Water-Data Report 2013

06472000 JAMES RIVER NEAR STRATFORD, SD

James Basin
Upper James Subbasin

LOCATION.--Lat 45°14′30″, long 98°23′28″ referenced to North American Datum of 1927, in NE ¼ NE ¼ NE ¼ sec.3, T.120 N., R.63 W., Spink County, SD, Hydrologic Unit 10160003, on right bank 10 ft downstream from bridge, 6.7 mi southwest of Stratford, and 9.0 mi upstream from Mud Creek.

DRAINAGE AREA.--8,773 mi^2 of which 1,126 mi^2 probably is noncontributing.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--March 1950 to September 1972, October 1976 to September 1977, October 1996 to September 1997 (crest-stage partial record), and October 1999 to current year.

REVISED RECORDS.--WDR SD-11-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,254.29 ft above NGVD of 1929. Prior to May 17, 1950, nonrecording gage at site 20.9 mi upstream at different datum. May 17, 1950, to Aug. 5, 1951, nonrecording gage at site 60 ft upstream 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 from Mud Creek. 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 2012 TO SEPTEMBER 2013
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	6.1	5.1	e6.0	e6.5	e2.5	e2.9	e5.5	365	730	1,120	1,260	1,040
2	5.4	4.5	e6.4	e6.0	e2.6	e3.0	e8.0	407	744	1,120	1,260	1,030
3	5.1	4.2	e6.8	e5.8	e2.6	e3.2	e14	436	752	1,120	1,250	1,020
4	4.2	3.9	e7.5	e5.4	e2.7	e3.4	e30	452	758	1,120	1,250	1,010
5	4.0	3.9	e8.2	e5.1	e3.0	e3.2	e80	464	768	1,130	1,240	999
6	3.5	3.8	e9.0	e4.8	e3.4	e3.0	e150	471	781	1,130	1,230	986
7	3.1	e3.6	e9.0	e5.0	e3.8	e3.2	e210	476	793	1,140	1,220	972
8	3.1	e3.4	e8.6	e5.0	e3.8	e3.4	e200	477	806	1,150	1,220	960
9	6.1	e3.4	e8.0	e5.2	e3.6	e3.4	e190	478	839	1,190	1,210	946
10	9.5	e3.2	e7.5	e5.4	e3.6	e3.2	e190	483	856	1,200	1,200	930
11	9.6	e2.9	e8.0	e5.3	e3.3	e3.0	e190	484	870	1,200	1,200	911
12	8.1	e3.0	e8.5	e4.8	e3.3	e3.0	e190	490	886	1,200	1,190	893
13	7.2	e3.1	e9.0	e4.5	e3.4	e2.8	e170	494	902	1,210	1,180	873
14	6.1	e3.3	e9.5	e4.2	e3.0	e3.0	e180	494	913	1,240	1,170	855
15	5.1	e3.4	e10	e4.3	e2.6	e2.9	e180	500	922	1,260	1,170	841
16	4.5	e3.6	e10	e4.4	e2.7	e2.7	e170	506	931	1,260	1,160	823
17	4.5	e4.0	e11	e4.4	e2.8	e2.8	e220	511	942	1,260	1,150	802
18	5.5	e4.1	e12	e4.6	e2.7	e2.8	e220	521	955	1,260	1,150	784
19	6.7	e4.3	e11	e4.4	e2.4	e2.6	e210	538	964	1,260	1,140	768
20	6.2	e4.5	e10	e3.8	e2.2	e2.5	e200	549	970	1,260	1,140	752
21	6.2	e4.7	e9.5	e3.4	e2.4	e2.4	e210	576	982	1,260	1,130	737
22	6.4	e4.5	e9.0	e3.3	e2.6	e2.5	e220	597	996	1,260	1,120	721
23	9.8	e4.2	e8.5	e3.1	e2.7	e2.6	e230	610	1,050	1,260	1,110	700
24	15	e4.3	e8.0	e3.0	e2.9	e2.6	e240	620	1,070	1,260	1,100	681
25	15	e4.4	e7.5	e3.0	e2.9	e2.5	e260	633	1,080	1,260	1,090	666
26	12	e4.4	e7.5	e3.1	e2.8	e2.3	287	649	1,090	1,260	1,090	650
27	9.9	e4.6	e7.0	e3.2	e3.0	e2.5	295	665	1,100	1,260	1,080	635
28	8.3	e5.0	e7.0	e3.4	e2.9	e2.8	298	680	1,100	1,260	1,070	636
29	7.0	e5.0	e6.5	e3.2	---	e3.1	310	695	1,110	1,260	1,060	628
30	6.1	e5.5	e6.5	e2.7	---	e4.0	329	715	1,110	1,260	1,060	615
31	5.5	---	e6.5	e2.4	---	e4.8	---	722	---	1,260	1,040	---
Total	214.8	121.8	259.5	132.7	82.2	92.1	5,686.5	16,758	27,770	37,690	35,940	24,864
Mean	6.93	4.06	8.37	4.28	2.94	2.97	190	541	926	1,216	1,159	829
Max	15	5.5	12	6.5	3.8	4.8	329	722	1,110	1,260	1,260	1,040
Min	3.1	2.9	6.0	2.4	2.2	2.3	5.5	365	730	1,120	1,040	615
Ac-ft	426	242	515	263	163	183	11,280	33,240	55,080	74,760	71,290	49,320

