Water-Data Report 2008

06473000 JAMES RIVER AT ASHTON, SD

James Basin
Middle James Subbasin

LOCATION.--Lat 44°59′54″, long 98°28′50″ referenced to North American Datum of 1927, in NW ¼ NW ¼ NE ¼ sec.36, T.118 N., R.64 W., Spink County, SD, Hydrologic Unit 10160006, on right bank near downstream side of highway bridge, 0.9 mi east of Ashton, 6.1 mi upstream from Snake Creek, and 14.2 mi upstream from Turtle Creek.

DRAINAGE AREA.--9,742 mi² of which 4,069 mi² probably is noncontributing.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--October 1945 to current year.

REVISED RECORDS.--WSP 1209: 1947. WDR SD-84-1: Drainage area. WDR SD-86-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,244.4 ft above NGVD of 1929. Prior to Nov. 26, 1957, nonrecording gage at present site and Nov. 26, 1957, to Oct. 7, 1974, water-stage recorder at site 900 ft upstream, all 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 and reverse flow caused by Snake Creek during most years. Satellite data-collection platform at station. Water temperature and specific conductance are measured with each discharge measurement.

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	588	234	e115	e70	e60	e30	305	148	81	241	178	119
2	573	230	e100	e65	e60	e30	286	144	79	234	204	126
3	558	226	e100	e85	e60	e26	260	139	79	226	210	114
4	539	222	e105	e95	e60	e26	252	133	77	219	204	107
5	523	217	e100	e100	e55	e24	255	133	84	213	188	109
6	513	213	e95	e110	e50	e20	e240	135	101	205	171	115
7	498	206	e90	e105	e50	e18	e260	139	114	199	155	118
8	487	199	e90	e100	e50	e22	266	135	126	195	138	114
9	476	193	e90	e100	e46	e24	261	132	134	194	123	115
10	466	190	e90	e90	e36	e26	260	129	140	191	111	119
11	458	188	e95	e90	e36	e30	286	133	172	183	111	119
12	450	189	e100	e85	e36	e32	320	139	190	170	117	116
13	442	188	e105	e85	e38	e34	334	145	208	160	103	115
14	438	189	e90	e80	e38	e30	325	153	235	152	104	116
15	436	189	e90	e85	e38	e30	305	158	270	146	120	114
16	432	184	e95	e85	e40	e30	279	163	306	138	134	112
17	413	183	e100	e80	e36	e32	266	159	322	178	158	111
18	396	182	e105	e75	e32	e36	257	154	325	142	189	109
19	374	180	e105	e70	e30	e38	249	143	327	171	216	106
20	352	180	e105	e65	e28	e40	234	137	318	144	230	106
21	340	179	e100	e65	e30	e50	209	129	306	131	233	106
22	325	e170	e90	e65	e32	e55	187	123	293	123	229	106
23	310	e175	e90	e62	e34	e65	170	103	284	116	222	104
24	299	e172	e90	e60	e36	e80	161	114	277	108	210	100
25	286	e180	e95	e65	e34	e100	155	105	278	105	195	96
26	266	e160	e90	e70	e32	e125	154	98	273	102	182	96
27	256	e140	e85	e75	e32	e170	152	94	267	104	166	102
28	251	e130	e80	e80	e34	e200	153	90	257	105	155	114
29	248	e125	e80	e70	e32	e230	155	88	251	112	142	130
30	245	e115	e75	e60	---	254	153	88	246	123	131	142
31	239	---	e75	e60	---	285	---	84	---	146	123	---
Total	12,477	5,528	2,915	2,452	1,175	2,192	7,149	3,967	6,420	4,976	5,152	3,376
Mean	402	184	94.0	79.1	40.5	70.7	238	128	214	161	166	113
Max	588	234	115	110	60	285	334	163	327	241	233	142
Min	239	115	75	60	28	18	152	84	77	102	103	96
Ac-ft	24,750	10,960	5,780	4,860	2,330	4,350	14,180	7,870	12,730	9,870	10,220	6,700

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 2008, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	142	126	77.4	32.6	21.5	114	623	731	511	399	307	189
Max	1,289	1,026	735	303	190	879	7,153	4,133	2,440	1,746	1,422	1,331
(WY)	(2000)	(2000)	(1994)	(1999)	(1999)	(1995)	(1997)	(1997)	(1950)	(1997)	(1997)	(1999)
Min	0.00	0.00	0.00	0.00	0.00	-338	0.00	0.00	0.00	0.00	0.00	0.00
(WY)	(1950)	(1950)	(1946)	(1950)	(1948)	(1997)	(1959)	(1959)	(1959)	(1959)	(1959)	(1958)

