07146500 ARKANSAS RIVER AT ARKANSAS CITY, KS

Middle Arkansas Basin
Middle Arkansas-Slate Subbasin

LOCATION.--Lat 37°03′23″, long 97°03′28″ referenced to North American Datum of 1927, in NE ¼ NE ¼ NE ¼ sec.35, T.34 S., R.3 E., Cowley County, KS, 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.

DRAINAGE AREA.--43,713 mi² of which 7,607 mi² probably is noncontributing.

SURFACE-WATER RECORDS

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 good except those for estimated daily discharges, which are poor. Flow slightly regulated since 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.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 10,000 ft³/s and (or) maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)
May 10	2200	14,000	15.71
May 28	0000	36,400	21.43
Jun 1	1315	21,900	17.98
Jun 6	0700	12,200	15.59
Jun 14	0200	18,000	16.98
Jun 19	0415	21,400	17.84
Jun 30	0200	14,200	16.10
Sep 14	1645	*79,100	*27.53

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	589	732	494	1,140	1,000	1,480	1,400	1,590	17,200	5,870	1,040	621
2	649	706	502	1,070	947	1,380	1,400	1,820	10,300	4,260	890	521
3	659	685	499	976	948	2,200	1,270	3,520	6,940	3,850	794	476
4	699	663	477	914	992	3,630	1,250	2,100	6,280	3,310	790	543
5	656	649	461	899	1,300	5,370	1,170	1,830	5,720	2,830	733	410
6	589	625	473	1,150	2,290	4,670	1,160	1,910	9,810	2,540	657	457
7	567	604	531	1,710	1,640	3,960	1,130	2,570	6,240	2,340	657	698
8	572	586	465	1,800	1,390	3,050	1,220	7,800	4,300	2,190	624	697
9	646	573	492	1,500	1,300	2,540	1,930	9,160	6,410	2,510	647	608
10	622	571	478	1,310	1,210	2,000	4,240	11,500	7,280	2,590	842	550
11	606	570	598	1,360	1,150	1,730	7,060	9,990	4,640	2,350	1,530	601
12	629	565	2,200	1,420	1,070	1,580	5,730	6,620	3,410	2,150	1,280	9,210
13	664	554	2,260	1,390	1,020	1,630	4,450	5,790	7,370	2,160	1,610	39,100
14	718	532	3,790	1,330	1,010	1,580	4,250	5,400	15,400	1,790	1,890	69,400
15	1,400	513	4,150	1,260	985	1,550	3,350	5,260	7,650	1,500	1,940	43,300
16	2,270	498	3,480	1,230	988	1,440	2,550	4,690	5,030	1,330	1,620	15,400
17	2,260	493	2,430	1,180	1,930	1,700	2,160	4,210	10,100	1,220	1,340	9,340
18	6,190	495	1,890	1,120	4,180	5,220	1,950	3,850	16,100	1,130	1,190	6,480
19	5,380	498	1,740	1,010	3,110	6,650	1,790	3,540	19,600	1,140	1,150	4,980
20	2,970	501	1,620	925	3,440	3,850	1,660	3,230	13,200	1,100	1,060	3,970
21	1,920	494	1,480	923	3,420	2,720	1,550	2,950	7,070	1,030	e1,020	3,260
22	1,910	483	1,430	899	2,560	2,210	1,520	2,720	4,760	1,000	e938	2,750
23	1,780	465	1,340	891	1,980	1,910	1,540	2,630	3,880	930	e791	2,320
24	1,300	464	1,100	854	1,770	1,710	1,560	4,560	3,340	855	e686	2,010
25	1,090	468	1,210	847	2,030	1,570	2,360	5,970	2,940	815	e609	1,800
26	990	478	1,570	798	2,180	1,470	3,610	9,120	2,630	783	617	1,560
27	917	484	1,720	847	1,600	1,410	2,440	27,400	3,930	1,050	620	1,630
28	861	486	1,480	990	1,500	1,350	2,120	33,800	5,850	1,040	615	1,550
29	827	482	1,320	1,170	1,550	1,290	1,910	21,700	11,100	906	586	1,430
30	800	485	1,250	1,170	---	1,250	1,750	10,900	11,400	984	541	1,320
31	765	---	1,160	1,050	---	1,250	---	8,560	---	1,330	590	---
Mean	1,371	547	1,422	1,133	1,741	2,431	2,383	7,313	7,996	1,899	964	7,566
Max	6,190	732	4,150	1,800	4,180	6,650	7,060	33,800	19,600	5,870	1,940	69,400
Min	567	464	461	798	947	1,250	1,130	1,590	2,630	783	541	410
Ac-ft	84,290	32,530	87,450	69,690	100,100	149,500	141,800	449,600	475,800	116,800	59,300	450,200

