ANNUAL YIELD AND SELECTED HYDROLOGIC DATA FOR THE ARKANSAS RIVER BASIN COMPACT ARKANSAS--OKLAHOMA

1985 WATER YEAR

By M. A. Moore and T. E. Lamb

U.S. GEOLOGICAL SURVEY

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DONALD PAUL HODEL, Secretary

GEOLOGICAL SURVEY

Dallas L. Peck, Director

For additional information
write to:

District Chief
U.S. Geological Survey
2301 Federal Office Building
Little Rock, Arkansas 72201-3287

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CONVERSION FACTORS

For use of readers who prefer to use metric units, conversion factors for terms used in this report are listed below:

Multiply	By	To obtain
inch (in.)	25.4	millimeter (mm)
foot (ft)	0.3048	meter (m)
mile (mi)	1.609	kilometer (km)
acre	4047	square meter (m^2)
	0.004047	square kilometer (km^2)
square mile (mi^2)	2.590	square kilometer (km^2)
cubic foot (ft^3)	0.02832	cubic meter (m^3)
acre-foot (acre-ft)	1233	cubic meter (m^3)
	1.233×10^{-6}	cubic kilometer (km^3)
cubic foot per second (ft^3/s)	28.32	liter per second (L/s)
	0.02832	cubic meter per second (m^3/s)

ANNUAL YIELD AND SELECTED HYDROLOGIC DATA FOR THE ARKANSAS RIVER BASIN COMPACT ARKANSAS-OKLAHOMA 1985 WATER YEAR

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ABSTRACT

The computed annual yield and deficiency of the subbasins as defined in the Arkansas River Compact, Arkansas-Oklahoma, are given in tables. Actual runoff from the subbasins and depletion caused by major reservoirs in the compact area are also given in tabular form. Monthly, maximum, minimum, and mean discharges are shown for the 14 streamflow stations used in computing annual yield. Water-quality data are shown for the Arkansas River at Dam No. 13, near Van Buren, Arkansas; Spavinaw Creek near Sycamore, Oklahoma; Neosho River below Fort Gibson Lake near Fort Gibson, Oklahoma; and Canadian River near Whitefield, Oklahoma.

INTRODUCTION

The computed annual yields for subbasins in the Arkansas River basin as defined in the Arkansas River Basin Compact, Arkansas-Oklahoma, 1972, are presented in this report. The area included in the Compact is shown in figure 1. Water-quality data for the Arkansas River at Dam No. 13 near Van Buren, Arkansas; Spavinaw Creek near Sycamore, Oklahoma; Neosho River below Fort Gibson Lake near Fort Gibson, Oklahoma; and Canadian River near Whitefield, Oklahoma are also included in the report.

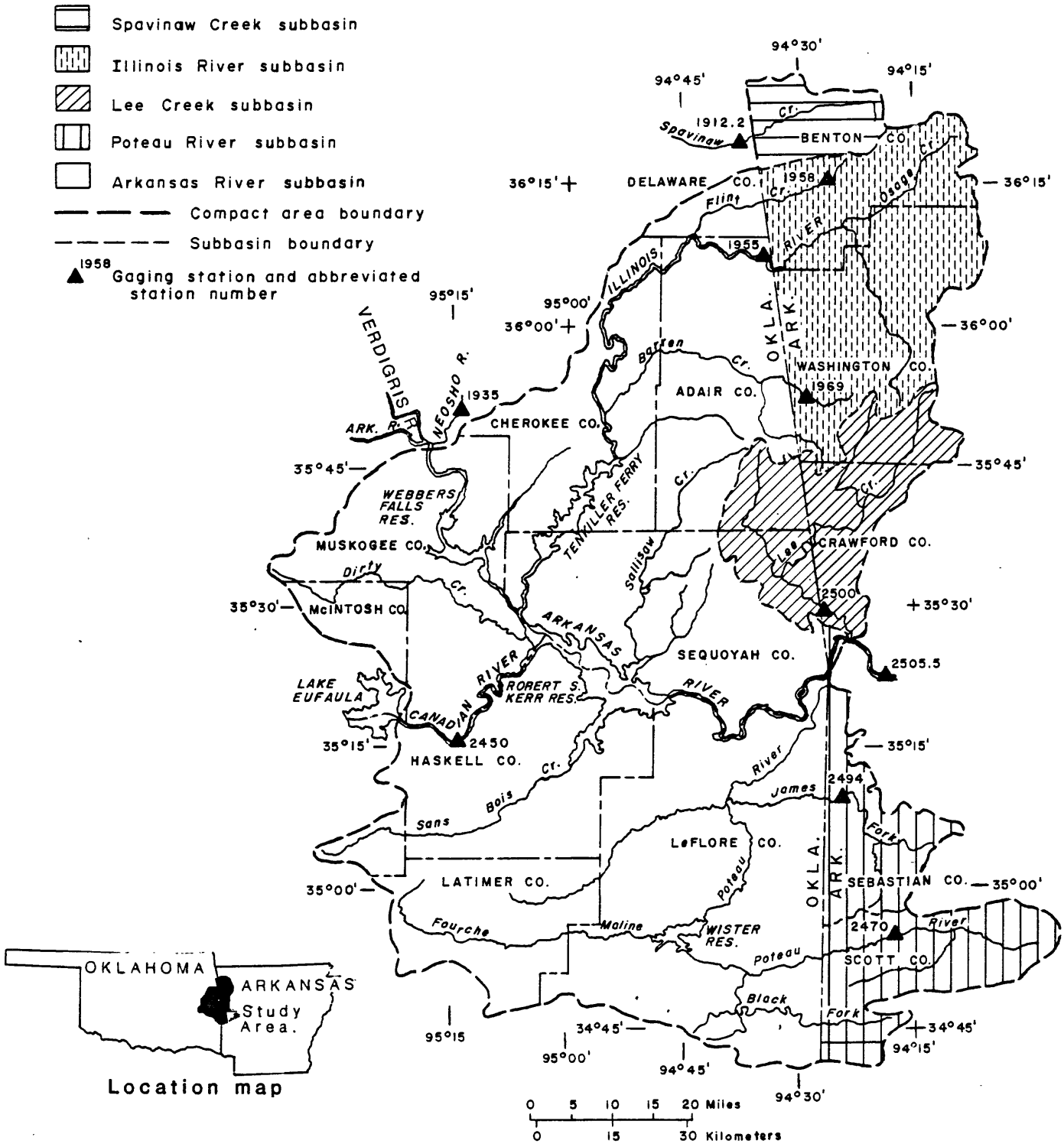

Figure 1.--Arkansas-Oklahoma Arkansas River Basin Compact area and subbasins.

This report was prepared by the U.S. Geological Survey in cooperation with the Arkansas Soil and Water Conservation Commission. Streamflow data were furnished by the Arkansas and Oklahoma Districts, U.S. Geological Survey and the U.S. Army Corps of Engineers, Tulsa District. The Tulsa District also provided data from the Webbers Falls, Tenkiller Ferry, Robert S. Kerr and Wister Reservoirs. Water-quality data were provided by the U.S. Geological Survey.

DEFINITION OF TERMS

The following terms used in this report are taken from Article II of the Arkansas River Basin Compact, Arkansas-Oklahoma, 1972.

The term "Arkansas River Basin" means all of the drainage basin of the the Arkansas River and its tributaries from a point immediately downstream from the confluence of the Neosho River with the Arkansas River (fig. 1) to a point immediately downstream from the confluence of Lee Creek with the Arkansas River, together with the drainage basin of Spavinaw Creek in Arkansas (top of fig. 1), but excludes that part of the drainage basin of the Canadian River upstream from Lake Eufaula Dam.

The term "Spavinaw Creek Subbasin" means the drainage area of Spavinaw Creek in the State of Arkansas.

The term "Illinois River Subbasin" means the drainage area of Illinois River in the State of Arkansas.

The term "Lee Creek Subbasin" means the drainage area of Lee Creek in the State of Arkansas and in the State of Oklahoma.

The term "Poteau River Subbasin" means the drainage area of Poteau River in the State of Arkansas.

The term "Arkansas River Subbasin" means all areas of the Arkansas River Basin except the four subbasins described previously.

The term "water year" means a 12-month period beginning on October 1 and ending September 30.

The term "annual yield" means the computed annual gross runoff from any specified subbasin. The runoff would have passed any certain point on a stream and would have originated within any specified area under natural conditions, without any manmade depletion or accretion during the water year.

Other hydrologic terms used in this report are defined as follows:

Acre-foot is the quantity of water required to cover 1 acre to a depth of 1 foot and is equivalent to 43,560 cubic feet.

