

Water-Data Report 2009

06478500 JAMES RIVER NEAR SCOTLAND, SD

James Basin
Lower James Subbasin

LOCATION.--Lat 43°11'09", long 97°38'07" referenced to North American Datum of 1927, in SW ¼ SW ¼ sec.30, T.97 N., R.57 W., Hutchinson County, SD, Hydrologic Unit 10160011, on right bank 5.0 ft downstream from highway bridge, 0.3 mi upstream from Dawson Creek, and 5.2 mi northeast of Scotland.

DRAINAGE AREA.--20,653 mi² of which 4,148 mi² probably is noncontributing.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--September 1928 to current year. Monthly discharge only for some periods, published in WSP 1309.

REVISED RECORDS.--WSP 786: Drainage area. WSP 956: 1937-38. WSP 1279: 1932, 1948. WDR SD-84-1: Drainage area. WDR SD-86-1: Drainage area. WDR SD-88-1: Datum.

GAGE.--Water-stage recorder, crest-stage gage, and rock and earth control. Datum of gage is 1,168.02 ft above NGVD of 1929. Prior to Nov. 28, 1972, at site 0.25 mi downstream at present datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Low flow regulated by dams forming Arrowwood and Jim Lakes, combined capacity, 16,530 acre-ft, and by dam forming Jamestown Reservoir, capacity, 229,470 acre-ft, since May 1953, and by dam forming Pipestem Reservoir, capacity, 147,000 acre-ft, since 1973. Occasional backwater caused by Dawson Creek; reverse flow occurred for part of May 15, 1961, from information by local residents. Satellite data-collection platform at station. Water temperature and specific conductance measured with each discharge measurement.

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

[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	176	978	e790	e210	e150	e450	2,750	7,140	5,270	3,650	3,530	2,110
2	167	947	e620	e200	e150	e430	2,880	7,520	5,120	3,620	3,500	2,080
3	161	946	e580	e190	e150	e420	3,050	7,870	4,980	3,570	3,470	2,090
4	159	944	e500	e190	e150	e410	3,300	8,240	4,850	3,570	3,420	2,110
5	151	929	e540	e190	e150	e410	3,610	8,520	4,740	3,630	3,380	2,110
6	172	911	e520	e185	e150	e400	3,860	8,760	4,650	3,900	3,320	2,110
7	261	944	e500	e180	e160	e390	4,110	8,930	4,550	4,290	3,280	2,100
8	257	941	e500	e175	e165	e390	4,440	9,020	4,500	4,510	3,220	2,090
9	247	908	e490	e180	e180	e400	4,610	9,010	4,430	4,830	3,170	2,060
10	223	886	e500	e180	e240	e300	4,760	8,960	4,340	5,210	3,110	2,060
11	221	904	e480	e180	e300	e250	4,820	8,850	4,250	5,560	3,070	2,060
12	240	882	e470	e180	e310	e450	4,810	8,710	4,190	5,760	3,030	2,050
13	274	831	e450	e175	e300	e440	4,770	8,370	4,110	5,770	2,970	2,040
14	299	821	e350	e175	e290	e420	4,760	8,190	4,010	5,690	2,910	2,040
15	303	829	e300	e170	e300	e480	4,780	7,940	3,930	5,500	2,850	2,020
16	297	821	e400	e165	e310	e550	4,870	7,730	3,890	5,350	2,840	2,020
17	300	813	e410	e160	e320	576	5,050	7,540	4,000	5,160	2,810	2,020
18	337	803	e360	e155	e380	597	5,370	7,290	4,130	4,980	2,760	2,010
19	395	789	e350	e150	e500	645	5,650	7,110	4,120	4,820	2,750	2,000
20	475	791	e360	e150	e650	763	5,840	6,890	4,020	4,660	2,710	1,990
21	525	747	e350	e150	e680	1,140	6,050	6,700	3,930	4,480	2,650	1,980
22	602	e580	e330	e150	e710	1,470	6,260	6,570	3,850	4,340	2,580	1,980
23	828	e800	e310	e150	e720	1,720	6,350	6,440	3,780	4,190	2,520	1,990
24	914	e650	e300	e150	e650	1,890	6,260	6,320	3,720	4,040	2,440	2,010
25	894	e540	e290	e150	e630	2,070	6,220	6,170	3,670	3,890	2,400	2,020
26	880	e550	e280	e145	e600	2,200	6,250	6,010	3,660	3,760	2,350	2,030
27	914	e640	e260	e145	e480	2,300	6,270	5,860	3,660	3,670	2,280	2,030
28	945	e580	e250	e145	e450	2,390	6,360	5,760	3,630	3,610	2,220	2,030
29	996	e590	e240	e145	---	2,470	6,530	5,660	3,630	3,570	2,180	2,030
30	1,040	e560	e230	e145	---	2,550	6,770	5,530	3,650	3,570	2,150	2,020
31	1,020	---	e220	e145	---	2,620	---	5,390	---	3,540	2,120	---
Total	14,673	23,855	12,530	5,160	10,225	31,991	151,410	229,000	125,260	136,690	87,990	61,290
Mean	473	795	404	166	365	1,032	5,047	7,387	4,175	4,409	2,838	2,043
Max	1,040	978	790	210	720	2,620	6,770	9,020	5,270	5,770	3,530	2,110
Min	151	540	220	145	150	250	2,750	5,390	3,630	3,540	2,120	1,980
Ac-ft	29,100	47,320	24,850	10,230	20,280	63,450	300,300	454,200	248,500	271,100	174,500	121,600