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 2013, BY WATER YEAR (WY)*

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	242	192	111	50.0	31.4	139	850	836	581	613	451	289
Max	2,739	2,373	1,446	587	264	1,849	6,223	5,702	3,353	5,991	4,465	2,803
(WY)	(2012)	(2012)	(2012)	(2012)	(2012)	(2010)	(2009)	(2011)	(2011)	(2011)	(2011)	(2011)
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)	(1955)	(1953)	(1952)	(1952)	(1951)	(1956)	(1959)	(1959)	(1959)	(1959)	(1959)	(1958)

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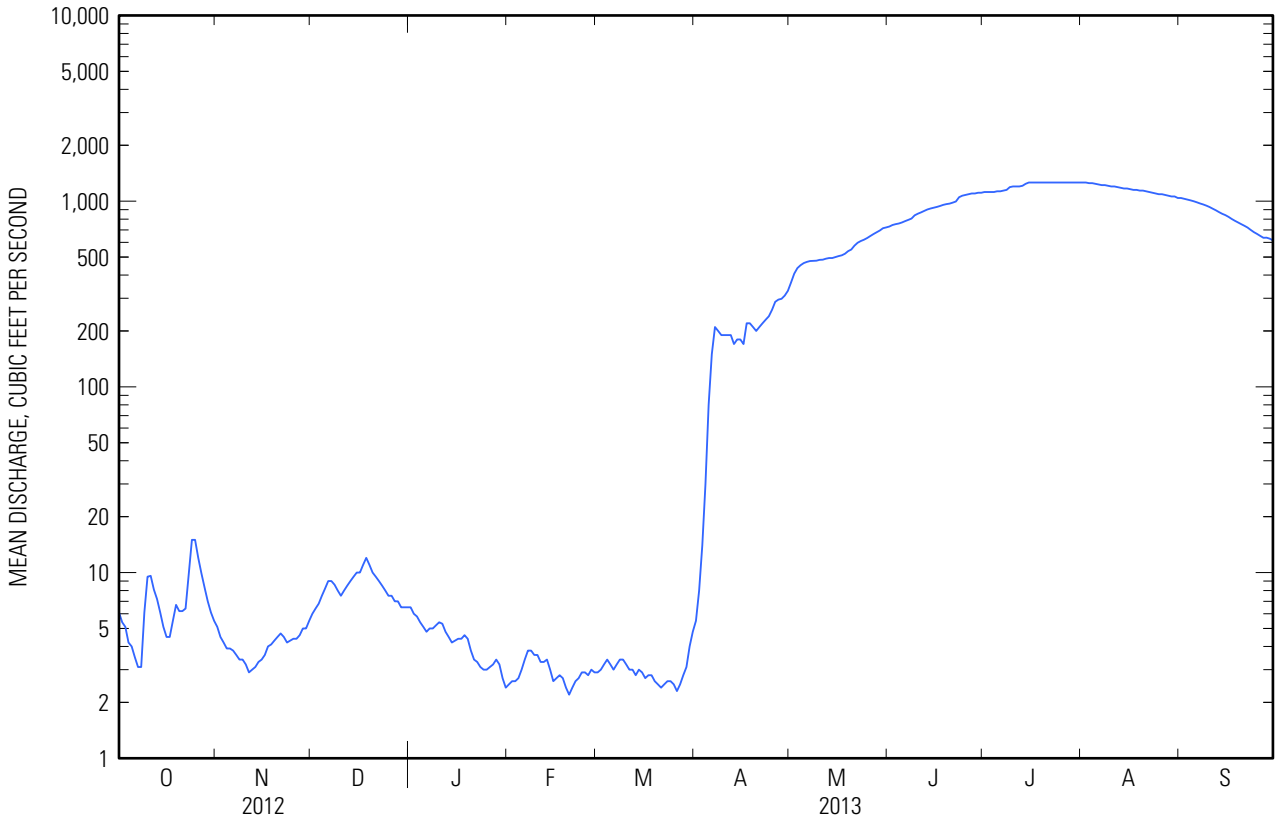
SUMMARY STATISTICS