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

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

Fecal streptoccocal bacteria also are present in intestines of warm-blooded animals. Their presence in water is considered to verify fecal pollution. They are characterized as gram-positive, coccoid bacteria that are capable of growth in brain-heart infusion broth. These bacteria are also defined as all the organisms that produce red or pink colonies within 48 hours at 35°C ± 0.5°C on KF-streptococcus agar (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

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

Code numbers have been assigned for agencies collecting and analyzing samples, and are listed in water-quality tables of this report as follows:

1028 U.S. Geological Survey

80513 Arkansas District, WRD, USGS

80010 Atlanta Central Laboratory, WRD, USGS

80020 Denver Central Laboratory, WRD, USGS

85113 Headquarters Tritium Laboratory, WRD, USGS

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.

Cubic foot per second is the rate of discharge representing a volume of 1 cubic foot passing a specified point during 1 second.

Discharge is the volume of water that passes a given point within a given period of time.

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

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

Dissolved refers to the material in a representative water sample that passes through a 0.45- micrometer membrane filter. This is a convenient operational definition used by Federal agencies that collect water data. Determinations of "dissolved" constituents are made on subsamples of the filtrate.

Dissolved oxygen content of water in equilibrium with air is a function of atmospheric pressure and temperature and the dissolved-solids concentration of the water. The ability of water to retain oxygen decreases with increasing temperature or dissolved solids, with small temperature changes having the more significant effect. Photosynthesis and respiration may cause diurnal variations in dissolved-oxygen concentration in water of some streams.

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

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

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

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

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

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

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

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

Sodium-absorption-ratio (SAR) is the expression of relative activity of sodium ions in exchange reactions with soil and is an index of sodium or alkali hazard to the soil. Water varies, in respect to sodium hazard, from that which can be used for irrigation on almost all soils to that which generally is unsatisfactory for irrigation.

Specific conductance is a measure of the ability of a water to conduct an electrical current. It is expressed in microsiemens per centimeter at 25°C. Specific conductance is related to the type and concentration of ions in solution and can be used for approximating the dissolved-solids concentration of the water. Commonly, the concentration of dissolved solids (in milligrams per liter) is about 65 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.

Stage-discharge relation is the relation between gage height and the amount of water flowing past the gage in a channel.

Total is the total amount of a given constituent in a representative water-suspended sediment 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 that the sample consists of a water-suspended-sediment mixture and that the analytical method determines all of the constituent in the sample.)

COMPUTATION OF ANNUAL YIELD

The annual yield and deficiency (table 1) for each subbasin were computed as described in Appendix I to the Arkansas River Basin Compact Arkansas-Oklahoma, 1972, supplement No. 1. Actual runoff for the subbasins (table 2) was computed as described in the Compact except for the stations Arkansas River at Muskogee, which has been discontinued, and Arkansas River at Van Buren, which has been moved 7.9 miles downstream.

Annual depletion caused by major reservoirs (table 3) was computed for the four major reservoirs in the basin as described in Appendix I to the Compact. Depletion caused by small reservoirs and minor diversion for municipal and agricultural use are insignificant at this time and data are not included in tables 1 and 3.

A compilation of the areas of lakes and ponds in the Poteau River, Lee Creek, Spavinaw Creek, and Illinois River Subbasins was conducted by the Arkansas Soil and Water Conservation Commission in the early 1970's. This information was used to partially evaluate depletions caused by small reservoirs. Analysis showed that their impact on the depletion in any Subbasin was less than 1 percent, and further consideration was not necessary at that time.

Streamflow data used in the computations are given in hydrologic station records (p. 14 to 39). The station description under "Remarks" states the degree of accuracy of the records. "Excellent" means that about 95 percent of the daily discharges are within 5 percent of the actual discharge, "good" means within 10 percent, and "fair" means within 15 percent. "Poor" means that daily discharges have less than "fair" accuracy.

Table 1.--Annual yield and deficiency for the subbasins as defined in the Arkansas-Oklahoma Arkansas River Basin Compact

[Average annual flow in cubic feet per second for 1985 water year]

Subbasin	Actual runoff from the subbasins	Total depletions (+) or accretions (-)	Annual yield	Percent depletion allowed	Minimum required flow	Deficiency
Spavinaw Creek	223	0	. 223	50	112	0
Illinois River	1,170	0	1,170	60	468	0
Lee Creek	1,040	0	1,040	100	0	0
Poteau River	1,120	0	1,120	60	448	0
Arkansas River	6,440	+359	6,800	60	2,720	0

Table 2.--Actual runoff from the subbasins

[Mean discharge in cubic feet per second for the 1985 water year; D.A. = drainage area]

Month	Spavinaw Creek D.A.=135 square miles[a]	Illinois River D.A.=744 square miles[b]	Lee Creek D.A.=464 square miles[c]	Poteau River D.A.=536 square miles[d]	Arkansas River D.A.=4,553 square miles[e]
October	127	998	2,310	3,540	5,860
November	126	1,250	2,150	2,230	13,320
December	521	2,570	1,970	1,720	11,140
January	288	1,560	882	786	14,420
February	305	1,820	1,490	1,630	3,910
March	370	2,110	1,960	1,290	10,500
April	239	1,120	951	1,490	12,550
May	248	822	682	517	7,480
June	331	1,030	107	186	-1,120[f]
July	57	223	5	67	2,080
August	40	366	42	9	-639[f]
September	32	193	0	11	-2,530[f]
1985 water year	223	1,170	1,040	1,120	6,440
1985 water year (acre-feet)	161,400	847,100	752,900	810,900	4,662,000

[a] Includes 31 square miles ungaged.
[b] Includes 63 square miles ungaged.
[c] Includes 38 square miles ungaged.
[d] Includes 125 square miles ungaged.
[e] Computed by subtracting drainage area at Arkansas River at Muskogee, Canadian River near Whitefield, Illinois River Subbasin, Lee Creek Subbasin, and Poteau River Subbasin from drainage area at Arkansas River at Dam No. 13, near Van Buren, Ark.
[f] Negative discharge caused by storage in reservoirs, seepage into ground water, and evaporation from reservoirs.

Table 3.--Annual depletion caused by major reservoirs

[1985 water year]

Reservoir	Year-end contents (acre-feet)	Change in contents in water year (acre-feet)	Precipitation on reservoir surface (inch)[a]	Evaporation from reservoir (inch)[b]	Depletion (acre-feet)	Depletion (Average annual cubic feet per second)
Webbers Falls-----	172,450	+6,843	52.55	72.85	+42,940	+59.3
Tenkiller Ferry---	655,100	+99,600	54.05	56.64	+123,500	+170
Robert S. Kerr----	529,200	+5,700	44.91	57.16	+94,160	+130
Wister----------	48,600	-15,760	63.22	58.02	-439	-0.6

[a] From U.S. Corps of Engineers, Tulsa District.
[b] Adjusted for pan coefficient of 0.70 (from Wisler and Brater, 1949).

SELECTED REFERENCES

Arkansas River Compact Committee, March 1972, Arkansas River Basin Compact Arkansas-Oklahoma, 1972, with Supplemental Interpretive Comments, Supplement No. 1: Austin, Tex., 31 p.

Wisler, C. D., and Brater, E. F., 1949, Hydrology: New York, N.Y., John Wiley & Sons, Inc., 150 p.

HYDROLOGIC STATION RECORDS

07165570 Arkansas River near Haskell, Oklahoma

LOCATION.--Lat 35°49'23", long 95°38'39", in NE 1/4 sec.31, T.16 N., R.16 E., Muskogee County, near right bank on downstream side of bridge on State Highway 104, 2.0 mi east of Haskell, 23.5 mi upstream from Verdigris River, and at mile 483.7.

DRAINAGE AREA.--75,473 mi^2, of which 12,541 mi^2 probably is noncontributing.

AVERAGE DISCHARGE.--13 years, 8,810 ft^3/s.

EXTREMES.--June 1972 to current year: Maximum discharge, 108,000 ft^3/s Nov. 6, 1974; minimum daily, 139 ft^3/s Nov. 18, 1982.

REMARKS.--Records good. Flow regulated by Keystone Lake, 55.1 mi upstream.

COOPERATION.--Gage-height record and discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

Monthly and yearly discharge

Month	Total (ft^3/s)	Maximum daily (ft^3/s)	Minimum daily (ft^3/s)	Mean (ft^3/s)	Runoff in acre-feet
October	22,645	1,720	363	730	44,920
November	25,892	1,780	370	863	51,360
December	204,192	20,500	617	6,587	405,000
January	337,580	35,500	3,780	10,890	669,600
February	258,100	25,000	3,190	9,218	511,900
March	706,700	27,700	18,000	22,800	1,402,000
April	367,620	19,600	5,900	12,250	729,200
May	545,190	31,100	9,230	17,590	1,081,000
June	458,330	29,600	5,990	15,280	909,100
July	194,450	11,000	980	6,273	385,700
August	121,690	8,210	1,020	3,925	241,400
September	163,400	15,200	1,020	5,447	324,100
Water Year 1985	3,405,789	35,500	363	9,331	6,755,000

07176000 Verdigris River near Claremore, Oklahoma

LOCATION.--Lat 36°18'26", long 95°41'52", in SE 1/4 SW 1/4 sec.10, T.21 N., R.15 E., Rogers County, near left bank on downstream side of bridge on State Highway 20, 2.3 mi downstream from Caney River, 4.5 mi west of Claremore, 12.4 mi upstream from Bird Creek, and at mile 76.0.

