

06414000 RAPID CREEK AT RAPID CITY, SD

LOCATION.--Lat 44°05'09", long 103°14'31", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.35, T.2 N., R.7 E., Pennington County, Hydrologic Unit 10120110, on left bank 1,300 ft upstream from 12th Street in Rapid City and 3.6 mi downstream from Canyon Lake Dam.

DRAINAGE AREA.--410 mi², approximately.

PERIOD OF RECORD.--June 1903 to November 1906, July 1942 to current year. Monthly discharge only for some periods, published in WSP 1309.

GAGE.--Water-stage recorder. Datum of gage is 3,230.14 ft above NGVD of 1929. Prior to Nov. 30, 1906, nonrecording gage at site 1.0 mi downstream at different datum, and June 10, 1972, to Nov. 1, 1972, nonrecording gage at site 800 ft downstream at datum 0.80 ft higher. July 1942 to June 9, 1972, water-stage recorder at site 300 ft downstream at datum 0.80 ft higher (destroyed by flood).

REMARKS.--Records good except those for estimated daily discharges, which are fair. Several small diversions upstream from station to municipal park pools and for irrigation of about 320 acres. Flow regulated by Pactola Dam 25.4 mi upstream since Aug. 22, 1956 (reservoir filled from August 1956 to June 1963). Maximum discharge prior to Sept. 30, 1963, 3,300 ft³/s, July 13, 1962, gage height, 8.37 ft, datum then in use; minimum daily discharge, 2.0 ft³/s, Apr. 20, 1962. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section. National Weather Service telemeter at station. U.S. Army Corps of Engineers satellite data-collection platform at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 12, 13, 1920, reached a stage of 14.4 ft present datum, from floodmarks.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	e33	36	34	24	33	32	37	53	65	44	42
2	27	e34	36	38	23	34	32	55	53	78	37	42
3	26	35	35	31	21	35	32	60	45	131	66	47
4	e24	33	35	27	21	32	33	68	40	101	49	66
5	e24	29	27	24	22	37	31	80	45	106	30	62
6	24	27	31	22	20	36	31	81	38	73	21	30
7	23	30	42	24	23	34	32	85	37	44	19	27
8	23	31	e38	31	29	38	31	81	35	39	21	25
9	24	35	36	38	28	38	31	81	40	41	21	24
10	25	e37	29	37	20	37	32	85	54	41	22	24
11	27	e35	32	36	23	34	33	95	38	46	22	24
12	27	e33	29	35	28	34	33	82	36	48	20	23
13	28	33	28	34	32	35	31	74	35	43	28	23
14	29	34	36	35	33	33	30	68	34	41	39	31
15	29	33	39	35	33	33	30	69	33	40	39	28
16	30	33	36	35	34	33	30	72	37	46	36	23
17	28	32	36	34	34	34	30	69	37	57	43	22
18	27	32	36	34	35	34	31	e65	33	57	55	21
19	27	32	34	33	35	33	30	64	33	53	65	23
20	27	33	36	34	35	33	30	63	33	69	86	23
21	26	36	37	33	34	32	31	72	32	76	93	23
22	27	32	35	34	34	33	38	63	30	78	97	24
23	27	29	33	33	34	33	33	63	28	64	99	24
24	28	28	33	33	34	33	32	54	26	54	86	24
25	29	35	36	31	34	32	30	50	27	48	69	23
26	30	33	36	23	34	34	29	49	27	38	69	22
27	31	33	36	20	35	38	28	52	27	33	72	22
28	e31	33	34	13	36	34	27	53	24	40	62	22
29	31	38	30	14	37	33	34	54	e29	45	59	22
30	32	38	29	16	---	32	37	58	39	48	58	21
31	33	---	30	26	---	32	---	54	---	45	48	---
TOTAL	851	989	1,056	927	865	1,056	944	2,056	1,078	1,788	1,575	857
MEAN	27.5	33.0	34.1	29.9	29.8	34.1	31.5	66.3	35.9	57.7	50.8	28.6
MAX	33	38	42	38	37	38	38	95	54	131	99	66
MIN	23	27	27	13	20	32	27	37	24	33	19	21
AC-FT	1,690	1,960	2,090	1,840	1,720	2,090	1,870	4,080	2,140	3,550	3,120	1,700

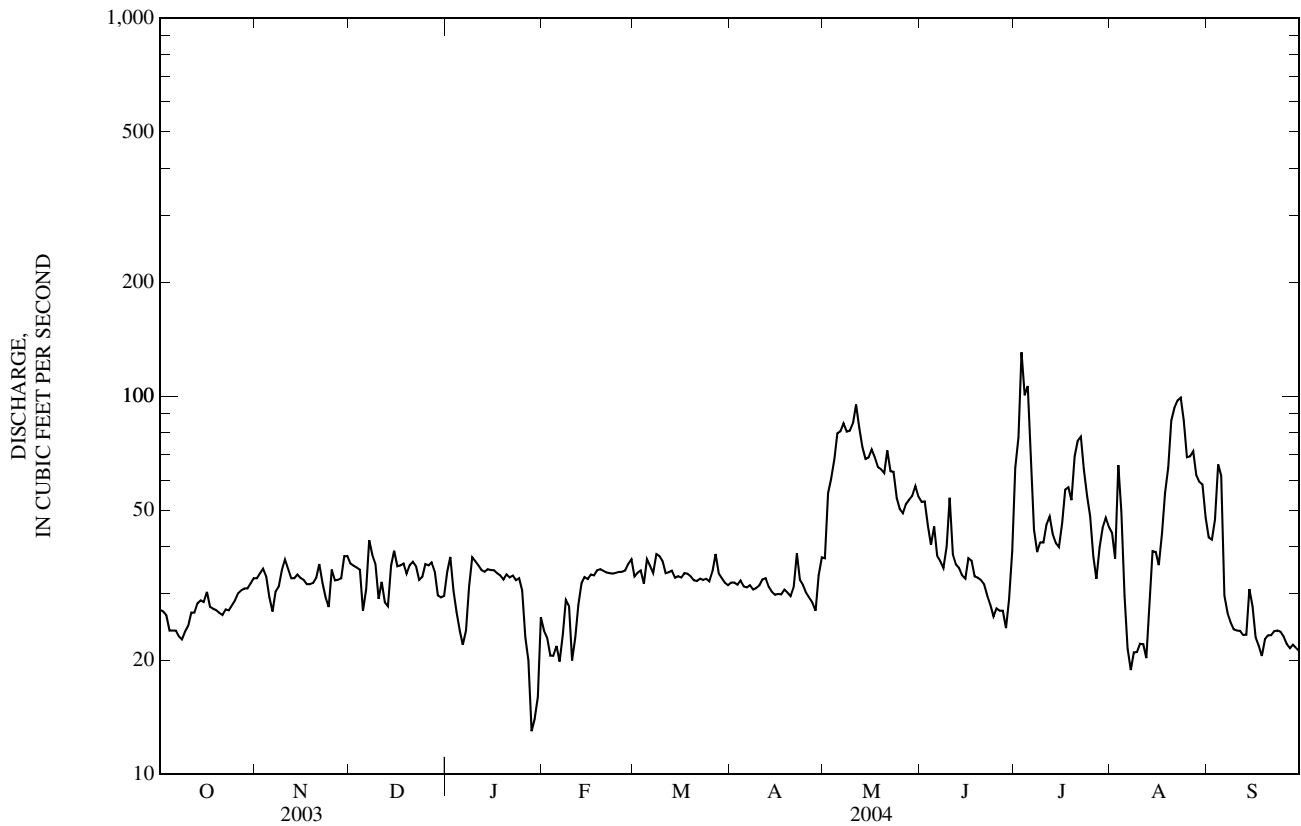
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2004, BY WATER YEAR (WY)*

MEAN	44.9	41.4	39.8	37.4	38.1	47.7	72.9	129	157	104	80.1	57.7
MAX	170	192	167	112	111	152	232	490	505	296	263	158
(WY)	(1999)	(1999)	(1999)	(1997)	(1997)	(1996)	(1999)	(1997)	(1999)	(1999)	(1998)	(1997)
MIN	15.4	20.8	20.1	15.9	15.9	18.3	17.6	42.7	28.0	45.8	39.5	26.5
(WY)	(1989)	(1982)	(1991)	(1978)	(1978)	(1991)	(1981)	(1986)	(1990)	(1986)	(1981)	(1989)

06414000 RAPID CREEK AT RAPID CITY, SD—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1964 - 2004*	
ANNUAL TOTAL	18,301		14,042		71.0	
ANNUAL MEAN	50.1		38.4		31.5	
HIGHEST ANNUAL MEAN					207	1999
LOWEST ANNUAL MEAN					31.5	1990
HIGHEST DAILY MEAN	134	Jun 21	131	Jul 3	5,600	Jun 10, 1972
LOWEST DAILY MEAN	23	Oct 7	13	Jan 28	6.7	Apr 17, 1981
ANNUAL SEVEN-DAY MINIMUM	24	Oct 4	19	Jan 26	8.6	Jan 24, 1978
MAXIMUM PEAK FLOW			418	Jul 3	^a 50,000	Jun 9, 1972
MAXIMUM PEAK STAGE			5.28	Jul 3	^b 19.66	Jun 9, 1972
ANNUAL RUNOFF (AC-FT)	36,300		27,850		51,440	
10 PERCENT EXCEEDS	84		64		130	
50 PERCENT EXCEEDS	38		33		46	
90 PERCENT EXCEEDS	28		23		24	

* Regulated period only (1964-2004). See REMARKS.
 a On basis of slope-area measurement of peak flow.
 b From floodmarks.
 e Estimated.



06418900 RAPID CREEK BELOW SEWAGE TREATMENT PLANT, NEAR RAPID CITY, SD

LOCATION.--Lat 44°01'24", long 103°05'43", in NW $\frac{1}{4}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.25, T.1 N., R.8 E., Pennington County, Hydrologic Unit 10120110, on right bank 120 ft downstream from sewage treatment plant effluent and 6.7 mi southeast of Rapid City.

DRAINAGE AREA.--452 mi², approximately.

PERIOD OF RECORD.--October 1981 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 3,000 ft above NGVD of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Pactola Dam 40.9 mi upstream since Aug. 22, 1956. Reservoir filled from August 1956 to June 1963. Diversions for irrigation of about 7,000 acres upstream from station. Satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

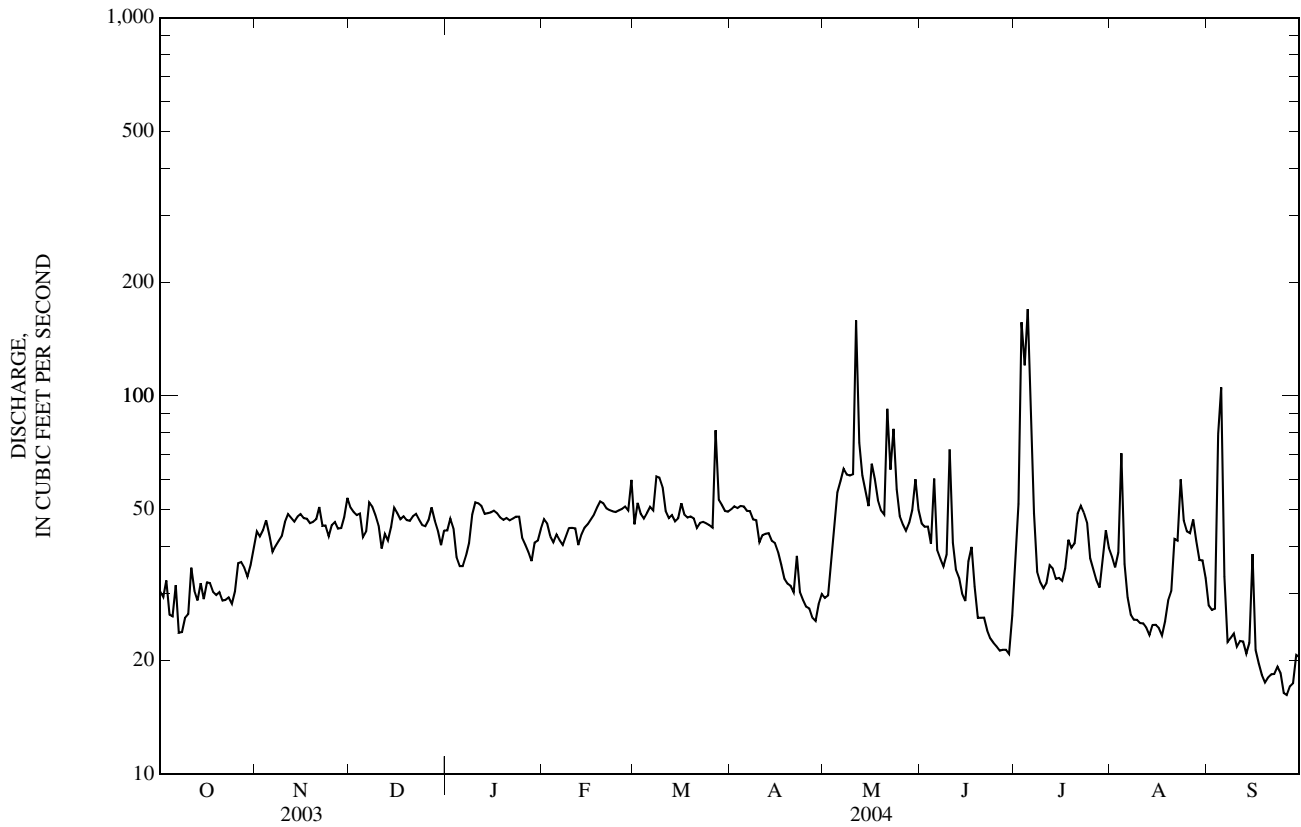
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	44	51	44	47	46	50	29	46	38	38	28
2	29	42	49	47	46	52	51	30	45	52	35	27
3	32	44	48	45	43	49	51	37	45	157	39	27
4	26	47	49	37	41	47	51	46	41	120	70	79
5	26	43	42	35	43	49	51	56	60	169	36	105
6	32	39	44	35	42	51	50	60	39	92	29	33
7	24	40	52	38	40	50	50	64	37	49	26	22
8	24	41	51	41	42	61	47	62	35	34	26	23
9	26	43	48	49	45	61	47	62	38	32	26	24
10	26	46	45	52	45	57	41	62	72	31	25	22
11	35	49	39	52	45	50	43	158	41	32	25	22
12	30	48	43	51	40	48	43	75	35	36	24	22
13	29	46	41	49	43	48	43	62	33	35	23	21
14	32	48	45	49	45	47	41	56	30	33	25	22
15	29	49	51	49	46	47	41	51	29	33	25	38
16	32	47	49	50	47	52	39	66	37	32	24	21
17	32	47	47	49	49	49	36	60	40	35	23	20
18	30	46	48	48	51	48	33	53	31	42	25	18
19	30	46	47	47	53	48	32	50	26	40	29	17
20	30	47	47	48	52	47	31	49	26	41	30	18
21	29	51	48	47	50	45	30	92	26	49	42	18
22	29	45	49	47	50	46	38	64	24	51	41	18
23	29	45	47	48	50	46	30	82	23	49	60	19
24	28	43	46	48	49	46	29	57	22	46	47	18
25	30	46	45	42	50	46	28	48	22	37	44	16
26	36	46	47	40	50	45	27	46	21	35	43	16
27	36	45	51	39	51	81	26	44	21	33	47	17
28	35	45	47	37	50	53	25	46	21	31	41	17
29	33	48	44	41	60	52	28	50	21	37	37	21
30	36	54	40	41	---	50	30	60	26	44	37	20
31	39	---	44	44	---	49	---	50	---	40	33	---
TOTAL	944	1,370	1,444	1,389	1,365	1,566	1,162	1,827	1,013	1,585	1,075	789
MEAN	30.5	45.7	46.6	44.8	47.1	50.5	38.7	58.9	33.8	51.1	34.7	26.3
MAX	39	54	52	52	60	81	51	158	72	169	70	105
MIN	24	39	39	35	40	45	25	29	21	31	23	16
AC-FT	1,870	2,720	2,860	2,760	2,710	3,110	2,300	3,620	2,010	3,140	2,130	1,560

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 2004, BY WATER YEAR (WY)

MEAN	59.4	62.8	62.6	61.1	63.0	75.5	103	146	166	107	85.6	60.8
MAX	216	230	196	141	158	172	285	552	523	313	339	192
(WY)	(1999)	(1999)	(1999)	(1997)	(1997)	(1996)	(1999)	(1997)	(1999)	(1999)	(1997)	(1997)
MIN	18.7	23.7	31.5	28.8	32.7	32.3	31.1	30.5	32.7	32.3	33.4	22.2
(WY)	(1991)	(1982)	(1991)	(1991)	(1991)	(1991)	(1988)	(1989)	(1985)	(1991)	(1986)	(1990)

06418900 RAPID CREEK BELOW SEWAGE TREATMENT PLANT, NEAR RAPID CITY, SD—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1982 - 2004	
ANNUAL TOTAL	19,611		15,529		87.8	
ANNUAL MEAN	53.7		42.4		35.5	
HIGHEST ANNUAL MEAN					239	1997
LOWEST ANNUAL MEAN					35.5	1989
HIGHEST DAILY MEAN	162	May 1	169	Jul 5	1,270	Jun 3, 1997
LOWEST DAILY MEAN	24	Sep 25	16	Sep 25	11	Sep 26, 1992
ANNUAL SEVEN-DAY MINIMUM	26	Sep 23	17	Sep 22	13	Oct 4, 1990
MAXIMUM PEAK FLOW			708	Jul 3	2,260	Jun 3, 1997
MAXIMUM PEAK STAGE			5.78	Jul 3	10.05	Jun 3, 1997
ANNUAL RUNOFF (AC-FT)	38,900		30,800		63,630	
10 PERCENT EXCEEDS	68		52		181	
50 PERCENT EXCEEDS	51		43		55	
90 PERCENT EXCEEDS	33		24		28	



06421500 RAPID CREEK NEAR FARMINGDALE, SD

LOCATION.--Lat 43°56'31", long 102°51'12", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.19, T.1 S., R.11 E., Pennington County, Hydrologic Unit 10120110, on right bank at downstream side of bridge, 2 mi southeast of Farmingdale, and 4.8 mi downstream from Antelope Creek.

DRAINAGE AREA.--602 mi².

