	9.6	8.9	16	21	8.5	6.3	4.7
13	6.7	8.0	8.4	8.8	9.4	9.5	8.8	13	11	8.2	17	5.6
14	6.6	8.0	8.4	8.7	9.4	9.4	8.8	11	9.6	7.9	19	8.0
15	6.7	8.0	8.3	8.7	9.5	9.2	8.4	12	14	7.5	18	6.3
16	6.7	7.8	8.3	8.8	9.4	9.2	8.3	9.6	10	8.2	11	5.7
17	6.8	7.8	8.3	8.7	9.2	9.3	8.7	9.1	9.4	10	8.4	4.8
18	6.8	8.1	8.4	8.8	9.2	9.2	8.6	8.6	8.7	7.3	7.1	4.7
19	6.9	7.9	8.4	8.9	9.3	9.3	8.5	8.3	8.1	5.0	6.0	4.9
20	7.0	7.9	8.6	8.8	9.2	9.2	17	8.2	8.0	4.9	5.4	5.0
21	7.1	7.9	8.6	8.9	9.1	9.1	14	8.0	7.7	4.7	5.7	4.7
22	7.1	7.9	8.7	8.9	9.0	9.1	11	7.9	7.5	4.8	4.5	4.5
23	7.2	8.0	8.8	8.7	8.9	9.1	9.5	7.7	7.3	5.2	4.4	4.4
24	7.1	8.0	8.8	8.7	8.9	9.2	9.0	9.6	7.2	5.1	43	4.5
25	7.2	7.8	8.8	8.8	8.9	9.1	8.5	8.8	7.2	4.5	35	4.4
26	7.7	7.7	8.9	8.6	8.9	9.0	8.4	8.6	20	4.1	18	4.4
27	7.7	7.8	8.9	8.6	8.9	9.0	8.6	8.3	12	4.0	10	4.6
28	7.7	7.9	8.9	8.6	9.0	9.0	8.3	8.3	8.9	8.0	7.6	4.7
29	7.7	8.0	8.9	8.8	---	9.1	8.2	8.0	8.4	9.2	6.7	4.4
30	7.8	8.2	8.9	10	---	8.9	8.2	8.3	8.3	7.1	6.0	4.3
31	8.0	---	8.9	9.7	---	8.9	---	7.4	---	6.3	5.8	---
MEAN	6.865	7.923	8.465	8.903	9.568	9.281	9.720	10.34	19.38	7.290	9.819	4.937
MAX	8.0	8.6	8.9	10	13	9.6	19	24	140	12	43	8.0
MIN	6.1	7.6	8.0	8.6	8.9	8.9	8.2	7.4	6.4	4.0	4.0	4.3
AC-FT	422	471	520	547	531	571	578	636	1150	448	604	294

07144910 SOUTH FORK NINNESCAH RIVER NEAR PRATT, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1981 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	13.13	15.47	12.35	12.07	13.04	21.74	26.23	29.87	21.04	23.40	19.32	12.37
MAX	42.2	81.5	28.5	16.8	22.8	110	251	160	46.9	143	169	100
(WY)	1986	1997	1985	1998	2000	2000	1991	1995	1995	1997	1996	1996
MIN	6.02	7.73	8.46	8.90	8.89	9.28	7.61	7.20	6.76	5.72	3.55	4.24
(WY)	1995	1995	2002	2002	1992	2002	1992	1992	1994	1990	1990	1984

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1981 - 2002	
ANNUAL MEAN	11.78		9.360		18.37	
HIGHEST ANNUAL MEAN					39.4	1997
LOWEST ANNUAL MEAN					9.36	2002
HIGHEST DAILY MEAN	84	Mar 16	140	Jun 5	6240	Apr 13 1991
LOWEST DAILY MEAN	4.2	Aug 22	4.0	Jul 27	0.85	Sep 8 1990
ANNUAL SEVEN-DAY MINIMUM	4.7	Aug 4	4.3	Aug 5	1.1	Sep 3 1990
MAXIMUM PEAK FLOW			343	Jun 4	26200	Apr 13 1991
MAXIMUM PEAK STAGE			6.19	Jun 4	14.27	Apr 13 1991
INSTANTANEOUS LOW FLOW			3.3	Jul 26	0.75	Sep 7 1990
ANNUAL RUNOFF (AC-FT)	8530		6780		13310	
10 PERCENT EXCEEDS	19		11		19	
50 PERCENT EXCEEDS	9.1		8.4		11	
90 PERCENT EXCEEDS	5.4		4.9		5.9	

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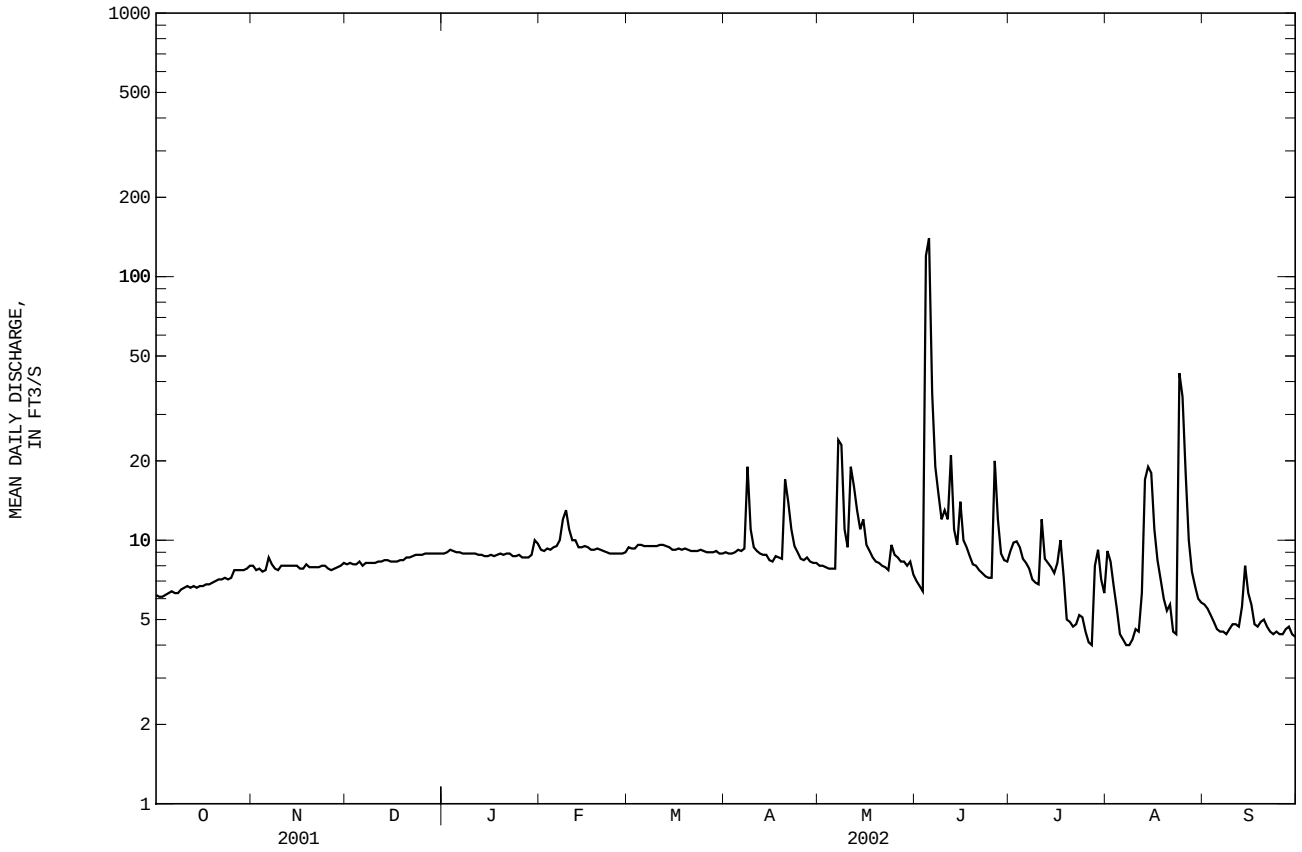

07145200 SOUTH FORK NINNESCAH RIVER NEAR MURDOCK, KS

LOCATION.--Lat 37°33'51", long 97°51'10", in SW $^1/_4$ SW $^1/_4$ SE $^1/_4$ sec.34, T.28 S., R.5 W., Kingman County, Hydrologic Unit 11030015, on right bank at upstream side of county highway bridge, 4.0 mi southeast of Murdock, and at mile 68.0.

DRAINAGE AREA.--650 mi^2, of which 107 mi^2 is probably noncontributing.

PERIOD OF RECORD.--August 1950 to September 1959. Annual maximums, water years 1960-64. June 1964 to current year.

REVISED RECORDS.--WSP 1561: 1957(P).

GAGE.--Water-stage recorder. Datum of gage is 1,357.81 ft above NGVD of 1929 (U.S. Army 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.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Natural flow affected by ground-water withdrawals, diversions for irrigation, and return flow from irrigated areas. Satellite telemeter at station.

PEAK DISCHARGES GREATER THAN BASE FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft^3/s and maximum (*):

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 12	2000	2,270	6.91	Jun 13	0600	*2,300	*6.93

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	111	117	141	e143	e116	e195	130	133	118	111	89	81
2	106	116	142	e192	e131	e178	134	138	110	114	84	77
3	105	115	140	e266	e259	e103	128	136	103	116	82	78
4	105	113	137	e221	226	e133	128	135	141	111	80	77
5	119	114	122	e203	208	e254	128	129	295	105	77	74
6	114	117	129	e230	196	e245	126	125	327	103	73	77
7	107	117	134	e259	188	185	150	121	309	103	68	71
8	101	117	135	e237	179	180	166	1110	197	102	72	71
9	96	116	134	163	217	190	229	989	160	99	72	74
10	99	118	135	145	267	162	223	458	123	99	72	76
11	99	119	135	135	214	152	221	335	112	112	74	77
12	102	119	139	128	198	139	245	1260	594	118	85	78
13	109	122	139	123	194	140	166	996	1570	113	109	79
14	112	123	133	126	184	133	155	494	604	113	150	85
15	115	123	129	124	177	126	146	352	411	109	121	88
16	112	121	131	124	171	119	145	299	1030	102	94	87
17	111	120	129	122	172	120	143	291	468	98	85	83
18	111	132	129	129	170	124	136	242	308	96	84	85
19	110	139	126	141	183	136	134	186	235	93	81	87
20	110	133	130	140	177	148	145	160	192	91	78	87
21	111	134	135	140	161	158	195	139	172	86	77	85
22	111	135	143	139	155	147	192	126	159	85	77	80
23	111	135	144	137	153	144	175	131	142	85	73	78
24	115	141	138	132	154	149	169	140	128	86	87	78
25	114	130	145	126	158	158	149	327	121	83	293	81
26	114	131	167	129	139	152	144	324	117	80	272	83
27	114	132	175	123	115	149	149	e118	114	76	137	84
28	114	144	163	124	e171	143	144	e108	114	80	108	83
29	116	148	e143	126	---	143	132	e100	148	118	98	80
30	115	147	e119	e120	---	138	130	128	114	109	90	74
31	115	---	e137	e105	---	136	---	127	---	95	84	---
MEAN	109.8	126.3	138.0	153.3	179.8	154.2	158.6	318.0	291.2	99.71	100.8	79.93
MAX	119	148	175	266	267	254	245	1260	1570	118	293	88
MIN	96	113	119	105	115	103	126	100	103	76	68	71
AC-FT	6750	7510	8490	9430	9980	9480	9440	19550	17330	6130	6200	4760

07145200 SOUTH FORK NINNESCAH RIVER NEAR MURDOCK, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	205.6	196.5	165.8	154.6	186.9	267.0	258.2	318.0	311.9	165.0	113.6	170.2
MAX	1215	820	319	305	486	1110	726	1100	1808	889	372	1271
(WY)	1974	1980	1974	1988	2001	1973	1973	1957	1957	1987	1977	1973
MIN	38.4	71.9	79.6	72.1	113	93.9	84.3	86.7	41.5	31.2	13.7	19.0
(WY)	1957	1957	1957	1957	1981	1955	1955	1956	1956	1954	1956	1956

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1951 - 2002	
ANNUAL MEAN	239.6		158.9		210.1	
HIGHEST ANNUAL MEAN					371	1973
LOWEST ANNUAL MEAN					89.0	1956
HIGHEST DAILY MEAN	2520	Jun 9	1570	Jun 13	18000	Oct 31 1979
LOWEST DAILY MEAN	68	Aug 7	68	Aug 7	7.9	Aug 4 1956
ANNUAL SEVEN-DAY MINIMUM	69	Aug 4	73	Aug 5	8.8	Aug 3 1956
MAXIMUM PEAK FLOW			2300	Jun 13	28700	Oct 31 1979
MAXIMUM PEAK STAGE			6.93	Jun 13	12.84	Oct 31 1979
INSTANTANEOUS LOW FLOW			66	Aug 7	5.0	Aug 5 1964
ANNUAL RUNOFF (AC-FT)	173400		115000		152200	
10 PERCENT EXCEEDS	423		227		310	
50 PERCENT EXCEEDS	140		129		136	
90 PERCENT EXCEEDS	79		83		68	

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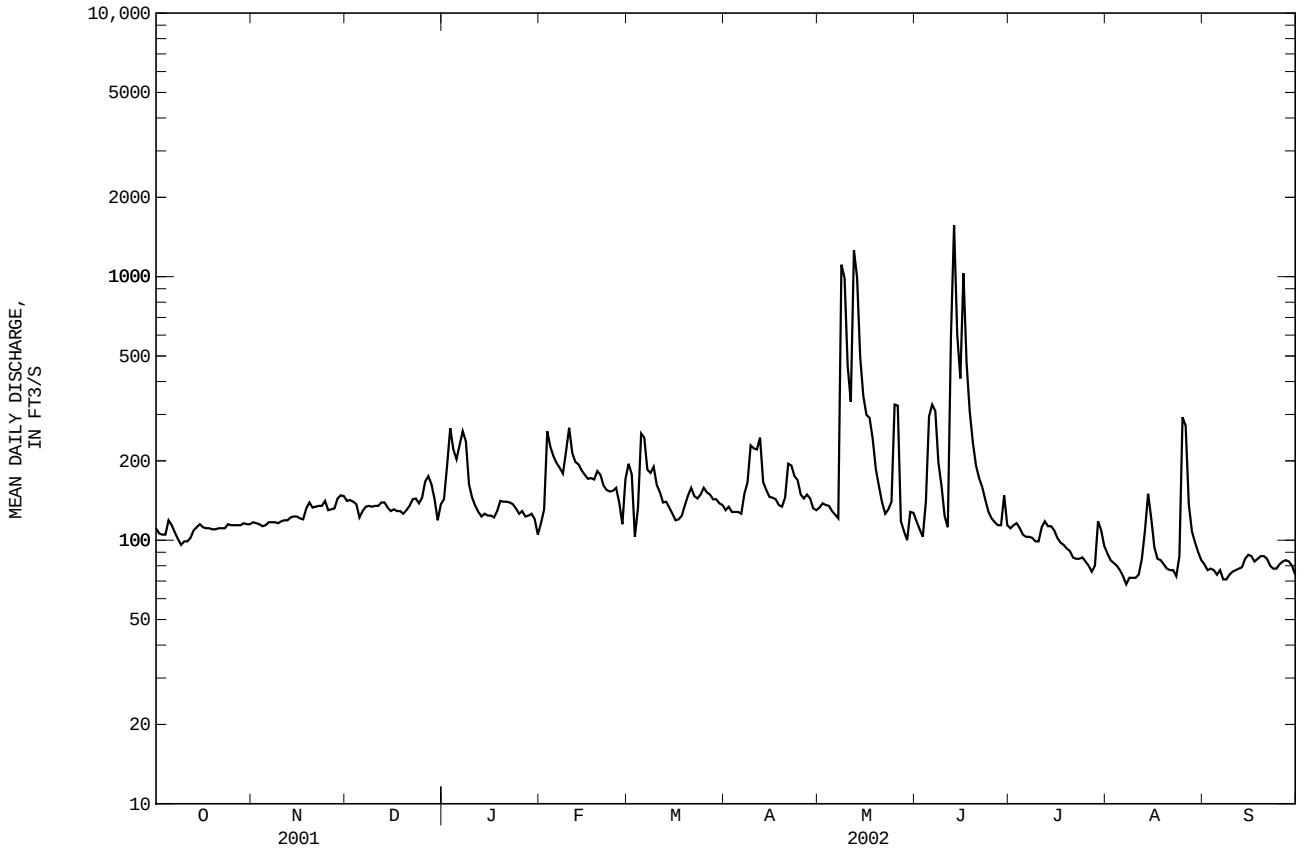


07145500 NINNESCAH RIVER NEAR PECK, KS

LOCATION.--Lat 37°27'26", long 97°25'20", in NW $^1/_4$ SW $^1/_4$ NW $^1/_4$ sec.10, T.30 S., R.1 W., Sumner County, Hydrologic Unit 11030016, on right bank at downstream side of county highway bridge, 3.0 mi southwest of Peck, and at mile 31.6.

DRAINAGE AREA.--2,129 mi^2, of which 344 mi^2 is probably noncontributing.

PERIOD OF RECORD.--October 1937 to current year. Prior to April 1938 monthly discharge only, published in WSP 1311.

REVISED RECORDS.--WSP 1117: Drainage area. WSP 1211: 1944(M). WSP 1241: 1944, 1945(M), 1947-48(M).

GAGE.--Water-stage recorder. Datum of gage is 1,222.38 ft above NGVD of 1929 (levels by U.S. Army Corps of Engineers). Prior to Feb. 4, 1939, nonrecording gage at present site and datum.

REMARKS.--Records good. Flow partially regulated since 1964 by Cheney Reservoir (station 07144790). Satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 9, 1923, reached a stage of 26.4 ft from floodmark, discharge, about 70,000 ft^3/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

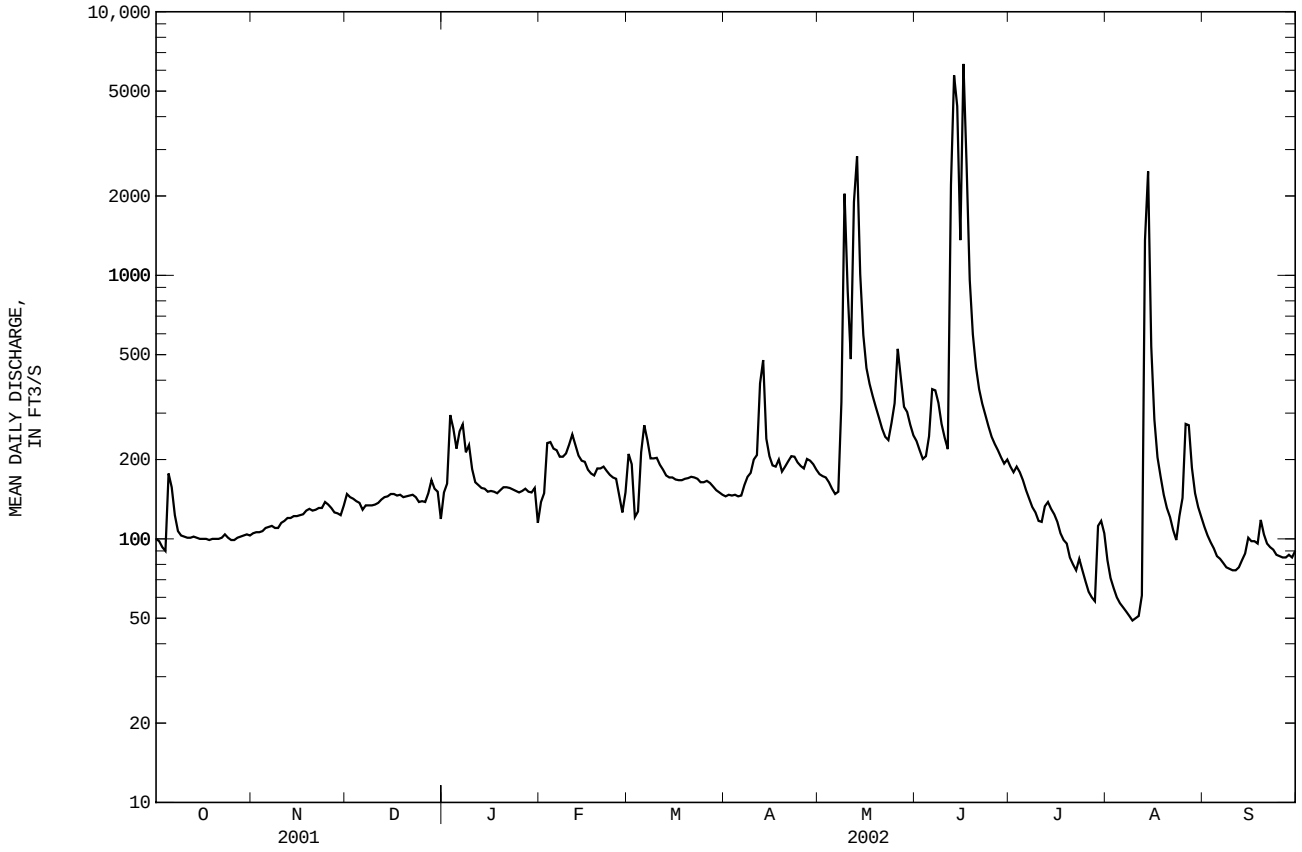
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	100	105	148	150	138	210	145	176	235	188	83	111
2	98	106	144	162	149	192	147	173	217	179	71	103
3	93	106	142	295	231	121	146	171	201	188	65	97
4	90	107	139	262	233	127	147	164	206	179	60	92
5	177	110	137	220	220	213	145	155	245	167	57	86
6	157	111	129	256	217	270	146	148	370	153	55	84
7	123	112	134	272	205	237	160	151	366	142	53	81
8	107	110	134	213	205	202	172	330	328	132	51	78
9	103	110	134	227	211	202	178	2040	273	126	49	77
10	102	115	135	184	228	203	200	876	242	117	50	76
11	101	117	137	164	249	191	208	481	219	116	51	76
12	101	120	141	160	227	183	389	1900	2200	133	61	78
13	102	120	144	156	207	174	477	2830	5740	138	1360	83
14	101	122	145	155	198	171	240	1010	4380	130	2480	88
15	100	122	148	151	196	171	206	593	1360	124	537	101
16	100	123	148	152	183	168	190	445	6340	116	284	98
17	100	124	146	151	177	167	188	387	2610	105	204	98
18	99	128	147	149	174	167	200	348	962	99	172	96
19	100	130	144	153	185	169	180	316	597	96	147	118
20	100	128	145	157	185	170	188	288	448	85	131	104
21	100	129	146	157	188	172	197	262	370	80	121	96
22	101	131	147	156	181	171	206	244	326	76	108	93
23	104	131	144	154	175	169	205	237	295	84	99	91
24	101	138	138	152	171	164	195	275	267	76	122	87
25	99	135	139	150	169	164	189	327	244	69	143	86
26	99	131	138	152	146	166	185	526	229	63	273	85
27	101	126	149	155	126	163	201	407	217	60	270	85
28	102	125	167	151	150	158	198	317	204	58	186	87
29	103	123	155	150	---	153	192	303	193	112	149	85
30	104	134	151	156	---	150	183	271	200	117	132	90
31	103	---	119	115	---	147	---	247	---	105	121	---
MEAN	105.5	121.0	142.4	175.4	190.1	176.9	200.1	529.0	1003	116.5	249.8	90.33
MAX	177	138	167	295	249	270	477	2830	6340	188	2480	118
MIN	90	105	119	115	126	121	145	148	193	58	49	76
AC-FT	6490	7200	8760	10780	10560	10880	11910	32530	59670	7170	15360	5380

07145500 NINNESCAH RIVER NEAR PECK, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	449.0	440.1	324.7	325.4	439.9	642.5	711.8	833.2	882.0	491.1	274.7	436.6
MAX	3170	2767	1032	1429	3027	3245	3568	4314	3813	3258	1397	2705
(WY)	1986	1980	1945	1949	1949	1973	1944	1993	1957	1948	1948	1977
MIN	38.5	80.9	95.5	81.5	117	104	120	91.4	43.0	18.3	5.43	3.24
(WY)	1940	1955	1957	1957	1967	1967	1972	1967	1956	1954	1956	1956

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1938 - 2002	
ANNUAL MEAN	501.0		257.8		519.7	
HIGHEST ANNUAL MEAN					1234	1993
LOWEST ANNUAL MEAN					158	1966
HIGHEST DAILY MEAN	9000	Feb 25	6340	Jun 16	33700	May 17 1957
LOWEST DAILY MEAN	54	Aug 30	49	Aug 9	0.20	Sep 3 1956
ANNUAL SEVEN-DAY MINIMUM	57	Aug 24	52	Aug 5	0.34	Sep 1 1956
MAXIMUM PEAK FLOW			7770	Jun 16	38200	May 17 1957
MAXIMUM PEAK STAGE			12.68	Jun 16	21.85	May 17 1957
INSTANTANEOUS LOW FLOW			45	Jul 26	0.20	Sep 3 1956
ANNUAL RUNOFF (AC-FT)	362700		186700		376500	
10 PERCENT EXCEEDS	1120		298		1020	
50 PERCENT EXCEEDS	220		150		239	
90 PERCENT EXCEEDS	69		88		77	



07145700 SLATE CREEK AT WELLINGTON, KS

LOCATION.--Lat 37°15'00", long 97°24'12", in SE $^{1}/_{4}$ NE $^{1}/_{4}$ SE $^{1}/_{4}$ sec.22, T.32 S., R.1 W., Sumner County, Hydrologic Unit 11030013, on right bank at upstream side of bridge on U.S. Highway 81, at south edge of Wellington.

DRAINAGE AREA.--154 mi^{2}.

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 above NGVD of 1929. Prior to Apr. 1, 1969, crest-stage gage at present site and at datum 3.0 ft higher.

REMARKS.--Records good. Satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft^{3}/s and maximum (*):

Date	Time	Discharge (ft^{3}/s)	Gage height (ft)	Date	Time	Discharge (ft^{3}/s)	Gage height (ft)
May 8	0000	*3,320	*19.52	Jun 12	1700	2,530	18.05
May 12	2100	1,030	12.75	Jun 16	1300	1,930	16.56

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

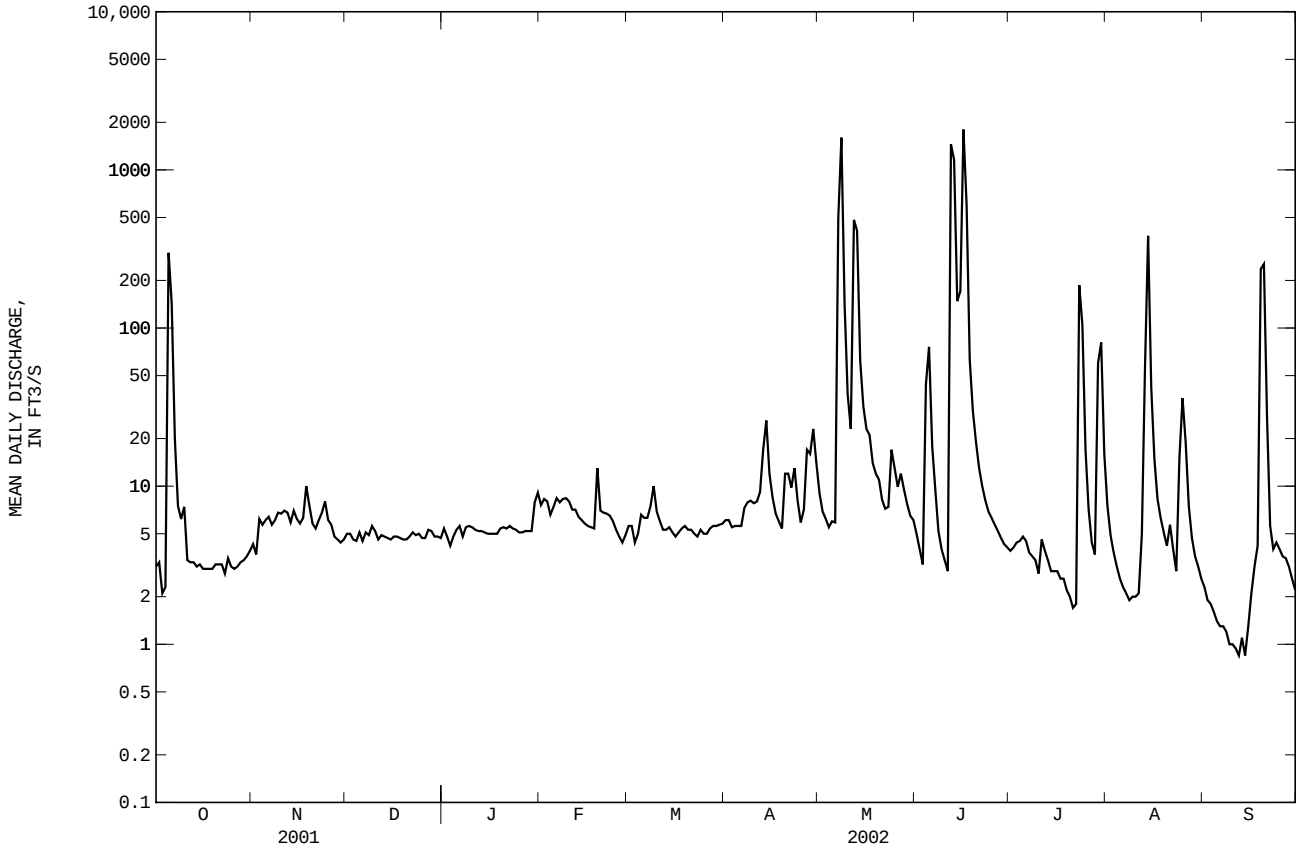
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.1	4.3	5.0	5.4	7.6	5.6	6.1	9.0	5.0	3.9	7.5	2.3
2	3.3	3.7	5.0	4.8	8.3	5.6	6.1	6.9	4.0	4.1	4.9	1.9
3	2.1	6.2	4.6	4.2	8.0	4.4	5.5	6.2	3.2	4.4	3.8	1.8
4	2.3	5.7	4.5	4.8	6.6	5.0	5.6	5.5	44	4.5	3.1	1.6
5	299	6.1	5.1	5.3	7.4	6.6	5.6	6.0	76	4.8	2.6	1.4
6	143	6.4	4.5	5.6	8.4	6.3	5.6	5.9	18	4.5	2.3	1.3
7	20	5.7	5.1	4.8	7.9	6.3	7.3	498	9.5	3.8	2.1	1.3
8	7.5	6.1	4.9	5.5	8.3	7.5	7.9	1600	5.2	3.6	1.9	1.2
9	6.2	6.8	5.6	5.6	8.4	10	8.1	144	4.0	3.4	2.0	1.0
10	7.4	6.7	5.2	5.5	8.0	6.9	7.8	38	3.4	2.8	2.0	1.0
11	3.4	7.0	4.6	5.3	7.1	6.0	8.0	23	2.9	4.6	2.1	0.94
12	3.3	6.8	4.9	5.2	7.1	5.3	9.2	483	1450	3.9	5.0	0.85
13	3.3	5.9	4.8	5.2	6.4	5.3	17	412	1160	3.4	56	1.1
14	3.1	7.0	4.7	5.1	6.1	5.5	26	62	148	2.9	383	0.85
15	3.2	6.2	4.6	5.0	5.8	5.1	12	32	171	2.9	42	1.3
16	3.0	5.8	4.8	5.0	5.6	4.8	8.5	23	1800	2.9	15	2.1
17	3.0	6.3	4.8	5.0	5.5	5.1	6.7	21	599	2.6	8.3	3.1
18	3.0	10	4.7	5.0	5.4	5.4	6.0	14	63	2.6	6.3	4.2
19	3.0	7.5	4.6	5.4	13	5.6	5.4	12	30	2.2	5.1	236
20	3.2	5.8	4.6	5.5	7.0	5.3	12	11	19	2.0	4.2	254
21	3.2	5.4	4.8	5.4	6.8	5.3	12	8.2	13	1.7	5.7	27
22	3.2	6.1	5.1	5.6	6.7	5.0	9.8	7.2	10	1.8	4.0	5.6
23	2.8	6.8	4.9	5.4	6.5	4.8	13	7.4	8.1	187	2.9	4.0
24	3.5	8.0	5.0	5.3	6.0	5.3	8.1	17	6.9	104	15	4.4
25	3.1	6.1	4.7	5.1	5.3	5.0	5.9	13	6.3	17	36	4.0
26	3.0	5.7	4.7	5.1	4.8	5.0	7.1	9.9	5.7	7.1	19	3.6
27	3.1	4.8	5.3	5.2	4.4	5.4	17	12	5.2	4.4	7.5	3.5
28	3.3	4.6	5.2	5.2	4.9	5.6	16	9.5	4.7	3.7	4.7	3.1
29	3.4	4.4	4.8	5.2	---	5.6	23	7.7	4.3	60	3.6	2.6
30	3.6	4.6	4.8	7.9	---	5.7	14	6.5	4.1	81	3.1	2.2
31	3.9	---	4.7	9.1	---	5.8	---	6.1	---	16	2.6	---
MEAN	18.11	6.083	4.858	5.410	6.904	5.681	10.08	113.5	189.4	17.85	21.40	19.31
MAX	299	10	5.6	9.1	13	10	26	1600	1800	187	383	254
MIN	2.1	3.7	4.5	4.2	4.4	4.4	5.4	5.5	2.9	1.7	1.9	0.85
AC-FT	1110	362	299	333	383	349	600	6980	11270	1100	1320	1150

07145700 SLATE CREEK AT WELLINGTON, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	40.84	64.44	29.25	26.87	58.03	132.7	86.14	101.4	153.6	63.66	48.17	56.35
MAX	318	408	229	116	331	739	477	1091	972	369	408	620
(WY)	1986	1999	2000	1993	2001	1973	1983	1993	1995	1999	1977	1973
MIN	0.32	0.39	1.85	2.30	2.86	3.40	2.39	3.14	0.49	0.17	0.40	0.28
(WY)	1981	1981	1989	1981	1981	1991	1981	1981	1972	1980	1978	1984

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1970 - 2002	
ANNUAL MEAN	57.37		34.88		71.70	
HIGHEST ANNUAL MEAN					210	1993
LOWEST ANNUAL MEAN					4.29	1981
HIGHEST DAILY MEAN	3190	Feb 24	1800	Jun 16	10200	Jun 17 1975
LOWEST DAILY MEAN	0.49	Aug 22	0.85	Sep 12	0.00	Aug 21 1972
ANNUAL SEVEN-DAY MINIMUM	0.55	Aug 17	0.99	Sep 8	0.00	Jul 10 1980
MAXIMUM PEAK FLOW			3320	May 8	28500	Jun 17 1975
MAXIMUM PEAK STAGE			19.52	May 8	25.82	Jun 17 1975
INSTANTANEOUS LOW FLOW			0.65	Sep 12	.00	at times
ANNUAL RUNOFF (AC-FT)	41530		25250		51940	
10 PERCENT EXCEEDS	74		20		72	
50 PERCENT EXCEEDS	7.5		5.4		7.9	
90 PERCENT EXCEEDS	1.1		2.9		0.96	



07146500 ARKANSAS RIVER AT ARKANSAS CITY, KS

LOCATION.--Lat 37°03'23", long 97°03'32", in NE $^1/_4$ NE $^1/_4$ NE $^1/_4$ sec.35, T.34 S., R.3 E., Cowley County, Hydrologic Unit 11030013, on left bank at downstream side of bridge on U.S. Highway 166, 0.5 mi west of Arkansas City, 5.4 mi upstream from Walnut River, and at mile 701.4.

WATER-DISCHARGE RECORDS

DRAINAGE AREA.--43,713 mi^2, of which 7,607 mi^2 is probably noncontributing.

PERIOD OF RECORD.--September 1902 to September 1906, September 1921 to current year. Published as "near Arkansas City" 1903-04. Monthly discharge only for some periods, published in WSP 1311.

REVISED RECORDS.--WSP 1311: 1905. WSP 1341: 1922-23, 1927, 1929, 1931, 1933, 1940, 1945-46(M), drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,050.04 ft above NGVD of 1929 (levels by U.S. Army Corps of Engineers). Sept. 23, 1902, to July 31, 1906, nonrecording gage at site 0.5 mi upstream at datum 9.5 ft 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 upstream at datum 2.97 ft higher than present datum.

REMARKS.--Records fair except those for estimated daily discahrges, which are poor. Flow slightly regulated since Oct. 1948 by John Martin Reservoir (station 07130000), and since 1964 by Cheney Reservoir (station 07144790). Diversions upstream from station for irrigation. Satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 10,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jun 14	0700	18,500	17.03	Jun 17	1900	*19,500	*17.32

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1060	519	471	437	472	454	454	866	1040	808	410	968
2	983	517	476	410	407	e430	454	900	946	783	365	911
3	915	624	487	407	440	e400	442	811	863	733	345	831
4	863	548	485	454	524	e470	443	739	1550	713	336	816
5	856	519	487	514	652	e520	447	683	3140	684	324	826
6	1340	508	473	509	684	555	450	660	2030	649	324	821
7	1190	503	472	499	673	654	655	645	1640	612	316	730
8	896	492	467	535	637	736	594	2800	1410	598	307	697
9	788	483	464	589	626	683	594	4470	1170	575	309	684
10	755	478	459	641	604	729	725	4190	1010	549	304	674
11	720	473	452	627	604	658	620	2600	898	535	295	657
12	699	477	473	567	602	624	615	2190	3120	524	301	694
13	675	476	484	542	617	598	915	5740	10700	509	392	801
14	651	479	489	528	602	579	981	5390	16900	500	1330	855
15	629	482	490	506	588	549	853	3230	10200	484	5810	779
16	605	484	485	494	588	523	697	2350	12000	468	4470	712
17	588	493	481	489	581	501	623	1890	17600	454	3950	711
18	564	504	483	497	565	484	577	1560	11500	443	3610	720
19	553	503	495	498	589	480	551	2430	6770	431	3320	1190
20	547	500	491	490	668	477	531	3290	5130	426	2790	1560
21	547	476	486	486	649	477	590	2250	3510	414	2100	1150
22	547	473	494	478	589	469	786	1600	2530	399	1630	810
23	544	491	485	482	569	475	1100	1320	2000	515	1360	717
24	540	517	484	472	557	486	1740	2140	1640	497	1450	679
25	530	524	462	459	538	477	2030	5220	1420	498	2540	645
26	514	522	452	453	539	477	1390	4190	1260	386	2000	617
27	511	495	442	447	545	473	1140	3170	1110	357	1740	616
28	506	482	437	460	482	488	1170	2100	1170	346	1620	613
29	504	476	489	456	---	493	1070	1580	1060	385	1510	590
30	508	465	470	522	---	484	871	1390	868	683	1270	591
31	519	---	379	569	---	468	---	1190	---	564	1090	---
MEAN	698.3	499.4	472.4	500.5	578.2	528.1	803.6	2374	4206	533.0	1546	788.8
MAX	1340	624	495	641	684	736	2030	5740	17600	808	5810	1560
MIN	504	465	379	407	407	400	442	645	863	346	295	590
AC-FT	42940	29720	29050	30780	32110	32470	47820	146000	250300	32770	95050	46940

07146500 ARKANSAS RIVER AT ARKANSAS CITY, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1903 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1638	1417	980.8	892.2	1256	2018	2360	3008	3664	2636	1626	1551
MAX	18890	11550	3908	3673	9658	14600	14780	16890	16040	17190	13320	7870
(WY)	1974	1999	1945	1949	1949	1973	1944	1993	1923	1951	1950	1951
MIN	19.6	8.27	18.2	84.1	41.6	36.9	118	334	248	112	65.4	32.4
(WY)	1922	1922	1922	1922	1923	1923	1923	1967	1956	1934	1934	1956

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1903 - 2002	
ANNUAL MEAN	2094		1127		1922	
HIGHEST ANNUAL MEAN					5830	1951
LOWEST ANNUAL MEAN					366	1934
HIGHEST DAILY MEAN	23400	Feb 25	17600	Jun 17	79700	Nov 3 1998
LOWEST DAILY MEAN	301	Sep 15	295	Aug 11	4.0	Oct 23 1921
ANNUAL SEVEN-DAY MINIMUM	308	Sep 11	308	Aug 6	5.6	Nov 5 1921
MAXIMUM PEAK FLOW			19500	Jun 17	103000	Jun 10 1923
MAXIMUM PEAK STAGE			17.32	Jun 17	28.89	Nov 3 1998
INSTANTANEOUS LOW FLOW			276	Aug 11	1.0	Oct 9 1921
ANNUAL RUNOFF (AC-FT)	1516000		815900		1392000	
10 PERCENT EXCEEDS	4630		2100		4070	
50 PERCENT EXCEEDS	1020		588		907	
90 PERCENT EXCEEDS	446		449		280	

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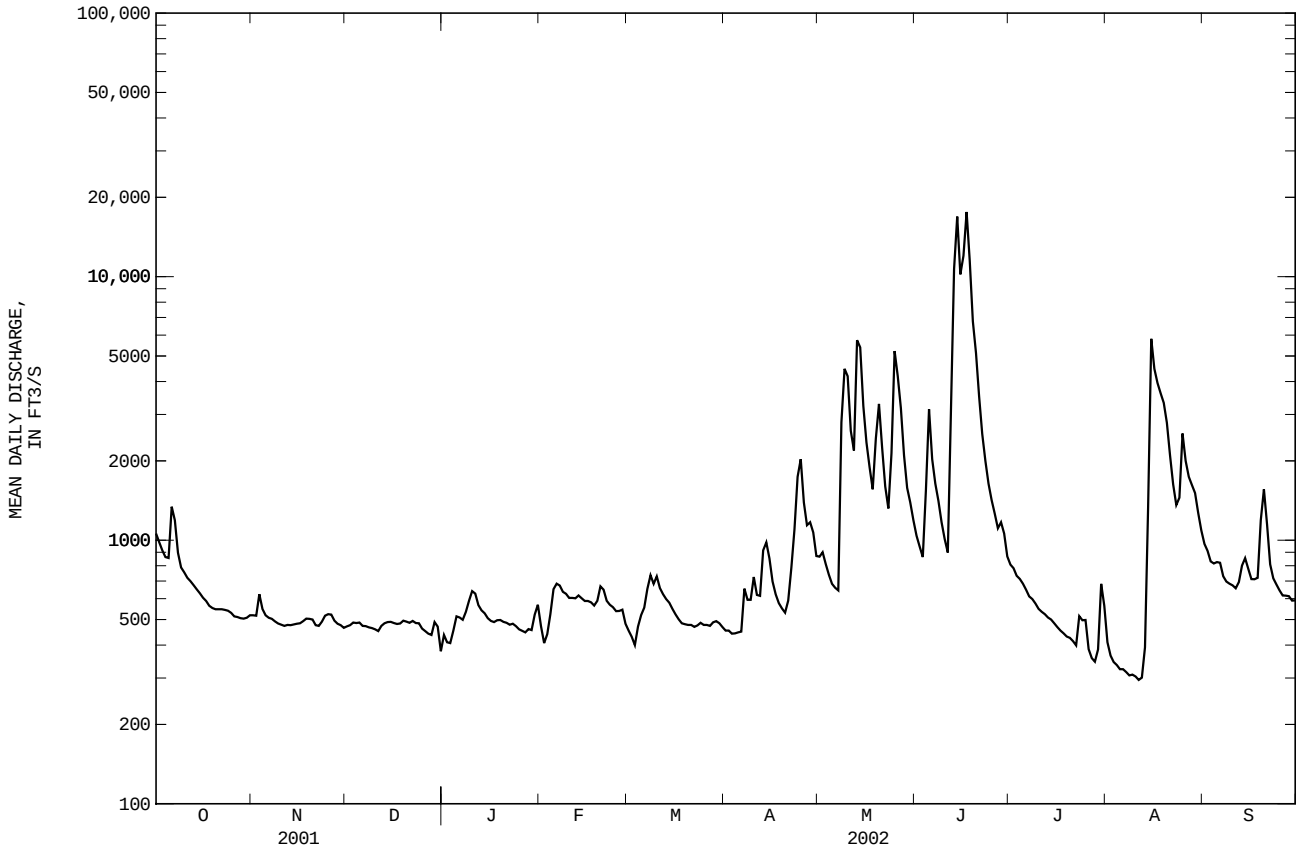


07146500 ARKANSAS RIVER AT ARKANSAS CITY, KS--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1952 to June 1988, 2000 to current year.

PERIOD OF DAILY RECORD.--September 1961 to September 1975.

REMARKS.--Unpublished records of intermittent sediment samples are available on the Internet at http://ks.waterdata.usgs.gov/nwis. Sediment samples are collected only at selected flow conditions.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM (70337)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM (70338)	SED. SUSP. FALL DIAM. % FINER THAN .008 MM (70339)	SED. SUSP. FALL DIAM. % FINER THAN .016 MM (70340)	SED. SUSP. FALL DIAM. % FINER THAN .031 MM (70341)	SED. SUSP. FALL DIAM. % FINER THAN .062 MM (70342)
JAN													
15...	1040	490	1630	8.4	3.0	1650	2180	--	--	--	--	--	--
MAY													
09...	1210	4400	556	7.7	17.5	1380	16400	--	--	--	--	--	--
16...	1245	2300	708	8.1	19.3	328	2040	--	--	--	--	--	--
20...	1125	3400	616	7.9	18.2	1440	13300	--	--	--	--	--	--
JUN													
05...	1320	2500	788	7.8	20.2	774	5230	--	--	--	--	--	--
14...	1200	--	272	7.4	23.4	1160	--	37	46	51	56	65	75

Date	SED. SUSP. FALL DIAM. % FINER THAN .125 MM (70343)	SED. SUSP. FALL DIAM. % FINER THAN .250 MM (70344)	SED. SUSP. FALL DIAM. % FINER THAN .500 MM (70345)	SED. SUSP. FALL DIAM. % FINER THAN 1.00 MM (70346)
JAN				
15...	--	--	--	--
MAY				
09...	--	--	--	--
16...	--	--	--	--
20...	--	--	--	--
JUN				
05...	--	--	--	--
14...	79	90	99	100

07147070 WHITEWATER RIVER AT TOWANDA, KS

LOCATION.--Lat 37°47'45", long 97°00'45", in SE $^1/_4$ SW $^1/_4$ SE $^1/_4$ sec.8, T.26 S., R.4 E., Butler County, Hydrologic Unit 11030017, on right bank at downstream side of bridge on Kansas Highway 254, 0.5 mi west of Towanda, 2.4 mi downstream from West Branch, and at mile 17.5.

DRAINAGE AREA.--426 mi^2.

PERIOD OF RECORD.--Annual maximum, water years 1960-61. October 1961 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,231.47 ft above NGVD of 1929 (levels by Kansas State Highway Commission). Prior to Oct. 1, 1961, crest-stage gage at same site at datum 5.22 ft higher.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of April 1944 reached a stage of 28.6 ft from floodmark.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 9	0400	2,070	9.67	Jun 14	1100	3,850	14.87
May 25	1100	*3,910	*15.05				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	12	12	11	20	12	16	6.7	31	23	7.9	e3.2
2	14	14	12	11	18	13	16	5.4	25	22	7.3	e3.0
3	14	14	13	12	16	13	16	4.8	21	22	6.7	e2.9
4	14	16	14	12	15	14	16	4.6	21	22	6.4	e2.8
5	18	22	14	13	15	14	16	4.8	25	21	5.8	e2.6
6	20	18	14	13	15	14	16	5.1	31	20	5.4	e2.5
7	20	16	14	14	16	15	16	5.1	27	19	5.5	e2.4
8	17	15	13	14	16	16	19	388	21	18	5.2	e2.3
9	15	13	13	14	17	15	22	1140	19	17	5.2	e2.2
10	13	13	13	16	17	15	24	109	18	16	4.9	e2.1
11	12	13	13	15	17	14	22	39	17	149	5.0	e2.0
12	11	13	13	16	16	13	120	669	678	96	e6.0	1.8
13	11	14	14	15	15	12	75	543	e1800	28	e8.0	2.1
14	11	16	16	15	14	13	25	140	3200	19	e12	2.3
15	10	16	18	14	14	12	17	60	935	16	14	2.5
16	11	15	17	14	13	12	12	38	e1100	14	12	2.4
17	9.5	15	16	15	13	12	11	63	e1300	14	11	2.4
18	10	16	16	14	13	12	9.7	55	e500	13	e8.7	2.3
19	10	18	15	14	16	13	8.7	47	191	12	7.9	2.9
20	11	16	14	14	18	13	9.1	30	125	12	7.9	2.8
21	12	14	13	14	16	13	9.5	23	83	e11	7.7	2.9
22	12	14	13	14	15	13	155	20	61	e11	6.9	2.8
23	12	15	12	14	14	12	53	18	48	e10	6.2	2.6
24	12	16	12	14	14	12	21	668	39	e10	6.2	2.5
25	12	15	12	13	13	12	12	3500	34	e9.8	6.3	2.5
26	11	14	12	13	12	12	9.4	1090	31	e9.6	5.9	2.4
27	11	14	13	13	12	12	11	250	29	e9.2	5.5	2.5
28	11	13	13	13	12	13	16	e139	26	e9.0	5.3	2.4
29	12	12	12	13	---	14	11	78	26	e8.8	4.6	2.2
30	12	12	11	16	---	14	8.2	53	25	9.1	3.6	1.9
31	12	---	11	19	---	16	---	39	---	8.7	e3.3	---
MEAN	12.73	14.80	13.48	13.94	15.07	13.23	26.42	297.9	349.6	21.91	6.913	2.473
MAX	20	22	18	19	20	16	155	3500	3200	149	14	3.2
MIN	9.5	12	11	11	12	12	8.2	4.6	17	8.7	3.3	1.8
AC-FT	782	881	829	857	837	813	1570	18320	20800	1350	425	147

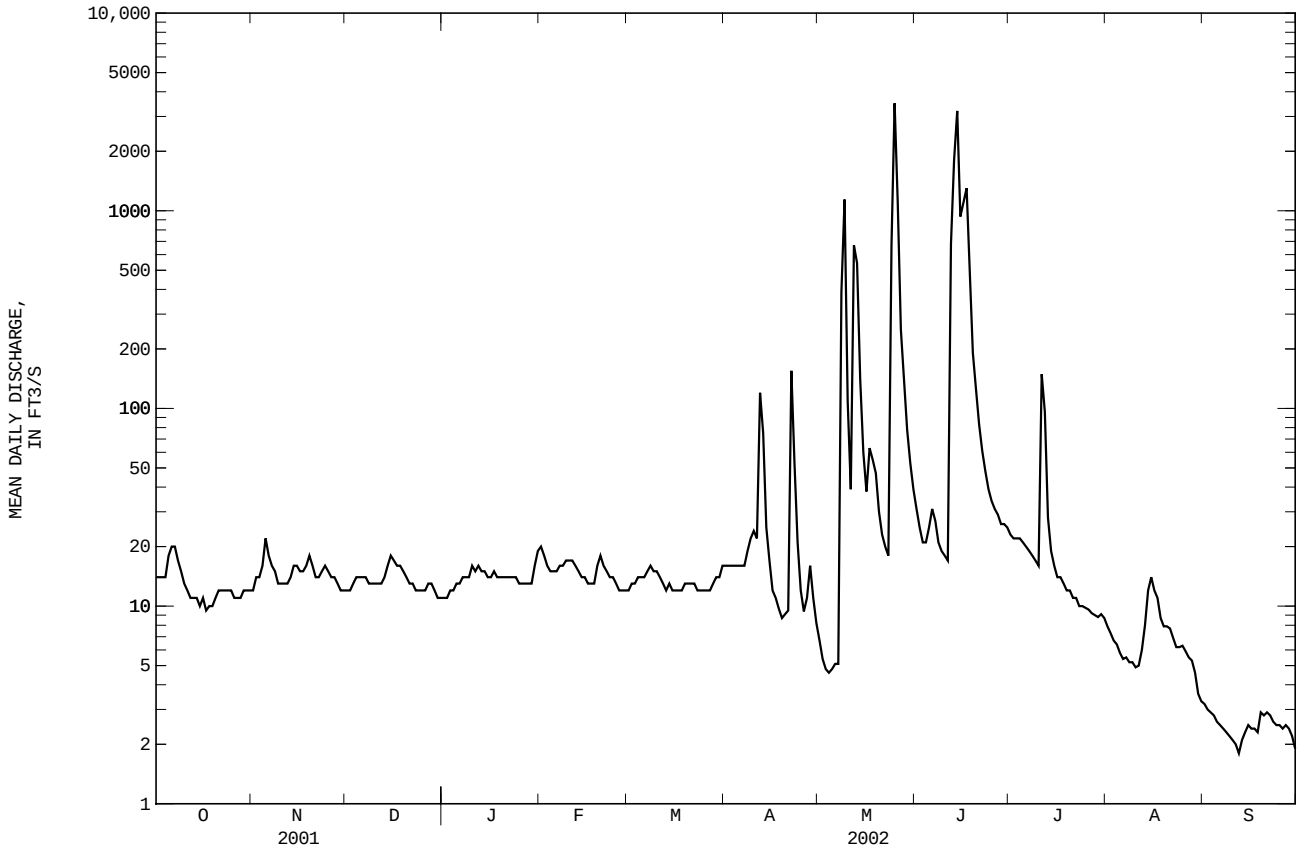
07147070 WHITEWATER RIVER AT TOWANDA, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	157.1	204.4	97.76	65.64	142.7	238.5	244.1	327.1	524.5	214.0	105.6	121.5
MAX	1797	3494	508	401	850	1933	1123	2097	2467	1210	1436	1599
(WY)	1986	1999	1993	1962	2001	1973	1999	1995	1995	1993	1995	1965
MIN	0.74	2.34	4.34	6.20	5.31	4.77	8.29	3.55	10.4	6.35	4.24	1.11
(WY)	1992	1981	1967	1967	1967	1967	1967	1967	1972	1980	1966	1980

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1962 - 2002	
ANNUAL MEAN	213.4		65.76		203.3	
HIGHEST ANNUAL MEAN					682	1999
LOWEST ANNUAL MEAN					21.3	1981
HIGHEST DAILY MEAN	7780	Feb 25	3500	May 25	49400	Nov 1 1998
LOWEST DAILY MEAN	9.5	Oct 17	1.8	Sep 12	0.30	Oct 20 1972
ANNUAL SEVEN-DAY MINIMUM	10	Oct 13	2.1	Sep 8	0.47	Oct 20 1991
MAXIMUM PEAK FLOW			3910	May 25	80600	Nov 1 1998
MAXIMUM PEAK STAGE			15.05	May 25	30.54	Nov 1 1998
INSTANTANEOUS LOW FLOW			1.7	Sep 11	0.20	Jul 14 1966
ANNUAL RUNOFF (AC-FT)	154500		47610		147300	
10 PERCENT EXCEEDS	445		39		242	
50 PERCENT EXCEEDS	30		14		35	
90 PERCENT EXCEEDS	12		4.9		7.7	

e Estimated



07147800 WALNUT RIVER AT WINFIELD, KS

LOCATION.--Lat 37°13'27", long 96°59'40", in SW $^1/_4$ SW $^1/_4$ NE $^1/_4$ sec.33, T.32 S., R.4 E., Cowley County, Hydrologic Unit 11030018, on left bank at upstream side of bridge on U.S. Highway 77, 1.0 mi south of Winfield, 1.0 mi upstream from Black Crook Creek, and at mile 25.4.

WATER-DISCHARGE RECORDS

DRAINAGE AREA.--1,880 mi^2.

PERIOD OF RECORD.--October 1921 to current year. October to November 1921 monthly discharge only, published in WSP 1311.

REVISED RECORDS.--WSP 607: 1923(M). WDR KS-82-1: Drainage area. WSP 1241: 1922(M), 1923, 1926-27, 1928-29(M), 1934, 1940-41.

