07144300 ARKANSAS RIVER AT WICHITA, KS

Middle Arkansas Basin
Middle Arkansas-Slate Subbasin

LOCATION.--Lat 37°38′36″, long 97°20′06″ referenced to North American Datum of 1927, in NE ¼ SE ¼ SE ¼ sec.5, T.28 S., R.1 E., Sedgwick County, KS, 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 mi² of which 7,263 mi² probably is noncontributing.

SURFACE-WATER RECORDS

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 fair. Flow slightly regulated since 1948 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 bypasses 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 the floodway occurred only on the days given in the following table:

Date	Discharge (ft³/s)	Date	Discharge (ft³/s)	Date	Discharge (ft³/s)	Date	Discharge (ft³/s)
Jul 30	1,940	Aug 5	9,900	Aug 11	5,070	Aug 17	1,190
Jul 31	7,040	Aug 6	7,850	Aug 12	1,900	Aug 18	322
Aug 1	2,420	Aug 7	8,370	Aug 13	1,130	Aug 19	1.9
Aug 2	317	Aug 8	8,110	Aug 14	2,280		
Aug 3	1.2	Aug 9	8,310	Aug 15	1,620		
Aug 4	2,790	Aug 10	7,710	Aug 16	1,440		

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).

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,700 ft³/s and (or) maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)
Jul 29	0915	3,940	--
Jul 31	1330	16,560	--
Aug 5	1345	*25,200	--
Aug 9	0700	23,630	--
Aug 13	1715	10,610	--

Suggested citation: U.S. Geological Survey, 2014, Water-resources data for the United States, Water Year 2013: U.S. Geological Survey Water-Data Report WDR-US-2013, site 07144300, accessed at http://wdr.water.usgs.gov/wy2013/pdfs/07144300.2013.pdf

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	55	28	29	35	42	80	81	e130	2,460	178	7,270	806
2	39	27	29	32	45	76	85	293	2,810	163	6,510	768
3	32	26	30	33	50	80	78	228	1,950	156	5,870	724
4	30	25	29	32	52	78	76	204	1,130	141	8,400	692
5	28	25	29	36	49	72	78	165	905	139	13,500	660
6	27	24	31	37	47	69	74	191	729	130	12,000	635
7	27	24	30	39	58	70	71	186	663	136	12,600	612
8	26	24	29	43	48	69	69	317	585	123	12,400	597
9	27	25	30	46	48	195	70	251	e552	118	12,700	586
10	26	26	27	90	51	124	241	417	e478	115	11,700	563
11	27	89	29	57	48	136	161	436	402	106	10,100	547
12	57	31	29	54	48	120	176	281	372	95	8,100	530
13	43	32	29	47	49	97	140	227	337	87	7,500	518
14	31	36	33	41	48	108	144	179	299	232	8,380	509
15	28	32	42	43	48	94	125	163	284	115	7,920	523
16	33	30	35	42	47	85	109	156	263	128	7,750	519
17	32	30	34	48	49	78	113	146	406	134	7,570	606
18	26	29	35	53	49	72	98	148	270	117	6,610	534
19	24	30	36	56	46	71	74	438	272	102	5,400	567
20	25	29	38	53	54	66	50	369	281	147	3,610	498
21	26	28	35	49	73	67	55	287	347	205	2,550	464
22	27	29	36	48	65	67	106	202	358	170	1,920	465
23	27	28	38	50	55	72	421	169	299	325	1,520	440
24	27	27	35	50	80	96	285	150	250	414	1,460	423
25	27	29	28	49	97	72	199	141	230	195	1,320	409
26	24	29	28	51	115	89	185	135	208	753	1,190	401
27	24	27	38	53	100	98	135	126	294	245	1,120	393
28	26	28	35	52	84	77	125	124	303	1,040	1,050	450
29	27	29	33	51	---	66	114	124	335	3,070	979	395
30	28	29	33	48	---	133	e118	964	169	5,550	940	392
31	27	---	37	48	---	76	---	2,870	---	8,350	884	---
Mean	30.1	30.2	32.5	47.3	58.8	88.8	129	330	608	741	6,156	541
Max	57	89	42	90	115	195	421	2,870	2,810	8,350	13,500	806
Min	24	24	27	32	42	66	50	124	169	87	884	392
Ac-ft	1,850	1,800	2,000	2,910	3,260	5,460	7,650	20,270	36,180	45,580	378,500	32,180

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1935 - 2013, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	886	636	442	410	650	1,113	1,198	1,680	1,952	1,544	967	836
Max	12,900	5,957	2,963	2,153	5,278	9,361	8,498	9,215	8,851	14,620	9,202	3,932
(WY)	(1974)	(1999)	(1974)	(1974)	(1949)	(1973)	(1973)	(1951)	(1951)	(1993)	(1950)	(1973)
Min	10.2	30.2	23.4	18.8	53.7	63.2	58.1	119	119	46.8	14.2	7.90
(WY)	(1957)	(2013)	(1957)	(1957)	(1957)	(1935)	(1935)	(1992)	(1956)	(1991)	(1956)	(1956)