PERIOD OF RECORD.--July 1946 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 2,700 ft above NGVD of 1929, from topographic map. Prior to Sept. 19, 1947, nonrecording gage at same site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow regulated by Pactola Dam 67 mi upstream since Aug. 22, 1956 (reservoir filled from August 1956 to June 1963). Maximum discharge prior to regulation, 2,640 ft³/s, June 21, 1947, gage height, 8.40 ft; no flow at times in 1949, 1952-56, 1958-63. Diversions of irrigation of about 10,000 acres upstream from station. Satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	e50	e53	e44	e42	e48	45	e5.7	33	3.5	13	11
2	21	e49	e51	e45	e46	e49	45	e4.3	22	9.8	12	9.4
3	17	e45	e49	e43	e44	e51	45	e3.4	19	32	7.9	3.6
4	15	e46	e48	e41	e43	e52	45	1.1	16	199	16	16
5	16	e48	e47	e39	e41	e49	46	3.4	21	189	42	89
6	14	e47	e43	e37	e43	e49	44	10	45	190	19	122
7	14	e42	e47	e37	e42	e52	40	11	23	104	16	38
8	18	e41	e52	e38	e41	e80	38	11	15	50	9.5	25
9	16	e50	e51	e40	e40	e170	36	11	13	29	5.5	23
10	17	e45	e49	e47	e43	e133	32	11	24	24	5.3	22
11	23	e52	e44	e50	e45	75	24	43	74	21	5.5	19
12	29	e51	e42	e52	e44	61	26	86	39	21	3.5	18
13	27	e50	e43	e51	e42	61	27	37	32	18	7.8	17
14	25	49	e44	e49	e41	59	27	27	29	8.6	5.6	15
15	28	49	e46	e48	e43	54	22	27	30	6.4	3.7	14
16	29	49	e49	e48	e47	53	22	23	28	4.2	3.3	33
17	28	47	e51	e48	e50	56	18	44	24	2.3	2.7	19
18	30	46	e48	e50	e51	57	19	39	41	2.0	1.2	15
19	27	44	e48	e49	e52	58	16	29	35	3.1	1.2	14
20	26	45	e48	e47	e54	54	14	19	26	5.9	0.78	13
21	28	49	e48	e46	e52	49	13	26	27	5.4	4.6	12
22	25	e47	e49	e47	e50	48	13	80	31	9.4	8.8	16
23	25	e30	e49	e48	e50	49	19	56	18	19	14	19
24	25	e46	e48	e48	e50	49	13	62	15	20	24	20
25	24	e46	e47	e47	e49	48	7.9	38	15	21	17	20
26	24	e46	e45	e43	e48	47	4.7	29	13	16	15	17
27	29	e46	e44	e41	e50	57	4.0	30	14	16	14	16
28	30	e45	e49	e39	e52	88	8.7	26	6.7	12	20	16
29	40	e44	e50	e37	e51	51	9.1	25	8.0	8.1	17	17
30	41	e50	e47	e39	---	48	7.6	27	6.5	9.5	14	17
31	e43	---	e43	e41	---	46	---	45	---	13	13	---
TOTAL	774	1,394	1,472	1,379	1,346	1,901	731.0	889.9	743.2	1,072.2	342.88	706.0
MEAN	25.0	46.5	47.5	44.5	46.4	61.3	24.4	28.7	24.8	34.6	11.1	23.5
MAX	43	52	53	52	54	170	46	86	74	199	42	122
MIN	14	30	42	37	40	46	4.0	1.1	6.5	2.0	0.78	3.6
AC-FT	1,540	2,760	2,920	2,740	2,670	3,770	1,450	1,770	1,470	2,130	680	1,400

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2004, BY WATER YEAR (WY)*

MEAN	54.8	58.8	54.4	51.3	56.8	79.7	105	146	169	78.4	53.3	46.5
MAX	246	257	215	147	180	176	343	754	607	305	340	155
(WY)	(1999)	(1999)	(1999)	(1997)	(1997)	(1996)	(1999)	(1997)	(1997)	(1999)	(1997)	(1997)
MIN	17.3	29.1	27.2	17.7	15.0	30.9	11.5	17.2	13.1	14.1	11.1	11.2
(WY)	(1993)	(1991)	(1989)	(1988)	(1988)	(1981)	(1981)	(1979)	(1966)	(1970)	(2004)	(1969)

06421500 RAPID CREEK NEAR FARMINGDALE, SD—Continued

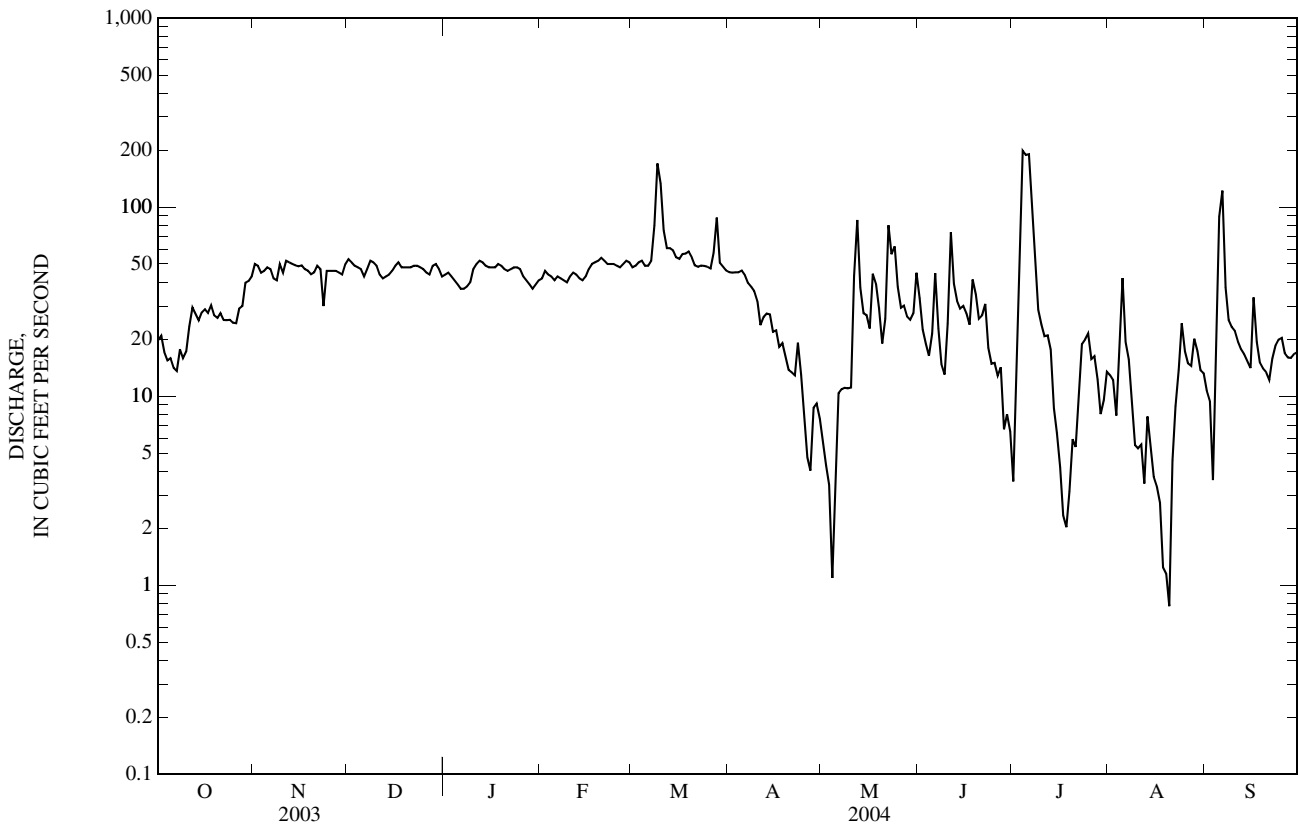
SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1964 - 2004*	
ANNUAL TOTAL	16,474.2		12,751.18		79.5	
ANNUAL MEAN	45.1		34.8		24.8	
HIGHEST ANNUAL MEAN					269	1997
LOWEST ANNUAL MEAN					24.8	1989
HIGHEST DAILY MEAN	153	May 2	199	Jul 4	2,860	Jun 10, 1972
LOWEST DAILY MEAN	2.5	Aug 18	0.78	Aug 20	^a 0.00	May 30, 1969
ANNUAL SEVEN-DAY MINIMUM	7.7	Aug 12	2.5	Aug 15	0.00	Jun 1, 1969
MAXIMUM PEAK FLOW			459	Jul 4	^b 7,320	Jun 10, 1972
MAXIMUM PEAK STAGE			7.81	Jul 4	^b 11.85	Jun 10, 1972
ANNUAL RUNOFF (AC-FT)	32,680		25,290		57,600	
10 PERCENT EXCEEDS	67		51		160	
50 PERCENT EXCEEDS	48		37		49	
90 PERCENT EXCEEDS	16		8.5		18	

* Regulated period only (1964-2004). See REMARKS.

a No flow at times in 1969-71.

b From floodmarks, from rating curve extended above 400 ft³/s on basis of contracted-opening and flow-over-road measurement of peak flow.

c Estimated.



06422500 BOXELDER CREEK NEAR NEMO, SD

LOCATION.--Lat 44°08'38", long 103°27'16", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.12, T.2 N., R.5 E., Lawrence County, Hydrologic Unit 10120111, on right bank at ranch 0.2 mi upstream from county line, 0.9 mi downstream from Jim Creek, and 4.5 mi southeast of Nemo.

DRAINAGE AREA.--96 mi², approximately.

PERIOD OF RECORD.--July 1945 to July 1947, May 1966 to current year.

GAGE.--Water-stage recorder. Datum of gage is 4,320.27 ft above NGVD of 1929. July 1945 to July 1947 nonrecording gage at site 100 ft upstream at different datum. May 17, 1966, to June 9, 1972, water-stage recorder (destroyed by flood) and June 10, 1972, to Aug. 8, 1972, nonrecording gage, both at site 100 ft upstream at datum 2.00 ft higher.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section. Satellite data-collection platform at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of 1911 reached a stage of about 16 ft, present datum.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.5	e3.4	e5.1	e2.6	e2.6	e5.3	6.6	5.7	4.1	4.9	1.9	0.78
2	3.4	e3.4	e5.1	e2.5	e2.6	e5.2	6.4	5.6	3.8	5.9	1.8	0.78
3	3.4	e3.4	e4.8	e2.2	e2.6	e5.0	6.4	4.8	3.7	5.0	2.0	0.88
4	3.3	e3.2	e4.5	e1.9	e2.6	e4.8	6.3	4.7	3.5	5.4	2.2	1.1
5	3.3	e2.9	e4.0	e1.7	e2.7	e4.7	6.2	4.4	4.0	6.5	2.3	1.4
6	3.2	e2.7	e4.0	e1.9	e2.7	e4.7	6.1	4.2	3.8	6.0	2.2	1.6
7	3.2	e2.6	e4.1	e2.1	e2.8	e4.6	6.0	4.0	3.4	5.2	2.0	1.3
8	3.2	e2.6	e4.1	e2.8	e2.8	e4.6	6.0	3.9	3.2	4.6	1.7	1.1
9	3.2	e2.5	e3.9	e3.4	e2.8	6.0	5.7	3.8	3.3	4.4	1.6	1.0
10	3.2	e2.6	e3.8	e3.8	e2.6	8.0	5.5	3.9	3.8	3.9	1.5	0.95
11	3.3	e2.8	e3.7	e4.1	e2.5	8.4	5.8	4.0	3.6	3.8	1.4	0.95
12	3.3	e3.1	e3.7	e4.2	e2.6	8.9	5.5	3.8	3.5	3.7	1.4	0.89
13	3.4	e3.2	e3.6	e4.2	e3.0	8.4	5.9	3.8	3.6	3.4	1.4	0.88
14	3.5	e3.3	e3.6	e4.2	e3.3	6.7	5.4	4.0	3.6	3.2	1.3	0.94
15	3.6	e3.9	e3.7	e4.2	e3.6	e6.6	5.0	4.0	3.5	3.0	1.2	1.1
16	3.7	e3.8	e3.8	e4.1	e3.9	6.5	4.8	4.3	3.3	2.9	1.1	1.3
17	3.7	e3.5	e3.8	e4.1	e4.0	7.0	4.7	5.0	3.5	2.8	1.1	1.3
18	3.5	e3.6	e3.8	e4.0	e4.0	10	4.5	5.2	3.6	2.7	1.1	1.2
19	3.4	e3.5	e3.9	e3.9	e4.1	12	4.5	4.7	3.5	2.5	0.99	1.1
20	3.4	e3.8	e3.9	e3.9	e4.4	12	4.5	4.0	3.6	2.4	1.0	1.1
21	3.4	e3.9	e3.9	e3.9	e4.9	8.6	5.1	5.1	3.6	2.4	1.0	1.1
22	3.3	e4.0	e3.8	e3.9	e5.2	7.9	8.6	6.2	3.6	2.4	1.1	1.2
23	3.3	e4.0	e3.8	e3.8	e4.7	8.1	8.5	5.9	3.4	2.5	1.4	1.3
24	3.2	e4.0	e3.9	e3.5	e6.0	8.4	7.6	5.2	3.1	2.7	1.0	1.4
25	3.1	e4.0	e3.8	e3.2	4.9	8.9	6.4	4.6	3.1	2.5	1.0	1.3
26	3.2	e4.1	e3.7	e3.0	5.3	9.0	5.6	4.3	3.1	2.4	1.0	1.3
27	3.4	e4.2	e3.2	e2.6	5.3	10	5.1	4.1	3.1	2.3	1.1	1.3
28	3.8	e4.3	e3.0	e2.3	5.5	9.1	4.7	4.0	2.8	2.0	1.1	1.4
29	3.8	e4.7	e3.0	e2.3	e5.4	7.5	5.1	4.2	2.8	1.9	1.0	1.3
30	3.9	e4.9	e2.9	e2.4	---	6.6	5.3	4.2	2.8	2.1	0.95	1.3
31	e3.4	---	e2.7	e2.5	---	6.7	---	4.2	---	2.0	0.88	---
TOTAL	105.5	105.9	118.6	99.2	109.4	230.2	173.8	139.8	103.3	107.4	42.72	34.55
MEAN	3.40	3.53	3.83	3.20	3.77	7.43	5.79	4.51	3.44	3.46	1.38	1.15
MAX	3.9	4.9	5.1	4.2	6.0	12	8.6	6.2	4.1	6.5	2.3	1.6
MIN	3.1	2.5	2.7	1.7	2.5	4.6	4.5	3.8	2.8	1.9	0.88	0.78
AC-FT	209	210	235	197	217	457	345	277	205	213	85	69

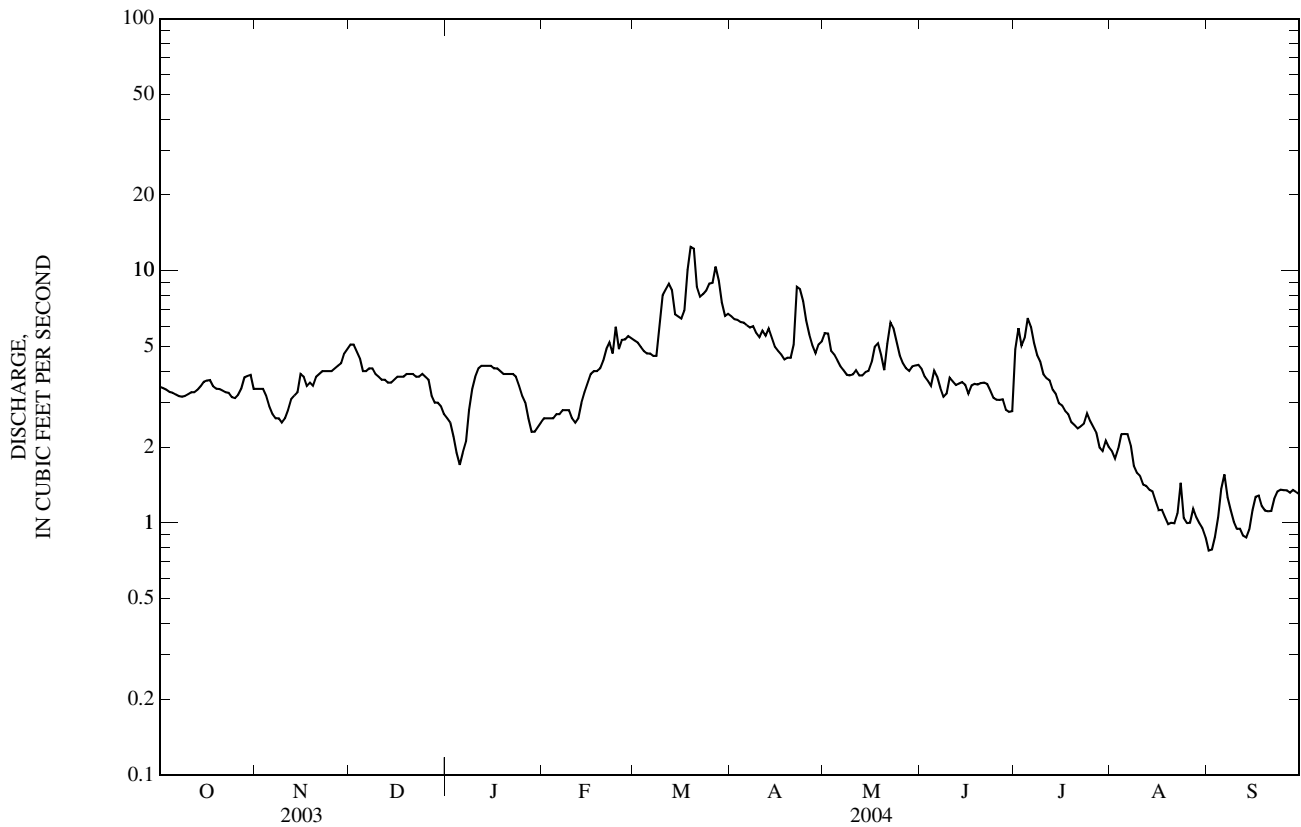
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 2004, BY WATER YEAR (WY)

MEAN	10.3	9.48	6.85	5.83	6.12	12.5	29.6	49.6	58.2	21.2	13.0	8.89
MAX	71.1	64.1	37.7	26.4	18.2	44.5	149	275	489	64.6	57.0	40.0
(WY)	(1999)	(1999)	(1999)	(1999)	(1997)	(1997)	(1997)	(1995)	(1972)	(1999)	(1998)	(1997)
MIN	1.85	1.66	1.65	1.42	1.36	2.66	3.03	4.51	3.44	1.70	0.76	1.15
(WY)	(1989)	(1989)	(1989)	(1982)	(1989)	(1981)	(1981)	(2004)	(2004)	(1988)	(1989)	(2004)

06422500 BOXELDER CREEK NEAR NEMO, SD—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1946, 1967-2004	
ANNUAL TOTAL	3,229.6		1,370.37			
ANNUAL MEAN	8.85		3.74		19.3	
HIGHEST ANNUAL MEAN					63.1	1997
LOWEST ANNUAL MEAN					3.74	2004
HIGHEST DAILY MEAN	47	May 11	12	Mar 19	6,700	Jun 10, 1972
LOWEST DAILY MEAN	2.0	Feb 23	0.78	Sep 1	0.10	Aug 8, 1989
ANNUAL SEVEN-DAY MINIMUM	2.7	Nov 5	0.91	Aug 28	^a 0.14	Aug 4, 1989
MAXIMUM PEAK FLOW			^b 19	Mar 11	^c 30,100	Jun 9, 1972
MAXIMUM PEAK STAGE			^d 2.03	Feb 29	^f 20.40	Jun 9, 1972
ANNUAL RUNOFF (AC-FT)	6,410		2,720		^a 13,990	
10 PERCENT EXCEEDS	20		6.0		^a 43	
50 PERCENT EXCEEDS	4.5		3.6		^a 8.3	
90 PERCENT EXCEEDS	3.2		1.3		^a 2.6	

- a Reflects water years 1967-2004.
- b Gage height, 1.85 ft.
- c From rating curve extended above 600 ft³/s on basis of slope-area measurement of peak flow.
- d Backwater from ice.
- e Estimated.
- f Site and datum then in use (22.0 ft, present site and datum, from floodmarks).



06423010 BOXELDER CREEK NEAR RAPID CITY, SD—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1979 - 2004	
ANNUAL TOTAL	0.00		0.00			
ANNUAL MEAN	0.00		0.00		6.14	
HIGHEST ANNUAL MEAN					42.3	1997
LOWEST ANNUAL MEAN					^a 0.00	1979
HIGHEST DAILY MEAN	0.00	Jan 1	0.00	Oct 1	879	May 9, 1995
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 1	^b 0.00	Oct 1, 1978
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 1	0.00	Oct 1, 1978
MAXIMUM PEAK FLOW					^c 1,080	May 10, 1995
MAXIMUM PEAK STAGE					33.46	May 31, 1996
ANNUAL RUNOFF (AC-FT)	0.00		0.00		4,450	
10 PERCENT EXCEEDS	0.00		0.00		8.5	
50 PERCENT EXCEEDS	0.00		0.00		0.00	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

a Also 1980, 1981, 1985-90, 1992, and 2002-04.
 b For most months in most years.
 c Gage height, 33.09 ft.