	Calendar Year 2012		Water Year 2013		Water Years 1951 - 2013*	
Annual total	96,164.7		149,611.6			
Annual mean	263		410		[a]367	
Highest annual mean					2,493	2011
Lowest annual mean					0.00	1959
Highest daily mean	1,040	Jan 1	1,260	Jul 15	9,650	Apr 27, 2009
Lowest daily mean	2.9	Nov 11	2.2	Feb 20	[b]0.00	Nov 28, 1950
Annual seven-day minimum	3.2	Nov 8	2.5	Mar 20	0.00	Nov 28, 1950
Maximum peak flow			[c]1,270	Jul 25	[d]9,910	Apr 26, 2009
Maximum peak stage			[c]14.96	Jul 25	[f]21.57	Jul 19, 2011
Annual runoff (ac-ft)	190,700		296,800		265,700	
10 percent exceeds	644		1,170		928	
50 percent exceeds	198		14		54	
90 percent exceeds	5.1		3.0		0.00	

* Excludes 1973-1976 and 1998-1999. Includes 1997 peak flow during partial-record year. See PERIOD OF RECORD.
[a] Median of annual mean discharges, 140 ft³/s.
[b] No flow for many days in some years.
[c] Also Jul. 31.
[d] Gage height, 19.98 ft.
[f] Backwater from downstream tributaries.



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WATER-QUALITY RECORDS

WATER-QUALITY DATA
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013

[ft^3/s, cubic feet per second; °C, degrees Celsius; µS/cm, microsiemens per centimeter]

Date	Sample start time	Discharge, instantaneous, ft^3/s (00061)	Specific conductance, water, unfiltered, µS/cm at 25°C (00095)	Temperature, air, °C (00020)	Temperature, water, °C (00010)
10-16-2012	**1532**	4.5	2,030	19.0	13.5
12-18-2012	**1035**	12	2,050	-1.0	0.0
02-07-2013	**1110**	3.8	2,950	2.0	0.0
04-08-2013	**1404**	197	1,820	0.0	0.0
04-17-2013	**1405**	216	1,680	0.0	3.0
06-04-2013	**0945**	764	1,130	21.0	16.5
07-22-2013	**0950**	1,230	959	29.0	27.0
09-04-2013	**1152**	1,030	1,220	23.0	22.0