

## 05291000 WHETSTONE RIVER NEAR BIG STONE CITY, SD

LOCATION.--Lat 45°17'30", long 96°29'14", in SE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 18, T.121 N., R.46 W., Grant County, Hydrologic Unit 07020001, on right bank 20 ft downstream from former highway bridge site, 1.5 mi west of Big Stone City, S.D., and 4.5 mi upstream from Big Stone Lake.

DRAINAGE AREA.--398 mi<sup>2</sup>.

PERIOD OF RECORD.--March 1910 to November 1912 (no winter records), and March 1931 to current year. Monthly discharge only for some periods, published in WSP 1308.

REVISED RECORDS.--WSP 895: Drainage area. WSP 1308: 1932(M), 1935(M).

GAGE.--Water-stage recorder. Datum of gage is 996.96 ft in sea level (NGVD of 1912). Mar. 8, 1910 to Nov. 30, 1912, nonrecording gage 2 mi downstream at different datum. Mar. 18, 1931 to May 3, 1939, nonrecording gage, at site 20 ft upstream at present datum. May 4, 1939 to Nov. 8, 1952, water-stage recorder at site 80 ft downstream at present datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, about 26 ft in June 1919, present site and datum, from information by local resident, discharge 29,000 ft<sup>3</sup>/s, from dam break.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	79	21	e12	e5.1	e9.8	49	23	34	88	12	6.4
2	29	74	20	e11	e4.1	e9.3	42	22	30	73	12	5.7
3	30	64	19	e11	e4.5	e9.4	37	21	27	61	15	6.4
4	32	53	19	e11	e4.1	e11	33	20	27	52	16	6.5
5	32	45	19	e9.6	e6.1	e12	31	19	32	38	15	6.2
6	27	39	18	e8.7	e9.1	e15	30	18	34	34	13	7.2
7	24	35	20	e8.1	e6.3	e22	29	19	39	31	11	7.2
8	20	31	20	e7.7	e6.0	e22	28	20	75	31	10	8.0
9	16	28	19	e6.7	e5.7	e21	27	24	88	30	9.7	7.1
10	14	27	19	e6.2	e5.4	e19	28	27	217	28	9.0	6.3
11	11	26	20	e6.0	e6.3	e18	38	27	278	26	9.9	5.4
12	10	25	16	e6.4	e7.5	e19	58	33	296	37	10	5.9
13	9.5	23	e10	e6.2	e8.8	e19	87	46	312	37	11	15
14	11	22	e15	e5.5	e16	e19	98	53	1,690	27	9.7	16
15	9.8	22	e18	e3.6	e20	e19	86	62	2,350	23	9.0	12
16	9.4	21	e18	e2.8	e15	e19	75	72	976	21	8.7	9.4
17	11	21	e17	e2.1	e15	e19	66	75	594	19	8.6	8.3
18	11	21	e17	e1.9	e15	e18	58	68	415	17	9.6	7.7
19	9.8	23	e14	e2.1	e15	e18	51	58	298	17	9.8	8.1
20	9.5	24	e13	e2.8	e14	e17	46	50	233	17	11	7.2
21	9.8	24	e14	e3.6	e14	e17	41	46	187	17	15	6.8
22	11	24	e11	e3.4	e14	e19	37	41	154	18	17	6.2
23	14	23	e8.9	e4.0	e13	e25	35	35	131	17	17	5.5
24	22	23	e6.8	e4.9	e12	e31	32	29	122	17	13	5.2
25	34	23	e7.2	e7.2	e12	e32	29	34	113	18	11	6.4
26	33	20	e8.1	e6.9	e11	e31	29	39	106	16	11	6.5
27	38	23	e8.1	e4.9	e10	e32	27	35	97	16	9.1	6.6
28	38	24	e8.4	e5.2	e9.9	e35	25	36	95	16	8.9	6.8
29	42	22	e9.7	e4.6	---	40	24	38	95	16	8.0	6.1
30	49	23	e12	e4.6	---	49	23	39	92	15	7.3	5.6
31	83	---	e11	e4.9	---	50	---	37	---	14	6.8	---
TOTAL	716.8	932	457.2	185.6	284.9	696.5	1,299	1,166	9,237	887	344.1	223.7
MEAN	23.1	31.1	14.7	5.99	10.2	22.5	43.3	37.6	308	28.6	11.1	7.46
MAX	83	79	21	12	20	50	98	75	2,350	88	17	16
MIN	9.4	20	6.8	1.9	4.1	9.3	23	18	27	14	6.8	5.2
AC-FT	1,420	1,850	907	368	565	1,380	2,580	2,310	18,320	1,760	683	444

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1910 - 2005, BY WATER YEAR (WY)

MEAN	14.6	14.9	10.0	6.57	15.0	151	217	91.2	80.9	55.8	19.1	10.3
MAX	280	122	56.0	36.3	168	612	1,677	491	478	885	327	77.0
(WY)	(1996)	(1996)	(1999)	(1994)	(1998)	(1978)	(1997)	(1972)	(1984)	(1993)	(1991)	(1995)
MIN	0.60	0.40	0.20	0.00	0.00	2.85	3.63	0.77	1.42	0.04	0.00	0.36
(WY)	(1932)	(1935)	(1935)	(1934)	(1934)	(1969)	(1934)	(1934)	(1936)	(1934)	(1934)	(1935)

05291000 WHETSTONE RIVER NEAR BIG STONE CITY, SD—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1910 - 2005	
ANNUAL TOTAL	5,493.7		16,429.8		<sup>a</sup> 58.8	
ANNUAL MEAN	15.0		45.0		232	
HIGHEST ANNUAL MEAN					1.52 1934	
LOWEST ANNUAL MEAN					8,090 Apr 8, 2001	
HIGHEST DAILY MEAN	83	Oct 31	2,350	Jun 15	0.00 Sep 13, 1931	
LOWEST DAILY MEAN	1.7	Feb 17	1.9	Jan 18	0.00 Jul 31, 1933	
ANNUAL SEVEN-DAY MINIMUM	1.8	Feb 11	2.7	Jan 16	9,930 Apr 8, 2001	
MAXIMUM PEAK FLOW			3,430	Jun 15	15.93 Apr 8, 2001	
MAXIMUM PEAK STAGE			10.44	Jun 15	42,590	
ANNUAL RUNOFF (AC-FT)	10,900		32,590		108	
10 PERCENT EXCEEDS	30		65		9.0	
50 PERCENT EXCEEDS	12		19		1.5	
90 PERCENT EXCEEDS	2.6		6.3			

- a Median of annual mean discharges is 44 ft<sup>3</sup>/s.
- b Many days, several years.
- e Estimated.