06423500 CHEYENNE RIVER NEAR WASTA, SD

LOCATION.--Lat 44°04'52", long 102°24'03", in NE¹/₄ NE¹/₄ NW¹/₄ sec.2, T.1 N., R.14 E., Pennington County, Hydrologic Unit 10120111, on left bank at downstream side of highway bridge, 200 ft downstream from railroad bridge, 3.0 mi east of Wasta, and 8.6 mi downstream from Boxelder Creek.

DRAINAGE AREA.--12,800 mi², approximately.

PERIOD OF RECORD.--July 1914 to June 1915, August 1928 to June 1932, March 1934 to current year. Monthly discharge only for some periods, published in WSP 1309. Records for Feb. 19-28, 1930, published in WSP 701, have been found to be unreliable and should not be used.

REVISED RECORDS.--WSP 786: Drainage area. WSP 1279: 1930(M), 1931, 1937. See also Period of Record.

GAGE.--Water-stage recorder. Datum of gage is 2,260.78 ft above NGVD of 1929. Prior to Aug. 1, 1940, nonrecording gage at site 50 ft upstream; Aug. 1, 1940, to Dec. 3, 1940, nonrecording gage and Dec. 4, 1940, to Sept. 30, 1968, water-stage recorder at present site all at datum 2.00 ft higher. Oct. 1, 1968, to Sept. 30, 1972, at datum 1.00 ft higher.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow regulated by Angostura Dam 108 mi upstream since October 1949 and by upstream reservoirs in the Rapid Creek Basin. The most downstream of the reservoirs in the Rapid Creek Basin, Pactola Reservoir, was the last to fill, and reached maximum pool elevation in June 1963 (began filling in August 1956). Prior to Oct. 1, 1963, maximum discharge observed, 46,300 ft³/s, May 6, 1932, gage height, 13.28 ft, present datum, from rating curve extended above 11,000 ft³/s on basis of an incomplete discharge measurement, at gage height, 10.65 ft, present datum; maximum gage height observed, 14.5 ft, present datum, June 13, 1915; minimum daily discharge, 1.0 ft³/s, July 27, 1961. U.S. Army Corps of Engineers satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 1920 reached a stage of 18 ft, present datum, from information by local residents.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	86	139	e150	e150	e80	e140	114	58	71	29	67	59
2	87	140	e145	e140	e79	e130	113	56	63	26	53	50
3	88	150	e140	e130	e78	e140	111	48	53	61	44	44
4	87	168	e135	e120	e77	e160	112	46	46	205	56	52
5	85	152	e130	e110	e76	e200	111	49	77	279	55	1,850
6	83	e109	e130	e100	e75	e400	111	65	221	426	71	3,200
7	83	e100	e135	e100	e75	e360	110	69	86	272	67	409
8	79	e90	e140	e102	e76	e460	106	70	53	158	52	176
9	78	e100	e150	e104	e76	594	109	57	38	110	45	125
10	78	e150	e140	e106	e77	496	105	56	203	88	42	108
11	84	e200	e120	e108	e78	287	107	62	745	73	35	278
12	92	e250	e100	e110	e78	203	101	66	223	59	39	130
13	98	153	e90	e115	e79	190	101	141	101	50	47	90
14	105	158	e80	e120	e80	189	101	98	70	41	49	85
15	102	143	e90	e140	e85	171	99	89	56	32	44	84
16	100	134	e100	e160	e90	153	93	87	54	25	40	82
17	102	131	e115	e150	e95	148	86	91	70	26	37	89
18	100	125	e120	e130	e100	151	81	115	65	25	32	86
19	101	124	e130	e120	e140	149	80	111	81	29	31	76
20	100	120	e140	e115	e170	145	81	88	81	24	35	74
21	94	e115	e150	e113	e200	137	79	84	79	370	37	75
22	93	e110	e160	e112	e195	130	202	81	110	192	44	81
23	98	e100	e165	e110	e190	127	257	137	82	64	51	99
24	99	e90	e170	e105	e185	126	121	185	65	60	103	216
25	103	e90	e175	e100	e180	124	97	207	47	101	88	114
26	104	e95	e180	e98	e175	120	78	129	41	76	71	99
27	106	e100	e175	e92	e170	128	70	89	44	69	68	93
28	108	e110	e170	e86	e160	124	65	72	38	62	58	85
29	113	e120	e160	e80	e150	146	55	61	31	55	63	84
30	119	e130	e155	e80	---	124	59	65	29	71	70	85
31	130	---	e150	e80	---	117	---	70	---	107	64	---
TOTAL	2,985	3,896	4,290	3,486	3,369	6,269	3,115	2,702	3,023	3,265	1,658	8,178
MEAN	96.3	130	138	112	116	202	104	87.2	101	105	53.5	273
MAX	130	250	180	160	200	594	257	207	745	426	103	3,200
MIN	78	90	80	80	75	117	55	46	29	24	31	44
AC-FT	5,920	7,730	8,510	6,910	6,680	12,430	6,180	5,360	6,000	6,480	3,290	16,220

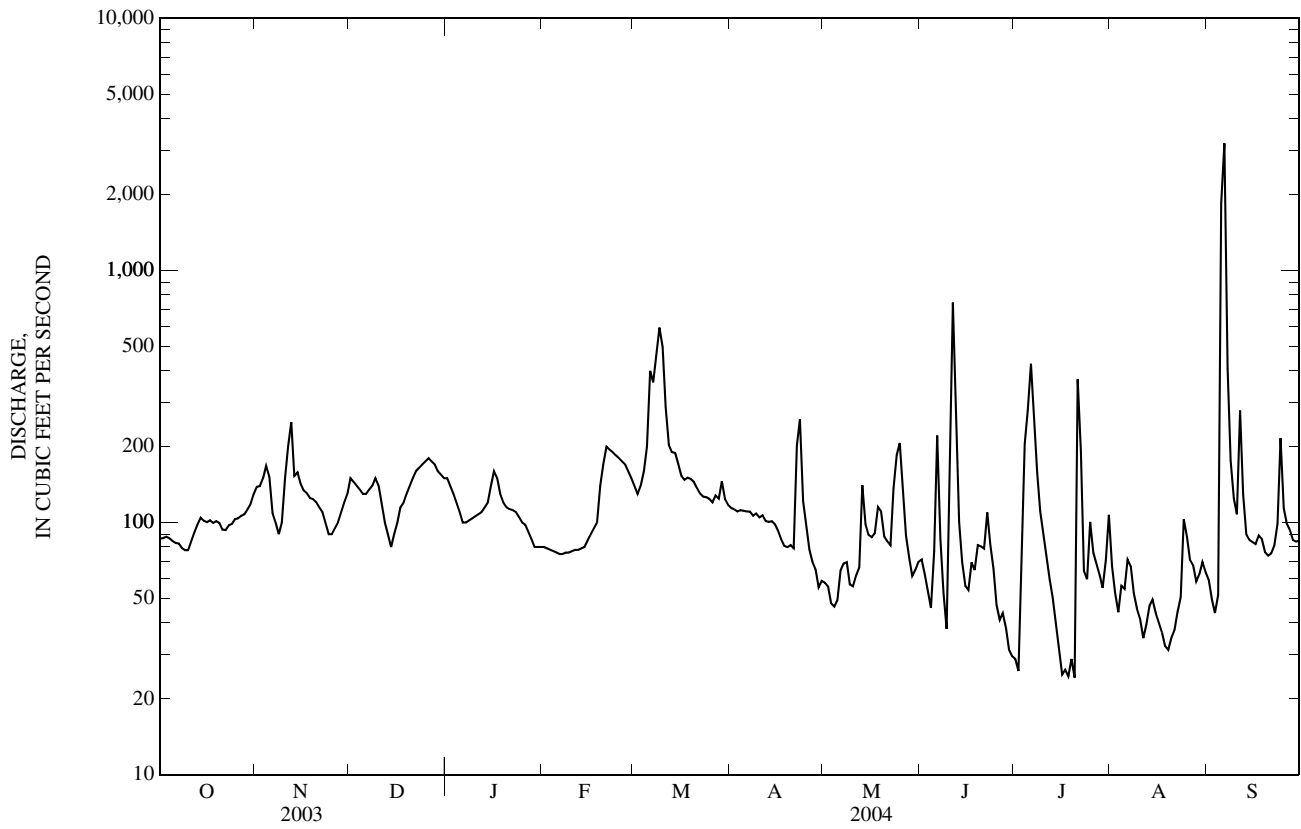
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2004, BY WATER YEAR (WY)*

MEAN	192	190	136	127	231	423	526	793	933	342	197	160
MAX	1,023	1,602	551	683	2,024	1,247	3,398	2,555	5,270	1,528	1,280	390
(WY)	(1999)	(1999)	(1999)	(1997)	(1997)	(1994)	(2000)	(1997)	(1967)	(1969)	(1997)	(1997)
MIN	58.6	81.4	38.4	5.04	25.1	90.8	68.4	65.8	36.9	34.9	25.4	49.0
(WY)	(1991)	(1989)	(1991)	(1991)	(1991)	(1981)	(1981)	(1989)	(1989)	(1989)	(1989)	(1975)

06423500 CHEYENNE RIVER NEAR WASTA, SD—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1964 - 2004*	
ANNUAL TOTAL	70,789		46,236			
ANNUAL MEAN	194		126		^a 354	
HIGHEST ANNUAL MEAN					1,143	1997
LOWEST ANNUAL MEAN					81.0	1989
HIGHEST DAILY MEAN	2,390	May 1	3,200	Sep 6	19,200	Jun 16, 1967
LOWEST DAILY MEAN	27	Aug 17	24	Jul 20	3.0	Dec 23, 1990
ANNUAL SEVEN-DAY MINIMUM	30	Aug 14	29	Jul 14	4.0	Jan 21, 1991
MAXIMUM PEAK FLOW			10,200	Sep 5	^b 26,900	May 25, 1957
MAXIMUM PEAK STAGE			7.99	Sep 5	^c 16.25	Mar 5, 1982
ANNUAL RUNOFF (AC-FT)	140,400		91,710		256,600	
10 PERCENT EXCEEDS	318		180		700	
50 PERCENT EXCEEDS	140		100		135	
90 PERCENT EXCEEDS	52		50		55	

* Regulated period only (1964-2004). See REMARKS.
 a Median of annual mean discharges, 280 ft³/s.
 b Gage height, 12.82 ft.
 c Backwater from ice.
 e Estimated.



06424000 ELK CREEK NEAR ROUBAIX, SD

LOCATION.--Lat 44°17'41", long 103°35'47", in SE¼ NE¼ sec.23, T.4 N., R.4 E., Lawrence County, Hydrologic Unit 10120111, on right bank approximately 2.5 mi upstream from mouth of Meadow Creek, 3.0 mi east of Roubaix, and 9.0 mi southwest of Sturgis.

DRAINAGE AREA.--21.5 mi².

PERIOD OF RECORD.--July 1945 to July 1947, October 1991 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 4,881 ft above NGVD of 1929, from topographic map. Prior to July 1947, nonrecording gage at site 0.5 mi upstream at different datum.

REMARKS.--Records good except those for May 6-17, which are fair, and those for estimated daily discharges, which are poor. Satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.0	e2.0	e2.2	e1.9	e2.2	e1.7	5.4	5.6	2.4	4.0	0.98	0.72
2	2.1	e1.9	e2.1	e1.8	e2.1	e1.6	5.3	4.0	2.0	4.8	0.81	0.65
3	2.0	e1.9	e2.1	e1.8	e2.1	e2.3	4.8	3.4	1.9	2.6	2.2	0.98
4	2.0	e1.9	e2.1	e1.7	e2.0	e2.5	4.6	3.2	1.7	3.6	2.6	1.7
5	1.9	e1.9	e2.1	e1.7	e2.0	e2.7	4.5	2.9	1.9	3.6	1.4	2.0
6	1.9	e1.8	e2.2	e1.7	e2.0	e2.8	4.1	2.7	1.5	4.0	1.1	1.4
7	1.9	e1.8	e2.3	e1.8	e2.0	e2.8	4.5	2.7	1.3	2.3	1.1	1.1
8	e1.9	e1.8	e2.1	e2.0	e2.0	e3.0	4.0	2.8	1.4	1.9	0.98	0.98
9	1.9	e1.9	e1.9	e2.4	e2.0	e4.0	3.8	2.8	1.6	1.7	0.88	0.89
10	1.9	e1.9	e1.7	e2.6	e2.0	e6.0	3.6	2.8	1.7	1.6	1.0	0.87
11	2.2	e1.9	e1.5	e2.6	e2.0	e8.0	3.8	2.8	1.6	1.5	1.1	0.86
12	2.0	e1.9	e1.5	e2.6	e1.9	e7.0	4.3	2.8	1.6	1.4	0.95	0.78
13	2.2	e1.9	e1.5	e2.6	e1.8	e6.0	3.9	2.8	1.5	1.2	0.91	0.85
14	e2.1	e2.0	e1.6	e2.6	e1.8	e4.5	3.3	2.6	1.4	1.1	0.82	1.2
15	e2.0	e2.0	e1.7	e2.8	e1.9	e4.3	3.1	2.5	1.3	1.1	0.79	1.4
16	e2.0	e1.9	e1.6	e2.9	e1.9	e3.9	2.9	2.7	1.8	1.1	0.72	1.1
17	e2.0	e1.9	e1.8	e2.9	e1.9	e6.8	2.9	4.0	2.1	1.1	0.78	0.99
18	1.9	e1.9	e1.8	e2.8	e1.9	e11	2.9	2.8	2.0	1.0	0.88	0.86
19	1.9	e2.0	e1.8	e2.6	e1.9	e15	3.0	2.3	1.8	0.90	0.78	0.87
20	1.9	e1.9	e1.9	e2.6	e1.9	e11	2.9	2.3	2.0	0.92	0.80	1.0
21	1.8	e1.9	e1.8	e2.6	e2.0	e7.2	4.0	6.6	2.1	0.93	0.72	1.3
22	1.8	e1.8	e1.8	e2.6	e2.2	e6.7	7.1	4.7	1.7	0.94	1.2	1.3
23	1.9	e1.8	e1.8	e2.6	e2.5	7.6	6.5	5.4	1.5	1.2	1.9	1.3
24	1.9	e1.8	e1.8	e2.8	e3.3	9.8	4.3	3.3	1.5	1.5	0.99	1.2
25	2.1	e2.0	e1.8	e2.5	e3.7	11	3.4	2.7	1.5	1.2	0.91	1.2
26	2.3	e2.2	e1.8	e2.3	e3.9	12	3.1	2.5	1.4	0.94	0.85	1.0
27	2.7	e2.3	e1.7	e2.1	e4.0	17	2.8	2.3	1.4	0.91	0.92	1.0
28	2.7	e2.4	e1.7	e2.0	e3.5	7.7	2.9	2.2	1.3	0.86	1.0	1.1
29	2.7	e2.4	e1.6	e2.2	e2.3	6.6	3.7	2.1	1.2	1.1	0.93	1.1
30	2.2	e2.3	e1.7	e2.4	---	5.8	4.2	3.4	1.2	1.2	0.88	1.0
31	2.0	---	e1.8	e2.3	---	5.9	---	2.9	---	0.95	0.81	---
TOTAL	63.8	59.0	56.8	72.8	66.7	204.2	119.6	98.6	49.3	53.15	32.69	32.70
MEAN	2.06	1.97	1.83	2.35	2.30	6.59	3.99	3.18	1.64	1.71	1.05	1.09
MAX	2.7	2.4	2.3	2.9	4.0	17	7.1	6.6	2.4	4.8	2.6	2.0
MIN	1.8	1.8	1.5	1.7	1.8	1.6	2.8	2.1	1.2	0.86	0.72	0.65
AC-FT	127	117	113	144	132	405	237	196	98	105	65	65

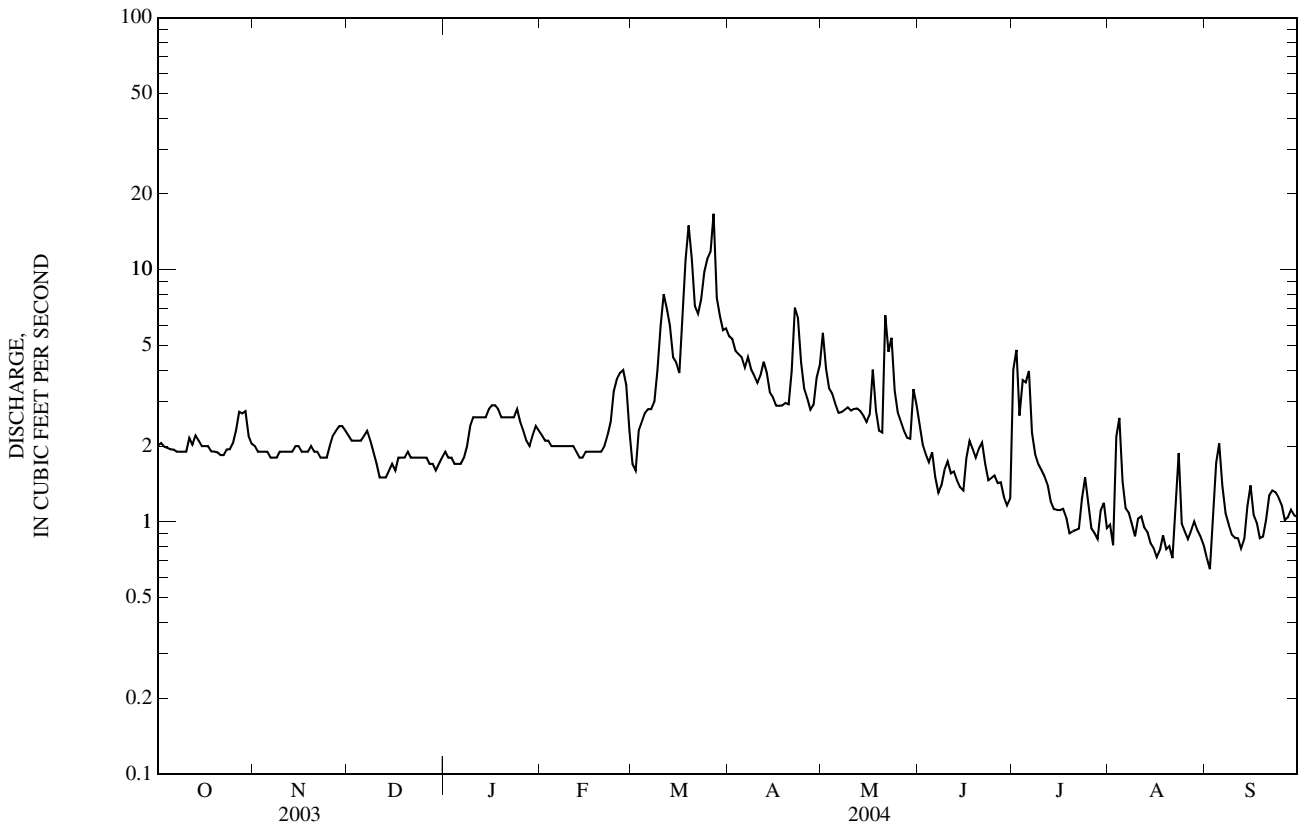
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 2004, BY WATER YEAR (WY)

MEAN	6.58	4.88	3.64	3.38	3.79	10.8	25.4	30.6	21.8	8.29	6.28	4.09
MAX	37.3	21.3	11.0	7.46	7.47	28.2	78.1	113	53.9	18.7	22.5	9.86
(WY)	(1999)	(1999)	(1999)	(1999)	(1999)	(1994)	(1997)	(1995)	(1995)	(1997)	(1998)	(1998)
MIN	1.05	0.98	1.05	0.77	0.90	1.84	3.99	3.18	1.64	1.37	1.05	1.09
(WY)	(1993)	(2003)	(2003)	(2003)	(1993)	(2002)	(2004)	(2004)	(2004)	(2002)	(2004)	(2004)

06424000 ELK CREEK NEAR ROUBAIX, SD—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1992 - 2004	
ANNUAL TOTAL	2,018.05		909.34		10.8	
ANNUAL MEAN	5.53		2.48		2.48	
HIGHEST ANNUAL MEAN					22.5	1997
LOWEST ANNUAL MEAN					2.48	2004
HIGHEST DAILY MEAN	60	Mar 14	17	Mar 27	500	May 8, 1995
LOWEST DAILY MEAN	0.30	Jan 22	0.65	Sep 2	0.30	Jan 22, 2003
ANNUAL SEVEN-DAY MINIMUM	0.44	Jan 20	0.78	Aug 15	0.44	Jan 20, 2003
MAXIMUM PEAK FLOW			^a 28	Mar 27	515	May 8, 1995
MAXIMUM PEAK STAGE			^b 7.72	Mar 9	12.32	May 8, 1995
ANNUAL RUNOFF (AC-FT)	4,000		1,800		7,830	
10 PERCENT EXCEEDS	15		4.2		27	
50 PERCENT EXCEEDS	2.2		2.0		4.8	
90 PERCENT EXCEEDS	1.1		0.98		1.5	

a Gage height, 7.02 ft.
 b Backwater from ice.
 e Estimated.