GAGE.--Water-stage recorder. Datum of gage is 1,082.86 ft above NGVD of 1929 (U.S. Army 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.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Some regulation at low flow by City Water Works Dam and Timber Creek Reservoir upstream from station. Flow moderately regulated since 1981 by El Dorado Lake (station 07146622). Satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 9,600 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 13	0900	14,000	15.60	Jun 16	2200	12,000	14.03
May 26	1015	*17,800	*18.39				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	77	52	65	65	99	64	52	205	2010	241	117	e52
2	71	54	65	65	99	67	53	160	1640	228	100	e48
3	67	66	67	64	99	65	50	136	1370	220	90	47
4	67	62	70	63	96	66	55	124	1300	204	81	48
5	450	57	71	67	95	65	56	115	1380	196	73	43
6	1120	56	68	68	94	64	55	108	953	190	68	42
7	358	54	68	69	91	64	117	251	628	184	66	40
8	149	62	68	70	88	68	102	4850	507	170	63	36
9	110	63	68	70	87	76	94	4350	428	147	59	36
10	99	60	66	71	83	72	97	3940	366	135	60	36
11	102	57	68	71	79	72	106	1940	323	161	60	37
12	89	57	70	71	77	78	608	5070	1040	457	77	41
13	78	58	70	71	75	75	1230	12200	4700	873	105	47
14	70	60	71	70	71	69	417	4380	6310	470	143	69
15	65	62	72	69	70	63	239	2190	5800	271	160	67
16	58	63	72	68	68	60	149	1440	8650	186	144	59
17	56	65	71	67	68	60	123	1000	9740	144	116	55
18	58	73	72	67	67	62	108	715	4460	129	104	69
19	58	72	71	68	78	62	99	617	e2230	120	94	926
20	60	72	69	69	76	58	94	511	e1550	111	86	277
21	59	69	67	70	78	58	117	425	e1510	103	78	114
22	59	69	67	69	79	55	152	348	e1330	105	73	90
23	59	69	65	69	79	55	156	307	e1020	125	79	71
24	57	70	65	67	75	56	225	10300	e846	119	166	60
25	54	70	65	65	70	56	189	16900	e740	111	100	55
26	52	71	64	64	67	53	141	17300	523	103	87	52
27	50	69	64	64	65	53	131	9050	360	91	83	49
28	50	67	64	64	63	53	248	4410	392	83	77	51
29	50	65	64	64	---	53	376	3380	296	97	71	46
30	49	66	64	88	---	51	255	2990	265	135	61	45
31	50	---	64	100	---	52	---	2500	---	142	e55	---
MEAN	124.2	63.67	67.58	69.26	79.86	62.10	196.5	3620	2089	195.2	90.19	90.27
MAX	1120	73	72	100	99	78	1230	17300	9740	873	166	926
MIN	49	52	64	63	63	51	50	108	265	83	55	36
AC-FT	7640	3790	4160	4260	4440	3820	11690	222600	124300	12000	5550	5370

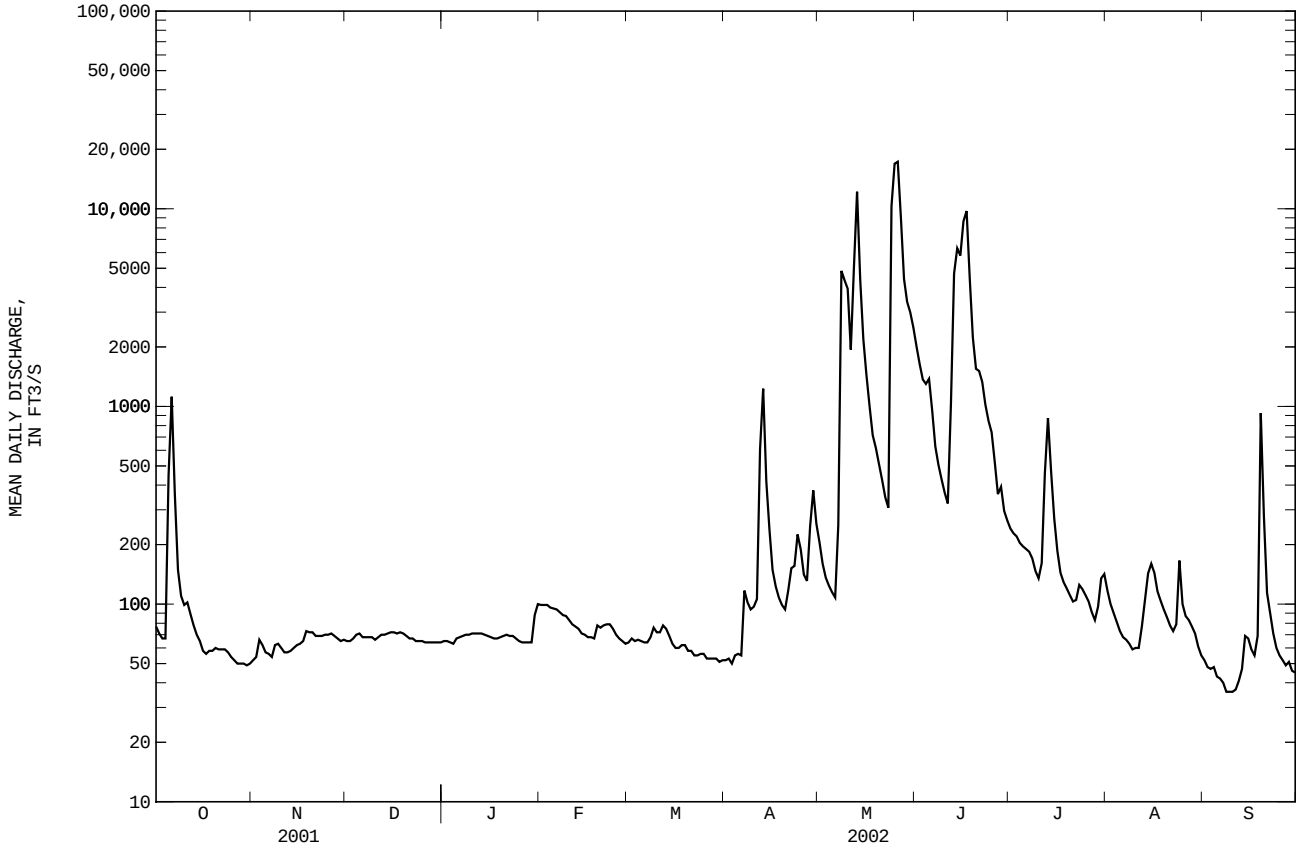
07147800 WALNUT RIVER AT WINFIELD, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	689.2	727.2	423.3	350.2	527.6	968.0	1356	1538	1838	962.9	457.2	565.1
MAX	6877	11710	3313	2633	3631	8777	10080	10320	11710	9335	4492	4782
(WY)	1987	1999	1945	1949	1949	1973	1944	1993	1995	1951	1950	1965
MIN	0.000	0.84	4.12	4.33	7.10	8.73	8.87	4.50	23.9	3.90	0.000	0.000
(WY)	1957	1957	1957	1957	1957	1957	1955	1956	1933	1936	1936	1954

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1922 - 2002	
ANNUAL MEAN	855.6		565.7		866.5	
HIGHEST ANNUAL MEAN					2948	1999
LOWEST ANNUAL MEAN					26.2	1954
HIGHEST DAILY MEAN	16800	Feb 26	17300	May 26	85200	Nov 2 1998
LOWEST DAILY MEAN	49	Oct 30	36	Sep 8	0.00	Nov 11 1928
ANNUAL SEVEN-DAY MINIMUM	50	Oct 26	38	Sep 6	0.00	Jul 27 1936
MAXIMUM PEAK FLOW			17800	May 26	105000	Apr 23 1944
MAXIMUM PEAK STAGE			18.39	May 26	38.30	Apr 23 1944
INSTANTANEOUS LOW FLOW			34	Sep 9	.00	at times
ANNUAL RUNOFF (AC-FT)	619400		409600		627800	
10 PERCENT EXCEEDS	2210		1010		1660	
50 PERCENT EXCEEDS	178		72		167	
90 PERCENT EXCEEDS	64		54		23	

e Estimated



07147800 WALNUT RIVER AT WINFIELD, KS--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1960 to June 1985, 2000 to current year.

PERIOD OF DAILY RECORD.--September 1961 to September 1975.

REMARKS.--Unpublished records of intermittent sediment samples are available on the Internet at http://ks.waterdata.usgs.gov/nwis. Sediment samples are collected only at selected flow conditions.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)
JAN							
11...	1020	71	1220	8.4	2.1	52	10.0
MAY							
09...	1035	4000	351	7.5	18.7	1090	11800
16...	1040	1500	318	7.7	19.1	222	897
24...	1110	12200	259	7.6	18.0	3330	110000
24...	1245	14000	132	7.7	17.3	2880	109000
JUN							
05...	1040	1200	411	7.9	23.4	87	283

07149000 MEDICINE LODGE RIVER NEAR KIOWA, KS

LOCATION.--Lat 37°02'17", long 98°28'04", in SE $^{1}/_{4}$ SW $^{1}/_{4}$ sec.36, T.34 S., R.11 W., Barber County, Hydrologic Unit 11060003, on right bank at downstream side of bridge on Kansas Highway 14, 200 ft downstream from the Atchison, Topeka and Santa Fe Railway Co. bridge, 1.5 mi northeast of Kiowa, and at mile 22.2.

DRAINAGE AREA.--903 mi^2.

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 ft^3/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.

REVISED RECORDS.--WSP 1117: Drainage area. WSP 1391: 1938(M), 1942(M). WSP 1921: Drainage area. See also "PERIOD OF RECORD."

GAGE.--Water-stage recorder. Datum of gage is 1,286.99 ft above NGVD of 1929 (levels by U.S. Army Corps of Engineers). May 1895 to October 1896, nonrecording gage at site 2.0 mi 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 and datum 3.00 ft higher. Oct. 1, 1944, to Sept. 30, 1950, and Oct. 1, 1954, to Sept. 30, 1955, water-stage recorder at present site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Floods of May 8, 1922, and June 1957 reached stages of about 16 ft and 15.5 ft, respectively, present site and datum, from the Atchison, Topeka and Santa Fe Railway Co. records and information by local resident.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,700 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jun 6	0400	*1,800	*5.25	No peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	65	66	93	e96	e80	111	92	87	74	30	33	49
2	63	67	94	e90	e90	88	91	85	66	31	23	46
3	64	69	92	e80	128	99	86	84	59	32	18	43
4	63	73	90	e80	132	103	84	83	57	31	14	41
5	61	75	91	e90	130	140	85	89	951	27	10	40
6	60	76	91	e100	129	140	85	121	1110	25	7.4	36
7	61	76	91	121	127	121	94	95	348	23	6.2	33
8	59	76	90	110	128	112	107	83	216	21	5.3	29
9	59	74	90	110	129	108	108	77	157	19	4.4	27
10	60	73	90	103	133	103	106	77	125	18	3.9	29
11	60	74	91	101	128	101	102	79	104	24	3.5	30
12	60	76	93	99	122	100	96	562	95	33	11	30
13	59	78	93	99	117	98	94	1000	107	48	677	31
14	58	79	93	100	114	96	94	310	96	38	1330	43
15	57	80	95	99	111	93	93	188	89	28	404	44
16	58	81	96	97	108	92	93	143	93	23	180	39
17	58	83	96	97	105	92	91	128	96	21	118	37
18	58	86	97	96	105	92	88	106	84	18	89	36
19	60	88	95	99	117	96	84	96	74	14	71	35
20	58	87	93	98	123	96	90	88	67	13	62	35
21	61	87	89	98	115	95	102	81	61	11	54	34
22	61	88	91	97	112	94	106	76	57	12	47	32
23	63	89	89	97	106	93	111	74	54	27	42	29
24	61	88	92	96	104	95	104	74	51	13	77	27
25	58	87	91	95	104	96	93	76	48	11	117	27
26	61	87	93	94	88	100	90	81	47	9.3	140	25
27	62	88	99	95	96	98	95	86	46	7.0	100	24
28	64	e90	101	94	108	99	99	98	44	6.9	75	24
29	65	95	98	92	---	98	93	120	40	21	64	24
30	64	94	96	91	---	94	89	91	32	120	59	24
31	64	---	99	85	---	93	---	83	---	51	53	---
MEAN	60.81	81.00	93.29	96.74	113.9	101.2	94.83	145.8	151.6	26.01	125.8	33.43
MAX	65	95	101	121	133	140	111	1000	1110	120	1330	49
MIN	57	66	89	80	80	88	84	74	32	6.9	3.5	24
AC-FT	3740	4820	5740	5950	6330	6220	5640	8970	9020	1600	7730	1990

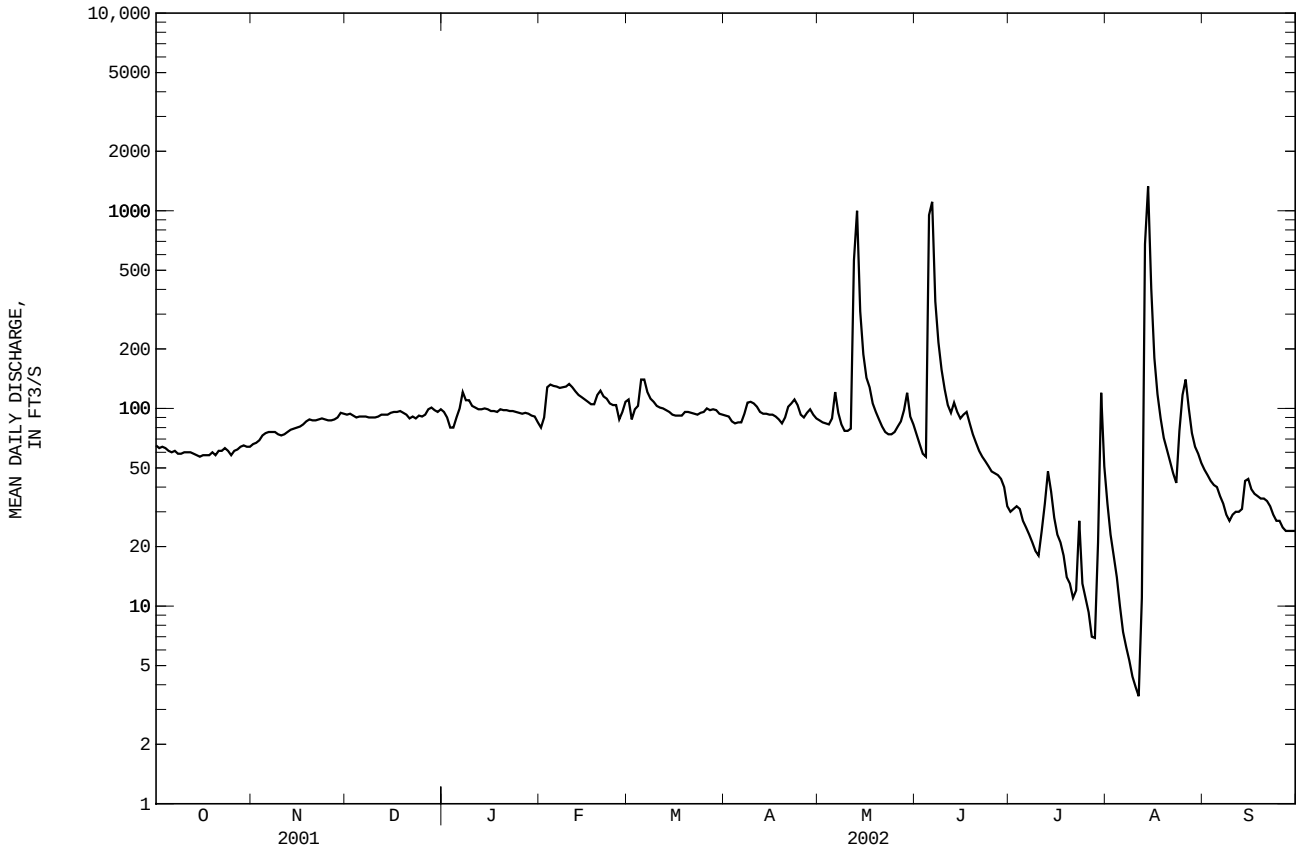
07149000 MEDICINE LODGE RIVER NEAR KIOWA, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	142.0	119.4	103.8	107.7	136.2	184.9	224.5	272.9	244.3	115.1	106.7	109.0
MAX	1083	627	334	322	913	932	1032	1549	1226	588	970	887
(WY)	1942	1997	1997	1998	1949	1987	1973	1938	1949	1996	1996	1949
MIN	0.000	0.000	2.45	0.000	31.0	42.5	38.6	26.5	26.3	0.88	0.000	0.000
(WY)	1940	1940	1940	1940	1955	1955	1955	1963	1972	1946	1946	1939

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1938 - 2002	
ANNUAL MEAN	155.9		93.57		153.7	
HIGHEST ANNUAL MEAN					494	1949
LOWEST ANNUAL MEAN					36.5	1964
HIGHEST DAILY MEAN	1480	Jun 6	1330	Aug 14	9660	Oct 22 1941
LOWEST DAILY MEAN	7.4	Aug 24	3.5	Aug 11	0.00	Jul 7 1939
ANNUAL SEVEN-DAY MINIMUM	11	Aug 19	5.8	Aug 5	0.00	Jul 7 1939
MAXIMUM PEAK FLOW			1800	Jun 6	16000	Oct 22 1941
MAXIMUM PEAK STAGE			5.25	Jun 6	12.10	Oct 12 1973
INSTANTANEOUS LOW FLOW			3.0	Aug 11	.00	at times
ANNUAL RUNOFF (AC-FT)	112800		67740		111400	
10 PERCENT EXCEEDS	277		117		270	
50 PERCENT EXCEEDS	112		88		86	
90 PERCENT EXCEEDS	25		27		13	

e Estimated



07151500 CHIKASKIA RIVER NEAR CORBIN, KS

LOCATION.--Lat 37°07'44", long 97°36'04", in NW $^1/_4$ SW $^1/_4$ SW $^1/_4$ sec.36, T.33 S., R.3 W., Sumner County, Hydrologic Unit 11060005, on right bank at downstream side of bridge on Kansas Highway 49, 1 mi upstream from Prairie Creek, 3 mi west of Corbin, and at mile 67.5.

DRAINAGE AREA.--794 mi^2.

PERIOD OF RECORD.--August 1950 to September 1965, October 1975 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,108.00 ft above NGVD of 1929 (U.S. Army Corps of Engineers bench mark). Prior to Mar. 23, 1951, wire-weight gage at same site and datum.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 8	0200	4,260	8.64	Jun 13	0200	3,880	8.28
May 12	1600	3,220	7.62	Jun 16	0900	*4,590	*8.94

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	102	66	91	e68	e85	e70	102	107	124	68	23	23
2	98	70	89	e69	e85	e75	103	102	111	74	17	16
3	94	88	91	e72	e85	e80	101	97	104	94	54	14
4	172	83	94	e86	e90	87	102	92	110	83	20	11
5	1200	78	95	e100	123	133	100	91	139	74	12	9.9
6	236	87	91	128	127	138	101	89	225	64	9.2	9.2
7	131	92	89	110	126	117	106	434	217	56	7.6	8.5
8	113	88	86	120	123	111	115	1690	171	47	6.4	7.4
9	114	83	82	120	126	109	125	552	165	107	5.4	6.6
10	109	87	84	106	135	105	125	213	130	60	5.1	6.6
11	103	88	88	102	134	100	128	156	109	66	4.6	6.3
12	102	89	93	100	122	97	453	1540	782	61	10	6.9
13	98	89	96	98	114	96	204	1250	2280	72	467	7.5
14	95	93	98	97	109	98	128	543	744	56	477	11
15	84	94	99	95	108	96	112	350	528	41	232	14
16	74	90	100	96	107	94	108	266	3410	30	130	14
17	74	89	98	95	106	95	104	232	752	25	98	13
18	73	98	98	93	104	95	100	206	313	22	62	12
19	72	90	96	100	115	95	99	188	228	19	40	264
20	67	90	94	100	116	97	106	174	184	17	29	152
21	66	87	94	98	117	100	169	163	161	16	27	38
22	63	84	95	98	110	96	127	156	145	12	18	19
23	64	90	93	98	106	96	120	154	130	461	14	13
24	61	95	88	95	105	98	118	157	119	128	74	11
25	58	92	75	91	102	98	104	162	114	24	117	10
26	57	87	79	94	83	99	104	166	111	14	184	9.7
27	57	76	e83	95	70	101	119	163	108	9.1	141	8.8
28	58	74	e88	94	e70	101	174	150	103	6.8	121	8.7
29	57	80	e78	e92	---	102	132	209	96	71	86	8.1
30	58	91	69	e88	---	100	115	190	81	83	48	7.4
31	61	---	e69	e86	---	100	---	144	---	35	31	---
MEAN	124.9	86.27	89.13	96.26	107.2	99.32	130.1	328.6	399.8	64.38	82.91	24.89
MAX	1200	98	100	128	135	138	453	1690	3410	461	477	264
MIN	57	66	69	68	70	70	99	89	81	6.8	4.6	6.3
AC-FT	7680	5130	5480	5920	5960	6110	7740	20200	23790	3960	5100	1480

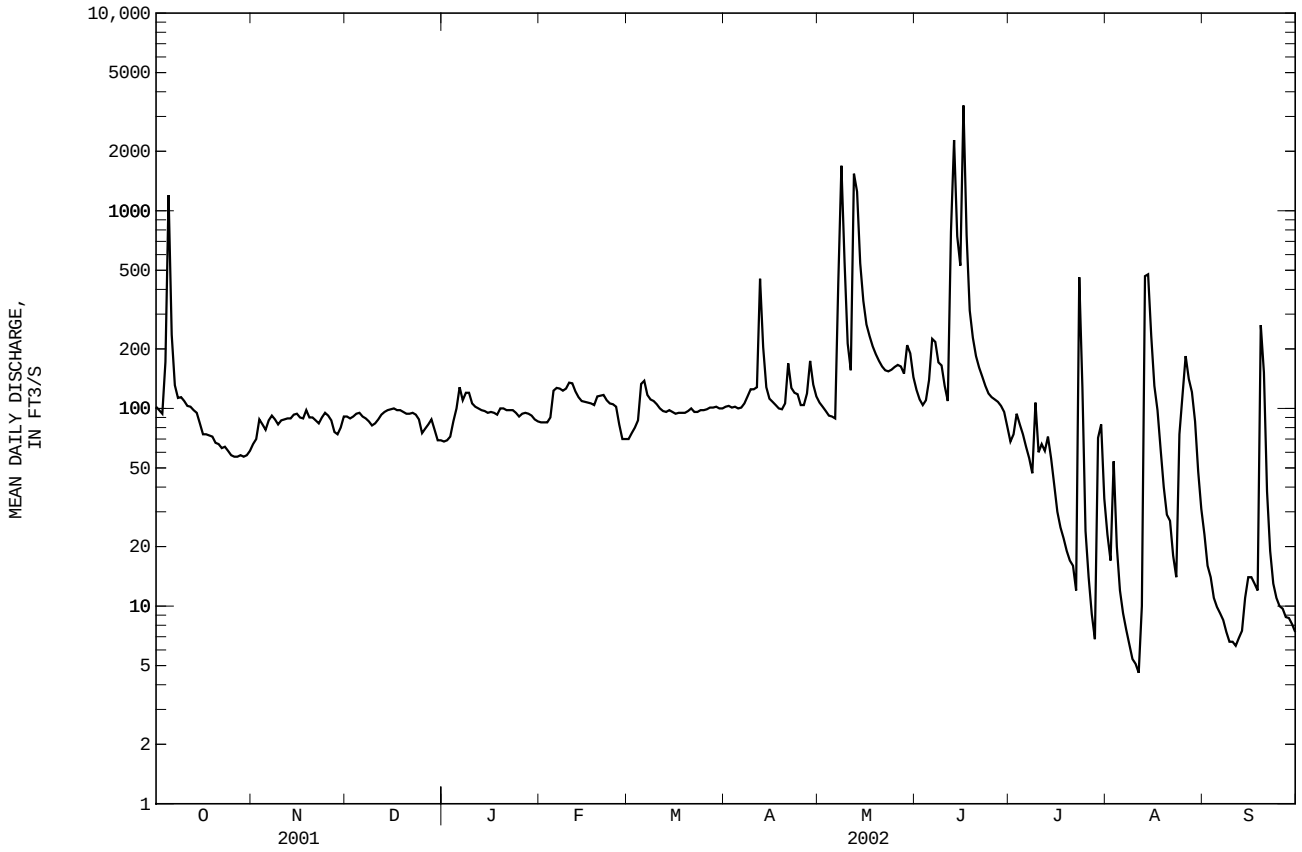
07151500 CHIKASKIA RIVER NEAR CORBIN, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	221.0	241.2	133.3	122.0	173.4	331.6	283.9	485.7	458.8	245.0	111.7	190.9
MAX	1894	1923	467	365	752	1907	1184	2690	2055	1496	428	1172
(WY)	1986	1999	1998	1998	2001	2000	1999	1993	1951	1951	1997	1977
MIN	0.000	0.000	13.7	15.4	30.3	32.0	26.9	24.0	12.9	0.80	0.000	0.000
(WY)	1957	1957	1955	1957	1957	1955	1955	1956	1953	1954	1956	1956

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1951 - 2002	
ANNUAL MEAN	293.2		136.1		250.0	
HIGHEST ANNUAL MEAN					609	1951
LOWEST ANNUAL MEAN					40.0	1954
HIGHEST DAILY MEAN	7110	Feb 24	3410	Jun 16	27800	Oct 11 1985
LOWEST DAILY MEAN	7.4	Aug 7	4.6	Aug 11	0.00	Jun 27 1953
ANNUAL SEVEN-DAY MINIMUM	8.2	Aug 4	6.9	Aug 6	0.00	Sep 16 1953
MAXIMUM PEAK FLOW			4590	Jun 16	39300	Oct 11 1985
MAXIMUM PEAK STAGE			8.94	Jun 16	22.90	Nov 1 1998
INSTANTANEOUS LOW FLOW			3.8	Aug 12	.00	at times
ANNUAL RUNOFF (AC-FT)	212300		98550		181100	
10 PERCENT EXCEEDS	528		174		431	
50 PERCENT EXCEEDS	145		95		95	
90 PERCENT EXCEEDS	18		14		19	

e Estimated



07155590 CIMARRON RIVER NEAR ELKHART, KS

LOCATION.--Lat 37°07'30", long 101°53'50", in NW $^1/_4$ NW $^1/_4$ NW $^1/_4$ sec.4, T.34 S., R.42 W., Morton County, Hydrologic Unit 11040002, Cimarron National Grasslands, on left bank at downstream side of bridge on Kansas Highway 27, 8.0 mi north of Elkhart, and at mile 499.4.

DRAINAGE AREA.--2,899 mi^2, of which 483 mi^2 does not contribute directly to surface runoff.

PERIOD OF RECORD.--April 1971 to current year.

REVISED RECORDS.--WDR KS-84-1: 1983.

GAGE.--Water-stage recorder. Datum of gage is 3,381.89 ft above NGVD of 1929.

REMARKS.--Records poor. Satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Aug 30	0300	*8.3	*4.60	No peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.0	0.0	e0.01	e0.01	e0.01	e0.01	e0.0	e0.0	0.00	0.00	0.00	0.00
2	0.0	0.0	e0.01	e0.01	e0.01	e0.01	e0.0	e0.0	0.00	e0.08	0.00	0.00
3	0.0	0.0	e0.01	e0.01	e0.01	e0.01	e0.0	e0.0	0.00	e0.04	0.00	0.00
4	0.0	0.0	e0.01	e0.01	e0.01	e0.01	e0.0	e0.0	0.00	0.00	0.00	0.00
5	0.0	0.0	e0.01	e0.01	e0.01	e0.01	0.0	e0.0	0.00	0.00	0.00	0.00
6	0.0	0.0	e0.01	e0.01	e0.01	e0.01	0.0	e0.0	0.00	0.00	0.00	0.00
7	0.0	0.0	e0.01	e0.01	e0.01	e0.01	0.0	e0.0	0.00	0.00	0.00	0.00
8	0.0	0.0	e0.01	e0.01	e0.01	e0.01	0.0	e0.0	0.00	e0.17	0.00	0.00
9	0.0	e0.01	e0.01	e0.01	e0.01	e0.01	0.0	e0.0	0.00	e0.11	0.00	0.00
10	0.0	e0.01	e0.01	e0.01	e0.01	e0.01	0.0	e0.0	0.00	e0.03	0.00	e0.58
11	0.0	e0.01	e0.01	e0.01	e0.01	e0.01	0.0	e0.0	0.00	0.00	0.00	e0.14
12	0.0	e0.01	e0.01	e0.01	e0.01	e0.01	0.0	e0.0	0.00	0.00	0.00	e0.04
13	0.0	e0.01	e0.01	e0.01	e0.01	e0.0	e0.01	e0.0	0.00	0.00	0.00	0.0
14	0.0	e0.01	e0.01	e0.01	e0.01	e0.0	e0.02	e0.0	0.00	0.00	0.00	0.00
15	0.0	e0.01	e0.01	e0.01	e0.01	e0.0	0.0	e0.0	0.00	0.00	0.00	0.00
16	0.0	e0.01	e0.01	e0.01	e0.01	e0.0	0.0	e0.0	0.00	0.00	0.00	0.00
17	0.0	e0.01	e0.01	e0.01	e0.01	e0.0	0.0	e0.0	0.00	0.0	0.00	0.00
18	0.0	e0.01	e0.01	e0.01	e0.01	e0.0	e0.0	e0.0	0.00	0.00	0.00	0.00
19	0.0	e0.01	e0.01	e0.01	e0.01	e0.0	e0.0	0.0	0.00	0.00	0.00	0.00
20	0.0	e0.01	e0.01	e0.01	e0.01	e0.0	e0.0	0.0	0.00	0.00	0.00	0.00
21	0.0	e0.01	e0.01	e0.01	e0.01	e0.0	e0.0	0.0	0.00	0.00	0.00	0.00
22	0.0	e0.01	e0.01	e0.01	e0.01	e0.0	e0.0	0.0	0.00	0.00	0.00	0.00
23	0.0	e0.01	e0.01	e0.01	e0.01	e0.0	e0.0	0.0	0.00	0.00	0.00	0.00
24	0.0	e0.01	e0.01	e0.01	e0.01	e0.0	e0.0	0.0	0.00	0.00	0.00	0.00
25	0.0	e0.01	e0.01	e0.01	e0.01	e0.0	e0.0	0.0	0.00	0.00	0.00	0.00
26	0.0	e0.01	e0.01	e0.01	e0.01	e0.0	e0.0	0.0	0.00	0.00	0.00	0.00
27	0.0	e0.01	e0.01	e0.01	e0.01	e0.0	e0.0	0.0	0.00	0.00	0.00	0.00
28	0.0	e0.01	e0.01	e0.01	e0.01	e0.0	e0.0	0.0	0.00	0.00	0.00	0.00
29	0.0	e0.01	e0.01	e0.01	---	e0.0	e0.0	0.0	0.00	0.00	0.00	0.00
30	0.0	e0.01	e0.01	e0.01	---	e0.0	e0.0	0.0	0.00	0.00	e0.50	0.00
31	0.0	---	e0.01	e0.01	---	e0.0	---	0.0	---	0.00	0.00	---
MEAN	0.000	0.007	0.010	0.010	0.010	0.004	0.001	0.000	0.000	0.014	0.016	0.025
MAX	0.00	0.01	0.01	0.01	0.01	0.01	0.02	0.00	0.00	0.17	0.50	0.58
MIN	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.4	0.6	0.6	0.6	0.2	0.06	0.00	0.00	0.9	1.0	1.5

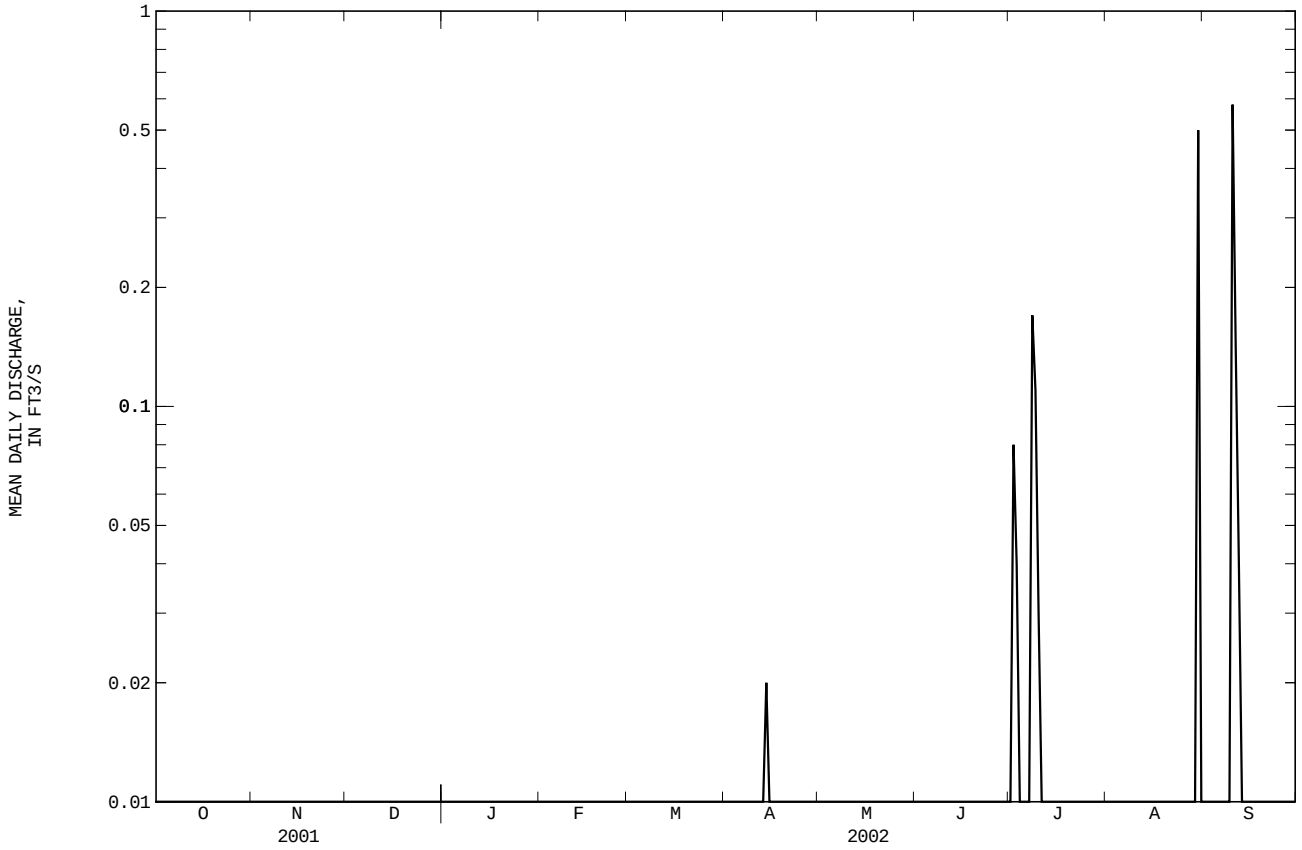
07155590 CIMARRON RIVER NEAR ELKHART, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.055	0.055	0.231	0.366	0.272	0.652	6.065	33.70	27.31	12.85	30.45	7.587
MAX	1.12	1.52	6.88	10.3	7.06	16.9	107	519	368	113	239	102
(WY)	1974	1998	1998	1998	1998	1998	1977	1977	1978	1977	1997	1973
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1972	1972	1972	1972	1972	1972	1972	1985	1983	1974	1978	1972

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1972 - 2002	
ANNUAL MEAN	0.898		0.008		10.04	
HIGHEST ANNUAL MEAN					82.6	1977
LOWEST ANNUAL MEAN					0.000	1985
HIGHEST DAILY MEAN	106	May 23	0.58	Sep 10	6190	May 26 1977
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 1	0.00	Oct 1 1971
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 1	0.00	Oct 1 1971
MAXIMUM PEAK FLOW			8.3	Aug 30	21500	May 26 1977
MAXIMUM PEAK STAGE			4.60	Aug 30	9.17	May 26 1977
INSTANTANEOUS LOW FLOW			0.00	Oct 1	.00	most years
ANNUAL RUNOFF (AC-FT)	650		5.9		7270	
10 PERCENT EXCEEDS	0.01		0.01		1.1	
50 PERCENT EXCEEDS	0.00		0.00		0.00	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

e Estimated



07157500 CROOKED CREEK NEAR ENGLEWOOD, KS

LOCATION.--Lat 37°01'54", long 100°12'29", in SE $^{1}/_{4}$ NW $^{1}/_{4}$ sec.1, T.35 S., R.27 W., Meade County, Hydrologic Unit 11040007, on right bank at downstream side of county highway bridge, 11.5 mi west of Englewood, and at mile 14.0.

DRAINAGE AREA.--1,157 mi^2, of which 344 mi^2 is probably noncontributing.

PERIOD OF RECORD.--August 1942 to current year. Published as "near Nye" August 1942 to September 1995. Monthly discharge only for some periods, published in WSP 1311.

REVISED RECORDS.--WSP 1117: Drainage area. WSP 1211: 1950. WSP 1311: 1949(M).

GAGE.--Water-stage recorder. Datum of gage is 2,163.79 ft above NGVD of 1929. Prior to Sept. 12, 1942, nonrecording gage at same site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Extensive diversion for irrigation upstream from station. Satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,400 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Aug 13	0515	*901	*6.32	No peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	3.1	e4.5	e5.4	e4.7	3.8	3.6	4.7	3.2	1.2	0.00	6.8
2	1.3	3.2	4.6	e5.3	e4.8	e3.9	3.6	4.7	2.8	1.2	0.00	5.9
3	1.2	3.3	4.6	e5.3	e5.0	e4.0	3.6	4.7	2.5	1.0	0.00	5.4
4	1.2	3.2	4.6	e5.2	e5.2	e4.0	3.7	4.6	3.2	0.98	0.00	5.0
5	1.3	3.3	4.6	e5.2	5.5	e4.0	3.9	4.5	3.7	1.5	0.00	4.6
6	1.4	3.3	4.6	e5.1	5.4	4.0	4.0	4.5	3.2	1.8	0.00	4.4
7	1.4	3.5	4.9	e5.1	5.2	3.9	4.3	4.2	2.8	1.7	0.00	4.1
8	1.4	3.6	4.9	5.0	5.1	3.8	4.7	3.9	2.5	1.4	0.00	4.0
9	1.4	3.6	4.7	4.9	5.0	3.5	4.8	4.0	2.3	0.95	6.1	3.9
10	1.5	3.8	4.8	4.9	5.0	3.5	4.9	4.0	2.2	0.81	52	4.1
11	1.7	3.7	4.9	4.8	4.9	3.5	5.1	4.2	2.0	0.90	12	4.5
12	1.8	3.8	5.0	4.9	4.6	3.4	5.3	4.3	1.9	0.95	8.4	4.5
13	1.9	3.8	5.1	4.9	4.4	3.5	5.7	4.8	2.6	1.0	179	4.3
14	1.8	3.9	5.2	4.8	4.4	3.4	5.6	4.7	2.4	0.66	25	4.6
15	1.9	3.9	5.3	4.9	4.2	3.2	5.4	4.3	2.9	0.57	15	4.9
16	1.9	4.0	5.3	4.9	4.2	3.2	5.2	4.2	4.5	0.49	10	4.4
17	2.0	4.3	5.3	5.0	4.1	3.2	5.0	5.5	4.2	0.39	8.3	4.0
18	2.1	4.2	5.3	e5.0	4.2	3.3	4.8	4.5	3.7	0.24	7.3	3.5
19	2.3	4.2	5.3	e5.0	4.2	3.5	4.8	4.2	3.2	0.07	6.4	3.7
20	2.3	4.3	5.4	e5.0	4.0	3.4	5.4	4.1	2.9	0.00	5.8	3.7
21	2.3	4.3	5.4	e5.0	3.9	3.3	5.5	4.0	2.6	0.00	5.6	3.4
22	2.4	4.5	5.5	5.0	3.9	3.2	5.2	3.7	2.3	0.00	5.2	3.2
23	2.5	4.6	5.5	4.9	3.9	3.3	5.0	3.7	2.2	0.00	4.8	3.2
24	2.5	4.5	e5.5	4.8	3.8	3.3	4.7	4.1	1.8	0.00	4.6	3.1
25	2.5	4.3	e5.5	5.0	3.6	3.3	4.5	4.3	1.8	0.00	4.4	3.0
26	2.7	4.4	e5.5	4.9	e4.0	3.3	4.8	4.0	1.8	0.00	4.6	3.0
27	2.8	4.5	e5.5	4.9	e4.0	3.2	4.9	4.8	1.9	0.00	8.9	3.0
28	2.8	e4.5	5.5	5.0	e3.9	3.2	4.8	6.3	1.5	0.00	11	3.0
29	2.8	e4.5	e5.5	4.9	---	3.2	4.7	5.2	1.3	0.91	11	2.7
30	2.9	e4.5	e5.4	4.6	---	3.3	4.8	4.3	1.1	0.37	8.9	2.7
31	2.9	---	e5.4	e4.7	---	3.4	---	3.7	---	0.11	7.8	---
MEAN	2.006	3.953	5.132	4.977	4.468	3.484	4.743	4.410	2.567	0.619	13.29	4.020
MAX	2.9	4.6	5.5	5.4	5.5	4.0	5.7	6.3	4.5	1.8	179	6.8
MIN	1.2	3.1	4.5	4.6	3.6	3.2	3.6	3.7	1.1	0.00	0.00	2.7
AC-FT	123	235	316	306	248	214	282	271	153	38	817	239

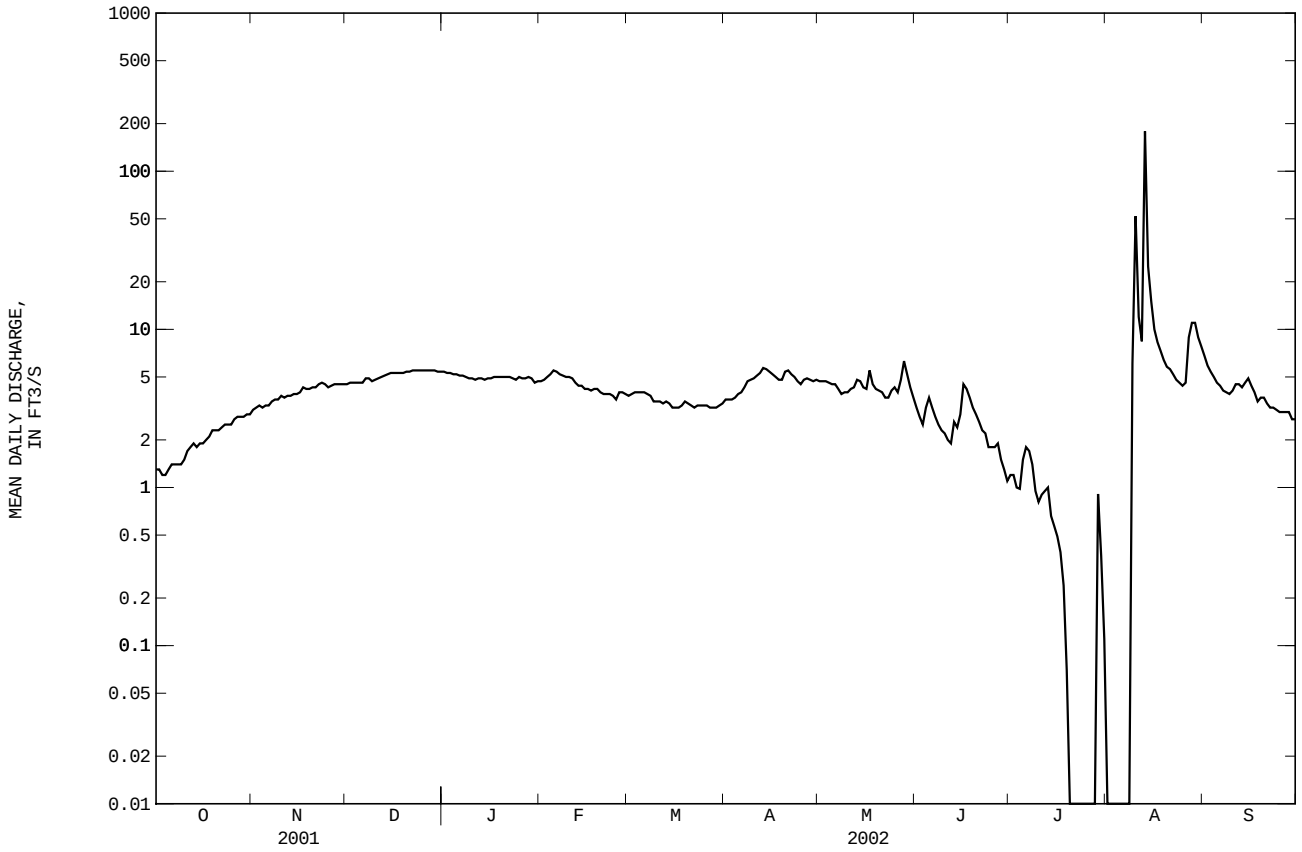
07157500 CROOKED CREEK NEAR ENGLEWOOD, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	25.28	17.35	14.23	15.19	16.96	26.44	38.30	72.08	39.43	33.57	30.09	26.35
MAX	463	176	32.6	34.1	74.9	528	582	1233	325	375	453	224
(WY)	1950	1972	1974	1954	1949	1973	1973	1955	1949	1950	1950	1950
MIN	0.000	1.22	5.13	4.98	4.47	3.48	4.74	3.71	0.60	0.000	0.000	0.000
(WY)	1957	1957	2002	2002	2002	2002	2002	1956	1956	1952	1956	1943

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1943 - 2002	
ANNUAL MEAN	5.486		4.480		29.69	
HIGHEST ANNUAL MEAN					176	1951
LOWEST ANNUAL MEAN					4.48	2002
HIGHEST DAILY MEAN	12	Mar 19	179	Aug 13	12700	May 20 1955
LOWEST DAILY MEAN	0.00	Jul 24	0.00	Jul 20	0.00	Jul 23 1943
ANNUAL SEVEN-DAY MINIMUM	0.00	Aug 3	0.00	Jul 20	0.00	Jul 23 1943
MAXIMUM PEAK FLOW			901	Aug 13	13600	May 20 1955
MAXIMUM PEAK STAGE			6.32	Aug 13	9.00	Aug 31 1963
INSTANTANEOUS LOW FLOW			0.00	Jul 19	.00	most years
ANNUAL RUNOFF (AC-FT)	3970		3240		21510	
10 PERCENT EXCEEDS	11		5.4		32	
50 PERCENT EXCEEDS	5.3		4.0		12	
90 PERCENT EXCEEDS	0.59		1.2		2.2	

e Estimated



07166500 VERDIGRIS RIVER NEAR ALTOONA, KS

LOCATION.--Lat 37°29'26", long 95°40'49", in SE $^{1}/_{4}$ NE $^{1}/_{4}$ SW $^{1}/_{4}$ sec.29, T.29 S., R.16 E., Wilson County, Hydrologic Unit 11070101, on left bank at downstream side of county highway bridge, 2.5 mi southwest of Altoona, 2.5 mi downstream from Big Cedar Creek, and at mile 227.9.

DRAINAGE AREA.--1,138 mi^2.

PERIOD OF RECORD.--October 1938 to current year. Monthly discharge only for some periods, published in WSP 1311.

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 780.18 ft above NGVD of 1929 (levels by U.S. Army Corps of Engineers). Prior to Sept. 9, 1944, nonrecording gage at same site and datum.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Considerable regulation since 1960 by Toronto Lake (station 07165900), 43.6 mi upstream. Diversion from Altoona Reservoir upstream from station for municipal supply of Altoona and considerable diversion for irrigation upstream from station. Satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	860	18	14	3.6	19	8.0	7.9	748	e2220	528	25	2.4
2	852	40	14	3.8	26	9.9	8.3	729	e2170	e363	18	2.4
3	850	17	15	3.4	32	7.8	7.0	704	e2130	e103	15	2.4
4	838	16	16	3.2	32	7.7	6.0	686	e2130	65	13	2.1
5	463	14	16	3.4	31	8.5	5.8	670	e2280	61	13	1.8
6	133	13	16	3.4	30	8.6	5.5	661	e2160	60	11	1.8
7	132	14	16	3.3	25	8.8	10	e1360	1910	58	9.3	2.1
8	121	16	16	3.3	21	8.3	12	e8850	1750	58	7.2	2.8
9	115	16	14	3.6	18	11	11	e6040	1710	59	5.2	3.3
10	106	21	14	4.0	16	9.5	9.6	e2080	1660	48	4.5	4.5
11	53	18	14	4.1	13	9.0	9.4	e1960	1300	483	5.6	5.6
12	26	16	17	4.4	12	9.2	10	e3070	1860	300	6.6	7.2
13	20	17	17	4.9	10	9.1	9.4	e3790	3370	105	9.8	10
14	17	17	18	4.6	8.8	9.1	9.1	e1420	2200	174	11	13
15	16	17	18	4.9	8.0	8.9	10	e1280	e983	179	10	16
16	15	17	16	4.5	7.2	8.0	11	e1240	e906	157	9.4	15
17	15	17	12	4.7	6.2	8.2	138	e2490	e870	65	11	14
18	17	17	8.9	5.1	5.4	8.5	244	e2260	797	29	14	14
19	18	17	7.5	6.0	6.3	8.9	104	e2000	1170	20	21	46
20	16	16	5.9	5.9	7.3	8.8	37	e2210	1540	19	18	32
21	15	16	5.2	5.9	7.5	8.8	34	e2510	1500	53	15	26
22	15	16	4.6	5.6	7.5	7.9	91	e2640	1460	97	12	19
23	16	15	4.4	5.7	7.3	8.0	107	e2620	1430	95	10	14
24	16	16	4.1	5.7	10	8.4	125	e8390	1400	58	8.7	12
25	16	16	3.7	5.0	15	8.8	252	e7130	1380	27	8.0	12
26	20	15	3.6	4.7	13	7.8	262	e2290	1360	17	8.2	12
27	16	14	3.6	4.6	11	7.8	745	e2740	1340	14	6.9	13
28	16	14	3.8	4.7	9.4	8.2	1420	e4030	869	13	5.4	12
29	18	14	3.9	4.9	---	8.7	691	e2930	552	33	4.4	12
30	17	14	3.8	11	---	8.0	503	e3130	534	57	3.5	12
31	17	---	3.8	28	---	7.8	---	e2560	---	43	2.8	---
MEAN	156.9	16.80	10.64	5.481	14.82	8.581	163.2	2749	1565	111.0	10.40	11.41
MAX	860	40	18	28	32	11	1420	8850	3370	528	25	46
MIN	15	13	3.6	3.2	5.4	7.7	5.5	661	534	13	2.8	1.8
AC-FT	9650	1000	654	337	823	528	9710	169000	93110	6830	640	679

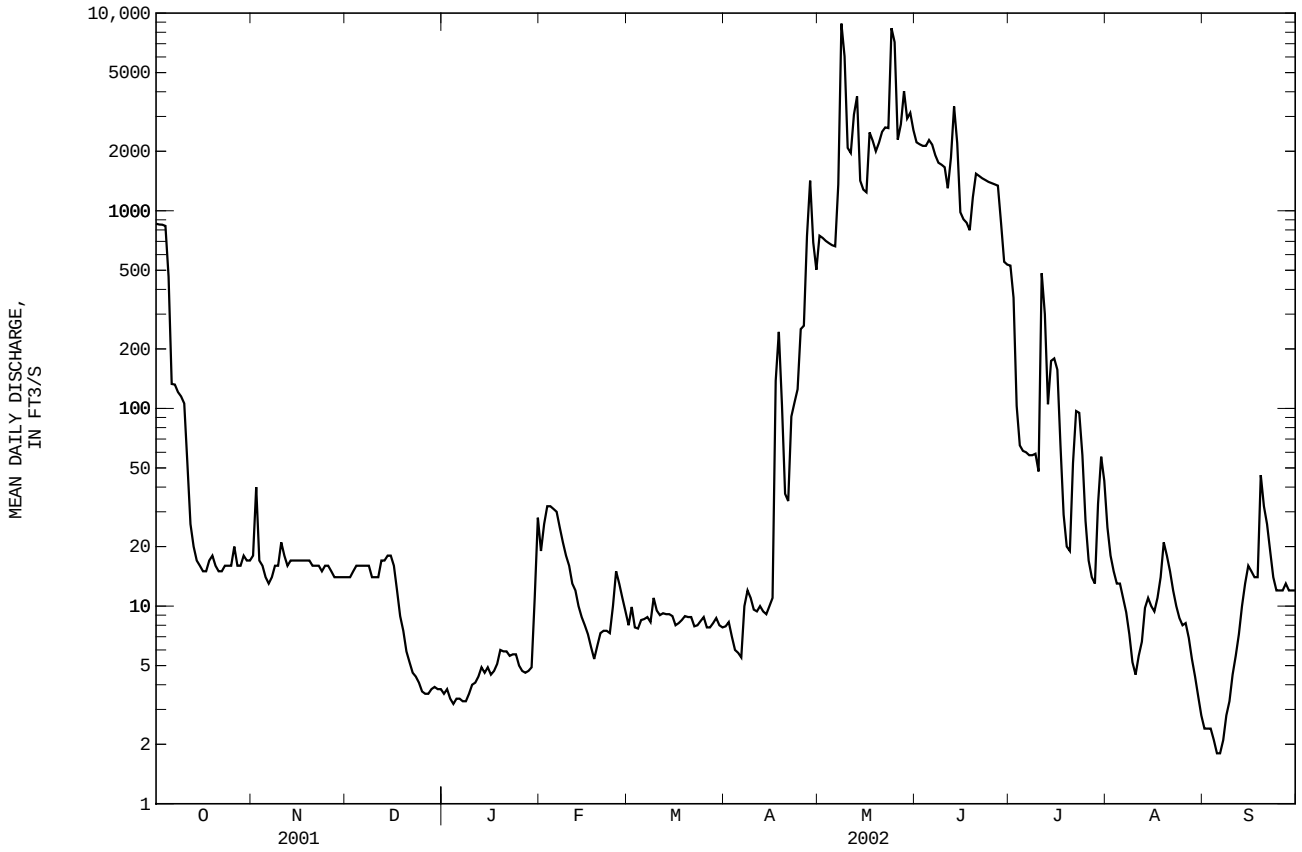
07166500 VERDIGRIS RIVER NEAR ALTOONA, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	697.2	903.2	582.9	396.3	624.1	1124	1173	1220	1460	557.9	284.3	517.1
MAX	6663	6814	3297	2242	2083	5062	4684	6826	4841	2945	1943	5119
(WY)	1987	1999	1993	1973	1975	1973	1994	1961	1995	1992	1985	1961
MIN	5.73	5.44	5.16	1.65	1.13	1.76	1.83	26.3	15.1	14.1	4.25	4.95
(WY)	1995	1981	1981	1981	1981	1981	1981	1964	1988	1991	1984	1980

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1961 - 2002	
ANNUAL MEAN	604.7		404.7		793.8	
HIGHEST ANNUAL MEAN					1833	1999
LOWEST ANNUAL MEAN					65.4	1996
HIGHEST DAILY MEAN	7800	Feb 25	8850	May 8	32800	Oct 3 1986
LOWEST DAILY MEAN	3.6	Dec 26	1.8	Sep 5	0.00	Sep 19 1980
ANNUAL SEVEN-DAY MINIMUM	3.7	Dec 25	2.1	Sep 1	0.00	Jul 29 1984
MAXIMUM PEAK FLOW			10400	May 24	71000	Jul 12 1951
MAXIMUM PEAK STAGE			23.02	May 24	31.09	Jul 12 1951
INSTANTANEOUS LOW FLOW			1.6	Sep 6	.00	at times
ANNUAL RUNOFF (AC-FT)	437800		293000		575100	
10 PERCENT EXCEEDS	1860		1480		2530	
50 PERCENT EXCEEDS	97		15		130	
90 PERCENT EXCEEDS	9.3		4.6		10	

e Estimated



07167500 OTTER CREEK AT CLIMAX, KS

LOCATION.--Lat 37°42'30", long 96°13'30", in SW $^1/_4$ SE $^1/_4$ sec.8, T.27 S., R.11 E., Greenwood County, Hydrologic Unit 11070102, on right bank at downstream side of bridge on Kansas Highway 99, 0.5 mi south of Climax, 5.2 mi upstream from mouth, and 5.5 mi downstream from confluence of North and South Branches.

DRAINAGE AREA.--129 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is 977.76 ft above NGVD of 1929 (levels by U.S. Army Corps of Engineers).

