

**07144200 LITTLE ARKANSAS RIVER AT VALLEY CENTER, KS**

Middle Arkansas Basin  
Little Arkansas Subbasin

LOCATION.--Lat 37°49'56", long 97°23'19" referenced to North American Datum of 1927, in NE ¼ NW ¼ SW ¼ sec.36, T.25 S., R.1 W., Sedgwick County, KS, 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 ¼ NE ¼ NE ¼ sec.34, T.25 S., R.1 W., on left bank at downstream side of county highway bridge, and 1.2 mi northwest of river gage.

DRAINAGE AREA.--1,327 mi<sup>2</sup> of which 77 mi<sup>2</sup> probably is noncontributing.

**SURFACE-WATER RECORDS**

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 fair except those for estimated daily discharges, which are poor. Natural flow affected by diversions and groundwater withdrawals for irrigation and municipal supply. Satellite telemeter at river station and floodway station. Since May 1957, part of high-water flow bypasses river gage through floodway channel for which separate records are computed; figures representing combined discharge are given herein. Discharge through floodway occurred only on the days given in the following table:

Date	Discharge (ft <sup>3</sup> /s)	Date	Discharge (ft <sup>3</sup> /s)	Date	Discharge (ft <sup>3</sup> /s)	Date	Discharge (ft <sup>3</sup> /s)
May 30	21	Jul 31	7,560	Aug 7	6,900	Aug 14	4,970
May 31	77	Aug 1	4,950	Aug 8	6,010	Aug 15	4,480
June 1	7.5	Aug 2	3,050	Aug 9	6,000	Aug 16	4,340
Jul 2	27	Aug 3	1,970	Aug 10	6,140	Aug 17	3,900
Jul 28	485	Aug 4	3,700	Aug 11	5,490	Aug 18	2,900
Jul 29	1,260	Aug 5	6,820	Aug 12	3,910	Aug 19	1,820
Jul 30	5,220	Aug 6	6,880	Aug 13	3,550	Aug 20	399

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,000 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
July 31	--	*10,230	--
Aug 7	--	10,010	--

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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	26	7.6	7.1	8.6	9.4	18	24	57	1,320	13	7,060	187
2	13	7.3	7.1	8.4	9.1	16	21	57	1,500	10	5,180	173
3	11	7.0	7.2	8.5	9.1	16	21	120	546	9.2	4,260	161
4	9.7	6.6	6.7	8.5	9.4	16	28	71	226	8.7	6,300	151
5	8.8	6.8	6.8	8.9	9.6	18	24	91	152	7.8	9,950	141
6	7.9	6.8	7.3	9.0	9.6	20	21	115	193	7.8	10,000	133
7	7.6	6.8	7.1	9.3	10	19	19	91	121	8.3	9,970	122
8	7.0	7.5	7.2	9.6	10	17	19	79	97	7.4	8,900	118
9	7.7	8.1	7.7	9.8	10	20	19	189	116	6.5	8,870	100
10	7.1	8.0	6.9	11	11	53	35	367	98	6.1	9,030	91
11	e6.7	10	7.1	12	11	54	100	213	66	5.5	8,230	81
12	e7.4	14	6.8	14	11	33	57	125	50	4.8	6,380	77
13	e8.3	14	6.5	11	11	50	72	76	39	4.8	5,940	81
14	e9.8	9.3	6.7	11	11	41	65	51	30	7.1	7,600	95
15	e31	8.0	7.1	11	11	32	47	39	27	8.6	7,050	94
16	e21	7.5	7.2	8.9	11	25	39	33	24	26	6,860	85
17	e9.7	7.2	7.4	7.6	10	22	33	30	25	18	6,360	80
18	8.9	7.1	7.8	7.7	11	20	31	26	30	12	5,100	73
19	8.5	7.2	7.4	8.3	11	19	34	32	40	8.5	3,720	71
20	8.2	6.9	7.5	8.3	11	19	28	119	77	15	1,950	76
21	8.5	7.1	7.3	8.5	12	18	28	77	130	44	893	76
22	8.4	7.4	7.4	8.5	e12	18	43	37	66	78	634	73
23	8.2	7.1	8.5	8.3	e12	18	104	30	38	67	525	68
24	7.9	6.9	8.0	8.4	13	19	131	28	28	37	443	64
25	7.8	6.6	7.0	8.6	14	21	56	26	e25	30	373	63
26	7.3	6.3	8.4	8.8	16	27	40	24	18	45	324	61
27	7.0	6.2	8.1	9.1	18	21	37	24	16	263	282	58
28	7.6	6.3	7.8	9.3	20	19	38	23	16	1,480	247	61
29	7.1	6.5	8.5	9.3	---	18	33	22	23	3,010	225	64
30	7.4	6.8	8.0	9.5	---	20	57	616	16	7,590	213	59
31	7.5	---	8.2	9.3	---	25	---	1,580	---	10,200	199	---
<b>Mean</b>	10.0	7.70	7.41	9.32	11.5	24.3	43.5	144	172	743	4,615	94.6
<b>Max</b>	31	14	8.5	14	20	54	131	1,580	1,500	10,200	10,000	187
<b>Min</b>	6.7	6.2	6.5	7.6	9.1	16	19	22	16	4.8	199	58
<b>Ac-ft</b>	615	458	456	573	641	1,490	2,590	8,860	10,220	45,700	283,800	5,630

**STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1923 - 2013, BY WATER YEAR (WY)**

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
<b>Mean</b>	272	186	102	87.2	200	367	387	573	631	457	266	250
<b>Max</b>	3,873	2,969	953	589	2,241	4,392	3,857	4,710	3,076	6,794	4,615	1,471
<b>(WY)</b>	(1974)	(1980)	(1945)	(1962)	(1993)	(1973)	(1944)	(1993)	(1965)	(1993)	(2013)	(1977)
<b>Min</b>	5.06	7.70	7.41	9.32	11.5	17.0	17.1	17.0	12.5	5.97	4.29	3.49
<b>(WY)</b>	(1957)	(2013)	(2013)	(2013)	(2013)	(1956)	(1956)	(1956)	(1934)	(2012)	(1956)	(1956)

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SUMMARY STATISTICS

	Calendar Year 2012		Water Year 2013		Water Years 1923 - 2013	
<b>Annual mean</b>	69.4		499		315	
<b>Highest annual mean</b>					1,698	1993
<b>Lowest annual mean</b>					24.9	1934
<b>Highest daily mean</b>	2,930	Feb 4	10,200	Jul 31	28,600	Jul 15, 1993
<b>Lowest daily mean</b>	4.3	Jul 29	4.8	Jul 12	1.1	Oct 6, 1956
<b>Annual seven-day minimum</b>	4.3	Jul 27	6.0	Jul 8	1.9	Oct 5, 1956
<b>Maximum peak flow</b>			10,200	Jul 31	32,000	Apr 16, 1945
<b>Maximum peak stage</b>					22.05	Apr 16, 1945
<b>Instantaneous low flow</b>			3.5	Dec 25	0.00	Nov 19, 1992
<b>Annual runoff (ac-ft)</b>	50,360		361,000		228,300	
<b>10 percent exceeds</b>	114		299		487	
<b>50 percent exceeds</b>	14		19		59	
<b>90 percent exceeds</b>	5.3		7.1		20	