DRAINAGE AREA.--6,534 mi^2.

AVERAGE DISCHARGE.--27 years (water years 1936-62), 3,723 ft^3/s; 21 years (water years 1965-85), 4,039 ft^3/s.

EXTREMES.--October 1935 to current year: Maximum discharge, 182,000 ft^3/s May 21, 1943; no flow at times in 1936, 1939-40, 1956.

REMARKS.--Records fair. Flow regulated since May 1963 by Oologah Lake 14.3 mi upstream; some regulation by dams in Kansas since 1949 and by Hulah Lake since 1950.

COOPERATION.--Gage-height record and discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

Monthly and yearly discharge

Month	Total (ft^3/s)	Maximum daily (ft^3/s)	Minimum daily (ft^3/s)	Mean (ft^3/s)	Runoff in acre-feet
October	36,406	3,330	143	1,174	72,210
November	33,842	6,160	164	1,128	67,130
December	159,912	12,100	219	5,158	317,200
January	316,580	16,800	6,180	10,210	627,900
February	227,109	26,000	579	8,111	450,500
March	741,500	29,000	14,500	23,920	1,471,000
April	259,000	12,600	4,840	8,633	513,700
May	289,370	14,800	2,800	9,335	574,000
June	466,170	26,200	5,200	15,540	924,600
July	164,405	13,900	161	5,303	326,100
August	147,099	11,600	56	4,745	291,800
September	109,755	9,700	156	3,659	217,700
Water Year 1985	2,951,148	29,000	56	8,085	5,854,000

07177500 Bird Creek near Sperry, Oklahoma

LOCATION.--Lat 36°16'42", long 95°57'14", in NW 1/4 NW 1/4 sec.29, T.21 N., R.13 E., Tulsa County, on downstream side of county road bridge, 1.5 mi upstream from Delaware Creek, 2.4 mi downstream from Hominy Creek, 2.5 mi southeast of Sperry, and at mile 25.0

DRAINAGE AREA.--905 mi^2.

AVERAGE DISCHARGE.--47 years, 507 ft^3/s.

EXTREMES.--October 1938 to current year: Maximum discharge, 90,000 ft^3/s Oct. 3, 1959; no flow at times in 1939, 1954-57, 1964-66, 1970.

REMARKS.--Records good.

COOPERATION.--Gage-height record and discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

Monthly and yearly discharge

Month	Total (ft^3/s)	Maximum daily (ft^3/s)	Minimum daily (ft^3/s)	Mean (ft^3/s)	Runoff in acre-feet
October	4,621.4	1,840	7.2	149	9,170
November	3,027.7	667	7.2	101	6,010
December	39,289	7,340	14	1,267	77,930
January	48,244	12,100	57	1,556	95,690
February	79,436	24,000	61	2,837	157,600
March	121,377	8,170	326	3,915	240,800
April	51,435	11,700	200	1,715	102,000
May	77,143	15,000	81	2,488	153,000
June	135,512	21,500	122	4,517	268,800
July	11,290	3,160	27	364	22,390
August	452.8	25	7.3	14.6	898
September	1,470.1	221	5.2	49.0	2,920
Water Year 1985	573,298.0	24,000	5.2	1,571	1,137,000

07191220 Spavinaw Creek near Sycamore, Oklahoma

LOCATION.--Lat 36°20'07", long 94°38'24", in NE 1/4 NW 1/4 sec.4, T.21 N., R.25 E., Delaware County, on right bank 1.8 mi upstream from Cherokee Creek, 4.8 mi northeast of Row, 6.5 mi southeast of Sycamore, and at mile 35.0.

DRAINAGE AREA.--133 mi^2.

AVERAGE DISCHARGE.--24 years, 106 ft^3/s.

EXTREMES.--October 1961 to current year: Maximum discharge, 39,800 ft^3/s July 27, 1975; minimum, 1.2 ft^3/s Aug. 9, 1964.

REMARKS.--Records good.

Monthly and yearly discharge

Month	Total (ft^3/s)	Maximum daily (ft^3/s)	Minimum daily (ft^3/s)	Mean (ft^3/s)	Runoff in acre-feet
October	3,870	813	24	125	7,680
November	3,715	246	80	124	7,370
December	15,908	3,270	89	513	31,550
January	8,771	2,360	116	283	17,400
February	8,422	1,830	106	301	16,710
March	11,326	2,770	137	365	22,470
April	7,084	927	123	236	14,050
May	7,598	1,600	126	245	15,070
June	9,767	2,940	82	326	19,370
July	1,737	79	42	56.0	3,450
August	1,252	50	35	40.4	2,480
September	964	39	27	32.1	1,910
Water Year 1985	80,414	3,270	24	220	159,500

07191220 SPAVINAW CREEK NEAR SYCAMORE, OKLAHOMA

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1968, 1977, January 1980 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

[Five-digit numbers in parenthesis are STORET parameter codes used for computer storage of data; MG/L = milligrams per liter]

DATE	TIME	BAROMETRIC PRESSURE (MILLIMETERS OF MERCURY) (00025)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	STREAMFLOW, INSTANTANEOUS (CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (MICROSIEMENS) (00095)	PH (STANDARD UNITS) (00400)	TEMPERATURE (DEG C) (00010)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)	NITROGEN DISSOLVED (MG/L AS N) (00602)	OXYGEN DEMAND, CHEMICAL (HIGH LEVEL) (MG/L) (00340)
OCT											
02...	1205	740	80020	29	324	7.0	19.5	—	—	—	60
NOV											
29...	1015	730	80020	146	270	7.6	12.5	9.8	96	—	11
DEC											
17...	1300	740	80020	390	240	7.1	14.0	9.3	93	—	12
JAN											
23...	1150	745	80020	125	270	7.1	10.0	10.7	97	—	—
FEB											
28...	1615	740	80020	386	230	6.8	11.5	9.2	87	—	<10
MAR											
26...	1400	740	80020	136	240	6.8	13.0	10.0	98	—	<10
APR											
24...	1520	738	80020	123	245	6.8	16.5	—	—	—	42
MAY											
15...	1530	740	80020	183	290	6.8	17.5	8.0	86	—	<10
JUN											
19...	1300	740	80020	129	—	7.0	19.0	—	—	—	70
JUL											
31...	1330	738	80020	42	275	6.6	21.5	8.6	101	2.3	14
AUG											
26...	1050	743	80020	—	275	6.6	21.0	7.7	89	—	<10
SEP											
25...	1615	735	80020	30	310	6.6	20.5	7.1	82	2.4	<10

DATE	HARDNESS (MG/L AS CACO3) (00900)	HARDNESS, NONCARBONATE (MG/L CACO3) (95902)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	PERCENT SODIUM (00932)	SODIUM ADSORPTION RATIO (00931)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY LAB (MG/L AS CACO3) (90410)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2) (00405)
OCT										
02...	150	9	55	1.9	6.9	9	0.3	2.5	136	26
NOV										
29...	130	23	48	1.6	5.2	8	.2	2.1	104	5.1
DEC										
17...	110	24	40	1.3	4.1	8	.2	2.0	81	12
JAN										
23...	110	30	43	1.4	4.5	8	.2	1.7	83	13
FEB										
28...	92	21	35	1.2	4.0	8	.2	1.7	72	22
MAR										
26...	110	24	42	1.4	4.4	8	.2	1.9	87	27
APR										
24...	110	23	43	1.4	4.6	8	.2	2.1	90	28
MAY										
15...	120	23	44	1.3	3.6	6	.2	2.1	92	28
JUN										
19...	110	18	43	1.3	4.4	8	.2	2.1	95	18
JUL										
31...	120	10	46	1.6	5.4	9	.2	2.5	112	54
AUG										
26...	130	20	51	1.6	5.8	8	.2	2.5	114	55
SEP										
25...	120	10	47	1.7	6.4	10	.3	2.4	115	56