REMARKS.--Records good. Satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 5,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 9	0300	5,430	14.49	May 24	1015	*8,520	*18.26
May 12	0900	7,880	17.58	May 25	0500	6,550	16.01

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

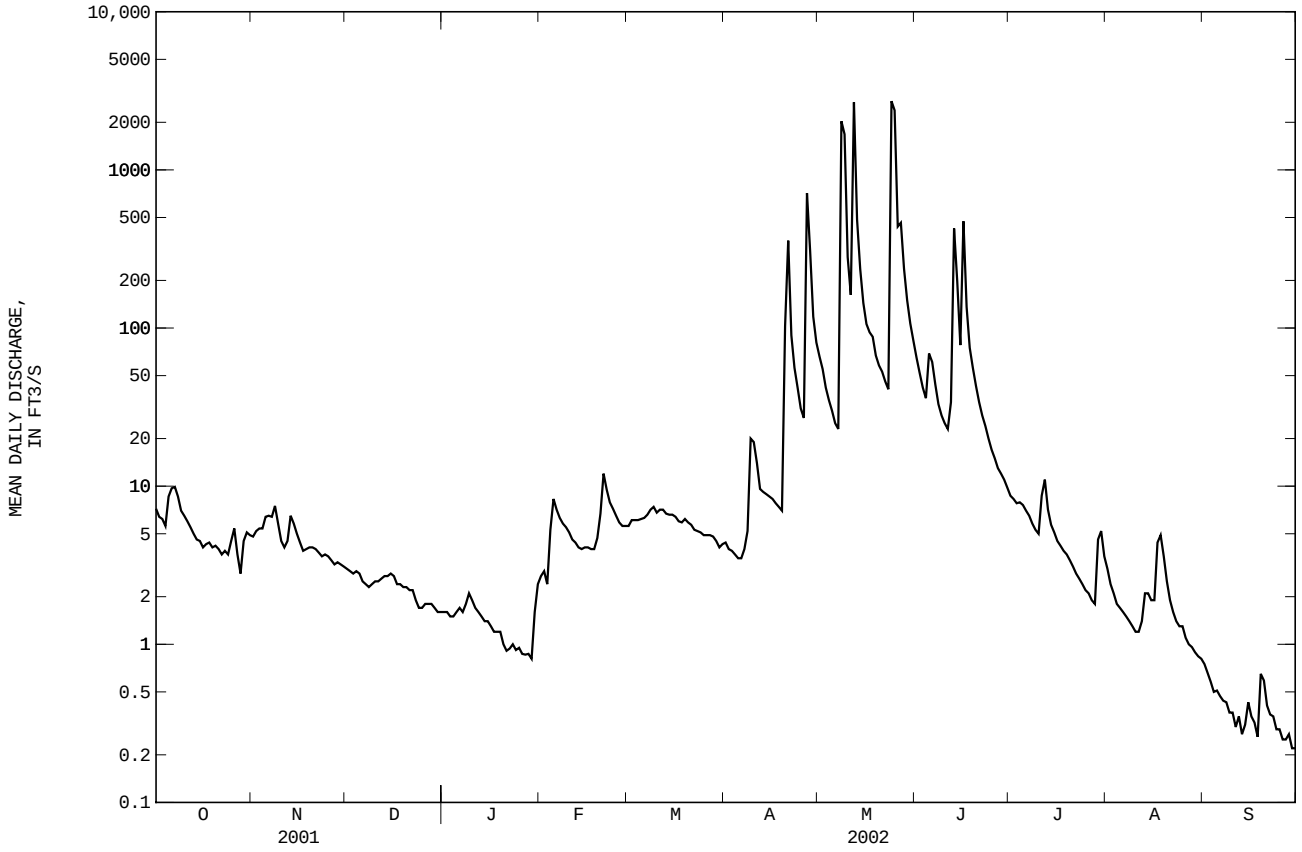
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.2	4.8	3.0	1.6	2.7	5.6	4.4	66	65	8.7	3.0	0.75
2	6.4	5.2	2.9	1.6	2.9	6.1	4.0	55	52	8.3	2.4	0.66
3	6.2	5.4	2.8	1.5	2.4	6.1	3.9	42	42	7.8	2.1	0.58
4	5.6	5.4	2.9	1.5	5.3	6.1	3.7	35	36	7.9	1.8	0.50
5	8.6	6.4	2.8	1.6	8.3	6.2	3.5	30	69	7.6	1.7	0.51
6	9.7	6.5	2.5	1.7	7.1	6.3	3.5	25	61	7.0	1.6	0.47
7	9.9	6.4	2.4	1.6	6.3	6.6	4.0	23	44	6.5	1.5	0.44
8	8.6	7.5	2.3	1.8	5.8	7.1	5.2	2030	33	5.8	1.4	0.43
9	7.0	5.8	2.4	2.1	5.5	7.4	20	1680	28	5.3	1.3	0.37
10	6.5	4.5	2.5	1.9	5.1	6.8	19	281	25	5.0	1.2	0.37
11	6.0	4.1	2.5	1.7	4.6	7.1	14	162	23	8.7	1.2	0.30
12	5.5	4.5	2.6	1.6	4.4	7.1	9.6	2680	34	11	1.4	0.35
13	5.0	6.5	2.7	1.5	4.1	6.7	9.2	485	426	7.1	2.1	0.27
14	4.6	5.8	2.7	1.4	4.0	6.6	8.9	236	198	5.7	2.1	0.31
15	4.5	5.0	2.8	1.4	4.1	6.6	8.6	144	78	5.1	1.9	0.43
16	4.1	4.4	2.7	1.3	4.1	6.4	8.3	106	473	4.5	1.9	0.35
17	4.3	3.9	2.4	1.2	4.0	6.0	7.8	94	136	4.2	4.4	0.32
18	4.4	4.0	2.4	1.2	4.0	5.9	7.4	88	75	3.9	4.9	0.26
19	4.1	4.1	2.3	1.2	4.7	6.2	7.0	67	56	3.7	3.6	0.65
20	4.2	4.1	2.3	1.0	6.7	5.9	103	58	43	3.4	2.5	0.59
21	4.0	4.0	2.2	0.91	12	5.7	357	53	34	3.1	1.9	0.41
22	3.7	3.8	2.2	0.94	9.5	5.3	90	46	28	2.8	1.6	0.36
23	3.9	3.6	1.9	1.0	7.9	5.2	56	41	24	2.6	1.4	0.35
24	3.7	3.7	1.7	0.92	7.2	5.1	42	2720	20	2.4	1.3	0.29
25	4.5	3.6	1.7	0.95	6.5	4.9	31	2380	17	2.2	1.3	0.29
26	5.4	3.4	1.8	0.87	5.9	4.9	27	438	15	2.1	1.1	0.25
27	3.7	3.2	1.8	0.86	5.6	4.9	713	463	13	1.9	1.0	0.25
28	2.8	3.3	1.8	0.87	5.6	4.8	307	237	12	1.8	0.96	0.27
29	4.5	3.2	1.7	0.81	---	4.5	118	150	11	4.6	0.89	0.22
30	5.1	3.1	1.6	1.6	---	4.1	81	107	9.8	5.2	0.84	0.22
31	4.9	---	1.6	2.4	---	4.3	---	83	---	3.6	0.81	---
MEAN	5.439	4.640	2.319	1.372	5.582	5.887	69.23	487.3	72.69	5.145	1.842	0.394
MAX	9.9	7.5	3.0	2.4	12	7.4	713	2720	473	11	4.9	0.75
MIN	2.8	3.1	1.6	0.81	2.4	4.1	3.5	23	9.8	1.8	0.81	0.22
AC-FT	334	276	143	84	310	362	4120	29960	4330	316	113	23

07167500 OTTER CREEK AT CLIMAX, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	52.74	86.46	43.68	37.44	66.67	115.6	146.7	133.2	153.7	72.29	19.55	56.58
MAX	644	1068	255	235	370	689	1325	762	857	798	200	596
(WY)	1987	1999	1993	1973	1985	1973	1994	1961	1951	1976	1995	1961
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.028	0.96	0.087	0.000	0.000	0.000
(WY)	1954	1954	1954	1954	1954	1956	1981	1996	1953	1953	1953	1953

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1947 - 2002	
ANNUAL MEAN	98.70		55.76		81.85	
HIGHEST ANNUAL MEAN					231	1999
LOWEST ANNUAL MEAN					0.55	1953
HIGHEST DAILY MEAN	7420	Sep 18	2720	May 24	21700	Jul 3 1976
LOWEST DAILY MEAN	1.6	Sep 4	0.22	Sep 29	0.00	Jun 12 1953
ANNUAL SEVEN-DAY MINIMUM	1.7	Dec 25	0.26	Sep 24	0.00	Jun 12 1953
MAXIMUM PEAK FLOW			8520	May 24	107000	Jul 3 1976
MAXIMUM PEAK STAGE			18.26	May 24	31.47	Jul 3 1976
INSTANTANEOUS LOW FLOW			0.13	Sep 18	.00	at times
ANNUAL RUNOFF (AC-FT)	71450		40370		59300	
10 PERCENT EXCEEDS	120		63		120	
50 PERCENT EXCEEDS	7.6		4.5		9.6	
90 PERCENT EXCEEDS	2.3		0.88		0.00	



07169500 FALL RIVER AT FREDONIA, KS

LOCATION.--Lat 37°30'30", long 95°50'00", in SW $^{1}/_{4}$ SW $^{1}/_{4}$ NW $^{1}/_{4}$ sec.24, T.29 S., R.14 E., Wilson County, Hydrologic Unit 11070102, on right bank at downstream side of bridge on Kansas Highway 96, 0.8 mi upstream from Clear Creek, 1.0 mi downstream from Salt Creek, 1.0 mi south of Fredonia, and at mile 25.3.

DRAINAGE AREA.--827 mi^2.

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.

REVISED RECORDS.--WSP 1117: Drainage area. WSP 1341: 1939-40.

GAGE.--Water-stage recorder. Datum of gage is 819.09 ft above NGVD of 1929 (levels by U.S. Army Corps of Engineers). Prior to Dec. 21, 1949, nonrecording gage at same site and datum.

REMARKS.--Records good. Considerable regulation since 1949 by Fall River Lake (station 07168000), 28.9 mi upstream, and during low flow by Fredonia City Water Reservoir, 1.0 mi upstream. Satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since at least 1904, that of Apr. 16, 1945.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

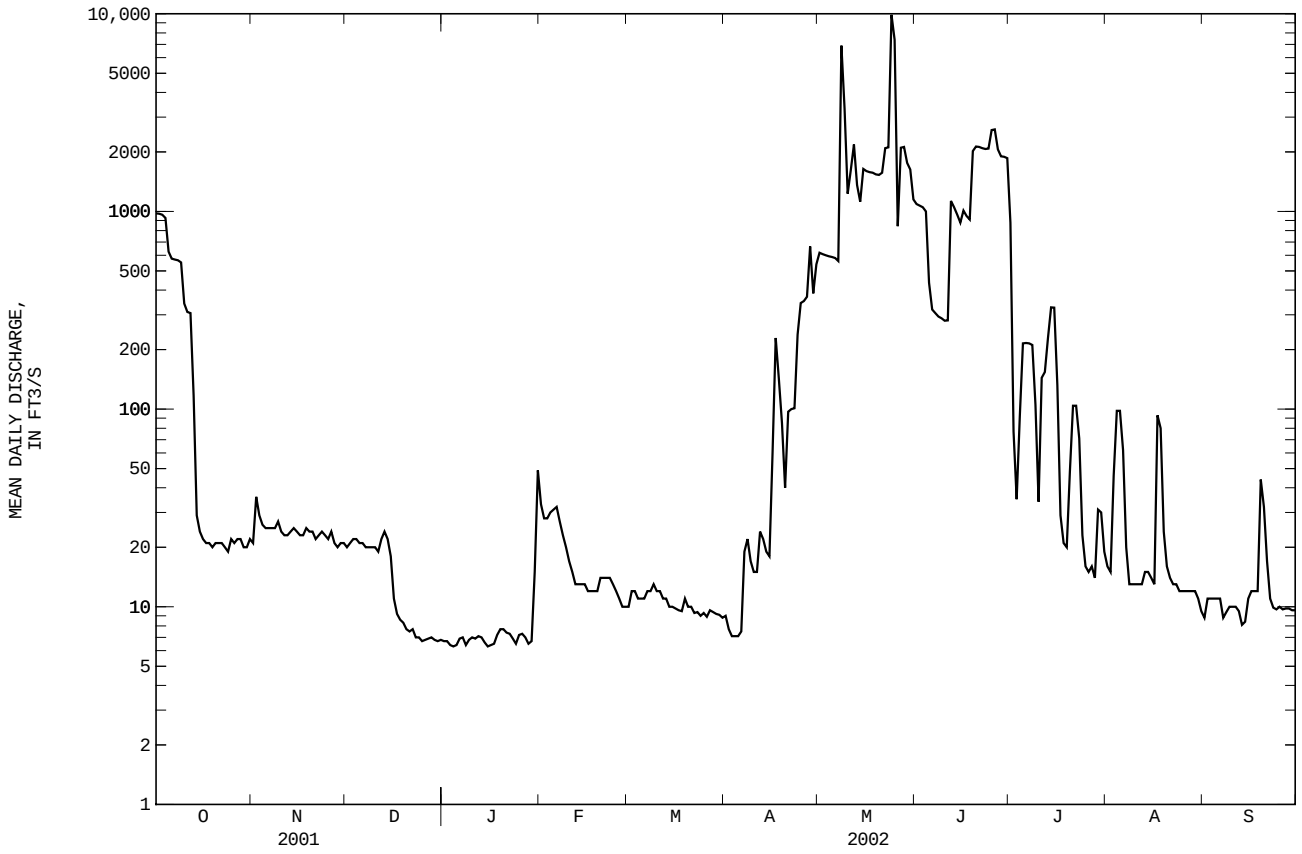
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	978	21	20	6.7	33	10	9.0	618	1090	876	16	8.8
2	974	36	21	6.7	28	12	7.7	608	1070	77	15	11
3	962	29	22	6.4	28	12	7.1	600	1050	35	46	11
4	927	26	22	6.3	30	11	7.1	593	1000	92	98	11
5	626	25	21	6.4	31	11	7.1	588	436	215	98	11
6	577	25	21	6.9	32	11	7.5	581	319	216	62	11
7	571	25	20	7.0	27	12	19	561	306	215	20	8.8
8	566	25	20	6.4	23	12	22	6900	294	211	13	9.4
9	552	27	20	6.8	20	13	17	3320	288	105	13	10
10	342	24	20	7.0	17	12	15	1230	280	34	13	10
11	310	23	19	6.9	15	12	15	1620	281	144	13	10
12	306	23	22	7.1	13	11	24	2180	1130	154	13	9.5
13	117	24	24	7.0	13	11	22	1360	1050	229	15	8.1
14	29	25	22	6.6	13	10	19	1120	963	327	15	8.4
15	24	24	18	6.3	13	10	18	1640	878	326	14	11
16	22	23	11	6.4	12	9.8	60	1600	1010	132	13	12
17	21	23	9.2	6.5	12	9.6	229	1580	948	29	93	12
18	21	25	8.6	7.2	12	9.5	143	1570	910	21	80	12
19	20	24	8.3	7.7	12	11	85	1540	2020	20	24	44
20	21	24	7.7	7.7	14	10	40	1530	2130	48	16	32
21	21	22	7.5	7.4	14	10	97	1570	2120	104	14	17
22	21	23	7.7	7.3	14	9.3	100	2090	2090	104	13	11
23	20	24	7.0	6.9	14	9.4	101	2110	2070	71	13	9.9
24	19	23	7.0	6.5	13	9.0	238	9880	2080	23	12	9.7
25	22	22	6.7	7.2	12	9.3	344	7390	2580	16	12	10
26	21	24	6.8	7.3	11	8.9	352	842	2600	15	12	9.7
27	22	21	6.9	7.0	10	9.6	370	2100	2060	16	12	9.8
28	22	20	7.0	6.5	10	9.4	665	2120	1900	14	12	9.8
29	20	21	6.8	6.7	---	9.2	385	1760	1890	31	12	9.6
30	20	21	6.7	15	---	9.1	540	1630	1860	30	11	9.6
31	22	---	6.8	49	---	8.8	---	1150	---	19	9.5	---
MEAN	264.4	24.07	13.99	8.477	17.71	10.38	132.2	2064	1290	127.4	26.53	12.24
MAX	978	36	24	49	33	13	665	9880	2600	876	98	44
MIN	19	20	6.7	6.3	10	8.8	7.1	561	280	14	9.5	8.1
AC-FT	16260	1430	860	521	984	638	7870	126900	76770	7830	1630	728

07169500 FALL RIVER AT FREDONIA, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	396.8	490.4	337.4	258.3	364.4	736.2	749.1	794.6	916.8	551.6	172.0	297.4
MAX	4332	3899	2060	1954	1573	3551	3536	5487	3806	6435	1231	3387
(WY)	1987	1999	1993	1993	1987	1973	1970	1961	1957	1951	1950	1961
MIN	4.77	4.79	6.96	3.84	2.05	1.59	0.91	18.7	10.3	10.9	5.78	0.91
(WY)	1981	1955	1981	1981	1981	1981	1981	1967	1954	1955	1983	1980

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1950 - 2002	
ANNUAL MEAN	446.9		334.9		505.3	
HIGHEST ANNUAL MEAN					1286	1999
LOWEST ANNUAL MEAN					16.5	1953
HIGHEST DAILY MEAN	7520	Feb 24	9880	May 24	26300	Oct 3 1986
LOWEST DAILY MEAN	6.7	Dec 25	6.3	Jan 4	0.00	Sep 9 1980
ANNUAL SEVEN-DAY MINIMUM	6.8	Dec 25	6.6	Dec 30	0.00	May 1 1981
MAXIMUM PEAK FLOW			12600	May 25	49000	Apr 16 1945
MAXIMUM PEAK STAGE			23.06	May 25	36.17	Apr 16 1945
INSTANTANEOUS LOW FLOW			5.8	Jan 2	.00	at times
ANNUAL RUNOFF (AC-FT)	323500		242400		366100	
10 PERCENT EXCEEDS	1530		1100		1530	
50 PERCENT EXCEEDS	73		21		74	
90 PERCENT EXCEEDS	15		7.3		9.0	



07169800 ELK RIVER AT ELK FALLS, KS

LOCATION.--Lat 37°22'32", long 96°11'07", in SW $^1/_4$ SE $^1/_4$ SE $^1/_4$ sec.3, T.31 S., R.11 E., Elk County, Hydrologic Unit 11070104, on left bank at downstream side of bridge on U.S. Highway 160 in Elk Falls, 2.0 mi upstream from Wildcat Creek, and at mile 57.5.

WATER-DISCHARGE RECORDS

DRAINAGE AREA.--220 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is 897.30 ft above NGVD of 1929 (levels by U.S. Army Corps of Engineers).

REMARKS.--Records good except those for estimated daily discharges, which are poor. Satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 8	1200	6,920	13.62	May 24	1500	*11,300	*17.96

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	0.68	1.6	1.0	13	2.9	2.3	66	152	36	8.7	0.94
2	0.64	1.8	1.6	1.0	13	3.4	2.1	55	129	32	7.3	0.81
3	0.45	1.2	1.7	1.0	16	3.4	2.1	46	114	30	6.0	0.64
4	0.28	1.1	1.7	0.99	15	3.4	2.2	40	105	28	4.8	0.44
5	0.50	1.4	1.9	0.98	12	3.5	2.2	35	140	26	3.9	0.37
6	1.2	1.6	2.1	0.99	9.7	3.4	2.0	30	138	22	3.3	0.36
7	1.5	1.7	1.8	1.0	8.7	3.3	4.4	160	117	19	2.7	0.34
8	1.0	1.9	1.6	1.0	7.1	3.3	11	4830	100	17	2.3	0.27
9	0.76	1.9	1.5	1.0	5.9	3.7	17	2510	87	15	2.0	0.20
10	0.75	2.0	1.4	1.1	5.2	4.1	17	1100	77	13	1.7	0.12
11	0.65	2.0	1.3	1.2	4.6	4.3	15	475	69	15	1.5	0.06
12	0.53	2.0	1.7	1.2	3.9	4.3	16	337	219	15	1.3	0.03
13	0.44	2.1	1.8	1.3	3.7	4.2	17	412	306	12	1.5	0.03
14	0.37	2.2	1.8	1.5	3.4	4.0	17	263	694	11	2.0	0.21
15	0.38	2.1	1.8	1.6	3.0	e4.0	16	197	264	10	2.3	0.35
16	0.24	2.0	1.8	1.5	2.7	e3.9	14	162	849	9.0	2.5	0.36
17	0.27	2.0	1.6	1.6	2.7	e3.9	13	152	436	8.2	3.1	0.38
18	0.33	2.1	1.6	1.6	2.7	e3.8	12	144	253	7.5	23	0.78
19	0.31	2.2	1.5	1.6	3.3	e3.8	11	127	194	6.7	18	25
20	0.29	2.1	1.4	1.7	3.2	e3.6	10	118	150	6.3	10	17
21	0.36	2.1	1.3	1.6	3.4	e3.5	11	112	121	5.7	7.5	13
22	0.45	2.2	1.3	1.6	3.2	e3.3	11	107	103	5.1	5.3	8.7
23	0.49	2.3	1.3	1.6	3.1	e3.0	10	105	88	38	4.1	5.8
24	0.38	2.2	1.3	1.6	3.0	e2.8	11	6510	77	23	3.3	3.9
25	0.43	2.1	1.2	1.6	3.2	e2.6	10	3470	68	15	2.8	2.6
26	0.47	2.0	1.2	1.5	3.1	e2.6	11	2520	60	11	2.3	1.8
27	0.40	1.9	1.2	1.4	2.9	2.7	38	1670	56	8.1	1.8	1.3
28	0.44	1.8	1.2	1.4	2.9	2.7	134	831	50	6.4	1.5	1.1
29	0.51	1.7	1.3	1.4	---	2.6	109	418	46	9.2	1.3	0.74
30	0.53	1.6	1.2	2.9	---	2.5	81	254	40	13	1.3	0.58
31	0.51	---	1.1	8.5	---	2.4	---	194	---	10	1.1	---
MEAN	0.547	1.866	1.510	1.612	5.843	3.384	20.98	885.5	176.7	15.59	4.523	2.940
MAX	1.5	2.3	2.1	8.5	16	4.3	134	6510	849	38	23	25
MIN	0.24	0.68	1.1	0.98	2.7	2.4	2.0	30	40	5.1	1.1	0.03
MED	0.45	2.0	1.5	1.4	3.4	3.4	11	194	116	13	2.7	0.61
AC-FT	34	111	93	99	325	208	1250	54450	10520	958	278	175

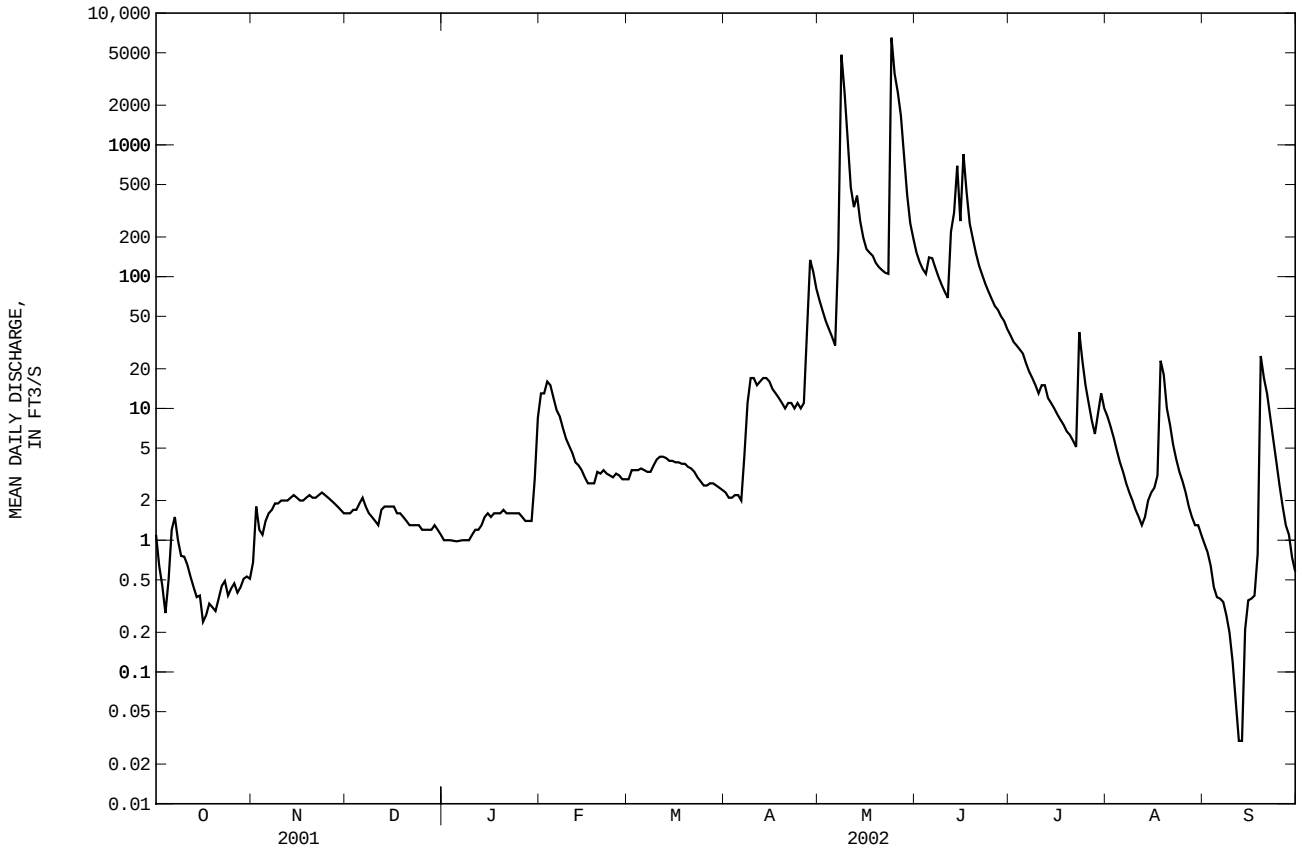
07169800 ELK RIVER AT ELK FALLS, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	113.3	155.2	107.5	79.52	136.8	237.5	245.9	267.9	284.6	111.7	28.08	47.88
MAX	1410	954	488	394	554	1247	1227	1232	1287	2080	208	381
(WY)	1987	1999	1993	1973	1987	1973	1994	1993	1995	1976	1985	1986
MIN	0.000	0.000	0.035	0.015	0.021	0.074	0.062	6.26	2.57	0.22	0.000	0.000
(WY)	1981	1981	1981	1981	1981	1981	1981	1991	1996	1980	1980	1980

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1968 - 2002	
ANNUAL MEAN	101.3		94.61		151.1	
HIGHEST ANNUAL MEAN					322	1999
LOWEST ANNUAL MEAN					6.17	1991
HIGHEST DAILY MEAN	4640	Feb 24	6510	May 24	47500	Jul 3 1976
LOWEST DAILY MEAN	0.24	Oct 16	0.03	Sep 12	0.00	Aug 26 1970
ANNUAL SEVEN-DAY MINIMUM	0.31	Oct 15	0.13	Sep 8	0.00	Aug 26 1970
MAXIMUM PEAK FLOW			11300	May 24	200000	Jul 3 1976
MAXIMUM PEAK STAGE			17.96	May 24	34.85	Jul 3 1976
INSTANTANEOUS LOW FLOW			0.02	Sep 12	.00	at times
ANNUAL RUNOFF (AC-FT)	73340		68490		109500	
10 PERCENT EXCEEDS	219		119		264	
50 PERCENT EXCEEDS	14		2.9		21	
90 PERCENT EXCEEDS	0.64		0.53		0.64	

e Estimated



07169800 ELK RIVER AT ELK FALLS, KS--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1967 to May 1980, 2000 to current year.

REMARKS.--Unpublished records of intermittent sediment samples are available on the Internet at http://ks.waterdata.usgs.gov/nwis. Sediment samples are collected only at selected flow conditions.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM (70337)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM (70338)	SED. SUSP. FALL DIAM. % FINER THAN .008 MM (70339)	SED. SUSP. FALL DIAM. % FINER THAN .016 MM (70340)	SED. SUSP. FALL DIAM. % FINER THAN .031 MM (70341)	SED. SUSP. FALL DIAM. % FINER THAN .062 MM (70342)
JAN													
14...	1040	1.6	--	--	4.0	8.9	.04	--	--	--	--	--	--
APR													
12...	1140	16	489	8.0	16.5	34	1.5	--	--	--	--	--	--
MAY													
08...	1115	6500	184	7.8	17.7	1880	33000	33	45	57	71	90	97
10...	1155	1120	241	7.8	17.9	158	477	--	--	--	--	--	--
JUN													
19...	1045	191	338	8.0	23.6	65	33.3	--	--	--	--	--	--

Date	SED. SUSP. FALL DIAM. % FINER THAN .125 MM (70343)	SED. SUSP. FALL DIAM. % FINER THAN .250 MM (70344)	SED. SUSP. FALL DIAM. % FINER THAN .500 MM (70345)	SED. SUSP. FALL DIAM. % FINER THAN 1.00 MM (70346)
JAN				
14...	--	--	--	--
APR				
12...	--	--	--	--
MAY				
08...	99	100	100	100
10...	--	--	--	--
JUN				
19...	--	--	--	--

07170060 ELK RIVER BELOW ELK CITY LAKE, KS

LOCATION.--Lat 37°16'46", long 95°46'53", in NW $^{1}/_{4}$ SW $^{1}/_{4}$ NW $^{1}/_{4}$ sec.9, T.32 S., R.15 E., Montgomery County, Hydrologic Unit 11070104, on left bank, 600 ft downstream from Elk City Dam, and at mile 8.7.

DRAINAGE AREA.--634 mi^2.

PERIOD OF RECORD.--October 1965 to September 2002 (discontinued). Prior to October 1971, published as "below Elk City Reservoir."

GAGE.--Water-stage recorder. Datum of gage is 740.00 ft above NGVD of 1929 (levels by U.S. Army Corps of Engineers). Aug. 17, 1978, to Apr. 3, 1979, at site 600 ft downstream at same datum.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Flow completely regulated since 1966 by Elk City Lake (station 07170050), 600 ft upstream. Satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.8	5.8	5.9	4.7	4.3	4.0	1.8	7.5	2580	206	1.9	1.6
2	5.8	5.9	5.6	4.6	4.3	4.1	2.0	8.0	2570	164	2.0	1.5
3	5.7	5.9	5.5	4.4	4.3	3.9	2.0	7.8	2540	127	2.0	1.5
4	5.6	5.8	5.5	4.1	4.5	3.9	1.8	7.9	1480	127	2.2	1.6
5	6.0	5.7	5.5	4.1	4.5	3.7	2.0	7.7	217	126	2.7	3.1
6	5.8	5.7	5.7	4.1	4.5	3.8	1.9	7.7	325	127	3.1	7.1
7	5.8	5.8	5.6	3.9	103	3.8	2.2	e20	502	129	3.3	7.1
8	5.7	6.1	5.8	3.9	177	3.7	2.5	e10	499	68	3.4	7.0
9	5.5	5.9	5.7	3.9	178	4.1	2.2	e800	498	15	3.6	16
10	5.8	5.9	5.4	4.0	178	3.8	2.0	e2000	850	14	3.7	24
11	5.8	5.9	5.4	3.9	178	3.5	1.7	2580	1670	15	3.7	56
12	5.7	5.7	5.6	4.1	177	2.9	1.6	2550	e2150	14	3.6	80
13	5.8	5.7	5.7	4.1	177	2.9	1.7	3070	e2500	14	3.6	49
14	5.8	5.6	5.6	4.1	177	2.9	1.7	4120	e2600	14	3.2	25
15	5.7	5.4	5.5	3.9	109	3.1	1.6	4280	2640	14	1.9	27
16	5.7	6.1	5.7	3.9	3.5	3.3	1.7	4210	2660	14	1.3	20
17	5.5	6.3	5.7	4.0	3.4	3.7	1.9	1790	2620	14	1.6	4.5
18	5.9	6.3	5.5	3.9	3.3	3.9	1.9	1080	3110	14	1.4	9.5
19	6.0	6.4	5.7	3.7	3.5	4.0	2.3	1080	3610	14	1.6	15
20	6.0	6.2	5.6	3.6	3.6	3.5	3.6	1070	3570	14	2.0	15
21	5.8	6.1	5.4	3.7	3.6	3.0	5.9	1070	3520	14	2.2	15
22	5.7	6.1	5.5	3.6	3.5	2.8	5.8	1060	3470	8.3	2.0	15
23	5.7	6.0	5.7	3.8	3.4	2.7	5.7	1060	3420	4.4	2.0	15
24	5.8	6.3	5.7	3.7	3.8	2.5	6.0	e500	3150	4.0	2.0	14
25	5.7	6.1	5.7	3.7	4.8	2.1	5.9	e20	2060	3.9	1.7	14
26	5.6	5.9	5.7	3.7	4.7	1.9	6.1	e400	1380	3.8	1.4	12
27	5.4	6.0	5.7	3.7	4.5	1.8	e7.0	557	698	3.9	1.5	8.5
28	5.2	6.1	5.1	3.9	4.3	1.8	6.6	550	207	3.7	1.5	8.5
29	5.5	5.9	4.5	3.9	---	1.5	7.0	1170	207	2.4	1.5	8.2
30	5.8	5.8	4.6	4.5	---	1.5	7.1	2150	206	3.6	1.5	8.3
31	5.2	---	4.6	4.7	---	1.6	---	2610	---	2.6	1.5	---
MEAN	5.703	5.947	5.497	3.994	54.65	3.087	3.440	1286	1917	41.89	2.277	16.33
MAX	6.0	6.4	5.9	4.7	178	4.1	7.1	4280	3610	206	3.7	80
MIN	5.2	5.4	4.5	3.6	3.3	1.5	1.6	7.5	206	2.4	1.3	1.5
AC-FT	351	354	338	246	3040	190	205	79050	114100	2580	140	972

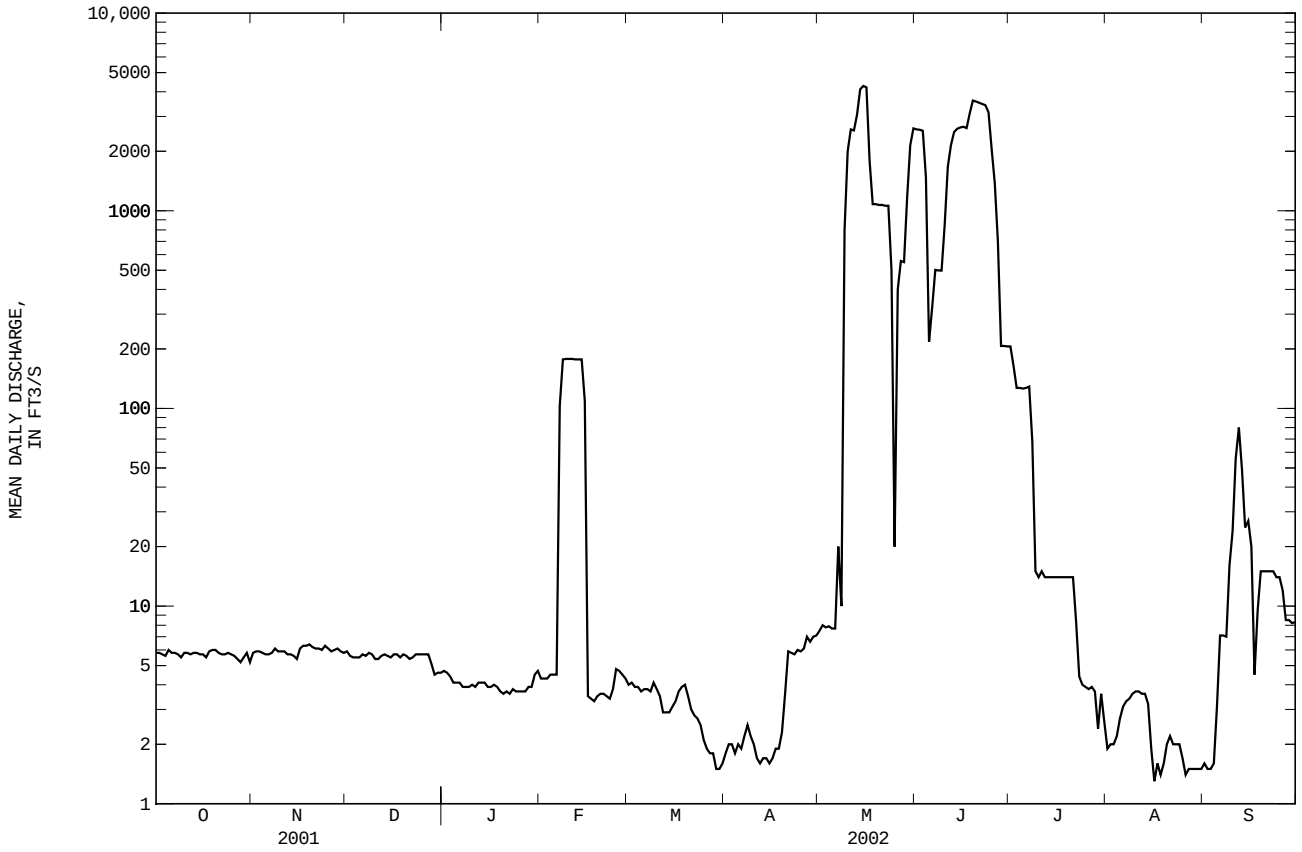
07170060 ELK RIVER BELOW ELK CITY LAKE, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	369.1	459.1	322.0	348.5	349.6	706.1	590.2	681.3	877.6	478.0	113.5	96.91
MAX	5813	3683	1511	2054	1669	2739	2874	2969	2819	4636	1247	747
(WY)	1987	1975	1993	1993	1975	1985	1988	1994	1993	1976	1985	1985
MIN	2.29	0.81	1.18	0.71	0.20	0.18	1.37	0.19	3.96	3.07	0.94	4.25
(WY)	1996	1991	1977	1977	1976	1976	1991	1972	1972	1974	1971	1975

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1966 - 2002	
ANNUAL MEAN	245.1		278.4		449.5	
HIGHEST ANNUAL MEAN					1119	1987
LOWEST ANNUAL MEAN					14.1	1981
HIGHEST DAILY MEAN	2980	Feb 28	4280	May 15	11600	Oct 4 1986
LOWEST DAILY MEAN	2.4	Jan 7	1.3	Aug 16	0.00	May 4 1966
ANNUAL SEVEN-DAY MINIMUM	2.5	Jan 7	1.5	Aug 26	0.01	May 3 1966
MAXIMUM PEAK FLOW			4400	May 14	11900	Oct 4 1986
MAXIMUM PEAK STAGE			19.70	May 14	33.36	Oct 4 1986
INSTANTANEOUS LOW FLOW			1.1	Aug 16	.00	at times
ANNUAL RUNOFF (AC-FT)	177500		201500		325600	
10 PERCENT EXCEEDS	1100		1060		1500	
50 PERCENT EXCEEDS	6.5		5.7		18	
90 PERCENT EXCEEDS	4.8		2.0		3.0	

e Estimated



07170500 VERDIGRIS RIVER AT INDEPENDENCE, KS

LOCATION.--Lat 37°13'24", long 95°40'43", in NW $^1/_4$ NE $^1/_4$ NE $^1/_4$ sec.32, T.32 S., R.16 E., Montgomery County, Hydrologic Unit 11070103, on left bank at downstream side of bridge on U.S. Highway 160, 1.0 mi east of Independence, 3.7 mi downstream from Elk River, and at mile 194.2.

DRAINAGE AREA.--2,892 mi^2.

PERIOD OF RECORD.--August 1895 to September 1904 (monthly figures only, published in WSP 1311), October 1921 to current year.

REVISED RECORDS.--WSP 977: 1922, 1927-29. WSP 1117: Drainage area. WSP 1341: 1923-25(M), 1939.

GAGE.--Water-stage recorder. Datum of gage is 716.63 ft above NGVD of 1929. Aug. 2, 1895, to Nov. 30, 1903, nonrecording gage at former mill dam 5.0 mi downstream and 2.5 mi northwest of Liberty, at datum about 4.00 ft lower. Apr. 20 to Sept. 25, 1904, nonrecording gage at Myrtle Street highway bridge 0.8 mi upstream at different datum. Nov. 14, 1921, to Sept. 30, 1929, nonrecording gage at Myrtle Street bridge at datum 0.87 ft higher than present datum. Oct. 1, 1929, to Dec. 25, 1933, nonrecording gage at site 400 ft upstream and present datum. Dec. 26, 1933, to Oct. 5, 1989, recording gage at site 400 ft upstream at present datum.

REMARKS.--Records good. Flow regulated since 1949 by Fall River Lake (station 07168000), since 1960 by Toronto Lake (station 07165900), and since 1966 by Elk City Lake (station 07170050). Satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

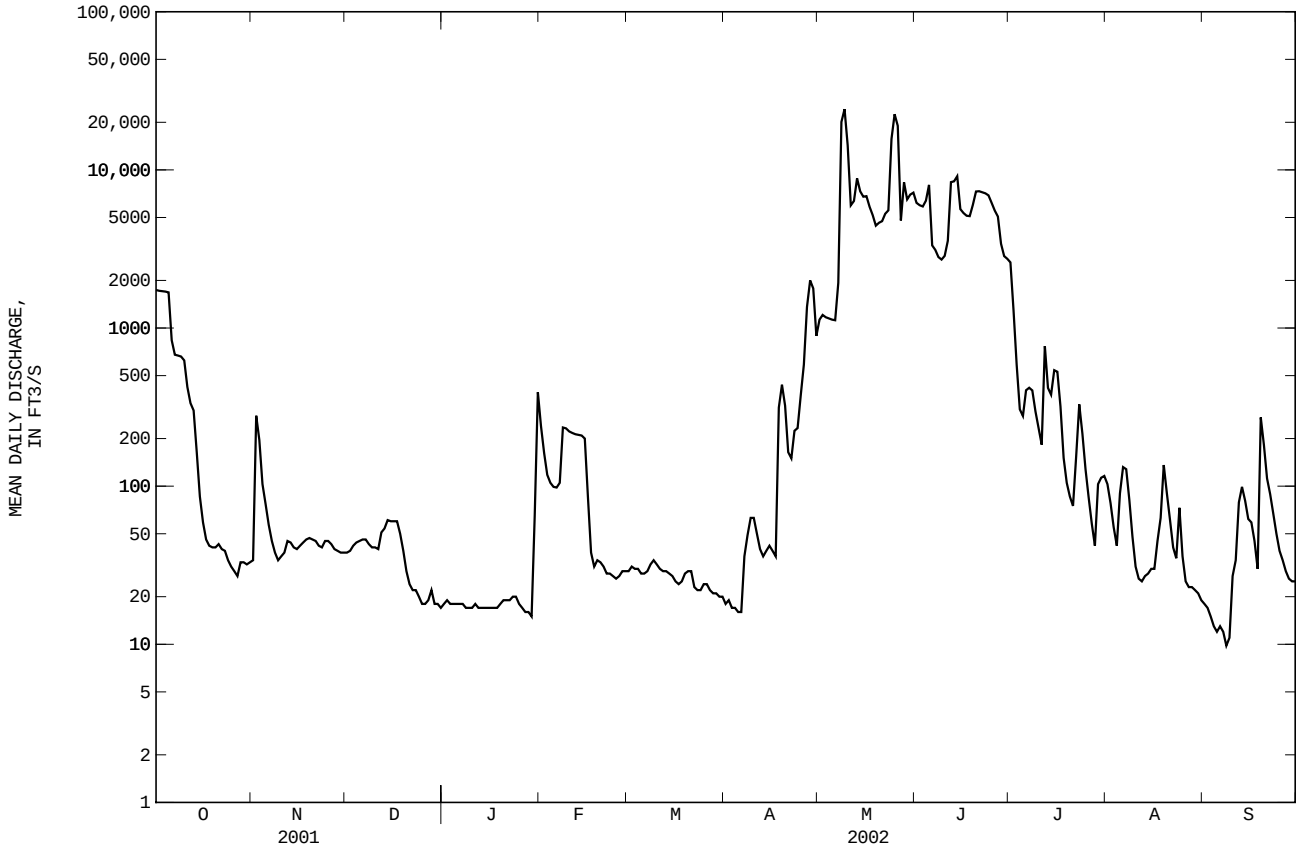
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1740	34	38	18	240	29	18	1130	6190	2600	103	18
2	1720	279	39	19	162	31	19	1210	5980	1290	78	17
3	1710	196	42	18	118	30	17	1170	5870	586	55	15
4	1700	103	44	18	105	30	17	1150	6390	306	42	13
5	1680	77	45	18	99	28	16	1130	8040	278	90	12
6	837	57	46	18	98	28	16	1120	3330	404	132	13
7	678	45	46	18	105	29	36	1930	3120	419	128	12
8	670	38	43	17	235	32	49	20100	2810	403	82	9.8
9	660	34	41	17	232	34	63	24200	2710	297	48	11
10	624	36	41	17	222	32	63	14300	2860	233	31	27
11	424	38	40	18	217	30	50	5970	3560	183	26	34
12	335	45	51	17	213	29	40	6360	8370	769	25	79
13	301	44	54	17	211	29	36	8840	8470	418	27	99
14	164	41	61	17	209	28	39	7320	9120	379	28	81
15	86	40	60	17	200	27	42	6770	5650	541	30	62
16	59	42	60	17	85	25	39	6820	5340	529	30	59
17	46	44	60	17	38	24	36	5840	5130	319	45	45
18	42	46	50	17	31	25	314	5170	5100	151	63	30
19	41	47	39	18	34	28	438	4440	6010	105	136	272
20	41	46	29	19	33	29	323	4630	7300	86	90	182
21	43	45	24	19	31	29	164	4740	7330	75	61	112
22	40	42	22	19	28	23	150	5280	7220	153	41	89
23	39	41	22	20	28	22	224	5550	7110	329	35	67
24	34	45	20	20	27	22	233	15700	6900	215	73	50
25	31	45	18	18	26	24	375	22500	6190	128	36	39
26	29	43	18	17	27	24	587	19000	5530	85	25	34
27	27	40	19	16	29	22	1360	4790	5070	58	23	29
28	33	39	22	16	29	21	2000	8340	3410	42	23	26
29	33	38	18	15	---	21	1780	6510	2850	103	22	25
30	32	38	18	65	---	20	892	6980	2740	113	21	25
31	33	---	17	393	---	20	---	7180	---	116	19	---
MEAN	449.4	58.27	37.00	31.29	111.1	26.61	314.5	7618	5523	377.8	53.81	52.89
MAX	1740	279	61	393	240	34	2000	24200	9120	2600	136	272
MIN	27	34	17	15	26	20	16	1120	2710	42	19	9.8
AC-FT	27630	3470	2280	1920	6170	1640	18720	468400	328700	23230	3310	3150

07170500 VERDIGRIS RIVER AT INDEPENDENCE, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1863	2313	1608	1305	1771	3319	3263	3297	4004	1783	681.6	753.7
MAX	21880	13130	7961	6799	6186	13500	12520	9018	11820	10880	4967	4888
(WY)	1987	1975	1993	1973	1975	1973	1988	1994	1995	1976	1985	1989
MIN	18.3	23.1	28.0	16.8	16.7	18.5	13.6	214	67.1	26.6	20.9	13.2
(WY)	1996	1981	1981	1981	1981	1981	1981	1992	1972	1980	1983	1980

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1968 - 2002	
ANNUAL MEAN	1375		1227		2162	
HIGHEST ANNUAL MEAN					4753	1999
LOWEST ANNUAL MEAN					199	1996
HIGHEST DAILY MEAN	17600	Feb 25	24200	May 9	103000	Oct 4 1986
LOWEST DAILY MEAN	17	Dec 31	9.8	Sep 8	1.5	Sep 25 1980
ANNUAL SEVEN-DAY MINIMUM	19	Dec 25	12	Sep 3	4.4	Oct 13 1991
MAXIMUM PEAK FLOW			25100	May 9	117000	Apr 17 1945
MAXIMUM PEAK STAGE			32.99	May 9	47.60	May 19 1943
INSTANTANEOUS LOW FLOW			8.6	Sep 8	.00	at times
ANNUAL RUNOFF (AC-FT)	995700		888600		1566000	
10 PERCENT EXCEEDS	4770		5300		7080	
50 PERCENT EXCEEDS	301		46		457	
90 PERCENT EXCEEDS	34		18		33	



07170700 BIG HILL CREEK NEAR CHERRYVALE, KS

LOCATION.--Lat 37°16'00", long 95°28'05", in SE $^{1}/_{4}$ SE $^{1}/_{4}$ sec.7, T.32 S., R.18 E., Labette County, Hydrologic Unit 11070103, on right bank at side of county highway bridge, 4.3 mi east of Cherryvale, and at mile 32.5.

DRAINAGE AREA.--37 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is 795.93 ft above NGVD of 1929 (levels by U.S. Army Corps of Engineers). Prior to May 6, 1958, nonrecording gage at same site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow completely regulated since 1981 by Big Hill Lake (station 07170695), 1,200 ft upstream. Satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--A flood in 1951 reached a stage of 18.92 ft, from information by local residents.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.10	0.00	e0.00	0.00	0.07	0.00	0.00	8.9	58	0.16	0.06	0.03
2	0.10	0.61	e0.00	0.00	0.07	0.00	e0.02	7.9	41	0.20	0.06	0.04
3	0.09	0.03	0.00	0.00	0.00	0.00	e0.02	6.1	30	0.17	0.06	0.04
4	0.73	0.00	e0.00	0.00	0.00	0.00	e0.04	4.4	31	0.27	0.05	0.04
5	e1.5	0.00	0.00	0.00	0.00	0.00	e0.04	3.5	120	0.20	0.05	0.04
6	e0.50	0.00	0.00	0.00	0.00	0.00	e0.04	3.7	104	0.19	0.06	0.05
7	e0.10	0.00	0.00	0.00	0.00	0.00	e0.10	55	72	0.15	0.07	0.05
8	e0.10	0.00	0.00	0.00	0.00	0.00	e0.10	992	51	0.14	0.06	0.05
9	e0.30	0.00	0.00	0.00	0.00	0.00	e0.10	1060	39	0.12	0.05	0.04
10	0.47	0.00	0.00	0.00	0.00	0.00	e0.10	651	29	e0.07	0.05	0.04
11	0.00	0.00	0.00	0.00	0.00	0.00	e0.05	376	23	e0.06	0.05	0.04
12	0.00	0.00	0.00	0.00	0.00	0.00	e0.05	243	74	e0.06	0.04	0.03
13	0.00	0.00	0.00	0.00	0.00	0.00	e0.05	167	109	e0.06	0.03	0.03
14	0.00	0.00	0.00	0.00	0.00	0.00	e0.05	112	91	0.05	0.03	0.04
15	0.00	0.00	0.00	0.00	0.00	0.00	e0.05	76	65	0.06	0.03	0.03
16	0.00	0.00	0.00	0.00	0.00	0.00	e0.05	57	51	0.06	0.04	0.03
17	0.00	0.00	0.00	0.00	0.00	0.00	e0.05	48	37	0.06	0.07	0.03
18	0.00	0.00	0.00	0.00	0.00	e0.00	e0.05	35	27	0.05	0.05	0.05
19	0.00	0.00	0.00	0.00	e0.09	0.00	e0.10	27	21	0.06	0.04	2.9
20	0.00	0.00	0.00	0.00	e0.07	0.00	e0.20	24	17	0.06	0.04	0.07
21	0.00	0.00	0.00	0.00	e0.05	0.00	e0.20	20	14	0.06	0.04	e0.03
22	0.00	0.00	0.00	0.00	e0.08	e0.00	e0.20	16	12	0.06	0.04	e0.03
23	0.00	0.00	0.00	0.00	e0.07	0.00	e0.20	14	9.5	0.57	0.04	e0.03
24	0.00	0.00	0.00	0.00	e0.05	0.00	e0.20	506	7.1	0.07	0.05	e0.02
25	0.00	0.00	0.00	0.00	e0.04	0.00	e0.20	555	5.1	0.07	0.05	e0.02
26	0.00	0.00	0.00	0.00	e0.03	0.00	e0.50	342	3.5	0.07	0.05	e0.01
27	0.00	0.00	0.00	0.00	e0.02	0.00	e4.0	241	2.2	0.07	0.05	e0.01
28	0.00	e0.00	0.00	0.00	0.00	0.00	10	252	1.3	0.07	0.05	e0.00
29	0.00	e0.00	0.00	0.00	---	e0.00	11	179	0.97	0.11	0.04	e0.00
30	0.00	0.00	0.00	0.97	---	0.00	10	120	0.41	0.07	0.04	e0.00
31	0.00	---	0.00	0.79	---	0.00	---	82	---	0.07	0.03	---
MEAN	0.129	0.021	0.000	0.057	0.023	0.000	1.259	202.7	38.20	0.114	0.047	0.127
MAX	1.5	0.61	0.00	0.97	0.09	0.00	11	1060	120	0.57	0.07	2.9
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.5	0.41	0.05	0.03	0.00
AC-FT	7.9	1.3	0.00	3.5	1.3	0.00	75	12470	2270	7.0	2.9	7.6

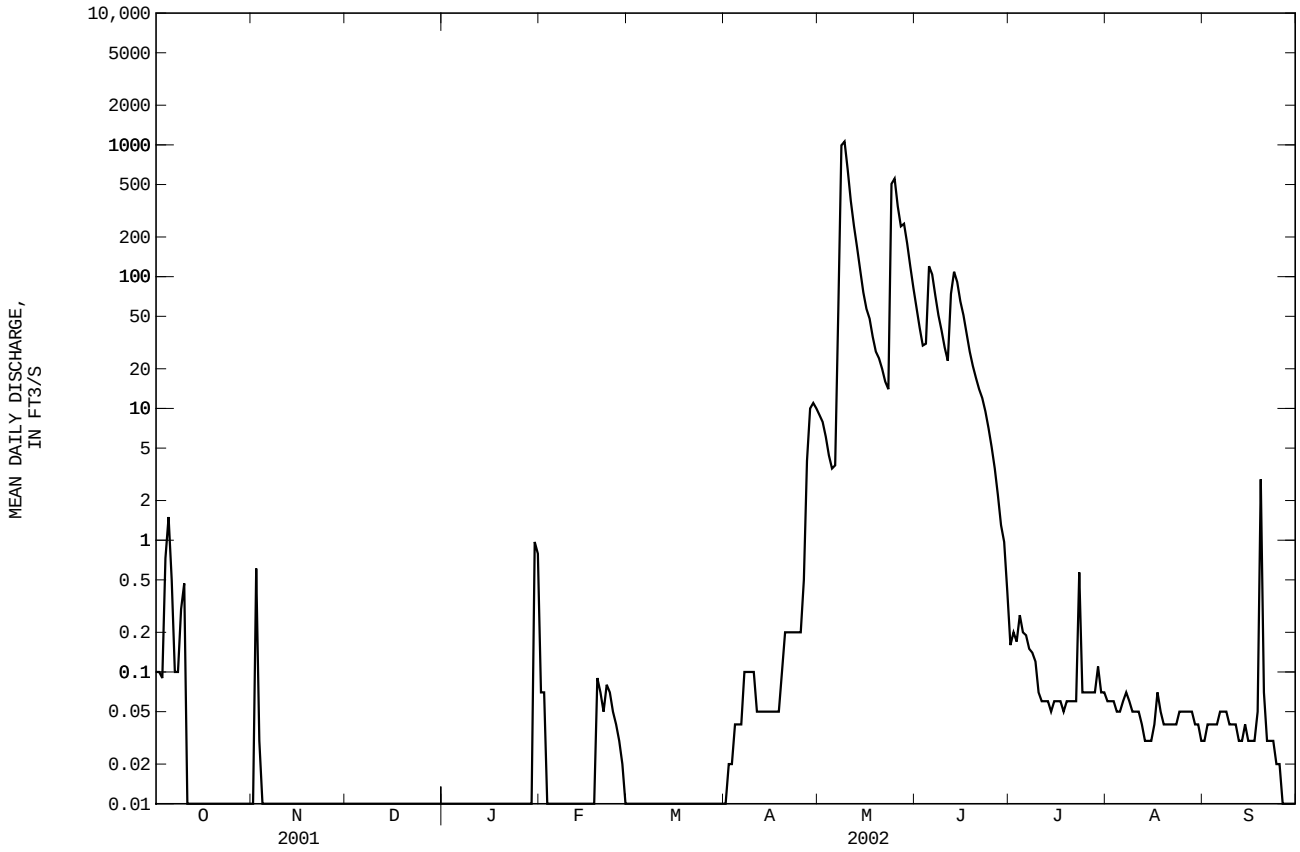
07170700 BIG HILL CREEK NEAR CHERRYVALE, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	23.74	27.49	17.07	17.77	20.10	40.48	35.67	46.03	44.27	24.09	6.457	15.36
MAX	384	151	143	145	164	228	219	269	219	403	97.4	123
(WY)	1987	1993	1993	1973	1985	1973	1994	1961	1977	1976	1995	1993
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.030	0.000	0.000	0.000
(WY)	1958	1964	1964	1964	1964	1964	1981	1982	1980	1963	1962	1963

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1958 - 2002	
ANNUAL MEAN	9.731		20.50		26.55	
HIGHEST ANNUAL MEAN					70.0	1993
LOWEST ANNUAL MEAN					0.071	1982
HIGHEST DAILY MEAN	189	Mar 16	1060	May 9	10700	Jul 3 1976
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 11	0.00	Oct 1 1957
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 16	0.00	Oct 11	0.00	Oct 1 1957
MAXIMUM PEAK FLOW			1150	May 9	36000	Jul 3 1976
MAXIMUM PEAK STAGE			13.38	May 9	23.02	Jul 3 1976
INSTANTANEOUS LOW FLOW			0.00	Dec 6	.00	most years
ANNUAL RUNOFF (AC-FT)	7040		14840		19230	
10 PERCENT EXCEEDS	53		28		48	
50 PERCENT EXCEEDS	0.00		0.03		1.1	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

e Estimated



07170990 VERDIGRIS RIVER AT COFFEYVILLE, KS

LOCATION.--Lat 37°00'20", long 95°35'32", in NW $^{1}/_{4}$ NE $^{1}/_{4}$ NW $^{1}/_{4}$ sec.18, T.35 S., R.17 E., Montgomery County, Hydrologic Unit 11070103, on right bank at downstream side of county road 0.75 mi north Oklahoma State line, and at mile 162.5.

DRAINAGE AREA.--3,342 mi^2.

PERIOD OF RECORD.--April 2002 to September 2002.

GAGE.--Water-stage recorder. Datum of gage is 675.00 ft above NGVD of 1929.

REMARKS.--Records good. Flow regulated since 1949 by Fall River Lake (station 07168000), since 1960 by Toronto Lake (station 07165900), and since 1966 by Elk City Lake (station 07170050). Satellite telemeter at station.

