

Water-Data Report 2013

**06478513 JAMES RIVER NEAR YANKTON SD**

James Basin  
Lower James Subbasin

LOCATION.--Lat 42°59'45", long 97°22'10" referenced to North American Datum of 1927, in NE ¼ NW ¼ sec.5, T.94 N., R.55 W., Yankton County, SD, Hydrologic Unit 10160011, on left bank at downstream side of county highway bridge, 3.9 mi upstream from Beaver Creek, 17.2 mi upstream from mouth, and 9.0 mi northeast of Yankton.

DRAINAGE AREA.--20,947 mi<sup>2</sup> of which 2,056 mi<sup>2</sup> probably is noncontributing.

**SURFACE-WATER RECORDS**

PERIOD OF RECORD.--October 1981 to September 1995 (continuous-record), October 1995 to September 2004 (crest-stage partial record), October 2009 to current year.

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

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,153.38 ft above NGVD of 1929.

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 Beaver Creek. Satellite data-collection platform at station. Water temperature and specific conductance measured with each discharge measurement.

## 06478513 JAMES RIVER NEAR YANKTON SD—Continued

**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	59	72	80	e82	e64	e88	176	1,040	1,900	2,410	1,590	1,180
2	58	71	77	e82	e66	e92	184	1,020	2,040	2,510	1,580	1,170
3	57	74	80	e82	e68	e96	192	982	2,070	2,590	1,590	1,170
4	61	76	80	e84	e68	e96	230	935	e2,040	2,650	1,570	1,160
5	61	77	78	e84	e68	e96	517	909	e2,020	2,710	1,570	1,160
6	59	77	88	e82	e72	e96	1,080	880	e1,990	2,760	1,540	1,150
7	61	73	91	e83	e78	e98	1,330	841	1,920	2,790	1,520	1,130
8	64	75	95	e86	e81	e100	1,440	819	1,920	2,790	1,510	1,130
9	62	75	e97	e86	e84	e105	1,490	832	2,050	2,740	1,530	1,130
10	56	73	e86	e80	e91	e200	1,430	908	2,140	2,640	1,520	1,110
11	57	74	e88	e80	e79	e190	1,310	977	2,070	2,470	1,550	1,110
12	53	74	e94	e76	e91	e190	1,200	993	1,940	2,300	1,580	1,100
13	58	78	e92	e72	e95	e185	1,150	993	1,850	2,130	1,690	1,080
14	59	79	e96	e72	e96	e180	1,120	966	1,760	2,000	1,700	1,050
15	55	79	e96	e74	e92	e185	1,040	926	1,770	2,000	1,600	1,020
16	57	72	e94	e75	e90	e170	975	884	1,750	2,180	1,510	1,010
17	61	70	e94	e80	e94	e160	980	850	1,740	2,420	1,440	999
18	66	71	e96	e82	e92	e150	1,050	823	1,680	2,470	1,390	982
19	66	71	e96	e80	e74	e140	1,150	806	1,630	2,340	1,340	977
20	72	68	e91	e76	e78	e130	1,220	809	1,580	2,230	1,310	981
21	83	68	e92	e74	e82	e120	1,230	896	1,530	2,220	1,290	1,010
22	82	76	e94	e72	e78	e115	1,220	1,070	1,540	2,230	1,290	1,030
23	73	78	e92	e74	e74	e110	1,200	1,220	1,500	2,240	1,280	993
24	66	75	e90	e72	e78	e110	1,160	1,210	e1,520	2,230	1,280	1,010
25	68	e78	e88	e74	e84	e110	1,100	1,140	e1,570	2,170	1,250	1,050
26	75	e76	e86	e76	e86	e115	1,060	1,090	1,660	2,060	1,230	1,040
27	85	e76	e88	e81	e90	e125	1,050	1,130	1,850	1,960	1,210	980
28	94	e75	e82	e75	e88	e140	1,050	1,160	2,020	1,870	1,190	951
29	84	e76	e80	e75	---	e160	1,030	1,290	2,160	1,760	1,180	990
30	78	e77	e82	e70	---	e170	1,020	1,400	2,310	1,690	1,170	995
31	75	---	e82	e68	---	e170	---	1,670	---	1,630	1,170	---
<b>Total</b>	2,065	2,234	2,745	2,409	2,281	4,192	30,384	31,469	55,520	71,190	44,170	31,848
<b>Mean</b>	66.6	74.5	88.5	77.7	81.5	135	1,013	1,015	1,851	2,296	1,425	1,062
<b>Max</b>	94	79	97	86	96	200	1,490	1,670	2,310	2,790	1,700	1,180
<b>Min</b>	53	68	77	68	64	88	176	806	1,500	1,630	1,170	951
<b>Ac-ft</b>	4,100	4,430	5,440	4,780	4,520	8,310	60,270	62,420	110,100	141,200	87,610	63,170

**STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 2013, BY WATER YEAR (WY)\***

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
<b>Mean</b>	656	585	449	244	270	2,123	4,030	3,243	2,914	2,407	1,466	815
<b>Max</b>	2,942	2,946	2,680	1,480	907	12,150	17,320	14,070	13,520	10,580	8,051	3,855
<b>(WY)</b>	(2012)	(2010)	(2012)	(2012)	(1994)	(2010)	(2011)	(1995)	(2010)	(2010)	(2011)	(2011)
<b>Min</b>	5.97	4.79	15.6	9.10	27.3	40.1	24.1	67.9	108	21.9	16.9	10.2
<b>(WY)</b>	(1982)	(1982)	(1982)	(1991)	(1990)	(1990)	(1990)	(1992)	(1992)	(1988)	(1989)	(1989)

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SUMMARY STATISTICS

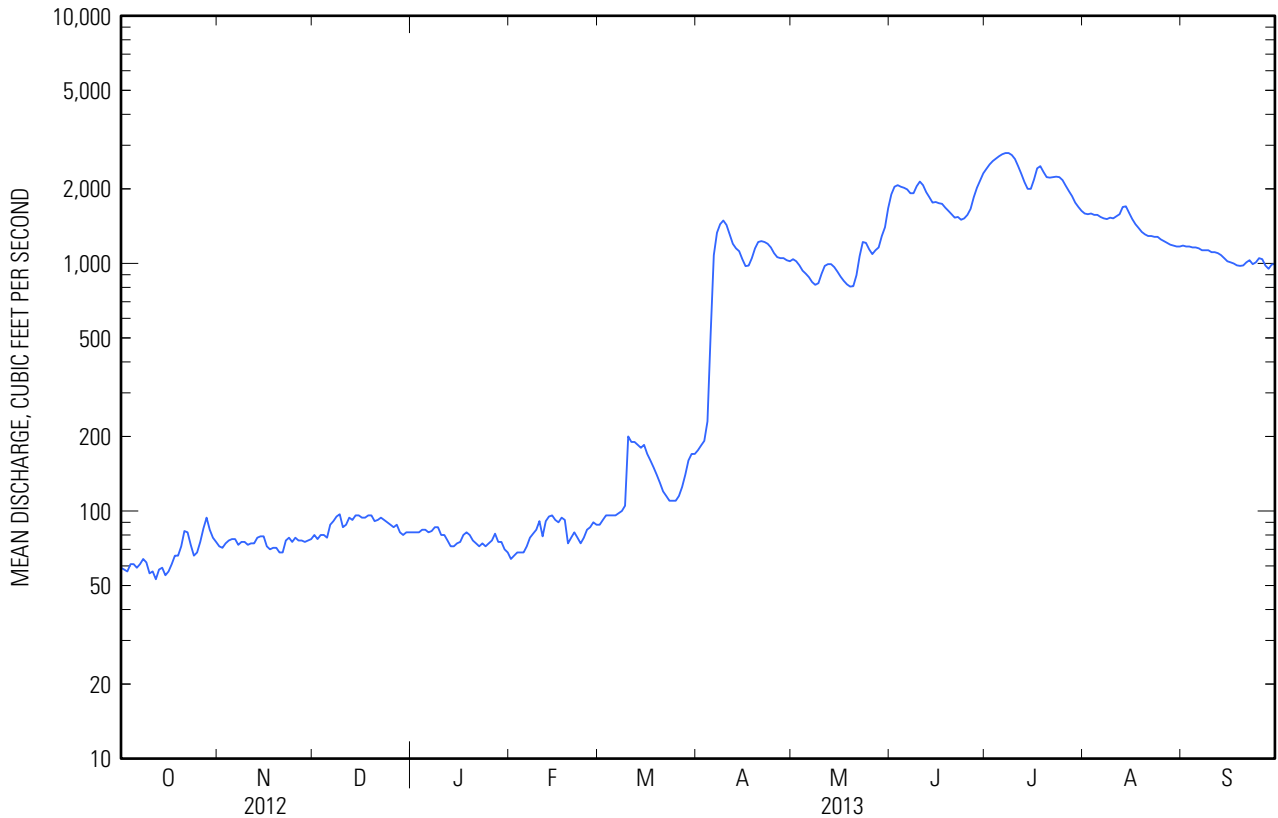
	Calendar Year 2012		Water Year 2013		Water Years 1982 - 2013*	
<b>Annual total</b>	255,673		280,507			
<b>Annual mean</b>	699		769		<sup>a</sup> 1,605	
<b>Highest annual mean</b>					6,317	2010
<b>Lowest annual mean</b>					56.5	1990
<b>Highest daily mean</b>	4,320	May 14	2,790	Jul 7	29,000	Mar 28, 2011
<b>Lowest daily mean</b>	53	Oct 12	53	Oct 12	0.78	Oct 4, 1981
<b>Annual seven-day minimum</b>	56	Oct 10	56	Oct 10	2.2	Oct 1, 1981
<b>Maximum peak flow</b>			<sup>b</sup> 2,800 Jul 7		<sup>c</sup> 29,200 Mar 28, 2011	