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1903 - 2008, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	1,662	1,378	967	900	1,250	2,083	2,385	3,126	3,806	2,684	1,635	1,587
Max	18,890	11,550	3,908	3,673	9,658	14,600	14,780	16,890	16,040	17,190	13,320	7,870
(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)

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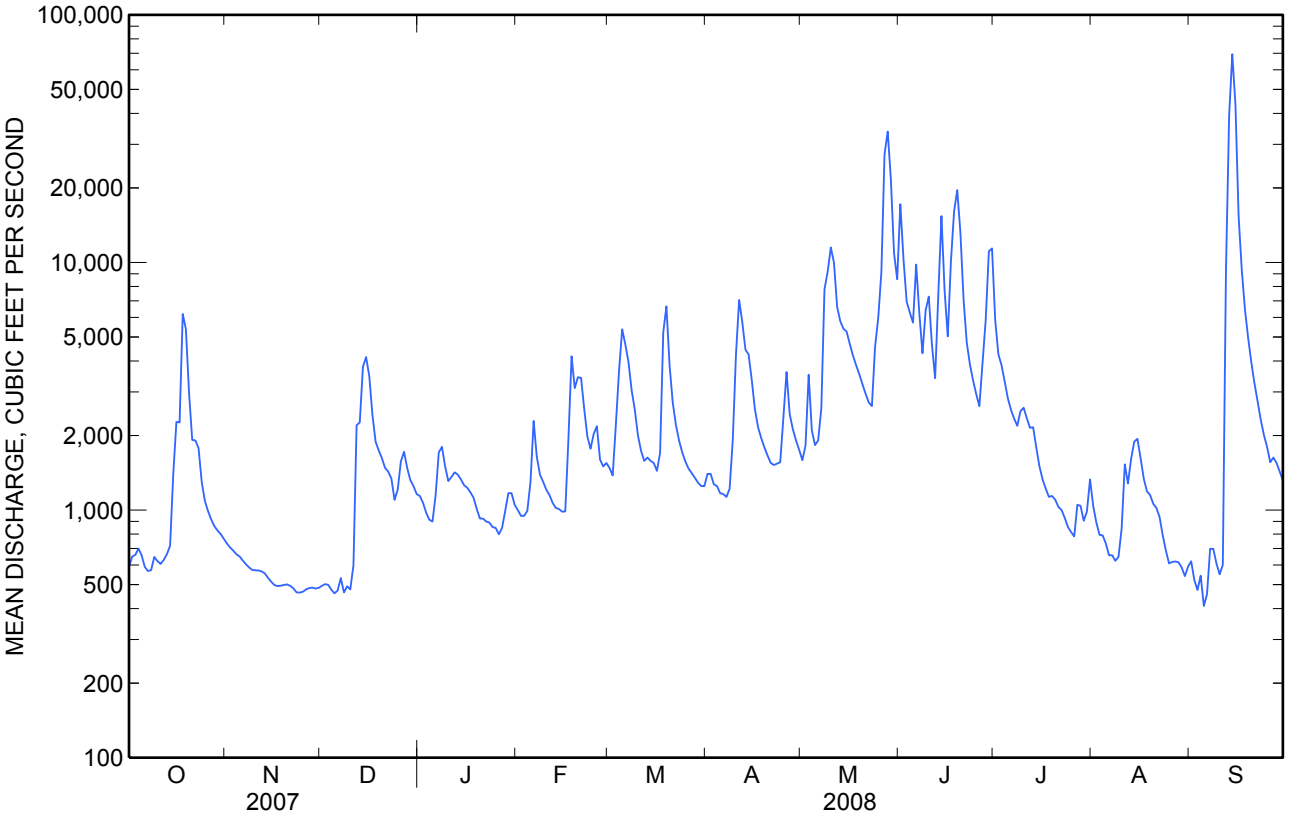
SUMMARY STATISTICS

	Calendar Year 2007		Water Year 2008		Water Years 1903 - 2008	
Annual mean	3,874		3,054		1,957	
Highest annual mean					5,830	1951
Lowest annual mean					366	1934
Highest daily mean	39,700	Jun 30	69,400	Sep 14	79,700	Nov 3, 1998
Lowest daily mean	282	Jan 15	410	Sep 5	4.0	Oct 23, 1921
Annual seven-day minimum	388	Jan 10	475	Nov 23	5.6	Nov 5, 1921
Maximum peak flow			79,100	Sep 14	103,000	Jun 10, 1923
Maximum peak stage			27.53	Sep 14	28.89	Nov 3, 1998
Instantaneous low flow			390	Sep 5	1.0	Oct 9, 1921
Annual runoff (ac-ft)	2,805,000		2,217,000		1,418,000	
10 percent exceeds	9,770		6,320		4,180	
50 percent exceeds	1,300		1,460		912	
90 percent exceeds	478		566		290