06425100 ELK CREEK NEAR RAPID CITY, SD

LOCATION.--Lat 44°14'25", long 103°09'03", in NE¹/₄ NE¹/₄ sec.9, T.3 N., R.8 E., Meade County, Hydrologic Unit 10120111, on section line near right upstream corner of county road bridge, 1.7 mi downstream from Morris Creek tributary, and 10 mi north of Exit 61 and I-90 northeast of Rapid City.

DRAINAGE AREA.--190 mi².

PERIOD OF RECORD.--November 1978 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 2,950 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Some flow is pumped from stream for irrigation. Satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.24	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.29	0.20	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.20	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.15	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.13	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.09	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.06	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.02	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.01	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.02	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.01	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.01	0.12	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	1.9	0.10	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	1.6	0.09	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	4.2	0.10	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	4.7	0.07	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	2.9	0.07	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	1.3	0.06	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.89	0.07	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.70	0.07	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.69	0.07	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.77	0.08	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.59	0.15	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.65	0.17	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.61	0.17	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	0.00	0.41	0.29	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	---	0.23	0.33	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	0.22	---	0.00	---	0.00	0.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	22.37	4.12	1.18	0.00	0.00	0.00	0.00
MEAN	0.00	0.00	0.00	0.00	0.00	0.72	0.14	0.04	0.00	0.00	0.00	0.00
MAX	0.00	0.00	0.00	0.00	0.00	4.7	0.33	0.24	0.00	0.00	0.00	0.00
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	0.00	0.00	0.00	44	8.2	2.3	0.00	0.00	0.00	0.00

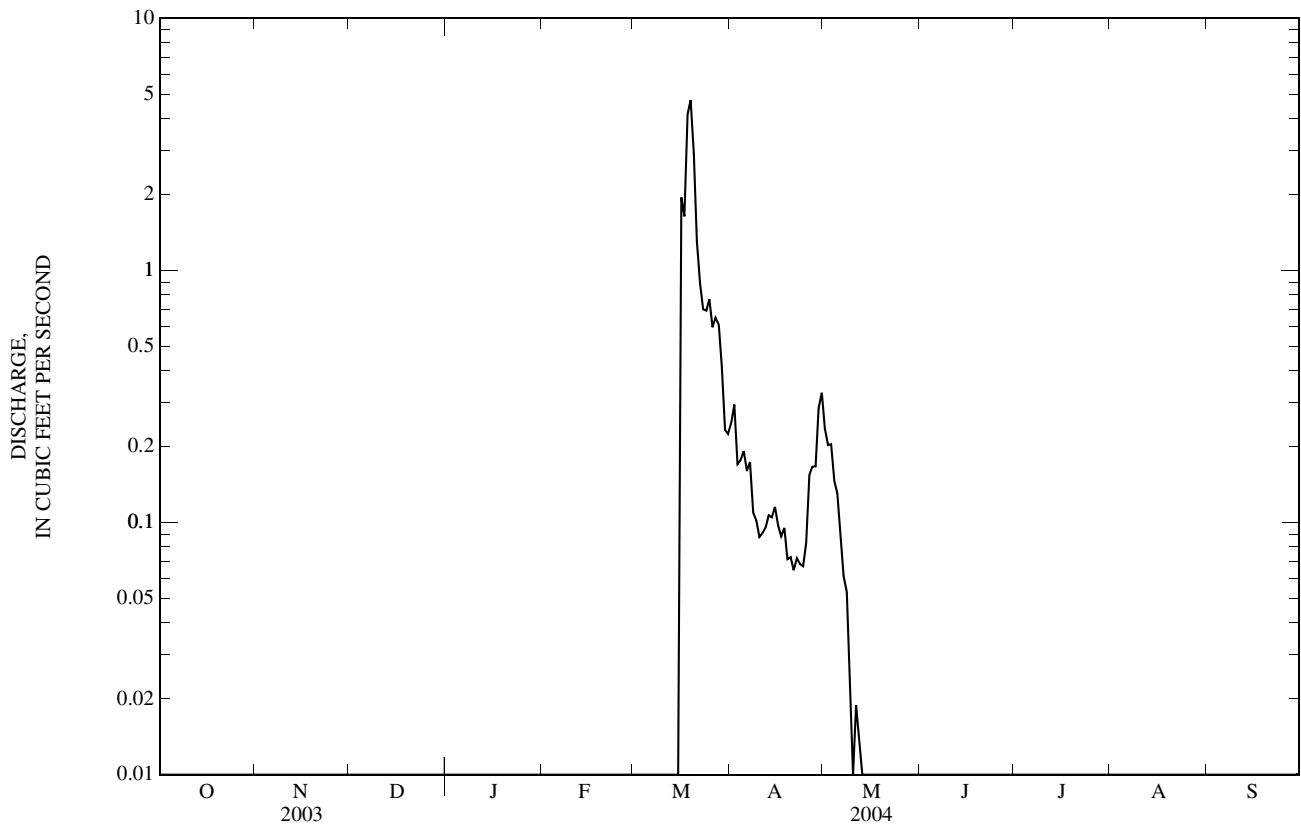
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 2004, BY WATER YEAR (WY)

MEAN	8.82	6.65	4.34	9.02	13.0	10.5	18.0	49.5	31.0	9.43	6.14	3.96
MAX	79.6	58.7	28.0	121	149	43.2	125	299	175	43.4	40.5	20.2
(WY)	(1999)	(1999)	(1999)	(1997)	(1997)	(1996)	(1997)	(1995)	(1996)	(1997)	(1997)	(1999)
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)	(1980)	(1981)	(1981)	(1981)	(1981)	(1981)	(1981)	(1981)	(1981)	(1988)	(1980)	(1980)

06425100 ELK CREEK NEAR RAPID CITY, SD—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR	FOR 2004 WATER YEAR	WATER YEARS 1980 - 2004	
ANNUAL TOTAL	771.38	27.67		
ANNUAL MEAN	2.11	0.08	14.2	
HIGHEST ANNUAL MEAN			77.1	1997
LOWEST ANNUAL MEAN			0.00	1992
HIGHEST DAILY MEAN	19 May 5	4.7 Mar 19	2,360	May 9, 1995
LOWEST DAILY MEAN	0.00 Jul 6	0.00 Oct 1	^a 0.00	Oct 1, 1979
ANNUAL SEVEN-DAY MINIMUM	0.00 Jul 6	0.00 Oct 1	0.00	Oct 1, 1979
MAXIMUM PEAK FLOW		10 Mar 18	3,120	May 27, 1996
MAXIMUM PEAK STAGE		^b 6.46 Mar 18	12.77	May 27, 1996
ANNUAL RUNOFF (AC-FT)	1,530	55	10,290	
10 PERCENT EXCEEDS	5.2	0.10	26	
50 PERCENT EXCEEDS	0.05	0.00	1.6	
90 PERCENT EXCEEDS	0.00	0.00	0.00	

a No flow for many days in most years.
 b Backwater from beaver dam.



CHEYENNE RIVER BASIN

06425500 ELK CREEK NEAR ELM SPRINGS, SD

LOCATION.--Lat 44°14'54", long 102°30'10", in SW¹/₄ NW¹/₄ sec.1, T.3 N., R.13 E., Meade County, Hydrologic Unit 10120111, on left bank near downstream end of county highway bridge, 1.4 mi downstream from Hay Draw, 5.0 mi southeast of Elm Springs, and 7.0 mi upstream from mouth.

DRAINAGE AREA.--540 mi², approximately.

PERIOD OF RECORD.--July 1949 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 2,304.49 ft above NGVD of 1929. Prior to Nov. 2, 1976, nonrecording gage, and prior to Feb. 1, 1967, at site 350 ft downstream at present datum.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, about 17 ft, at former site, in May 1920, from information by local residents.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.00	0.00	0.03	0.00
4	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.05
5	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.00	0.17	0.00	0.20
6	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.00	0.09	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.00	0.02	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.16	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.35	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.13	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.03	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.01	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.01	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.06	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.04	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.19	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.20	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.16	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.18	0.00	0.01	0.00
23	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	9.5	0.05	0.00	0.00	0.12
24	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	7.1	0.03	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35	0.06	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.14	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.03	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	17.06	1.83	0.28	0.04	0.37
MEAN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55	0.06	0.01	0.00	0.01
MAX	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.5	0.35	0.17	0.03	0.20
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
AC-FT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	34	3.6	0.6	0.08	0.7

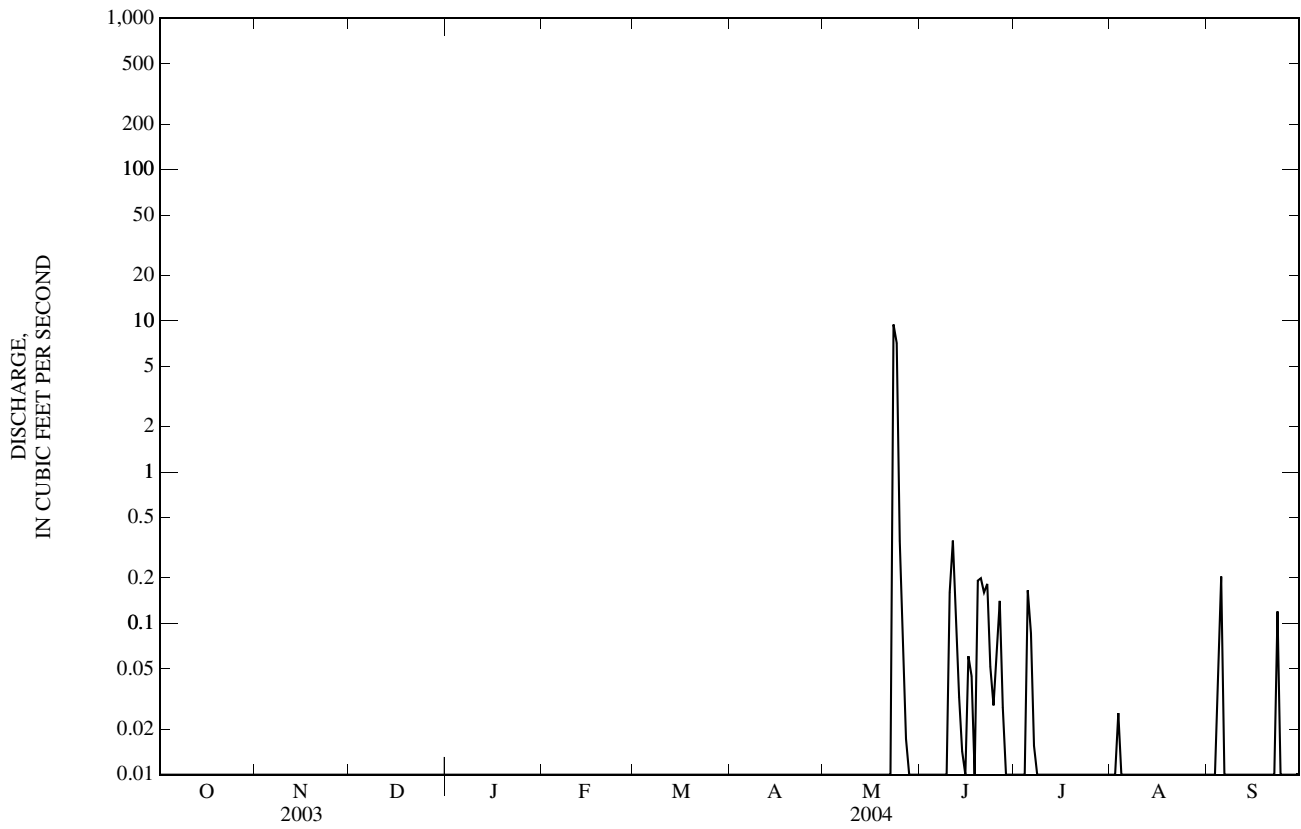
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 2004, BY WATER YEAR (WY)

MEAN	9.76	4.63	2.56	4.20	16.4	41.1	59.0	97.8	66.6	12.4	4.20	2.01
MAX	295	87.2	23.7	103	334	327	493	519	708	88.8	40.4	26.8
(WY)	(1999)	(1999)	(1999)	(1997)	(1997)	(1978)	(2000)	(1995)	(1967)	(1996)	(1997)	(1951)
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)	(1950)	(1950)	(1950)	(1950)	(1950)	(1957)	(1959)	(1955)	(1955)	(1950)	(1952)	(1950)

06425500 ELK CREEK NEAR ELM SPRINGS, SD—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1950 - 2004	
ANNUAL TOTAL	263.61		19.58		26.7	
ANNUAL MEAN	0.72		0.05		135	
HIGHEST ANNUAL MEAN					0.00	1997
LOWEST ANNUAL MEAN					5,010	1961
HIGHEST DAILY MEAN	41	Mar 19	9.5	May 23		May 28, 1996
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 1	^a 0.00	Oct 1, 1949
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 1	0.00	Oct 1, 1949
MAXIMUM PEAK FLOW			37	May 23	^b 8,540	Mar 29, 1952
MAXIMUM PEAK STAGE			^c 6.24	May 23	^d 16.22	Feb 18, 1997
ANNUAL RUNOFF (AC-FT)	523		39		19,360	
10 PERCENT EXCEEDS	1.9		0.00		37	
50 PERCENT EXCEEDS	0.00		0.00		0.01	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

- a No flow for long periods in most years.
- b Gage height, 10.61 ft, from floodmarks, site and datum then in use, from rating curve extended above 5,100 ft³/s.
- c Backwater from beaver dam.
- d Backwater from ice; from floodmark.
- e Estimated.



BELLE FOURCHE RIVER BASIN

06427000 KEYHOLE RESERVOIR NEAR MOORCROFT, WY

LOCATION.--Lat 44°22'55", long 104°46'45", in NW¹/₄NW¹/₄sec.27, T.51 N., R.66 W., Crook County, Hydrologic Unit 10120201, at reservoir dam on Belle Fourche River, 12 mi northeast of Moorcroft.

DRAINAGE AREA.--2,000 mi², approximately.

PERIOD OF RECORD.--March 1952 to current year (monthend contents only).

GAGE.--Water-stage recorder. Elevations listed to NGVD of 1929 (Bureau of Reclamation datum). Prior to May 15, 1958, and Oct. 1, 1968, to Mar. 13, 1970, nonrecording gages, and May 15, 1958, to Sept. 30, 1968, water-stage recorder, all at present site and datum.

REMARKS.--Reservoir is formed by a zoned earth-fill dam completed by the Bureau of Reclamation Oct. 25, 1952. Storage began Feb. 12, 1952. Inactive storage, between elevations 4,036.0 ft and 4,051.0 ft, 7,230 acre-ft. Total active conservation pool below elevation 4,099.3 ft (crest of spillway), 185,800 acre-ft. Dead storage below elevation 4,036.0 ft, 726 acre-ft. Figures given herein represent inactive and active contents above elevation 4,036.0 ft. The reservoir provides flood control and water for irrigation in Wyoming and near Belle Fourche, SD.

COOPERATION.--Records of elevation and contents provided by the Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 200,744 acre-ft, May 21, 1978, elevation, 4,100.38 ft; minimum daily contents (since appreciable storage was attained), 6,030 acre-ft, Mar. 8, 9, 1955, elevation, 4,046.35 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 114,300 acre-ft, Mar. 23, elevation, 4,089.06 ft; minimum, 93,700 acre-ft, Sept. 30, elevation, 4,085.38 ft.

MONTHEND ELEVATION AND CONTENTS AT 2400 HOURS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Elevation	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	4,088.45	110,600	--
Oct. 31	4,088.20	109,200	-1,400
Nov. 30	4,088.17	109,000	-200
Dec. 31	4,088.28	109,600	+600
CAL YR 2003	--	--	-5,300
Jan. 31	4,088.30	109,700	+100
Feb. 29	4,088.86	113,100	+3,400
Mar. 31	4,089.02	114,000	+900
Apr. 30	4,088.86	113,000	-1,000
May 31	4,088.40	110,300	-2,700
June 30	4,087.97	107,800	-2,500
July 31	4,087.38	104,500	-3,300
Aug. 31	4,086.09	97,400	-7,100
Sept. 30	4,085.38	93,700	3,700
WTR YR 2004	--	--	-16,900

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06428500 BELLE FOURCHE RIVER AT WYOMING-SOUTH DAKOTA STATE LINE

LOCATION.--Lat 44°44'59", long 104°02'49", in NE $\frac{1}{4}$ NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.18, T.9 N., R.1 E., Butte County, Hydrologic Unit 10120202, on left bank 0.3 mi downstream from State line, 3.7 mi downstream from Oak Creek, and 11 mi northwest of Belle Fourche, SD.

DRAINAGE AREA.--3,280 mi², approximately.

PERIOD OF RECORD.--December 1946 to current year. Records for water year 1947 incomplete, yearly estimate published in WSP 1729.