07191220 SPAVINAW CREEK NEAR SYCAMORE, OKLAHOMA—CONTINUED

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, DIS-SOLVED (TONS PER ACRE-FOOT (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) (00636)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P) (00666)
OCT										
02...	5.6	13	<0.10	11	180	0.24	14	2.3	<0.20	0.050
NOV										
29...	7.0	9.2	<.10	8.6	140	.20	57	2.8	.90	.050
DEC										
17...	8.6	6.9	<.10	8.8	120	.16	127	.83	.50	.050
JAN										
23...	6.9	7.9	—	—	—	.16	39	—	—	—
FEB										
28...	7.3	6.3	<.10	8.0	110	.15	111	3.1	.30	.020
MAR										
26...	7.2	8.2	<.10	7.7	120	.17	46	2.6	.30	.010
APR										
24...	6.1	8.0	<.10	8.5	130	.17	42	2.3	.90	.030
MAY										
15...	6.9	6.5	<.10	9.2	130	.18	64	1.9	.60	.030
JUN										
19...	6.8	6.5	<.10	9.7	130	.18	46	2.0	<.20	.030
JUL										
31...	5.3	9.9	.10	11	150	.20	17	1.9	.40	.030
AUG										
26...	6.3	10	<.10	11	160	.21	—	2.0	<.20	.030
SEP										
25...	6.2	12	<.10	11	160	.21	13	2.2	.20	.030

07193500 Neosho River below Fort Gibson Lake, near Fort Gibson, Oklahoma

LOCATION.--Lat 35°51'15", long 95°13'45", in SE 1/4 NW 1/4 sec.19, T.16 N., R.19 E., Cherokee County, on left bank 1.1 mi downstream from Fort Gibson Dam, 4.5 mi north of Fort Gibson, and at mile 6.6.

DRAINAGE AREA.--12,495 mi^2.

AVERAGE DISCHARGE.--35 years (1950-85), 7,953 ft^3/s.

EXTREMES.--May 1950 to current year: Maximum discharge, 223,000 ft^3/s May 26, 1957; minimum, 12 ft^3/s Oct. 10, 1957, Aug. 23, 1964.

REMARKS.--Records good. Flow completely regulated by Fort Gibson Lake.

COOPERATION.--Gage-height record and discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

Monthly and yearly discharge

Month	Total (ft^3/s)	Maximum daily (ft^3/s)	Minimum daily (ft^3/s)	Mean (ft^3/s)	Runoff in acre-feet
October	126,003	12,700	15	4,065	249,900
November	207,340	14,000	2,150	6,911	411,300
December	438,645	30,200	15	14,150	870,100
January	786,410	46,900	4,980	25,370	1,560,000
February	394,650	82,600	1,880	14,090	782,800
March	1,377,000	79,200	4,300	44,420	2,731,000
April	713,520	49,600	8,120	23,780	1,415,000
May	593,900	26,700	12,500	19,160	1,178,000
June	801,400	43,000	14,000	26,710	1,590,000
July	251,650	22,600	1,590	8,118	499,100
August	257,144	23,500	649	8,295	510,000
September	335,030	16,600	1,510	11,170	664,500
Water Year 1985	6,282,692	82,600	15	17,210	12,462,000

07193500 NEOSHO RIVER BELOW FORT GIBSON LAKE NEAR FORT GIBSON, OKLAHOMA

WATER-QUALITY RECORDS

PERIOD OF RECORD.—Water years 1952 to current year.

PERIOD OF DAILY RECORD.—
SPECIFIC CONDUCTANCE: October 1951 to September 1963, October 1973 to January 1982.
WATER TEMPERATURE: October 1951 to September 1963, October 1973 to January 1982.

REMARKS: Samples were collected bimonthly and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

EXTREMES FOR PERIOD OF DAILY RECORD.—
SPECIFIC CONDUCTANCE: Maximum daily, 496 micromhoe September 7, 1975; minimum daily 188 micromhos October 18, 1974.
WATER TEMPERATURE: Maximum daily, 31.5°C July 31, August 1, 1955; minimum daily, 0.0°C January 23-25, 1962.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

[Five-digit numbers in parenthesis are STORET parameter codes used for computer storage of data; UM-MF = micrometer membrane filter; MG/L = milligrams per liter; K = plate count outside ideal range; IT-FLD = incremental titration-field; UG/L = micrograms per liter]

DATE	TIME	BARO-METRIC PRESSURE (MILLI-METERS OF MERCURY) (00025)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER) (00028)	SPECIFIC CONDUCT-ANCE (MICRO-SIEMENS) (00095)	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE (DEG C) (00010)	TURBIDITY (NEPHELO-METRIC UNITS) (00076)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PERCENT SATUR-ATION) (00301)	COLIFORM, FECAL, 0.7 UM-MF (COLONIES PER 100 ML) (31625)	STREP-TOCOCCI FECAL, KF AGAR (COLONIES PER 100 ML) (31673)
NOV											
28...	1200	749	80020	286	7.9	11.0	5.5	11.4	105	K13	K7
JAN											
22...	1200	760	80020	270	7.3	4.0	13	13.0	99	K15	240
APR											
30...	1315	745	80020	250	6.8	20.0	28	6.0	68	—	—
MAY											
30...	1300	739	80020	—	7.0	24.0	7.5	7.8	96	—	—
JUL											
23...	1215	746	80020	280	6.4	30.5	4.2	6.0	82	—	—
SEP											
24...	1250	752	80020	290	6.8	29.0	12	6.0	79	—	—

DATE	HARD-NESS (MG/L AS CACO3) (00900)	HARD-NESS, NONCAR-BONATE (MG/L CACO3) (95902)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	PERCENT SODIUM (00932)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	CAR-BONATE IT-FLD (MG/L AS CO3) (99445)	BICAR-BONATE IT-FLD (MG/L AS HCO3) (99440)	ALKA-LINITY, CARBON-ATE IT-FLD (MG/L - CACO3) (99430)
NOV											
28...	130	19	42	6.5	9.0	13	0.4	2.9	0.000	138	113
JAN											
22...	120	30	41	5.1	7.3	11	.3	2.5	.000	114	93
APR											
30...	100	0	34	4.6	6.1	11	.3	2.7	.000	176	144
MAY											
30...	110	31	38	4.8	6.1	10	.3	2.6	.000	102	84
JUL											
23...	130	30	41	6.0	7.2	11	.3	3.1	—	—	—
SEP											
24...	120	32	39	5.6	7.1	11	.3	3.3	—	—	—

DATE	ALKA-LINITY LAB (MG/L AS CACO3) (90410)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2) (00405)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, DIS-SOLVED (TONS PER ACRE-FOOT) (70303)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)
NOV										
28...	100	2.8	32	9.5	0.20	2.2	180	170	0.24	0.18
JAN										
22...	84	9.1	27	7.4	.20	6.2	152	150	.21	1.0
APR										
30...	70	44	28	6.1	.10	8.0	144	180	.20	1.1
MAY										
30...	78	.0	30	6.5	.10	6.2	149	140	.20	.90
JUL										
23...	97	75	33	7.1	.10	6.0	172	160	.23	—
SEP										
24...	89	27	27	6.8	.20	4.8	153	150	.21	.30

07193500 NEOSHO RIVER BELOW FORT GIBSON LAKE NEAR FORT GIBSON, OKLAHOMA—CONTINUED

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4) (71846)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOSPHORUS, TOTAL (MG/L AS P) (00665)	PHOSPHORUS, TOTAL (MG/L AS PO4) (71886)	PHOSPHORUS, DISSOLVED (MG/L AS P) (00666)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P) (00671)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4) (00660)	ALUMINUM, DISSOLVED (UG/L AS AL) (01106)	ARSENIC DISSOLVED (UG/L AS AS) (01000)
NOV 28...	0.120	0.15	0.60	0.050	—	0.010	0.010	0.03	10	<1
JAN 22...	.080	.10	.40	.070	—	.040	.040	.12	—	—
APR 30...	.050	.06	.80	.100	—	.050	.040	.12	170	<1
MAY 30...	.090	.12	.40	.060	0.18	.020	.030	.09	<10	<1
JUL 23...	—	—	2.1	.030	—	.010	—	—	—	—
SEP 24...	.070	.09	.40	.070	.21	.040	.040	.12	20	1

DATE	BARIUM, DISSOLVED (UG/L AS BA) (01005)	BERYLLIUM, DISSOLVED (UG/L AS BE) (01010)	CADMIUM DISSOLVED (UG/L AS CD) (01025)	CHROMIUM, DISSOLVED (UG/L AS CR) (01030)	COBALT, DISSOLVED (UG/L AS CO) (01035)	COPPER, DISSOLVED (UG/L AS CU) (01040)	IRON, DISSOLVED (UG/L AS FE) (01046)	LEAD, DISSOLVED (UG/L AS PB) (01049)	LITHIUM DISSOLVED (UG/L AS LI) (01130)	MANGANESE, DISSOLVED (UG/L AS MN) (01055)
NOV 28...	67	<0.5	<1	3	<3	2	5	5	6	<1
JAN 22...	—	—	—	—	—	—	—	—	—	—
APR 30...	56	<.5	<1	<1	<3	3	50	<1	<4	5
MAY 30...	60	<.5	<1	<1	<3	4	12	3	4	2
JUL 23...	—	—	—	—	—	—	—	—	—	—
SEP 24...	70	<.5	1	<1	<3	4	6	3	<4	4

