

06478000 JAMES RIVER NEAR MITCHELL, SD

James Basin
Lower James Subbasin

LOCATION.--Lat 43°39'32", long 97°55'08" referenced to North American Datum of 1927, in NW ¼ NE ¼ NW ¼ sec.9, T.102 N., R.59 W., Hanson County, SD, Hydrologic Unit 10160011, on right bank at downstream side of bridge on county road, 6.5 mi southeast of Mitchell, 6.9 mi downstream of Firesteel Creek, and 2.3 mi upstream of Enemy Creek.

DRAINAGE AREA.--19,074 mi² of which 2,051 mi² probably is noncontributing.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--July 1953 to September 1958 (published as "near Alexandria") and August 1965 to September 1972. Miscellaneous peak discharge measurement in 1995, partial-record crest-stage gage in 1997, and miscellaneous discharge measurements in 2001. October 2001 to current year.

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

GAGE.--Water-stage recorder. Datum of gage is 1,193.48 ft above NGVD of 1929. Miscellaneous discharge measurements made in 2001 at present site and datum. Miscellaneous discharge measurements made in 1995 and 1997 at datum 1,197.93 ft above NGVD of 1929 at site 7.2 mi upstream (SD Hwy 38). August 1965 to September 1972 at datum 1,198.00 ft above NGVD of 1929 (South Dakota Department of Transportation bench mark) at site 6.7 mi upstream (Interstate I-90), and was nonrecording gage Aug. 17 to Dec. 7, 1965. July 1953 to September 1958 nonrecording gage at datum 1,195.03 ft above NGVD of 1929 at site 3.8 mi downstream.

REMARKS.--Mean daily gage height records good except those for May 20 to Jun. 20, which are fair. Mean daily discharge records good except those for May 20 to Jun. 20, which are fair and those for estimated daily discharges, which are poor. Only daily discharges above 500 ft³/s published because flows less than 500 ft³/s are unreliable due to wind effect. 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. Satellite data-collection platform at station. Water temperature and specific conductance measured with each discharge measurement.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 28,400 ft³/s, Mar. 25, 2011, gage height, 25.20 ft (from floodmark); maximum gage height, 23.14 ft, Apr. 7, 1997 (Gage height at different site and/or datum).

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge at current site, 24,700 ft³/s, Apr. 11, 2001, from rating curve extended above 20,100 ft³/s, gage height, 25.33 ft (from floodmark).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,910 ft³/s, May 8, gage height, 19.35 ft.

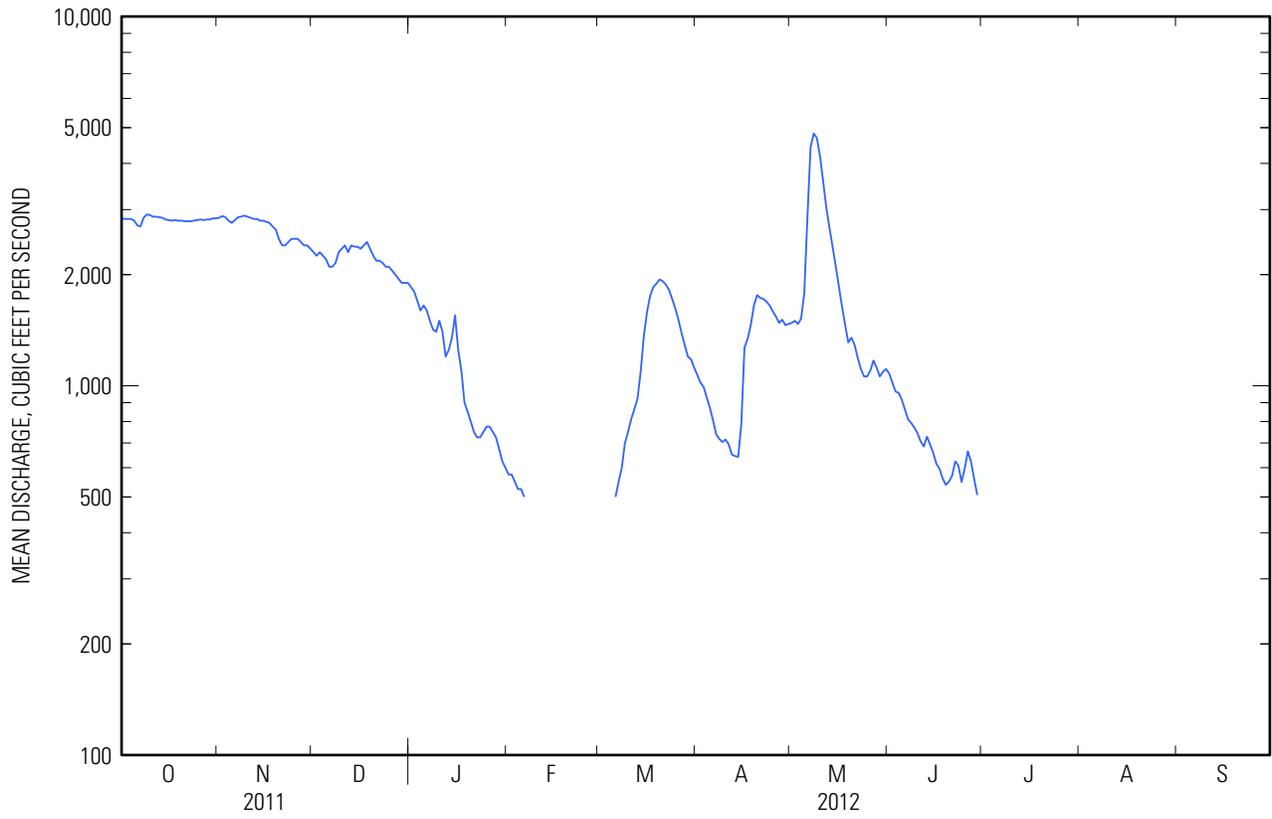
06478000 JAMES RIVER NEAR MITCHELL, SD—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012
DAILY MEAN VALUES

