



Water-Data Report 2009

07141200 PAWNEE RIVER AT ROZEL, KS

Middle Arkansas Basin
Pawnee Subbasin

LOCATION.--Lat 38°12'27", long 99°24'21" referenced to North American Datum of 1927, in NW ¼ SW ¼ sec.22, T.21 S., R.19 W., Pawnee County, KS, Hydrologic Unit 11030005, on left bank at downstream side of highway bridge, 1.2 mi north of U.S. Highway 156 on county road at west edge of Rozel, 16.6 mi west of Larned, and at mile 30.6.

DRAINAGE AREA.--2,148 mi² of which 138 mi² probably is noncontributing.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--April to September 1924 (gage heights and discharge measurements only), October 1924 to September 1995 published as "near Larned," and October 1995 to current year. Monthly discharge only for some periods, published in WSP 1311.

REVISED RECORDS.--WSP 1177: 1949. WSP 1241: 1927-28(M), 1935, 1940, 1943. WSP 1341: Drainage area.

GAGE.--Water-stage recorders. Datum of gage is 2,040.24 ft above NGVD of 1929. June 3, 1959, to June 6, 1990, at site 5.8 mi downstream at datum 0.66 ft higher. See WSP 1921 for history of changes prior to June 2, 1959.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Natural flow affected by groundwater withdrawals, diversions for irrigation, and return flow from irrigated areas. Satellite telemeter at station.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 900 ft³/s and (or) maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jun 17	0530	*1,040	*18.98
No other peak greater than base discharge			

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**DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009
DAILY MEAN VALUES**

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.00	1.4	0.00	0.00	0.00	0.00	0.00	1.4	0.02	6.2	0.00	0.00
2	0.00	0.84	0.00	0.00	0.00	0.00	0.00	0.38	0.00	3.8	0.00	0.00
3	0.00	0.53	0.00	0.00	0.00	0.00	0.00	0.01	0.00	2.4	0.00	0.00
4	0.00	0.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.6	0.00	0.00
5	0.00	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.76	0.00	0.00
6	0.00	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.00	0.00
7	0.00	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.17	0.00	0.00	0.00	0.00	0.00	292	0.00	0.00	0.00	0.00
9	0.00	0.11	0.00	0.00	0.00	0.00	0.00	243	0.00	0.00	0.00	0.00
10	0.00	0.09	0.00	0.00	0.00	0.00	0.00	51	0.00	0.00	0.00	99
11	0.00	0.07	0.00	0.00	0.00	0.00	0.00	18	0.00	0.00	0.00	287
12	0.00	0.04	0.00	0.00	0.00	0.00	0.00	10	1.9	0.00	0.00	333
13	0.00	0.02	0.00	0.00	0.00	0.00	0.00	6.0	26	0.00	0.00	159
14	2.6	0.01	0.00	0.00	0.00	0.00	0.00	3.6	8.6	0.00	0.00	126
15	80	0.00	0.00	0.00	0.00	0.00	0.00	2.3	9.5	0.00	0.00	126
16	130	0.00	0.00	0.00	0.00	0.00	0.00	1.4	385	0.00	0.00	81
17	107	0.00	0.00	0.00	0.00	0.00	0.00	0.77	811	0.00	0.14	47
18	47	0.00	0.00	0.00	0.00	0.00	0.00	0.28	251	0.00	0.06	20
19	24	0.00	0.00	0.00	0.00	0.00	124	0.02	130	0.00	32	9.8
20	10	0.00	0.00	0.00	0.00	0.00	508	0.00	78	0.00	132	5.3
21	6.4	0.00	0.00	0.00	0.00	0.00	347	0.00	67	0.00	37	2.3
22	489	0.00	0.00	0.00	0.00	0.00	183	0.00	44	0.00	39	0.74
23	311	0.00	0.00	0.00	0.00	0.00	137	0.00	35	0.00	19	0.17
24	195	0.00	0.00	0.00	0.00	0.00	161	0.00	75	0.00	9.1	0.02
25	91	0.00	0.00	0.00	0.00	0.00	91	0.00	65	0.00	5.3	0.00
26	45	0.00	0.00	0.00	0.00	0.00	42	0.00	57	0.00	3.5	0.00
27	22	0.00	0.00	0.00	0.00	0.01	17	0.00	40	0.00	2.2	0.00
28	13	0.00	0.00	0.00	0.00	0.00	8.8	0.00	27	0.00	1.0	0.00
29	8.5	0.00	0.00	0.00	---	0.00	5.4	1.4	17	0.00	0.25	0.00
30	4.8	0.00	0.00	0.00	---	0.00	2.5	2.2	10	0.00	0.00	0.00
31	2.4	---	0.00	0.00	---	0.00	---	0.56	---	0.00	0.00	---
Mean	51.2	0.14	0.00	0.00	0.00	0.00	54.2	20.5	71.3	0.48	9.05	43.2
Max	489	1.4	0.00	0.00	0.00	0.01	508	292	811	6.2	132	333
Min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ac-ft	3,150	8.6	0.00	0.00	0.00	0.02	3,230	1,260	4,240	30	556	2,570

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1925 - 2009, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	45.6	15.6	6.61	7.13	10.9	27.7	46.8	90.9	140	148	99.5	50.0
Max	1,185	320	63.5	59.7	304	552	640	1,286	2,298	2,264	2,536	447
(WY)	(1947)	(1997)	(1974)	(1952)	(1949)	(1960)	(1973)	(1935)	(1951)	(1958)	(1950)	(1962)
Min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(WY)	(1940)	(1940)	(1955)	(1956)	(1957)	(1957)	(1935)	(1956)	(1966)	(1976)	(1946)	(1939)

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SUMMARY STATISTICS

	Calendar Year 2008		Water Year 2009		Water Years 1925 - 2009	
Annual mean	23.6		20.8		57.9	
Highest annual mean					549	1951
Lowest annual mean					0.00	1991
Highest daily mean	1,560	May 10	811	Jun 17	14,300	Jul 28, 1958
Lowest daily mean	0.00	Jan 1	0.00	Oct 1	0.00	May 5, 1926
Annual seven-day minimum	0.00	Jan 1	0.00	Oct 1	0.00	Jul 10, 1930
Maximum peak flow			1,040	Jun 17	16,300	Jul 28, 1958
Maximum peak stage			18.98	Jun 17	33.75	Jul 22, 1993
Instantaneous low flow			0.00	Oct 1	0.00	most years
Annual runoff (ac-ft)	17,120		15,040		41,910	
10 percent exceeds	4.8		46		54	
50 percent exceeds	0.00		0.00		2.7	
90 percent exceeds	0.00		0.00		0.00	