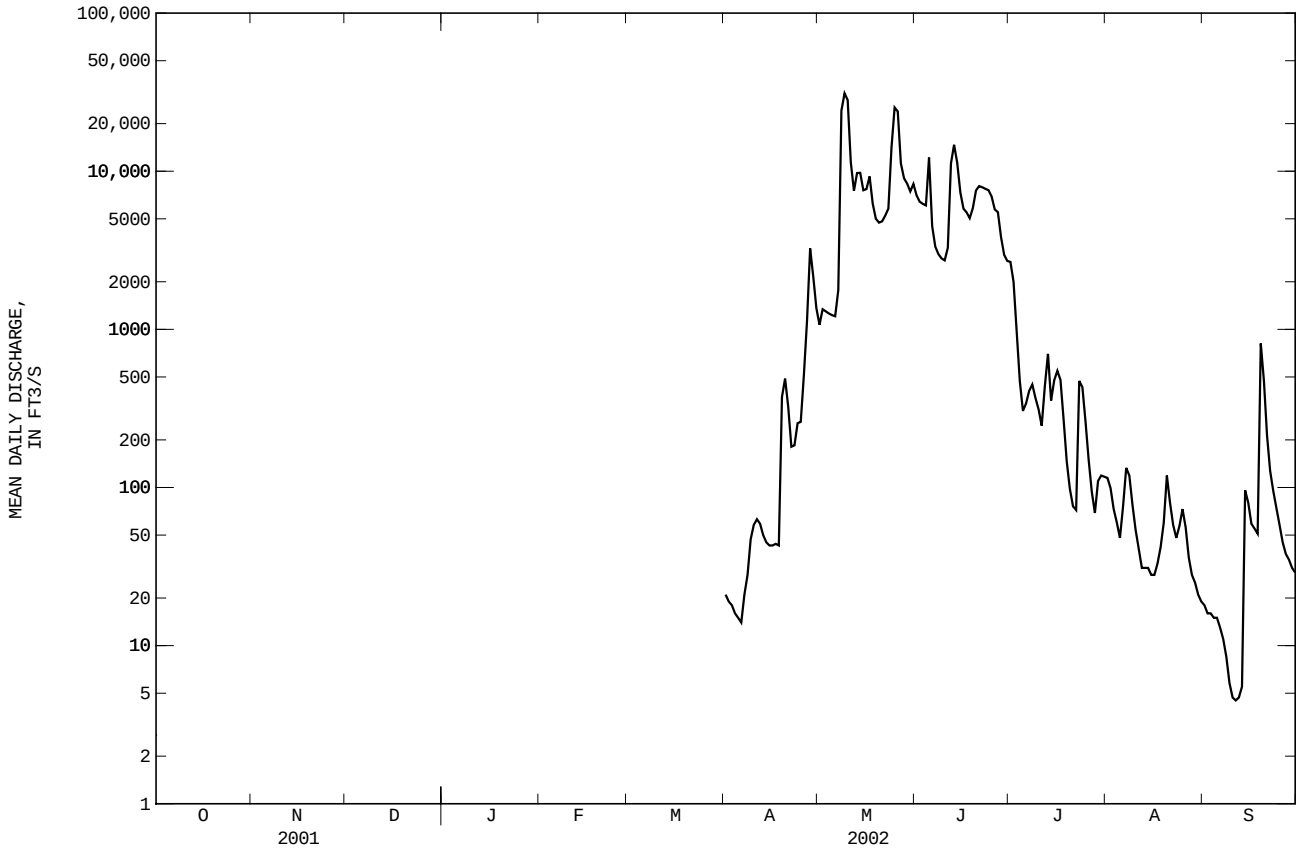
DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	21	1070	7050	2670	115	18
2	---	---	---	---	---	---	19	1340	6420	2000	99	16
3	---	---	---	---	---	---	18	1300	6220	970	73	16
4	---	---	---	---	---	---	16	1260	6080	470	60	15
5	---	---	---	---	---	---	15	1230	12200	305	48	15
6	---	---	---	---	---	---	14	1210	4490	340	76	13
7	---	---	---	---	---	---	21	1770	3330	409	133	11
8	---	---	---	---	---	---	28	24200	2990	448	119	8.5
9	---	---	---	---	---	---	47	31100	2810	368	78	5.8
10	---	---	---	---	---	---	58	28200	2730	312	54	4.7
11	---	---	---	---	---	---	63	11400	3280	246	41	4.5
12	---	---	---	---	---	---	59	7520	11200	438	31	4.7
13	---	---	---	---	---	---	50	9740	14700	700	31	5.5
14	---	---	---	---	---	---	45	9770	11300	355	31	96
15	---	---	---	---	---	---	43	7580	7350	477	28	80
16	---	---	---	---	---	---	43	7710	5800	547	28	59
17	---	---	---	---	---	---	44	9270	5490	479	33	55
18	---	---	---	---	---	---	43	6240	5050	268	42	51
19	---	---	---	---	---	---	374	5010	5850	146	60	814
20	---	---	---	---	---	---	488	4730	7560	98	119	473
21	---	---	---	---	---	---	324	4820	8050	76	80	213
22	---	---	---	---	---	---	181	5240	7920	72	58	127
23	---	---	---	---	---	---	185	5800	7740	472	48	95
24	---	---	---	---	---	---	255	14100	7590	431	57	74
25	---	---	---	---	---	---	260	25300	6920	261	73	58
26	---	---	---	---	---	---	512	23900	5730	150	56	45
27	---	---	---	---	---	---	1120	11200	5510	94	36	38
28	---	---	---	---	---	---	3250	9030	3830	69	28	35
29	---	---	---	---	---	---	2160	8350	2960	110	25	31
30	---	---	---	---	---	---	1360	7450	2710	119	21	29
31	---	---	---	---	---	---	---	8310	---	117	19	---
MEAN	---	---	---	---	---	---	370.5	9521	6362	452.2	58.06	83.69
MAX	---	---	---	---	---	---	3250	31100	14700	2670	133	814
MIN	---	---	---	---	---	---	14	1070	2710	69	19	4.5
AC-FT	---	---	---	---	---	---	22050	585400	378600	27800	3570	4980

07170990 VERDIGRIS RIVER AT COFFEYVILLE, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2002 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	---	---	---	---	---	---	370.5	9521	6362	452.2	58.06	83.69
MAX	---	---	---	---	---	---	371	9521	6362	452	58.1	83.7
(WY)	---	---	---	---	---	---	2002	2002	2002	2002	2002	2002
MIN	---	---	---	---	---	---	371	9521	6362	452	58.1	83.7
(WY)	---	---	---	---	---	---	2002	2002	2002	2002	2002	2002



07172000 CANEY RIVER NEAR ELGIN, KS

LOCATION.--Lat 37°00'14", long 96°19'00", in NW $^1/_4$ NW $^1/_4$ SE $^1/_4$ sec.16, T.35 S., R.10 E., Chautauqua County, Hydrologic Unit 11070106, on right bank at upstream side of county highway bridge, 2 mi west of Elgin, and at mile 117.8.

DRAINAGE AREA.--445 mi^2.

PERIOD OF RECORD.--October 1939 to current year. Monthly discharge only for some periods, published in WSP 1311.

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 763.32 ft above NGVD of 1929 (levels by U.S. Army Corps of Engineers). Prior to Sept. 13, 1961, at site 300 ft downstream at same datum. Prior to Apr. 6, 1989, at site on left bank at upstream side of county highway bridge at same datum.

REMARKS.--Records good. Satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 6,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 8	0100	*13,700	*15.16	May 25	0200	10,200	12.21
May 24	1100	8,550	10.74				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.03	0.23	0.37	10	0.21	0.08	54	485	80	13	0.18
2	0.00	0.03	0.24	0.36	9.9	0.42	0.08	44	339	79	11	0.11
3	0.00	0.04	0.24	0.24	7.5	0.34	0.07	33	216	79	9.7	0.09
4	0.00	0.04	0.24	0.20	5.7	0.31	0.07	30	360	77	8.3	0.09
5	0.19	0.03	0.24	0.25	4.6	0.29	0.07	27	1300	78	7.1	0.08
6	0.12	0.05	0.25	0.29	4.4	0.32	0.07	26	606	68	6.0	0.08
7	0.06	0.04	0.25	0.29	3.8	0.33	2.6	843	400	62	5.0	0.08
8	0.14	0.04	0.24	0.28	3.4	e0.37	46	4280	291	57	4.3	0.07
9	0.61	0.04	0.24	0.31	e2.9	0.42	27	2140	233	53	3.6	0.06
10	0.35	0.04	0.24	0.34	e2.4	0.40	14	1050	216	52	2.6	0.06
11	0.13	0.04	0.26	0.36	e2.0	0.38	9.9	818	165	61	2.1	0.05
12	0.09	0.04	0.42	0.42	e1.7	0.36	7.7	605	2120	57	1.8	0.05
13	0.10	0.04	0.74	0.48	1.4	0.37	5.6	453	2530	54	4.0	0.05
14	0.08	0.05	0.96	0.50	1.2	0.42	4.9	342	1100	48	5.1	0.07
15	0.07	0.05	1.3	0.47	0.99	0.31	4.2	264	713	44	5.8	0.07
16	0.06	0.05	1.3	0.50	1.0	0.24	3.7	210	1490	42	5.8	0.06
17	0.05	0.05	0.85	0.49	1.1	0.25	3.1	194	791	38	5.3	0.06
18	0.04	0.07	0.63	0.55	1.1	0.30	2.9	179	544	27	4.6	0.08
19	0.04	0.08	0.63	0.60	1.3	0.44	2.8	159	413	22	3.9	52
20	0.04	0.07	0.63	0.60	1.2	0.40	2.9	156	318	18	3.2	55
21	0.04	0.08	0.63	0.50	0.83	0.30	2.6	158	253	16	2.4	28
22	0.04	0.08	0.63	0.49	0.64	0.17	1.8	125	208	13	1.8	18
23	0.03	0.09	0.63	0.51	0.55	0.15	2.4	114	175	15	1.4	11
24	0.04	0.15	0.63	0.43	0.54	0.17	2.1	4100	151	28	1.3	8.2
25	0.05	0.14	0.63	0.37	0.39	0.16	1.5	4360	133	28	1.3	5.9
26	0.05	0.10	0.63	0.32	0.25	0.13	3.6	1820	119	22	0.96	4.4
27	0.04	0.10	0.63	0.30	0.18	0.13	159	1780	109	18	0.74	3.1
28	0.03	0.11	0.63	0.35	0.19	0.11	207	1120	99	15	0.57	2.2
29	0.04	0.16	0.63	0.34	---	0.09	101	815	91	18	0.45	1.5
30	0.04	0.16	0.63	3.7	---	0.09	69	861	85	18	0.37	1.2
31	0.03	---	0.63	8.0	---	0.08	---	716	---	16	0.27	---
MEAN	0.084	0.070	0.550	0.749	2.541	0.273	22.92	899.2	535.1	42.03	3.992	6.396
MAX	0.61	0.16	1.3	8.0	10	0.44	207	4360	2530	80	13	55
MIN	0.00	0.03	0.23	0.20	0.18	0.08	0.07	26	85	13	0.27	0.05
AC-FT	5.2	4.1	34	46	141	17	1360	55290	31840	2580	245	381

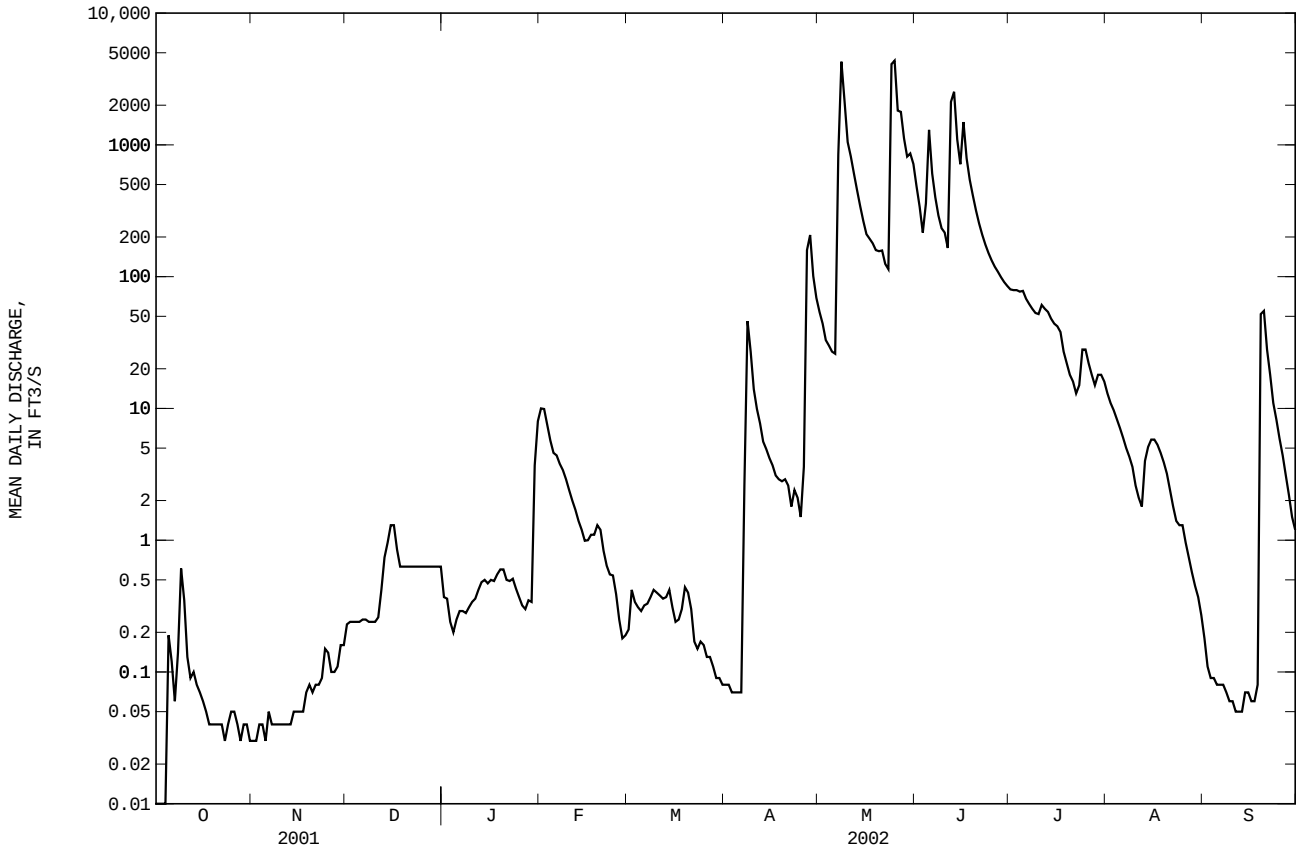
07172000 CANEY RIVER NEAR ELGIN, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	249.1	238.4	158.9	139.4	207.3	399.9	485.2	517.0	423.0	196.4	58.71	156.9
MAX	5482	1929	800	1130	1279	2502	2511	3041	2242	1611	1039	2058
(WY)	1987	1975	1993	1973	1987	1973	1944	1961	1957	1950	1950	1961
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.085	7.37	6.85	0.000	0.000	0.000
(WY)	1940	1940	1940	1940	1940	1940	1981	1956	1972	1954	1954	1953

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1940 - 2002	
ANNUAL MEAN	145.3		127.0		269.0	
HIGHEST ANNUAL MEAN					891	1987
LOWEST ANNUAL MEAN					8.61	1981
HIGHEST DAILY MEAN	7190	Feb 24	4360	May 25	79200	Oct 3 1986
LOWEST DAILY MEAN	0.00	Aug 21	0.00	Oct 1	0.00	Oct 1 1939
ANNUAL SEVEN-DAY MINIMUM	0.00	Aug 21	0.03	Oct 27	0.00	Oct 1 1939
MAXIMUM PEAK FLOW			13700	May 8	104000	Oct 3 1986
MAXIMUM PEAK STAGE			15.16	May 8	42.35	Oct 3 1986
INSTANTANEOUS LOW FLOW			0.00	Oct 1	.00	at times
ANNUAL RUNOFF (AC-FT)	105200		91960		194900	
10 PERCENT EXCEEDS	358		216		521	
50 PERCENT EXCEEDS	15		0.74		39	
90 PERCENT EXCEEDS	0.00		0.05		0.06	

e Estimated



07179500 NEOSHO RIVER AT COUNCIL GROVE, KS

LOCATION.--Lat 38°39'54", long 96°29'38", in NE $^{1}/_{4}$ NW $^{1}/_{4}$ sec.14, T.16 S., R.8 E., Morris County, Hydrologic Unit 11070201, on right bank at downstream side of bridge, 300 ft downstream from Mozler Creek, 1.0 mi upstream from Elm Creek, 1.7 mi downstream from Council Grove Lake, and at mile 448.0.

DRAINAGE AREA.--250 mi^2.

PERIOD OF RECORD.--October 1938 to current year.

REVISED RECORDS.--WSP 1117: Drainage area. WSP 1341: 1939-40(M), 1942.

GAGE.--Water-stage recorder. Concrete control since Jan. 8, 1997. Datum of gage is 1,205.63 ft above NGVD of 1929 (levels by U.S. Army Corps of Engineers). Prior to June 7, 1940, nonrecording gage at present site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow completely regulated since 1964 by Council Grove Lake (station 07179400), 1.7 mi upstream. Satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1903 reached a stage of 37.3 ft at water plant, from information by U.S. Army Corps of Engineers.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	11	10	8.5	7.2	5.5	9.6	2.5	2.1	2.1	20	18
2	13	11	10	7.8	7.4	3.6	9.0	2.3	2.1	2.3	21	18
3	12	11	11	7.0	7.4	2.8	9.3	2.4	2.1	2.2	23	18
4	11	11	11	6.9	7.4	3.0	9.5	2.5	3.1	2.1	23	18
5	12	11	11	6.9	7.4	3.2	9.6	2.6	2.4	2.2	23	18
6	11	11	10	6.9	7.4	3.0	10	2.7	2.2	2.1	23	18
7	11	11	10	7.2	7.4	3.3	11	3.1	2.2	2.1	23	18
8	11	11	9.9	7.1	7.4	3.4	11	e9.1	2.2	2.1	22	18
9	11	11	10	7.0	7.7	2.2	10	e4.4	2.3	2.8	21	18
10	10	11	10	6.9	6.9	1.7	11	3.8	2.3	8.0	19	18
11	11	11	10	7.1	7.4	1.7	11	3.9	2.3	8.1	19	18
12	11	11	10	7.1	7.4	1.7	11	3.6	2.2	8.0	19	18
13	11	11	10	7.3	7.2	3.0	11	3.0	2.6	8.1	19	19
14	11	11	10	7.1	8.2	8.8	11	3.0	2.0	8.1	19	19
15	11	11	11	7.2	8.0	8.3	11	3.1	2.3	8.2	19	18
16	11	11	10	7.0	8.2	8.8	11	3.5	2.1	8.3	19	18
17	11	11	10	6.9	8.3	8.9	11	3.0	2.1	11	20	18
18	11	11	10	6.8	8.6	9.2	9.4	2.9	2.1	14	19	18
19	10	10	9.5	6.9	8.6	9.2	8.5	3.0	2.1	13	19	18
20	9.7	11	9.8	6.9	5.5	8.9	11	2.9	2.1	13	19	15
21	9.0	11	10	6.9	1.5	8.1	9.7	2.9	2.1	13	20	9.6
22	9.9	11	10	6.9	1.2	7.6	9.1	3.0	2.1	13	18	9.7
23	10	11	9.5	6.9	1.2	8.0	9.3	2.7	2.1	17	18	9.6
24	10	10	9.5	7.0	1.1	8.3	7.5	3.0	2.1	21	18	13
25	10	11	9.6	7.2	0.96	8.0	6.7	2.9	2.1	21	18	15
26	11	11	9.5	7.4	0.85	8.2	7.5	2.6	2.3	21	18	18
27	11	9.8	9.5	7.4	1.4	8.6	8.1	2.9	2.3	21	18	20
28	11	10	9.6	7.3	4.6	8.6	7.1	2.4	2.1	21	19	19
29	11	10	9.1	7.2	---	8.8	5.7	2.3	2.1	21	18	20
30	11	10	8.9	8.1	---	9.0	2.7	2.2	2.1	21	18	20
31	11	---	9.2	7.4	---	9.1	---	2.1	---	21	18	---
MEAN	10.89	10.79	9.923	7.168	5.850	6.210	9.310	3.106	2.210	10.93	19.68	17.10
MAX	13	11	11	8.5	8.6	9.2	11	9.1	3.1	21	23	20
MIN	9.0	9.8	8.9	6.8	0.85	1.7	2.7	2.1	2.0	2.1	18	9.6
AC-FT	670	642	610	441	325	382	554	191	132	672	1210	1020

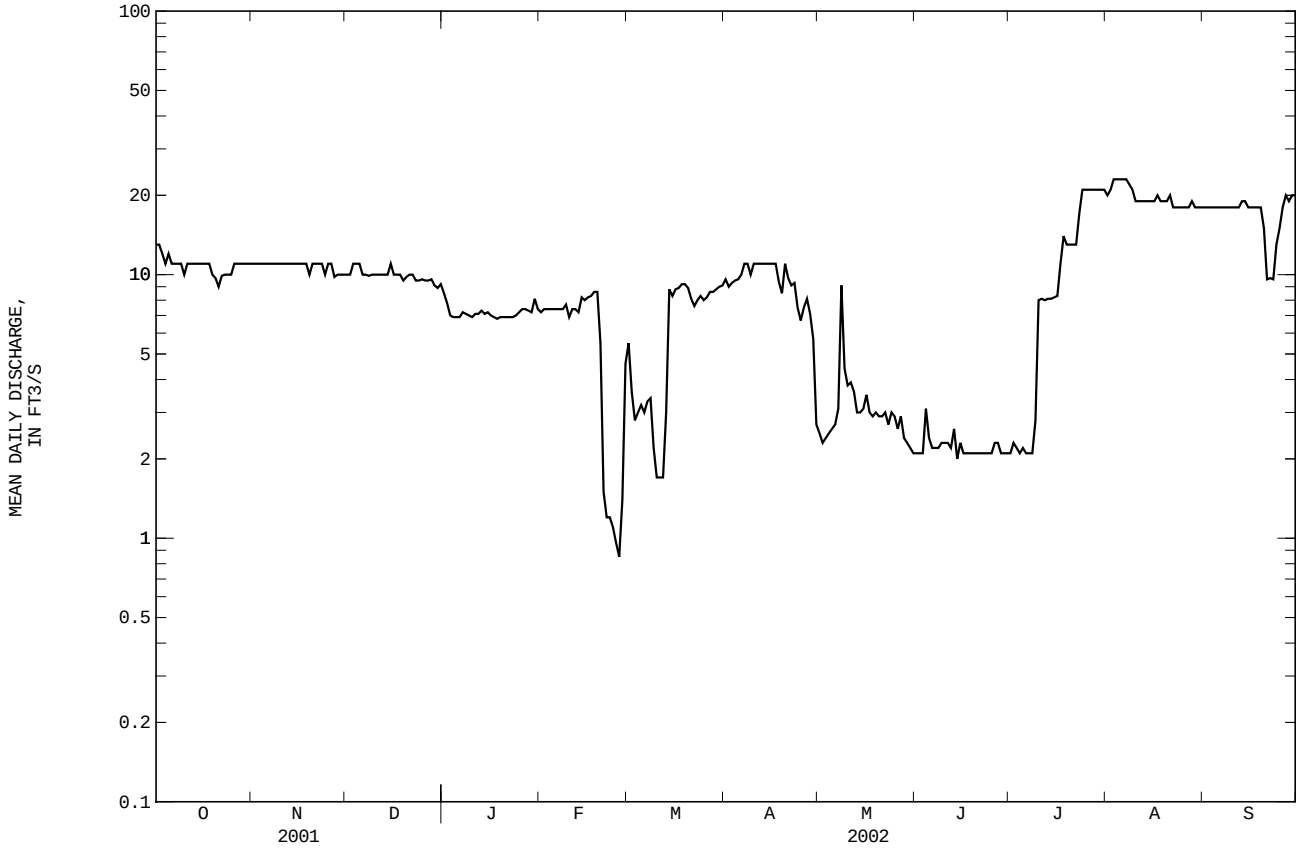
07179500 NEOSHO RIVER AT COUNCIL GROVE, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	110.4	63.84	59.14	53.45	62.11	117.7	197.6	224.5	243.5	211.3	71.95	76.20
MAX	1387	852	718	503	579	702	1424	1387	1656	2858	1103	984
(WY)	1974	1999	1945	1973	1949	1973	1944	1993	1995	1951	1993	1951
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.43	0.030	0.000	0.000	0.000
(WY)	1939	1939	1939	1939	1939	1940	1940	1954	1956	1940	1939	1939

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1939 - 2002	
ANNUAL MEAN	69.35		9.455		124.6	
HIGHEST ANNUAL MEAN					498	1951
LOWEST ANNUAL MEAN					5.37	1953
HIGHEST DAILY MEAN	1140	Jun 8	23	Aug 3	34000	Jul 11 1951
LOWEST DAILY MEAN	0.70	Mar 5	0.85	Feb 26	0.00	Oct 1 1938
ANNUAL SEVEN-DAY MINIMUM	0.91	Feb 27	1.2	Feb 21	0.00	Oct 1 1938
MAXIMUM PEAK FLOW			28	Aug 17	121000	Jul 11 1951
MAXIMUM PEAK STAGE			8.33	Aug 17	36.29	Jul 11 1951
INSTANTANEOUS LOW FLOW			0.60	Feb 26	.00	at times
ANNUAL RUNOFF (AC-FT)	50210		6850		90230	
10 PERCENT EXCEEDS	167		18		228	
50 PERCENT EXCEEDS	10		9.3		14	
90 PERCENT EXCEEDS	2.7		2.2		0.80	

e Estimated



07179730 NEOSHO RIVER NEAR AMERICUS, KS

LOCATION.--Lat 38°28'01", long 96°15'01", in SW $^{1}/_{4}$ SW $^{1}/_{4}$ NW $^{1}/_{4}$ sec.24, T.18 S., R.10 E., Lyon County, Hydrologic Unit 11070201, on right bank, 0.1 mi below Ruggles Dam, 2.0 mi south of Americus, 12.5 mi upstream from Allen Creek, and 24.0 mi upstream from Cottonwood River.

DRAINAGE AREA.--622 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is 1,106.99 ft above NGVD of 1929 (levels by U.S. Army Corps of Engineers). Apr. 10, 1989, to Nov. 1990 at site 0.4 mi upstream at present datum. Aug. 8, 1963, to Apr. 11, 1989, and Nov. 21, 1990, to current year, water-stage recorder at present site and datum.

REMARKS.--Records good. Flow moderately regulated since 1964 by Council Grove Lake (station 07179400). Low flow occasionally regulated by Ruggles Dam 0.1 mi upstream. Satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

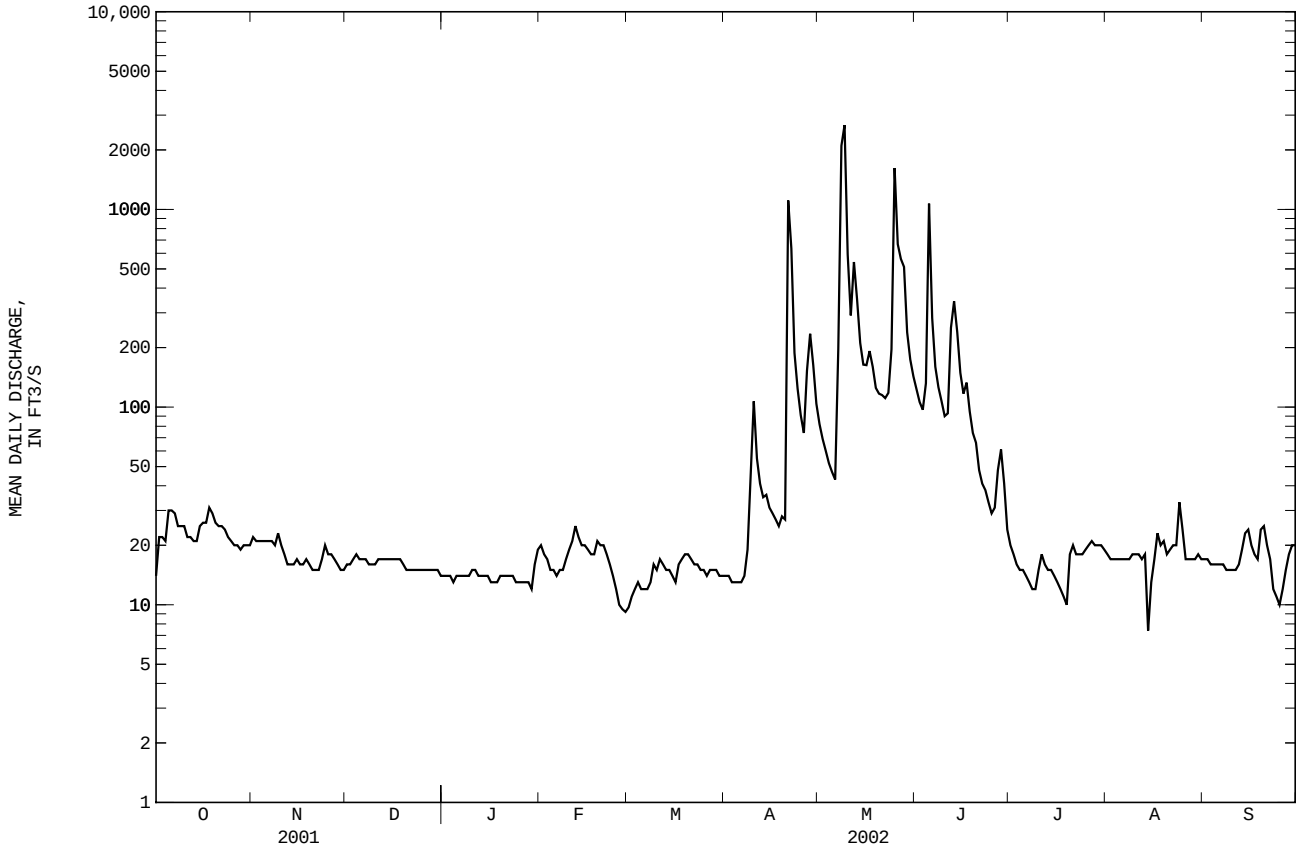
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	22	16	14	20	9.7	14	82	123	20	18	17
2	22	21	16	14	18	11	14	69	106	18	17	17
3	22	21	17	14	17	12	13	60	97	16	17	16
4	21	21	18	13	15	13	13	52	132	15	17	16
5	30	21	17	14	15	12	13	47	1070	15	17	16
6	30	21	17	14	14	12	13	43	282	14	17	16
7	29	21	17	14	15	12	14	197	160	13	17	16
8	25	20	16	14	15	13	19	2100	126	12	17	15
9	25	23	16	14	17	16	45	2670	107	12	18	15
10	25	20	16	15	19	15	107	593	90	15	18	15
11	22	18	17	15	21	17	55	291	93	18	18	15
12	22	16	17	14	25	16	41	542	252	16	17	16
13	21	16	17	14	22	15	35	351	343	15	18	19
14	21	16	17	14	20	15	36	211	240	15	7.4	23
15	25	17	17	14	20	14	31	164	149	14	13	24
16	26	16	17	13	19	13	29	163	117	13	17	20
17	26	16	17	13	18	16	27	192	133	12	23	18
18	31	17	17	13	18	17	25	160	95	11	20	17
19	29	16	16	14	21	18	28	125	74	10	21	24
20	26	15	15	14	20	18	27	117	66	18	18	25
21	25	15	15	14	20	17	1110	115	48	20	19	20
22	25	15	15	14	18	16	634	111	41	18	20	17
23	24	17	15	14	16	16	188	118	38	18	20	12
24	22	20	15	13	14	15	124	196	33	18	33	11
25	21	18	15	13	12	15	91	1620	29	19	24	10
26	20	18	15	13	10	14	74	667	31	20	17	12
27	20	17	15	13	9.5	15	153	562	48	21	17	15
28	19	16	15	13	9.2	15	235	512	61	20	17	18
29	20	15	15	12	---	15	163	239	41	20	17	20
30	20	15	15	16	---	14	104	174	24	20	18	20
31	20	---	14	19	---	14	---	143	---	19	17	---
MEAN	23.48	18.00	16.03	13.94	17.06	14.54	115.8	409.2	141.6	16.29	18.21	17.17
MAX	31	23	18	19	25	18	1110	2670	1070	21	33	25
MIN	14	15	14	12	9.2	9.7	13	43	24	10	7.4	10
AC-FT	1440	1070	986	857	948	894	6890	25160	8430	1000	1120	1020

07179730 NEOSHO RIVER NEAR AMERICUS, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	269.7	225.0	169.9	131.0	206.9	355.6	529.2	612.6	635.0	413.5	160.0	171.3
MAX	2278	2304	916	854	1048	2100	2258	3285	2761	3127	1498	1526
(WY)	1974	1999	1974	1973	1973	1973	1999	1995	1995	1993	1993	1973
MIN	2.41	6.90	5.87	3.73	3.64	6.87	11.1	24.4	15.9	12.5	12.5	10.7
(WY)	1965	1967	1967	1967	1967	1967	1989	1967	1989	1964	1978	1980

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1964 - 2002	
ANNUAL MEAN	167.7		68.82		323.4	
HIGHEST ANNUAL MEAN					1106	1993
LOWEST ANNUAL MEAN					28.2	1989
HIGHEST DAILY MEAN	3440	Feb 25	2670	May 9	14700	Nov 2 1998
LOWEST DAILY MEAN	6.2	Aug 20	7.4	Aug 14	0.00	Oct 2 1963
ANNUAL SEVEN-DAY MINIMUM	10	Jan 21	10	Feb 25	0.24	Oct 26 1964
MAXIMUM PEAK FLOW			3360	May 8	17400	Jul 22 1993
MAXIMUM PEAK STAGE			16.03	May 8	27.84	Jul 22 1993
INSTANTANEOUS LOW FLOW			1.0	Aug 14	.00	at times
ANNUAL RUNOFF (AC-FT)	121400		49830		234300	
10 PERCENT EXCEEDS	406		125		871	
50 PERCENT EXCEEDS	25		18		63	
90 PERCENT EXCEEDS	13		13		11	



07179795 NORTH COTTONWOOD RIVER BELOW MARION LAKE, KS

LOCATION.--Lat 38°22'00", long 97°05'00", in SE $^{1}/_{4}$ NW $^{1}/_{4}$ SE $^{1}/_{4}$ sec.27, T.19 S., R.3 E., Marion County, Hydrologic Unit 11070202, on left bank, 0.25 mi downstream from outlet of dam, 1.6 mi upstream from South Cottonwood River, 3.0 mi northwest of Marion, and at mile 126.5.

DRAINAGE AREA.--200 mi^2.

PERIOD OF RECORD.--July 1968 to current year. Prior to Oct. 1, 1991, published as "Cottonwood River."

REVISED RECORDS.--WDR KS-77-1: 1976.

GAGE.--Water-stage recorder. Datum of gage is 1,296.57 ft above NGVD of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow completely regulated since 1968 by Marion Lake (station 07179794), 0.25 mi upstream. Satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

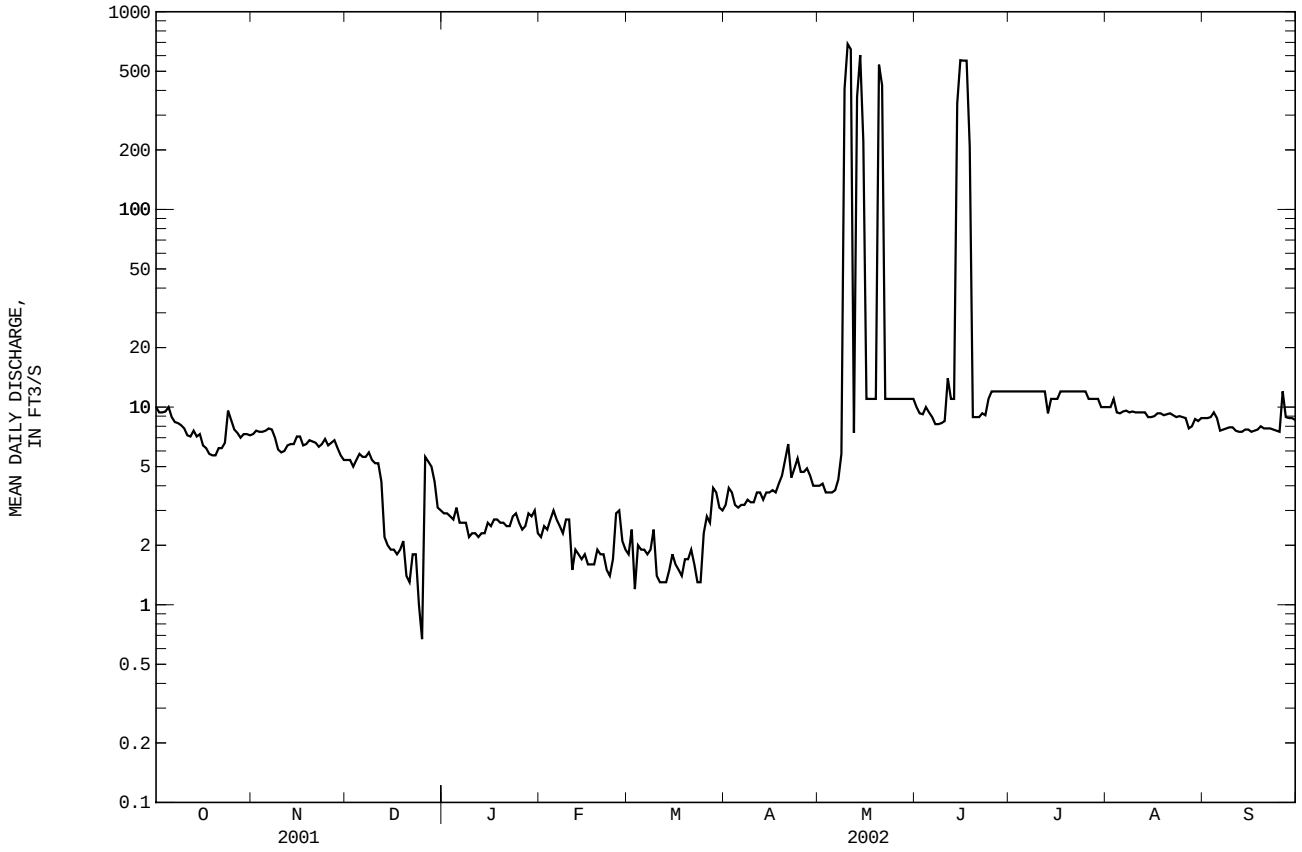
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	7.3	5.4	2.9	2.2	1.8	3.2	4.0	10	12	10	8.8
2	9.4	7.6	5.4	2.9	2.5	2.4	3.9	4.1	9.3	12	10	8.8
3	9.4	7.5	5.0	2.8	2.4	1.2	3.7	3.7	9.2	12	11	8.9
4	9.5	7.5	5.4	2.7	2.7	2.0	3.2	3.7	10	12	9.4	9.4
5	10	7.6	5.8	3.1	3.0	1.9	3.1	3.7	9.4	12	9.3	8.8
6	8.9	7.8	5.6	2.6	2.7	1.9	3.2	3.8	8.9	12	9.5	7.6
7	8.4	7.7	5.6	2.6	2.5	1.8	3.2	4.3	8.2	12	9.6	7.7
8	8.3	7.0	5.9	2.6	2.3	1.9	3.4	5.8	8.2	12	9.4	7.8
9	8.1	6.1	5.4	2.2	2.7	2.4	3.3	407	8.3	12	9.5	7.9
10	7.8	5.9	5.2	2.3	2.7	1.4	3.3	687	8.5	12	9.4	7.9
11	7.2	6.0	5.2	2.3	1.5	1.3	3.7	646	14	12	9.4	7.6
12	7.1	6.4	4.2	2.2	1.9	1.3	3.7	7.4	11	12	9.4	7.5
13	7.6	6.5	2.2	2.3	1.8	1.3	3.4	371	11	9.3	9.4	7.5
14	7.1	6.5	2.0	2.3	1.7	1.5	3.7	604	344	11	8.9	7.7
15	7.3	7.1	1.9	2.6	1.8	1.8	3.7	221	569	11	8.9	7.7
16	6.4	7.1	1.9	2.5	1.6	1.6	3.8	11	566	11	9.0	7.5
17	6.2	6.4	1.8	2.7	1.6	1.5	3.7	11	566	12	9.3	7.6
18	5.8	6.5	1.9	2.7	1.6	1.4	4.1	11	208	12	9.3	7.7
19	5.7	6.8	2.1	2.6	1.9	1.7	4.5	11	8.9	12	9.1	8.0
20	5.7	6.7	1.4	2.6	1.8	1.7	5.4	540	8.9	12	9.2	7.8
21	6.2	6.6	1.3	2.5	1.8	1.9	6.5	425	8.9	12	9.3	7.8
22	6.2	6.3	1.8	2.5	1.5	1.6	4.4	11	9.3	12	9.1	7.8
23	6.6	6.5	1.8	2.8	1.4	1.3	4.9	11	9.1	12	8.9	7.7
24	9.6	6.9	1.0	2.9	1.7	1.3	5.5	11	11	12	9.0	7.6
25	8.6	6.4	0.67	2.6	2.9	2.3	4.7	11	12	12	8.9	7.5
26	7.7	6.6	5.6	2.4	3.0	2.8	4.7	11	12	11	8.8	12
27	7.4	6.8	5.3	2.5	2.1	2.6	4.9	11	12	11	7.8	8.9
28	7.0	6.2	5.0	2.9	1.9	3.9	4.5	11	12	11	8.0	8.8
29	7.3	5.7	4.2	2.8	---	3.7	4.0	11	12	11	8.7	8.8
30	7.3	5.4	3.1	3.0	---	3.1	4.0	11	12	10	8.5	8.6
31	7.2	---	3.0	2.3	---	3.0	---	11	---	10	8.8	---
MEAN	7.645	6.713	3.615	2.603	2.114	1.977	4.043	132.1	83.57	11.56	9.187	8.190
MAX	10	7.8	5.9	3.1	3.0	3.9	6.5	687	569	12	11	12
MIN	5.7	5.4	0.67	2.2	1.4	1.2	3.1	3.7	8.2	9.3	7.8	7.5
AC-FT	470	399	222	160	117	122	241	8120	4970	711	565	487

07179795 NORTH COTTONWOOD RIVER BELOW MARION LAKE, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	58.05	66.11	45.50	29.45	56.22	80.54	105.4	138.4	136.7	110.1	36.69	27.58
MAX	692	549	469	229	411	703	559	1035	860	997	528	191
(WY)	1974	1999	1999	1973	1973	1973	1973	1993	1995	1993	1993	1985
MIN	0.99	1.04	0.67	0.77	1.05	0.70	0.54	1.61	2.00	3.85	1.87	1.74
(WY)	1969	1969	1969	1992	1992	1969	1969	1992	1992	1992	1992	1992

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1969 - 2002	
ANNUAL MEAN	11.05		22.92		74.25	
HIGHEST ANNUAL MEAN					322	1993
LOWEST ANNUAL MEAN					1.98	1992
HIGHEST DAILY MEAN	553	Jun 23	687	May 10	4000	May 26 1993
LOWEST DAILY MEAN	0.67	Dec 25	0.67	Dec 25	0.00	Oct 3 1984
ANNUAL SEVEN-DAY MINIMUM	1.4	Dec 19	1.4	Dec 19	0.25	Mar 30 1969
MAXIMUM PEAK FLOW			929	May 21	4530	May 26 1993
MAXIMUM PEAK STAGE			8.46	May 21	22.58	Dec 4 1998
INSTANTANEOUS LOW FLOW			0.24	Mar 3	0.00	Oct 3 1984
ANNUAL RUNOFF (AC-FT)	8000		16590		53790	
10 PERCENT EXCEEDS	11		12		102	
50 PERCENT EXCEEDS	6.7		6.6		7.5	
90 PERCENT EXCEEDS	3.0		1.9		1.9	



07180400 COTTONWOOD RIVER NEAR FLORENCE, KS

LOCATION.--Lat 38°14'10", long 96°52'37", in NW $^1/_4$ SW $^1/_4$ sec.10, T.21 S., R.5 E., Marion County, Hydrologic Unit 11070202, on left bank at downstream side of county highway bridge, 0.4 mi upstream from Martin Creek, 2.5 mi east of Florence, 3.3 mi downstream from Doyle Creek, and at mile 102.4.

DRAINAGE AREA.--754 mi^2.

PERIOD OF RECORD.--June 1961 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,231.49 ft above NGVD of 1929. Since Aug. 10, 1965, auxiliary water-stage recorder 2.8 mi downstream at datum 1,219.49 ft above NGVD of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow moderately regulated since 1968 by Marion Lake (station 07179794), 24 mi upstream. Satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since at least 1872, 32.5 ft July 11, 1951, from information by local residents.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	46	38	43	31	e23	27	27	72	86	82	33	25
2	44	38	41	29	33	27	28	63	80	78	33	24
3	42	41	40	28	32	26	28	58	76	77	30	25
4	43	40	41	29	31	27	27	57	540	74	30	25
5	48	40	42	30	31	29	27	56	1030	72	29	24
6	49	40	41	32	31	29	26	54	267	67	28	23
7	46	42	39	30	31	29	27	181	144	66	28	21
8	46	42	39	32	31	31	34	1090	113	62	28	20
9	44	40	38	33	34	36	42	1230	99	57	28	21
10	42	39	38	33	36	36	39	820	91	56	31	21
11	39	42	38	33	34	32	36	680	89	54	28	20
12	38	40	38	32	32	31	39	1120	2790	54	30	20
13	39	42	39	31	30	30	42	499	3040	49	41	22
14	37	46	36	31	30	30	38	664	2600	47	46	25
15	39	44	35	31	29	29	33	547	988	46	38	27
16	41	46	35	30	29	28	31	1230	2380	44	34	26
17	38	44	35	30	28	28	31	1440	1170	43	33	27
18	38	45	34	30	28	28	31	529	720	44	35	26
19	37	43	34	31	31	29	82	242	242	44	35	31
20	36	42	32	30	30	28	192	235	187	42	32	28
21	37	41	32	30	29	28	1250	837	158	38	33	26
22	37	42	32	30	29	28	773	160	147	37	35	25
23	36	43	31	30	28	27	198	110	134	36	34	23
24	33	44	31	30	28	27	110	125	121	35	37	23
25	31	43	30	29	27	29	80	358	112	35	38	23
26	30	42	30	29	26	28	71	282	107	35	34	22
27	31	40	34	29	25	28	72	185	100	35	34	24
28	33	40	34	29	28	29	150	129	100	34	31	24
29	36	40	33	29	---	29	147	110	102	41	30	23
30	36	41	33	e27	---	29	87	102	89	38	30	22
31	37	---	32	e25	---	28	---	94	---	34	27	---
MEAN	39.00	41.67	35.81	30.10	29.79	29.03	126.6	430.9	596.7	50.19	32.68	23.87
MAX	49	46	43	33	36	36	1250	1440	3040	82	46	31
MIN	30	38	30	25	23	26	26	54	76	34	27	20
AC-FT	2400	2480	2200	1850	1650	1790	7530	26500	35510	3090	2010	1420

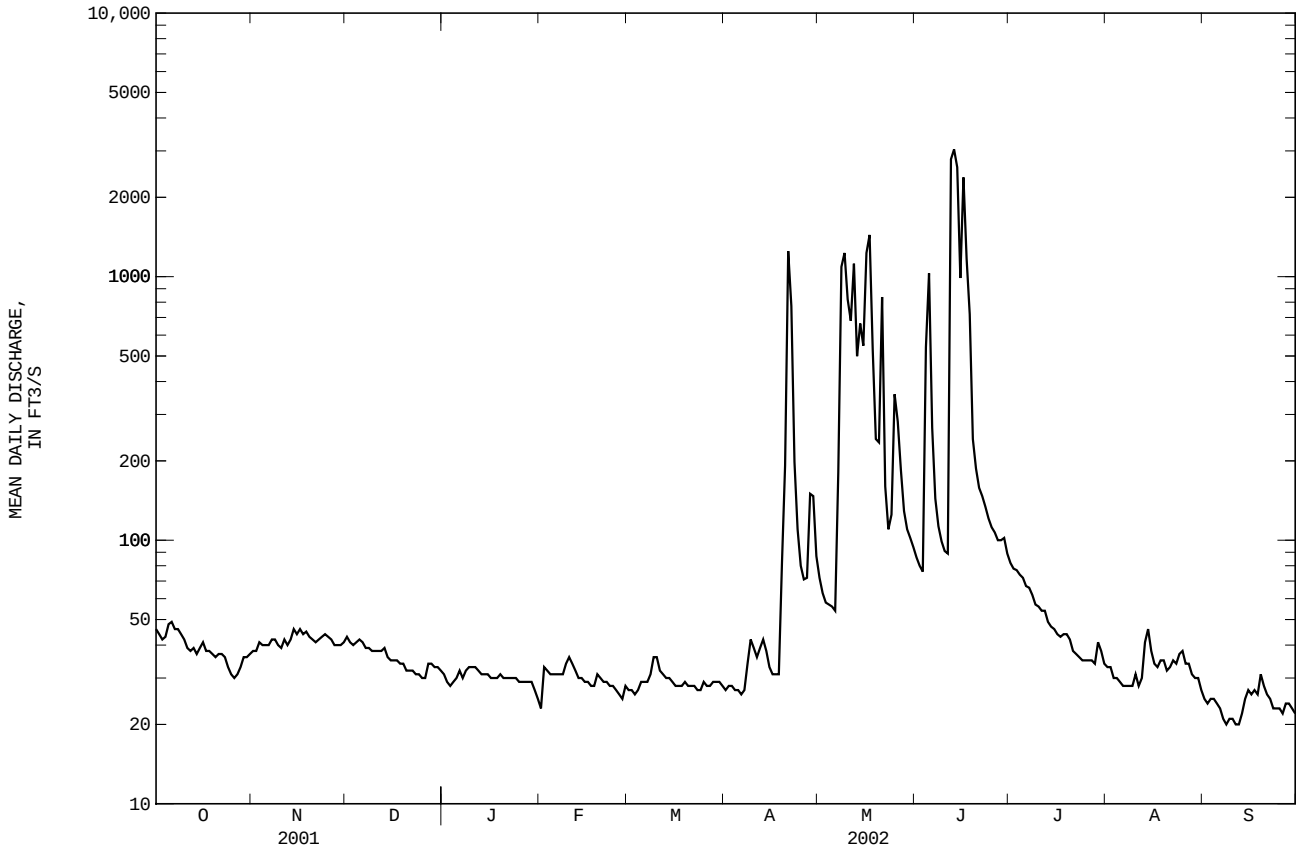
07180400 COTTONWOOD RIVER NEAR FLORENCE, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	274.3	315.5	161.3	135.5	228.2	377.0	411.3	555.5	692.6	362.5	149.4	219.9
MAX	2203	4356	755	728	1308	3251	1533	4981	3691	4044	833	1755
(WY)	1986	1999	1999	1962	1973	1973	1983	1993	1965	1993	1985	1962
MIN	11.5	19.8	18.2	20.4	19.8	26.9	25.6	23.0	53.4	22.8	16.9	21.8
(WY)	1965	1967	1992	1967	1967	1981	1981	1967	1991	1966	1991	1966

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1962 - 2002	
ANNUAL MEAN	187.6		122.1		323.4	
HIGHEST ANNUAL MEAN					1298	1993
LOWEST ANNUAL MEAN					39.9	1991
HIGHEST DAILY MEAN	6700	Feb 25	3040	Jun 13	47800	Nov 2 1998
LOWEST DAILY MEAN	30	Oct 26	20	Sep 8	4.8	Jun 28 1991
ANNUAL SEVEN-DAY MINIMUM	31	Dec 20	21	Sep 7	6.9	Oct 8 1964
MAXIMUM PEAK FLOW			4720	Jun 13	73700	Nov 2 1998
MAXIMUM PEAK STAGE			14.52	Jun 13	28.81	Nov 2 1998
INSTANTANEOUS LOW FLOW			18	Mar 3	4.4	Jun 28 1991
ANNUAL RUNOFF (AC-FT)	135800		88420		234300	
10 PERCENT EXCEEDS	256		153		650	
50 PERCENT EXCEEDS	62		35		82	
90 PERCENT EXCEEDS	38		27		28	

e Estimated



07180500 CEDAR CREEK NEAR CEDAR POINT, KS

LOCATION.--Lat 38°11'55", long 96°49'22", in NE $^1/_4$ SE $^1/_4$ NE $^1/_4$ sec.25, T.21 S., R.5 E., Chase County, Hydrologic Unit 11070202, on right bank at upstream side of county highway bridge, 4.0 mi south of Cedar Point, and at mile 9.4.

DRAINAGE AREA.--110 mi^2.

PERIOD OF RECORD.--October 1938 to current year. Monthly discharge only for some periods, published in WSP 1311.

REVISED RECORDS.--WSP 1211: 1944(M). WSP 1341: 1940-41, 1942(M), 1943, 1945(M).

GAGE.--Water-stage recorder. Datum of gage is 1,262.50 ft above NGVD of 1929 (levels by U.S. Army Corps of Engineers). Prior to Sept. 28, 1944, nonrecording gage at present site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in July 1929 reached a stage of 24.63 ft from floodmarks on house on left bank where flood in 1951 reached a stage of 25.7 ft.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,600 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 25	0400	*2,500	*10.06	No peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.5	5.2	5.6	4.0	e3.0	3.4	3.5	19	30	17	5.4	1.7
2	4.1	6.5	5.6	3.9	4.8	e3.0	3.0	18	28	17	5.0	1.5
3	3.5	6.9	5.7	3.6	4.6	e2.0	2.8	16	25	18	4.7	1.4
4	3.4	7.5	6.1	3.6	5.2	3.8	2.7	15	26	18	4.7	1.1
5	6.3	7.6	6.2	3.9	5.1	4.0	2.8	14	33	16	4.4	0.97
6	7.5	7.7	6.1	4.8	5.0	4.1	2.6	13	29	15	4.2	1.0
7	5.6	7.5	5.9	4.8	5.0	4.6	2.8	13	24	13	3.9	0.98
8	4.3	7.1	5.5	4.5	5.4	4.8	5.4	50	21	13	3.7	0.92
9	3.6	7.1	5.3	4.8	5.8	6.7	12	39	20	12	3.5	e0.85
10	2.8	6.9	5.2	5.1	5.8	6.9	12	19	19	11	3.5	e0.80
11	3.0	6.5	5.0	4.8	5.3	5.4	7.8	14	21	12	3.6	e0.75
12	3.4	6.7	5.2	4.6	4.6	4.7	6.5	213	102	12	4.7	e0.70
13	3.9	7.0	5.9	4.4	4.3	4.4	5.9	66	1100	12	6.8	0.65
14	4.0	7.0	5.8	4.2	3.8	3.9	5.6	31	242	11	8.3	0.57
15	4.2	7.2	5.5	4.1	3.5	4.0	5.9	26	86	10	5.9	0.55
16	4.5	6.9	5.5	4.1	3.5	4.1	5.4	538	384	9.7	4.9	0.63
17	4.4	6.9	5.5	3.7	3.4	3.7	7.4	177	94	9.1	4.7	0.61
18	4.4	7.1	5.2	3.9	3.1	3.6	9.9	90	58	9.3	7.6	0.56
19	4.3	7.2	4.8	4.0	4.2	3.5	8.2	43	47	12	6.2	1.4
20	3.9	5.9	5.6	4.2	4.7	3.7	11	35	40	10	5.0	1.5
21	3.4	5.7	4.8	4.3	4.7	3.7	343	31	35	8.0	4.2	1.3
22	3.5	5.8	4.5	4.6	4.4	3.3	70	28	32	7.1	3.5	1.0
23	4.2	5.9	4.4	4.3	3.9	3.1	29	26	28	6.7	3.2	0.97
24	4.5	6.2	4.7	3.9	3.4	3.0	21	29	26	6.4	3.1	0.96
25	4.7	6.9	4.7	3.7	3.0	3.3	17	957	25	6.2	3.1	0.94
26	4.9	6.3	4.8	3.6	3.0	3.5	17	97	23	6.0	2.9	0.94
27	5.3	5.8	5.3	3.5	2.9	3.4	28	114	22	5.3	2.7	0.90
28	5.1	5.5	5.2	3.7	3.1	3.2	53	69	21	5.2	2.4	0.74
29	4.6	5.3	5.3	3.7	---	3.3	26	49	19	6.5	2.2	0.50
30	5.3	5.4	4.9	e3.0	---	4.0	20	39	18	6.7	2.0	0.37
31	5.2	---	4.2	e2.0	---	3.6	---	34	---	6.0	1.7	---
MEAN	4.397	6.573	5.290	4.042	4.232	3.926	24.91	94.26	89.27	10.55	4.248	0.925
MAX	7.5	7.7	6.2	5.1	5.8	6.9	343	957	1100	18	8.3	1.7
MIN	2.8	5.2	4.2	2.0	2.9	2.0	2.6	13	18	5.2	1.7	0.37
MED	4.3	6.9	5.3	4.0	4.3	3.7	8.0	34	28	10	4.2	0.93
AC-FT	270	391	325	249	235	241	1480	5800	5310	649	261	55

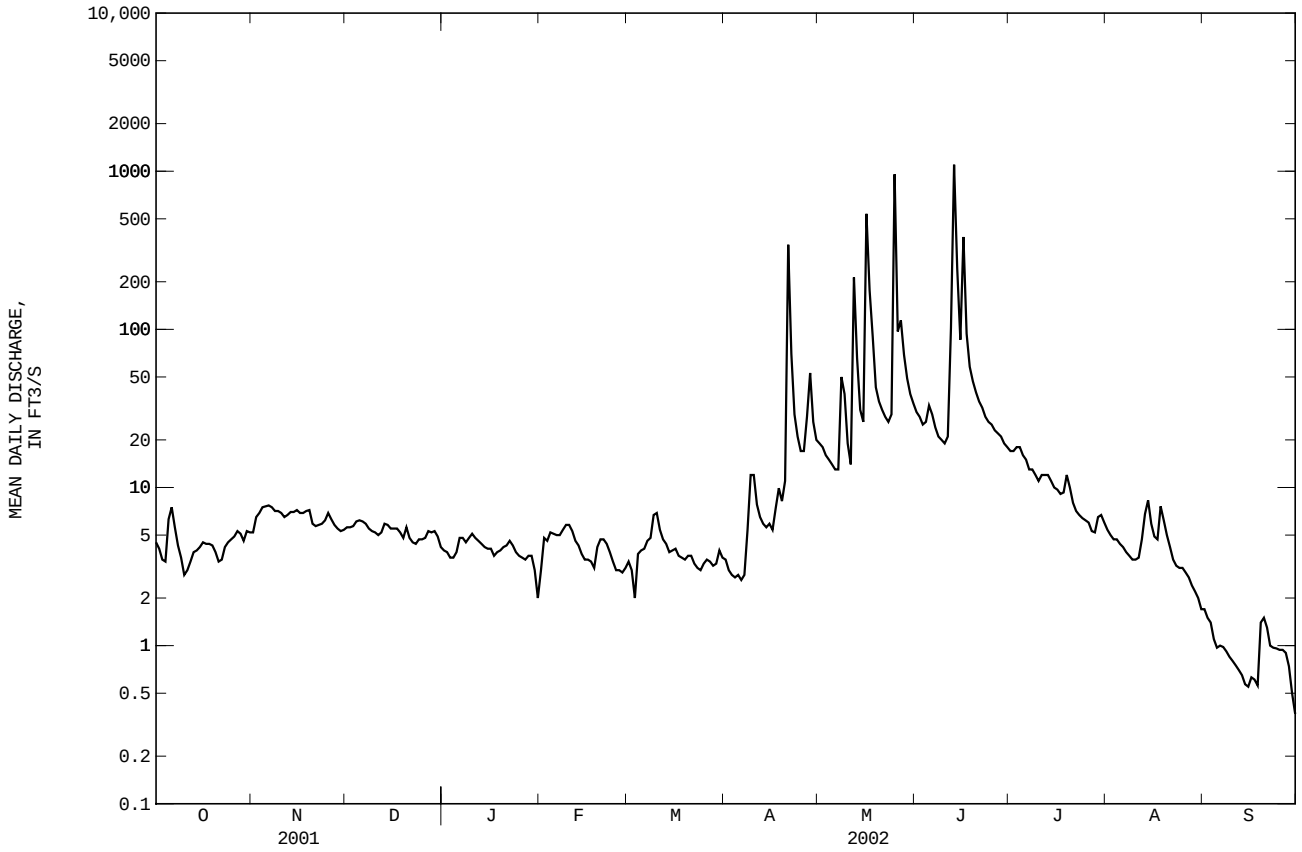
07180500 CEDAR CREEK NEAR CEDAR POINT, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	46.62	40.71	30.62	26.41	42.43	70.27	89.72	86.57	121.3	63.24	29.20	38.17
MAX	392	542	264	195	260	449	554	507	814	594	179	414
(WY)	1986	1999	1945	1949	2001	1973	1944	1993	1965	1951	1995	1941
MIN	0.000	0.000	0.000	0.000	0.000	0.44	0.58	0.006	0.000	0.000	0.000	0.000
(WY)	1940	1954	1955	1940	1957	1956	1954	1955	1955	1954	1954	1953

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1939 - 2002	
ANNUAL MEAN	54.87		21.09		57.05	
HIGHEST ANNUAL MEAN					159	1993
LOWEST ANNUAL MEAN					0.91	1954
HIGHEST DAILY MEAN	3420	Feb 24	1100	Jun 13	10900	Jun 29 1951
LOWEST DAILY MEAN	2.8	Oct 10	0.37	Sep 30	0.00	Jul 12 1939
ANNUAL SEVEN-DAY MINIMUM	3.6	Oct 9	0.61	Sep 12	0.00	Jul 12 1939
MAXIMUM PEAK FLOW			2500	May 25	52400	Jun 29 1951
MAXIMUM PEAK STAGE			10.06	May 25	23.70	Jun 29 1951
INSTANTANEOUS LOW FLOW			0.29	Sep 30	.00	at times
ANNUAL RUNOFF (AC-FT)	39720		15270		41330	
10 PERCENT EXCEEDS	77		29		76	
50 PERCENT EXCEEDS	16		5.2		16	
90 PERCENT EXCEEDS	4.9		2.5		1.9	

e Estimated



07182250 COTTONWOOD RIVER NEAR PLYMOUTH, KS

LOCATION.--Lat 38°23'51", long 96°21'21", in NE $^{1}/_{4}$ NE $^{1}/_{4}$ SE $^{1}/_{4}$ sec.13, T.19 S., R.9 E., Chase County, Hydrologic Unit 11070203, on right bank at upstream side of county highway bridge, 0.8 mi downstream from Buckeye Creek, 1.5 mi southwest of Plymouth, and at mile 39.2.