<b>Maximum peak stage</b>			<sup>b</sup> 7.16 Jul 7		24.34	Jun 23, 1984
<b>Annual runoff (ac-ft)</b>	507,100		556,400		1,163,000	
<b>10 percent exceeds</b>	1,700		1,990		4,110	
<b>50 percent exceeds</b>	464		190		319	
<b>90 percent exceeds</b>	69		72		26	

\* Excludes water years 1996 to 2009.

<sup>a</sup> Median of annual mean discharges, 900 ft<sup>3</sup>/s.

<sup>b</sup> Also Jul. 8.

<sup>c</sup> Gage height, 22.24 ft.



**06478513 JAMES RIVER NEAR YANKTON SD—Continued****WATER-QUALITY RECORDS****WATER-QUALITY DATA****WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013**[ft<sup>3</sup>/s, cubic feet per second; °C, degrees Celsius; μS/cm, microsiemens per centimeter]

<b>Date</b>	<b>Sample start time</b>	<b>Discharge, instantaneous, ft<sup>3</sup>/s (00061)</b>	<b>Specific conductance, water, unfiltered, μS/cm at 25°C (00095)</b>	<b>Temperature, air, °C (00020)</b>	<b>Temperature, water, °C (00010)</b>
10-03-2012	1427	53	2,220	29.5	16.4
11-06-2012	1437	79	2,250	11.5	7.8
02-06-2013	1345	73	2,450	8.0	0.3
04-02-2013	1330	185	1,350	8.5	7.9
06-07-2013	0820	1,930	1,350	18.0	17.7
07-24-2013	0900	2,210	1,140	21.5	26.5
09-05-2013	0903	1,240	1,180	25.0	24.8