DATE	MERCURY DISSOLVED (UG/L AS HG) (71890)	MOLYBDENUM, DISSOLVED (UG/L AS MO) (01060)	NICKEL, DISSOLVED (UG/L AS NI) (01065)	SELENIUM, DISSOLVED (UG/L AS SE) (01145)	SILVER, DISSOLVED (UG/L AS AG) (01075)	STRONTIUM, DISSOLVED (UG/L AS SR) (01080)	VANADIUM, DISSOLVED (UG/L AS V) (01085)	ZINC, DISSOLVED (UG/L AS ZN) (01090)	SEDIMENT, SUSPENDED (MG/L) (80154)	SEDIMENT SUSPENDED SIEVE DIAMETER PERCENT FINER THAN .062 MILLIMETER (70331)
NOV 28...	<0.1	<10	3	<1	<1	230	<6	14	11	86
JAN 22...	—	—	—	—	—	—	—	—	13	86
APR 30...	<.1	<10	2	<1	<1	150	<6	8	28	89
MAY 30...	<.1	<10	4	<1	<1	140	<6	21	—	—
JUL 23...	—	—	—	—	—	—	—	—	—	—
SEP 24...	<.1	<10	3	<1	<1	190	<6	29	—	—

07194500 Arkansas River near Muskogee, Oklahoma

LOCATION.--Lat 35°46'10", long 95°17'55", in NW 1/4 sec.21, T.15 N., R.19 E., Muskogee County, at bridge on U.S. Highway 62, 1.7 mi downstream from Neosho River, 3.5 mi northeast of Muskogee.

DRAINAGE AREA.--96,674 mi^2 of which 12,541 mi^2 probably is noncontributing.

REMARKS.--Gaging station discontinued Sept. 30, 1970, due to backwater conditions. Streamflow computed by combining flow at station 07165570 Arkansas River near Haskell, station 07176000 Verdigris River near Claremore, station 07177500 Bird Creek near Sperry, station 07193500 Neosho River below Fort Gibson Lake near Fort Gibson, and adjusting the total for the ungaged intervening drainage area.

Monthly and yearly discharge

Month	Mean (ft^3/s)	Runoff in acre-feet
October	6,321	388,700
November	9,142	544,000
December	28,940	1,779,000
January	50,200	3,087,000
February	38,220	2,123,000
March	100,500	6,180,000
April	48,780	2,903,000
May	52,060	3,201,000
June	68,370	4,068,000
July	20,560	1,264,000
August	17,000	1,045,000
September	20,390	1,213,000
Water Year 1985	38,400	27,800,000

07195500 Illinois River near Watts, Oklahoma

LOCATION.--Lat 36°07'48", long 94°34'12", in NE 1/4 sec.18, T.19 N., R.26 E., Adair County, near right bank on downstream side of bridge on U.S. Highway 59, 1.5 mi north of Watts, 4.5 mi downstream from Cincinnati Creek, and at mile 106.2.

DRAINAGE AREA.--635 mi^2.

AVERAGE DISCHARGE.--30 years, 568 ft^3/s.

EXTREMES.--August 1955 to current year: Maximum discharge, 68,000 ft^3/s July 25, 1960; minimum, 8.6 ft^3/s Oct. 26, 1955, Sept. 19, Oct. 14, 1956.

REMARKS.--Records good. Some regulation at low flow by Lake Francis Dam, 0.8 mi above station. Since July 2, 1957, small diversion above station for municipal water supply for city of Siloam Springs, Ark.

COOPERATION.--Gage-height record and discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

Monthly and yearly discharge

Month	Total (ft^3/s)	Maximum daily (ft^3/s)	Minimum daily (ft^3/s)	Mean (ft^3/s)	Runoff in acre-feet
October	24,846	5,630	105	801	49,280
November	31,757	3,730	345	1,059	62,990
December	67,506	15,500	489	2,178	133,900
January	45,391	14,300	515	1,464	90,030
February	43,492	12,000	427	1,553	86,270
March	56,312	13,900	713	1,817	111,700
April	28,015	3,390	484	934	55,570
May	21,910	3,520	394	707	43,460
June	28,793	4,740	277	960	57,110
July	6,545	268	174	211	12,980
August	9,833	1,240	165	317	19,500
September	4,593	167	141	153	9,110
Water Year 1985	368,993	15,500	105	1,011	731,900

STREAMFLOW

07195800 Flint Creek at Springtown, Arkansas

LOCATION.--Lat 36°15'20", long 94°25'50", in NW 1/4 sec. 7, T.18 N., R.32 W., Benton County, Hydrologic Unit 11110103, on right bank 20 ft downstream from State Highway 12, 0.8 mi southwest of Springtown.

DRAINAGE AREA.--14.2 mi^2.

AVERAGE DISCHARGE.--24 years, 13.5 ft^3/s.

EXTREMES.--June 1961 to current year: Maximum discharge, 14,600 ft^3/s June 8, 1974; no flow for part of July 9, 29, 30, Aug. 7, 1964, Sept. 16, 1980.

REMARKS.--Records good.

Monthly and yearly discharge

Month	Total (ft^3/s)	Maximum daily (ft^3/s)	Minimum daily (ft^3/s)	Mean (ft^3/s)	Runoff in acre-feet
October	829.2	179	2.4	26.7	1,640
November	531.7	29	9.3	17.7	1,050
December	1,829.4	638	9.3	59.0	3,630
January	788	127	11	25.4	1,560
February	930.1	293	9.3	33.2	1,840
March	1,434	401	21	46.3	2,840
April	1,086	112	14	36.2	2,150
May	996	108	13	32.1	1,980
June	656	55	10	21.9	1,300
July	231.5	9.8	6.2	7.47	459
August	439.3	28	6.3	14.2	871
September	419.2	25	8.1	14.0	831
Water Year 1985	10,170.4	638	2.4	27.9	20,170

07196900 Baron Fork at Dutch Mills, Arkansas

LOCATION.--Lat 35°52'48", long 94°29'11", on line between secs.21 and 22, T.14 N., R.33 W., Washington County, near right bank on downstream side of bridge on State Highway 59 at Dutch Mills, 2.2 mi downstream from Fly Creek, and 2.9 mi upstream from Arkansas-Oklahoma State line.

DRAINAGE AREA.--46.0 mi^2.

AVERAGE DISCHARGE.--27 years, 37.7 ft^3/s.

EXTREMES.--April 1958 to current year: Maximum discharge, 17,100 ft^3/s July 13, 1972; no flow at times in 1963, 1967, 1980, 1981.

REMARKS.--Records good.

Monthly and yearly discharge

Month	Total (ft^3/s)	Maximum daily (ft^3/s)	Minimum daily (ft^3/s)	Mean (ft^3/s)	Runoff in acre-feet
October	2,144.5	933	2.0	69.2	4,250
November	2,654	586	17	88.5	5,260
December	4,690	1,230	27	151	9,300
January	1,733	347	20	55.9	3,440
February	3,173	1,660	19	113	6,290
March	3,613	988	39	117	7,170
April	1,702	410	20	56.7	3,380
May	833.7	150	9.7	26.9	1,650
June	935.5	198	4.5	31.2	1,860
July	66.2	3.9	1.2	2.14	131
August	308.2	114	1.7	9.94	611
September	37.73	2.8	.11	1.26	75
Water Year 1985	21,890.83	1,660	.11	60.0	43,420

STREAMFLOW

07245000 Canadian River near Whitefield, Oklahoma

LOCATION.--Lat 35°15'45", long 95°14'19", in SE 1/4 SE 1/4 sec.12, T.9 N., R.19 E., Haskell County, near right bank on downstream side of bridge on State Highway 2, 0.8 mi north of Whitefield, 5.5 mi upstream from Taleka (Snake) Creek, 8.2 mi downstream from Eufaula Dam, and at mile 18.8.

DRAINAGE AREA.--47,576 mi^2, of which 9,700 mi^2 is probably noncontributing.

AVERAGE DISCHARGE.--25 years (water years 1939-63), 6,005 ft^3/s; 18 years (water years 1968-85), 5,335 ft^3/s.

EXTREMES.--July 1938 to current year: Maximum discharge, 281,000 ft^3/s May 10, 1943; minimum daily, 0.4 ft^3/s Oct. 8, 1956.

REMARKS.--Records good. Prior to February 1964, occasional slight regulation by Conchas Lake in New Mexico and except for 54 mi^2 of intervening area, completely regulated thereafter by Eufaula Lake.