DRAINAGE AREA.--1,740 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is 1,109.04 ft above NGVD of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow partially regulated since 1968 by Marion Lake (station 07179794), 87.3 mi upstream. Satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1903, 37.8 ft July 11, 1951, from information by local residents, discharge not determined.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,900 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 25	1300	*5,930	*20.10	Jun 14	0400	5,650	19.56

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	73	55	65	e56	e54	50	47	355	568	230	60	35
2	71	57	65	e57	70	54	47	292	496	211	56	33
3	68	58	67	58	77	54	45	255	435	209	51	31
4	66	59	70	58	73	54	44	230	455	206	50	29
5	74	61	69	57	66	53	43	211	2430	194	47	28
6	72	62	72	59	63	55	43	196	2000	179	44	27
7	73	61	71	60	62	55	44	726	945	165	42	27
8	75	61	71	60	62	57	52	2860	604	153	39	27
9	74	63	68	61	65	65	65	3170	482	144	38	26
10	71	63	66	62	68	62	69	2110	415	133	38	25
11	67	63	66	62	67	64	78	1360	372	134	37	23
12	63	64	67	61	70	68	82	2220	1030	121	39	22
13	62	65	67	62	70	66	81	2560	3360	115	46	24
14	59	66	66	62	66	62	86	1300	5400	114	49	28
15	64	67	66	59	63	58	78	1090	4220	110	54	27
16	62	69	66	58	60	55	73	2300	2080	103	62	27
17	63	70	66	57	57	54	69	4340	3140	98	63	27
18	65	72	64	56	57	52	64	3230	1900	93	61	28
19	63	73	63	57	62	53	144	1470	1160	89	54	35
20	60	70	62	57	60	52	184	1020	695	87	50	37
21	62	68	60	57	59	52	2420	839	534	83	50	36
22	60	68	59	57	60	50	2380	1240	464	78	47	34
23	59	67	58	58	59	49	1480	778	412	71	44	32
24	59	71	57	57	57	49	592	809	371	66	48	29
25	57	70	56	56	55	49	374	4520	337	63	46	28
26	54	66	57	56	52	48	299	3130	310	61	47	26
27	51	68	55	54	50	47	356	1960	298	56	46	25
28	49	66	56	54	49	48	536	1410	295	54	43	25
29	48	66	e55	53	---	49	479	979	265	55	41	24
30	48	66	e54	e53	---	48	458	778	251	56	38	24
31	51	---	e54	e52	---	47	---	658	---	59	36	---
MEAN	62.68	65.17	63.16	57.61	61.89	54.16	360.4	1561	1191	115.8	47.29	28.30
MAX	75	73	72	62	77	68	2420	4520	5400	230	63	37
MIN	48	55	54	52	49	47	43	196	251	54	36	22
AC-FT	3850	3880	3880	3540	3440	3330	21450	95990	70860	7120	2910	1680

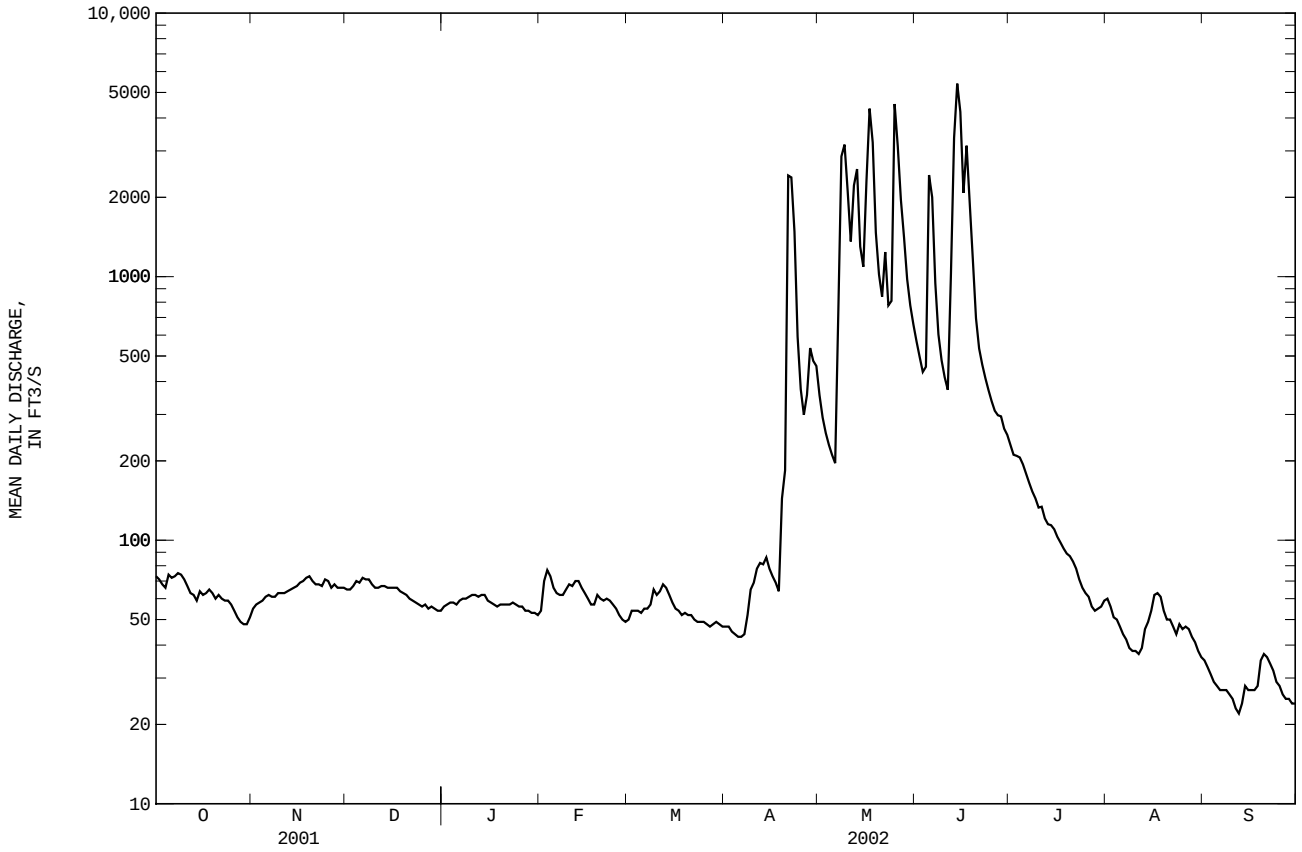
07182250 COTTONWOOD RIVER NEAR PLYMOUTH, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	718.7	785.3	468.6	373.0	678.1	1101	1338	1478	1867	871.0	408.5	470.7
MAX	6370	8861	2389	1727	2948	7548	5588	8608	9568	7881	2199	2654
(WY)	1986	1999	1993	1974	1973	1973	1999	1993	1965	1993	1985	1965
MIN	12.3	29.5	31.9	38.0	31.9	43.0	48.2	51.2	127	42.0	21.4	20.6
(WY)	1992	1981	1992	1981	1967	1981	1989	1967	1980	1980	1991	1980

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1964 - 2002	
ANNUAL MEAN	505.2		306.6		878.8	
HIGHEST ANNUAL MEAN					2701	1993
LOWEST ANNUAL MEAN					121	1991
HIGHEST DAILY MEAN	13000	Feb 25	5400	Jun 14	73500	Nov 2 1998
LOWEST DAILY MEAN	48	Oct 29	22	Sep 12	8.7	Oct 21 1964
ANNUAL SEVEN-DAY MINIMUM	51	Oct 26	25	Sep 7	11	Oct 18 1964
MAXIMUM PEAK FLOW			5930	May 25	92900	Nov 2 1998
MAXIMUM PEAK STAGE			20.10	May 25	36.78	Nov 2 1998
INSTANTANEOUS LOW FLOW			21	Sep 12	8.7	Oct 21 1964
ANNUAL RUNOFF (AC-FT)	365800		221900		636600	
10 PERCENT EXCEEDS	971		778		1900	
50 PERCENT EXCEEDS	150		62		260	
90 PERCENT EXCEEDS	62		39		45	

e Estimated



07182510 NEOSHO RIVER AT BURLINGTON, KS

LOCATION.--Lat 38°11'40", long 95°44'10", in SE $^{1}/_{4}$ NW $^{1}/_{4}$ sec.26, T.21 S., R.15 E., Coffey County, Hydrologic Unit 11070204, on right bank at upstream side of county highway bridge at Burlington, 0.3 mi upstream from Rock Creek, and at mile 338.4.

DRAINAGE AREA.--3,042 mi^2, includes that of Rock Creek.

PERIOD OF RECORD.--June 1961 to current year.

GAGE.--Water-stage recorder. Datum of gage is 983.56 ft above NGVD of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow completely regulated since 1963 by John Redmond Reservoir (station 07182450), 5.3 mi upstream. Records include flow of Rock Creek. Satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	71	39	48	18	21	30	34	1780	77	224	45	45
2	62	38	47	18	21	32	34	1440	79	145	44	44
3	63	39	48	e18	21	29	34	845	81	145	44	44
4	64	38	48	e19	20	32	35	840	86	146	45	44
5	71	33	49	19	19	50	35	830	2130	145	45	45
6	65	25	58	19	19	50	35	601	4670	146	43	45
7	84	56	49	20	19	52	37	360	4620	144	43	44
8	106	76	48	19	19	42	43	472	4530	163	42	44
9	106	76	49	19	21	23	37	393	4460	188	42	46
10	105	73	49	19	20	21	35	1690	4340	241	44	47
11	105	72	49	19	19	22	36	2670	4230	277	42	45
12	101	72	46	18	31	22	31	2720	3630	416	43	45
13	100	74	20	18	81	22	59	3870	2060	446	48	49
14	98	73	18	18	80	22	63	4810	2070	436	42	49
15	99	62	18	19	66	21	63	4700	2110	348	43	45
16	89	47	18	22	29	24	65	4560	2170	262	44	44
17	89	47	29	22	28	21	66	3520	3990	155	58	46
18	87	48	23	22	28	33	65	2450	5550	46	45	45
19	74	47	18	23	34	80	64	2520	5450	46	44	52
20	31	47	18	22	28	63	67	3550	5330	45	43	44
21	30	47	18	21	30	23	77	4610	5130	43	43	44
22	31	47	19	21	29	23	67	4640	4900	45	43	44
23	33	48	18	21	29	22	608	3750	4660	44	44	44
24	33	49	18	19	28	23	1100	992	3800	45	44	45
25	36	46	18	19	29	23	1210	933	3080	44	44	44
26	36	47	18	19	27	23	1310	94	2910	44	44	45
27	36	47	18	18	27	23	1360	87	2770	45	44	45
28	35	47	18	19	29	23	1300	73	1420	47	44	44
29	35	46	18	19	---	23	1570	76	306	50	44	45
30	34	47	18	28	---	31	1800	77	306	45	45	44
31	35	---	18	24	---	35	---	77	---	45	45	---
MEAN	65.94	51.77	30.61	19.97	30.43	31.06	378.0	1936	3032	150.4	44.29	45.20
MAX	106	76	58	28	81	80	1800	4810	5550	446	58	52
MIN	30	25	18	18	19	21	31	73	77	43	42	44
AC-FT	4050	3080	1880	1230	1690	1910	22490	119100	180400	9250	2720	2690

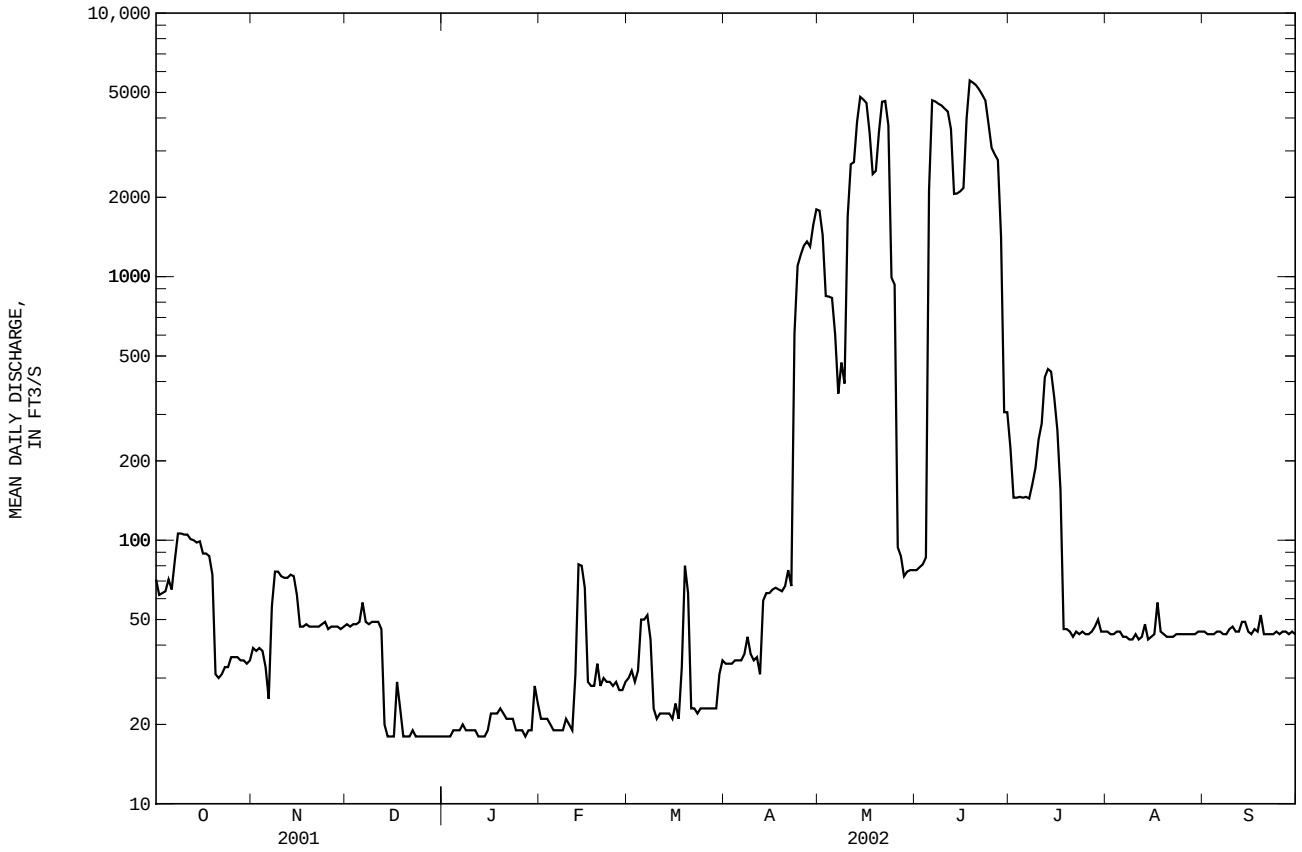
07182510 NEOSHO RIVER AT BURLINGTON, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1379	1449	1106	770.4	991.9	1833	2366	2617	3368	2108	1009	624.5
MAX	11540	15410	6925	3578	5363	7637	8191	9790	12890	7332	10330	3771
(WY)	1974	1999	1993	1973	1973	1973	1984	1999	1995	1969	1993	1985
MIN	22.4	12.0	12.4	17.7	17.1	13.8	21.5	44.5	162	66.0	44.3	32.4
(WY)	1989	1991	1991	1989	1989	1981	1981	1989	1988	1966	2002	1984

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1966 - 2002	
ANNUAL MEAN	859.0		484.1		1636	
HIGHEST ANNUAL MEAN					4982	1993
LOWEST ANNUAL MEAN					190	1991
HIGHEST DAILY MEAN	7130	Mar 19	5550	Jun 18	23300	Nov 6 1998
LOWEST DAILY MEAN	18	Dec 14	18	Dec 14	0.86	Nov 28 1980
ANNUAL SEVEN-DAY MINIMUM	18	Dec 23	18	Dec 23	4.2	Nov 22 1980
MAXIMUM PEAK FLOW			5640	Jun 18	26200	Sep 13 1961
MAXIMUM PEAK STAGE			13.11	Jun 18	31.53	Sep 13 1961
INSTANTANEOUS LOW FLOW			16	Dec 13	0.00	Nov 28 1980
ANNUAL RUNOFF (AC-FT)	621900		350500		1186000	
10 PERCENT EXCEEDS	2550		1900		5290	
50 PERCENT EXCEEDS	274		45		392	
90 PERCENT EXCEEDS	23		19		26	

e Estimated



07183000 NEOSHO RIVER NEAR IOLA, KS

LOCATION.--Lat 37°53'27", long 95°25'50", in SW $^{1}/_{4}$ NE $^{1}/_{4}$ NE $^{1}/_{4}$ sec.9, T.25 S., R.18 E., Allen County, Hydrologic Unit 11070204, on left bank 1.0 mi downstream from Elm Creek, 3.0 mi southwest of Iola, and at mile 287.4.

DRAINAGE AREA.--3,818 mi^2.

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.

REVISED RECORDS.--WSP 1037: 1819-24, 1926-29, 1935(M). WSP 1117: Drainage area. WSP 1311: 1895-98. WSP 1391: 1896(M), 1899, 1-02(M), 1903-04.

GAGE.--Water-stage recorder. Datum of gage is 914.77 ft above NGVD of 1929 (levels by U.S. Army Corps of Engineers). Prior to Oct. 1, 1917, nonrecording gage at tailgate of flume at mill dam, 4.8 mi upstream at datum 12.2 ft higher.

REMARKS.--Records good. Considerable regulation since 1963 by John Redmond Reservoir (station 07182450), 59.3 mi upstream. Satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

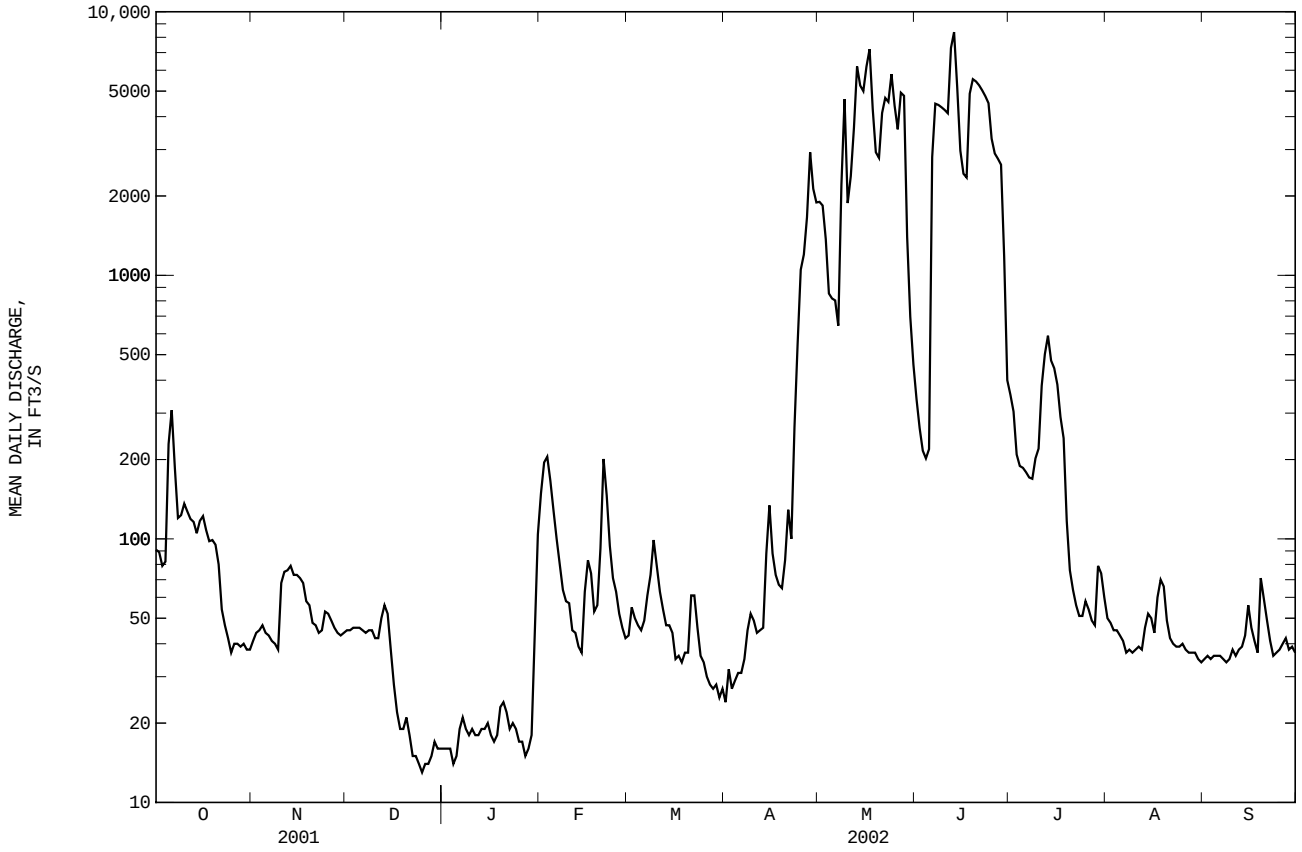
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	91	41	45	16	149	43	24	1900	339	352	50	35
2	89	44	45	16	195	55	32	1840	263	304	48	36
3	79	45	46	16	205	50	27	1370	216	209	45	35
4	82	47	46	14	166	47	29	853	202	189	45	36
5	229	44	46	15	128	45	31	817	219	186	43	36
6	308	43	45	19	100	49	31	803	2810	179	41	36
7	186	41	44	21	80	61	35	644	4480	171	37	35
8	120	40	45	19	64	73	45	2200	4430	169	38	34
9	123	38	45	18	58	99	52	4660	4340	202	37	35
10	136	68	42	19	57	79	49	1880	4240	220	38	38
11	127	75	42	18	45	63	44	2380	4120	381	39	36
12	119	76	50	18	44	54	45	3630	7290	502	38	38
13	116	79	56	19	39	47	46	6200	8370	590	46	39
14	105	73	52	19	37	47	88	5250	5160	475	52	43
15	117	73	38	20	63	44	134	5000	2970	444	50	56
16	122	71	28	18	83	35	88	6190	2430	385	44	46
17	108	68	22	17	74	36	73	7210	2350	290	60	41
18	98	58	19	18	53	34	67	4280	4890	241	70	37
19	99	56	19	23	56	37	65	2930	5550	117	66	71
20	95	48	21	24	92	37	83	2790	5440	76	49	59
21	80	47	18	22	201	61	129	4130	5260	64	42	49
22	54	44	15	19	146	61	100	4710	5030	56	40	41
23	47	45	15	20	94	46	265	4550	4780	51	39	36
24	42	53	14	19	71	36	547	5800	4500	51	39	37
25	37	52	13	17	63	34	1050	4400	3300	58	40	38
26	40	49	14	17	52	30	1200	3580	2900	54	38	40
27	40	46	14	15	46	28	1660	4930	2770	49	37	42
28	39	44	15	16	42	27	2930	4800	2630	47	37	38
29	40	43	17	18	---	28	2130	1400	1180	79	37	39
30	38	44	16	43	---	25	1890	697	400	74	35	37
31	38	---	16	104	---	27	---	459	---	60	34	---
MEAN	98.19	53.17	31.06	21.84	89.39	46.39	433.0	3299	3429	204.0	43.68	40.63
MAX	308	79	56	104	205	99	2930	7210	8370	590	70	71
MIN	37	38	13	14	37	25	24	459	202	47	34	34
AC-FT	6040	3160	1910	1340	4960	2850	25760	202900	204000	12550	2690	2420

07183000 NEOSHO RIVER NEAR IOLA, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1899 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1537	1461	1006	809.9	1030	1938	2876	3025	3684	2572	1131	1339
MAX	15890	18520	9116	4773	6994	11010	19580	14270	15390	43540	10700	11140
(WY)	1942	1999	1993	1993	1949	1973	1944	1938	1995	1951	1993	1951
MIN	0.21	0.52	1.39	1.33	3.24	11.4	19.8	82.3	126	10.8	1.10	0.64
(WY)	1957	1957	1957	1957	1957	1956	1981	1967	1933	1954	1936	1956

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1899 - 2002	
ANNUAL MEAN	1178		650.0		1869	
HIGHEST ANNUAL MEAN					6635	1951
LOWEST ANNUAL MEAN					141	1956
HIGHEST DAILY MEAN	13300	Jun 21	8370	Jun 13	344000	Jul 13 1951
LOWEST DAILY MEAN	13	Dec 25	13	Dec 25	0.00	Aug 19 1936
ANNUAL SEVEN-DAY MINIMUM	14	Dec 22	14	Dec 22	0.00	Aug 19 1936
MAXIMUM PEAK FLOW			9890	Jun 13	436000	Jul 13 1951
MAXIMUM PEAK STAGE			12.48	Jun 13	43.00	Jul 13 1951
INSTANTANEOUS LOW FLOW			12	Dec 24	.00	at times
ANNUAL RUNOFF (AC-FT)	853000		470600		1354000	
10 PERCENT EXCEEDS	4120		2850		5220	
50 PERCENT EXCEEDS	377		51		400	
90 PERCENT EXCEEDS	35		20		34	



07183500 NEOSHO RIVER NEAR PARSONS, KS

LOCATION.--Lat 37°20'24", long 95°06'35", in NE $^{1}/_{4}$ NW $^{1}/_{4}$ NE $^{1}/_{4}$ sec.21, T.31 S., R.21 E., Labette County, Hydrologic Unit 11070205, on right bank at downstream side of bridge on U.S. Highway 160, 0.4 mi upstream from Hickory Creek, 2.7 mi upstream from dam of Kansas Army Ammunition Plant, 8.0 mi east of Parsons, and at mile 204.1.

WATER-DISCHARGE RECORDS

DRAINAGE AREA.--4,905 mi^2.

PERIOD OF RECORD.--October 1921 to current year. Monthly discharge only October 1921, published in WSP 1311.

REVISED RECORDS.--WSP 807: 1922-23. WSP 1391: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 810.25 ft above NGVD of 1929 (levels by U.S. Army Corps of Engineers). Prior to Oct. 1, 1929, nonrecording gage at bridge 0.5 mi downstream at datum 0.04 ft lower. Oct. 1, 1929, to Feb. 7, 1935, nonrecording gage, and Feb. 8, 1935, to Dec. 7, 1966, water-stage recorder at present site and datum. Dec. 8, 1966, to June 8, 1987, water-stage recorder 2.7 mi downstream at present datum.

REMARKS.--Records good. Flow moderately regulated since 1963 by John Redmond Reservoir (station 07182450), 139.6 mi upstream. Small diversion by the Kansas Army Ammunition Plant. Records include flow of Hickory Creek. Satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

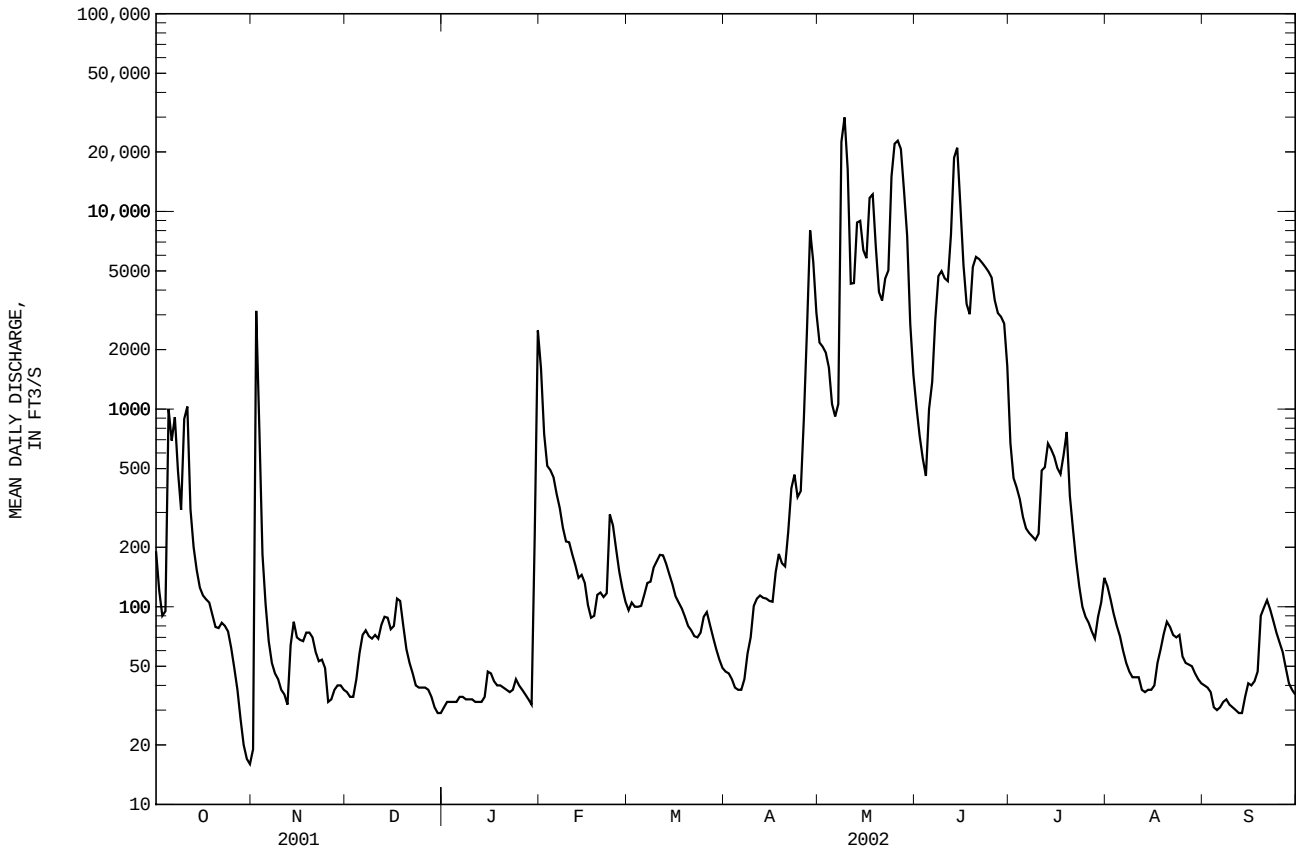
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	191	19	37	31	1610	96	47	2170	1020	672	127	40
2	121	3140	35	33	750	105	46	2070	731	448	109	39
3	90	801	35	33	516	100	43	1930	562	401	92	37
4	95	184	43	33	491	100	39	1620	459	350	80	31
5	1000	103	58	33	452	101	38	1060	1000	285	71	30
6	693	67	72	35	372	115	38	918	1370	249	60	31
7	911	52	76	35	316	132	43	1060	2840	236	52	33
8	486	46	71	34	251	134	58	22500	4710	227	47	34
9	309	43	69	34	214	158	70	29900	4990	218	44	32
10	892	38	72	34	212	170	101	16400	4590	234	44	31
11	1030	36	69	33	184	183	110	4310	4440	489	44	30
12	311	32	81	33	162	182	114	4340	7640	508	38	29
13	200	64	89	33	140	165	111	8790	18700	670	37	29
14	153	84	88	35	145	146	110	8960	21000	627	38	35
15	125	70	77	47	132	130	107	6370	10800	575	38	41
16	114	68	80	46	102	113	106	5800	5370	503	40	40
17	109	67	110	42	88	105	150	11700	3400	469	52	42
18	105	74	107	40	90	98	185	12200	3020	587	61	47
19	91	74	80	40	115	89	166	6590	5240	766	73	90
20	79	70	61	39	118	80	160	3910	5890	364	84	99
21	78	59	52	38	112	76	239	3540	5740	246	79	108
22	83	53	46	37	117	71	397	4580	5490	171	72	97
23	80	54	40	38	293	70	466	5030	5230	127	70	85
24	75	49	39	43	258	74	359	15000	4960	100	72	74
25	62	33	39	40	196	89	385	22000	4630	89	56	66
26	49	34	39	38	151	94	896	22800	3550	83	52	59
27	38	38	38	36	124	81	2520	20700	3060	75	51	49
28	27	40	35	34	106	70	8010	12700	2930	69	50	41
29	20	40	31	32	---	61	5570	7540	2710	89	46	38
30	17	38	29	229	---	54	3080	2690	1650	105	43	36
31	16	---	29	2500	---	49	---	1490	---	140	41	---
MEAN	246.8	185.7	58.94	122.2	279.2	106.2	792.1	8731	4924	328.1	60.10	49.10
MAX	1030	3140	110	2500	1610	183	8010	29900	21000	766	127	108
MIN	16	19	29	31	88	49	38	918	459	69	37	29
AC-FT	15170	11050	3620	7510	15510	6530	47140	536900	293000	20180	3700	2920

07183500 NEOSHO RIVER NEAR PARSONS, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2303	2279	1479	1268	1701	2936	4301	4440	5230	3596	1357	1909
MAX	25520	20340	12760	7762	9492	18100	25520	22110	20610	52780	11140	15030
(WY)	1987	1999	1993	1973	1949	1973	1927	1961	1995	1951	1993	1951
MIN	0.000	0.000	0.000	0.000	0.000	8.10	18.6	282	210	10.8	0.000	0.90
(WY)	1957	1957	1957	1957	1957	1957	1981	1967	1980	1954	1936	1956

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1922 - 2002	
ANNUAL MEAN	1776		1330		2733	
HIGHEST ANNUAL MEAN					8611	1993
LOWEST ANNUAL MEAN					173	1953
HIGHEST DAILY MEAN	23700	Feb 25	29900	May 9	366000	Jul 14 1951
LOWEST DAILY MEAN	16	Oct 31	16	Oct 31	0.00	Aug 26 1934
ANNUAL SEVEN-DAY MINIMUM	27	Oct 26	27	Oct 26	0.00	Aug 26 1934
MAXIMUM PEAK FLOW			31600	May 9	410000	Jul 14 1951
MAXIMUM PEAK STAGE			25.90	May 9	40.20	Jul 14 1951
INSTANTANEOUS LOW FLOW			15	Oct 31	.00	at times
ANNUAL RUNOFF (AC-FT)	1286000		963200		1980000	
10 PERCENT EXCEEDS	5960		4380		8020	
50 PERCENT EXCEEDS	510		94		590	
90 PERCENT EXCEEDS	46		35		41	



07183500 NEOSHO RIVER NEAR PARSONS, KS--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1962-94, 2000 to current year.

REMARKS.--Unpublished records of intermittent sediment samples are available on the Internet at http://ks.waterdata.usgs.gov/nwis. Sediment samples are collected only at selected flow conditions.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
NOV							
01...	1245	19	268	17.0	50	2.6	--
FEB							
21...	1415	113	419	10.5	17	5.3	--
APR							
04...	1555	38	418	14.0	29	3.0	--
30...	1450	2840	422	18.0	223	1710	--
MAY							
09...	1415	31200	178	19.0	504	42500	97
31...	0945	1650	--	--	133	593	--
JUN							
19...	1145	5600	363	25.5	232	3510	--
AUG							
14...	1215	39	427	28.0	36	3.8	--

07184000 LIGHTNING CREEK NEAR MCCUNE, KS

LOCATION.--Lat 37°16'54", long 95°01'56", in NE $^{1}/_{4}$ NE $^{1}/_{4}$ sec.7, T.32 S., R.22 E., Cherokee County, Hydrologic Unit 11070205, on right bank at downstream side of county highway bridge, 5.0 mi south of McCune, 13.0 mi southeast of Parsons, and at mile 12.6.

DRAINAGE AREA.--197 mi^2.

PERIOD OF RECORD.--October 1938 to September 1946, October 1959 to current year.

REVISED RECORDS.--WDR KS-86-1: 1993. WDR KS-87-1: 1993.

GAGE.--Water-stage recorder. Datum of gage is 818.10 ft above NGVD of 1929 (levels by U.S. Army 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 downstream at present datum. Satellite telemeter at station.

REMARKS.--Records good. Satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,800 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct 5	1000	2,770	13.10	May 18	0200	2,540	12.46
Nov 3	0300	2,800	13.19	May 25	1400	5,790	16.11
Jan 31	1900	2,640	12.73	Jun 13	1600	3,190	14.23
May 9	0000	*11,900	*17.14				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.09	4.8	5.7	4.9	1260	6.6	6.7	48	51	14	0.78	0.05
2	0.06	1360	5.6	4.2	206	11	9.2	34	38	10	0.80	0.04
3	0.05	1790	4.9	3.7	119	20	6.0	25	34	7.9	0.70	0.03
4	1.0	155	4.3	3.4	82	21	3.6	19	27	6.1	0.65	0.03
5	2260	67	4.0	3.4	57	20	2.7	15	21	4.9	0.60	0.02
6	532	37	4.5	3.8	46	54	2.8	12	19	4.0	0.49	0.01
7	80	25	4.1	4.1	41	69	3.5	87	17	3.9	0.39	0.0
8	33	18	3.5	4.1	36	62	4.7	4650	16	2.9	0.32	0.00
9	19	14	3.1	4.3	31	e48	5.7	8880	278	2.1	0.26	0.00
10	66	9.7	2.8	4.6	27	e35	6.1	4460	680	3.2	0.22	0.00
11	228	13	2.8	4.6	23	e28	7.1	657	105	23	0.23	0.00
12	73	12	4.9	4.6	20	23	7.8	330	1420	24	0.22	0.00
13	31	7.5	12	4.6	17	19	6.4	944	3020	11	0.19	0.00
14	19	6.1	34	4.5	16	17	5.9	291	1160	5.8	0.20	0.02
15	10	5.2	32	4.1	15	15	6.0	131	205	3.5	0.17	0.03
16	5.7	5.0	35	4.0	13	12	5.9	88	108	2.5	0.13	0.03
17	3.8	4.2	59	3.9	12	11	5.9	1150	71	1.9	0.31	0.03
18	2.9	4.0	59	3.9	12	9.6	5.9	1730	51	1.5	0.36	0.02
19	2.0	4.9	39	4.4	15	9.4	6.2	249	36	18	0.26	0.90
20	1.4	15	33	4.7	19	9.1	16	132	27	31	0.23	2.5
21	1.1	19	24	4.9	20	9.6	91	106	21	11	0.18	1.2
22	0.66	15	18	5.0	15	8.4	44	79	17	4.9	0.14	0.50
23	0.63	11	15	5.9	12	7.0	31	56	14	12	0.13	0.38
24	1.5	9.5	12	6.9	10	6.4	23	1850	11	11	0.17	0.27
25	2.1	13	10	6.5	9.5	6.3	16	4590	19	3.4	0.22	0.18
26	2.3	9.1	8.9	6.7	7.8	6.1	12	1720	12	0.56	0.17	0.13
27	2.4	10	7.9	7.2	6.4	5.7	155	269	8.6	1.2	0.14	0.09
28	3.4	19	7.3	6.9	6.0	5.6	1150	422	25	1.0	0.11	0.05
29	4.1	10	6.7	6.7	---	5.5	208	161	57	1.2	0.10	0.04
30	4.0	6.7	5.9	130	---	5.3	81	105	20	0.88	0.07	0.03
31	3.7	---	5.4	2260	---	4.9	---	72	---	0.83	0.06	---
MEAN	109.5	122.7	15.30	81.63	76.92	18.40	64.50	1076	253.0	7.393	0.290	0.219
MAX	2260	1790	59	2260	1260	69	1150	8880	3020	31	0.80	2.5
MIN	0.05	4.0	2.8	3.4	6.0	4.9	2.7	12	8.6	0.56	0.06	0.00
MED	3.7	12	7.3	4.6	18	11	6.5	161	30	4.0	0.22	0.03
AC-FT	6730	7300	941	5020	4270	1130	3840	66170	15050	455	18	13

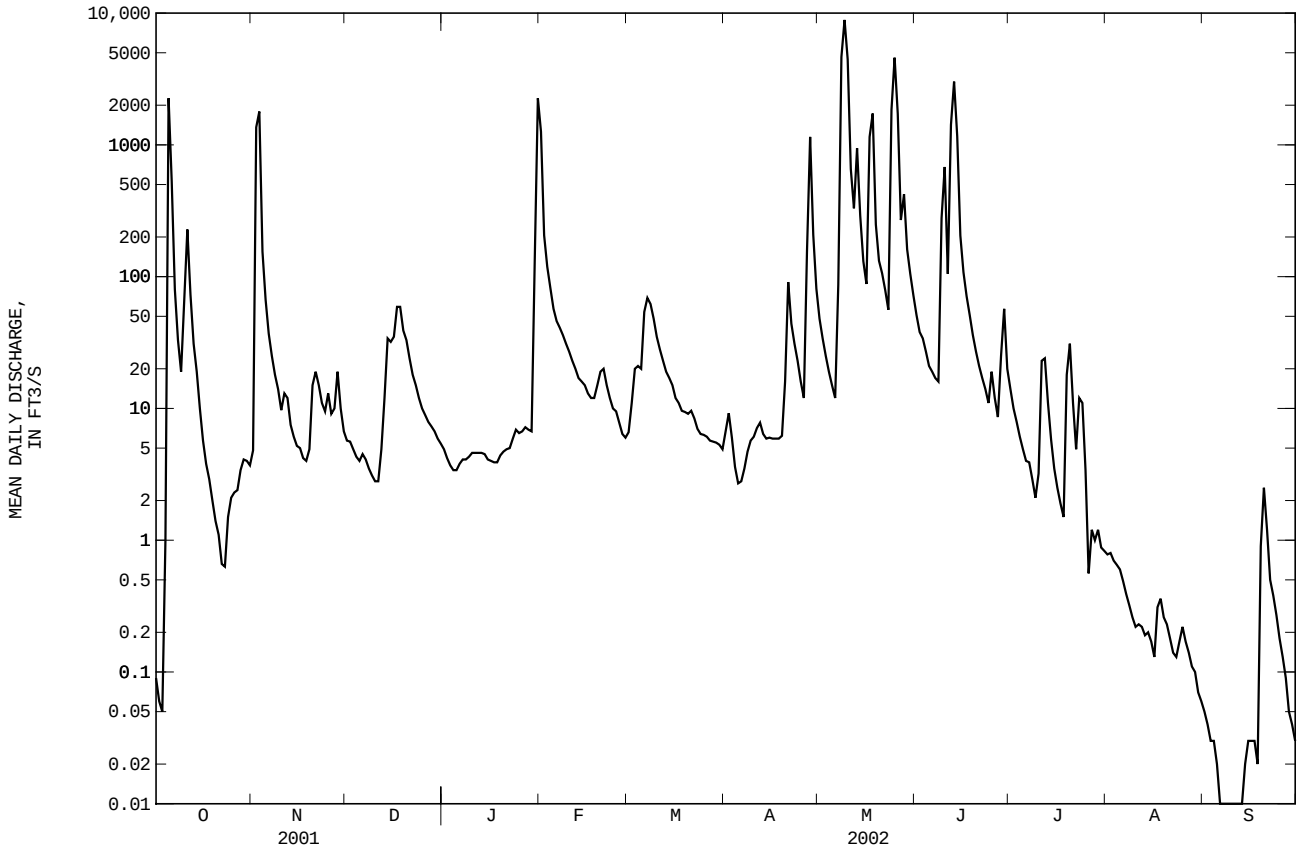
07184000 LIGHTNING CREEK NEAR MCCUNE, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	184.8	175.0	112.6	101.4	135.4	198.7	250.6	295.2	288.3	94.16	40.34	146.2
MAX	2924	907	751	516	1033	1091	1700	2227	1612	1418	488	2102
(WY)	1987	1975	1993	1946	1985	1973	1994	1943	1995	1992	1985	1993
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.18	7.58	0.55	0.001	0.000	0.000
(WY)	1939	1939	1939	1939	1939	1964	1981	1988	1980	1991	1946	1946

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1939 - 2002	
ANNUAL MEAN	145.0		153.2		168.3	
HIGHEST ANNUAL MEAN					498	1993
LOWEST ANNUAL MEAN					18.0	1940
HIGHEST DAILY MEAN	3760	Jan 30	8880	May 9	42400	Sep 25 1993
LOWEST DAILY MEAN	0.00	Sep 5	0.00	Sep 7	0.00	Oct 1 1938
ANNUAL SEVEN-DAY MINIMUM	0.02	Sep 10	0.00	Sep 7	0.00	Oct 1 1938
MAXIMUM PEAK FLOW			11900	May 9	67500	Sep 25 1993
MAXIMUM PEAK STAGE			17.14	May 9	19.79	Sep 25 1993
INSTANTANEOUS LOW FLOW			0.00	Sep 7	.00	many years
ANNUAL RUNOFF (AC-FT)	105000		110900		121900	
10 PERCENT EXCEEDS	209		130		266	
50 PERCENT EXCEEDS	12		7.3		12	
90 PERCENT EXCEEDS	0.47		0.17		0.01	

e Estimated



As the number of streams on which streamflow information is likely to be desired far exceeds the number of streamflow-gaging stations feasible to operate at one time, the Geological Survey collects limited streamflow data at sites other than streamflow-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 high-flow analyses, depending on the type of data collected.

High-flow stations

The following table contains annual maximum discharges for high-flow stations. A high-flow gage is a device that 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 complete-record stations, weather records, or local inquiry. Only the maximum discharge for each water year is given. Information on some lesser 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 high-flow stations

Station name and number (fig. 3)	Location and drainage area	Period of record	Water year 2002 maximum			Period of record maximum		
			Date	Gage height (ft)	Discharge (ft^3/s)	Date	Gage height (ft)	Discharge (ft^3/s)
Wolf River Basin								
Buttermilk Creek near Willis, KS (06815700)	Lat 39°45'16", long 95°27'02", in SW 1/4 SW1/4 sec.30, T.3 S., R.18 E, Brown County, Hydrologic Unit 10240005, at downstream side of county highway bridge, 3.6 mi northeast of Willis. Published as "South Branch Wolf Creek tributary" 1957-60, as "South Fork Wolf River tributary" 1961. Drainage area is 3.74 mi^2.	1957-02	5-11-02	13.17	766	6-08-84	20.18	6,000
Independence Creek Basin								
White Clay Creek at Atchison, KS (06818260)	Lat 39°33'33", long 95°07'38", in SW 1/4 NE1/4 sec.1, T.6 S., R.20 E., Atchison County, Hydrologic Unit 10240011, on right bank at center of highway bridge, on 10th Street in Atchison, and 0.15 mi downstream from Brewery Creek. Drainage area is 13.1 mi^2.	1972-02	5-11-02	8.46	325	6-08-82	16.07	5,410
Kansas River Basin								
Long Branch Draw near Norcatur, KS (06845100)	Lat 39°54'06", long100°10'43", in SW 1/4 SW1/4 sec.6, T.2 S., R.25 W., Decatur-Norton County line, Hydrologic Unit 10250011, on downstream side of county highway bridge, 4.7 mi north of Norcatur. Drainage area is 31.7 mi^2.	1957-02		+	+	6-15-57	26.40	2,680
Prairie Dog Creek tributary at Colby, KS (06847600)	Lat 39°23'28", long 101°02'43", in SW1/4 NW1/4 NE1/4 sec.6, T.8 S., R.33 W., Thomas County, Hydrologic Unit 10250015, at downstream side of bridge on Franklin Avenue in Colby. Prior to Mar. 31, 1971, at site 0.3 mi upstream at same datum. Drainage area is 7.53 mi^2.	1957-02	8-27-02	13.29	194	6-18-75	27.44	4,300

+ Not determined.

Annual maximum discharge at high-flow stations

Station name and number (fig. 3)	Location and drainage area	Period of record	Water year 2002 maximum			Period of record maximum		
			Date	Gage height (ft)	Discharge (ft^3/s)	Date	Gage height (feet)	Discharge (ft^3/s)
			Kansas River Basin--Continued					
Elk Creek at Clyde, KS (06856320)	Lat 39°35'28", long 97°23'26", in NW 1/4 SE1/4 sec.26, T.5 S., R.1 W., Republic County, Hydrologic Unit 10250017, at downstream side of State Highway 9 bridge, 1.2 mi upstream from mouth. Drainage area is 73.4 mi^2.	1970-02		+	+	9-26-73 7-23-93	15.30 18.47	6,000 b
Big Creek tributary near Ogallah, KS (06863400)	Lat 38°56'00", long 99°44'33", in NW 1/4 SW1/4 sec.11, T.13 S., R.22 W., Trego County, Hydrologic Unit 110260007, at downstream side of bridge on State Highway 147, 4.0 mi southwest of Ogallah. Drainage area is 4.81 mi^2.	1957-02		+	+	3-24-87	15.20	4,100
Big Creek tributary near Hays, KS (06863700)	Lat 38°51'08", long 99°14'48", in SE 1/4 NE1/4 sec.7, T.14 S., R.17 W., Ellis County, Hydrologic Unit 10260007, at downstream side of culvert on old U.S. Highway 40 at Toulon, 4.7 mi southeast of Hays. Drainage area is 6.19 mi^2.	1957-02		+	+	5-29-59	13.10	1,100
Smoky Hill River tributary at Dorrance, KS (06864300)	Lat 38°50'52", long 98°35'44", in NE 1/4 SE1/4 sec.12, T.14 S., R.12 W., Russell County, Hydrologic Unit 10260006, at downstream end of culvert on old U.S. Highway 40 at Dorrance. Drainage area is 5.39 mi^2.	1957-02		+	+	9-03-75	14.62	2,400
Coon Creek tributary near Luray, KS (06868300)	Lat 39°10'30", long 98°42'02" in NW 1/4 NE1/4 sec.19, T.10 S., R.12 W., Osborne County, Hydrologic Unit 10260010, at downstream side of county highway bridge, 4.4 mi southwest of Luray. Drainage area is 6.53 mi^2.	1957-02	8-13-02	15.88	259	7-02-82	21.13	4,210
Mulberry Creek near Salina, KS (06869950)	Lat 38°50'40", long 97°40'05", in SW 1/4 SW1/4 sec.9, T.14 S., R.3 W., Saline County, Hydrologic Unit 10260010, at left downstream pier of bridge on county highway, 2.0 mi downstream from Spring Creek, 2.0 mi west of Salina, and 9.0 mi upstream from mouth. Drainage area is 261 mi^2. (Discontinued)	1961-02	5-06-02	4.36	54	5-28-95	27.14	8,440
Ash Creek tributary near Stockton, KS (06873300)	Lat 39°26'15", long 99°22'16 " in SE 1/4 SW1/4 sec.18, T.7 S., R.18 W., Rooks County, Hydrologic Unit 10260014, at upstream end of culvert on old U.S. Highway 24, 5.3 mi west of Stockton. Drainage area is 0.89 mi^2.	1957-02		+	+	5-12-93	15.54	530

b Backwater, discharge not determined.
+ Not determined.

Annual maximum discharge at high-flow stations

Station name and number (fig. 3)	Location and drainage area	Period of record	Water year 2002 maximum			Period of record maximum		
			Date	Gage height (ft)	Discharge (ft^3/s)	Date	Gage height (ft)	Discharge (ft^3/s)
			Kansas River Basin--Continued					
Mud Creek at Abilene, KS (06877120)	Lat 38°55'47", long 97°13'39", in NE 1/4 NE1/4 sec.17, T.13 S., R.2 E., Dickinson County, Hydrologic Unit 10260008, at downstream side of bridge on old U.S. Highway 40 on north edge of Abilene. Drainage area is 87.0 mi^2.	1970-02	2002 6-06-01	+ 14.70	+ 6,910	11-04-98	17.73	15,000
Mill Creek tributary near Washington, KS (06884300)	Lat 39°48'48", long 97°00'30", in SW 1/4 SW1/4 sec.5, T.3 S., R.4 E., Washington County, Hydrologic Unit 10270207, at downstream end of culvert on U.S. Highway 36, 2.2 mi east of Washington. Drainage area is 3.20 mi^2.	1957-02	5-28-02 8-23-01	10.52 15.32	73.8 584	6-18-83	19.90	2,500
Cedar Creek near Manhattan, KS (06887200)	Lat 39°15'31", long 96°33'48", in NE 1/4 NE1/4 sec.19, T.9 S., R.8 E., Pottawatomie County, Hydrologic Unit 10270205, at downstream side of county highway bridge, 5.5 mi north of Manhattan. Drainage area is 13.4 mi^2.	1957-02	5-06-02	11.59	464	6-27-99	23.61	12,000
Indian Creek near Topeka, KS (06889550)	Lat 39°07'27", long 95°39'05", in SE 1/4 SE1/4 NE1/4 sec.5, T.11 S., R. 16 E., Shawnee County, Hydrologic Unit 10270102, 3.0 mi north of Topeka, 2.7 mi uptream from Soldier Creek (new channel). Drainage area is 9.72 mi^2.	1970-02	4-08-02	10.31	502	7-27-81 6-28-99	17.87 16.73	2,700 3,400
Shunganunga Creek at Topeka, KS (06889630)	Lat 39°01'54 ", long 95°40'57", in SW 1/4 SE1/4 SW1/4 sec.6, T.12 S., R. 16 E., Shawnee County, Hydrologic 10270102, on downstream side of bridge on U.S. Highway 75, 700 ft north of 21st Street in Topeka. Drainage area is 33.5 mi^2.	1970-02		+	+	7-20-73 7-09-93	15.18 15.37	3,300 3,200
			Osage River Basin					
South Fork Pottawatomie Creek tributary near Garnett, KS (06914250)	Lat 38°14'00", long 95°14'52", in NW 1/4 SE1/4 sec.7, T.21 S., R.20 E., Anderson County, Hydrologic Unit 10290101, above culvert on U.S. Highway 59, 3.1 mi south of Garnett. Drainage area is 0.35 mi^2.	1963-02	5-24-02	12.50	269	6-21-67	14.98	600
Big Bull Creek at Paola, KS (06915100)	Lat 38°34'36", long 94°53'44", in NW 1/4 NE1/4 NW1/4 sec.17, T.17 S., R.23 E., Miami County, Hydrologic Unit 10290102, on downstream side of bridge on county highway (extension of Peoria Street), 0.5 mi west of of Paola, and 9.0 mi upstream from mouth. Drainage area is 230 mi^2.	1970-02		+	+	10-11-73	25.18	39,000

+ Not determined.

Annual maximum discharge at high-flow stations

Station name and number (fig. 3)	Location and drainage area	Period of record	Water year 2002 maximum			Period of record maximum		
			Date	Gage height (ft)	Discharge (ft^3/s)	Date	Gage height (ft)	Discharge (ft^3/s)
			Osage River Basin--Continued					
Marmaton River tributary near Fort Scott, KS (06917400)	Lat 37°47'26", long 94°47'47", in SE 1/4 SE1/4 SE1/4 sec.8, T.26 S., R. 24 E., Bourbon County, Hydrologic Unit 10290104, at downstream side of county highway bridge, 6.0 mi southwest of Fort Scott. Drainage area is 2.80 mi^2.	1957-02	5-08-02	13.64	914	9-14-98	17.23	2,160
			Arkansas River Basin					
White Woman Creek tributary near Selkirk, KS (07138600)	Lat 38°31'30", long 101°37'16", in SW 1/4 SW1/4 sec.34, T.17 S., R.39 W., Greeley County, Hydrologic Unit 11030002, at downstream side of county highway bridge, 5.6 mi northwest of Selkirk. Drainage area is 38.0 mi^2, of which 7.59 mi^2 is contributing.	1957-02		+	+	7-09-72	13.06	1,000
Arkansas River tributary near Dodge City, KS (07139700)	Lat 37°42'52", long 100°00'53", in SE 1/4 NE1/4 sec.11, T.27 S., R.25 W., Ford County, Hydrologic Unit 11030004, at downstream side of culvert on U.S. Highway 283, 2.6 mi south of Dodge City. Prior to Mar. 1, 1959, above culvert 175 ft north of present site at same datum. Records for 1957-58 discredited. Drainage area is 8.66 mi^2.	1957-02	8-11-02	14.17	421	9-12-97	16.32	1,730
Little Cheyenne Creek tributary near Claflin, KS (07143100)	Lat 38°27'25", long 98°32'08", in NE 1/4 SE1/4 sec.28, T.18 S., R.11 W., Barton County, Hydrologic Unit 11030011, at culvert on county highway, 4.7 mi south of Claflin. Published as "Cheyenne Creek tributary" 1957-70. Drainage area is 1.48 mi^2.	1957-02	8-13-02	11.43	32	6-22-81	12.82	570
Whitewater River tributary near Towanda, KS (07147020)	Lat 37°51'03", long 97°03'37", in NE 1/4 NE1/4 sec.26, T.25 S., R.3 E., Butler County, Hydrologic Unit 11030017, at culvert on county highway, 5.0 mi northwest of Towanda. Drainage area is 0.17 mi^2.	1963-02	5-24-02	14.42	140	6-09-95	16.59	540
Cedar Creek tributary near Cambridge, KS (07147990)	Lat 37°19'19 ", long 96°37'33", in NE 1/4 NE1/4 SE1/4 sec.26, T.31 S., R.7 E., Cowley County, Hydrologic Unit 11060001, at downstream side of bridge on U.S. Highway 160, 0.5 mi upstream from Cedar Creek, and 2.1 mi northeast of Cambridge. Published as "Grouse Creek tributary" 1961-63. Drainage area is 2.41 mi^2.	1961-02	6-12-02	13.25	918	6-21-77	14.42	3,000

+ Not determined.