[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	e2,840	2,850	e2,300	e1,850	e575	---	1,070	1,480	1,080	---	---	---
2	e2,830	2,880	e2,250	e1,800	e575	---	1,020	1,500	1,020	---	---	---
3	e2,830	2,860	e2,300	e1,700	e550	---	993	1,470	965	---	---	---
4	2,830	2,800	e2,250	e1,600	e525	---	930	1,520	957	---	---	---
5	2,800	2,760	e2,200	e1,650	e525	---	872	1,780	917	---	---	---
6	2,720	2,810	e2,100	e1,600	e500	e500	806	2,850	862	---	---	---
7	2,700	2,860	e2,100	e1,500	---	e550	739	4,420	811	---	---	---
8	2,850	2,870	e2,150	e1,420	---	e600	718	4,820	793	---	---	---
9	2,910	2,890	e2,300	e1,400	---	e700	704	4,690	770	---	---	---
10	2,900	2,870	e2,350	e1,500	---	e750	715	4,190	744	---	---	---
11	2,870	2,850	e2,400	e1,400	---	813	693	3,580	707	---	---	---
12	2,870	2,830	e2,300	e1,200	---	864	651	3,040	685	---	---	---
13	2,860	2,830	e2,400	e1,250	---	923	645	2,680	728	---	---	---
14	2,850	2,800	e2,380	e1,350	---	1,090	642	2,380	693	---	---	---
15	2,820	2,800	e2,380	e1,550	---	1,360	788	2,110	658	---	---	---
16	2,810	2,780	e2,350	e1,250	---	1,580	1,270	1,860	615	---	---	---
17	2,800	2,760	e2,400	e1,100	---	1,750	1,340	1,640	596	---	---	---
18	2,810	e2,700	e2,450	e900	---	1,850	1,460	1,460	561	---	---	---
19	2,800	e2,650	e2,350	e850	---	1,890	1,650	1,310	539	---	---	---
20	2,800	e2,500	e2,250	e800	---	1,940	1,760	1,350	550	---	---	---
21	2,790	e2,400	e2,180	e750	---	1,920	1,730	1,290	571	---	---	---
22	2,790	e2,400	e2,180	e725	---	1,880	1,720	1,190	624	---	---	---
23	2,790	e2,450	e2,150	e725	---	1,820	1,690	1,110	608	---	---	---
24	2,800	e2,500	e2,100	e750	---	1,720	1,650	1,060	549	---	---	---
25	2,810	e2,500	e2,100	e775	---	1,620	1,590	1,060	597	---	---	---
26	2,820	e2,500	e2,050	e775	---	1,510	1,540	1,100	664	---	---	---
27	2,810	e2,450	e2,000	e750	---	1,390	1,480	1,170	624	---	---	---
28	2,820	e2,400	e1,950	e725	---	1,290	1,510	1,120	560	---	---	---
29	2,820	e2,400	e1,900	e675	---	1,200	1,460	1,060	506	---	---	---
30	2,840	e2,350	e1,900	e625	---	1,180	1,470	1,090	---	---	---	---
31	2,840	---	e1,900	e600	---	1,120	---	1,110	---	---	---	---
Total	87,430	80,300	68,370	35,545	---	---	35,306	62,490	---	---	---	---
Mean	2,820	2,677	2,205	1,147	---	---	1,177	2,016	---	---	---	---
Max	2,910	2,890	2,450	1,850	---	---	1,760	4,820	---	---	---	---
Min	2,700	2,350	1,900	600	---	---	642	1,060	---	---	---	---
Ac-ft	173,400	159,300	135,600	70,500	---	---	70,030	123,900	---	---	---	---