COOPERATION.--Gage-height record and discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

Monthly and yearly discharge

Month	Total (ft^3/s)	Maximum daily (ft^3/s)	Minimum daily (ft^3/s)	Mean (ft^3/s)	Runoff in acre-feet
October	7,992	1,210	62	258	15,850
November	140,561	11,300	105	4,685	278,800
December	258,446	21,900	243	8,337	512,600
January	624,350	38,900	2,060	20,140	1,238,000
February	209,370	21,100	1,420	7,478	415,300
March	940,600	39,800	11,100	30,340	1,866,000
April	769,200	39,200	16,600	25,640	1,526,000
May	560,080	35,100	4,260	18,070	1,111,000
June	255,118	14,600	158	8,504	506,000
July	163,871	10,300	87	5,286	325,000
August	21,452	2,640	62	692	42,550
September	16,731	2,860	51	558	33,190
Water Year 1985	3,967,771	39,800	51	10,870	7,870,000

07245000 CANADIAN RIVER NEAR WHITEFIELD, OKLAHOMA
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.—Water years 1944-64, 1967 to current year.

PERIOD OF DAILY RECORD.—
SPECIFIC CONDUCTANCE: September 1944 to February 1945, September 1946 to September 1964, October 1966 to current year.
WATER TEMPERATURE: September 1944 to February 1945, September 1946 to September 1964, October 1966 to current year.

REMARKS.—Samples were collected by a local observer on a daily basis. Additional samples were collected bimonthly and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

EXTREMES FOR PERIOD OF DAILY RECORD.—
SPECIFIC CONDUCTANCE: Maximum daily, 22,900 micromhos November 11, 1956; minimum daily, 36 micromhos May 19, 1980.
WATER TEMPERATURE: Maximum daily, 39.0°C, July 16, 1981; minimum, 0.0°C on January 31, February 1-2, 1985.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

[Five-digit numbers in parenthesis are STORET parameter codes used for computer storage of data; IT-FLD = incremental titration - field; MG/L = milligrams per liter; UG/L = micrograms per liter; UM-MF = micrometer membrane filter; K = plate count outside ideal range]

DATE	TIME	BAROMETRIC PRESSURE (MILLIMETERS OF MERCURY) (00025)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	SPECIFIC CONDUCTANCE (MICROSIEMENS) (00095)	PH (STANDARD UNITS) (00400)	TEMPERATURE (DEG C) (00010)	TURBIDITY (NEPHELOMETRIC TURBIDITY UNITS) (00076)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)	COLIFORM, FECAL, 0.7 UM-MF (COLONIES 100 ML) (31625)	STREPTOCOCCI FECAL, KF AGAR (COLONIES PER 100 ML) (31673)
OCT											
30...	1130	705	80020	400	7.0	20.5	20	11.2	134	K13	K17
JAN											
29...	1500	704	1028	360	8.0	4.0	—	12.2	101	—	—
MAR											
05...	1430	760	80020	322	7.4	7.5	65	12.2	102	K75	—
APR											
02...	1545	750	80020	312	7.8	15.5	70	11.6	118	1600	860
30...	1700	740	80020	284	7.6	19.0	70	8.0	89	K40	K47
JUL											
09...	1730	740	80020	275	—	29.0	29	7.3	98	370	300
SEP											
24...	1630	750	80020	440	8.4	22.5	.70	7.9	93	—	—

DATE	HARDNESS (MG/L AS CACO3) (00900)	HARDNESS, NONCARBONATE (MG/L CACO3) (00902)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	PERCENT SODIUM (00932)	SODIUM ADSORPTION RATIO (00931)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	CARBONATE IT-FLD (MG/L AS CO3) (99445)	BICARBONATE IT-FLD (MG/L AS HCO3) (99440)	ALKALINITY, CARBONATE IT-FLD (MG/L - CACO3) (99430)
OCT											
30...	140	37	38	11	31	32	1	3.3	0.000	126	103
JAN											
29...	—	—	—	—	—	—	—	—	.000	212	174
MAR											
05...	98	27	25	8.5	27	37	1	3.1	.000	86	70
APR											
02...	100	27	27	8.9	26	34	1	3.1	.000	94	77
30...	96	26	25	8.2	23	33	1	3.0	.000	86	70
JUL											
09...	130	26	34	10	27	31	1	3.4	—	—	—
SEP											
24...	160	22	45	12	28	27	1	3.3	—	—	—

07245000 CANADIAN RIVER NEAR WHITEFIELD, OKLAHOMA—CONTINUED

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	ALKALINITY LAB (MG/L AS CACO3) (90410)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2) (00405)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301)	SOLIDS, DISSOLVED (TONS PER AC-FT) (70303)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)
OCT										
30...	103	20	35	42	0.20	7.5	239	230	0.33	<0.10
JAN										
29...	—	3.4	—	—	—	—	—	—	—	—
MAR										
05...	65	5.4	24	39	.20	6.1	185	180	.25	.37
APR										
02...	70	2.4	27	38	.20	6.9	193	180	.26	.41
30...	65	3.4	27	31	.20	7.6	187	170	.25	.44
JUL										
09...	100	—	27	40	.20	7.7	223	210	.30	.29
SEP										
24...	140	1.1	23	41	.20	7.6	259	240	.35	<.10

DATE	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4) (71846)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOSPHORUS, TOTAL (MG/L AS P) (00665)	PHOSPHORUS, TOTAL (MG/L AS PO4) (71886)	PHOSPHORUS, DISSOLVED (MG/L AS P) (00666)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P) (00671)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4) (00660)	ALUMINUM, DISSOLVED (UG/L AS AL) (01106)	ARSENIC DISSOLVED (UG/L AS AS) (01000)
OCT										
30...	0.050	0.06	0.70	0.060	—	0.010	0.010	0.03	80	1
JAN										
29...	—	—	—	—	—	—	—	—	—	—
MAR										
05...	.100	.13	.70	.110	—	<.010	<.010	—	70	<1
APR										
02...	.110	.14	1.5	.220	—	.150	.090	.28	—	—
30...	.080	.10	.50	.040	—	.090	<.010	—	100	<1
JUL										
09...	.030	.04	.70	.070	0.21	.020	<.010	—	—	—
SEP										
24...	.040	.05	.60	.070	.21	.040	.030	.09	—	—

07245000 CANADIAN RIVER NEAR WHITEFIELD, OKLAHOMA—CONTINUED

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)
OCT										
30...	160	<0.0	<1	<1	<3	6	65	3	8	130
JAN										
29...	—	—	—	—	—	—	—	—	—	—
MAR										
05...	82	<.5	<1	<1	<3	8	180	<1	5	9
APR										
02...	—	—	—	—	—	—	—	—	—	—
30...	81	<.5	2	<1	<3	12	150	<1	4	9
JUL										
09...	—	—	—	—	—	—	—	—	—	—
SEP										
24...	—	—	—	—	—	—	—	—	—	—

DATE	MERCURY DIS-SOLVED (UG/L AS HG) (71890)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	VANA-DIUM, DIS-SOLVED (UG/L AS V) (01085)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDIMENT SUSPENDED SIEVE DIAMETER PERCENT FINER THAN .062 MILLIMETER (70331)
OCT										
30...	<0.1	<10	2	<1	<1	310	<6	7	32	92
JAN										
29...	—	—	—	—	—	—	—	—	—	—
MAR										
05...	<.1	<10	5	<1	<1	210	<6	11	30	54
APR										
02...	—	—	—	—	—	—	—	—	112	30
30...	<.1	<10	3	<1	<1	190	<6	13	49	97
JUL										
09...	—	—	—	—	—	—	—	—	26	88
SEP										
24...	—	—	—	—	—	—	—	—	—	—

STATION NUMBER 07245000 CANADIAN RIVER NEAR WHITEFIELD, OKLAHOMA—CONTINUED

SPECIFIC CONDUCTANCE (MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	565	299	571	308	529	544	303	297	348	350	386	405
2	570	300	578	304	530	646	307	304	350	344	387	409
3	566	301	570	306	426	566	293	296	357	375	528	411
4	568	292	570	362	410	327	691	295	352	365	637	561
5	603	610	555	360	422	326	621	296	363	355	595	558
6	613	613	558	358	427	325	686	291	359	360	558	613
7	527	592	548	359	428	324	590	298	348	366	554	586
8	528	582	545	358	509	324	695	330	332	379	534	517
9	472	748	546	357	510	322	642	326	332	372	432	427
10	444	759	586	358	511	325	573	329	336	390	534	412
11	422	755	624	359	507	473	327	326	333	377	576	419
12	—	643	632	461	509	363	326	325	338	382	434	411
13	—	586	643	458	669	351	325	331	331	532	420	410
14	—	571	648	455	657	352	321	678	341	585	434	412
15	—	579	644	466	649	365	320	332	331	546	421	412
16	—	596	640	478	—	624	514	677	662	377	432	411
17	—	606	608	476	—	590	583	339	664	378	523	413
18	—	596	508	496	—	617	377	639	652	535	572	411
19	562	587	507	488	—	606	660	653	668	582	534	412
20	570	594	475	482	—	635	—	610	675	598	660	412
21	569	575	472	478	—	615	304	672	677	557	663	411
22	568	579	462	486	426	664	312	678	678	595	605	413
23	—	570	503	508	430	670	306	677	677	630	643	412
24	—	540	504	510	433	645	312	683	356	683	582	424
25	—	536	505	508	441	658	314	682	349	685	635	626
26	347	544	503	518	423	314	312	606	348	384	623	610
27	350	597	504	514	605	307	313	685	347	385	407	413
28	296	578	505	265	686	306	315	686	347	370	405	669
29	290	544	507	261	—	306	300	684	348	376	415	601
30	286	546	469	265	—	305	295	683	480	373	421	692
31	288	—	505	253	—	308	—	358	—	370	420	—
MEAN	476	561	548	407	506	455	422	486	436	450	515	476