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SUMMARY STATISTICS

	Calendar Year 2007		Water Year 2008		Water Years 1946 - 2008	
Annual total	280,891.28		57,779			
Annual mean	770		158		[a]274	
Highest annual mean					1,530	1997
Lowest annual mean					0.00	1959
Highest daily mean	3,610	May 14	588	Oct 1	9,100	Apr 23, 1997
Lowest daily mean	0.00	Feb 1	18	Mar 7	[b]-8,400	Mar 31, 1997
Annual seven-day minimum	0.00	Feb 1	23	Mar 3	[b]-1,960	Mar 26, 1997
Maximum peak flow			[c]336	Apr 13	[d]9,150	Apr 23, 1997
Maximum peak stage			[c]6.06	Apr 13	[f]26.64	Apr 6, 1997
Annual runoff (ac-ft)	557,100		114,600		198,300	
10 percent exceeds	1,820		288		827	
50 percent exceeds	605		129		48	
90 percent exceeds	0.06		38		0.00	

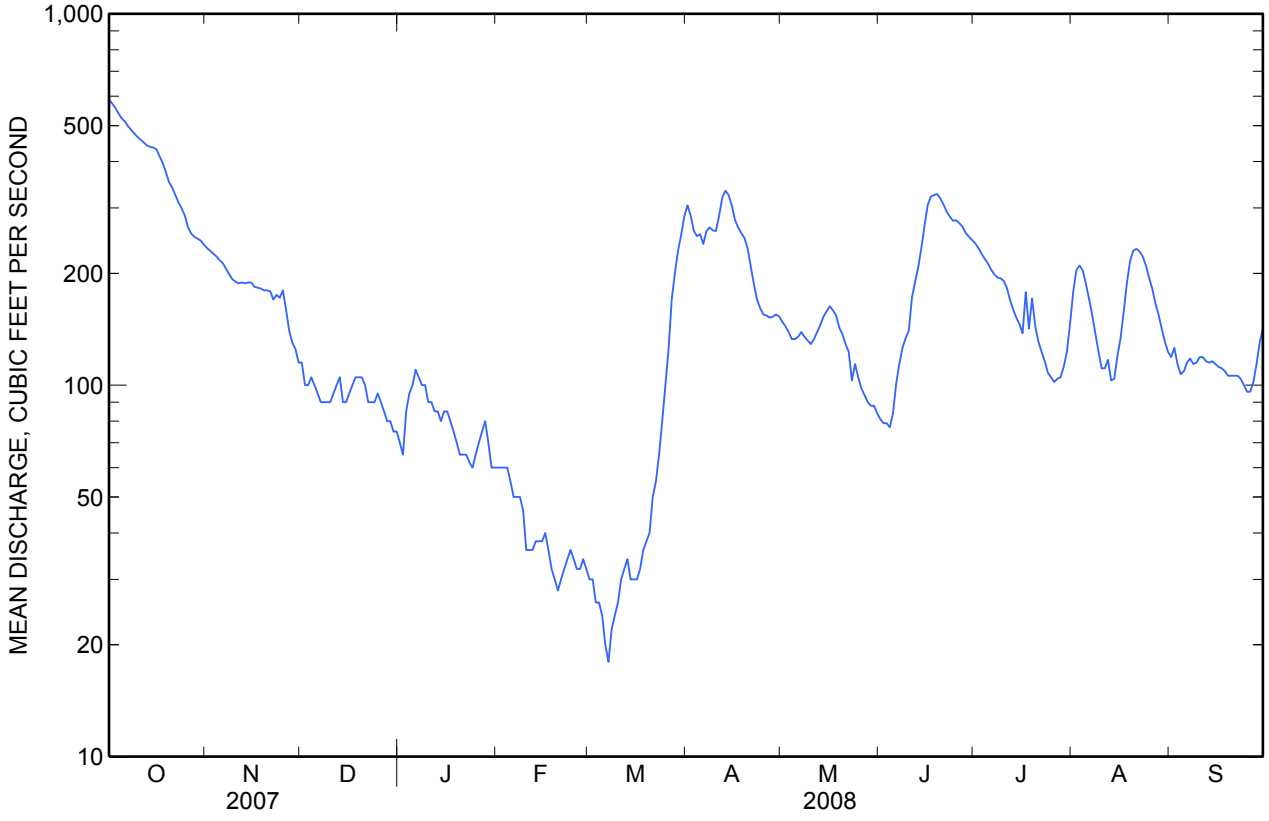
[a] Median of annual mean discharges, 160 ft³/s.

[b] Backwater from Snake Creek.

[c] Stage falling, maximum daily discharge, 588 ft³/s, Oct. 1; maximum gage height, 7.67 ft, Oct. 1.

[d] Gage height, 25.03 ft.

[f] From floodmark, backwater from Snake Creek.



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WATER-QUALITY RECORDS

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf µS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)
Oct					
02...	1650	576	1,280	22.0	16.5
Jan					
24...	1525	63	2,110	-17.8	.0
Mar					
11...	1245	31	2,300	12.0	.5
Apr					
14...	0850	326	1,410	2.0	4.0
May					
01...	1220	150	1,830	13.0	11.5
23...	1420	88	2,010	20.0	17.0
28...	1000	89	1,920	16.0	13.0
Jul					
09...	1245	194	1,400	31.0	27.5
Aug					
13...	1610	104	1,700	28.0	27.0