GAGE.--Water-stage recorder. Datum of gage is 3,095.7 ft above NGVD of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Diversions upstream from station for irrigation of about 5,400 acres. Flow regulated by Keyhole Dam, usable capacity, 191,600 acre-ft, 143 mi upstream since Oct. 25, 1952. Maximum discharge prior to regulation, 3,620 ft³/s, June 23, 1947, gage height, 12.51 ft; maximum gage height, 14.33 ft, Mar. 22, 1949, backwater from ice; no flow at times some years. Bureau of Reclamation satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	e15	e15	e12	e5.0	e48	28	14	16	5.7	57	93
2	19	e15	e15	e10	e5.0	e47	26	14	15	3.6	56	92
3	18	e14	e14	e6.5	e5.0	e45	25	14	14	3.6	58	95
4	16	e14	e14	e6.5	e5.0	e43	24	14	14	50	60	88
5	15	e14	e15	e7.0	e5.0	e43	24	15	11	132	68	63
6	14	e13	e15	e7.5	e5.0	e45	23	15	8.4	511	54	56
7	13	e14	e16	e8.0	e4.8	e48	22	14	7.5	169	47	53
8	13	e15	e16	e8.0	e4.8	e54	21	14	7.2	142	43	51
9	13	e15	e16	e8.0	e4.6	e250	20	13	5.5	108	40	49
10	13	e16	e16	e8.0	e4.6	115	19	13	5.3	67	39	48
11	12	e18	e15	e8.0	e4.5	65	19	12	9.5	49	39	47
12	13	e21	e15	e8.0	e4.3	59	19	11	9.4	36	39	47
13	13	e23	e15	e7.8	e4.3	51	18	13	9.0	26	31	47
14	12	e23	e15	e7.8	e4.5	44	18	12	8.8	21	24	52
15	13	e23	e14	e7.6	e4.5	50	18	11	8.2	18	25	76
16	14	e24	e14	e7.6	e4.8	49	17	10	7.4	13	21	59
17	13	24	e14	e7.5	e5.2	46	17	12	7.7	12	17	53
18	13	26	e14	e7.5	e9.5	43	16	11	8.5	14	12	42
19	13	24	e13	e7.5	e32	42	17	9.4	7.8	25	7.4	30
20	12	18	e13	e7.5	e28	39	17	10	7.8	26	5.4	24
21	12	19	e13	e7.5	e23	38	17	9.3	7.8	26	3.7	21
22	12	19	e13	e7.0	e23	37	18	41	8.5	25	4.4	18
23	13	14	e13	e7.0	e23	37	17	297	7.0	28	2.3	17
24	13	e14	e13	e6.3	e22	35	16	160	5.1	34	1.3	16
25	12	e15	e13	e6.0	e22	33	16	89	4.7	48	43	14
26	12	e16	e13	e5.5	e27	32	15	70	4.5	61	82	13
27	13	e16	e14	e5.2	e40	31	15	61	4.2	57	90	12
28	13	e16	e13	e5.0	e110	30	14	46	3.9	58	86	12
29	14	e16	e13	e5.0	e50	29	15	34	4.8	60	92	11
30	16	e15	e12	e5.0	---	29	14	29	3.7	62	93	11
31	16	---	e12	e5.0	---	29	---	19	---	58	93	---
TOTAL	424	529	436	222.8	490.4	1,586	565	1,106.7	242.2	1,948.9	1,333.5	1,310
MEAN	13.7	17.6	14.1	7.19	16.9	51.2	18.8	35.7	8.07	62.9	43.0	43.7
MAX	19	26	16	12	110	250	28	297	16	511	93	95
MIN	12	13	12	5.0	4.3	29	14	9.3	3.7	3.6	1.3	11
AC-FT	841	1,050	865	442	973	3,150	1,120	2,200	480	3,870	2,640	2,600

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 2004, BY WATER YEAR (WY)*

MEAN	28.3	27.6	17.6	20.7	43.1	154	159	212	178	95.4	72.4	34.6
MAX	134	277	51.5	247	459	931	823	1,104	812	303	271	109
(WY)	(1999)	(1999)	(1999)	(1997)	(1996)	(1972)	(1971)	(1978)	(1984)	(1981)	(1980)	(1955)
MIN	0.00	0.00	0.00	0.00	0.20	15.7	15.1	3.10	8.07	2.94	0.10	0.00
(WY)	(1955)	(1961)	(1961)	(1961)	(1959)	(1981)	(1992)	(1961)	(2004)	(1960)	(1961)	(1954)

06428500 BELLE FOURCHE RIVER AT WYOMING-SOUTH DAKOTA STATE LINE—Continued

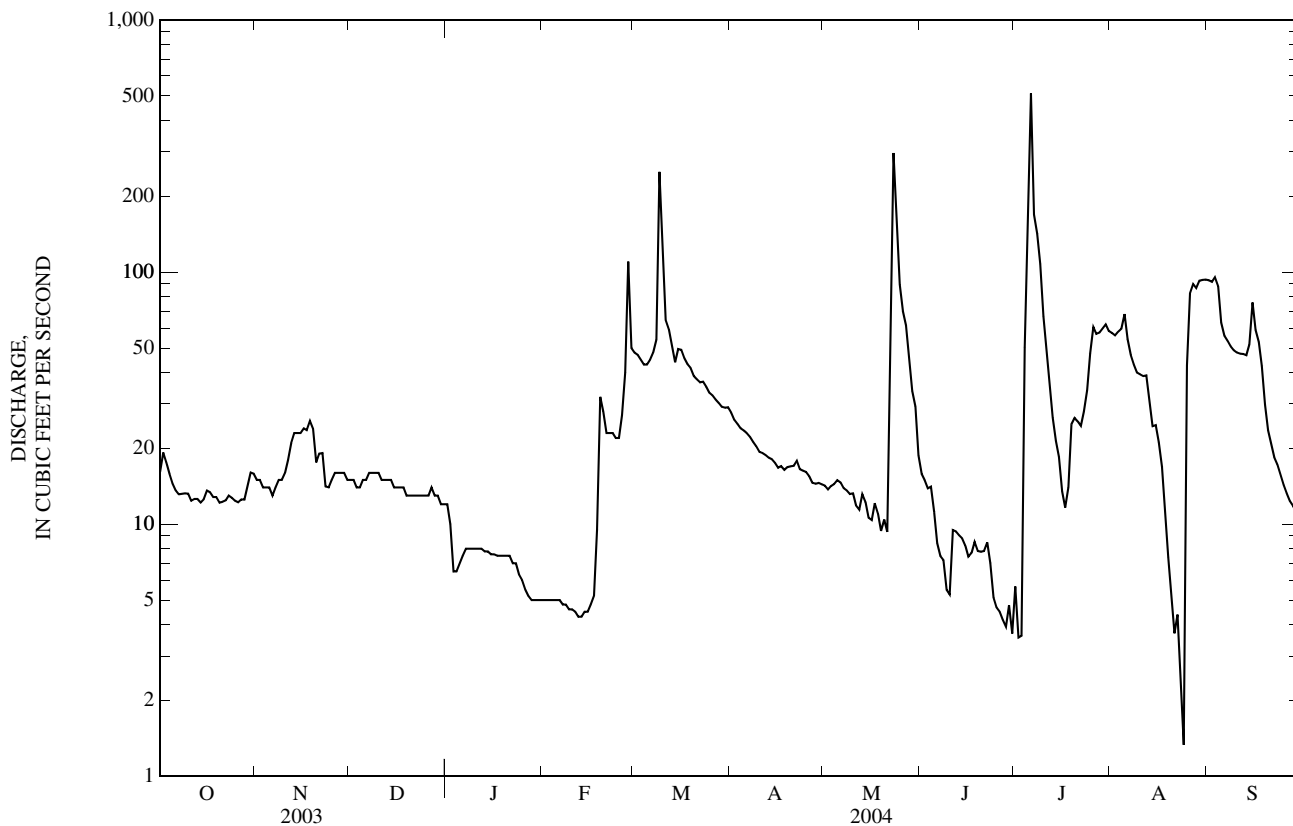
SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1954 - 2004*	
ANNUAL TOTAL	19,122.4		10,194.5		87.0	
ANNUAL MEAN	52.4		27.9		7.69	
HIGHEST ANNUAL MEAN					229	1978
LOWEST ANNUAL MEAN					7.69	1961
HIGHEST DAILY MEAN	842	Mar 17	511	Jul 6	4,760	May 9, 1995
LOWEST DAILY MEAN	7.0	Feb 25	1.3	Aug 24	^a 0.00	Jul 30, 1954
ANNUAL SEVEN-DAY MINIMUM	8.9	Feb 23	4.2	Jun 27	0.00	Jul 30, 1954
MAXIMUM PEAK FLOW			1,040	Jul 6	^b 6,320	May 10, 1995
MAXIMUM PEAK STAGE			9.17	Jul 6	16.33	May 10, 1995
ANNUAL RUNOFF (AC-FT)	37,930		20,220		63,020	
10 PERCENT EXCEEDS	99		58		192	
50 PERCENT EXCEEDS	26		15		35	
90 PERCENT EXCEEDS	12		5.4		5.5	

* Regulated period only (1954-2004). See REMARKS.

a No flow at times in some years.

b Based on slope-area measurement of peak flow.

c Estimated.



CHEYENNE RIVER BASIN

06429500 COLD SPRINGS CREEK AT BUCKHORN, WY

LOCATION.--Lat 44°09'15", long 104°04'37", in NW¹/₄ NW¹/₄ SW¹/₄ sec.9, T.48 N., R.60 W., Weston County, Hydrologic Unit 10120303, on right bank at downstream end of culvert at U.S. Highway 85 and 0.5 mi northeast of Buckhorn.

DRAINAGE AREA.--19.0 mi².

PERIOD OF RECORD.--October 1974 to September 1982, April 1991 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,050 ft above NGVD of 1929, from topographic map. October 1974 to September 1982, 200 ft upstream at different datum. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. No diversion upstream from station.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.7	e3.0	3.4	3.1	e3.0	e2.9	3.6	2.5	2.9	3.0	3.5	3.7
2	3.8	e3.2	3.3	3.0	e3.0	e2.9	3.7	2.3	2.8	3.0	3.5	3.7
3	3.7	3.3	3.3	e2.9	e3.0	3.0	3.7	2.2	2.7	3.0	3.5	3.7
4	3.7	3.2	e3.2	2.8	e3.0	e3.1	3.7	2.2	2.7	3.3	3.5	3.9
5	3.8	e3.1	e3.2	1.6	e3.0	3.1	3.7	2.1	2.7	3.2	3.5	3.9
6	3.6	e3.1	e3.3	1.6	e3.0	3.1	3.7	2.2	2.7	3.1	3.4	3.9
7	3.7	e3.1	3.4	2.1	e3.0	e3.2	3.7	2.2	2.7	3.0	3.5	3.9
8	3.7	e3.1	e3.4	e3.4	e3.0	3.3	3.6	2.2	2.8	3.0	3.5	3.9
9	3.6	e3.2	e3.3	e3.0	e3.0	3.5	3.4	2.1	2.8	3.0	3.5	3.9
10	3.6	e3.2	e3.4	2.9	e3.0	3.4	3.2	2.1	2.8	3.2	3.6	3.9
11	3.5	e3.2	e3.4	2.9	e3.0	e3.3	3.2	2.2	2.9	3.5	3.7	3.9
12	3.5	e3.2	e3.5	2.9	e3.0	e3.3	2.9	2.3	3.0	3.4	3.6	3.9
13	3.5	e3.3	e3.5	e2.9	e3.0	3.2	3.0	2.4	3.0	3.5	3.6	3.9
14	3.5	3.4	e3.5	e2.9	e3.0	e3.2	3.0	2.4	3.1	3.4	3.6	4.0
15	3.4	3.3	3.6	e2.9	e3.0	3.2	3.0	2.4	3.1	3.5	3.6	4.0
16	3.4	e3.2	e3.4	e2.9	e3.0	3.2	3.0	2.4	3.2	3.4	3.6	4.0
17	3.4	3.3	e2.8	e2.9	e3.0	3.2	2.9	2.4	3.2	3.4	3.7	4.1
18	3.5	e3.2	e3.0	e2.9	e3.1	3.4	3.0	2.4	3.2	3.4	3.7	4.1
19	3.5	e3.2	e3.2	e2.9	e3.1	3.9	2.8	2.4	3.2	3.4	3.7	4.2
20	3.5	3.2	e3.3	e2.9	e3.1	3.5	2.8	2.7	3.2	3.5	3.5	4.0
21	3.5	e2.3	3.3	e2.9	e3.1	3.3	2.8	2.7	3.1	3.4	3.5	4.1
22	3.5	e2.5	3.3	e2.9	e3.1	3.4	2.8	2.6	3.1	3.5	3.5	4.0
23	3.5	e2.5	e3.1	e2.9	e3.1	3.8	2.7	2.6	3.1	3.6	3.7	4.1
24	3.5	e2.3	e3.2	e2.9	e3.1	4.2	2.7	2.8	3.1	3.5	3.7	4.0
25	3.5	e2.7	3.3	e2.9	e3.1	4.3	2.7	2.8	3.1	3.5	3.7	4.0
26	3.3	e2.6	3.2	e2.9	3.1	5.8	2.6	2.8	3.1	3.5	3.7	4.0
27	3.4	e2.5	2.5	e2.9	3.0	4.6	2.5	2.8	3.0	3.5	3.7	4.1
28	3.3	e2.0	1.4	e2.9	3.0	3.6	2.6	2.8	3.0	3.5	3.7	4.1
29	3.4	e2.5	2.1	e3.0	2.9	3.5	2.6	2.9	3.0	3.6	3.7	4.2
30	3.1	e3.8	2.9	e3.0	---	3.5	2.6	3.0	3.0	3.5	3.7	4.2
31	2.8	---	2.8	e3.0	---	3.6	---	2.9	---	3.5	3.7	---
TOTAL	108.4	89.7	97.5	87.6	87.8	108.5	92.2	76.8	89.3	103.8	111.6	119.3
MEAN	3.50	2.99	3.15	2.83	3.03	3.50	3.07	2.48	2.98	3.35	3.60	3.98
MAX	3.8	3.8	3.6	3.4	3.1	5.8	3.7	3.0	3.2	3.6	3.7	4.2
MIN	2.8	2.0	1.4	1.6	2.9	2.9	2.5	2.1	2.7	3.0	3.4	3.7
AC-FT	215	178	193	174	174	215	183	152	177	206	221	237

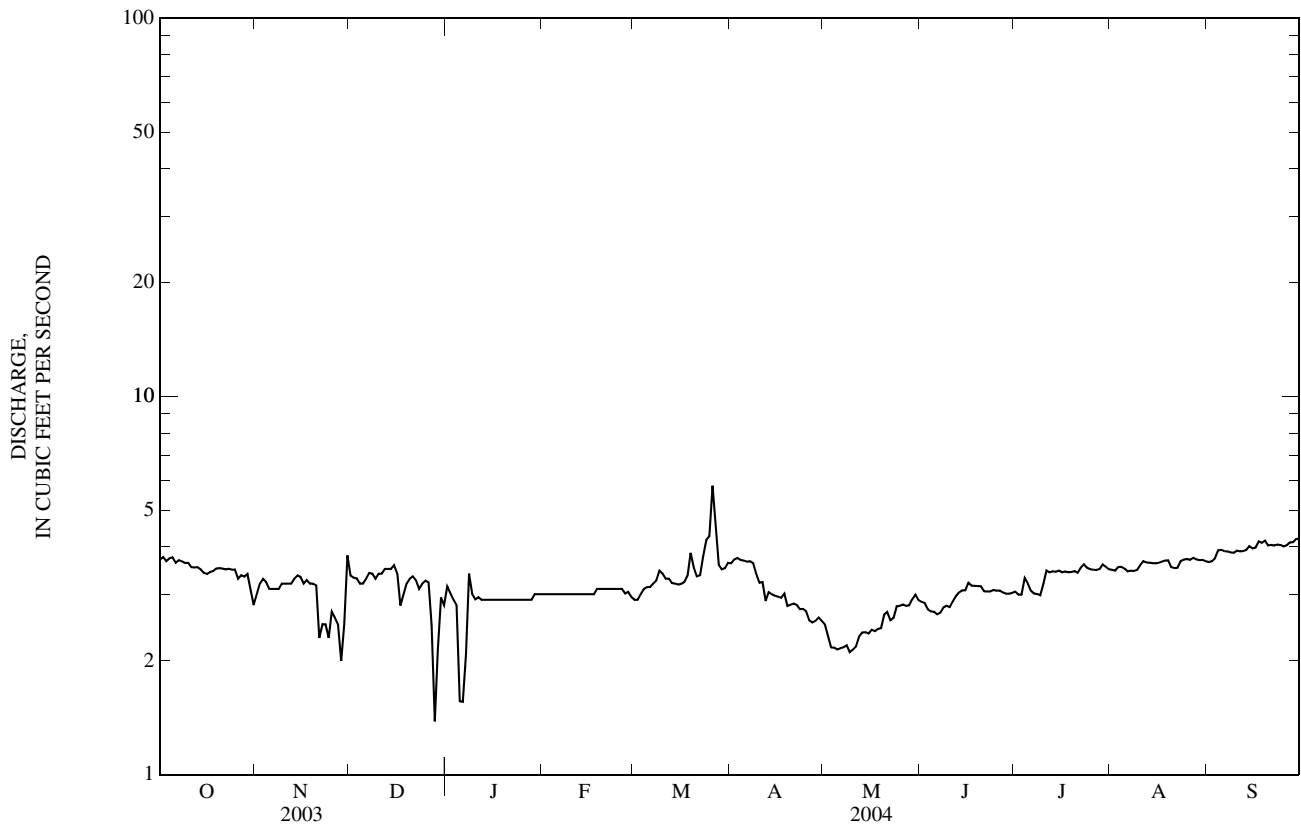
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 2004, BY WATER YEAR (WY)

MEAN	4.51	4.31	4.20	4.16	4.32	4.69	4.99	4.71	4.80	4.66	4.72	4.65
MAX	7.00	7.15	7.04	7.01	6.75	8.03	7.43	7.29	7.77	7.58	7.28	7.14
(WY)	(2000)	(2000)	(2000)	(2000)	(2000)	(1999)	(1999)	(1999)	(1999)	(1999)	(1999)	(1999)
MIN	2.53	2.09	2.06	2.50	2.61	2.91	3.07	2.48	2.98	2.62	2.71	2.92
(WY)	(1975)	(1993)	(1993)	(1994)	(1993)	(1993)	(1993)	(2004)	(2004)	(1995)	(1995)	(1994)

06429500 COLD SPRINGS CREEK AT BUCKHORN, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1975 - 2004	
ANNUAL TOTAL	1,392.9		1,172.5		--	
ANNUAL MEAN	3.82		3.20		4.58	
HIGHEST ANNUAL MEAN	--		--		7.06 1999	
LOWEST ANNUAL MEAN	--		--		2.92 1993	
HIGHEST DAILY MEAN	12	Apr 11	5.8	Mar 26	22	Mar 26, 1999
LOWEST DAILY MEAN	1.4	Dec 28	1.4	Dec 28	0.30	Dec 20, 1996
ANNUAL SEVEN-DAY MINIMUM	2.4	Nov 22	2.2	May 4	0.75	Dec 18, 1996
MAXIMUM PEAK FLOW	--		^a 10	Mar 26	^b 42	Mar 26, 1999
MAXIMUM PEAK STAGE	--		^c 4.37	Mar 2	^d 8.61	Jan 12, 1978
ANNUAL RUNOFF (AC-FT)	2,760		2,330		3,320	
10 PERCENT EXCEEDS	4.3		3.7		6.5	
50 PERCENT EXCEEDS	3.8		3.2		4.5	
90 PERCENT EXCEEDS	3.2		2.6		3.0	

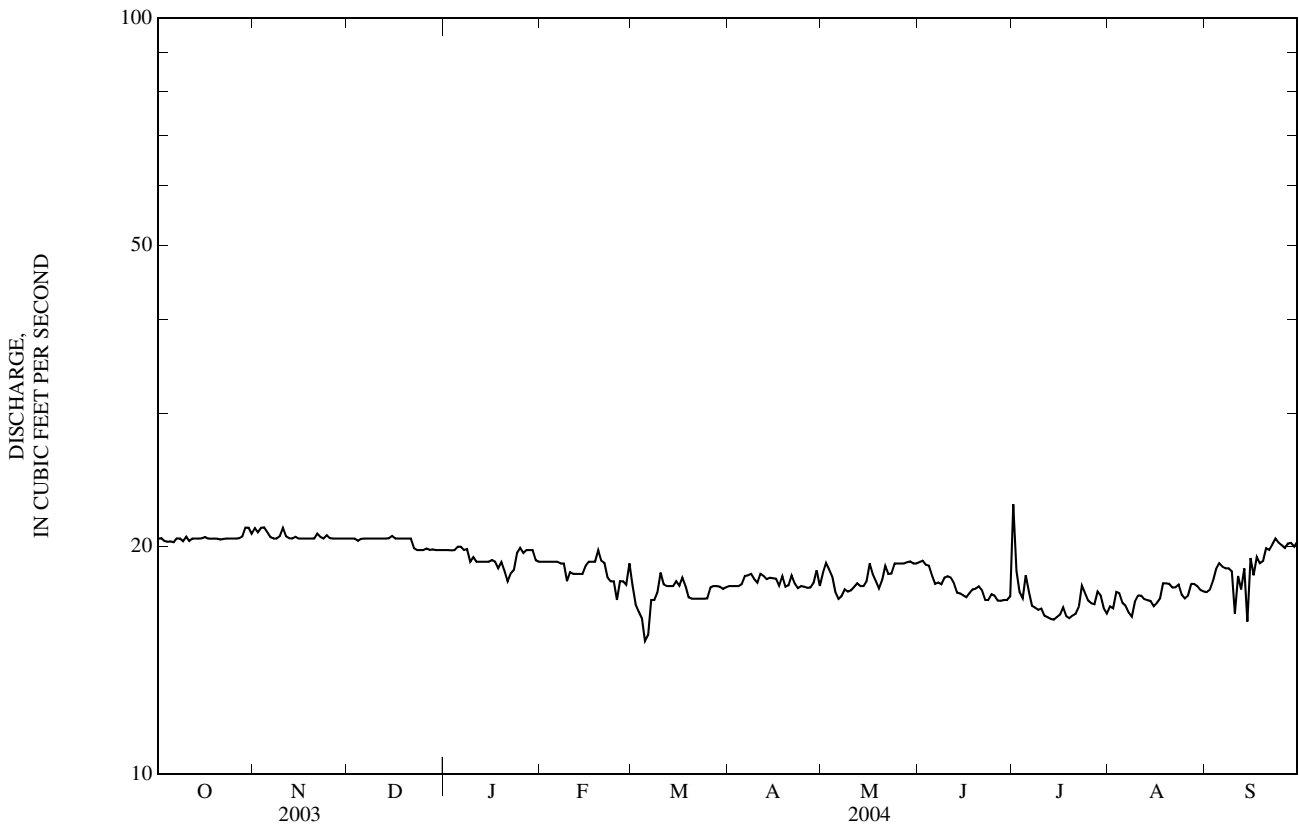
- a Gage height, 2.48 ft.
- b Gage height, 3.33 ft.
- c Backwater from ice.
- d Backwater from ice, site and datum then in use.
- e Estimated.