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 2009, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	193	184	133	75.5	127	799	1,928	1,535	1,251	777	457	279
Max	1,613	2,050	1,885	716	800	4,118	20,950	13,180	7,585	8,582	4,154	2,048
(WY)	(2000)	(1999)	(1999)	(1999)	(1994)	(1994)	(1997)	(1995)	(1984)	(1993)	(1993)	(1999)
Min	0.00	0.00	2.72	1.52	2.14	16.8	18.5	8.52	5.14	0.79	0.00	0.27
(WY)	(1940)	(1940)	(1940)	(1940)	(1940)	(1940)	(1934)	(1934)	(1981)	(1936)	(1934)	(1941)

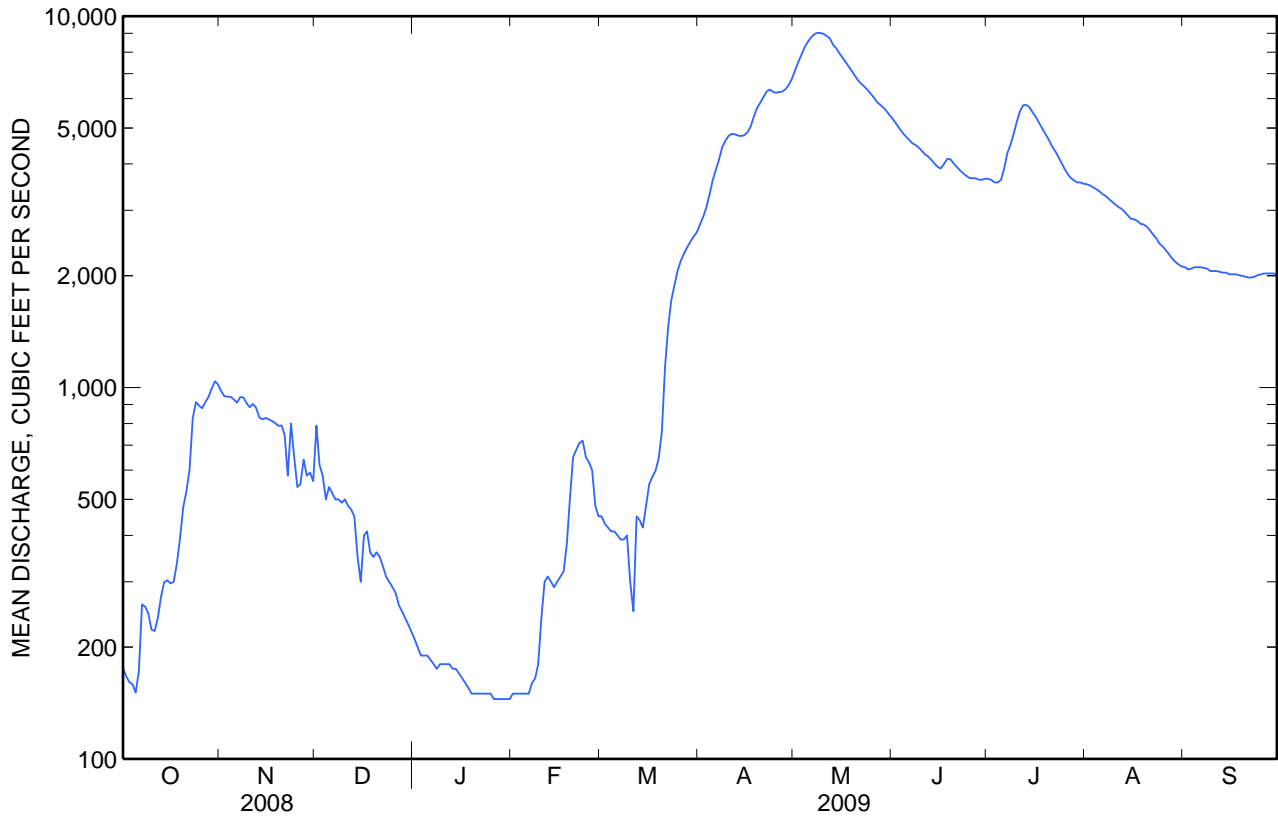
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SUMMARY STATISTICS

	Calendar Year 2008		Water Year 2009		Water Years 1929 - 2009	
Annual total	255,365		890,074			
Annual mean	698		2,439		^a 646	
Highest annual mean					3,996	1997
Lowest annual mean					13.8	1934
Highest daily mean	11,300	Jun 8	9,020	May 8	27,800	Apr 9, 1997
Lowest daily mean	100	Feb 20	145	Jan 26	^b 0.00	Jul 28, 1934
Annual seven-day minimum	107	Feb 17	146	Jan 25	0.00	Jul 28, 1934
Maximum peak flow			9,150	May 9	29,400	Jun 23, 1984
Maximum peak stage			16.99	May 9	20.45	Jun 23, 1984
