07152500 ARKANSAS RIVER AT RALSTON, OK

Arkansas-Keystone Basin
Black Bear-Red Rock Subbasin

LOCATION.--Lat 36°30′15″, long 96°43′41″ referenced to North American Datum of 1927, in NE ¼ NE ¼ sec.2, T.23 N., R.5 E., Pawnee County, OK, Hydrologic Unit 11060006, on right upstream abutment of bridge on State Highway 18 at Ralston, 2 mi downstream from Salt Creek, 2 mi upstream from Grayhorse Creek, and at mile 594.0. Prior to Feb. 10, 1988, gage was near left bank on downstream side of pier of bridge.

DRAINAGE AREA.--54,465 mi² of which 7,615 mi² probably is noncontributing.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--October 1925 to current year. Monthly discharge only for some periods, published in WSP 1311. Gage-height records collected in this vicinity since 1922 are contained in reports of National Weather Service.

GAGE.--Water-stage recorder. Datum of gage is 776.70 ft above NGVD of 1929. Oct. 1, 1925 to Nov. 13, 1935, nonrecording gage at site of former highway bridge 1,200 ft downstream at same datum. Nov. 14, 1935 to Feb. 23, 1939, nonrecording gage near left bank on downstream side of bridge at same datum. Feb. 24, 1939 to Feb. 10, 1988, gage was near left bank on downstream side of pier of bridge at same datum.

REMARKS.--Records fair except for estimated periods which are poor. Flow regulated since April 1976 by Kaw Lake (station 07148130) 59.7 mi upstream; some regulation by Great Salt Plains Lake (station 07150000) since 1941. U.S. Army Corps of Engineers' satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 11, 1923, reached a stage of 23.8 ft, referred to outside gage on basis of stages observed in 1923 and 1944 at site 1,200 ft downstream.

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007
DAILY MEAN VALUES

[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	e880	e220	e195	e390	e1,800	4,830	34,000	10,300	15,600	82,600	12,600	4,480
2	e500	e205	e190	e385	e2,500	4,690	35,800	13,100	26,500	89,000	12,500	3,360
3	e359	e195	e185	e380	e2,000	4,670	22,400	10,900	45,000	99,200	12,200	2,410
4	e320	e190	e180	e390	e3,500	2,970	24,900	9,900	48,300	73,000	12,000	2,420
5	e310	e195	e185	e410	e2,000	1,040	25,800	8,330	36,500	56,200	11,400	3,360
6	e300	e190	e190	e420	e1,500	1,710	23,900	7,690	24,500	38,400	11,500	2,910
7	e290	e188	e200	e410	e1,200	3,730	18,100	20,500	20,600	37,900	11,300	3,130
8	e280	e185	e210	e400	e1,100	2,980	14,500	21,600	16,400	29,800	13,500	3,310
9	e290	e182	e220	e390	e1,000	2,520	13,900	34,300	17,600	21,900	17,100	4,720
10	e300	e180	e230	e380	e1,100	2,450	11,400	41,100	18,900	23,100	17,200	6,380
11	e290	e178	e240	e375	e1,200	2,170	8,190	35,200	20,600	29,700	17,800	5,850
12	e280	e176	e255	e370	e1,000	762	7,810	31,900	24,100	42,500	18,200	4,350
13	e270	e174	e260	e360	e900	482	9,470	31,300	31,400	41,200	18,100	3,200
14	e290	e172	e250	e350	e850	389	20,300	28,200	30,500	28,200	17,900	2,800
15	e285	e195	e245	e345	e1,000	284	27,100	26,600	38,300	25,500	17,400	2,570
16	e270	e210	e240	e340	e1,800	214	32,100	25,700	34,600	19,100	13,200	2,390
17	e265	e200	e235	e335	e4,800	566	28,700	18,800	25,500	17,500	10,800	1,990
18	e260	e195	e245	e350	e3,500	818	28,900	14,600	19,900	17,600	10,400	1,820
19	e255	e188	e260	e370	e1,600	265	27,300	13,700	18,400	20,000	6,540	2,180
20	e250	e185	e280	e400	e1,500	3,500	26,600	13,100	28,300	24,900	5,950	2,040
21	e260	e182	e300	e450	4,130	14,600	17,900	12,700	22,000	25,400	5,860	1,960
22	e250	e180	e325	e500	4,310	22,600	14,600	16,800	24,100	24,600	5,460	2,210
23	e245	e176	e350	e475	4,570	19,200	14,100	21,600	18,500	24,200	6,160	2,440
24	e240	e172	e370	e450	4,610	12,800	12,300	21,500	14,800	24,100	6,320	2,240
25	e235	e170	e360	e430	3,330	9,220	10,500	21,400	13,900	23,400	7,100	2,110
26	e230	e168	e350	e420	1,350	7,850	8,010	20,700	14,900	22,700	5,480	2,250
27	e240	e190	e345	e410	2,200	7,400	7,240	21,800	21,900	16,800	4,880	2,230
28	e230	e210	e340	e400	4,750	4,310	6,990	26,800	35,700	13,300	4,730	2,370
29	e220	e205	e350	e425	---	6,890	7,180	23,800	83,400	12,800	5,250	2,330
30	e245	e200	e370	e450	---	14,400	7,000	23,400	90,200	12,500	5,230	1,960
31	e255	---	e400	e800	---	24,300	---	18,400	---	12,400	4,480	---
Total	9,194	5,656	8,355	12,760	65,100	184,610	546,990	645,720	880,900	1,029,500	328,540	87,770
Mean	297	189	270	412	2,325	5,955	18,230	20,830	29,360	33,210	10,600	2,926
Max	880	220	400	800	4,800	24,300	35,800	41,100	90,200	99,200	18,200	6,380
Min	220	168	180	335	850	214	6,990	7,690	13,900	12,400	4,480	1,820
Ac-ft	18,240	11,220	16,570	25,310	129,100	366,200	1,085,000	1,281,000	1,747,000	2,042,000	651,700	174,100