06429905 SAND CREEK NEAR RANCH A, NEAR BEULAH, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1977 - 2004	
ANNUAL TOTAL	7,799		6,810		--	
ANNUAL MEAN	21.4		18.6		23.0	
HIGHEST ANNUAL MEAN	--		--		30.5	1999
LOWEST ANNUAL MEAN	--		--		15.7	1992
HIGHEST DAILY MEAN	73	Mar 15	23	Jul 1	455	May 9, 1995
LOWEST DAILY MEAN	15	Apr 29	15	Mar 5,6	12	Mar 10, 1992
ANNUAL SEVEN-DAY MINIMUM	18	Apr 23	16	Mar 2	13	Mar 8, 1992
MAXIMUM PEAK FLOW	--		^a 24	Jul 1	1,230	May 8, 1995
MAXIMUM PEAK STAGE	--		^b 2.07	Jan 6	^c 3.80	May 8, 1995
ANNUAL RUNOFF (AC-FT)	15,470		13,510		16,670	
10 PERCENT EXCEEDS	24		20		30	
50 PERCENT EXCEEDS	21		18		22	
90 PERCENT EXCEEDS	20		17		16	

- a Gage height, 1.67 ft.
- b Backwater from ice.
- c From floodmarks, present site and datum
- e Estimated.



06429997 MURRAY DITCH ABOVE HEADGATE AT WYOMING-SOUTH DAKOTA STATE LINE

LOCATION.--Lat 44°34'35", long 104°03'20", in SW¹/₄ SW¹/₄ sec.7, T.7 N., R.1 E., Butte County, Hydrologic Unit 10120203, on right bank at State line and 12 mi southwest of Belle Fourche, SD.

PERIOD OF RECORD.--April 1987 to current year.

REVISED RECORDS.--WDR SD-96-1: September 1995 daily discharges, monthly, and water year statistics.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 3,440 ft above NGVD of 1929, from topographic map. Prior to Apr. 23, 1987, published as 06430000 (below diversion at site 15 ft downstream).

REMARKS.--No estimated daily discharges. Records fair. Ditch diverts water from left bank of Redwater Creek, 2.0 mi upstream, for irrigation of about 700 acres. Flow maintained during irrigation season and in some years for livestock watering. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.5	9.2	0.00	0.00	0.00	0.00	0.00	1.0	6.3	4.8	5.5	14
2	14	9.2	0.00	0.00	0.00	0.00	0.00	2.3	7.3	4.4	5.5	5.9
3	13	9.1	0.00	0.00	0.00	0.00	0.00	3.5	7.3	0.83	7.4	5.8
4	13	8.8	0.00	0.00	0.00	0.00	0.00	3.4	7.5	0.00	4.4	3.0
5	11	8.0	0.00	0.00	0.00	0.00	0.00	4.2	8.1	0.00	e4.6	2.2
6	9.8	8.0	0.00	0.00	0.00	0.00	0.00	13	2.6	0.00	4.6	2.2
7	9.0	8.0	0.00	0.00	0.00	0.00	0.00	8.4	2.7	0.00	4.6	3.6
8	10	8.0	0.00	0.00	0.00	0.00	0.00	3.5	2.9	0.00	4.6	3.6
9	11	7.0	0.00	0.00	0.00	0.00	0.00	3.6	3.0	0.00	4.6	3.7
10	11	0.34	0.00	0.00	0.00	0.00	0.00	4.3	5.0	0.00	3.8	3.7
11	9.4	0.00	0.00	0.00	0.00	0.00	0.00	7.5	6.7	0.53	3.7	3.7
12	9.2	0.00	0.00	0.00	0.00	0.00	0.00	2.5	8.1	24	3.7	3.8
13	9.0	0.00	0.00	0.00	0.00	0.00	0.00	2.5	11	26	3.7	3.9
14	9.0	0.00	0.00	0.00	0.00	0.00	0.00	2.8	9.7	21	3.7	4.2
15	9.4	0.00	0.00	0.00	0.00	0.00	2.8	3.7	10	13	3.7	4.2
16	10	0.00	0.00	0.00	0.00	0.00	5.6	5.1	12	12	8.1	4.2
17	11	0.00	0.00	0.00	0.00	0.00	10	5.7	12	e13	16	4.2
18	13	0.00	0.00	0.00	0.00	0.00	17	9.2	13	e14	16	4.0
19	11	0.00	0.00	0.00	0.00	0.00	5.5	12	13	14	18	4.4
20	8.6	0.00	0.00	0.00	0.00	0.00	5.7	4.3	12	15	17	4.4
21	8.9	0.00	0.00	0.00	0.00	0.00	9.4	6.4	12	14	17	4.4
22	8.7	0.00	0.00	0.00	0.00	0.00	5.4	7.3	12	14	19	4.4
23	9.0	0.00	0.00	0.00	0.00	0.00	4.4	8.4	13	14	21	4.3
24	9.0	0.00	0.00	0.00	0.00	0.00	1.9	5.0	13	15	16	4.5
25	9.2	0.00	0.00	0.00	0.00	0.00	2.7	2.1	13	12	16	4.5
26	9.1	0.00	0.00	0.00	0.00	0.00	15	1.2	13	8.0	17	4.5
27	9.0	0.00	0.00	0.00	0.00	0.00	17	1.4	9.4	4.4	19	4.6
28	9.2	0.00	0.00	0.00	0.00	0.00	11	1.9	9.3	4.5	13	4.6
29	9.2	0.00	0.00	0.00	0.00	0.00	2.1	3.0	9.4	4.7	14	4.5
30	9.2	0.00	0.00	0.00	---	0.00	1.2	6.0	8.0	5.4	14	4.7
31	9.2	---	0.00	0.00	---	0.00	---	6.5	---	5.5	14	---
TOTAL	309.6	75.64	0.00	0.00	0.00	0.00	116.70	151.7	272.3	264.06	323.2	133.7
MEAN	9.99	2.52	0.00	0.00	0.00	0.00	3.89	4.89	9.08	8.52	10.4	4.46
MAX	14	9.2	0.00	0.00	0.00	0.00	17	13	13	26	21	14
MIN	8.5	0.00	0.00	0.00	0.00	0.00	0.00	1.0	2.6	0.00	3.7	2.2
AC-FT	614	150	0.00	0.00	0.00	0.00	231	301	540	524	641	265

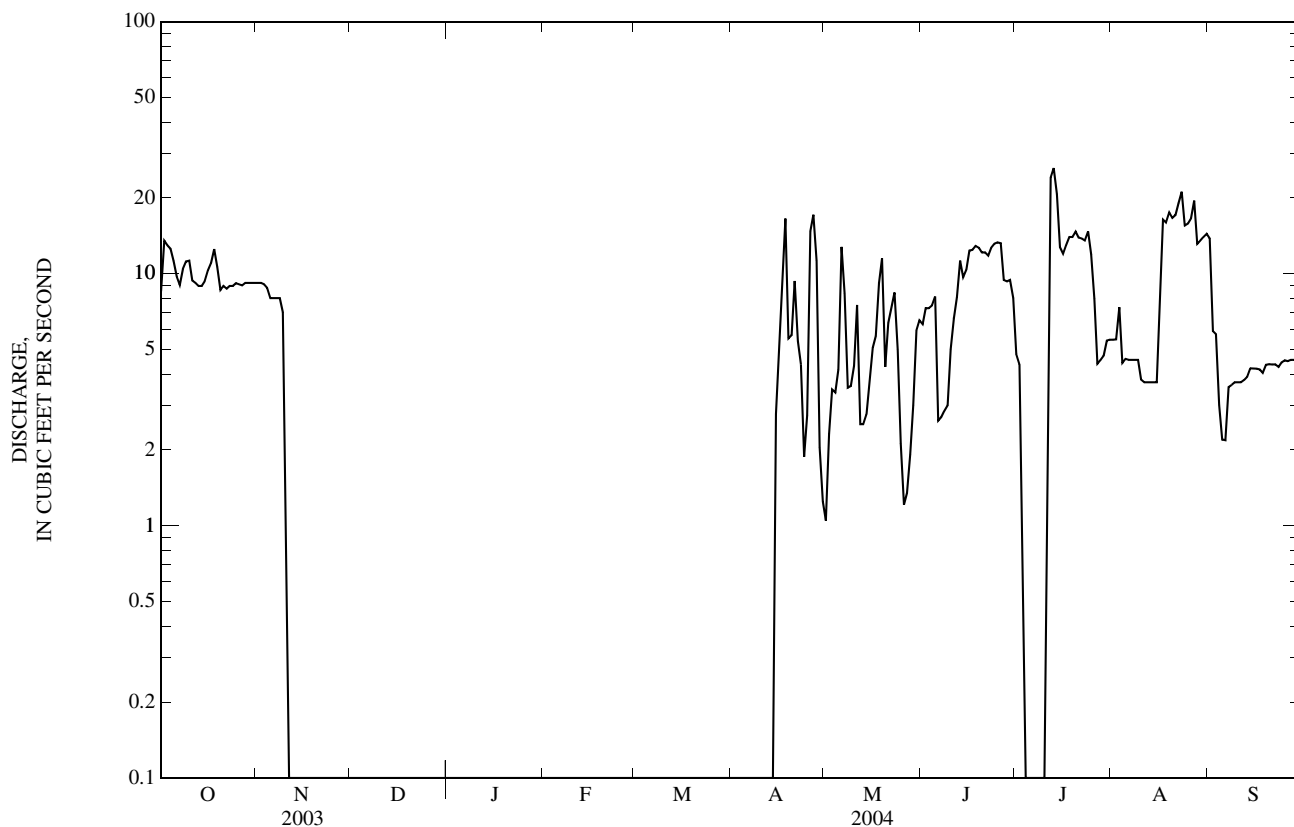
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 2004, BY WATER YEAR (WY)

MEAN	6.10	0.40	0.00	0.00	0.00	0.00	0.24	2.12	5.55	9.94	8.81	7.91
MAX	20.6	2.52	0.00	0.00	0.00	0.00	3.89	6.30	13.9	16.4	18.2	18.8
(WY)	(1991)	(2004)	(1988)	(1988)	(1988)	(1988)	(2004)	(1992)	(1988)	(1991)	(1991)	(1994)
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.84	2.24	0.80
(WY)	(1988)	(1988)	(1988)	(1988)	(1988)	(1988)	(1988)	(1990)	(1991)	(1993)	(1998)	(1993)

06429997 MURRAY DITCH ABOVE HEADGATE AT WYOMING-SOUTH DAKOTA STATE LINE—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1988 - 2004	
ANNUAL TOTAL	1,776.87		1,646.90			
ANNUAL MEAN	4.87		4.50		3.45	
HIGHEST ANNUAL MEAN					5.32	1994
LOWEST ANNUAL MEAN					0.92	1993
HIGHEST DAILY MEAN	30	Jul 12	26	Jul 13	46	Oct 8, 1990
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Nov 11	^a 0.00	Oct 1, 1987
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Nov 11	0.00	Oct 1, 1987
ANNUAL RUNOFF (AC-FT)	3,520		3,270		2,500	
10 PERCENT EXCEEDS	13		13		12	
50 PERCENT EXCEEDS	0.00		2.8		0.00	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

a No flow for many days in each year.
 e Estimated.



06430500 REDWATER CREEK AT WYOMING-SOUTH DAKOTA STATE LINE

LOCATION.--Lat 44°34'19", long 104°03'13" (revised), in NW¹/₄ NW¹/₄ sec.18 T.7 N., R.1 E., Butte County, Hydrologic Unit 10120203, on left bank 800 ft downstream from State line, 5.7 mi upstream from Crow Creek, and 12 mi southwest of Belle Fourche, SD.

DRAINAGE AREA.--471 mi².

PERIOD OF RECORD.--April 1929 to September 1931 and February 1936 to July 1937 (published as "near Beulah, WY"), June 1954 to current year.

REVISED RECORDS.--WSP 1309: 1931(M), 1936-37(M).

GAGE.--Water-stage recorder. Elevation of gage is 3,410 ft above NGVD of 1929, from topographic map. Apr. 25, 1929, to Sept. 30, 1931, and Feb. 28, 1936, to July 31, 1937, nonrecording gage at site 2 mi upstream at different datum.

REMARKS.--Records good. Large diversions for irrigation upstream from station. Total flow passing State line may be obtained by adding flow of Murray ditch (see station 06429997). Satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	28	30	30	30	29	32	29	17	19	25	5.5
2	19	28	31	30	30	27	33	25	17	20	24	8.1
3	21	28	31	29	29	28	34	20	16	28	29	8.8
4	21	29	30	e27	30	28	34	19	16	27	22	14
5	21	32	30	e26	30	28	33	16	16	28	22	15
6	21	31	31	e24	29	28	30	8.9	17	28	22	16
7	20	31	30	e25	e28	27	30	8.6	17	26	22	14
8	13	31	31	e26	29	28	31	16	17	26	22	14
9	13	31	30	29	29	28	31	17	17	25	22	13
10	13	32	30	29	29	28	31	17	18	25	24	13
11	14	32	30	29	29	27	32	18	17	24	24	14
12	15	31	30	29	e27	28	32	20	17	9.8	24	13
13	15	30	30	28	29	28	32	19	17	9.4	23	14
14	15	31	30	28	29	28	32	19	23	10	22	17
15	16	30	30	28	28	28	23	20	24	10	22	16
16	16	30	30	28	28	27	16	21	20	11	18	17
17	15	30	29	29	30	28	14	21	21	10	8.9	16
18	15	30	30	29	29	28	9.5	17	21	12	8.8	18
19	20	30	30	29	30	28	13	14	21	12	8.7	19
20	27	30	30	29	29	27	13	14	20	13	8.6	19
21	25	31	30	29	28	28	13	15	19	12	8.7	19
22	25	31	30	29	27	28	14	17	17	13	7.9	20
23	25	30	30	29	27	28	16	17	16	13	5.1	20
24	26	31	30	29	28	28	23	20	14	13	3.9	19
25	26	31	30	30	28	28	22	17	14	14	3.7	19
26	26	31	30	e28	28	30	13	17	14	18	3.3	19
27	26	30	30	e24	28	30	12	17	17	25	3.3	19
28	27	30	30	e22	28	30	16	18	16	25	5.5	19
29	28	31	29	e27	30	30	27	18	16	24	6.3	19
30	28	31	30	30	---	31	29	18	16	26	5.8	19
31	28	---	29	30	---	31	---	17	---	25	5.3	---
TOTAL	638	912	931	868	833	878	720.5	550.5	528	581.2	460.8	476.4
MEAN	20.6	30.4	30.0	28.0	28.7	28.3	24.0	17.8	17.6	18.7	14.9	15.9
MAX	28	32	31	30	30	31	34	29	24	28	29	20
MIN	13	28	29	22	27	27	9.5	8.6	14	9.4	3.3	5.5
AC-FT	1,270	1,810	1,850	1,720	1,650	1,740	1,430	1,090	1,050	1,150	914	945

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1955 - 2004, BY WATER YEAR (WY)*

MEAN	28.8	33.1	32.8	32.1	33.2	34.9	37.7	52.3	45.2	23.5	23.1	25.4
MAX	45.0	47.9	48.0	48.5	57.8	66.0	65.4	168	128	54.9	58.9	50.4
(WY)	(1973)	(1974)	(1999)	(1999)	(1971)	(1996)	(1999)	(1995)	(1976)	(1976)	(1973)	(1973)
MIN	14.2	20.8	21.5	20.7	21.2	22.1	18.8	7.44	6.29	7.62	6.78	11.8
(WY)	(1991)	(1961)	(1993)	(1993)	(1993)	(1962)	(1981)	(1985)	(1961)	(1990)	(1985)	(1985)

06430500 REDWATER CREEK AT WYOMING-SOUTH DAKOTA STATE LINE—Continued

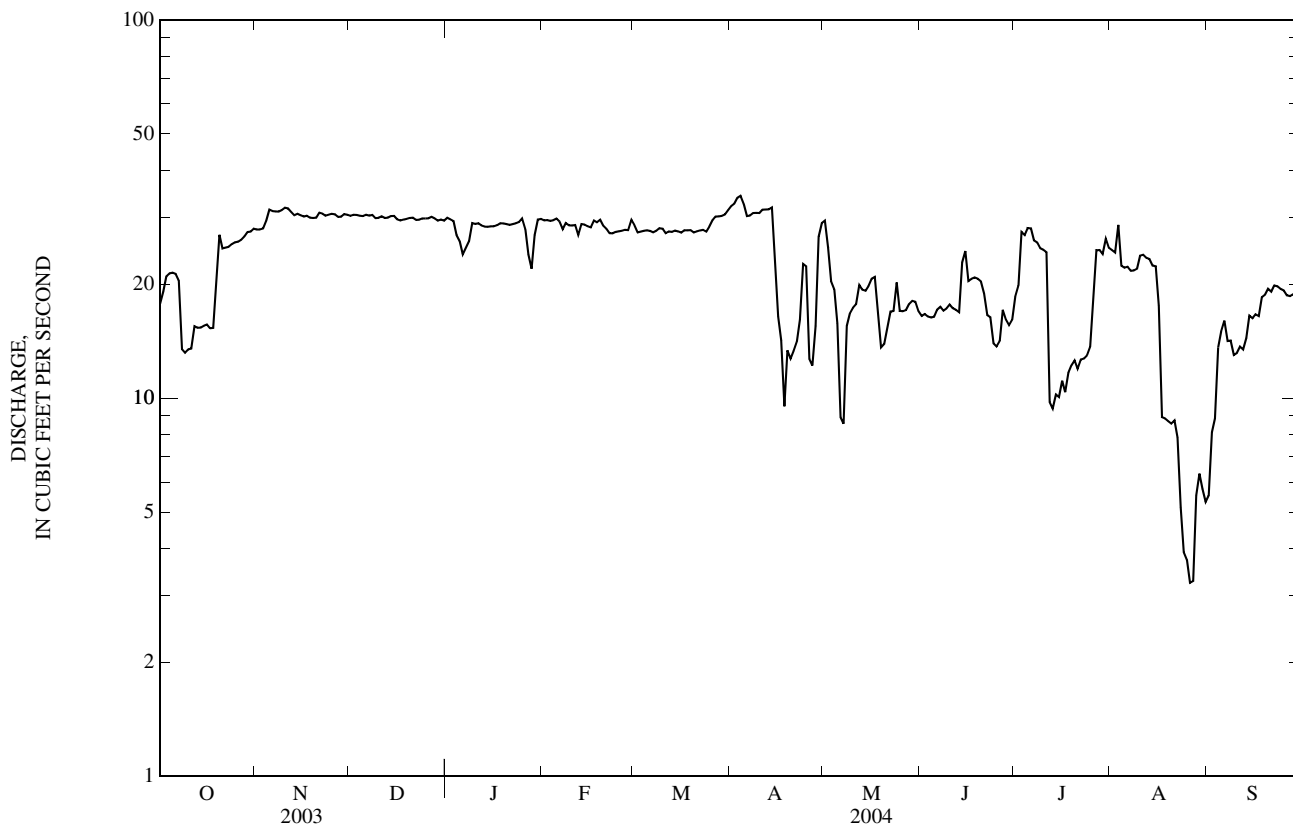
SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1955 - 2004*	
ANNUAL TOTAL	10,158.0		8,377.4			
ANNUAL MEAN	27.8		22.9		33.5	
HIGHEST ANNUAL MEAN					56.0	1973
LOWEST ANNUAL MEAN					17.9	1961
HIGHEST DAILY MEAN	128	Mar 15	34	Apr 3	1,330	May 9, 1995
LOWEST DAILY MEAN	6.5	Aug 16	3.3	Aug 26, 27	^a 1.3	May 22, 1985
ANNUAL SEVEN-DAY MINIMUM	8.1	Aug 12	4.4	Aug 23	1.9	May 21, 1985
MAXIMUM PEAK FLOW			113	Aug 3	^b 2,440	Aug 22, 1973
MAXIMUM PEAK STAGE			4.15	Aug 3	12.19	Aug 22, 1973
ANNUAL RUNOFF (AC-FT)	20,150		16,620		24,260	
10 PERCENT EXCEEDS	36		30		47	
50 PERCENT EXCEEDS	30		25		31	
90 PERCENT EXCEEDS	13		13		16	

* Period using present site and datum only. See GAGE.

a No flow Aug. 13-15, 1929, during partial year.

b From rating curve extended above 1,000 ft³/s on basis of slope-area measurement.

c Estimated.