STATION NUMBER 07245000 CANADIAN RIVER NEAR WHITEFIELD, OKLAHOMA—CONTINUED

TEMPERATURE, WATER (DEGREES CELSIUS), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16.0	16.0	13.0	8.0	0.0	4.0	6.0	16.0	24.0	29.0	32.0	34.0
2	17.0	16.0	14.0	7.0	2.0	7.0	7.0	16.0	27.0	31.0	33.0	33.0
3	21.0	19.0	12.0	6.0	2.0	4.0	8.0	18.0	26.0	30.0	33.0	35.0
4	18.0	15.0	15.0	10.0	1.0	6.0	7.0	17.0	28.0	32.0	31.0	33.0
5	18.0	15.0	12.0	12.0	.0	7.0	7.0	17.0	26.0	31.0	31.0	32.0
6	15.0	16.0	11.0	11.0	2.0	4.0	6.0	18.0	27.0	30.0	30.0	33.0
7	24.0	18.0	13.0	9.0	3.0	3.0	8.0	18.0	24.0	29.0	32.0	32.0
8	25.0	17.0	12.0	5.0	1.0	6.0	5.0	20.0	28.0	31.0	33.0	34.0
9	26.0	18.0	16.0	8.0	2.0	4.0	7.0	21.0	27.0	30.0	32.0	33.0
10	24.0	16.0	13.0	7.0	3.0	5.0	7.0	20.0	26.0	32.0	33.0	33.0
11	22.0	15.0	12.0	4.0	4.0	6.0	7.0	19.0	27.0	31.0	33.0	34.0
12	—	16.0	12.0	4.0	2.0	6.0	7.0	21.0	29.0	30.0	32.0	30.0
13	—	16.0	13.0	8.0	2.0	5.0	7.0	21.0	29.0	32.0	33.0	29.0
14	—	15.0	11.0	7.0	4.0	7.0	8.0	20.0	28.0	31.0	32.0	28.0
15	—	17.0	13.0	—	2.0	6.0	9.0	22.0	29.0	30.0	34.0	30.0
16	—	16.0	12.0	—	—	5.0	11.0	22.0	30.0	33.0	33.0	29.0
17	—	14.0	11.0	—	—	7.0	9.0	20.0	28.0	32.0	34.0	28.0
18	—	13.0	10.0	4.0	—	8.0	10.0	20.0	29.0	31.0	33.0	30.0
19	18.0	13.0	10.0	3.0	—	6.0	13.0	21.0	30.0	32.0	32.0	30.0
20	15.0	12.0	11.0	6.0	—	6.0	—	21.0	28.0	31.0	34.0	30.0
21	15.0	13.0	12.0	5.0	—	5.0	16.0	20.0	29.0	33.0	33.0	29.0
22	16.0	17.0	13.0	3.0	5.0	6.0	17.0	22.0	30.0	32.0	31.0	31.0
23	—	16.0	10.0	4.0	6.0	6.0	16.0	23.0	30.0	33.0	33.0	28.0
24	—	18.0	9.0	3.0	4.0	8.0	15.0	23.0	30.0	31.0	32.0	27.0
25	—	16.0	11.0	2.0	7.0	8.0	17.0	21.0	29.0	31.0	31.0	28.0
26	16.0	13.0	8.0	5.0	3.0	6.0	16.0	26.0	28.0	33.0	29.0	27.0
27	18.0	14.0	12.0	6.0	6.0	5.0	18.0	22.0	30.0	32.0	34.0	25.0
28	16.0	12.0	14.0	5.0	8.0	6.0	17.0	22.0	31.0	33.0	33.0	25.0
29	19.0	14.0	13.0	2.0	—	5.0	16.0	23.0	28.0	34.0	34.0	24.0
30	19.0	13.0	12.0	3.0	—	5.0	17.0	24.0	30.0	31.0	32.0	25.0
31	18.0	—	9.0	.0	—	6.0	—	26.0	—	32.0	33.0	—
MEAN	19.0	15.5	12.0	5.5	3.0	5.5	11.0	20.5	28.0	31.5	32.5	30.0

STREAMFLOW

07247000 Poteau River at Cauthron, Arkansas

LOCATION.--Lat 34°55'08", long 94°17'55", in NW 1/4 SW 1/4 sec.16, T.3 N., R.31 W., Scott County, on right bank at downstream side of highway bridge at Cauthron, 2.9 mi downstream from Cross Creek, 7.8 mi downstream from Jones Creek, and at mile 109.0.

DRAINAGE AREA.--203 mi^2.

AVERAGE DISCHARGE.--46 years, 219 ft^3/s.

EXTREMES.--February 1939 to current year: Maximum discharge, 32,200 ft^3/s May 20, 1960; no flow at times in most years.

REMARKS.--Records good. As of September 1974, flow from 92.2 mi^2 above this station is controlled by 16 floodwater-detention reservoirs with a total combined capacity of 39,082 acre-ft below the flood spillway crests, of which 33,524 acre-ft is flood-detention capacity, 2,100 acre-ft is water-supply storage, and 3,458 acre-ft is sediment-storage capacity.

Monthly and yearly discharge

Month	Total (ft^3/s)	Maximum daily (ft^3/s)	Minimum daily (ft^3/s)	Mean (ft^3/s)	Runoff in acre-feet
October	44,113.6	7,550	8.6	1,423	87,500
November	24,769	3,410	100	826	49,130
December	18,242	1,700	195	588	36,180
January	9,756	976	102	315	19,350
February	16,440	3,960	178	587	32,610
March	15,186	1,770	100	490	30,120
April	19,011	3,610	90	634	37,710
May	6,543	1,030	64	211	12,980
June	2,668	371	15	88.9	5,290
July	915.3	273	2.9	29.5	1,820
August	113.7	8.2	1.7	3.67	226
September	100.55	17	.29	3.35	199
Water Year 1985	157,858.15	7,550	.29	432	313,100

07249400 James Fork near Hackett, Arkansas

LOCATION.--Lat 35°09'45", long 94°24'25", in NW 1/4 NW 1/4 sec.34, T.6 N., R.32 W., Sebastian County, near left bank on downstream side of bridge on State Highway 45, 1.7 mi south of Hackett, 2.0 mi downstream from Elder Branch, 2.0 mi upstream from small tributary, and 3.6 mi upstream from Arkansas-Oklahoma State line.

DRAINAGE AREA.--147 mi^2.

AVERAGE DISCHARGE.--27 years, 135 ft^3/s.

EXTREMES.--April 1958 to current year: Maximum discharge, 30,000 ft^3/s May 14, 1968; no flow at times.

REMARKS.--Records good.

Monthly and yearly discharge

Month	Total (ft^3/s)	Maximum daily (ft^3/s)	Minimum daily (ft^3/s)	Mean (ft^3/s)	Runoff in acre-feet
October	26,878.0	3,840	7.2	867	53,310
November	19,002	3,590	65	633	37,690
December	17,212	2,530	73	555	34,140
January	5,929	1,050	49	191	11,760
February	13,648	4,820	120	487	27,070
March	10,996	1,210	96	355	21,810
April	9,546	2,010	47	318	18,930
May	3,769	845	42	122	7,480
June	806.2	83	9.5	26.9	1,600
July	359.4	31	1.2	11.6	713
August	61.2	4.2	1.0	1.97	121
September	75.84	7.1	.00	2.53	150
Water Year 1985	108,282.64	4,820	.00	297	214,800

07250000 Lee Creek near Van Buren, Arkansas

LOCATION.--Lat 35°29'40", long 94°26'58", in SE 1/4 sec.21, T.12 N., R.27 E., Indian Meridian, Sequoyah County, Okla., on right bank 300 ft west of Arkansas-Oklahoma State line, 3.2 mi downstream from Webbers Creek, 6.8 mi northwest of Van Buren, and at mile 7.8.