Annual maximum discharge at high-flow stations

Station name and number (fig. 3)	Location and drainage area	Period of record	Water year 2002 maximum			Period of record maximum		
			Date	Gage height (ft)	Discharge (ft^3/s)	Date	Gage height (ft)	Discharge (ft^3/s)
			Arkansas River Basin--Continued					
Cimarron River tributary near Satanta, KS (07156700)	Lat 37°16'15", long 100°55'36", in NW 1/4 NE1/4 sec.17, T.32 S., R.33 W., Seward County, Hydrologic Unit 11040006, 27 ft upstream from culvert under county highway, 12.0 mi southeast of Satanta. Prior to 1985, gage was located on the downstream side of culvert. Drainage area is 2.41 mi^2.	1957-02	6-15-02	10.84	20	9-23-62 8-15-94	14.12 16.12	2,040 725
Sandy Creek near Yates Center, KS (07166200)	Lat 37°50'47", long 95°50'07", in NE 1/4 SW1/4 NE1/4 sec.26, T.25 S., R.14 E., Woodson County, Hydrologic Unit 11070101, at downstream side of bridge on U.S. Highway 54, 6.0 mi southwest of Yates Center. Drainage area is 6.80 mi^2.	1957-02	5-25-02	14.38	538	7-12-72	19.80	3,000

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)	Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)
Big Nemaha River Basin									
06814000 TURKEY C NR SENECA, KS (LAT 39 56 52N LONG 096 06 30W)									
OCT 2001					MAY 2002				
11...	1205	46	696	14.0	06...	0945	429	380	16.5
DEC					JUN				
10...	1320	29	692	4.5	06...	1330	41	668	24.0
JAN 2002					25...	1135	11	622	28.5
09...	0940	27	761	.5	AUG				
MAR					12...	0900	2.0	562	23.0
04...	1440	14	796	21.5	SEP				
APR					12...	0915	.79	595	17.5
08...	1345	25	596	14.5					
Kansas River Basin									
06827000 SF REPUBLICAN R NR CO-KS ST LINE, KS (LAT 39 40 20N LONG 102 00 40W)									
MAY 2002					JUL 2002				
22...	1225	7.9	545	17.0	24...	1310	.94	515	27.0
JUN					SEP				
11...	1620	5.5	534	25.5	12...	1420	5.3	520	23.5
06845000 SAPPA C NR OBERLIN, KS (LAT 39 48 45N LONG 100 32 00W)									
OCT 2001					NOV 2001				
10...	1035	.02	963	11.5	15...	1250	.03	925	13.5
06845110 SAPPA C NR LYLE, KS (LAT 40 00 00N LONG 099 59 35W)									
OCT 2001					APR 2002				
11...	1420	.90	908	--	11...	1400	6.0	781	20.0
NOV					JUN				
16...	0850	2.6	803	8.0	10...	1520	2.1	885	25.0
JAN 2002					JUL				
09...	1410	3.5	784	1.5	10...	1515	.49	945	28.0
FEB					SEP				
21...	0955	6.8	710	1.0	10...	1620	.11	1030	21.0
06846000 BEAVER C AT LUDELL, KS (LAT 39 50 53N LONG 100 57 40W)									
AUG 2002					AUG 2002				
27...	1550	1060	145	17.0	28...	1005	191	185	19.0
06847900 PRAIRIE DOG C AB KEITH SEBELIUS LAKE, KS (LAT 39 46 13N LONG 100 06 00W)									
OCT 2001					JAN 2002				
10...	1540	1.6	838	14.0	10...	1045	5.0	775	.0
06848000 PRAIRIE DOG C AT NORTON, KS (LAT 39 48 36N LONG 099 55 18W)									
OCT 2001					APR 2002				
11...	1200	.37	728	10.5	09...	1750	.96	--	14.5
NOV					JUN				
14...	1500	.24	711	13.0	11...	0935	.23	731	21.0
FEB 2002					JUL				
20...	1040	.10	680	3.0	01...	1440	89	705	26.0
06848500 PRAIRIE DOG C NR WOODRUFF, KS (LAT 39 59 09N LONG 099 28 39W)									
OCT 2001					MAY 2002				
12...	0935	2.3	1020	11.0	14...	1240	18	1000	15.0
NOV					JUN				
16...	1240	6.9	1040	10.0	12...	1500	3.1	995	24.0
JAN 2002					JUL				
09...	1005	8.6	1040	.0	11...	1255	.31	910	25.5
FEB					26...	0900	.12	885	22.5
19...	1410	10	910	1.0					
APR									
11...	1550	6.7	957	17.0					
06853500 REPUBLICAN R NR HARDY, NE (LAT 39 59 33N LONG 097 55 53W)									
OCT 2001					MAY 2002				
11...	1335	52	778	18.5	09...	0940	48	743	14.0
NOV					JUN				
20...	0820	132	736	4.0	27...	0850	33	754	26.5
JAN 2002					AUG				
08...	1510	141	722	.0	01...	0955	37	748	26.5
FEB					09...	1100	16	752	23.0
13...	1420	188	717	4.0	SEP				
MAR					09...	1530	14	733	26.5
28...	0935	151	738	10.0					

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002--Continued

Kansas River Basin--Continued

06853800 WHITE ROCK C NR BURR OAK, KS (LAT 39 53 55N LONG 098 15 05W)

Date	Time	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (US/CM) (00095)	TEMPERATURE WATER (DEG C) (00010)
OCT 2001				
11...	0840	2.6	1300	12.0
NOV				
19...	1235	6.0	1190	7.5
JAN 2002				
09...	1345	10	1420	2.5
FEB				
12...	1130	15	1030	.0
MAR 2002				
27...	1515	14	860	9.0
JUN				
26...	1440	.86	1380	29.5
JUL				
31...	1115	2.5	771	20.0

06854000 WHITE ROCK C AT LOVEWELL, KS (LAT 39 53 10N LONG 098 01 20W)

Date	Time	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (US/CM) (00095)	TEMPERATURE WATER (DEG C) (00010)
NOV 2001				
19...	1430	.14	829	8.0
JAN 2002				
09...	1035	.16	1040	.0
FEB				
12...	0830	.20	--	.0
MAY 2002				
09...	1255	.25	1050	17.0
JUN				
27...	1250	.91	637	26.0
JUL				
31...	1400	.10	759	25.0

06856000 REPUBLICAN R AT CONCORDIA, KS (LAT 39 35 25N LONG 097 39 32W)

Date	Time	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (US/CM) (00095)	TEMPERATURE WATER (DEG C) (00010)
OCT 2001				
23...	0845	100	1010	15.0
DEC				
13...	1320	204	820	5.0
MAR 2002				
08...	0850	235	799	.5
APR				
01...	1100	188	852	14.0
MAY				
29...	1115	900	--	22.0
JUN				
07...	1100	113	750	24.0
JUL 2002				
01...	1130	114	750	29.0
31...	1150	136	703	31.0
AUG				
09...	1320	56	835	23.5
SEP				
09...	1305	7.1	--	26.0
12...	0935	8.2	--	22.0
17...	1225	36	737	25.0

06856600 REPUBLICAN R AT CLAY CENTER, KS (LAT 39 21 20N LONG 097 07 34W)

Date	Time	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (US/CM) (00095)	TEMPERATURE WATER (DEG C) (00010)
OCT 2001				
22...	1340	175	960	15.5
DEC				
13...	1605	243	849	5.0
MAR 2002				
07...	1505	280	939	4.0
APR				
01...	0820	241	908	9.0
MAY				
29...	1320	1880	--	24.0
JUN 2002				
10...	1005	156	920	25.0
JUL				
01...	1330	90	910	29.0
30...	1235	53	862	31.0
AUG				
09...	1510	22	956	24.0
SEP				
09...	1520	8.0	--	25.5

06857100 REPUBLICAN R BL MILFORD DAM, KS (LAT 39 04 15N LONG 096 52 00W)

Date	Time	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (US/CM) (00095)	TEMPERATURE WATER (DEG C) (00010)
OCT 2001				
31...	1305	216	590	14.0
DEC				
11...	1135	201	600	9.0
FEB 2002				
20...	1205	254	254	6.0
APR				
01...	1500	166	624	15.0
MAY 2002				
07...	1550	58	668	21.0
14...	1115	41	620	22.0
JUN				
26...	1315	112	660	26.5
JUL				
03...	1430	1380	--	28.0
24...	1140	517	667	34.0
AUG				
20...	1310	41	650	31.0

06860000 SMOKY HILL R AT ELKADER, KS (LAT 38 47 33N LONG 100 51 19W)

Date	Time	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (US/CM) (00095)	TEMPERATURE WATER (DEG C) (00010)
OCT 2001				
23...	1110	.10	1940	13.0
DEC				
04...	1045	.85	1400	5.5
18...	1045	1.4	1070	3.0
FEB 2002				
19...	1110	1.8	905	6.0
APR				
03...	1255	1.1	1090	8.0

06861000 SMOKY HILL R NR ARNOLD, KS (LAT 38 48 31N LONG 100 01 13W)

Date	Time	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (US/CM) (00095)	TEMPERATURE WATER (DEG C) (00010)
OCT 2001				
02...	1245	9.1	1650	20.0
NOV				
09...	1300	3.6	1540	10.0
DEC				
14...	1205	3.8	1580	5.5
JAN 2002				
15...	1325	4.2	1460	1.0
FEB				
14...	1245	6.2	1480	6.0
MAR				
13...	1300	4.4	1530	13.0
APR 2002				
25...	1300	2.7	1460	16.5
JUN				
06...	1010	1.0	1370	19.0
JUL				
18...	1210	.33	1470	31.0
29...	1235	7.6	1530	26.0
SEP				
03...	1200	1.1	1380	22.5

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002--Continued

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)	Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)
Kansas River Basin--Continued									
06862700 SMOKY HILL R NR SCHOENCHEN, KS (LAT 38 42 44N LONG 099 22 53W)									
OCT 2001					APR 2002				
26...	1425	8.1	1570	12.0	24...	1535	8.2	1570	20.5
NOV					JUN				
08...	1430	8.8	1580	11.5	07...	1420	1.7	1400	27.0
DEC					AUG				
04...	1415	11	1610	9.0	02...	1255	1.9	1700	25.0
27...	1410	12	1680	2.5	06...	0915	23	1460	24.5
FEB 2002					26...	1235	1.1	1480	24.0
13...	1530	12	1560	5.5	SEP				
MAR					26...	0950	.36	1450	14.0
18...	1450	8.7	1530	11.0					
06862850 SMOKY HILL R BL SCHOENCHEN, KS (LAT 38 42 46N LONG 099 17 30W)									
NOV 2001					MAY 2002				
09...	1420	10	1560	11.5	13...	1530	6.7	1540	24.5
DEC					JUN				
13...	1420	10	1420	6.0	06...	1305	2.7	1420	26.5
FEB 2002					27...	1420	.32	1540	34.5
15...	1530	11	1560	8.5	AUG				
MAR					02...	1450	.27	1640	21.0
18...	1000	8.8	1510	9.0	06...	0925	12	1550	25.0
APR					26...	0945	.74	1540	23.0
22...	1545	9.3	1500	23.0					
06863500 BIG C NR HAYS, KS (LAT 38 51 08N LONG 099 19 05W)									
OCT 2001					APR 2002				
04...	1415	31	1080	16.0	29...	1535	19	1120	18.0
NOV					JUN				
06...	1420	21	1340	14.0	05...	1405	10	1460	21.5
DEC					JUL				
28...	1415	21	1330	1.0	03...	1350	2.1	1140	26.5
FEB 2002					16...	1405	1.3	1140	26.5
11...	1530	26	1210	2.5	SEP				
MAR					05...	0915	.56	1080	23.0
13...	1525	20	1220	8.5					
06864050 SMOKY HILL R NR BUNKER HILL, KS (LAT 38 47 38N LONG 098 46 50W)									
OCT 2001					MAY 2002				
18...	1435	73	1980	14.0	21...	1035	40	1900	21.0
NOV					JUN				
29...	1445	47	2120	1.0	25...	1450	17	2520	32.0
FEB 2002					AUG				
11...	1440	57	1910	5.0	06...	0955	3.7	3810	26.0
MAR					SEP				
12...	1440	58	1890	10.0	20...	1045	12	2670	20.5
APR									
03...	1350	43	1960	13.0					
06864500 SMOKY HILL R AT ELLSWORTH, KS (LAT 38 43 36N LONG 098 14 00W)									
OCT 2001					JUN 2002				
29...	1520	87	1890	16.0	12...	1330	591	316	20.5
DEC					JUL				
17...	1500	85	1920	5.0	03...	1250	25	1750	28.5
FEB 2002					12...	1400	16	2100	25.5
07...	1605	94	1860	5.0	AUG				
MAR					06...	1405	10	2300	33.0
18...	1110	74	1910	9.0	22...	1430	37	1580	32.0
APR									
17...	1545	68	1900	25.0					
06865500 SMOKY HILL R NR LANGLEY, KS (LAT 38 36 38N LONG 097 57 04W)									
OCT 2001					APR 2002				
29...	1215	148	830	14.0	17...	1245	69	1250	17.5
DEC					JUN				
17...	1145	419	1010	5.0	26...	1020	97	1280	25.0
FEB 2002					AUG				
07...	1205	24	1190	6.0	07...	1010	54	1280	27.0
MAR									
18...	1420	55	1260	7.0					

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002--Continued

Kansas River Basin--Continued

06866500 SMOKY HILL R NR MENTOR, KS (LAT 38 42 39N LONG 097 34 16W)

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)
OCT 2001				
17...	1035	201	892	14.0
DEC				
12...	1030	133	970	5.0
FEB 2002				
21...	1410	77	1050	9.0
MAR				
07...	1605	92	--	6.0
APR				
02...	0930	87	1130	12.0
MAY 2002				
21...	1035	89	1170	17.0
JUN				
12...	1505	948	178	25.0
13...	1120	383	468	23.5
JUL				
10...	0845	57	1200	28.0
18...	0930	37	1220	27.0
AUG				
29...	1030	52	1160	26.0

06866900 SALINE R NR WAKEENEY, KS (LAT 39 06 22N LONG 099 52 10W)

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)
OCT 2001				
25...	1450	3.6	1100	12.0
NOV				
29...	1520	6.8	1630	.0
JAN 2002				
24...	1150	12	940	.0
MAR				
15...	1125	9.3	1020	4.0
APR				
04...	1105	8.8	1000	8.0
MAY 2002				
21...	1000	5.0	991	16.0
JUN				
27...	1045	.28	995	25.5
AUG				
07...	1000	.01	1060	24.0
19...	1005	.12	994	15.0

06867000 SALINE R NR RUSSELL, KS (LAT 38 58 00N LONG 098 51 20W)

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)
OCT 2001				
18...	1430	42	2560	14.5
NOV				
30...	1450	46	3330	.0
DEC				
13...	1425	46	2530	6.0
JAN 2002				
22...	1455	48	2260	6.0
MAR				
12...	1035	50	2030	5.0
APR 2002				
03...	1125	42	2130	9.0
MAY				
22...	0940	29	2730	19.5
JUN				
25...	1130	13	3760	28.0
AUG				
01...	1330	2.9	6720	31.5
SEP				
12...	1300	1.9	7330	22.5

06868200 SALINE R AT WILSON DAM, KS (LAT 38 58 35N LONG 098 29 20W)

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)
OCT 2001				
01...	1520	49	2150	21.0
NOV				
30...	0930	20	2280	5.5
FEB 2002				
21...	1305	18	2250	7.0
MAR				
28...	1150	48	2280	5.5
MAY 2002				
10...	1445	46	2300	17.0
JUN				
24...	1055	12	2420	25.0
JUL				
29...	1115	13	2410	27.0
SEP				
12...	0945	11	2510	19.5

06869500 SALINE R AT TESCOTT, KS (LAT 39 00 15N LONG 097 52 26W)

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)
NOV 2001				
14...	1025	62	2290	13.5
JAN 2002				
03...	1125	49	2250	.0
FEB				
20...	1245	242	2190	7.0
MAR				
26...	1100	89	2230	5.0
MAY 2002				
22...	1100	72	1950	20.0
JUL				
09...	1525	24	2250	31.0
AUG				
28...	0910	16	1740	24.0

06870200 SMOKY HILL R AT NEW CAMBRIA, KS (LAT 38 51 49N LONG 097 28 58W)

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)
OCT 2001				
17...	1450	448	1440	13.5
NOV				
20...	1155	222	1340	8.5
FEB 2002				
22...	0920	332	1840	5.0
APR				
02...	1525	185	1590	14.0
MAY 2002				
22...	1445	190	1350	21.5
JUL				
09...	1300	92	1360	31.0
AUG				
27...	1440	80	1350	28.5

06870300 GYPSUM C NR GYPSUM, KS (LAT 38 39 11N LONG 097 25 10W)

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)
DEC 2001				
12...	0850	7.3	867	6.0
FEB 2002				
21...	1010	8.4	830	5.0
APR				
02...	1200	6.5	853	13.0
19...	1110	801	296	15.0
MAY 2002				
21...	0845	19	811	14.0
JUL				
18...	1200	1.6	1340	26.0
AUG				
29...	0910	.09	1090	24.0

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002--Continued

Kansas River Basin--Continued

06871000 NF SOLOMON R AT GLADE, KS (LAT 39 40 40N LONG 099 18 30W)

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)	Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)
OCT 2001					APR 2002				
22...	1430	5.3	1270	18.0	11...	1225	17	900	20.0
DEC					MAY				
03...	1500	14	950	1.0	28...	1110	7.9	960	21.5
FEB 2002					JUN				
04...	1555	9.9	1040	.0	10...	1415	1.0	1160	30.5
MAR									
08...	1055	18	899	.0					

06871500 BOW C NR STOCKTON, KS (LAT 39 33 46N LONG 099 17 04W)

OCT 2001					MAY 2002				
17...	1450	3.3	1410	13.0	28...	1435	4.5	980	23.0
DEC					JUN				
05...	1455	6.2	1050	8.0	26...	1100	.96	1700	21.0
JAN 2002					AUG				
17...	1145	6.1	1080	2.0	08...	1005	.18	2480	24.0
MAR					SEP				
12...	1335	8.7	844	8.5	17...	1015	.19	2390	15.5
APR									
11...	1500	8.1	885	21.0					

06871800 NF SOLOMON R AT KIRWIN, KS (LAT 39 39 36N LONG 099 06 55W)

DEC 2001									
06...	1215	.02	846	.0					

06872500 NF SOLOMON R AT PORTIS, KS (LAT 39 33 15N LONG 098 41 31W)

OCT 2001					MAY 2002				
26...	1030	28	1140	7.0	07...	1500	40	1160	19.0
NOV					JUN				
13...	1100	36	1190	12.5	25...	1010	16	1080	25.5
JAN 2002					JUL				
10...	0915	45	1220	1.0	31...	0800	21	--	23.5
FEB					SEP				
15...	1325	50	1100	4.5	09...	1125	11	1090	22.0
APR									
09...	1315	48	1440	14.0					

06873000 SF SOLOMON R AB WEBSTER RE, KS (LAT 39 22 26N LONG 099 34 54W)

OCT 2001					APR 2002				
23...	1535	13	1350	19.0	04...	1350	24	1140	13.0
DEC					MAY				
06...	1455	20	1170	7.5	21...	1240	13	1190	24.5
JAN 2002					JUN				
11...	1255	26	1120	3.5	10...	1050	1.1	1380	27.0
MAR									
08...	1110	31	1040	1.0					

06873200 SF SOLOMON R BL WEBSTER RE, KS (LAT 39 24 34N LONG 099 24 53W)

FEB 2002					JUL 2002				
28...	1520	.11	980	4.5	16...	1350	185	1380	26.0
JUN									
25...	1040	151	1400	24.5					

06873460 SF SOLOMON R AT WOODSTON, KS (LAT 39 26 23N LONG 099 06 05W)

OCT 2001					MAY 2002				
19...	1445	9.3	1570	16.0	22...	1420	3.6	1640	25.0
DEC					JUN				
07...	1515	7.6	--	6.5	10...	1100	.94	1460	25.5
FEB 2002					AUG				
04...	1205	16	1960	1.0	08...	1315	6.3	1330	29.0
MAR					SEP				
12...	1015	11	1730	15.0	17...	1415	1.0	1360	24.5
APR									
05...	1430	9.0	--	12.0					

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002--Continued

Kansas River Basin--Continued

06874000 SF SOLOMON R AT OSBORNE, KS (LAT 39 25 43N LONG 098 41 40W)

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)	Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)
OCT 2001					MAY 2002				
26...	1305	21	1010	9.0	07...	1125	20	1430	19.5
NOV					JUN				
14...	1340	24	--	15.0	24...	1415	9.0	1280	32.5
JAN 2002					JUL				
10...	1235	29	1460	2.5	29...	1510	19	1290	32.0
FEB					SEP				
15...	1040	28	1500	3.5	11...	1105	10	1350	19.5
APR									
10...	1110	34	1420	15.0					

06875900 SOLOMON R NR GLEN ELDER, KS (LAT 39 28 27N LONG 098 16 58W)

OCT 2001					JUN 2002				
12...	0955	19	1030	14.0	25...	1630	91	1180	29.5
JAN 2002					SEP				
08...	1005	226	1080	3.5	11...	1450	37	1100	22.5
MAR									
29...	1000	1.2	1240	11.5					

06876070 SOLOMON R NR SIMPSON, KS (LAT 39 22 05N LONG 097 55 44W)

OCT 2001					MAY 2002				
09...	1305	29	1910	18.5	08...	1155	44	1520	22.0
NOV					JUN				
20...	1340	27	1750	7.5	26...	0915	49	1380	26.0
JAN 2002					JUL				
07...	1340	228	1100	.0	30...	1255	77	1200	28.5
FEB					SEP				
13...	0955	80	1330	1.5	10...	1505	32	1550	22.5
MAR									
29...	1250	17	2270	15.0					

06876700 SALT C NR ADA, KS (LAT 39 08 30N LONG 097 50 10W)

NOV 2001					MAY 2002				
14...	1340	9.0	2650	14.5	22...	0845	7.6	2500	17.5
JAN 2002					JUL				
03...	1500	6.9	3270	.0	17...	1320	.48	4440	27.0
FEB					AUG				
14...	1030	18	3100	1.0	28...	1120	.68	3350	24.0
MAR									
26...	1545	11	2650	6.0					

06876900 SOLOMON R AT NILES, KS (LAT 38 58 08N LONG 097 28 34W)

OCT 2001					JUL 2002				
18...	1020	82	2440	15.5	11...	1520	49	2270	28.0
NOV					AUG				
20...	1410	75	1830	8.0	08...	1325	43	1740	29.0
DEC					28...	1405	52	1910	28.0
12...	1330	261	1250	4.5					
MAY 2002									
21...	1425	70	--	20.0					

06877600 SMOKY HILL R AT ENTERPRISE, KS (LAT 38 54 24N LONG 097 07 12W)

OCT 2001					AUG 2002				
18...	1500	506	1730	13.5	30...	1055	143	2330	26.0
NOV					SEP				
21...	0855	345	1990	7.0	12...	1055	116	2760	--
JUL 2002									
17...	0920	138	2970	27.0					

06878000 CHAPMAN C NR CHAPMAN, KS (LAT 39 01 52N LONG 097 02 24W)

OCT 2001					MAY 2002				
26...	1350	19	1200	11.0	23...	1310	23	1070	18.0
DEC					JUN				
11...	1425	20	1130	5.5	25...	1110	9.5	1140	25.0
FEB 2002					JUL				
20...	1520	23	1040	9.0	24...	1130	2.8	1130	25.0
APR					AUG				
03...	1115	21	1090	9.5	29...	1410	7.2	1100	27.0

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002--Continued

Kansas River Basin--Continued

06879100 KANSAS R AT FORT RILEY, KS (LAT 39 03 09N LONG 096 46 33W)

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)
NOV 2001				
05...	1210	673	1240	11.0
DEC				
14...	0925	757	1780	6.0
MAR 2002				
08...	1300	770	1660	5.0
APR				
04...	1315	566	1780	13.5
MAY				
07...	1250	546	1540	22.5
JUN 2002				
26...	1720	465	1470	31.0
JUL				
05...	1030	1890	801	27.0
29...	0740	300	2510	25.0
AUG				
20...	1645	286	1970	31.0
28...	1720	307	1720	30.0
29...	0845	240	1820	25.5

06879650 KINGS C NR MANHATTAN, KS (LAT 39 06 07N LONG 096 35 42W)

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)
MAY 2002				
07...	1730	1.8	523	19.0

06882510 BIG BLUE R AT MARYSVILLE, KS (LAT 39 50 32N LONG 096 39 39W)

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)
OCT 2001				
24...	1340	320	692	14.5
DEC				
11...	1540	302	707	4.0
MAR 2002				
05...	1605	381	747	2.0
APR				
11...	1525	359	544	16.5
MAY				
28...	1305	5810	290	22.0
JUN 2002				
21...	1045	472	486	28.0
28...	0925	173	650	29.0
JUL				
08...	1000	161	732	30.0
16...	1225	76	732	30.0
24...	1400	46	705	29.5
AUG				
20...	0730	290	649	24.0

06884200 MILL C AT WASHINGTON, KS (LAT 39 48 50N LONG 097 02 20W)

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)
OCT 2001				
23...	1450	16	621	14.5
DEC				
12...	1320	20	678	4.5
MAR 2002				
05...	0900	19	692	.5
APR				
12...	0755	24	676	13.0
MAY 2002				
06...	1615	44	701	24.0
28...	1430	2850	--	18.5
JUN				
05...	1130	36	670	23.0
26...	0800	12	645	24.5
JUL				
24...	1200	.29	615	27.0
AUG				
20...	1005	12	540	23.0

06884400 L BLUE R NR BARNES, KS (LAT 39 46 33N LONG 096 51 29W)

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)
OCT 2001				
24...	0935	200	610	13.5
DEC				
12...	1030	206	627	4.0
MAR 2002				
05...	1150	230	732	2.0
APR				
11...	1245	230	584	16.5
MAY				
06...	1455	242	556	25.5
JUN 2002				
14...	1015	1910	262	27.0
25...	1650	171	589	31.5
JUL				
10...	1005	68	740	29.0
AUG				
12...	1300	48	783	28.5
SEP				
11...	1045	41	778	24.0

06885500 BLACK VERMILLION R NR FRANKFORT, KS (LAT 39 41 03N LONG 096 26 15W)

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)
OCT 2001				
25...	1010	38	620	10.0
MAY 2002				
06...	1300	47	558	22.0

06887000 BIG BLUE R NR MANHATTAN, KS (LAT 39 14 14N LONG 096 34 16W)

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)
OCT 2001				
12...	1240	473	410	16.5
DEC				
19...	1010	2750	419	6.5
MAR 2002				
01...	1030	759	487	2.5
APR				
03...	1500	757	527	10.5
MAY				
07...	0940	533	491	19.0
JUN 2002				
03...	1045	3990	502	18.0
19...	0930	2840	395	28.0
JUL				
17...	1215	589	437	27.0
29...	1215	130	446	28.0
AUG				
19...	1220	330	458	26.0

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002--Continued

Kansas River Basin--Continued

06887500 KANSAS R AT WAMEGO, KS (LAT 39 11 52N LONG 096 18 16W)

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)	Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)
OCT 2001					APR 2002				
30...	1300	1780	1060	14.5	02...	1340	1410	965	13.0
DEC					JUL				
27...	0910	5010	560	3.0	23...	1110	1080	880	26.0
MAR 2002					AUG				
08...	1145	1490	1210	5.5	29...	1130	926	895	30.0

06888000 VERMILLION C NR WAMEGO, KS (LAT 39 21 00N LONG 096 13 10W)

JAN 2002					JUN 2002				
29...	1200	22	667	2.0	24...	0930	12	595	28.0
APR					JUL				
05...	1350	12	670	12.0	15...	0950	7.1	613	29.0
MAY									
06...	0845	888	670	18.0					
15...	1215	154	508	19.0					
20...	1220	86	550	19.0					

06888350 KANSAS R NR BELVUE, KS (LAT 39 11 15N LONG 096 08 50W)

OCT 2001					JUN 2002				
30...	0940	1560	1080	14.5	19...	1315	3960	560	27.0
DEC					JUL				
27...	1130	5320	676	3.0	31...	1230	917	982	32.0
MAR 2002					AUG				
11...	1120	1530	1200	8.0	28...	1300	812	858	29.5
MAY									
03...	1210	1310	1080	18.0					

06888500 MILL C NR PAXICO, KS (LAT 39 03 44N LONG 096 10 52W)

OCT 2001					JUL 2002				
25...	1345	44	312	12.0	05...	1400	21	617	30.5
DEC					17...	1030	9.5	--	28.0
18...	1055	25	688	5.5	AUG				
FEB 2002					07...	0805	5.3	580	29.0
28...	1410	24	662	3.5	21...	1215	13	512	27.0
APR					SEP				
03...	1140	18	685	11.5	11...	1415	2.8	394	26.0
JUN									
27...	1110	37	591	27.0					

06889000 KANSAS R AT TOPEKA, KS (LAT 39 04 00N LONG 095 38 58W)

OCT 2001					JUL 2002				
11...	0950	2180	668	16.5	02...	1245	998	883	28.0
NOV					17...	1220	1920	--	30.0
21...	1120	1900	844	8.5	AUG				
JAN 2002					12...	1045	967	843	24.0
11...	1005	1800	975	3.0	30...	1220	803	823	26.5
MAR					SEP				
13...	1545	1520	1050	12.0	26...	1130	784	838	21.0
JUN									
11...	1115	6160	582	25.0					

06889170 SOLDIER C NR HOLTON, KS (LAT 39 26 03N LONG 095 56 31W)

OCT 2001					JUN 2002				
23...	1400	9.3	680	15.0	12...	0930	9.2	420	24.5
DEC					JUL				
18...	1130	5.6	770	3.0	15...	1315	1.9	581	30.0
MAR 2002					24...	1100	.74	631	28.5
05...	1340	4.2	776	3.5	AUG				
APR					08...	0830	.62	683	25.5
05...	1200	3.0	740	12.0					

06889200 SOLDIER C NR DELIA, KS (LAT 39 12 08N LONG 095 52 25W)

OCT 2001					JUN 2002				
24...	1310	26	691	15.5	12...	1345	30	670	28.0
DEC					JUL				
26...	1100	11	820	.0	15...	1150	4.5	573	29.0
MAR 2002					AUG				
05...	1640	11	758	3.5	08...	1215	1.7	567	29.5
APR									
04...	1315	7.5	735	11.5					
12...	0945	163	440	14.0					

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002--Continued

Kansas River Basin--Continued

06889500 SOLDIER C NR TOPEKA, KS (LAT 39 06 00N LONG 095 43 27W)

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)	Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)
OCT 2001					APR 2002				
24...	1545	52	301	15.0	12...	1125	448	610	15.0
DEC					JUN				
20...	1125	25	705	2.0	11...	1310	34	365	27.0
MAR 2002					JUL				
06...	1635	25	--	10.0	24...	1610	6.4	554	34.5
07...	0920	26	--	8.0					

06890100 DELAWARE R NR MUSCOTAH, KS (LAT 39 31 17N LONG 095 31 57W)

DEC 2001					JUL 2002				
26...	1310	33	765	.0	24...	1350	2.4	547	35.0
MAR 2002									
12...	1630	38	640	11.0					

06891000 KANSAS R AT LECOMPTON, KS (LAT 39 03 07N LONG 095 23 15W)

OCT 2001					MAY 2002				
26...	1140	2220	950	10.0	22...	1130	3340	594	22.0
DEC					JUN				
28...	1030	4760	750	.0	24...	1045	5620	376	25.0
MAR 2002					JUL				
13...	1215	1870	866	10.0	23...	1150	1240	770	30.0
APR					AUG				
25...	1400	2680	668	19.0	29...	1125	1010	862	28.0

06891500 WAKARUSA R NR LAWRENCE, KS (LAT 38 54 40N LONG 095 15 37W)

OCT 2001					MAY 2002				
25...	0955	11	405	13.5	01...	0935	721	387	14.0
DEC					JUN				
19...	1240	4.9	275	3.0	28...	0920	278	354	24.0
MAR 2002					AUG				
06...	1030	322	342	3.5	09...	1020	16	340	26.0

06892000 STRANGER C NR TONGANOXIE, KS (LAT 39 06 59N LONG 095 00 39W)

OCT 2001					JUN 2002				
22...	1410	78	477	14.5	27...	1045	16	506	26.0
DEC					JUL				
06...	1110	35	572	11.0	25...	1425	2.2	458	30.0
MAR 2002					AUG				
06...	1040	45	569	2.0	12...	1000	.89	486	26.0
MAY									
07...	1300	3120	278	19.0					

06892350 KANSAS R AT DESOTO, KS (LAT 38 59 00N LONG 094 57 52W)

OCT 2001					JUN 2002				
12...	1045	3810	559	16.5	11...	1115	6970	530	24.0
NOV					JUL				
21...	0930	2320	835	8.5	24...	0955	1270	714	28.0
JAN 2002					AUG				
10...	1110	3310	440	2.5	26...	1040	1030	836	29.5
APR									
05...	1100	1980	790	14.5					

06892440 CEDAR C AT HWY 56 AT OLATHE, KS (LAT 38 51 33N LONG 094 51 14W)

MAR 2002					MAY 2002				
27...	1115	.30	1160	9.0	08...	1040	102	548	18.2
APR									
08...	1155	4.7	876	10.5					
18...	0940	.61	903	22.1					

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002--Continued

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)	Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)
Blue River Basin									
06893080 BLUE R NR STANLEY, KS (LAT 38 48 45N LONG 094 40 31W)									
OCT 2001					MAY 2002				
08...	1220	2.3	466	13.0	03...	1420	16	621	15.0
DEC					JUN				
05...	1250	.98	666	13.5	25...	1225	2.4	577	25.0
MAR 2002					AUG				
05...	1400	6.9	660	3.0	08...	1405	.03	527	26.0
06893300 INDIAN C AT OVERLAND PARK, KS (LAT 38 56 30N LONG 094 40 10W)									
OCT 2001					MAY 2002				
08...	1505	21	866	19.0	02...	1205	23	1080	16.5
DEC					JUN				
06...	1330	15	1130	14.5	25...	1035	10	893	26.0
MAR 2002					AUG				
05...	1155	21	1810	9.0	19...	1350	43	402	25.0
Osage River Basin									
06910800 MARAIS DES CYGNES R NR READING, KS (LAT 38 34 00N LONG 095 57 50W)									
OCT 2001					MAY 2002				
08...	1500	3.0	440	16.0	09...	0920	1830	222	5.0
30...	1330	1.9	386	15.0	JUL				
NOV					16...	1500	1.0	456	28.0
16...	1525	2.4	487	--	AUG				
DEC					05...	1130	.08	445	30.5
12...	1225	2.3	272	5.5	27...	1210	13	412	25.5
MAR 2002					SEP				
07...	1200	5.1	301	5.0	12...	1145	.01	--	26.0
06911490 SALT C AT LYNDON, KS (LAT 38 36 07N LONG 095 41 05W)									
OCT 2001					APR 2002				
08...	1200	2.5	337	15.5	12...	1140	100	513	15.0
NOV					21...	1155	2070	220	14.0
06...	1345	1.3	487	17.0	MAY				
DEC					30...	1325	50	391	22.5
07...	1130	1.4	285	8.5	JUL				
MAR 2002					17...	1315	.57	503	28.0
05...	1155	4.8	271	5.5	AUG				
					05...	1350	.28	489	33.0
06911900 DRAGOON C NR BURLINGAME, KS (LAT 38 42 30N LONG 095 50 20W)									
OCT 2001					JUL 2002				
11...	1445	8.9	473	15.5	23...	1200	.18	519	27.0
NOV					AUG				
06...	1115	5.7	490	14.5	27...	1445	4.8	474	26.0
DEC									
10...	1255	3.9	361	7.0					
06912500 HUNDRED AND TEN MILE C NR QUENEMO, KS (LAT 38 38 41N LONG 095 33 34W)									
OCT 2001					MAY 2002				
22...	1345	.41	298	22.5	21...	1540	522	353	18.0
DEC					JUL				
13...	1055	15	165	7.0	18...	1130	27	346	24.0
MAR 2002									
06...	1425	14	178	5.0					
06913000 MARAIS DES CYGNES R NR POMONA, KS (LAT 38 35 03N LONG 095 27 12W)									
OCT 2001					MAY 2002				
10...	1050	165	294	17.5	21...	1210	717	389	18.0
30...	0915	26	447	13.0	JUN				
DEC					20...	0840	1080	343	--
07...	1340	887	315	8.0	JUL				
18...	1445	42	395	7.0	18...	1350	52	362	27.5
JAN 2002					SEP				
16...	0840	521	323	2.0	09...	1005	34	409	26.0
MAR									
06...	1100	54	244	3.0					

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002--Continued

Osage River Basin--Continued

06913500 MARAIS DES CYGNES R NR OTTAWA, KS (LAT 38 37 07N LONG 095 16 04W)

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)	Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)
OCT 2001					MAY 2002				
10...	1445	157	298	18.0	01...	1200	297	396	15.0
NOV					13...	1510	3860	--	18.0
01...	1330	25	348	17.0	JUN				
DEC					05...	1350	2180	327	20.0
04...	1115	1030	314	11.5	JUL				
JAN 2002					18...	1215	36	353	32.0
16...	1205	500	324	2.5	AUG				
MAR					14...	1310	43	429	28.5
06...	1550	65	545	8.0					

06914100 POTTAWATOMIE C NR SCIPIO, KS (LAT 38 20 57N LONG 095 12 12W)

OCT 2001					JUN 2002				
16...	1410	3.4	321	13.0	12...	1145	2430	174	22.0
DEC					12...	1410	2650	174	22.0
03...	1210	.93	589	8.0	24...	1125	23	370	27.0
FEB 2002					JUL				
28...	1105	15	380	3.0	09...	1145	7.9	277	29.0
APR					25...	1150	8.4	356	27.5
22...	1205	380	336	16.0	AUG				
MAY					08...	1115	.45	395	27.0
28...	1050	2550	195	19.0	SEP				
29...	1050	1390	219	19.0	17...	1410	.42	391	26.5

06914950 BIG BULL C NR EDGERTON, KS (LAT 38 45 12N LONG 094 58 34W)

OCT 2001					MAY 2002				
12...	0910	1.5	579	15.0	02...	1415	5.8	604	16.0
DEC					JUN				
04...	1440	1.1	834	11.0	26...	1100	1.3	737	26.0
MAR 2002					AUG				
06...	1400	3.2	758	4.0	14...	1045	.34	805	22.0

06914990 L BULL C NR SPRING HILL, KS (LAT 38 45 11N LONG 094 52 10W)

OCT 2001					MAY 2002				
12...	1110	.84	721	13.0	02...	1135	3.8	659	15.5
DEC					JUN				
05...	1115	.67	1780	14.5	25...	1530	.30	1460	28.0
MAR 2002					AUG				
04...	1445	1.2	1090	2.0	13...	1110	10	1770	24.0

06915000 BIG BULL C NR HILLSDALE, KS (LAT 38 38 12N LONG 094 53 29W)

OCT 2001					MAY 2002				
10...	1255	11	286	19.0	20...	1145	45	358	18.0
DEC					JUN				
11...	1450	5.4	304	7.0	10...	1135	1070	327	21.0
MAR 2002					AUG				
07...	1250	9.3	346	5.5	13...	1310	37	339	25.0

06915800 MARAIS DES CYGNES R AT LA CYGNE, KS (LAT 38 20 43N LONG 094 46 19W)

OCT 2001					APR 2002				
19...	1150	322	316	13.5	29...	1130	6060	290	--
DEC					JUL				
11...	1005	581	218	7.0	02...	1100	219	410	28.0
MAR 2002					AUG				
11...	1155	198	446	7.5	20...	1155	87	357	28.0

06916600 MARAIS DES CYGNES R NR KS-MO ST LINE, KS (LAT 38 13 21N LONG 094 40 04W)

OCT 2001					JUL 2002				
18...	0905	310	292	13.0	02...	1250	259	411	30.0
DEC					AUG				
10...	1235	468	333	8.0	20...	1405	89	387	28.5

06917000 L OSAGE R AT FULTON, KS (LAT 38 01 09N LONG 094 42 48W)

OCT 2001					JUL 2002				
19...	0830	5.8	235	11.0	02...	1520	21	401	27.0
DEC					AUG				
10...	1500	1.2	381	7.0	02...	1130	1.7	422	29.0
MAR 2002					08...	1725	.66	414	28.5
12...	1250	28	444	7.0					
MAY									
03...	1120	118	--	16.0					

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002--Continued

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)	Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)
Osage River Basin--Continued									
06917240 MARMATON R NR UNIONTOWN, KS (LAT 37 50 08N LONG 094 58 52W)									
OCT 2001					APR 2002				
17...	1105	.83	244	12.5	22...	1215	85	401	16.0
DEC					MAY				
03...	1435	.31	285	10.0	16...	1300	605	--	18.0
04...	1115	49	404	11.0	JUN				
FEB 2002					12...	1335	2210	179	22.5
20...	1500	8.9	407	10.5	14...	1535	199	348	22.5
MAR					JUL				
27...	1420	56	404	9.5	11...	1315	1.5	394	26.5
06917380 MARMATON R NR MARMATON, KS (LAT 37 49 03N LONG 094 47 30W)									
OCT 2001					MAY 2002				
17...	1320	5.1	225	12.5	31...	1245	173	--	22.0
DEC					JUL				
03...	1205	2.5	336	9.5	02...	1325	9.3	432	25.5
20...	1430	12	--	6.0	AUG				
FEB 2002					08...	1545	.22	382	31.5
20...	1205	20	377	10.0					
APR									
05...	1410	5.0	384	14.5					
Arkansas River Basin									
07137000 FRONTIER DITCH NR COOLIDGE, KS (LAT 38 02 18N LONG 102 02 19W)									
MAY 2002									
01...	0955	26	4440	15.5					
07137500 ARKANSAS R NR COOLIDGE, KS (LAT 38 01 34N LONG 102 00 41W)									
OCT 2001					MAY 2002				
04...	1055	125	4000	--	01...	1450	42	4650	25.0
22...	1210	100	4080	17.0	22...	1035	34	4550	21.5
DEC					JUN				
03...	1045	105	4230	5.5	25...	1125	246	3460	24.5
JAN 2002					JUL				
08...	0915	139	4000	3.0	15...	1045	65	4100	24.0
FEB					31...	0930	28	4300	21.0
27...	1515	111	4120	6.5	AUG				
APR					21...	1100	20	4120	24.5
05...	0905	64	4500	8.0	SEP				
19...	1115	153	3700	9.0	18...	1450	69	3960	--
07138000 ARKANSAS R AT SYRACUSE, KS (LAT 37 57 58N LONG 101 45 23W)									
OCT 2001					JUN 2002				
10...	1105	111	4110	14.5	26...	0915	179	3500	23.0
DEC					JUL				
03...	1515	120	4200	9.0	17...	1105	49	4200	25.0
JAN 2002					AUG				
08...	1415	133	4190	5.5	06...	1510	8.0	3820	29.0
FEB					23...	1520	3.0	3110	30.0
15...	1440	127	4280	8.0	SEP				
MAY					18...	1045	44	4100	17.0
02...	0900	53	4290	10.5					
07138020 ARKANSAS R AT KENDALL, KS (LAT 37 55 48N LONG 101 32 56W)									
OCT 2001					MAY 2002				
03...	1000	109	4170	15.0	02...	1440	68	4220	20.5
DEC					23...	1335	45	4170	22.0
06...	1215	123	4110	6.5	JUN				
JAN 2002					26...	1135	152	3520	25.0
09...	1440	136	3980	6.0	AUG				
FEB					06...	1300	11	3680	27.0
28...	1230	118	4060	4.0	21...	1640	3.3	3670	31.5
					SEP				
					19...	1025	42	3930	14.0

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002--Continued

Arkansas River Basin--Continued

07138070 ARKANSAS R AT DEERFIELD, KS (LAT 37 58 11N LONG 101 07 42W)

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)
OCT 2001				
12...	1000	19	--	10.0
NOV				
16...	1015	75	3990	12.0
DEC				
07...	1555	98	4110	8.0
JAN 2002				
10...	0905	57	3680	.0
FEB				
28...	1500	74	4010	1.0
APR 2002				
03...	1540	4.4	4170	7.0
MAY				
03...	0935	44	4170	12.0
JUN				
26...	1520	9.9	3680	32.0
JUL				
15...	1550	28	3750	32.0

07139000 ARKANSAS R AT GARDEN CITY, KS (LAT 37 57 21N LONG 100 52 37W)

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)
NOV 2001				
13...	1520	33	4070	17.0
DEC				
07...	1350	66	3990	9.0
JAN 2002				
10...	1240	63	3630	3.0
FEB 2002				
20...	1400	65	4290	12.0
28...	1710	28	3900	3.0

07140000 ARKANSAS R NR KINSLEY, KS (LAT 37 55 33N LONG 099 22 31W)

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)
OCT 2001				
31...	1135	.55	1650	18.0
DEC				
13...	0920	.48	--	9.5
JAN 2002				
14...	1205	.41	1540	5.0
24...	1510	.44	1720	12.0
FEB				
21...	1230	.48	1670	13.0
MAR				
13...	1135	.67	1610	15.0
APR 2002				
05...	1120	.47	1650	16.0
29...	1110	.46	1570	18.0
MAY				
24...	1155	1.0	1520	13.5
31...	1115	.40	1560	23.5
AUG				
09...	1010	.15	1450	23.0
21...	1805	.09	1750	25.5
29...	1355	.16	1650	28.5

07140850 PAWNEE R NR BURDETT, KS (LAT 38 12 24N LONG 099 38 35W)

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)
JUN 2002				
13...	1620	18	150	21.5
JUL 2002				
29...	1050	201	174	25.5
30...	1100	44	199	24.5

07141175 BUCKNER C NR BURDETT, KS (LAT 38 09 45N LONG 099 38 33W)

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)
AUG 2002				
14...	1025	159	253	20.0
15...	1210	68	233	19.0
AUG 2002				
19...	1140	5.7	339	22.5
21...	1135	1.8	373	23.0

07141200 PAWNEE R AT ROZEL, KS (LAT 38 12 00N LONG 099 20 50W)

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)
JUN 2002				
13...	1050	40	180	22.0
JUL				
30...	1030	168	180	24.5
AUG 2002				
19...	1440	14	280	23.0

07141220 ARKANSAS R NR LARNED, KS (LAT 38 12 13N LONG 099 00 07W)

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)
OCT 2001				
18...	1125	9.2	1570	13.5
DEC				
04...	1250	1.4	1440	13.5
FEB 2002				
13...	1120	1.6	1540	6.0
MAR 2002				
18...	1045	.36	1400	11.0
APR				
16...	1045	.05	1430	23.0
AUG				
01...	1315	24	257	28.5

07141300 ARKANSAS R AT GREAT BEND, KS (LAT 38 21 11N LONG 098 45 50W)

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)
OCT 2001				
30...	0935	25	1090	13.5
DEC				
18...	0940	14	1070	7.0
FEB 2002				
07...	1340	13	1100	10.5
MAR				
13...	1120	12	1040	12.0
APR 2002				
17...	1250	9.4	950	23.0
JUN				
07...	1440	6.0	936	27.5
JUL				
10...	1145	3.8	927	29.5
AUG				
20...	1055	1.8	1000	25.0

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002--Continued

Arkansas River Basin--Continued

07141770 WALNUT C NR ALEXANDER, KS (LAT 38 27 53N LONG 099 37 20W)

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)
NOV 2001				
13...	1310	5.8	1360	14.5
JAN 2002				
07...	1400	7.1	1500	2.0
FEB				
13...	1355	8.6	1250	4.0
MAR				
22...	1405	7.7	1330	8.0
APR 2002				
30...	1335	6.5	1300	20.0
JUN				
05...	1440	2.9	1310	21.0
JUL				
17...	1110	.85	1180	24.5
AUG				
27...	1055	8.7	885	22.0

07141780 WALNUT C AT NEKOMA, KS (LAT 38 28 07N LONG 099 22 07W)

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)
OCT 2001				
16...	1430	4.8	1210	9.0
NOV				
09...	1410	7.5	1360	8.0
JAN 2002				
07...	1105	8.6	1450	.0
FEB				
14...	1120	12	1230	2.0
MAR				
29...	1545	9.9	1230	13.0
MAY				
01...	1035	10	1190	17.0
JUN 2002				
13...	1220	2.4	1180	22.5
JUL				
17...	1515	.66	1160	27.0
30...	1040	48	315	22.0
AUG				
27...	1345	3.0	780	23.0
SEP				
10...	1015	.65	1280	19.5

07141900 WALNUT C AT ALBERT, KS (LAT 38 27 40N LONG 099 00 50W)

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)
OCT 2001				
30...	1410	13	1340	12.0
NOV				
01...	1435	14	1400	13.5
DEC				
06...	1245	19	1370	7.0
MAR 2002				
13...	1440	19	1160	8.0
APR				
18...	1435	20	1350	21.0
JUN 2002				
11...	1505	7.2	1310	22.5
JUL				
08...	1230	1.4	1160	25.0
17...	1600	.32	1160	25.0
SEP				
16...	1220	.04	694	20.0

07142020 WALNUT C BLW CHEYENNE BTMS DV NR GREAT BEND, KS (LAT 38 25 08N LONG 098 45 53W)

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)
NOV 2001				
01...	1140	12	1330	13.5
07...	1115	.58	1390	15.0
DEC				
18...	1300	.63	1310	4.0
FEB 2002				
14...	1245	.33	1260	.0
MAR 2002				
19...	1155	.34	1290	7.0
APR				
18...	1135	.70	1210	22.0
JUN				
12...	0920	.78	1260	22.5

07142300 RATTLESNAKE C NR MACKSVILLE, KS (LAT 37 52 18N LONG 098 52 33W)

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)
OCT 2001				
26...	1000	3.7	579	8.5
DEC				
20...	1520	5.3	595	5.0
FEB 2002				
08...	0855	7.3	592	3.0
MAR				
12...	1440	7.7	509	10.0
MAY 2002				
13...	1100	12	520	13.5
JUN				
28...	0925	.64	520	23.5
JUL				
15...	1145	.04	580	31.0

07142575 RATTLESNAKE C NR ZENITH, KS (LAT 38 05 37N LONG 098 32 45W)

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)
OCT 2001				
09...	1240	7.3	8280	22.0
JAN 2002				
23...	1120	19	4020	3.0
FEB				
15...	1245	26	4080	5.0
APR				
11...	1205	22	4040	15.0
JUN 2002				
03...	1200	10	6850	24.5
27...	1210	10	8380	27.0
AUG				
06...	1105	3.4	9700	27.0
SEP				
05...	1215	4.4	9860	28.0

07142680 ARKANSAS R NR NICKERSON, KS (LAT 38 08 42N LONG 098 06 39W)

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)
OCT 2001				
17...	1315	153	1610	14.0
NOV				
26...	1055	96	2010	8.0
JAN 2002				
10...	1330	83	2180	8.0
FEB				
28...	1325	73	2140	7.5
APR 2002				
18...	1035	76	2220	22.0
JUN				
04...	1125	63	2190	19.0
JUL				
11...	1305	70	2200	30.5
AUG				
21...	1140	103	2160	26.0

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002--Continued

Arkansas River Basin--Continued

07143300 COW C NR LYONS, KS (LAT 38 18 30N LONG 098 11 30W)

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)	Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)
OCT 2001					MAY 2002				
17...	1050	9.8	1990	9.5	17...	1150	197	706	15.5
NOV					JUN				
20...	1125	9.3	2060	6.5	03...	1125	9.1	1530	21.5
JAN 2002					JUL				
10...	1055	11	1960	2.0	11...	1050	5.3	1610	23.5
FEB					AUG				
28...	1115	13	2760	.5	23...	1110	10	1030	24.0
APR									
17...	1135	12	2150	19.0					

07143330 ARKANSAS R NR HUTCHINSON, KS (LAT 37 56 47N LONG 097 46 29W)

OCT 2001					MAY 2002				
16...	1025	215	1700	10.5	31...	1000	135	2340	26.0
NOV					JUL				
27...	1025	152	2370	2.0	10...	1100	117	2530	30.0
JAN 2002					31...	1040	78	2100	33.5
11...	1005	130	2400	3.0	AUG				
FEB					22...	1305	312	1970	28.0
27...	1035	115	2630	.0					
APR									
11...	1100	129	2300	17.5					

07143375 ARKANSAS R NR MAIZE, KS (LAT 37 46 53N LONG 097 23 33W)

OCT 2001					MAY 2002				
18...	1340	204	1660	16.0	29...	1405	145	1860	31.0
DEC					JUL				
04...	1400	133	1830	15.5	09...	1035	131	2330	31.5
JAN 2002					23...	1400	80	2120	31.0
07...	1040	145	2140	.5	AUG				
MAR					05...	1005	45	1900	29.0
04...	1425	96	2480	.5	14...	1135	3740	195	22.5
APR					21...	1045	450	1350	27.0
12...	1345	111	1980	21.0					

07143665 L ARKANSAS R AT ALTA MILLS, KS (LAT 38 06 44N LONG 097 35 30W)

OCT 2001					MAY 2002				
15...	1000	10	1120	11.5	30...	1020	27	945	19.0
NOV					JUL				
30...	1105	9.3	1820	2.5	08...	1125	12	820	28.0
JAN 2002					AUG				
09...	1040	11	2040	1.5	01...	1150	3.4	1000	30.0
FEB					22...	0955	11	801	25.0
26...	1045	8.4	1160	.0					
APR									
10...	1030	13	1670	13.5					

07143672 L ARKANSAS R AT HWY 50 NR HALSTEAD, KS (LAT 38 01 43N LONG 097 32 25W)

OCT 2001					AUG 2002				
10...	1105	20	--	17.0	01...	1135	2.8	964	28.0
DEC									
06...	0930	15	--	9.0					

07144100 L ARKANSAS R NR SEDGWICK, KS (LAT 37 52 59N LONG 097 25 27W)

OCT 2001					AUG 2002				
11...	0930	39	--	15.0	01...	1015	8.1	76	28.0
DEC									
06...	1110	34	--	10.0					

07144200 L ARKANSAS R AT VALLEY CENTER, KS (LAT 37 49 56N LONG 097 23 16W)

OCT 2001					MAY 2002				
10...	1025	53	598	17.0	14...	1050	480	368	17.5
NOV					16...	1005	190	475	18.5
29...	1355	35	807	3.5	30...	1315	80	558	24.0
JAN 2002					JUL				
09...	1300	40	1000	4.5	09...	1455	34	605	33.0
FEB					25...	1015	13	682	27.0
25...	1030	44	997	--	AUG				
APR					19...	1415	49	480	30.0
12...	1030	48	960	15.5					

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002--Continued

Arkansas River Basin--Continued

07144300 ARKANSAS R AT WICHITA, KS (LAT 37 38 41N LONG 097 20 06W)

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)
OCT 2001				
11...	1110	334	1240	18.0
DEC				
05...	1040	201	1620	17.0
JAN 2002				
11...	1315	191	1680	7.5
FEB				
11...	1220	219	1430	--
MAR				
04...	1015	107	1660	3.5
APR				
15...	1020	157	1430	23.0
JUN 2002				
06...	1015	926	810	22.0
11...	1035	195	1180	25.5
JUL				
09...	1335	187	1920	34.0
AUG				
06...	1345	70	1380	34.0
SEP				
03...	1000	277	1900	--
11...	1345	198	1920	30.0

07144480 COWSKIN C AT 119TH ST AT WICHITA, KS (LAT 37 42 05N LONG 097 28 49W)

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)
OCT 2001				
12...	1035	1.4	1020	16.0
DEC				
11...	1310	1.6	1360	6.5
JAN 2002				
22...	1110	2.2	1150	6.0
FEB				
11...	0935	1.3	1210	--
MAR				
08...	1100	1.4	1710	10.0
MAY				
01...	1450	3.8	890	19.0
08...	1010	216	650	--
09...	1135	305	185	17.5
JUN 2002				
12...	1345	595	290	23.0
13...	0955	873	125	23.0
18...	1315	77	160	23.0
19...	1425	39	230	24.0
JUL				
11...	1425	2.9	1330	27.0
31...	1340	3.6	1670	28.0
AUG				
30...	1450	8.1	440	26.0

07144550 ARKANSAS R AT DERBY, KS (LAT 37 32 34N LONG 097 16 31W)

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)
OCT 2001				
18...	1020	319	1390	13.0
DEC				
11...	1525	273	1650	8.0
JAN 2002				
23...	1110	224	1830	6.0
FEB				
13...	1040	255	1870	6.0
MAR				
11...	1445	328	1670	16.0
MAY 2002				
03...	1045	335	1520	18.0
JUN				
21...	1040	1380	710	27.0
JUL				
18...	1455	218	1650	34.0
AUG				
05...	1020	142	1380	30.0
SEP				
03...	1320	375	1760	31.0