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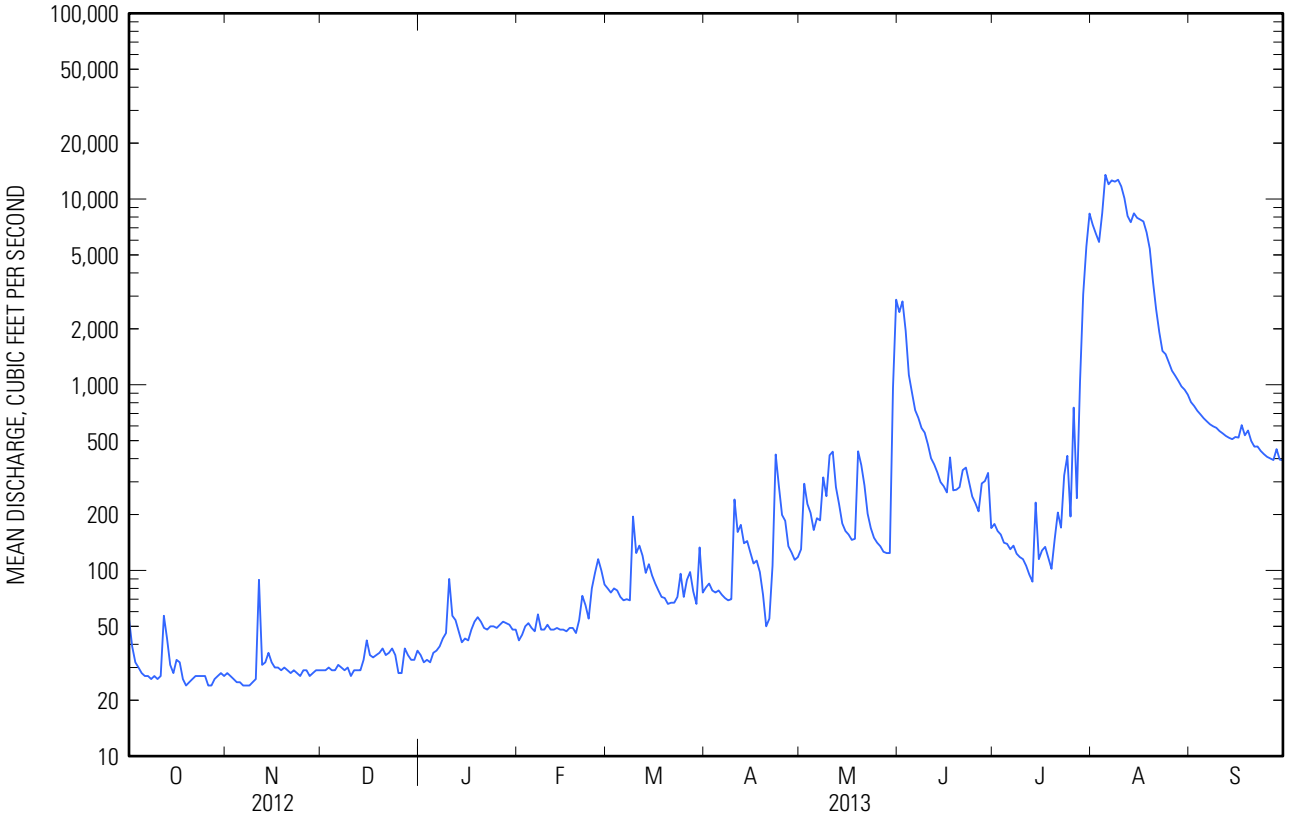
SUMMARY STATISTICS

	Calendar Year 2012		Water Year 2013		Water Years 1935 - 2013	
Annual mean	186		743		1,028	
Highest annual mean					3,850	1993
Lowest annual mean					151	1991
Highest daily mean	4,850	Feb 4	13,500	Aug 5	41,100	Jul 15, 1993
Lowest daily mean	24	Aug 12	24	Oct 19	5.0	Oct 5, 1956
Annual seven-day minimum	25	Aug 16	25	Nov 3	5.4	Oct 2, 1956
Maximum peak flow			25,200	Aug 5	48,400	Oct 31, 1979
Instantaneous low flow			12	Dec 25	3.0	Sep 3, 1934
Annual runoff (ac-ft)	135,200		537,600		744,400	
10 percent exceeds	410		1,040		2,180	
50 percent exceeds	80		94		415	
90 percent exceeds	27		28		103