DRAINAGE AREA.--426 mi^2.

AVERAGE DISCHARGE.--41 years (1930-36, 1950-85), 494 ft^3/s.

EXTREMES.--September 1930 to June 1937, October 1950 to current year: Maximum discharge, 80,600 ft^3/s (2,280 m^3/s) May 6, 1960; no flow at times.

REMARKS.--Records good.

Monthly and yearly discharge

Month	Total (ft^3/s)	Maximum daily (ft^3/s)	Minimum daily (ft^3/s)	Mean (ft^3/s)	Runoff in acre-feet
October	65,811	10,000	43	2,123	130,500
November	59,163	13,700	243	1,972	117,300
December	56,065	14,700	333	1,809	111,200
January	25,043	5,450	243	808	49,670
February	38,450	14,100	212	1,373	76,270
March	55,777	19,300	607	1,799	110,600
April	26,145	5,010	227	872	51,860
May	19,457	5,980	95	628	38,590
June	2,967	372	12	98.9	5,890
July	123	11	1.7	3.97	244
August	1,249.6	324	1.8	40.3	2,480
September	45.55	4.3	.65	1.52	90
Water Year 1985	350,296.15	19,300	.65	960	694,800

07250550 Arkansas River at Dam No. 13, near Van Buren, Arkansas

LOCATION.--Lat 35°20'56", long 94°17'54", in sec.28, T.8 N., R.31 W., Sebastian County, in Dam No. 13 control house on right bank, and at mile 308.9.

DRAINAGE AREA.--150,547 mi^2, of which 22,241 mi^2 is probably noncontributing.

AVERAGE DISCHARGE.--58 years, 31,280 ft^3/s.

EXTREMES.--October 1927 to current year: Maximum discharge, 850,000 ft^3/s (24,100 m^3/s) May 12, 1943; no flow Nov. 2, 1975, Feb. 1, 1981.

REMARKS.--Records good. Prior to October 1969, published as 07250500 Arkansas River at Van Buren. Beginning Apr. 26, 1970, daily discharge computed from relation between discharge, head, and gate openings. Flow regulated by many locks, dams, and reservoirs upstream.

Monthly and yearly discharge

Month	Total (ft^3/s)	Maximum daily (ft^3/s)	Minimum daily (ft^3/s)	Mean (ft^3/s)	Runoff in acre-feet
October	597,948	60,700	458	19,290	1,186,000
November	983,100	75,600	11,900	32,770	1,950,000
December	1,695,340	130,000	5,610	54,690	3,363,000
January	2,727,600	145,000	33,800	87,990	5,410,000
February	1,527,300	164,000	22,500	54,550	3,029,000
March	4,548,000	191,000	132,000	146,700	9,021,000
April	2,716,000	167,000	50,700	90,530	5,387,000
May	2,468,400	133,000	29,200	79,630	4,896,000
June	2,312,300	107,000	30,000	77,080	4,586,000
July	874,820	45,900	8,080	28,220	1,735,000
August	541,480	35,600	1,820	17,470	1,074,000
September	558,500	40,700	2,000	18,620	1,108,000
Water Year 1985	21,550,788	191,000	458	59,040	42,750,000

WATER-QUALITY RECORDS

PERIOD OF RECORD.—October 1969 to current year.

PERIOD OF DAILY RECORD.—
SPECIFIC CONDUCTANCE: October 1969 to September 1981.
WATER TEMPERATURES: October 1969 to September 1972, March 1974 to September 1981.
SUSPENDED SEDIMENT DISCHARGE: October 1970 to September 1981.

INSTRUMENTATION.—Water-quality monitor December 1969 to September 1981.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

[Five-digit numbers in parenthesis are STORET parameter codes used for computer storage of data; UM-MF = micrometer membrane filter; UG/L = micrograms per liter; MG/L = milligrams per liter; K = plate count outside ideal range]

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	STREAMFLOW INSTANTANEOUS (CUBIC FEET PER SECOND) (00061)	SPECIFIC CONDUCTANCE (MICROSIEMENS) (00095)	PH (STANDARD UNITS) (00400)	TEMPERATURE (DEG C) (00010)	TURBIDITY (NEPHELOMETRIC UNITS) (00076)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)
OCT										
03...	0900	80513	80010	1820	715	8.1	19.5	3.3	7.8	85
DEC										
03...	1115	80513	80010	25000	201	7.7	10.0	15	10.6	94
FEB										
12...	1330	80513	80010	33500	220	8.3	1.5	2.5	14.2	100
APR										
25...	1100	80513	80010	55400	285	8.0	19.0	50	8.4	91
JUN										
11...	0730	80513	80010	92500	691	8.1	21.0	20	8.1	91
AUG										
01...	0800	80513	80010	10800	620	8.1	28.5	13	7.6	99

DATE	TIME	BAROMETRIC PRESSURE (MILLIMETERS OF MERCURY) (00025)	COLIFORM, FECAL, 0.7 UM-MF (COLONIES PER 100 ML) (31625)	STREPTOCOCCI FECAL, KF AGAR (COLONIES PER 100 ML) (31673	HARDNESS (MG/L AS CACO3) (00900)	HARDNESS NONCARBONATE (MG/L AS CACO3) (95902)	HARDNESS, NONCARBONATE (MG/L CACO3) (00902)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	PERCENT SODIUM (00932)
OCT											
03...	0900	766	K18	40	160	44	44	44	12	78	51
DEC											
03...	1115	764	K240	700	64	16	16	19	4.1	12	28
FEB											
12...	1330	770	390	130	120	36	36	35	8.3	62	52
APR											
25...	1100	761	120	K2100	100	29	29	29	7.0	32	40
JUN											
11...	0730	764	44	K46	140	56	56	40	8.8	75	54
AUG											
01...	0800	756	K300	K360	140	39	39	40	9.6	61	48

DATE	TIME	SODIUM ADSORPTION RATIO (00931)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY LAB (MG/L AS CACO3) (90410)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301)	SOLIDS, DISSOLVED (TONS PER ACRE-FOOT) (70303)
OCT											
03...	0900	3	3.6	112	57	120	0.20	1.8	394	390	0.54
DEC											
03...	1115	.7	2.0	47	21	21	<.10	5.0	109	110	.15
FEB											
12...	1330	3	2.6	83	41	95	.20	5.7	315	300	.43
APR											
25...	1100	1	2.1	75	31	51	.10	6.7	219	200	.30
JUN											
11...	0730	3	2.8	98	46	120	.30	4.7	412	350	.56
AUG											
01...	0800	2	3.3	105	39	86	.10	3.2	324	300	.44

07250550 ARKANSAS RIVER AT DAM NO. 13, NEAR VAN BUREN, ARKANSAS—CONTINUED

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS-PHORUS, TOTAL (MG/L AS P) (00665)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P) (00671)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)
OCT											
03...	0900	<0.10	0.120	0.40	0.050	0.090	0.070	<10	3	96	1.0
DEC											
03...	1115	.25	.030	.50	.050	.020	.020	—	—	—	—
FEB											
12...	1330	.68	.160	.50	.110	.060	.080	10	<1	100	<.5
APR											
25...	1100	.69	.050	.90	.070	.060	.040	60	<1	140	<.5
JUN											
11...	0730	—	—	1.3	.100	.020	—	—	—	—	—
AUG											
01...	0800	.23	.100	.60	.030	<.010	.030	30	1	91	.5

DATE	TIME	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY DIS-SOLVED (UG/L AS HG) (71890)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)
OCT											
03...	0900	<1	<1	<3	2	<3	1	5	<1	<0.1	<10
DEC											
03...	1115	—	—	—	—	—	—	—	—	—	—
FEB											
12...	1330	<1	<1	<3	2	140	1	<4	35	.2	<10
APR											
25...	1100	<1	<1	<3	6	82	2	<4	10	<.1	<10
JUN											
11...	0730	—	—	—	—	—	—	—	—	—	—
AUG											
01...	0800	<1	6	<3	6	11	1	5	4	.2	<10

DATE	TIME	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDIMENT DIS-CHARGE, SUSPENDED (TONS PER DAY) (80155)	SEDIMENT SUSPENDED SIEVE DIAMETER PERCENT FINER THAN .062 MILLIMETER (70331)
OCT									
03...	0900	4	<1	<1	390	4	11	54	79
DEC									
03...	1115	—	—	—	—	—	19	1280	84
FEB									
12...	1330	2	<1	<1	270	17	30	2710	96
APR									
25...	1100	3	<1	<1	210	32	53	7930	92
JUN									
11...	0730	—	—	—	—	—	120	30000	46
AUG									
01...	0800	12	<1	<1	320	18	28	816	73