07144780 NF NINNESCAH R AB CHENEY RE, KS (LAT 37 51 49N LONG 098 00 52W)

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)
OCT 2001				
09...	1050	46	1190	19.5
NOV				
19...	1040	48	1250	8.0
MAR 2002				
18...	1150	73	1260	10.5
JUL 2002				
22...	1310	18	1080	31.0
AUG				
16...	1115	89	735	26.5
SEP				
16...	1130	43	1070	23.5

07144795 NF NINNESCAH R AT CHENEY DAM, KS (LAT 37 43 17N LONG 097 47 39W)

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)
MAR 2002				
18...	1405	.04	968	12.5
MAY				
23...	1105	.40	927	20.0
AUG 2002				
23...	1030	.26	850	23.0
SEP				
16...	1235	.08	824	21.5

07144910 SF NINNESCAH R NR PRATT, KS (LAT 37 38 16N LONG 098 43 14W)

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)
OCT 2001				
26...	0810	7.8	624	10.5
DEC				
20...	1655	8.9	586	7.0
FEB 2002				
07...	1620	15	490	5.5
MAR				
13...	0825	9.5	725	7.5
MAY 2002				
13...	1255	12	526	18.5
JUN				
28...	1115	8.6	470	26.0
AUG				
08...	1820	3.3	484	26.0
SEP				
16...	1605	5.7	498	21.5

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002--Continued

Arkansas River Basin--Continued

07145200 SF NINNESCAH R NR MURDOCK, KS (LAT 37 33 51N LONG 097 51 10W)

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)	Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)
OCT 2001					MAY 2002				
22...	1350	108	1370	21.0	02...	1320	140	1230	18.5
DEC					JUN				
14...	1355	132	1190	7.5	21...	1030	168	1060	24.5
JAN 2002					JUL				
24...	1055	135	1280	3.0	29...	1415	123	1150	32.0
MAR					SEP				
22...	1130	148	1140	7.5	05...	1035	74	1300	30.0

07145500 NINNESCAH R NR PECK, KS (LAT 37 27 26N LONG 097 25 20W)

OCT 2001					MAR 2002				
22...	1045	107	1020	20.5	13...	1450	170	1090	15.5
DEC					MAY				
14...	1105	149	1250	5.5	06...	1600	147	--	28.0
JAN 2002					JUL				
23...	1340	150	1210	6.0	25...	1500	68	1230	34.0
FEB					AUG				
12...	1115	221	923	--	30...	1040	133	880	26.0

07145700 SLATE C AT WELLINGTON, KS (LAT 37 15 00N LONG 097 24 12W)

OCT 2001					MAY 2002				
19...	1325	2.9	428	13.0	06...	1230	5.7	1060	22.5
DEC					JUN				
13...	1310	4.8	1320	6.0	20...	1320	18	630	26.0
JAN 2002					JUL				
29...	1120	5.0	1240	3.5	25...	1120	16	300	25.0
MAR					AUG				
11...	1410	6.0	1070	9.5	29...	1305	3.5	620	27.0

07146500 ARKANSAS R AT ARKANSAS CITY, KS (LAT 37 03 23N LONG 097 03 32W)

OCT 2001					MAR 2002				
23...	1110	533	1430	20.0	20...	1050	490	1660	12.5
DEC					JUL				
18...	1130	486	1700	8.0	03...	1435	724	--	28.0
JAN 2002					AUG				
28...	1150	468	1710	7.0	27...	1400	1680	600	30.0
FEB									
11...	1100	616	1670	3.5					

07147070 WHITEWATER R AT TOWANDA, KS (LAT 37 47 45N LONG 097 00 45W)

OCT 2001					MAY 2002				
09...	1025	15	1140	16.0	08...	1325	269	1170	--
NOV					09...	1000	1150	294	--
28...	1050	12	1860	3.5	28...	1030	139	510	18.0
JAN 2002					JUL				
08...	1000	14	2010	1.0	03...	1115	22	1110	24.0
FEB					29...	1435	8.7	1280	29.0
26...	1410	12	1600	2.5	AUG				
APR					15...	1055	14	1460	24.0
09...	1350	24	1370	14.5	SEP				
					12...	1035	1.9	1470	21.5

07147800 WALNUT R AT WINFIELD, KS (LAT 37 13 27N LONG 096 59 40W)

OCT 2001					MAY 2002				
23...	1430	59	540	18.0	25...	1430	17400	162	16.0
DEC					JUN				
18...	1440	71	1240	7.0	10...	1250	370	480	27.0
FEB 2002					JUL				
11...	1530	77	1210	5.5	22...	1200	103	690	30.0
MAR					AUG				
21...	1110	59	1090	9.0	26...	1140	86	750	29.0

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002--Continued

Arkansas River Basin--Continued

07149000 MEDICINE LODGE R NR KIOWA, KS (LAT 37 02 17N LONG 098 28 04W)

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)
OCT 2001				
25...	1335	60	1010	14.0
DEC				
20...	1115	93	1000	3.0
FEB 2002				
07...	1255	126	760	7.0
MAR				
13...	1500	98	878	17.0
MAY 2002				
10...	1055	78	957	--
JUN				
25...	1250	47	1090	31.5
AUG				
08...	1600	5.2	1320	35.0
SEP				
17...	0915	38	913	18.5

07151500 CHIKASKIA R NR CORBIN, KS (LAT 37 07 44N LONG 097 36 04W)

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)
OCT 2001				
19...	1055	68	608	13.0
DEC				
13...	1035	93	620	5.5
FEB 2002				
07...	0930	126	522	3.0
MAR				
14...	1055	101	544	14.5
MAY 2002				
06...	1035	90	556	25.0
JUN				
20...	1455	181	530	29.0
JUL				
10...	1200	59	520	33.0
AUG				
28...	1155	120	370	28.0

07157500 CROOKED C NR ENGLEWOOD, KS (LAT 37 01 54N LONG 100 12 29W)

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)
NOV 2001				
21...	1155	4.3	3800	14.0
DEC				
12...	1015	5.1	--	7.0
JAN 2002				
11...	1015	5.0	4060	2.0
23...	1520	5.0	4720	7.0
APR 2002				
22...	1340	5.2	2890	20.5
JUN				
24...	1435	1.9	3100	31.0
SEP				
17...	1600	4.0	4640	26.0

07166500 VERDIGRIS R NR ALTOONA, KS (LAT 37 29 26N LONG 095 40 49W)

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)
OCT 2001				
17...	1150	14	281	12.0
DEC				
05...	1525	16	367	13.0
FEB 2002				
14...	1500	8.3	411	7.0
APR				
03...	1300	6.8	468	14.0
JUL 2002				
03...	1100	108	351	26.0
AUG				
15...	1135	9.9	408	26.0
SEP				
06...	1230	1.9	429	28.5

07167500 OTTER C AT CLIMAX, KS (LAT 37 42 30N LONG 096 13 30W)

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)
OCT 2001				
16...	1140	4.2	562	11.5
DEC				
04...	1530	2.9	596	11.5
FEB 2002				
13...	1220	4.0	552	5.0
APR				
02...	1430	4.2	526	15.0
MAY 2002				
21...	1230	55	522	17.5
JUN				
17...	1220	125	339	23.0
AUG				
13...	1205	2.4	480	24.0
SEP				
10...	0930	.39	495	24.0

07169500 FALL R AT FREDONIA, KS (LAT 37 30 30N LONG 095 50 00W)

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)
OCT 2001				
16...	1520	21	286	15.0
DEC				
05...	0930	22	431	12.0
FEB 2002				
13...	1525	13	483	7.5
APR				
03...	0945	7.6	502	11.0
18...	1400	115	415	23.0
MAY 2002				
08...	1120	7850	127	20.0
JUN				
18...	1025	872	322	24.0
19...	1330	2140	307	23.5
AUG				
15...	0945	15	407	25.0

07169800 ELK R AT ELK FALLS, KS (LAT 37 22 32N LONG 096 11 07W)

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)
OCT 2001				
24...	1500	.34	251	17.0
DEC				
19...	1550	1.4	485	3.5
FEB 2002				
06...	1540	9.3	460	4.5
MAR				
15...	0900	3.9	465	11.0
JUN 2002				
11...	1000	70	400	27.5
JUL				
23...	0955	8.3	440	29.0
AUG				
26...	1455	2.2	400	30.0

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Arkansas River Basin--Continued

07170060 ELK R BL ELK CITY LK, KS (LAT 37 16 46N LONG 095 46 53W)

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)
OCT 2001				
17...	0845	5.8	341	10.5
DEC				
05...	1200	5.6	381	14.0
FEB 2002				
14...	1210	176	322	6.0
MAY 2002				
20...	1745	1120	217	18.5
JUN				
18...	1850	3770	212	24.0

07170500 VERDIGRIS R AT INDEPENDENCE, KS (LAT 37 13 24N LONG 095 40 40W)

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)
OCT 2001				
17...	1525	44	306	15.0
DEC				
06...	0910	46	388	10.5
FEB 2002				
14...	0915	215	357	4.5
MAR				
22...	0925	23	525	9.5
APR 2002				
03...	1515	18	492	13.0
19...	0825	420	523	21.5
JUL				
01...	1410	2800	329	26.0
AUG				
14...	0820	28	479	25.0
SEP				
09...	1310	10	480	28.0

07170700 BIG HILL C NR CHERRYVALE, KS (LAT 37 16 00N LONG 095 28 05W)

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)
FEB 2002				
22...	0845	.08	525	5.5
APR				
04...	1215	.04	511	12.0
30...	1925	9.0	237	18.0
MAY				
08...	1230	1080	--	19.0
17...	0805	54	--	18.0
JUL 2002				
01...	1700	.14	321	23.5
10...	1645	.06	424	29.0
AUG				
14...	1800	.02	502	23.0

07170990 VERDIGRIS R AT COFFEYVILLE, KS (LAT 37 00 20N LONG 095 35 32W)

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)
MAR 2002				
21...	1455	30	623	13.0
APR				
04...	1200	17	631	12.5
18...	1700	38	601	23.0
19...	1115	430	570	22.0
29...	1500	2280	346	18.0
30...	0915	1350	350	17.5
MAY				
08...	1615	30500	173	19.0
14...	1500	9430	240	19.0
20...	1350	4820	280	19.0
JUL 2002				
01...	1025	2750	346	26.5
11...	0945	254	385	29.0
AUG				
13...	1545	32	462	26.5
SEP				
09...	1535	5.5	623	29.5

07172000 CANEY R NR ELGIN, KS (LAT 37 00 13N LONG 096 18 54W)

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)
OCT 2001				
25...	0900	.05	452	9.0
DEC				
18...	1225	.68	470	8.5
FEB 2002				
06...	1305	4.4	582	6.0
MAR				
14...	1610	.40	470	21.0
MAY 2002				
10...	1105	1030	297	18.0
JUN				
11...	1355	163	370	29.0
JUL				
23...	1355	14	390	33.0
AUG				
27...	1035	.86	360	26.0

07179500 NEOSHO R AT COUNCIL GROVE, KS (LAT 38 39 54N LONG 096 29 38W)

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)
OCT 2001				
24...	1450	10	342	15.5
DEC				
18...	0905	10	226	7.0
MAR 2002				
12...	1050	1.8	183	11.5
JUN				
10...	1530	2.5	410	27.0
JUL 2002				
11...	1330	8.1	400	30.5
25...	1315	21	379	28.5
SEP				
11...	1550	18	400	26.0

07179730 NEOSHO R NR AMERICUS, KS (LAT 38 28 01N LONG 096 15 01W)

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)
OCT 2001				
04...	1315	22	385	18.0
25...	1300	21	385	14.0
DEC				
18...	1145	16	316	--
MAR 2002				
11...	1445	17	227	8.0
MAY 2002				
09...	1030	3540	--	17.0
JUL				
11...	1040	19	486	28.5
SEP				
11...	1350	16	490	26.0

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002--Continued

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)	Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)
Arkansas River Basin--Continued									
07179795 N COTTONWOOD R BL MARION LK, KS (LAT 38 22 00N LONG 097 05 00W)									
OCT 2001					MAY 2002				
23...	1230	6.7	614	15.0	20...	1635	920	636	18.0
DEC					JUL				
06...	1350	5.4	654	9.0	16...	1635	11	630	27.5
FEB 2002					AUG				
14...	1250	1.6	692	6.0	22...	1445	8.9	634	28.0
MAR									
28...	0930	2.5	708	9.0					
07180400 COTTONWOOD R NR FLORENCE, KS (LAT 38 14 10N LONG 096 52 37W)									
OCT 2001					MAY 2002				
24...	0915	34	1150	15.0	20...	1315	155	568	16.5
DEC					JUL				
07...	0855	39	1230	7.0	16...	1140	46	975	26.5
FEB 2002					AUG				
15...	0925	29	1210	3.5	23...	1020	33	963	27.0
MAR					SEP				
28...	1340	29	1250	13.0	12...	1340	20	--	23.0
07180500 CEDAR C NR CEDAR POINT, KS (LAT 38 11 55N LONG 096 49 22W)									
OCT 2001					MAY 2002				
23...	1710	4.9	520	16.0	20...	1110	36	344	--
DEC					JUL				
06...	1010	6.0	602	10.0	16...	0950	9.6	482	24.0
FEB 2002					AUG				
14...	0935	4.1	511	3.0	22...	1155	3.5	453	27.5
MAR									
27...	1045	3.4	540	7.5					
07182250 COTTONWOOD R NR PLYMOUTH, KS (LAT 38 23 51N LONG 096 21 21W)									
OCT 2001					JUN 2002				
25...	0955	56	791	13.5	10...	1300	424	310	16.0
DEC					JUL				
18...	1330	65	721	7.5	16...	1225	108	710	28.5
MAR 2002					SEP				
11...	1115	64	472	17.0	11...	1200	23	815	25.0
07182510 NEOSHO R AT BURLINGTON, KS (LAT 38 11 40N LONG 095 44 10W)									
OCT 2001					APR 2002				
23...	0920	34	421	15.0	02...	1115	36	559	13.0
DEC					JUN				
07...	1410	45	459	9.0	27...	1330	2770	382	27.0
FEB 2002					AUG				
22...	1350	30	503	9.5	15...	1435	42	455	27.0
07183000 NEOSHO R NR IOLA, KS (LAT 37 53 27N LONG 095 25 50W)									
OCT 2001					MAY 2002				
23...	1155	46	420	18.5	01...	0915	1860	--	17.5
DEC					JUN				
04...	0810	49	458	10.5	14...	1145	5450	325	22.0
FEB 2002					JUL				
15...	1030	61	414	6.0	23...	1145	50	408	30.0
MAR					AUG				
27...	1100	31	452	10.5	08...	1200	38	442	31.0
07183500 NEOSHO R NR PARSONS, KS (LAT 37 20 24N LONG 095 06 35W)									
OCT 2001					APR 2002				
18...	1315	112	233	15.0	05...	0815	36	408	12.0
DEC									
07...	0855	79	405	9.0					
07184000 LIGHTNING C NR MCCUNE, KS (LAT 37 16 54N LONG 095 01 56W)									
OCT 2001					MAY 2002				
18...	1555	3.1	378	12.0	10...	0920	4620	165	18.0
DEC					JUL				
06...	1430	4.4	551	12.5	02...	1025	11	364	25.0
FEB 2002					AUG				
21...	1100	21	769	9.0	14...	1520	.17	426	25.5
APR									
05...	1035	2.7	794	12.5					

HARVEY COUNTY

WELL 24S 02W 16BAA 01 SITE NUMBER 375810097324301

24-2W-16BAA. (886) F. H. HAIBER. DRILLED, UNUSED, WATER-TABLE WELL IN SAND AND GRAVEL OF PLEISTOCENE AGE. DEPTH 57 FEET, DIAMETER 1.25 INCHES. MEASURING POINT, TOP OF PIPE, 0.8 FOOT ABOVE LSD. MEASURED BY CITY OF WICHITA.

ALTITUDE OF LAND SURFACE 1402.23 FEET

RECORDS AVAILABLE 1939 TO CURRENT YEAR.

HIGHEST WATER LEVEL 2.34 FEET BELOW LAND SURFACE DATUM AUG 21, 1939.

LOWEST WATER LEVEL 42.19 FEET BELOW LAND SURFACE DATUM OCT 01, 1992.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM,

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18, 2001	20.79	JAN 08, 2002	21.55	APR 04, 2002	22.10	JUL 02, 2002	22.80

WATER YEAR 2002 HIGHEST 20.79 OCT 18, 2001 LOWEST 22.80 JUL 02, 2002

WELL 24S 02W 28DDD 01 SITE NUMBER 375540097320901

24-2W-28DDD. (M-49) CITY OF WICHITA. DRILLED, WATER-TABLE PUBLIC-SUPPLY WELL IN SAND AND GRAVEL OF PLEISTOCENE AGE. DEPTH 246 FEET, DIAMETER 18 INCHES. MEASURING POINT, TOP OF CASING, 1.5 FEET ABOVE LSD. MEASURED BY CITY OF WICHITA.

ALTITUDE OF LAND SURFACE 1403. FEET

RECORDS AVAILABLE 1958 TO CURRENT YEAR.

HIGHEST WATER LEVEL 22.48 FEET BELOW LAND SURFACE DATUM JUN 02, 1975.

LOWEST WATER LEVEL 87.01 FEET BELOW LAND SURFACE DATUM OCT. 01, 1994.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM,

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 01, 2001	27.90	FEB 01, 2002	26.49	JUL 01, 2002	67.99		
JAN 02, 2002	26.42	APR 01	28.31				

WATER YEAR 2002 HIGHEST 26.42 JAN 02, 2002 LOWEST 28.31 APR 01, 2002

SEDGWICK COUNTY

WELL 26S 01W 19ABA 01 SITE NUMBER 374659097280201

26-1W-19ABA. (805) CITY OF WICHITA. DRIVEN, WATER-TABLE OBSERVATION WELL IN SAND AND GRAVEL OF PLEISTOCENE AGE. DEPTH 38 FEET, DIAMETER 1.25 INCHES. MEASURING POINT, TOP OF PIPE, 3.3 FEET ABOVE LSD.

ALTITUDE OF LAND SURFACE 1351.7 FEET

RECORDS AVAILABLE 1938 TO CURRENT YEAR.

HIGHEST WATER LEVEL 1.57 FEET BELOW LAND SURFACE DATUM APR 01, 1980.

LOWEST WATER LEVEL 9.89 FEET BELOW LAND SURFACE DATUM SEP 30, 1968.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM,

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 2001	4.31	JAN 10, 2002	7.18	APR 08, 2002	7.56	JUL 10, 2002	6.93

WATER YEAR 2002 HIGHEST 4.31 OCT 26, 2001 LOWEST 7.56 APR 08, 2002

THOMAS COUNTY

WELL 08S 34W 01BAC 01 SITE NUMBER 392329101040201

8-34W-1BA. KS. AGRICULTURAL EXPERIMENT STATION. DRILLED, UNUSED, WATER-TABLE WELL IN OGALLALA FORMATION. DIAMETER 16 INCHES, DEPTH 160 FEET. MEASURING POINT, TOP OF 2 INCH PIPE, 2.72 FEET ABOVE LSD. MEASURED BY GMD 4.

ALTITUDE OF LAND SURFACE 3177. FEET

RECORDS AVAILABLE 1947 TO CURRENT YEAR.

HIGHEST WATER LEVEL 112.31 FEET BELOW LAND SURFACE DATUM MAY 20, 1954.

LOWEST WATER LEVEL 137.02 FEET BELOW LAND SURFACE DATUM SERP 20, 20002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM,

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 19, 2001	134.93	JAN 22, 2002	134.07	APR 22, 2002	134.98	JUL 26, 2002	136.79
NOV 20	134.80	FEB 20	133.96	MAY 20	135.52	AUG 20	136.84
DEC 20	134.68	MAR 21	135.15	JUN 20	135.84	SEP 20	137.02

WATER YEAR 2002 HIGHEST 133.96 FEB 20, 2002 LOWEST 137.02 SEP 20, 2002

DOUGLAS COUNTY

390006095132301. Local number 12S 20E 17CCB 01

LOCATION.--Lat 39°00'06", long 95°13'23", Hydrologic Unit 10270104, County Code 045, on east side of county road, 3.6 mi northeast of Lawrence.

AQUIFER.--Unconsolidated aquifer in Newman Terrace deposits of Pleistocene age. Aquifer code: 112NWMN.

WELL CHARACTERISTICS.--Drilled observation well, diameter 10 in., depth 50 ft.

INSTRUMENTATION.--Float gage interfaced to a data-collection platform/data logger with a 1-hour update interval.

DATUM.--Datum of gage is NGVD of 1929. Measuring point east side of hole in top of box, elevation 835.81 ft, measuring point is 3.6 ft above land surface.

REMARKS.--Water level fluctuates with Kansas River stage and nearby pumping.

PERIOD OF RECORD.--1952 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 821.72 ft above NGVD of 1929, July 25, 1993; lowest, 807.98 ft above NGVD of 1929, Mar. 30, 1957.

EXTREMES FOR CURRENT YEAR.--Maximum water level, 812.62 ft, May 29; minimum water level, 809.03 ft, Sept. 29.

ELEVATION, in FT (NGVD), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY OBSERVATION AT 1200 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	812.50	812.20	811.71	811.32	811.09	811.05	810.80	811.77	812.62	811.26	810.09	809.44
2	812.49	812.15	811.69	811.31	811.08	811.05	810.80	811.80	812.59	811.21	810.05	809.43
3	812.45	812.08	811.68	811.31	811.08	811.05	810.77	811.80	812.55	811.17	810.02	809.40
4	812.42	812.05	811.67	811.31	811.08	811.02	810.74	811.82	812.48	811.14	809.99	809.38
5	812.39	812.02	811.65	811.31	811.07	811.01	810.73	811.82	812.43	811.12	809.94	809.36
6	812.43	812.02	811.63	811.31	811.08	811.01	810.71	811.82	812.42	811.10	809.91	809.35
7	812.48	812.01	811.61	811.30	811.09	811.01	810.69	811.84	812.42	811.06	809.87	809.33
8	812.50	812.00	811.61	811.29	811.09	811.01	810.69	811.99	812.43	811.01	809.82	809.31
9	812.51	811.97	811.61	811.28	811.13	811.02	810.69	812.11	812.43	810.96	809.80	809.29
10	812.51	811.96	811.61	811.27	811.17	810.98	810.69	812.14	812.39	810.93	809.78	809.27
11	812.50	811.95	811.61	811.25	811.13	810.97	810.69	812.20	812.35	810.88	809.76	809.25
12	812.48	811.93	811.61	811.24	811.13	811.00	810.71	812.26	812.31	810.85	809.73	809.24
13	812.44	811.93	811.61	811.24	811.13	811.00	810.72	812.29	812.29	810.82	809.70	809.23
14	812.42	811.93	811.57	811.24	811.13	811.00	810.75	812.32	812.28	810.77	809.70	809.22
15	812.33	811.90	811.57	811.23	811.14	810.99	810.77	812.37	812.26	810.74	809.70	809.21
16	812.31	811.89	811.57	811.21	811.14	810.95	810.78	812.41	812.20	810.73	809.69	809.21
17	812.37	811.87	811.57	811.21	811.13	810.93	810.78	812.43	812.18	810.68	809.68	809.21
18	812.45	811.85	811.56	811.20	811.12	810.92	810.74	812.44	812.15	810.64	809.68	809.20
19	812.49	811.84	811.56	811.19	811.12	810.90	810.70	812.45	812.08	810.61	809.68	809.19
20	812.50	811.82	811.45	811.19	811.12	810.88	810.68	812.46	811.98	810.57	809.67	809.19
21	812.51	811.81	811.41	811.19	811.11	810.87	810.72	812.47	811.90	810.52	809.67	809.18
22	812.51	811.81	811.41	811.18	811.08	810.84	811.11	812.49	811.84	810.48	809.67	809.17
23	812.54	811.81	811.40	811.17	811.07	810.84	811.27	812.51	811.76	810.43	809.66	809.15
24	812.55	811.81	811.37	811.16	811.07	810.84	811.36	812.51	811.69	810.39	809.64	809.12
25	812.47	811.79	811.36	811.15	811.07	810.85	811.40	812.51	811.65	810.36	809.61	809.10
26	812.37	811.75	811.36	811.14	811.07	810.84	811.42	812.51	811.60	810.32	809.59	809.09
27	812.29	811.74	811.36	811.14	811.07	810.82	811.49	812.55	811.53	810.29	809.56	809.08
28	812.26	811.71	811.36	811.13	811.05	810.82	811.61	812.59	811.46	810.24	809.53	809.06
29	812.26	811.71	811.34	811.13	---	810.82	811.65	812.61	811.39	810.20	809.51	809.03
30	812.23	811.71	811.33	811.11	---	810.81	811.71	812.62	811.33	810.17	809.49	809.03
31	812.21	---	811.32	811.09	---	810.80	---	812.62	---	810.13	809.47	---
MEAN	812.42	811.90	811.52	811.22	811.10	810.93	810.95	812.28	812.10	810.70	809.73	809.22
MAX	812.55	812.20	811.71	811.32	811.17	811.05	811.71	812.62	812.62	811.26	810.09	809.44
MIN	812.21	811.71	811.32	811.09	811.05	810.80	810.68	811.77	811.33	810.13	809.47	809.03

HARVEY COUNTY

380025097312701. Local number EB-145-A5

LOCATION.--Lat 38°00'25", long 97°31'27", Hydrologic Unit 11030012, County Code 079, Halstead quadrangle, on the upstream side of the bridge, south of the levee on Halstead Road in Halstead, KS. Owner: Ground-Water Management District # 2.

AQUIFER.--Equus Beds. Aquifer code: 112PLSC.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 2 in., depth 42.61 ft, screened 32.6-42.6 ft.

INSTRUMENTATION.--Submersible transducer interfaced to a data-collection platform/data logger with a 1-hour update interval.

DATUM.-- Datum of gage is NGVD of 1929. Measuring point is top of PVC casing, elevation 1,394.26 ft, top of casing is 1.9 ft above land surface.

REMARKS.--Water level fluctuates with river stage and nearby pumping.

PERIOD OF RECORD.--November 1995 to February 2002 (discontinued).

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 1,381.29 ft above NGVD of 1929, Apr. 5, 2000; lowest, 1,370.52 ft above NGVD of 1929, July 28, 1996.

EXTREMES FOR CURRENT YEAR.--Maximum water level, 1,376.43 ft, Mar. 8; minimum water level, 1,373.86 ft, Oct. 1.

ELEVATION, in FT (NGVD), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY OBSERVATION AT 1200 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1373.88	1374.55	1374.95	1375.36	1375.50	---	---	---	---	---	---	---
2	1373.97	1374.47	1375.06	1375.39	1375.69	---	---	---	---	---	---	---
3	1373.96	1374.47	1375.11	1375.49	1375.59	---	---	---	---	---	---	---
4	1374.01	1374.53	1375.11	1375.56	1375.59	---	---	---	---	---	---	---
5	1373.89	1374.63	1375.03	1375.50	1375.66	---	---	---	---	---	---	---
6	1374.00	1374.64	1375.10	1375.45	1375.79	---	---	---	---	---	---	---
7	1374.06	1374.66	1375.16	1375.53	1375.71	---	---	---	---	---	---	---
8	1374.15	1374.47	1374.99	1375.62	1375.91	---	---	---	---	---	---	---
9	1374.19	1374.64	1375.16	1375.61	1375.83	---	---	---	---	---	---	---
10	1374.04	1374.70	1375.21	1375.42	1375.46	---	---	---	---	---	---	---
11	1374.19	1374.69	1375.21	1375.51	1375.87	---	---	---	---	---	---	---
12	1374.31	1374.72	1375.23	1375.55	1375.71	---	---	---	---	---	---	---
13	1374.29	1374.77	1375.16	1375.71	1375.72	---	---	---	---	---	---	---
14	1374.13	1374.75	1375.25	1375.46	1376.01	---	---	---	---	---	---	---
15	1374.11	1374.73	1375.24	1375.54	1375.74	---	---	---	---	---	---	---
16	1374.16	1374.72	1375.20	1375.50	1375.81	---	---	---	---	---	---	---
17	1374.32	1374.79	1375.29	1375.55	1375.93	---	---	---	---	---	---	---
18	1374.34	1374.88	1375.41	1375.65	1376.06	---	---	---	---	---	---	---
19	1374.32	1374.69	1375.14	1375.58	1376.06	---	---	---	---	---	---	---
20	1374.36	1374.88	1375.22	1375.86	1375.91	---	---	---	---	---	---	---
21	1374.36	1374.95	1375.42	1375.57	1375.75	---	---	---	---	---	---	---
22	1374.49	1375.00	1375.24	1375.81	1375.91	---	---	---	---	---	---	---
23	1374.51	1375.12	1375.19	1375.57	1376.07	---	---	---	---	---	---	---
24	1374.31	1374.89	1375.27	1375.52	1376.07	---	---	---	---	---	---	---
25	1374.21	1374.90	1375.42	1375.61	1375.79	---	---	---	---	---	---	---
26	1374.27	1374.96	1375.41	1375.69	1375.80	---	---	---	---	---	---	---
27	1374.39	1374.81	1375.44	1375.77	1375.99	---	---	---	---	---	---	---
28	1374.52	1374.84	1375.55	1375.61	1376.10	---	---	---	---	---	---	---
29	1374.43	1375.06	1375.27	1375.60	---	---	---	---	---	---	---	---
30	1374.55	1375.06	1375.28	1375.64	---	---	---	---	---	---	---	---
31	1374.68	---	1375.40	1375.73	---	---	---	---	---	---	---	---
MEAN	1374.24	1374.77	1375.23	1375.58	1375.82	---	---	---	---	---	---	---
MAX	1374.68	1375.12	1375.55	1375.86	1376.10	---	---	---	---	---	---	---
MIN	1373.88	1374.47	1374.95	1375.36	1375.46	---	---	---	---	---	---	---

HARVEY COUNTY

380027097311401. Local number EB-145-A4

LOCATION.-- Lat 38°00'27", long 97°31'14", Hydrologic Unit 11030012, County Code 079, Halstead quadrangle, on the upstream side of the bridge, north of the levee on Halstead Road in Halstead. Owner: Ground-Water Management District # 2.

AQUIFER.--Equus Beds. Aquifer code: 112PLSC.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 2 in., depth 61.81 ft, screened 51.8-61.8 ft.

INSTRUMENTATION.--Submersible transducer interfaced to a data-collection platform/data logger with a 1-hour update interval.

DATUM.-- Datum of gage is NGVD of 1929. Measuring point is top of PVC casing, elevation 1,394.00 ft, top of casing is 1.8 ft above land surface.

REMARKS.--Water level fluctuates with river stage and nearby pumping.

PERIOD OF RECORD.--October 1995 to February 2002 (discontinued).

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 1,380.63 ft above NGVD of 1929, Nov. 5, 1998; lowest, 1,363.48 ft above NGVD of 1929, July 22, 1996.

EXTREMES FOR CURRENT YEAR.--Maximum water level, 1,375.26 ft, Mar. 8; minimum water level, 1,373.69 ft, Oct. 1.

ELEVATION, in FT (NGVD), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY OBSERVATION AT 1200 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1373.70	1374.31	1374.39	1374.61	e1374.54	---	---	---	---	---	---	---
2	1373.88	1374.13	1374.53	1374.60	1374.66	---	---	---	---	---	---	---
3	1373.86	1374.11	1374.60	1374.74	1374.66	---	---	---	---	---	---	---
4	1373.90	1374.14	1374.60	1374.83	1374.60	---	---	---	---	---	---	---
5	1373.89	1374.26	1374.60	1374.77	1374.70	---	---	---	---	---	---	---
6	1374.01	1374.31	1374.53	1374.70	1374.82	---	---	---	---	---	---	---
7	1374.06	1374.35	1374.62	1374.67	1374.77	---	---	---	---	---	---	---
8	1374.19	1374.18	1374.42	1374.83	1374.93	---	---	---	---	---	---	---
9	1374.20	1374.24	1374.57	1374.80	e1375.02	---	---	---	---	---	---	---
10	1374.11	1374.38	1374.67	1374.60	1374.61	---	---	---	---	---	---	---
11	1374.09	1374.36	1374.65	1374.59	1374.85	---	---	---	---	---	---	---
12	1374.25	e1374.34	1374.69	1374.55	1374.81	---	---	---	---	---	---	---
13	1374.25	e1374.42	1374.58	1374.82	1374.76	---	---	---	---	---	---	---
14	1374.07	1374.40	1374.70	1374.63	1375.01	---	---	---	---	---	---	---
15	1373.98	1374.33	1374.69	e1374.62	1374.81	---	---	---	---	---	---	---
16	1373.97	1374.32	1374.63	1374.69	1374.85	---	---	---	---	---	---	---
17	1374.15	1374.36	1374.66	1374.65	1374.90	---	---	---	---	---	---	---
18	1374.27	1374.50	1374.75	1374.71	1375.06	---	---	---	---	---	---	---
19	1374.16	1374.27	1374.52	1374.74	1375.11	---	---	---	---	---	---	---
20	1374.22	1374.44	1374.59	1374.96	1374.94	---	---	---	---	---	---	---
21	1374.20	1374.59	1374.72	1374.71	1374.77	---	---	---	---	---	---	---
22	1374.30	1374.66	1374.78	1374.87	1374.83	---	---	---	---	---	---	---
23	1374.34	1374.77	1374.56	1374.74	1375.04	---	---	---	---	---	---	---
24	1374.19	1374.62	1374.56	e1374.60	1375.13	---	---	---	---	---	---	---
25	1373.94	1374.37	1374.68	1374.65	1374.80	---	---	---	---	---	---	---
26	1373.96	1374.56	1374.69	1374.65	1374.73	---	---	---	---	---	---	---
27	1374.07	1374.32	1374.77	1374.74	1374.90	---	---	---	---	---	---	---
28	1374.26	1374.32	1374.84	1374.66	1375.01	---	---	---	---	---	---	---
29	1374.17	1374.54	1374.53	1374.63	---	---	---	---	---	---	---	---
30	1374.21	1374.65	1374.54	1374.65	---	---	---	---	---	---	---	---
31	1374.41	---	1374.63	1374.77	---	---	---	---	---	---	---	---
MEAN	1374.11	1374.38	1374.62	1374.70	1374.84	---	---	---	---	---	---	---
MAX	1374.41	1374.77	1374.84	1374.96	1375.13	---	---	---	---	---	---	---
MIN	1373.70	1374.11	1374.39	1374.55	1374.54	---	---	---	---	---	---	---

e Estimated

HARVEY COUNTY

380028097310901. Local number EB-145-A2

LOCATION.-- Lat 38°00'28", long 97°31'09", Hydrologic Unit 11030012, County Code 079, Halstead quadrangle, on the upstream side of the bridge, north of the levee on Halstead Road in Halstead. Owner: Ground-Water Management District # 2.

AQUIFER.--Equus Beds. Aquifer code: 112PLSC.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 2 in., depth 46.35 ft, screened 36.2-46.2 ft.

INSTRUMENTATION.--Submersible transducer interfaced to a data-collection platform/data logger with a 1-hour update interval.

DATUM.-- Datum of gage is NGVD of 1929. Measuring point is top of PVC casing, elevation 1,392.68 ft, top of casing is 1.6 ft above land surface.

REMARKS.--Water level fluctuates with river stage and nearby pumping.

PERIOD OF RECORD.--October 1995 to February 2002 (discontinued).

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 1,381.34 ft above NGVD of 1929, Nov. 4, 1998; lowest, 1,364.17 ft above NGVD of 1929, July 22, 1996.

EXTREMES FOR CURRENT YEAR.--Maximum water level, 1,375.20 ft, Mar. 8; minimum water level, 1,373.76 ft, Oct. 1.

ELEVATION, in FT (NGVD), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY OBSERVATION AT 1200 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1373.76	1374.32	1374.40	e1374.57	e1374.52	---	---	---	---	---	---	---
2	1373.94	1374.15	1374.52	e1374.57	1374.65	---	---	---	---	---	---	---
3	1373.90	1374.14	1374.59	e1374.71	1374.63	---	---	---	---	---	---	---
4	1373.95	1374.15	1374.59	e1374.78	1374.59	---	---	---	---	---	---	---
5	1374.00	1374.28	1374.58	1374.74	1374.68	---	---	---	---	---	---	---
6	1374.06	1374.32	1374.52	e1374.67	1374.80	---	---	---	---	---	---	---
7	1374.11	1374.35	1374.60	1374.65	1374.74	---	---	---	---	---	---	---
8	1374.22	e1374.15	1374.42	1374.80	1374.91	---	---	---	---	---	---	---
9	1374.24	1374.26	1374.57	e1374.78	e1375.00	---	---	---	---	---	---	---
10	1374.13	e1374.36	1374.65	1374.56	1374.60	---	---	---	---	---	---	---
11	1374.12	e1374.38	1374.63	1374.57	1374.84	---	---	---	---	---	---	---
12	1374.27	e1374.38	1374.67	1374.56	1374.78	---	---	---	---	---	---	---
13	1374.29	e1374.42	1374.56	1374.81	1374.74	---	---	---	---	---	---	---
14	1374.09	1374.40	e1374.67	1374.60	1374.97	---	---	---	---	---	---	---
15	1374.01	1374.34	1374.65	1374.59	1374.78	---	---	---	---	---	---	---
16	1374.00	1374.32	e1374.60	1374.65	1374.82	---	---	---	---	---	---	---
17	1374.17	1374.37	1374.64	1374.62	1374.87	---	---	---	---	---	---	---
18	1374.28	1374.50	e1374.55	1374.69	1375.02	---	---	---	---	---	---	---
19	1374.18	1374.28	e1374.49	1374.71	1375.06	---	---	---	---	---	---	---
20	1374.24	1374.45	1374.57	1374.92	1374.90	---	---	---	---	---	---	---
21	1374.22	1374.58	e1374.71	1374.68	1374.74	---	---	---	---	---	---	---
22	1374.32	e1374.65	1374.73	1374.80	1374.80	---	---	---	---	---	---	---
23	1374.35	1374.75	e1374.53	1374.71	1375.00	---	---	---	---	---	---	---
24	1374.20	1374.59	e1374.53	e1374.59	1375.08	---	---	---	---	---	---	---
25	1373.96	1374.38	e1374.66	1374.63	1374.77	---	---	---	---	---	---	---
26	1373.99	1374.54	1374.66	1374.63	1374.70	---	---	---	---	---	---	---
27	1374.09	1374.32	e1374.74	1374.72	1374.87	---	---	---	---	---	---	---
28	e1374.25	1374.32	1374.81	1374.63	1374.97	---	---	---	---	---	---	---
29	1374.19	1374.54	1374.51	1374.61	---	---	---	---	---	---	---	---
30	1374.23	1374.63	e1374.51	1374.63	---	---	---	---	---	---	---	---
31	1374.41	---	e1374.61	1374.75	---	---	---	---	---	---	---	---
MEAN	1374.13	1374.39	1374.60	1374.67	1374.82	---	---	---	---	---	---	---
MAX	1374.41	1374.75	1374.81	1374.92	1375.08	---	---	---	---	---	---	---
MIN	1373.76	1374.14	1374.40	1374.56	1374.52	---	---	---	---	---	---	---

e Estimated

HARVEY COUNTY

380028097311001. Local number EB-145-A1

LOCATION.-- Lat 38°00'28", long 97°30'52", Hydrologic Unit 11030012, County Code 079, Halstead quadrangle, on the upstream side of the bridge, north of the levee on Halstead Road in Halstead. Owner: Ground-Water Management District # 2.

AQUIFER.--Equus Beds. Aquifer code: 112PLSC

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 2 in., depth 50.65 ft, screened 40.6-50.6 ft.

INSTRUMENTATION.--Submersible transducer interfaced to a data-collection platform/data logger with a 1-hour update interval.

DATUM.-- Datum of gage is NGVD of 1929. Measuring point is top of PVC casing, elevation 1,392.87 ft, top of casing is 2.8 ft above land surface.

REMARKS.--Water level fluctuates with river stage and nearby pumping.

PERIOD OF RECORD.--October 1995 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 1,382.63 ft above NGVD of 1929, Nov. 4, 1998; lowest, 1,366.10 ft above NGVD of 1929, July 22, 1996.

EXTREMES FOR CURRENT YEAR.--Maximum water level, 1,376.54 ft, June 13; minimum water level, 1,369.61 ft, Aug. 18.

ELEVATION, in FT (NGVD), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY OBSERVATION AT 1200 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1373.94	1374.44	1374.51	1374.66	e1374.55	1375.06	1374.99	1372.03	1375.15	1374.04	1372.64	1372.90
2	1374.09	1374.29	1374.62	1374.65	1374.68	1374.86	1374.80	1371.44	1375.16	1374.04	1372.60	1372.92
3	1374.06	1374.29	1374.67	1374.77	1374.66	1374.80	1374.70	1372.64	1375.16	1374.23	1372.39	1372.78
4	1374.10	1374.30	1374.68	1374.85	1374.62	1374.95	1374.16	1374.23	1375.14	1374.29	1372.34	1372.73
5	1374.12	1374.41	1374.66	1374.80	1374.70	1375.01	1374.80	1374.65	1375.32	1374.39	1372.47	1372.76
6	1374.21	1374.44	1374.62	1374.73	1374.81	1375.05	1374.67	1374.92	1375.36	1374.14	1372.27	1372.73
7	1374.25	1374.47	1374.69	1374.73	1374.76	1375.09	1374.89	1374.98	1375.37	1374.17	1372.07	1372.69
8	1374.36	1374.29	1374.52	1374.86	1374.92	1375.14	1374.97	1375.13	1375.36	1373.90	1372.11	1372.60
9	1374.37	1374.39	1374.66	1374.83	1375.00	1374.72	1374.92	1374.91	1375.37	1373.75	1372.14	1372.67
10	1374.26	1374.50	1374.73	1374.64	1374.64	1374.85	1375.03	1375.07	1375.27	1373.64	1372.27	1372.61
11	1374.25	1374.49	1374.71	1374.65	1374.87	1375.13	1375.13	1375.26	1375.07	1373.70	1372.30	1372.64
12	1374.40	1374.48	1374.74	1374.65	1374.81	e1375.02	1375.00	1375.56	1375.93	1373.60	1372.42	1372.71
13	1374.39	1374.54	1374.65	1374.87	1374.78	1375.13	1375.04	1373.38	1374.59	1373.58	1372.63	1372.90
14	1374.22	1374.50	1374.75	1374.67	1375.00	1375.12	1375.12	1372.50	1373.29	1373.71	1373.00	1372.95
15	1374.14	1374.45	1374.74	1374.68	1374.81	1374.86	1375.13	1372.08	1372.56	1373.78	1371.61	1372.96
16	1374.13	1374.44	1374.68	1374.72	1374.84	1374.84	1375.09	1371.71	e1373.30	1373.77	1370.19	1373.03
17	1374.28	1374.48	1374.72	1374.69	1374.89	1374.99	1374.95	1372.09	1374.00	1373.69	1369.80	1373.15
18	1374.37	1374.61	1374.83	1374.75	1375.04	1374.95	1375.01	1372.61	1374.02	1373.53	1369.61	1373.20
19	1374.30	1374.40	1374.59	1374.76	1375.07	1374.95	1374.92	1371.98	1373.09	1373.27	1372.13	1373.11
20	1374.36	1374.56	1374.65	1374.97	1374.91	1374.85	1375.05	1371.65	1372.36	1373.19	1372.44	1373.10
21	1374.34	1374.68	1374.78	1374.73	1374.76	1374.67	1375.70	1371.47	1372.07	1373.21	1372.57	1373.07
22	1374.43	1374.72	1374.78	1374.87	1374.83	1374.85	1374.14	1371.38	1371.84	1373.16	1372.63	1372.91
23	1374.47	1374.83	1374.62	1374.73	1375.02	1375.10	1373.03	1371.21	1371.38	1373.05	1372.67	1372.99
24	1374.33	1374.67	1374.63	1374.61	1375.08	1375.12	1372.13	1372.34	1370.98	1372.94	1372.80	1372.98
25	1374.11	1374.49	1374.74	1374.66	1374.79	1374.86	1371.61	1374.22	1370.90	1373.05	1372.87	1373.06
26	1374.15	1374.63	1374.74	1374.66	1374.74	1374.83	1371.49	1374.75	1373.62	1372.71	1372.96	1373.06
27	1374.25	1374.43	1374.79	1374.73	1374.89	1375.00	1374.64	1375.00	1374.04	1372.69	1372.97	1373.01
28	1374.41	1374.43	1374.88	1374.65	1374.99	1375.02	1374.81	1375.12	1374.19	1372.71	1372.97	1373.01
29	1374.32	1374.63	1374.60	1374.63	---	1374.90	1375.19	1375.18	1374.21	1372.78	1372.96	1372.98
30	1374.36	1374.72	1374.60	1374.66	---	1374.84	1373.01	1375.23	1373.96	1372.63	1372.92	1372.96
31	1374.53	---	1374.69	1374.77	---	1374.80	---	1375.17	---	1372.56	1372.85	---
MEAN	1374.27	1374.50	1374.69	1374.73	1374.84	1374.95	1374.47	1373.55	1373.93	1373.48	1372.28	1372.91
MAX	1374.53	1374.83	1374.88	1374.97	1375.08	1375.14	1375.70	1375.56	1375.93	1374.39	1373.00	1373.20
MIN	1373.94	1374.29	1374.51	1374.61	1374.55	1374.67	1371.49	1371.21	1370.90	1372.56	1369.61	1372.60

e Estimated

HARVEY COUNTY

380028097311002. Local number EB-145-PD5

LOCATION.--Lat 38°00'28", long 97°31'07", Hydrologic Unit 11030012, County Code 079, Halstead quadrangle, on the upstream side of the bridge, north of the levee on Halstead Road in Halstead. Owner: Ground-Water Management District # 2.

AQUIFER.--Equus Beds. Aquifer code: 112PLSC.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 2 in., depth 117.70 ft, screened 112.6-117.7 ft.

INSTRUMENTATION.--Submersible transducer interfaced to a data-collection platform/data logger with a 1-hour update interval.

DATUM.-- Datum of gage is NGVD of 1929. Measuring point is top of PVC casing, elevation 1,392.40 ft, top of casing is 2.00 ft above land surface.

REMARKS.--Water level fluctuates with river stage and nearby pumping.

PERIOD OF RECORD.--February 1996 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 1,381.35 ft above NGVD of 1929, Nov. 5, 1998; lowest, 1,356.52 ft above NGVD of 1929, July 22, 1996.

EXTREMES FOR CURRENT YEAR.--Maximum water level, 1,375.67 ft, June 13; minimum water level, 1,363.37 ft, Aug. 18.

ELEVATION, in FT (NGVD), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY OBSERVATION AT 1200 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1373.62	1374.18	1374.27	1374.44	1374.34	1374.88	1374.79	1366.59	1375.01	1373.53	1372.03	1372.33
2	1373.79	1374.01	1374.37	1374.43	1374.46	1374.68	1374.62	1366.00	1375.01	1373.57	1371.92	1372.37
3	1373.76	1374.00	1374.44	1374.55	1374.46	1374.62	1374.48	1372.40	e1375.02	1373.80	1371.60	1372.25
4	1373.80	1374.01	1374.44	1374.64	1374.41	1374.77	1373.55	1374.10	1374.92	1373.77	1371.72	1372.22
5	1373.80	1374.13	1374.45	1374.60	1374.51	1374.82	1374.60	1374.48	1375.10	1374.05	1371.93	1372.26
6	1373.90	1374.16	1374.37	1374.53	1374.62	1374.86	1369.20	1374.76	1375.16	1373.54	1371.51	1372.25
7	1373.95	1374.20	1374.45	1374.51	1374.57	1374.89	1374.73	1374.81	1375.18	1373.61	1371.28	1372.22
8	1374.07	1374.02	1374.28	1374.65	1374.72	1374.94	1374.81	1374.97	1375.17	1373.35	1371.57	1372.13
9	1374.08	1374.10	1374.41	1374.64	1374.81	1374.55	1374.71	1374.73	1375.18	1373.03	1371.61	1372.22
10	1373.98	1374.22	1374.50	1374.46	1374.44	1374.64	1374.82	1374.86	1374.92	1373.03	1371.81	1372.20
11	1373.97	1374.21	1374.48	1374.45	1374.64	1374.94	1374.94	1375.07	1374.67	1373.17	1371.80	1372.21
12	1374.12	1374.20	1374.51	1374.46	1374.61	e1374.83	1374.81	1375.38	1375.16	1372.90	1371.93	1372.27
13	1374.12	1374.26	1374.41	1374.69	1374.57	e1374.94	1374.85	1366.15	1367.45	1372.99	1372.08	1372.42
14	1373.96	1374.24	1374.52	1374.49	1374.79	1374.95	1374.94	1366.93	1367.14	1373.28	1372.35	1372.46
15	1373.89	1374.19	1374.50	1374.45	1374.62	1374.67	1374.95	1366.62	1366.76	1373.35	1363.80	1372.44
16	1373.85	1374.18	1374.45	1374.54	1374.65	1374.63	1374.92	1366.30	e1366.75	1373.32	1363.67	1372.53
17	1374.01	1374.21	1374.49	1374.50	1374.69	1374.79	1374.78	1366.24	1367.73	1373.24	1363.46	1372.64
18	1374.13	1374.34	1374.60	1374.54	1374.84	1374.75	1374.85	1366.49	1367.73	1372.85	1363.37	1372.72
19	1374.03	1374.14	1374.36	1374.57	1374.89	1374.76	1374.75	1366.32	1367.34	1372.51	1371.66	1372.63
20	1374.09	1374.29	1374.43	1374.76	1374.72	1374.65	1374.82	1366.06	1366.61	1372.56	1371.88	1372.62
21	1374.06	1374.43	1374.55	1374.54	1374.58	1374.48	1375.30	1365.92	1366.52	1372.60	1372.01	1372.60
22	1374.16	1374.47	1374.61	1374.67	1374.61	1374.63	1366.42	1365.86	1366.27	1372.59	1372.03	1372.43
23	1374.18	1374.60	1374.40	1374.56	1374.81	1374.88	1367.08	1365.71	1365.54	1372.39	1372.08	1372.52
24	1374.06	1374.46	1374.41	1374.42	1374.90	1374.95	1366.55	1372.00	1365.06	1372.24	1372.22	1372.50
25	1373.82	1374.24	1374.51	1374.47	1374.61	1374.67	1366.08	1374.10	1365.14	1372.41	1372.30	1372.58
26	1373.85	1374.40	1374.52	1374.44	1374.53	1374.63	1366.01	1374.62	1373.11	1371.90	1372.39	1372.58
27	1373.94	1374.19	1374.58	1374.53	1374.70	1374.79	1374.52	1374.85	1373.46	1372.02	1372.41	1372.55
28	1374.12	1374.18	1374.66	1374.46	1374.80	1374.82	1374.65	1374.98	1373.77	1372.18	1372.42	1372.54
29	1374.04	1374.38	1374.38	1374.44	---	1374.72	1374.92	1375.04	1373.67	1372.26	1372.39	1372.52
30	1374.07	1374.49	1374.38	1374.45	---	1374.64	1365.69	1375.10	1373.27	1371.80	1372.35	1372.49
31	1374.25	---	1374.47	1374.57	---	1374.60	---	1375.04	---	1371.68	1372.28	---
MEAN	1373.98	1374.24	1374.46	1374.53	1374.64	1374.75	1372.87	1371.05	1371.13	1372.89	1370.90	1372.42
MAX	1374.25	1374.60	1374.66	1374.76	1374.90	1374.95	1375.30	1375.38	1375.18	1374.05	1372.42	1372.72
MIN	1373.62	1374.00	1374.27	1374.42	1374.34	1374.48	1365.69	1365.71	1365.06	1371.68	1363.37	1372.13

e Estimated

HARVEY COUNTY

380028097311101. Local number EB-145-A3

LOCATION.-- Lat 38°00'28", long 97°31'11", Hydrologic Unit 11030012, County Code 079, Halstead quadrangle, on the upstream side of the bridge, north of the levee on Halstead Road in Halstead. Owner: Ground-Water Management District # 2.

AQUIFER.--Equus Beds. Aquifer code: 112PLSC.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 2 in., depth 71.20 ft, screened 61.2-71.2 ft.

INSTRUMENTATION.--Submersible transducer interfaced to a data-collection platform/data logger with a 1-hour update interval.

DATUM.-- Datum of gage is NGVD of 1929. Measuring point is top of PVC casing, elevation 1,392.82 ft, top of casing is 2.3 ft above land surface.

REMARKS.--Water level fluctuates with river stage and nearby pumping.

PERIOD OF RECORD.--October 1995 to February 2002 (discontinued).

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 1,380.93 ft above NGVD of 1929, Nov. 5, 1998; lowest, 1,362.56 ft above NGVD of 1929, July 22, 1996.

EXTREMES FOR CURRENT YEAR.--Maximum water level, 1,375.16 ft, Mar. 8; minimum water level, 1,373.66 ft, Oct. 1.

ELEVATION, in FT (NGVD), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY OBSERVATION AT 1200 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1373.67	1374.25	1374.33	1374.54	e1374.47	---	---	---	---	---	---	---
2	1373.85	1374.08	1374.46	1374.53	1374.58	---	---	---	---	---	---	---
3	1373.82	1374.06	1374.53	1374.66	1374.58	---	---	---	---	---	---	---
4	1373.87	1374.09	1374.53	1374.75	1374.53	---	---	---	---	---	---	---
5	1373.85	1374.21	1374.53	1374.70	1374.62	---	---	---	---	---	---	---
6	1373.98	1374.25	1374.46	1374.63	1374.74	---	---	---	---	---	---	---
7	1374.02	1374.28	1374.54	1374.60	1374.69	---	---	---	---	---	---	---
8	1374.15	1374.11	1374.36	1374.76	1374.84	---	---	---	---	---	---	---
9	1374.15	1374.18	1374.49	1374.74	e1374.94	---	---	---	---	---	---	---
10	1374.06	1374.31	1374.59	1374.53	1374.54	---	---	---	---	---	---	---
11	1374.04	1374.30	1374.57	1374.52	1374.77	---	---	---	---	---	---	---
12	1374.20	e1374.28	1374.61	1374.50	1374.73	---	---	---	---	---	---	---
13	1374.21	e1374.36	1374.50	1374.76	1374.68	---	---	---	---	---	---	---
14	1374.02	1374.34	1374.61	1374.57	1374.92	---	---	---	---	---	---	---
15	1373.94	1374.27	1374.59	1374.54	1374.73	---	---	---	---	---	---	---
16	1373.93	1374.26	1374.54	1374.62	1374.77	---	---	---	---	---	---	---
17	1374.09	1374.30	1374.58	1374.58	1374.81	---	---	---	---	---	---	---
18	1374.21	1374.44	1374.66	1374.63	1374.98	---	---	---	---	---	---	---
19	1374.11	1374.22	1374.44	1374.66	1375.03	---	---	---	---	---	---	---
20	1374.17	1374.38	1374.51	1374.87	1374.85	---	---	---	---	---	---	---
21	1374.15	1374.52	1374.64	1374.63	1374.69	---	---	---	---	---	---	---
22	1374.24	1374.58	1374.69	1374.78	1374.74	---	---	---	---	---	---	---
23	1374.28	1374.70	1374.48	1374.67	1374.95	---	---	---	---	---	---	---
24	1374.15	1374.55	1374.48	e1374.52	1375.04	---	---	---	---	---	---	---
25	1373.89	1374.31	1374.59	1374.57	1374.73	---	---	---	---	---	---	---
26	1373.92	1374.49	1374.61	1374.57	1374.65	---	---	---	---	---	---	---
27	1374.02	1374.26	1374.69	1374.66	1374.82	---	---	---	---	---	---	---
28	1374.21	1374.26	1374.76	1374.58	1374.92	---	---	---	---	---	---	---
29	1374.12	1374.48	1374.47	1374.55	---	---	---	---	---	---	---	---
30	1374.16	1374.58	1374.47	1374.57	---	---	---	---	---	---	---	---
31	1374.34	---	1374.56	1374.69	---	---	---	---	---	---	---	---
MEAN	1374.06	1374.32	1374.54	1374.63	1374.76	---	---	---	---	---	---	---
MAX	1374.34	1374.70	1374.76	1374.87	1375.04	---	---	---	---	---	---	---
MIN	1373.67	1374.06	1374.33	1374.50	1374.47	---	---	---	---	---	---	---

e Estimated

HARVEY COUNTY

380643097353001. Local number 07143665

LOCATION.--Lat 38°06'43", long 97°35'30", Hydrologic Unit 11030012, County Code 079, Halstead quadrangle, at the downstream side of the county bridge, 0.4 mi south of Alta Mills, 0.8 mi downstream from Sand Creek, and at mile 50.1. Owner: U.S. Geological Survey.

AQUIFER.--Equus Beds. Aquifer code: 112PLSC.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 2 in., depth 40.1 ft, screened 30.1-40.1 ft.

INSTRUMENTATION.--Submersible transducer interfaced to a data-collection platform/data logger with a 1-hour update interval.

DATUM.--Datum of gage is NGVD of 1929. Measuring point is top of casing, elevation 1,416.97 ft, top of casing is 1.5 ft above land surface.

REMARKS.--Water level fluctuates with river stage.

PERIOD OF RECORD.--February 1994 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 1,415.93 ft above NGVD of 1929, June 11, 1995; lowest, 1,391.70 ft above NGVD of 1929, Aug. 10, 2002.

EXTREMES FOR CURRENT YEAR.--Maximum water level, 1,402.11 ft, June 18; minimum water level, 1,391.70 ft, Aug. 10.