BELLE FOURCHE RIVER BASIN

06430532 CROW CREEK NEAR BEULAH, WY

LOCATION.--Lat 44°34'14", long 104°00'19", in NW $\frac{1}{4}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.16, T.7 N., R.1 E., Lawrence County, Hydrologic Unit 10120203, on left bank 1,500 ft upstream from confluence with Redwater River, 0.8 mi north of McNenny Fish Hatchery, and approximately 4.4 mi east of Beulah.

DRAINAGE AREA.--40.8 mi².

PERIOD OF RECORD.--April 1992 to current year.

REVISED RECORDS.--WDR SD-97-1: 1996.

GAGE.--Water-stage recorder. Elevation of gage is 3,360 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

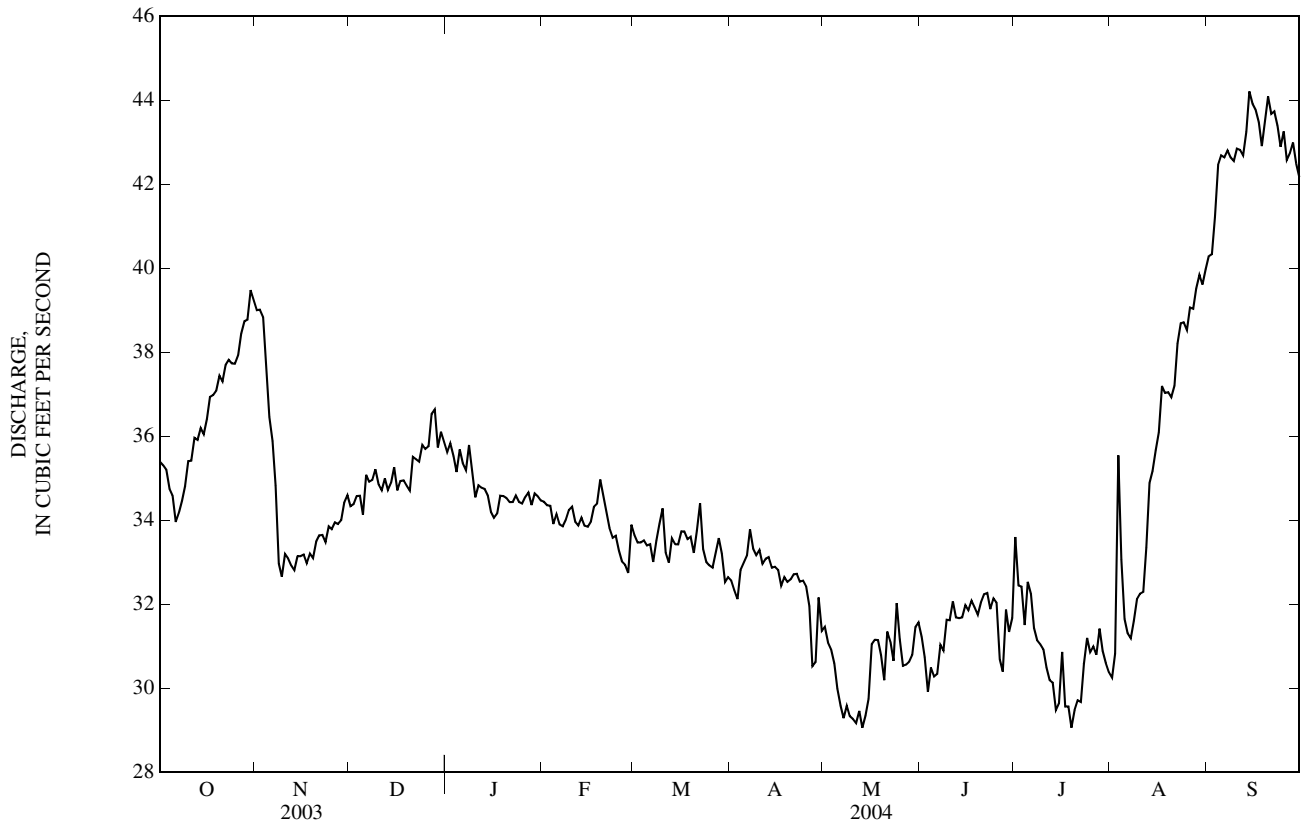
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	39	34	36	34	34	33	31	31	34	30	40
2	35	39	34	36	34	33	32	31	31	32	31	40
3	35	39	35	36	34	33	32	31	30	32	36	41
4	35	38	35	35	34	34	33	31	30	32	33	42
5	35	36	34	36	34	33	33	30	30	33	32	43
6	34	36	35	35	34	33	33	30	30	32	31	43
7	34	35	35	35	34	33	34	29	31	31	31	43
8	34	33	35	36	34	34	33	30	31	31	32	43
9	35	33	35	35	34	34	33	29	32	31	32	43
10	35	33	35	35	34	34	33	29	32	31	32	43
11	35	33	35	35	34	33	33	29	32	30	32	43
12	36	33	35	35	34	33	33	29	32	30	33	43
13	36	33	35	35	34	34	33	29	32	30	35	43
14	36	33	35	35	34	33	33	29	32	29	35	44
15	36	33	35	34	34	33	33	30	32	30	36	44
16	36	33	35	34	34	34	33	31	32	31	36	44
17	37	33	35	34	34	34	32	31	32	30	37	43
18	37	33	35	35	34	34	33	31	32	30	37	43
19	37	33	35	35	35	34	33	31	32	29	37	43
20	37	33	35	35	35	33	33	30	32	29	37	44
21	37	34	36	34	34	34	33	31	32	30	37	44
22	38	34	35	34	34	34	33	31	32	30	38	44
23	38	33	35	35	34	33	33	31	32	31	39	43
24	38	34	36	34	34	33	33	32	32	31	39	43
25	38	34	36	34	33	33	32	31	32	31	39	43
26	38	34	36	35	33	33	32	31	31	31	39	43
27	38	34	37	35	33	33	31	31	30	31	39	43
28	39	34	37	34	33	34	31	31	32	31	40	43
29	39	34	36	35	34	33	32	31	31	31	40	42
30	39	35	36	35	---	33	31	31	32	31	40	42
31	39	---	36	34	---	33	---	32	---	30	40	---
TOTAL	1,131	1,031	1,093	1,081	984	1,036	979	944	944	955	1,105	1,285
MEAN	36.5	34.4	35.3	34.9	33.9	33.4	32.6	30.5	31.5	30.8	35.6	42.8
MAX	39	39	37	36	35	34	34	32	32	34	40	44
MIN	34	33	34	34	33	33	31	29	30	29	30	40
AC-FT	2,240	2,040	2,170	2,140	1,950	2,050	1,940	1,870	1,870	1,890	2,190	2,550

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 2004, BY WATER YEAR (WY)

	37.6	37.0	36.1	36.3	35.9	37.4	44.4	48.8	40.3	34.8	35.8	38.0
MEAN	50.0	46.7	48.3	44.8	41.7	42.7	60.3	118	54.9	43.3	41.8	42.8
(WY)	(1999)	(1999)	(1996)	(1996)	(1996)	(1996)	(1994)	(1995)	(1993)	(1999)	(1999)	(2004)
MIN	31.8	30.7	31.9	31.2	33.0	33.4	32.6	30.2	30.8	30.8	30.3	33.6
(WY)	(2000)	(2000)	(1995)	(1995)	(2000)	(2004)	(2004)	(1992)	(2002)	(2004)	(2003)	(2002)

06430532 CROW CREEK NEAR BEULAH, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR	FOR 2004 WATER YEAR	WATER YEARS 1992 - 2004	
ANNUAL TOTAL	12,618	12,568	--	
ANNUAL MEAN	34.6	34.3	38.8	
HIGHEST ANNUAL MEAN	--	--	44.7	1999
LOWEST ANNUAL MEAN	--	--	33.4	2002
HIGHEST DAILY MEAN	48 Jun 8	44 Several days	502	May 9, 1995
LOWEST DAILY MEAN	28 Aug 5,7	29 Several days	21	Jul 1, 1998
ANNUAL SEVEN-DAY MINIMUM	29 Aug 2	29 May 7	22	Jun 28, 1998
MAXIMUM PEAK FLOW	--	58 Aug 3	530	May 9, 1995
MAXIMUM PEAK STAGE	--	4.54 Aug 3	10.17	May 9, 1995
ANNUAL RUNOFF (AC-FT)	25,030	24,930	28,080	
10 PERCENT EXCEEDS	37	39	46	
50 PERCENT EXCEEDS	35	34	36	
90 PERCENT EXCEEDS	31	31	32	



06430770 SPEARFISH CREEK NEAR LEAD, SD

LOCATION.--Lat 44°17'57", long 103°52'06" (revised), in NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.22, T.4 N., R.2 E., Lawrence County, Hydrologic Unit 10120203, on right bank 0.5 mi below confluence of East Spearfish Creek, in the vicinity of Cheyenne Crossing, approximately 5 mi southwest of Lead.

DRAINAGE AREA.--63.5 mi².

PERIOD OF RECORD.--October 1988 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 5,310 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good. Occasional minor upstream diversions by Lead-Deadwood Sanitary District out of drainage basin into Whitewood Creek Basin. Upstream diversions by Homestake Mining Company discontinued March 2003. Satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, 673 ft³/s, May 14, 1965, from contracted-opening measurement of peak flow 2.0 mi downstream.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	26	25	28	27	25	30	28	29	31	22	23
2	26	26	26	27	25	25	31	25	29	31	22	24
3	26	26	26	27	26	25	30	24	29	32	24	25
4	26	26	26	25	27	25	30	24	28	34	24	25
5	26	25	25	23	27	24	30	25	30	34	23	25
6	27	25	26	24	26	25	30	26	29	32	23	25
7	26	25	26	29	25	25	30	26	28	31	24	25
8	27	25	27	30	27	26	30	26	28	30	24	24
9	26	25	27	28	27	26	29	26	27	29	23	24
10	27	25	27	28	27	26	29	26	29	29	23	24
11	27	25	28	27	26	26	29	26	29	26	23	24
12	26	25	26	27	e24	26	28	27	29	25	23	24
13	27	25	28	27	27	26	27	26	29	24	23	24
14	26	25	28	27	27	25	27	26	29	24	23	24
15	26	25	28	27	26	25	27	25	29	24	23	24
16	26	25	28	27	26	25	27	28	29	24	23	24
17	25	25	28	27	26	26	26	27	29	24	24	24
18	25	25	28	27	26	27	27	26	29	23	24	23
19	25	25	28	27	26	28	26	26	29	23	24	24
20	24	25	28	27	25	28	27	27	30	23	24	24
21	24	25	28	27	26	27	27	31	30	23	24	24
22	25	25	28	27	25	27	27	30	30	23	24	24
23	25	25	27	27	26	27	27	30	29	24	24	24
24	25	27	27	27	26	28	26	30	30	24	24	24
25	25	27	27	27	26	29	26	31	30	23	24	24
26	26	26	27	24	26	31	25	33	29	23	24	24
27	26	26	28	27	26	31	26	29	30	23	24	24
28	26	25	27	28	26	29	27	28	30	23	24	23
29	26	26	26	28	26	28	30	29	29	23	24	23
30	26	26	27	28	---	29	29	30	29	23	24	22
31	26	---	27	27	---	30	---	30	---	22	24	---
TOTAL	801	762	838	836	756	830	840	851	873	807	730	719
MEAN	25.8	25.4	27.0	27.0	26.1	26.8	28.0	27.5	29.1	26.0	23.5	24.0
MAX	27	27	28	30	27	31	31	33	30	34	24	25
MIN	24	25	25	23	24	24	25	24	27	22	22	22
AC-FT	1,590	1,510	1,660	1,660	1,500	1,650	1,670	1,690	1,730	1,600	1,450	1,430

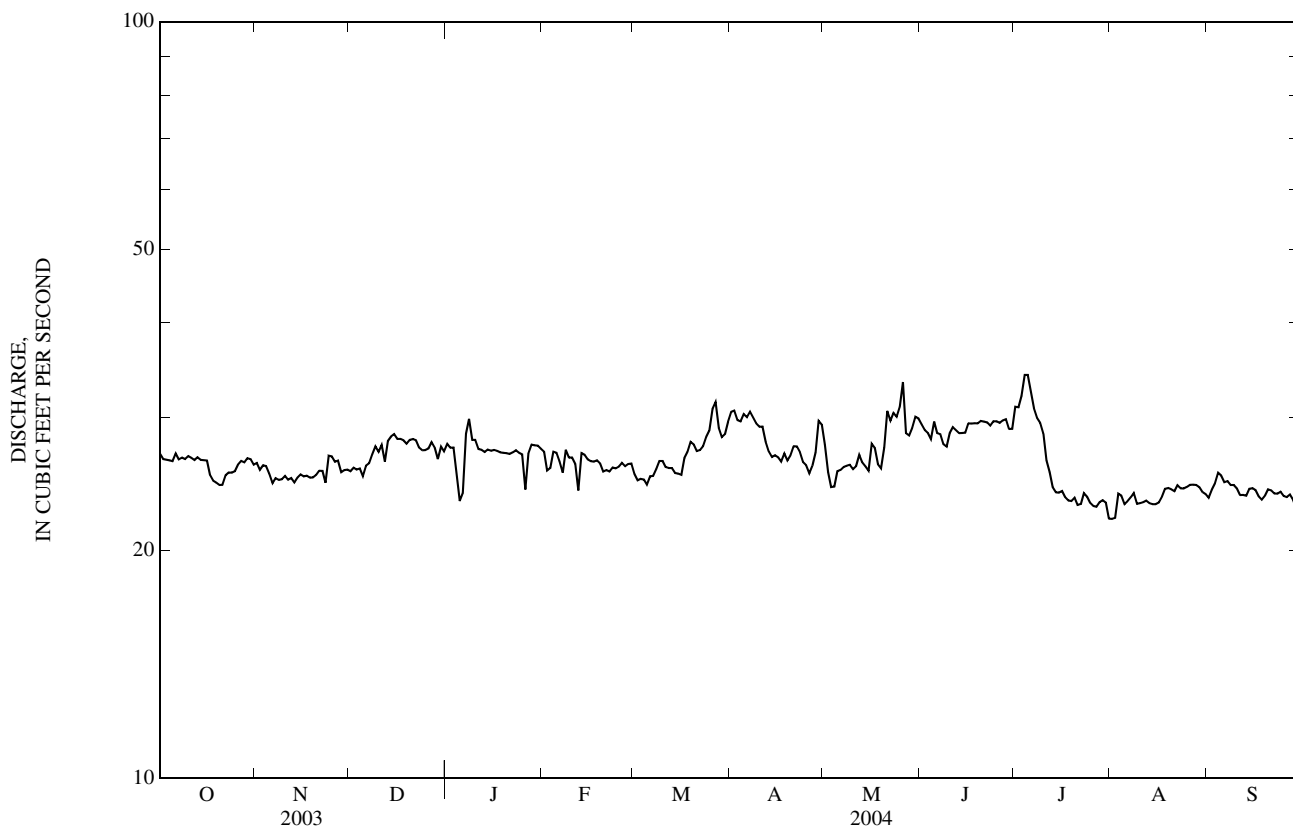
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 2004, BY WATER YEAR (WY)

MEAN	27.2	27.1	25.4	25.0	25.1	26.4	31.5	38.3	35.4	31.2	29.7	28.3
MAX	49.4	45.5	46.0	43.3	44.1	45.0	50.4	67.4	60.8	52.2	59.3	51.5
(WY)	(1999)	(2000)	(2000)	(2000)	(1999)	(1999)	(1999)	(1997)	(1999)	(1998)	(1998)	(1998)
MIN	13.0	13.3	11.9	12.2	11.4	12.1	15.0	16.5	16.1	12.5	10.3	11.1
(WY)	(1991)	(1991)	(1991)	(1990)	(1990)	(1990)	(1989)	(1992)	(1990)	(1990)	(1990)	(1990)

06430770 SPEARFISH CREEK NEAR LEAD, SD—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1989 - 2004	
ANNUAL TOTAL	10,522		9,643		29.2	
ANNUAL MEAN	28.8		26.3		48.1 1999	
HIGHEST ANNUAL MEAN					14.2 1990	
LOWEST ANNUAL MEAN					108 May 10, 1995	
HIGHEST DAILY MEAN	40	Jun 14	34	Jul 4	7.5 Dec 22, 1990	
LOWEST DAILY MEAN	19	Feb 24	22	Jul 31	9.5 Aug 24, 1990	
ANNUAL SEVEN-DAY MINIMUM	24	Mar 5	23	Jul 27	181 Aug 20, 1998	
MAXIMUM PEAK FLOW			^a 48	Jul 4	8.39 Aug 20, 1998	
MAXIMUM PEAK STAGE			^b 8.28	Feb 12		
ANNUAL RUNOFF (AC-FT)	20,870		19,130		21,180	
10 PERCENT EXCEEDS	34		30		47	
50 PERCENT EXCEEDS	28		26		27	
90 PERCENT EXCEEDS	25		24		13	

a Gage height, 7.65 ft.
 b Backwater from ice.
 e Estimated.