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 2007, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	4,720	5,022	3,264	3,639	4,557	8,692	8,910	9,901	11,670	8,168	4,729	3,620
Max	41,580	41,300	10,120	12,450	17,510	27,120	25,300	52,840	41,910	33,210	21,280	17,660
(WY)	(1987)	(1999)	(2000)	(1993)	(1993)	(1987)	(1984)	(1993)	(1995)	(2007)	(1995)	(1989)
Min	161	189	270	412	487	402	305	2,001	1,688	908	390	205
(WY)	(1992)	(2007)	(2007)	(2007)	(1981)	(1981)	(1981)	(1996)	(2006)	(1991)	(1978)	(1984)

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SUMMARY STATISTICS

	Calendar Year 2006		Water Year 2007		Water Years 1977 - 2007	
Annual total	589,248		3,805,095			
Annual mean	1,614		10,420		[a]6,412	
Highest annual mean					16,810	1999
Lowest annual mean					1,292	1981
Highest daily mean	21,800	Apr 30	99,200	Jul 3	170,000	Oct 4, 1986
Lowest daily mean	168	Nov 26	168	Nov 26	[b]52	Sep 18, 1978
Annual seven-day minimum	176	Nov 20	176	Nov 20	103	Oct 19, 1991
Maximum peak flow			105,000	Jul 3	[c]174,000	Oct 4, 1986
Maximum peak stage			18.11	Jul 3	[d]22.20	Oct 4, 1986
Annual runoff (ac-ft)	1,169,000		7,547,000		4,645,000	
10 percent exceeds	3,300		26,900		16,100	
50 percent exceeds	722		3,360		3,000	
90 percent exceeds	204		210		488	

[a] Prior to regulation by Kaw Lake, water years 1926-75, 4826 ft³/s.
[b] Minimum daily discharge for period of record, 14 ft³/s, Oct. 12, 1956.
[c] Maximum for period of record 211,000 ft³/s, Oct. 13, 1973.
[d] Maximum for period of record, 22.98 ft, Oct. 13, 1973.