06478000 JAMES RIVER NEAR MITCHELL, SD—Continued

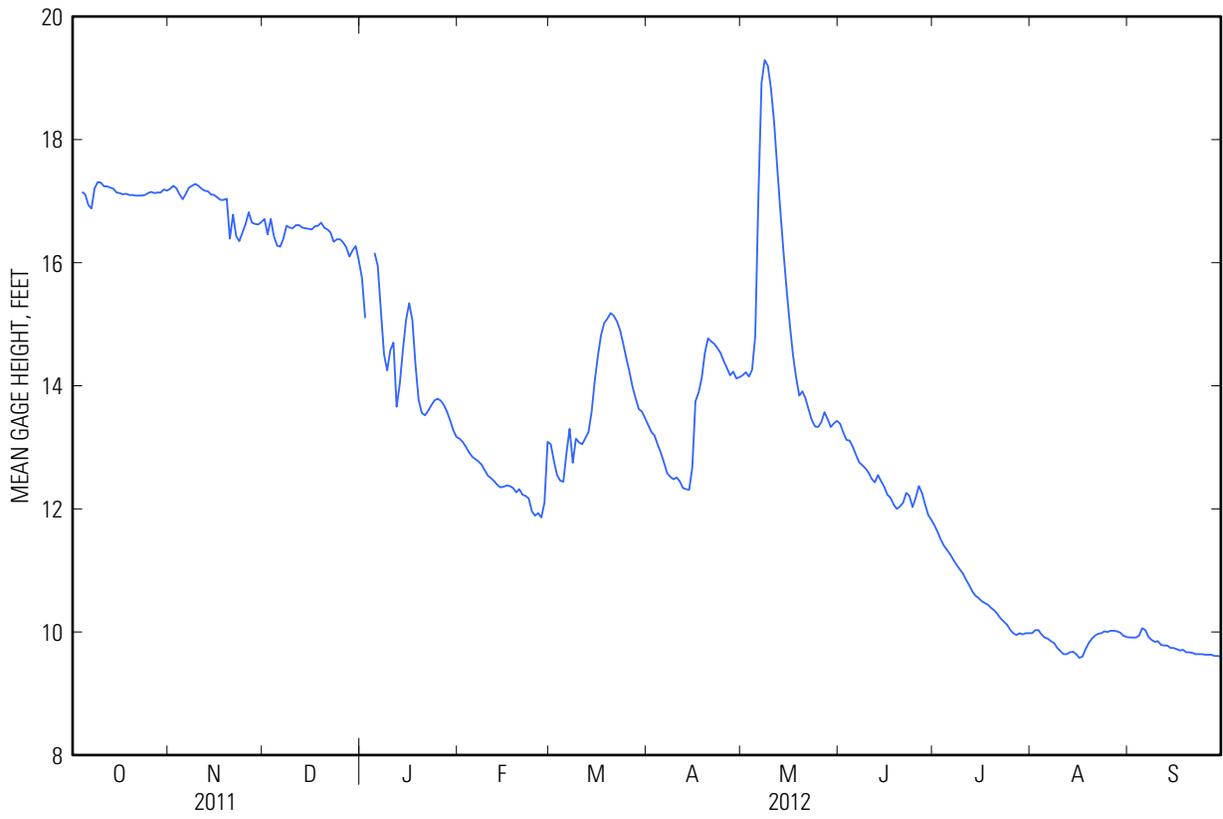


06478000 JAMES RIVER NEAR MITCHELL, SD—Continued

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	---	17.20	16.71	15.75	13.14	13.05	13.36	14.17	13.38	11.73	9.98	9.91
2	---	17.25	16.46	15.10	13.09	12.78	13.25	14.22	13.24	11.62	10.03	9.91
3	---	17.21	16.71	---	13.01	12.55	13.19	14.15	13.12	11.50	10.03	9.91
4	17.15	17.11	16.43	---	12.92	12.46	13.04	14.26	13.11	11.40	9.96	9.94
5	17.11	17.03	16.28	16.16	12.85	12.44	12.91	14.81	13.01	11.33	9.91	10.06
6	16.94	17.12	16.26	15.95	12.81	12.91	12.75	17.07	12.88	11.26	9.89	10.03
7	16.88	17.22	16.39	15.22	12.77	13.30	12.58	18.92	12.76	11.17	9.85	9.92
8	17.21	17.25	16.60	14.51	12.72	12.75	12.52	19.29	12.71	11.09	9.82	9.87
9	17.31	17.28	16.57	14.25	12.63	13.14	12.48	19.20	12.66	11.02	9.74	9.84
10	17.30	17.25	16.56	14.58	12.54	13.08	12.51	18.83	12.59	10.95	9.69	9.85
11	17.24	17.20	16.61	14.70	12.50	13.05	12.45	18.28	12.49	10.85	9.64	9.79
12	17.24	17.17	16.61	13.66	12.45	13.15	12.34	17.54	12.43	10.76	9.64	9.78
13	17.22	17.16	16.57	14.03	12.39	13.25	12.32	16.83	12.55	10.66	9.67	9.78
14	17.20	17.11	16.56	14.58	12.35	13.58	12.31	16.16	12.45	10.59	9.68	9.74
15	17.14	17.10	16.55	15.07	12.36	14.09	12.68	15.55	12.36	10.55	9.64	9.74
16	17.13	17.06	16.54	15.34	12.38	14.49	13.75	14.99	12.23	10.50	9.58	9.72
17	17.11	17.02	16.59	15.07	12.37	14.83	13.89	14.50	12.18	10.47	9.60	9.70
18	17.12	17.02	16.60	14.34	12.34	15.02	14.13	14.13	12.07	10.44	9.72	9.71
19	17.10	17.04	16.65	13.77	12.27	15.09	14.54	13.84	12.00	10.39	9.82	9.67
20	17.10	16.39	16.57	13.56	12.32	15.18	14.77	13.91	12.04	10.35	9.89	9.67
21	17.09	16.78	16.54	13.52	12.23	15.14	14.72	13.79	12.10	10.29	9.94	9.66