Annual runoff (ac-ft)	506,500		1,765,000		468,000	
10 percent exceeds	1,230		5,920		1,680	
50 percent exceeds	380		2,020		114	
90 percent exceeds	154		180		10	

^a Median of annual mean discharges, 324 ft³/s.

^b No flow for many days in some years.



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WATER-QUALITY RECORDS

WATER-QUALITY DATA
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009

Date	Time	Instan- taneous dis- charge, ft ³ /s (00061)	Specif- ic	Temper- ature, deg C (00020)	Temper- ature, deg C (00010)
			conduc- tance, wat unf μS/cm @ 25 degC (00095)		
Oct					
07...	1715	274	1,430	22.0	18.5
Dec					
18...	1725	360	2,150	-12.0	.0
Feb					
23...	1155	706	1,820	--	.0
Mar					
19...	1745	671	1,520	12.0	7.5
27...	1050	2,330	1,020	-6.5	4.5
Apr					
06...	1605	4,030	836	1.0	3.0
16...	1200	4,790	973	14.5	11.0
21...	1340	6,040	862	16.0	11.5
30...	0925	6,750	819	9.0	11.5
May					
08...	1335	8,970	645	13.0	7.0
19...	1120	7,110	690	30.5	19.0
Jun					
04...	1055	4,870	783	19.0	18.5
Jul					
21...	1700	4,490	841	26.0	24.5
Aug					
27...	1045	2,270	938	23.0	23.5