ELEVATION, in FT (NGVD), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY OBSERVATION AT 1200 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1394.86	1393.91	1394.24	1394.24	1394.24	1394.29	1394.24	1395.44	1395.01	1394.25	1392.43	1392.46
2	1394.82	1393.95	1394.27	1394.25	1394.30	1394.20	1394.13	1395.20	1394.97	1394.02	1392.59	1392.53
3	1394.75	1393.98	1394.30	1394.28	1394.26	1394.22	1394.12	1395.09	1394.91	1394.63	1392.04	1392.39
4	1394.71	1394.03	1394.30	1394.29	1394.25	1394.26	1394.13	1394.98	1394.69	1394.80	1391.91	1392.58
5	1394.63	1394.08	1394.28	1394.27	1394.27	1394.28	1394.14	1394.98	1394.85	1393.98	1391.96	1392.68
6	1394.64	1394.10	1394.31	1394.26	1394.31	1394.28	1394.17	1394.94	1394.81	1394.04	1392.10	1392.76
7	1394.68	1394.13	1394.33	1394.28	1394.28	1394.31	1393.98	1394.88	1394.78	1393.66	1391.94	1392.04
8	1394.68	1394.08	1394.26	1394.31	1394.35	1394.32	1393.79	1394.54	1394.73	1393.64	1391.83	1391.89
9	1394.64	1394.15	1394.31	1394.32	1394.34	1394.17	1393.89	1394.38	1394.73	1393.65	1391.75	1391.82
10	1394.53	1394.19	1394.35	1394.26	1394.22	1394.23	1393.98	1394.47	1393.76	1393.45	1391.70	1392.23
11	1394.53	1394.19	1394.33	1394.26	1394.35	1394.30	1394.06	1394.36	1393.43	1393.98	1392.28	1392.30
12	1394.55	1394.20	1394.33	1394.29	1394.35	1394.28	1394.07	1394.98	1397.19	1393.89	1392.48	1392.33
13	1394.50	1394.22	1394.31	1394.36	1394.34	1394.32	1394.09	1395.20	1398.45	1393.07	1392.68	1392.47
14	1394.41	1394.22	1394.35	1394.26	1394.42	1394.29	1394.12	1395.57	1398.71	1393.12	1393.37	1392.57
15	1394.36	1394.21	1394.34	1394.26	1394.33	1394.22	1394.14	1395.37	1397.51	1392.94	1394.39	1392.66
16	1394.37	1394.21	1394.31	1394.24	1394.34	1394.22	1394.12	1395.26	1400.59	1393.53	1393.96	1392.77
17	1394.40	1394.24	1394.33	1394.24	1394.36	1394.26	1394.10	1397.68	1401.69	1393.45	1393.80	1392.85
18	1394.39	1394.29	1394.37	1394.26	1394.40	1394.23	1394.11	1398.27	1402.07	1393.48	1393.75	1392.90
19	1394.37	1394.22	1394.28	1394.26	1394.40	1394.22	1394.08	1397.03	1399.35	1392.83	1393.03	1392.95
20	1394.38	1394.28	1394.28	1394.34	1394.34	1394.19	1395.01	1396.44	1398.10	1392.74	1393.18	1393.00
21	1394.35	1394.30	1394.33	1394.25	1394.28	1394.13	1395.77	1396.11	1397.42	1392.71	1392.58	1393.03
22	1394.39	1394.31	1394.30	1394.33	1394.31	1394.22	1397.28	1395.90	1395.80	1392.66	1392.43	1393.04
23	1394.39	1394.35	1394.26	1394.26	1394.35	1394.28	1397.12	1395.66	1395.52	1392.51	1392.85	1393.07
24	1394.30	1394.28	1394.26	1394.23	1394.33	1394.26	1396.05	1395.52	1395.81	1392.43	1392.86	1393.09
25	1394.25	1394.25	1394.30	1394.24	1394.24	1394.18	1395.63	1395.42	1395.94	1392.35	1393.01	1393.12
26	1394.24	1394.26	1394.29	1394.27	1394.20	1394.18	1395.44	1395.40	1395.85	1392.26	1393.13	1393.14
27	1394.26	1394.20	1394.31	1394.29	1394.27	1394.24	1395.37	1395.36	1395.74	1392.12	1392.38	1393.14
28	1393.95	1394.20	1394.33	1394.24	1394.27	1394.24	1395.46	1395.28	1394.75	1392.09	1392.75	1393.16
29	1394.05	1394.27	1394.23	1394.22	---	1394.17	1395.86	e1395.22	1394.35	1392.22	1392.63	1393.17
30	1393.84	1394.29	1394.23	1394.26	---	1394.17	1395.73	1395.15	1394.30	1392.19	1392.19	1393.19
31	1393.85	---	1394.27	1394.32	---	1394.16	---	1395.07	---	1392.07	1392.57	---
MEAN	1394.42	1394.19	1394.30	1394.27	1394.31	1394.24	1394.74	1395.46	1396.33	1393.19	1392.66	1392.71
MAX	1394.86	1394.35	1394.37	1394.36	1394.42	1394.32	1397.28	1398.27	1402.07	1394.80	1394.39	1393.19
MIN	1393.84	1393.91	1394.23	1394.22	1394.20	1394.13	1393.79	1394.36	1393.43	1392.07	1391.70	1391.82

e Estimated

RENO COUNTY

380842098063701. Local number 07142680

LOCATION.--Lat 38°08'42", long 98°06'37", Hydrologic Unit 11030011, County Code 155, Halstead quadrangle, on the upstream side of the bridge, north of Highway K96, west of Nickerson, and at mile 825.8. Owner: U.S. Geological Survey.

AQUIFER.--Equus Beds. Aquifer code: 112PLSC.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 2 in., depth 47.0 ft, screened 37-47 ft.

INSTRUMENTATION.--Submersible transducer interfaced to a data-collection platform/data logger with a 1-hour update interval.

DATUM.--Datum of gage is NGVD of 1929. Measuring point is top of casing, elevation 1,603.68 ft, top of casing is 2.0 ft above land surface.

REMARKS.--Records good. Water level fluctuates with river stage.

PERIOD OF RECORD.--July 1997 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 1,596.70 ft above NGVD of 1929, June 12, 2001; lowest, 1,590.74 ft above NGVD of 1929, Aug. 6, 2002.

EXTREMES FOR CURRENT YEAR.--Maximum water level, 1,591.91 ft, Oct. 1; minimum water level, 1,590.74 ft, Aug. 6.

ELEVATION, in FT (NGVD), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY OBSERVATION AT 1200 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1591.88	1591.21	1591.04	1590.96	1590.95	1590.92	1590.88	1590.87	1590.83	1590.86	1590.76	1591.20
2	1591.82	1591.21	1591.05	1590.95	1590.95	1590.91	1590.87	1590.87	1590.83	1590.86	1590.76	1591.19
3	1591.77	1591.20	1591.05	1590.94	1590.95	1591.12	1590.87	1590.87	1590.83	1590.87	1590.75	1591.18
4	1591.72	1591.20	1591.03	1590.95	1590.95	1591.08	1590.87	1590.86	1590.83	1590.86	1590.75	1591.17
5	1591.70	1591.19	1591.04	1590.95	1590.95	1590.95	1590.86	1590.86	1590.84	1590.86	1590.75	1591.16
6	1591.65	1591.19	1591.03	1590.95	1590.96	1590.94	1590.86	1590.86	1590.83	1590.85	1590.75	1591.15
7	1591.62	1591.18	1591.03	1590.94	1590.96	1590.93	1590.86	1590.87	1590.82	1590.84	1590.75	1591.15
8	1591.58	1591.17	1591.02	1590.93	1590.95	1590.92	1590.87	1590.86	1590.82	1590.83	1590.74	1591.14
9	1591.56	1591.17	1591.01	1590.93	1590.96	1590.91	1590.88	1590.85	1590.82	1590.83	1590.74	1591.14
10	1591.53	1591.16	1591.01	1590.93	1590.96	1590.91	1590.87	1590.85	1590.81	1590.82	1590.77	1591.13
11	1591.50	1591.16	1591.01	1590.93	1590.95	1590.91	1590.87	1590.85	1590.81	1590.84	1590.75	1591.13
12	1591.48	1591.15	1591.01	1590.94	1590.95	1590.91	1590.87	1590.90	1590.86	1590.84	1590.80	1591.14
13	1591.46	1591.15	1591.01	1590.94	1590.95	1590.91	1590.87	1590.88	1590.91	1590.83	1591.79	1591.14
14	1591.43	1591.14	1591.01	1590.94	1590.95	1590.91	1590.86	1590.87	1590.89	1590.82	1591.52	1591.13
15	1591.41	1591.14	1591.00	1590.93	1590.95	1590.90	1590.86	1590.86	1590.87	1590.82	1591.36	1591.17
16	1591.39	1591.13	1591.00	1590.94	1590.95	1590.90	1590.86	1590.88	1591.16	1590.81	1591.27	1591.13
17	1591.37	1591.12	1591.00	1590.94	1590.94	1590.89	1590.86	1590.88	1591.14	1590.81	1591.24	1591.12
18	1591.35	1591.12	1591.00	1590.94	1590.93	1590.89	1590.87	1590.87	1591.08	1590.80	1591.18	1591.12
19	1591.34	1591.11	1590.99	1590.94	1590.94	1590.90	1590.86	1590.86	1591.03	1590.80	1591.11	1591.11
20	1591.33	1591.11	1590.99	1590.95	1590.93	1590.90	1590.87	1590.86	1591.01	1590.79	1591.07	1591.11
21	1591.32	1591.10	1590.98	1590.95	1590.93	1590.90	1590.92	1590.85	1590.99	1590.79	1591.28	1591.10
22	1591.31	1591.10	1590.98	1590.95	1590.93	1590.89	1590.91	1590.85	1590.97	1590.80	1591.26	1591.10
23	1591.30	1591.09	1590.98	1590.95	1590.93	1590.89	1590.90	1590.85	1590.95	1590.79	1591.24	1591.09
24	1591.29	1591.09	1590.98	1590.96	1590.95	1590.89	1590.90	1590.85	1590.93	1590.78	1591.35	1591.09
25	1591.27	1591.08	1590.98	1590.96	1590.93	1590.89	1590.89	1590.85	1590.92	1590.78	1591.28	1591.08
26	1591.26	1591.08	1590.97	1590.96	1590.92	1590.88	1590.88	1590.85	1590.91	1590.77	1591.26	1591.08
27	1591.24	1591.06	1590.96	1590.96	1590.91	1590.88	1590.89	1590.84	1590.90	1590.77	1591.28	1591.08
28	1591.23	1591.05	1590.96	1590.96	1590.92	1590.88	1590.88	1590.84	1590.89	1590.77	1591.26	1591.08
29	1591.23	1591.04	1590.96	1590.95	---	1590.88	1590.88	1590.84	1590.89	1590.77	1591.24	1591.07
30	1591.22	1591.04	1590.96	1590.96	---	1590.88	1590.88	1590.84	1590.87	1590.76	1591.22	1591.07
31	1591.22	---	1590.96	1590.96	---	1590.88	---	1590.84	---	1590.76	1591.21	---
MEAN	1591.44	1591.13	1591.00	1590.95	1590.94	1590.91	1590.88	1590.86	1590.91	1590.81	1591.08	1591.12
MAX	1591.88	1591.21	1591.05	1590.96	1590.96	1591.12	1590.92	1590.90	1591.16	1590.87	1591.79	1591.20
MIN	1591.22	1591.04	1590.96	1590.93	1590.91	1590.88	1590.86	1590.84	1590.81	1590.76	1590.74	1591.07

374956097231601. Local number 07144200

LOCATION.--Lat 37°49'56", long 97°23'16", Hydrologic Unit 11030012, County Code 173, Maize quadrangle, on right bank at downstream side of county highway bridge, 0.5 mi west of Valley Center, and at mile 15.6 from mouth. Owner: U.S. Geological Survey.

AQUIFER.--Equus Beds. Aquifer code: 112PLSC.

WELL CHARACTERISTICS.--Drilled, unused water-table well, diameter 2 in., depth 50.0 ft, screened 40.0-50.0 ft.

INSTRUMENTATION.--Submersible transducer interfaced to a data-collection platform/data logger with a 1-hour update interval.

DATUM.--Datum of gage is NGVD of 1929. Measuring point is top of casing, elevation 1,349.63 ft, top of casing is 2.00 ft above land-surface datum.

REMARKS.--Records good. Water level fluctuates with river stage.

PERIOD OF RECORD.--October 1993 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level 1,334.68 ft above NGVD of 1929, June 13, 1995; lowest, 1,327.59 ft above NGVD of 1929, Oct. 2, 1994.

EXTREMES FOR CURRENT YEAR.--Maximum water level, 1,330.93 ft, June 13; minimum water level, 1,327.75 ft, Aug. 11.

ELEVATION, in FT (NGVD), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY OBSERVATION AT 1200 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1328.77	1328.34	1328.26	1328.12	1328.15	1328.13	1328.08	1328.75	1328.71	1328.83	1327.94	1327.86
2	1328.74	1328.33	1328.25	1328.12	1328.15	1328.16	1328.07	1328.62	1328.70	1328.79	1327.93	1327.84
3	1328.69	1328.32	1328.25	1328.15	1328.13	1328.15	1328.06	1328.56	1328.67	1328.75	1327.90	1327.84
4	1328.66	1328.33	1328.26	1328.10	1328.13	1328.15	1328.06	1328.50	1328.64	1328.71	1327.89	1327.83
5	1328.67	1328.33	1328.25	1328.10	1328.13	1328.13	1328.05	1328.46	1329.26	1328.65	1327.88	1327.81
6	1328.70	1328.32	1328.25	1328.10	1328.14	1328.13	1328.05	1328.43	1329.10	1328.60	1327.85	1327.80
7	1328.63	1328.31	1328.25	1328.10	1328.14	1328.13	1328.06	1328.41	1328.94	1328.56	1327.84	1327.80
8	1328.61	1328.31	1328.25	1328.10	1328.16	1328.13	1328.08	1328.43	1328.84	1328.52	1327.81	1327.80
9	1328.61	1328.31	1328.25	1328.10	1328.17	1328.13	1328.15	1328.40	1328.77	1328.48	1327.78	1327.79
10	1328.58	1328.31	1328.25	1328.11	1328.18	1328.16	1328.14	1328.41	1328.71	1328.56	1327.78	1327.79
11	1328.55	1328.31	1328.25	1328.11	1328.20	1328.14	1328.12	1328.50	1328.67	1328.44	1327.76	1327.79
12	1328.53	1328.31	1328.25	1328.11	1328.19	1328.12	1328.11	1329.01	1329.50	1328.41	1327.79	1327.79
13	1328.51	1328.31	1328.24	1328.11	1328.18	1328.13	1328.30	1329.10	1330.93	1328.38	1327.95	1327.79
14	1328.49	1328.31	1328.25	1328.11	1328.21	1328.11	1328.20	1329.05	1330.75	1328.34	1328.02	1327.80
15	1328.48	1328.31	1328.24	1328.11	1328.20	1328.10	1328.16	1329.01	1330.48	1328.30	1328.41	1327.80
16	1328.46	1328.30	1328.23	1328.09	1328.19	1328.10	1328.12	1328.83	1330.83	1328.28	1328.68	1327.81
17	1328.46	1328.30	1328.22	1328.09	1328.18	1328.09	1328.11	1329.33	1330.85	1328.25	1328.38	1327.82
18	1328.44	1328.31	1328.22	1328.08	1328.20	1328.10	1328.10	1330.29	1330.89	1328.21	1328.25	1327.81
19	1328.44	1328.30	1328.21	1328.08	1328.19	1328.09	1328.09	1330.05	1330.81	1328.17	1328.15	1327.84
20	1328.43	1328.29	1328.20	1328.10	1328.19	1328.09	1328.08	1329.50	1330.35	1328.15	1328.10	1327.83
21	1328.42	1328.29	1328.20	1328.08	1328.18	1328.08	1328.71	1329.24	1329.92	1328.13	1328.05	1327.81
22	1328.42	1328.29	1328.18	1328.10	1328.17	1328.08	1329.28	1329.07	1329.68	1328.12	1328.01	1327.80
23	1328.40	1328.31	1328.17	1328.08	1328.17	1328.09	1329.87	1328.95	1329.50	1328.10	1327.96	1327.79
24	1328.40	1328.29	1328.16	1328.08	1328.15	1328.09	1329.41	1328.94	1329.35	1328.08	1327.97	1327.79
25	1328.38	1328.29	1328.16	1328.08	1328.17	1328.08	1329.02	1329.87	1329.26	1328.04	1327.95	1327.79
26	1328.36	1328.29	1328.16	1328.08	1328.15	1328.08	1328.84	1329.30	1329.16	1328.01	1327.94	1327.79
27	1328.36	1328.27	1328.14	1328.08	1328.17	1328.08	1328.75	1329.05	1329.08	1327.99	1327.93	1327.78
28	1328.36	1328.27	1328.14	1328.08	1328.14	1328.08	1328.65	1328.93	1329.01	1327.98	1327.93	1327.78
29	1328.36	1328.27	1328.14	1328.09	---	1328.10	1328.78	1328.84	1328.95	1327.98	1327.93	1327.77
30	1328.35	1328.27	1328.13	1328.11	---	1328.08	1328.87	1328.78	1328.88	1327.98	1327.91	1327.77
31	1328.34	---	1328.14	1328.13	---	1328.08	---	1328.73	---	1327.96	1327.88	---
MEAN	1328.50	1328.30	1328.21	1328.10	1328.17	1328.11	1328.41	1328.95	1329.51	1328.32	1327.98	1327.80
MAX	1328.77	1328.34	1328.26	1328.15	1328.21	1328.16	1329.87	1330.29	1330.93	1328.83	1328.68	1327.86
MIN	1328.34	1328.27	1328.13	1328.08	1328.13	1328.08	1328.05	1328.40	1328.64	1327.96	1327.76	1327.77

SEDGWICK COUNTY

375259097252901. Local number EB-142

LOCATION.-- Lat 37°52'59", long 97°25'29", Hydrologic Unit 11030012, County Code 173, Sedgwick quadrangle, at the downstream side of the county bridge, 2.0 mi south of Sedgwick, 4.1 mi downstream from Sand Creek. Owner: U.S. Geological Survey.

AQUIFER.--Equus Beds. Aquifer code: 112PLSC.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 2 in., depth 48.5 ft, screened 38.5-48.5 ft.

INSTRUMENTATION.--Submersible transducer interfaced to a data-collection platform/data logger with a 1-hour update interval.

DATUM.-- Datum of gage is NGVD of 1929. Measuring point is top of PVC casing, elevation 1,370.34 ft, top of casing is 1.5 ft above land surface.

REMARKS.--Water level flucuates with river stage and nearby pumping.

PERIOD OF RECORD.--November 1993 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 1,359.52 ft above NGVD of 1929, Nov. 4, 1998; lowest, 1,344.42 ft above NGVD of 1929, Sept. 230, 2002.

EXTREMES FOR CURRENT YEAR.--Maximum water level 1,348.55 ft, June 18; minimum water level, 1,344.42 ft, Sept. 30.

ELEVATION, in FT (NGVD), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY OBSERVATION AT 1200 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1346.22	1345.60	1345.45	1345.34	1345.26	1345.23	1345.13	1345.65	1345.72	1346.28	1345.03	1344.61
2	1346.18	1345.59	1345.45	1345.33	1345.28	1345.22	1345.11	1345.57	1345.70	1346.23	1344.99	1344.59
3	1346.13	1345.58	1345.45	1345.33	1345.26	1345.20	1345.10	1345.53	1345.67	1346.17	1344.97	1344.58
4	1346.10	1345.58	1345.45	1345.34	1345.26	1345.20	1345.10	1345.49	1345.64	1346.12	1344.94	1344.56
5	1346.07	1345.58	1345.44	1345.32	1345.26	1345.21	1345.10	1345.46	1345.88	1346.06	1344.92	1344.55
6	1346.06	1345.57	1345.44	1345.31	1345.27	1345.20	1345.11	1345.45	1345.86	1346.00	1344.89	1344.54
7	1346.02	1345.57	1345.44	1345.32	1345.26	1345.22	1345.11	1345.43	1345.81	1345.97	1344.87	1344.53
8	1345.99	1345.55	1345.42	1345.31	1345.28	1345.22	1345.11	1345.42	1345.74	1345.91	1344.84	1344.52
9	1345.98	1345.56	1345.43	1345.30	1345.27	1345.20	1345.14	1345.38	1345.69	1345.86	1344.82	1344.51
10	1345.94	1345.55	1345.43	1345.29	1345.26	1345.22	1345.14	1345.40	1345.65	1345.86	1344.80	1344.49
11	1345.92	1345.54	1345.43	1345.30	1345.29	1345.23	1345.13	1345.45	1345.61	1345.78	1344.77	1344.49
12	1345.91	1345.53	1345.42	1345.30	1345.27	1345.21	1345.14	e1345.54	1346.57	1345.74	e1344.75	1344.49
13	1345.86	1345.54	1345.41	1345.32	1345.26	e1345.21	1345.19	1345.73	1347.90	1345.70	e1344.75	1344.49
14	1345.84	1345.53	1345.42	1345.29	1345.29	1345.17	1345.17	1345.78	1347.67	1345.66	e1344.80	1344.47
15	1345.82	1345.52	1345.41	1345.30	1345.26	e1345.17	1345.15	1345.79	1347.48	1345.61	e1344.90	1344.47
16	1345.80	1345.51	1345.40	1345.29	1345.26	1345.17	1345.14	1345.71	1348.28	1345.57	e1345.10	1344.47
17	1345.80	1345.51	1345.41	1345.29	1345.27	1345.17	1345.12	1345.97	1348.49	1345.53	e1345.20	1344.48
18	1345.77	1345.51	1345.41	1345.29	1345.28	1345.17	1345.11	1346.44	1348.52	1345.49	e1345.00	1344.48
19	1345.76	1345.50	1345.39	1345.28	1345.27	1345.16	1345.09	1346.28	1348.25	1345.45	e1344.90	1344.47
20	1345.74	1345.51	1345.39	1345.31	1345.26	1345.15	1345.08	1346.14	1347.68	1345.41	1344.87	1344.47
21	1345.73	1345.50	1345.40	1345.26	1345.24	1345.15	e1345.30	1346.05	1347.41	1345.37	1344.82	1344.46
22	1345.73	1345.50	1345.38	1345.28	1345.25	1345.15	e1345.80	1345.97	1347.20	1345.34	1344.78	1344.46
23	1345.71	1345.51	1345.37	1345.27	1345.25	1345.17	e1346.10	1345.89	1347.05	1345.30	1344.74	1344.46
24	1345.69	1345.49	1345.37	1345.26	1345.24	1345.15	e1346.10	1345.88	1346.91	1345.28	1344.73	1344.46
25	1345.67	1345.49	1345.38	1345.26	1345.23	1345.14	e1346.00	1346.04	1346.79	1345.24	1344.71	1344.46
26	1345.65	1345.48	1345.37	1345.25	1345.22	1345.14	e1345.90	1345.95	1346.69	1345.20	1344.70	1344.46
27	1345.65	1345.47	1345.37	1345.27	1345.22	1345.15	e1345.80	1345.88	1346.59	1345.17	1344.69	1344.45
28	1345.65	1345.46	1345.37	1345.26	1345.22	1345.13	e1345.75	1345.83	1346.50	1345.13	1344.69	1344.45
29	1345.63	1345.47	1345.35	1345.27	---	1345.12	e1345.70	1345.80	1346.42	1345.11	1344.66	1344.45
30	1345.62	1345.46	1345.35	1345.28	---	1345.12	1345.69	1345.77	1346.34	1345.09	1344.64	1344.44
31	1345.63	---	1345.34	1345.28	---	1345.11	---	1345.76	---	1345.06	1344.62	---
MEAN	1345.85	1345.53	1345.40	1345.29	1345.26	1345.18	1345.35	1345.76	1346.72	1345.60	1344.84	1344.49
MAX	1346.22	1345.60	1345.45	1345.34	1345.29	1345.23	1346.10	1346.44	1348.52	1346.28	1345.20	1344.61
MIN	1345.62	1345.46	1345.34	1345.25	1345.22	1345.11	1345.08	1345.38	1345.61	1345.06	1344.62	1344.44

e Estimated

375300097253301. Local number EB-142-A2

LOCATION.-- Lat 37°53'00", long 97°25'33", Hydrologic Unit 11030012, County Code 173, Sedgwick quadrangle, at the right upstream side of the county bridge in the streambed, 2.0 mi south of Sedgwick, 4.1 mi downstream from Sand Creek. Owner: Ground-Water Management District #2.

AQUIFER.--Equus Beds. Aquifer code: 112PLSC.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 2 in., depth 42.50 ft, screened 32.1-42.5 ft.

INSTRUMENTATION.--Submersible transducer interfaced to a data-collection platform/data logger with a 1-hour update interval.

DATUM.-- Datum of gage is NGVD of 1929. Measuring point is top of PVC casing, elevation 1,355.15 ft, top of casing is 2.03 ft above land surface.

REMARKS.--Water level fluctuates with river stage and nearby pumping.

PERIOD OF RECORD.--January 1996 to February 2002 (discontinued).

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 1,364.21 ft above NGVD of 1929, Nov. 3, 1998; lowest, 1,345.04 ft above NGVD of 1929, Aug. 9, 1996.

EXTREMES FOR CURRENT YEAR.--Maximum water level, 1,345.56 ft, Jan. 11; minimum water level, 1,345.27 ft, Mar. 9.

ELEVATION, in FT (NGVD), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY OBSERVATION AT 1200 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1346.57	1345.97	1345.79	1345.60	1345.43	---	---	---	---	---	---	---
2	1346.54	1345.99	1345.78	1345.59	1345.45	---	---	---	---	---	---	---
3	1346.50	1345.98	1345.79	1345.58	1345.43	---	---	---	---	---	---	---
4	1346.47	1345.97	1345.78	1345.59	1345.43	---	---	---	---	---	---	---
5	1346.45	1345.97	1345.78	1345.58	1345.43	---	---	---	---	---	---	---
6	1346.45	1345.97	1345.76	1345.55	1345.43	---	---	---	---	---	---	---
7	1346.41	1345.96	1345.76	1345.57	1345.42	---	---	---	---	---	---	---
8	1346.39	1345.93	1345.75	1345.55	1345.44	---	---	---	---	---	---	---
9	1346.38	1345.94	1345.75	1345.53	1345.43	---	---	---	---	---	---	---
10	1346.34	1345.93	1345.75	1345.51	1345.40	---	---	---	---	---	---	---
11	1346.33	1345.93	1345.73	1345.54	1345.44	---	---	---	---	---	---	---
12	1346.32	1345.92	1345.73	1345.54	1345.41	---	---	---	---	---	---	---
13	1346.23	1345.92	1345.72	1345.55	1345.41	---	---	---	---	---	---	---
14	1346.26	1345.90	1345.73	1345.53	1345.44	---	---	---	---	---	---	---
15	1346.21	1345.90	1345.71	1345.52	1345.41	---	---	---	---	---	---	---
16	1346.21	1345.89	1345.70	1345.52	1345.39	---	---	---	---	---	---	---
17	1346.21	1345.88	1345.70	1345.51	1345.40	---	---	---	---	---	---	---
18	1346.19	1345.88	1345.71	1345.51	1345.41	---	---	---	---	---	---	---
19	1346.16	1345.86	1345.69	1345.50	1345.41	---	---	---	---	---	---	---
20	1346.16	1345.87	1345.68	1345.53	1345.38	---	---	---	---	---	---	---
21	1346.14	1345.87	1345.68	1345.44	1345.37	---	---	---	---	---	---	---
22	1346.14	1345.86	1345.67	1345.47	1345.37	---	---	---	---	---	---	---
23	1346.13	1345.87	1345.66	1345.47	1345.38	---	---	---	---	---	---	---
24	1346.10	1345.85	1345.66	1345.46	1345.37	---	---	---	---	---	---	---
25	1346.06	1345.84	1345.65	1345.46	1345.34	---	---	---	---	---	---	---
26	1346.06	1345.83	1345.65	1345.44	1345.33	---	---	---	---	---	---	---
27	1346.06	1345.81	1345.64	1345.48	1345.33	---	---	---	---	---	---	---
28	1346.06	1345.80	1345.65	1345.45	1345.34	---	---	---	---	---	---	---
29	1346.02	1345.81	1345.62	1345.45	---	---	---	---	---	---	---	---
30	1345.98	1345.80	1345.61	1345.46	---	---	---	---	---	---	---	---
31	1346.03	---	1345.61	1345.46	---	---	---	---	---	---	---	---
MEAN	1346.24	1345.90	1345.71	1345.51	1345.40	---	---	---	---	---	---	---
MAX	1346.57	1345.99	1345.79	1345.60	1345.45	---	---	---	---	---	---	---
MIN	1345.98	1345.80	1345.61	1345.44	1345.33	---	---	---	---	---	---	---

SEDGWICK COUNTY

375300097253501. Local number EB-142-A3

LOCATION.-- Lat 37°53'00", long 97°25'35", Hydrologic Unit 11030012, County Code 173, Sedgwick quadrangle, at the right upstream side of the county bridge west of the stream, 2.0 mi south of Sedgwick, 4.1 mi downstream from Sand Creek. Owner: Ground-Water Management District #2.

AQUIFER.--Equus Beds. Aquifer code: 112PLSC.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 2 in., depth 48.30 ft, screened 38.3-48.3 ft.

INSTRUMENTATION.--Submersible transducer interfaced to a data-collection platform/data logger with a 1-hour update interval.

DATUM.--Datum of gage is NGVD of 1929. Measuring point is top of PVC casing, elevation 1,363.63 ft, top of casing is 2.03 ft above land surface.

REMARKS.--Water level fluctuates with river stage and nearby pumping.

PERIOD OF RECORD.--January 1996 to February 2002 (discontinued).

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 1,364.21 ft above NGVD of 1929, Nov. 3, 1998; lowest, 1,345.13 ft above NGVD of 1929, Aug. 9, 1996.

EXTREMES FOR CURRENT YEAR.--Maximum water level, 1,346.90 ft, Oct. 1; minimum water level, 1,345.86 ft, Jan. 21.

ELEVATION, in FT (NGVD), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY OBSERVATION AT 1200 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1346.90	1346.34	1346.21	1346.08	1345.96	---	---	---	---	---	---	---
2	1346.87	1346.36	1346.20	1346.07	1345.98	---	---	---	---	---	---	---
3	1346.83	1346.35	1346.21	1346.07	1345.96	---	---	---	---	---	---	---
4	1346.80	1346.34	1346.20	1346.07	1345.97	---	---	---	---	---	---	---
5	1346.78	1346.35	1346.19	1346.06	1345.97	---	---	---	---	---	---	---
6	1346.77	1346.34	1346.19	1346.02	1345.98	---	---	---	---	---	---	---
7	1346.74	1346.34	1346.19	1346.04	1345.97	---	---	---	---	---	---	---
8	1346.73	1346.31	1346.17	1346.02	1345.99	---	---	---	---	---	---	---
9	1346.71	1346.32	1346.18	1345.98	1345.97	---	---	---	---	---	---	---
10	1346.67	1346.31	1346.18	1345.99	1345.95	---	---	---	---	---	---	---
11	1346.66	1346.31	1346.18	1346.04	1345.99	---	---	---	---	---	---	---
12	1346.66	1346.30	1346.17	1346.03	1345.95	---	---	---	---	---	---	---
13	1346.52	1346.31	1346.16	1346.05	1345.96	---	---	---	---	---	---	---
14	1346.58	1346.29	1346.16	1346.02	1345.99	---	---	---	---	---	---	---
15	1346.55	1346.29	1346.16	1346.03	1345.96	---	---	---	---	---	---	---
16	1346.55	1346.28	1346.15	1346.01	1345.95	---	---	---	---	---	---	---
17	1346.54	1346.28	1346.15	1346.01	1345.96	---	---	---	---	---	---	---
18	1346.53	1346.27	1346.16	1346.02	1345.97	---	---	---	---	---	---	---
19	1346.51	1346.26	1346.14	1346.01	1345.97	---	---	---	---	---	---	---
20	1346.51	1346.27	1346.13	1346.04	1345.95	---	---	---	---	---	---	---
21	1346.49	1346.27	1346.14	1345.86	1345.94	---	---	---	---	---	---	---
22	1346.49	1346.27	1346.12	1345.98	1345.94	---	---	---	---	---	---	---
23	1346.48	1346.27	1346.12	1345.99	1345.95	---	---	---	---	---	---	---
24	1346.45	1346.24	1346.11	1345.96	1345.94	---	---	---	---	---	---	---
25	1346.43	1346.25	1346.11	1345.95	1345.92	---	---	---	---	---	---	---
26	1346.42	1346.24	1346.11	1345.95	1345.91	---	---	---	---	---	---	---
27	1346.42	1346.22	1346.11	1345.99	1345.92	---	---	---	---	---	---	---
28	1346.41	1346.22	1346.11	1345.98	1345.92	---	---	---	---	---	---	---
29	1346.39	1346.22	1346.09	1345.98	---	---	---	---	---	---	---	---
30	1346.31	1346.22	1346.09	1345.99	---	---	---	---	---	---	---	---
31	1346.40	---	1346.08	1345.99	---	---	---	---	---	---	---	---
MEAN	1346.58	1346.29	1346.15	1346.01	1345.96	---	---	---	---	---	---	---
MAX	1346.90	1346.36	1346.21	1346.08	1345.99	---	---	---	---	---	---	---
MIN	1346.31	1346.22	1346.08	1345.86	1345.91	---	---	---	---	---	---	---

STAFFORD COUNTY

381119098435301. Local number 21S 13W 27DDDC01

LOCATION.--Lat 38°11'19", long 98°43'53", Hydrologic Unit 11030004, County Code 185, from Great Bend on Highway 281, go 12 mi south, then 0.75 mi east. Gage is in pasture on north side of dirt road.

AQUIFER.--Ogallala Formation. Aquifer code: 121OGLL.

WELL CHARACTERISTICS.--Drilled observation well, diameter 2 in., depth 44 ft. Prior to Mar. 27, 2000, well was located 200 ft from current site and published under station number 381120098434802.

INSTRUMENTATION.--Submersible transducer interfaced to a data-collection platform/data logger with a 1-hour update interval.

DATUM.--Datum of gage is NGVD of 1929. Measuring point is top of PVC casing, elevation 1,880.57 ft, measuring point is 4.7 ft above land surface.

REMARKS.--Water level fluctuates with nearby pumping.

PERIOD OF RECORD.--2000 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 1,871.55 ft above NGVD of 1929, May 10, 2000; lowest, 1,863.13 ft above NGVD of 1929, Sept. 30, 2002.

EXTREMES FOR CURRENT YEAR.--Maximum water level, 1,865.07, June 7; minimum water level, 1,863.13, Sept. 30.

ELEVATION, in FT (NGVD), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY OBSERVATION AT 1200 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1863.67	1863.84	1863.96	1864.00	1864.12	1864.10	1864.13	1864.37	1864.90	1864.74	1863.90	1863.49
2	1863.65	1863.96	1863.91	1864.00	1864.07	1864.19	1864.25	1864.41	1864.94	1864.73	1863.88	1863.47
3	1863.70	1863.99	1863.88	1863.97	1864.11	1864.19	1864.25	1864.42	1864.98	1864.71	1863.84	1863.45
4	1863.70	1864.03	1863.88	1863.92	1864.12	1864.13	1864.26	1864.44	1865.02	1864.69	1863.81	1863.42
5	1863.75	1863.98	1863.91	1863.95	1864.11	1864.11	1864.25	1864.45	1865.04	1864.66	1863.78	1863.41
6	1863.73	1863.96	1863.90	1863.98	1864.07	1864.11	1864.21	1864.46	1865.06	1864.63	1863.75	1863.39
7	1863.72	1864.00	1863.88	1863.96	1864.10	1864.07	1864.18	1864.48	1865.06	1864.59	1863.72	1863.37
8	1863.71	1864.05	1863.96	1863.93	1864.03	1864.06	1864.24	1864.49	1865.05	1864.57	1863.69	1863.35
9	1863.72	1864.01	1863.90	1863.92	1864.05	1864.21	1864.29	1864.55	1865.03	1864.54	1863.67	1863.34
10	1863.79	1863.97	1863.88	1864.01	1864.17	1864.16	1864.25	1864.56	1865.01	1864.51	1863.63	1863.32
11	1863.78	1863.96	1863.89	1864.01	1864.07	1864.08	1864.24	1864.56	1864.98	1864.49	1863.60	1863.29
12	1863.74	1863.93	1863.90	1864.03	1864.14	1864.11	1864.29	1864.60	1864.96	1864.47	1863.58	1863.28
13	1863.74	1863.91	1863.94	1863.97	1864.14	1864.06	1864.28	1864.62	1864.95	1864.45	1863.62	1863.27
14	1863.85	1863.91	1863.89	1864.08	1864.05	1864.07	1864.25	1864.62	1864.92	1864.42	1863.69	1863.25
15	1863.89	1863.92	1863.90	1864.07	1864.17	1864.16	1864.23	1864.62	1864.93	1864.40	1863.67	1863.24
16	1863.86	1863.96	1863.96	1864.09	1864.16	1864.16	1864.27	1864.65	1865.04	1864.38	1863.62	1863.24
17	1863.80	1863.94	1863.93	1864.09	1864.12	1864.16	1864.31	1864.67	1865.07	1864.34	1863.59	1863.24
18	1863.83	1863.92	1863.88	1864.06	1864.09	1864.20	1864.31	1864.69	1865.05	1864.31	1863.59	1863.23
19	1863.84	1864.01	1863.97	1864.08	1864.09	1864.23	1864.33	1864.70	1864.99	1864.27	1863.56	1863.22
20	1863.84	1863.95	1863.96	1863.98	1864.13	1864.23	1864.35	1864.71	1864.92	1864.24	1863.53	1863.21
21	1863.88	1863.91	1863.90	1864.08	1864.19	1864.26	1864.33	1864.71	1864.91	1864.22	1863.51	1863.20
22	1863.82	1863.85	1863.97	1864.01	1864.15	1864.17	1864.34	1864.71	1864.90	1864.18	1863.49	1863.19
23	1863.82	1863.78	1863.98	1864.09	1864.09	1864.09	1864.34	1864.74	1864.90	1864.15	1863.47	1863.18
24	1863.94	1863.86	1863.95	1864.10	1864.09	1864.11	1864.37	1864.75	1864.87	1864.12	1863.50	1863.18
25	1864.05	1863.87	1863.92	1864.08	1864.18	1864.18	1864.37	1864.76	1864.85	1864.09	1863.58	1863.17
26	1864.04	1863.88	1863.95	1864.05	1864.19	1864.18	1864.34	1864.77	1864.84	1864.05	1863.62	1863.17
27	1863.97	1863.94	1863.94	1864.03	1864.12	1864.11	1864.24	1864.78	1864.83	1864.02	1863.60	1863.16
28	1863.97	1863.94	1863.90	1864.07	1864.09	1864.13	1864.39	1864.81	1864.80	1863.99	1863.57	1863.15
29	1864.00	1863.86	1864.00	1864.09	---	1864.18	1864.39	1864.83	1864.79	1863.97	1863.56	1863.14
30	1863.94	1863.89	1864.01	1864.10	---	1864.19	1864.34	1864.85	1864.76	1863.94	1863.53	1863.14
31	1863.89	---	1863.97	1864.05	---	1864.22	---	1864.88	---	1863.92	1863.50	---
MEAN	1863.83	1863.93	1863.93	1864.03	1864.12	1864.15	1864.29	1864.63	1864.94	1864.35	1863.63	1863.27
MAX	1864.05	1864.05	1864.01	1864.10	1864.19	1864.26	1864.39	1864.88	1865.07	1864.74	1863.90	1863.49
MIN	1863.65	1863.78	1863.88	1863.92	1864.03	1864.06	1864.13	1864.37	1864.76	1863.92	1863.47	1863.14

KANSAS RIVER BASIN

384021100545400 SCOTT LAKE STATE PARK, KS
(National Atmospheric Deposition Program/National Trends Network station)

LOCATION.--Lat 3840"21", long 100°54'54", in SW 1/4 SW 1/4 SE 1/4 sec.12, T.16 S., R.33 W., Scott County, Hydrologic Unit 10260004, 14 mi north of Scott City, and 1 mi south of Scott Lake.

PERIOD OF RECORD.--March 1984 to current year.

INSTRUMENTATION.--The sample collector is an Aerochem Metrics Wet/Dry Precipitation Collector and a recording rain gage (with event recorder).

REMARKS.--Chemical analyses of rainfall collected in wet-dry automatic sampler. Data collected in cooperation with Kansas Department of Wildlife and Parks. Chemical analyses from National Atmospheric Deposition Program, National Trends Network Analytical Laboratory. If a sufficient volume of sample is collected, specific conductance and pH are measured in the field before the composite sample is sent in for analysis.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	PRECIP-ITATION TOTAL INCHES/ WEEK (00046)	SAMPLE SIZE (ML) (32002)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	SPE-CIFIC CON-DUCT-ANCE LAB (US/CM) (90095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	PH WATER WHOLE LAB (STAND-ARD UNITS) (00403)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)
OCT 02-09	.10	53	--	13	--	6.0	.83	.28	.03	.03	7	.0	.10
OCT 09-16	.06	53	--	13	--	6.0	.83	.28	.03	.03	7	.0	.10
NOV 06-13	.10	190	11	9	6.3	5.9	.49	.18	.01	.03	10	.0	.03
NOV 20-27	.20	340	6	6	6.1	6.1	.82	.29	.02	.03	6	.0	.06
DEC 11-18	.02	36	--	10	--	5.4	--	.10	<.01	.03	--	--	.01
DEC 18-25	.04	31	--	21	--	5.6	6.15	2.29	.11	.49	14	.1	.21
JAN 01-08	.01	21	--	10	--	5.9	--	.14	<.02	.02	--	--	<.02
JAN 08-15	.03	94	35	22	--	4.5	.28	.10	.01	.08	38	.1	M
JAN 29-FEB 05	.35	330	17	3	--	5.8	.39	.14	.01	.01	4	.0	.01
FEB 05-12	.10	140	11	9	--	6.4	.87	.31	.02	.04	9	.0	.04
FEB 19-26	.10	69	--	5	--	6.2	.80	.29	.02	.02	4	.0	.05
MAR 19-26	.13	160	30	31	--	6.8	4.81	1.77	.09	.15	6	.0	.17
APR 02-09	.82	1400	18	16	6.5	6.6	1.04	.36	.03	.03	6	.0	.04
APR 09-16	.43	710	7	6	6.0	6.2	.21	.07	.01	.01	6	.0	.01
APR 23-30	.06	52	--	126	--	7.3	37.2	11.2	2.26	4.69	21	.3	.42
APR 30-MAY 07	.02	42	--	32	--	6.5	6.23	2.25	.15	.31	10	.1	.09
MAY 07-14	.09	94	41	45	6.9	6.7	9.76	3.48	.26	.66	13	.1	.27
MAY 14-21	.15	290	16	15	6.5	6.7	1.36	.47	.05	.07	10	.0	.04
MAY 21-28	.95	1700	12	14	6.2	6.5	1.57	.55	.05	.12	14	.0	.05
MAY 28-JUN 04	.40	670	12	13	6.4	6.4	2.50	.90	.06	.07	6	.0	.09
JUN 11-18	.76	1300	19	15	6.6	6.7	1.59	.57	.04	.06	7	.0	.08
JUN 18-25	1.00	1700	35	11	6.5	6.6	2.77	1.02	.06	.07	5	.0	.07
JUN 25-JUL 02	.36	630	22	22	6.5	6.5	3.87	1.36	.12	.07	3	.0	.29
JUL 02-09	.34	560	7	7	6.0	6.3	.23	.07	.01	.08	39	.1	.02
JUL 16-23	.40	660	13	14	6.4	6.4	2.13	.76	.06	.03	3	.0	.12
JUL 23-30	.35	720	14	15	6.2	6.6	1.15	.41	.03	.02	3	.0	.08
AUG 06-13	.95	1900	10	10	5.9	5.9	.82	.29	.02	.02	5	.0	.03
AUG 20-27	1.43	2400	11	12	6.6	6.3	1.53	.55	.04	.05	6	.0	.08
AUG 27-SEP 03	.08	230	5	5	5.2	5.5	.31	.11	.01	.01	5	.0	.01
SEP 03-10	.82	1600	6	6	5.2	5.8	.25	.09	.01	.01	6	.0	.01
SEP 10-17	--	120	13	13	5.1	5.2	.40	.14	.01	.04	16	.0	.01

M Presence of material verified but not quantified.

384021100545400 SCOTT LAKE STATE PARK, KS
(National Atmospheric Deposition Program/National Trends Network station)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS NO3) (71851)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4) (71846)	PHOS-PHATE, DIS-SOLVED (MG/L AS PO4) (00653)
OCT 02-09	1.7	.1	2.20	1.18	<.01
OCT 09-16	1.7	.1	2.20	1.18	<.01
NOV 06-13	.9	.1	1.27	.80	<.01
NOV 20-27	.5	M	.588	.36	<.01
DEC 11-18	1.0	.1	1.76	.73	<.03
DEC 18-25	1.9	.1	2.09	.42	<.03
JAN 01-08	.4	.2	2.28	.77	<.05
JAN 08-15	.9	.1	3.28	.44	<.01
JAN 29-FEB 05	.2	M	.385	.12	<.01
FEB 05-12	.3	M	1.67	.79	<.01
FEB 19-26	.2	M	.992	.31	<.01
MAR 19-26	4.0	.2	4.30	1.95	<.01
APR 02-09	1.3	.1	2.08	1.65	<.01
APR 09-16	.3	M	.731	.69	<.01
APR 23-30	25.4	5.0	2.67	.97	<.01
APR 30-MAY 07	2.7	.6	6.52	1.68	<.03
MAY 07-14	2.7	.9	7.27	2.16	<.01
MAY 14-21	1.1	.1	2.56	1.45	<.01
MAY 21-28	1.3	.2	1.73	.91	<.01
MAY 28-JUN 04	1.2	.1	1.46	.71	<.01
JUN 11-18	.9	.1	2.25	1.33	<.01
JUN 18-25	1.1	.1	1.21	.47	<.01
JUN 25-JUL 02	2.3	.2	2.88	1.28	<.01
JUL 02-09	.4	.2	.876	.73	<.01
JUL 16-23	.6	.1	2.54	.96	<.01
JUL 23-30	--	.1	2.52	1.44	<.01
AUG 06-13	1.3	M	1.52	.79	<.01
AUG 20-27	1.0	.1	1.98	.83	<.01
AUG 27-SEP 03	.2	M	.864	.31	<.01
SEP 03-10	.5	M	.748	.39	<.01
SEP 10-17	1.1	.1	2.29	.82	<.003

M Presence of material verified but not quantified.

OSAGE RIVER BASIN

3739030944813OO FARLINGTON STATE FISH HATCHERY, KS
(National Atmospheric Deposition Program/National Trends Network station)

LOCATION.--Lat 37°39'03", long 94°48'13", in NW $^{1}/_{4}$ NW $^{1}/_{4}$ SE $^{1}/_{4}$ sec.32, T.27 S., R.24 E., Crawford County, Hydrologic Unit 10290104, 3 mi northwest of Farlington, and 0.5 mi northwest of Farlington Lake.

PERIOD OF RECORD.--March 1984 to current year.

INSTRUMENTATION.--The sample collector is an Aerochem Metrics Wet/Dry Precipitation Collector and a recording rain gage (with event recorder).

REMARKS.--Chemical analyses of rainfall collected in wet-dry automatic sampler. Data collected in cooperation with Kansas Department of Wildlife and Parks. Chemical analyses from National Atmospheric Deposition Program, National Trends Network Analytical Laboratory. If a sufficient volume of sample is collected, specific conductance and pH are measured in the field before the composite sample is sent in for analysis.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	PRECIP-ITATION TOTAL INCHES/ WEEK (00046)	SAMPLE SIZE (ML) (32002)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	SPE-CIFIC CON-DUCT-ANCE LAB (US/CM) (90095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	PH WATER WHOLE LAB (STAND-ARD UNITS) (00403)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)
OCT 02-09	2.57	4400	9	9	4.8	5.0	.67	.24	.02	.04	10	.0	.01
OCT 09-16	2.76	4800	11	11	4.9	4.9	.71	.25	.02	.11	25	.1	.02
OCT 29-NOV 06	1.57	2600	10	10	5.4	6.0	1.93	.68	.06	.23	20	.1	.03
NOV 06-13	.02	38	--	60	--	7.0	17.9	6.90	.17	.43	5	.0	.18
NOV 13-20	.76	1300	24	21	4.4	4.4	.38	.13	.01	.07	28	.1	.01
NOV 20-26	.35	610	9	9	5.3	5.5	1.09	.40	.02	.05	8	.0	.03
NOV 26-DEC 04	.08	120	14	14	5.6	6.6	4.81	1.86	.04	.03	1	.0	.02
DEC 04-11	.17	290	22	21	5.7	6.7	6.53	2.49	.08	.29	9	.0	.05
DEC 11-18	1.34	2200	10	8	5.0	5.1	.28	.10	.01	.07	18	.1	.27
JAN 01-08	.04	73	15	15	5.2	6.3	3.56	1.37	.04	.04	2	.0	.03
JAN 15-22	.44	740	12	11	4.8	4.8	.33	.12	.01	.02	12	.0	.01
JAN 22-29	.26	440	--	6	5.4	5.9	.73	.27	.01	.02	6	.0	.01
JAN 29-FEB 04	2.40	4100	--	6	--	5.1	.20	.07	M	.01	13	.0	.01
FEB 04-12	.08	140	10	11	5.3	6.4	2.76	1.06	.03	.02	1	.0	.01
FEB 12-19	.20	360	21	16	4.7	5.1	1.05	.34	.05	.37	42	.2	.04
FEB 19-26	.14	240	13	14	6.2	6.6	2.27	.79	.07	.25	19	.1	.03
FEB 26-MAR 05	.91	1500	8	7	5.1	5.4	.99	.34	.03	.04	8	.0	.02
MAR 05-12	.16	280	44	44	6.7	7.2	15.2	5.46	.38	.75	0	.1	281
MAR 12-19	.18	310	15	17	5.7	6.5	3.05	1.13	.06	.15	9	.0	.06
MAR 19-26	.17	280	37	36	6.1	6.8	5.82	2.00	.20	1.14	29	.2	.17
APR 02-09	.40	630	10	8	4.9	5.3	.48	.18	.01	.01	5	.0	.01
APR 09-16	.11	190	43	43	4.3	4.3	3.09	1.10	.08	.13	8	.0	.06
APR 16-23	1.86	3100	6	7	5.5	5.7	.54	.18	.02	.13	32	.1	.03
APR 23-30	2.28	3800	11	12	6.0	6.3	.66	.21	.04	.10	18	.1	.23
APR 30-MAY 07	.18	350	24	24	5.9	6.4	3.25	1.09	.12	.72	31	.2	.18
MAY 07-08	6.07	10000	12	11	5.1	5.8	1.07	.35	.04	.25	33	.1	.06
MAY 08-14	6.35	3200	12	13	6.0	6.1	1.66	.55	.07	.37	31	.1	.08
MAY 14-21	1.21	2100	16	17	5.5	5.7	2.03	.69	.07	.23	19	.1	.04
MAY 21-28	2.76	4700	10	10	5.0	5.0	.63	.20	.03	.16	35	.1	.02
JUN 04-11	1.55	2600	--	13	4.7	4.7	.32	.11	.01	.04	22	.0	.01
JUN 11-18	2.02	3500	10	9	5.1	5.2	.67	.24	.02	.07	17	.0	.02
JUN 25-JUL 02	.70	1200	10	10	5.8	5.7	1.57	.58	.03	.01	1	.0	.03
JUL 02-09	.03	50	--	19	--	5.6	2.53	.94	.04	.06	5	.0	.03
JUL 09-16	.50	800	18	19	6.2	6.6	4.26	1.61	.06	.04	2	.0	.07
JUL 16-23	--	1100	8	19	5.6	5.8	1.15	.42	.03	.05	9	.0	.01

M Presence of material verified but not quantified.

OSAGE RIVER BASIN--Continued

373903094481300 FARLINGTON STATE FISH HATCHERY, KS
(National Atmospheric Deposition Program/National Trends Network station)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS NO3) (71851)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4) (71846)	PHOS-PHATE, DIS-SOLVED (MG/L AS PO4) (00653)
OCT 02-09	1.0	.1	.890	.23	<.01
OCT 09-16	1.2	.2	1.04	.28	<.01
OCT 29-NOV 06	1.2	.3	1.52	.34	<.01
NOV 06-13	8.2	.4	8.01	2.19	<.03
NOV 13-20	1.8	.1	1.67	.37	<.01
NOV 20-26	1.4	M	1.03	.40	<.01
NOV 26-DEC 04	1.0	.1	.976	.26	<.01
DEC 04-11	2.6	.3	1.33	.79	<.01
DEC 11-18	.8	M	.861	.14	.01
JAN 01-08	1.2	.1	3.66	.51	<.01
JAN 15-22	.8	M	1.29	.25	<.01
JAN 22-29	.7	M	.766	.35	<.01
JAN 29-FEB 04	.7	M	.454	.18	<.01
FEB 04-12	.5	M	2.19	.36	<.01
FEB 12-19	2.3	.5	1.85	.79	<.01
FEB 19-26	1.6	.1	1.52	.75	<.01
FEB 26-MAR 05	.6	M	1.28	.19	<.01
MAR 05-12	4.6	.5	1.76	.35	<.01
MAR 12-19	1.5	.1	1.73	.82	<.01
MAR 19-26	5.1	1.2	4.03	1.77	<.01
APR 02-09	.9	M	1.02	.39	<.01
APR 09-16	4.2	.2	6.56	1.24	<.01
APR 16-23	.8	.2	.778	.33	<.01
APR 23-30	1.2	.3	.665	1.26	.24
APR 30-MAY 07	3.1	.9	3.11	1.42	<.01
MAY 07-08	1.3	.3	.869	.48	<.01
MAY 08-14	1.6	.5	1.60	.75	<.01
MAY 14-21	2.5	.3	2.57	1.02	<.01
MAY 21-28	1.2	.2	.960	.31	<.01
JUN 04-11	1.1	.1	1.18	.27	<.01
JUN 11-18	1.0	.1	1.04	.32	<.01
JUN 25-JUL 02	1.3	.1	1.79	.59	<.01
JUL 02-09	1.4	.3	3.10	1.08	<.01
JUL 09-16	2.2	.2	2.98	.95	<.01
JUL 16-23	.6	.1	1.35	.28	<.01

M Presence of material verified but not quantified.

OSAGE RIVER BASIN--Continued

373903094481300 FARLINGTON STATE FISH HATCHERY, KS
(National Atmospheric Deposition Program/National Trends Network station)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	PRECIP-ITATION TOTAL INCHES/ WEEK (00046)	SAMPLE SIZE (ML) (32002)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	SPE-CIFIC CON-DUCT-ANCE LAB (US/CM) (90095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	PH WATER WHOLE LAB (STAND-ARD UNITS) (00403)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)
JUL 23-30	1.11	1800	--	6	--	5.2	.39	.14	.01	.06	25	.0	.01
AUG 06-13	.04	51	--	98	--	4.2	12.9	4.77	.23	.09	1	.0	.09
AUG 13-20	.33	550	14	14	5.3	5.3	1.95	.69	.05	.23	20	.1	.04
AUG 20-27	.15	250	14	15	5.2	5.2	1.72	.62	.04	.14	15	.0	.03
SEP 03-10	.35	590	20	20	6.1	6.4	3.56	1.34	.05	.04	2	.0	.05
SEP 10-17	1.17	1900	30	32	4.3	4.3	.89	.33	.02	.01	3	.0	.03
SEP 17-24	1.63	2700	8	9	5.0	4.9	.43	.15	.01	.05	19	.0	.01

Date	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS NO3) (71851)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4) (71846)	PHOS-PHATE, DIS-SOLVED (MG/L AS PO4) (00653)
JUL 23-30	--	.1	.470	.10	<.01
AUG 06-13	16.2	.4	11.8	2.76	<.01
AUG 13-20	1.7	.3	2.37	.55	<.01
AUG 20-27	1.6	.3	2.82	.73	<.01
SEP 03-10	3.0	.1	2.90	1.20	<.01
SEP 10-17	3.4	.1	2.28	.64	<.01
SEP 17-24	.9	.7	.797	.21	<.01

A

B

C

D

E

F

G

T

U

V

W

Y

Z

CALENDAR FOR WATER YEAR 2002

2001

OCTOBER

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

NOVEMBER

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

DECEMBER

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

2002

JANUARY

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

FEBRUARY

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

MARCH

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

APRIL

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

MAY

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

JUNE

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

JULY

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

AUGUST

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

SEPTEMBER

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

CONVERSION FACTORS

Multiply	By	To obtain
	Length	
inch (in.)	2.54×10^{1}	millimeter
	2.54×10^{-2}	meter
foot (ft)	3.048×10^{-1}	meter
mile (mi)	1.609×10^{0}	kilometer
	Area	
acre	4.047×10^{3}	square meter
	4.047×10^{-1}	square hectometer
	4.047×10^{-3}	square kilometer
square mile (mi^2)	2.590×10^{0}	square kilometer
	Volume	
gallon (gal)	3.785×10^{0}	liter
	3.785×10^{0}	cubic decimeter
	3.785×10^{-3}	cubic meter
million gallons (Mgal)	3.785×10^{3}	cubic meter
	3.785×10^{-3}	cubic hectometer
cubic foot (ft^3)	2.832×10^{1}	cubic decimeter
	2.832×10^{-2}	cubic meter
cubic-foot-per-second day [(ft^3/s) d]	2.447×10^{3}	cubic meter
	2.447×10^{-3}	cubic hectometer
acre-foot (acre-ft)	1.233×10^{3}	cubic meter
	1.233×10^{-3}	cubic hectometer
	1.233×10^{-6}	cubic kilometer
	Flow	
cubic foot per second (ft^3/s)	2.832×10^{1}	liter per second
	2.832×10^{1}	cubic decimeter per second
	2.832×10^{-2}	cubic meter per second
gallon per minute (gal/min)	6.309×10^{-2}	liter per second
	6.309×10^{-2}	cubic decimeter per second
	6.309×10^{-5}	cubic meter per second
million gallons per day (Mgal/d)	4.381×10^{1}	cubic decimeter per second
	4.381×10^{-2}	cubic meter per second
	Mass	
ton (short)	9.072×10^{-1}	megagram or metric ton

Temperature in degrees Celsius (°C) may be converted to degrees Fahrenheit (°F) as follows:

$°F = (1.8 \times °C) + 32$