22	17.09	16.43	16.49	13.59	12.21	15.05	14.68	13.61	12.26	10.22	9.97	9.64
23	17.09	16.35	16.34	13.68	12.17	14.91	14.61	13.44	12.21	10.17	9.98	9.64
24	17.10	16.49	16.38	13.76	11.96	14.69	14.53	13.34	12.03	10.12	10.01	9.64
25	17.13	16.63	16.38	13.79	11.89	14.45	14.40	13.33	12.18	10.04	10.00	9.63
26	17.15	16.82	16.33	13.76	11.93	14.23	14.29	13.41	12.37	9.98	10.02	9.63
27	17.13	16.65	16.25	13.69	11.86	13.98	14.17	13.57	12.26	9.95	10.02	9.63
28	17.14	16.63	16.10	13.58	12.10	13.79	14.23	13.46	12.07	9.98	10.01	9.61
29	17.14	16.62	16.20	13.44	13.09	13.62	14.12	13.33	11.90	9.96	9.99	9.61
30	17.19	16.66	16.27	13.28	---	13.58	14.14	13.39	11.82	9.98	9.94	9.60
31	17.17	---	16.03	13.17	---	13.47	---	13.43	---	9.98	9.92	---
Mean	---	16.94	16.46	---	12.47	13.78	13.52	15.12	12.45	10.62	9.86	9.76
Max	---	17.28	16.71	---	13.14	15.18	14.77	19.29	13.38	11.73	10.03	10.06
Min	---	16.35	16.03	---	11.86	12.44	12.31	13.33	11.82	9.95	9.58	9.60

06478000 JAMES RIVER NEAR MITCHELL, SD—Continued



06478000 JAMES RIVER NEAR MITCHELL, SD—Continued**WATER-QUALITY RECORDS****WATER-QUALITY DATA****WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012**[ft³/s, cubic feet per second; °C, degrees Celsius; μS/cm, microsiemens per centimeter]

Date	Sample start time	Discharge, instanta- neous, ft³/s (00061)	Specific conduc- tance, water, unfiltered, μS/cm at 25°C (00095)	Tempera- ture, air, °C (00020)	Tempera- ture, water, °C (00010)
10-03-2011	1315	2,780	1,150	30.0	16.4
11-14-2011	1236	2,690	1,080	12.0	4.8
01-04-2012	0820	1,130	1,490	7.0	0.5
03-09-2012	1125	727	1,580	3.0	2.0
03-15-2012	1000	1,260	1,540	18.0	11.0
04-18-2012	0700	1,450	1,480	10.0	11.4
05-08-2012	0725	4,830	920	14.0	15.3
06-07-2012	1440	808	1,810	33.0	26.2