BELLE FOURCHE RIVER BASIN

06430800 ANNIE CREEK NEAR LEAD, SD

LOCATION.--Lat 44°19'37", long 103°53'38", in NW¹/₄ NW¹/₄ NW¹/₄ sec.9, T.4 N., R.2 E., Lawrence County, Hydrologic Unit 10120203, on left bank 200 ft upstream from mouth and about 6 mi southwest of Lead.

DRAINAGE AREA.--3.55 mi².

PERIOD OF RECORD.--October 1988 to current year.

GAGE.--Water-stage recorder and V-notch weir. Elevation of gage is 5,125 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.18	0.23	0.17	0.30	0.25	0.26	1.1	0.64	0.47	0.22	0.11	0.02
2	0.16	0.33	0.33	0.30	e0.20	0.31	1.0	0.62	0.43	0.21	0.08	0.02
3	0.14	0.40	0.30	0.31	e0.09	0.26	0.88	0.59	0.41	0.15	0.16	0.03
4	0.15	0.34	0.28	0.30	e0.12	0.24	1.0	0.58	0.38	0.30	0.14	0.07
5	0.14	e0.24	e0.15	0.20	e0.15	0.23	1.1	0.55	0.38	0.45	0.11	0.06
6	0.14	e0.20	0.31	e0.09	e0.12	0.23	1.0	0.52	0.36	0.37	0.08	0.04
7	0.14	e0.12	0.29	e0.18	e0.30	0.24	1.1	0.50	0.35	0.24	0.07	0.04
8	0.14	e0.13	0.27	e0.30	e0.27	0.32	1.0	0.48	0.34	0.22	0.07	0.03
9	0.13	e0.20	0.25	e0.50	e0.20	0.39	0.95	0.49	0.34	0.20	0.07	0.02
10	0.13	0.63	e0.20	e0.45	e0.15	0.39	0.89	0.48	0.32	0.21	0.08	0.03
11	0.13	0.58	e0.16	e0.40	e0.14	0.31	0.83	0.47	0.31	0.17	0.07	0.04
12	0.13	0.35	e0.11	e0.28	e0.12	0.31	0.79	0.50	0.29	0.16	0.09	0.03
13	0.15	0.36	e0.08	0.31	e0.10	0.30	0.79	0.48	0.29	0.15	0.08	0.02
14	0.27	0.34	e0.11	0.27	e0.25	0.29	0.73	0.44	0.26	0.15	0.06	0.03
15	0.28	0.31	e0.20	0.26	e0.60	0.25	0.68	0.40	0.26	0.14	0.05	0.05
16	0.29	0.29	0.38	0.26	e0.50	0.22	0.62	0.50	0.25	0.13	0.05	0.03
17	0.28	0.28	0.26	0.24	e1.7	0.30	0.56	0.49	0.23	0.12	0.04	0.03
18	0.27	0.23	0.26	0.20	e1.6	0.37	0.68	0.41	0.24	0.12	0.07	0.02
19	0.26	0.26	0.37	0.19	e0.80	0.46	0.64	0.34	0.23	0.11	0.05	0.01
20	0.26	0.28	0.35	0.22	e0.40	0.55	0.57	0.37	0.26	0.10	0.05	0.01
21	0.25	0.26	0.31	0.21	0.19	0.48	0.65	0.67	0.28	0.13	0.04	0.03
22	0.25	e0.17	0.31	0.20	0.32	0.50	0.72	0.49	0.38	0.25	0.06	0.04
23	0.25	e0.14	0.30	0.13	0.31	0.60	0.72	0.42	0.32	0.35	0.05	0.03
24	0.24	e0.10	0.30	0.21	0.29	0.79	0.66	0.44	0.32	0.19	0.05	0.03
25	0.26	e0.19	0.32	0.19	0.32	0.98	0.63	0.41	0.37	0.12	0.04	0.02
26	0.28	0.27	0.30	0.17	0.31	1.3	0.59	0.41	0.37	0.10	0.05	0.02
27	0.28	0.28	0.29	0.25	0.32	1.5	0.56	0.41	0.34	0.10	0.04	0.03
28	0.25	0.52	0.26	0.49	0.28	1.1	0.59	0.40	0.33	0.11	0.04	0.03
29	0.25	0.51	0.30	0.92	0.26	0.95	0.65	0.47	0.34	0.10	0.03	0.02
30	0.33	0.22	0.30	0.32	---	0.95	0.64	0.68	0.26	0.11	0.02	0.02
31	0.25	---	0.28	0.26	---	1.1	---	0.53	---	0.09	0.02	---
TOTAL	6.66	8.76	8.10	8.91	10.66	16.48	23.32	15.18	9.71	5.57	2.02	0.90
MEAN	0.21	0.29	0.26	0.29	0.37	0.53	0.78	0.49	0.32	0.18	0.07	0.03
MAX	0.33	0.63	0.38	0.92	1.7	1.5	1.1	0.68	0.47	0.45	0.16	0.07
MIN	0.13	0.10	0.08	0.09	0.09	0.22	0.56	0.34	0.23	0.09	0.02	0.01
AC-FT	13	17	16	18	21	33	46	30	19	11	4.0	1.8

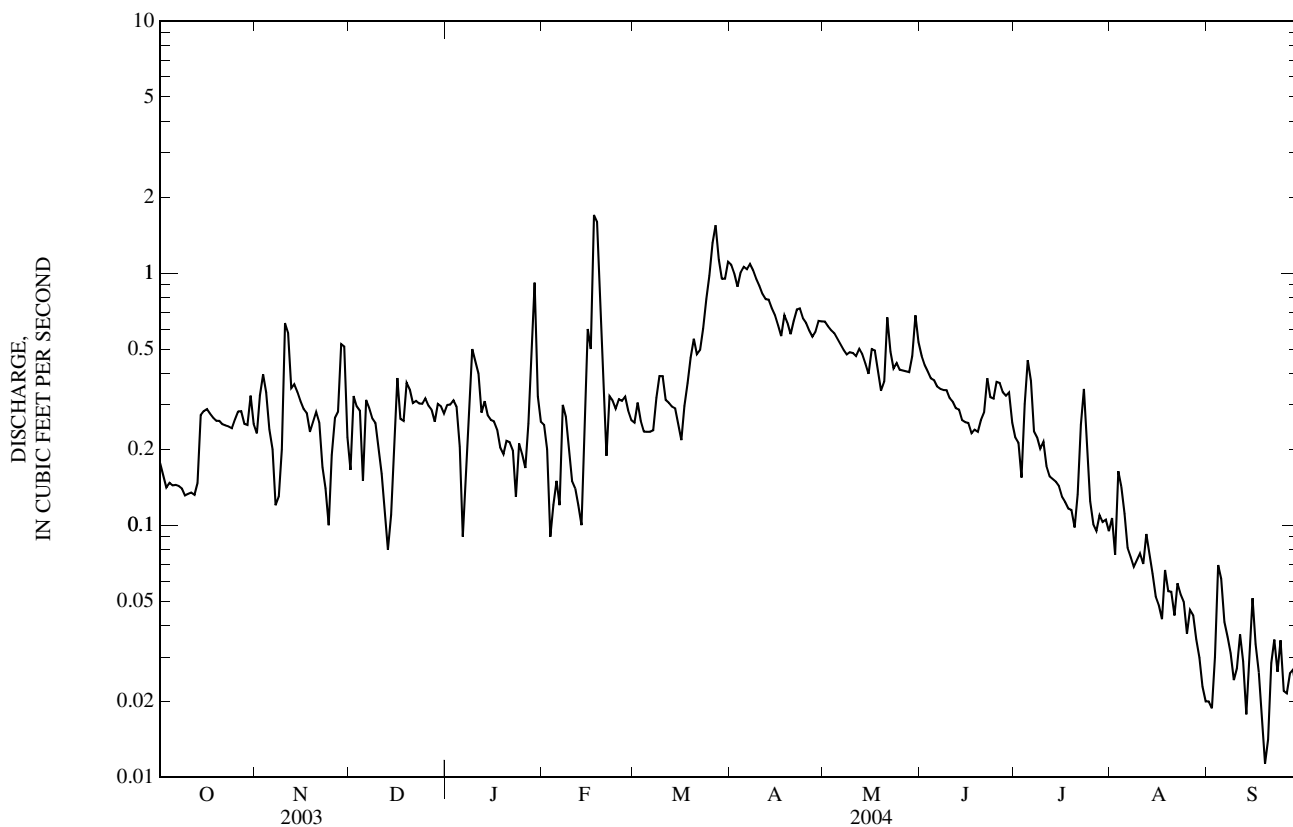
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 2004, BY WATER YEAR (WY)

MEAN	0.70	0.47	0.35	0.34	0.35	1.02	3.89	5.91	2.71	0.97	0.63	0.39
MAX	4.27	2.05	1.20	0.91	1.02	3.03	9.79	28.5	8.54	2.31	2.43	1.51
(WY)	(1999)	(1999)	(1999)	(1997)	(1999)	(1999)	(1997)	(1995)	(1998)	(1995)	(1998)	(1998)
MIN	0.05	0.10	0.02	0.00	0.00	0.08	0.75	0.49	0.32	0.18	0.07	0.03
(WY)	(1993)	(1993)	(2003)	(2003)	(1993)	(1991)	(1991)	(2004)	(2004)	(2004)	(2004)	(2004)

06430800 ANNIE CREEK NEAR LEAD, SD—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1989 - 2004	
ANNUAL TOTAL	398.02		116.27			
ANNUAL MEAN	1.09		0.32		^a 1.48	
HIGHEST ANNUAL MEAN					4.04	1995
LOWEST ANNUAL MEAN					0.32	2004
HIGHEST DAILY MEAN	17	Jun 8	1.7	Feb 17	188	May 8, 1995
LOWEST DAILY MEAN	0.00	Jan 1	0.01	Sep 19, 20	^b 0.00	Mar 2, 1989
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.02	Sep 16	0.00	Jan 6, 1993
MAXIMUM PEAK FLOW			^c 2.1	Mar 26	^d 270	May 8, 1995
MAXIMUM PEAK STAGE			^f 4.85	Feb 17	^g 6.38	Jan 28, 2003
ANNUAL RUNOFF (AC-FT)	789		231		1,070	
10 PERCENT EXCEEDS	2.9		0.64		3.6	
50 PERCENT EXCEEDS	0.30		0.26		0.51	
90 PERCENT EXCEEDS	0.00		0.05		0.09	

- a Median of annual mean discharges, 1.2 ft³/s.
- b Also Mar. 3-7, 1989, and Jan. 6 to Mar. 16, 1993, and Dec. 5, 2002, to Mar. 21, 2003.
- c Gage height, 4.26 ft.
- d Gage height, 6.12 ft.
- e Estimated.
- f Backwater from ice.
- g Backwater from ice, observed.



BELLE FOURCHE RIVER BASIN

06430850 LITTLE SPEARFISH CREEK NEAR LEAD, SD

LOCATION.--Lat 44°20'58", long 103°56'08", in NE¹/₄ NW¹/₄ SE¹/₄ sec.36, T.5 N., R.1 E., Lawrence County, Hydrologic Unit 10120203, on left bank 0.3 mi upstream from Savoy, 0.4 mi upstream from mouth, 0.6 mi downstream from Roughlock Falls, and 13.6 mi northwest of Lead.

DRAINAGE AREA.--25.8 mi².

PERIOD OF RECORD.--October 1988 to September 1998, October 1999 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 5,020 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	12	11	12	11	13	13	11	11	13	11	13
2	12	12	11	12	10	13	13	11	10	13	11	13
3	12	12	11	12	10	13	13	11	10	13	11	13
4	12	12	11	12	11	14	13	11	10	13	11	13
5	12	11	10	11	11	14	13	11	11	13	11	13
6	11	11	11	11	11	14	12	e11	10	13	11	13
7	11	11	11	12	11	14	12	e11	10	13	11	13
8	11	11	11	12	11	14	12	e11	10	12	11	13
9	11	11	11	12	11	14	12	e11	10	12	11	12
10	12	11	9.8	12	11	15	12	12	10	12	11	12
11	12	12	10	12	11	14	12	12	11	13	11	12
12	12	11	9.3	11	11	14	12	12	11	12	11	12
13	12	11	9.9	11	11	14	12	12	11	12	11	13
14	12	12	10	11	11	14	12	12	11	12	11	13
15	11	11	10	11	11	14	12	12	11	12	11	14
16	11	11	10	11	11	14	12	12	11	12	11	13
17	12	11	10	11	11	14	12	12	11	12	11	13
18	11	11	10	11	11	14	12	11	11	12	12	13
19	11	11	10	11	11	14	12	11	11	12	12	13
20	11	12	10	11	11	14	12	11	11	12	12	13
21	11	12	10	e11	11	14	12	12	11	12	12	13
22	11	12	10	e11	11	14	12	11	11	12	12	13
23	11	11	10	e11	11	14	12	11	11	12	13	13
24	11	10	10	e11	e11	14	12	11	11	12	13	13
25	11	11	11	e11	e11	14	12	11	12	12	13	13
26	12	12	11	e10	12	14	12	11	12	11	13	12
27	12	11	11	10	13	14	12	10	12	11	13	13
28	12	11	11	10	13	14	12	10	12	11	13	13
29	12	11	11	e11	13	14	12	11	12	11	13	13
30	12	11	11	11	---	13	12	11	12	11	13	13
31	12	---	12	11	---	13	---	11	---	11	13	---
TOTAL	358	339	325.0	347	324	430	365	348	328	374	364	386
MEAN	11.5	11.3	10.5	11.2	11.2	13.9	12.2	11.2	10.9	12.1	11.7	12.9
MAX	12	12	12	12	13	15	13	12	12	13	13	14
MIN	11	10	9.3	10	10	13	12	10	10	11	11	12
AC-FT	710	672	645	688	643	853	724	690	651	742	722	766

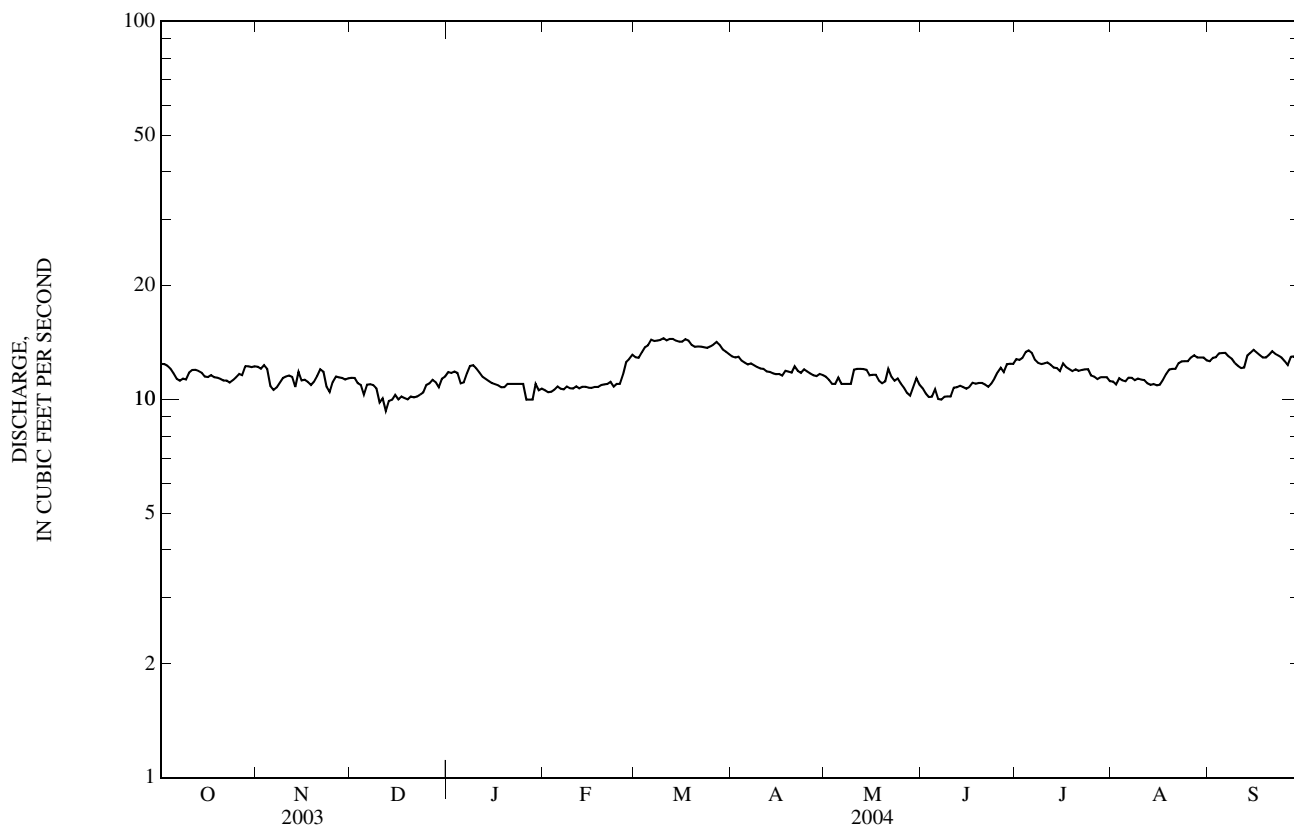
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 2004, BY WATER YEAR (WY)

MEAN	16.6	16.4	16.0	15.3	15.3	15.7	16.8	19.2	19.0	17.4	16.8	16.5
MAX	23.2	25.1	25.7	23.1	22.4	21.6	25.1	34.6	28.7	26.1	24.4	23.8
(WY)	(2000)	(2000)	(2000)	(2000)	(2000)	(1998)	(1997)	(1995)	(1997)	(1997)	(1996)	(1996)
MIN	11.5	11.1	10.3	9.96	11.0	12.2	12.0	11.2	10.9	12.1	11.7	12.0
(WY)	(2004)	(1993)	(1993)	(1993)	(1993)	(1991)	(1993)	(2004)	(2004)	(2004)	(2004)	(1991)

06430850 LITTLE SPEARFISH CREEK NEAR LEAD, SD—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1989 - 2004	
ANNUAL TOTAL	5,130.0		4,288.0			
ANNUAL MEAN	14.1		11.7		16.7	
HIGHEST ANNUAL MEAN					23.1	2000
LOWEST ANNUAL MEAN					11.7	2004
HIGHEST DAILY MEAN	21	May 5	15	Mar 10	61	May 10, 1995
LOWEST DAILY MEAN	9.3	Dec 12	9.3	Dec 12	9.3	Dec 12, 2003
ANNUAL SEVEN-DAY MINIMUM	9.9	Dec 10	9.9	Dec 10	9.8	Dec 30, 1992
ANNUAL RUNOFF (AC-FT)	10,180		8,510		12,130	
10 PERCENT EXCEEDS	17		13		23	
50 PERCENT EXCEEDS	14		12		15	
90 PERCENT EXCEEDS	11		11		12	

e Estimated.



06430900 SPEARFISH CREEK ABOVE SPEARFISH, SD

LOCATION.--Lat 44°24'06", long 103°53'40", in NW¹/₄ NE¹/₄ NE¹/₄ sec.17, T.5 N., R.2 E., Lawrence County, Hydrologic Unit 10120203, on left bank immediately below confluence of Squaw Creek and 8.0 mi south of Spearfish.

DRAINAGE AREA.--139 mi².

PERIOD OF RECORD.--October 1988 to current year. Operated as partial-record crest-stage gage station from October 1997 (revised) to September 2001.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 4,440 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Occasional minor upstream diversions by Lead-Deadwood Sanitary District out of drainage basin into Whitewood Creek Basin. Upstream diversions by Homestake Mining Company discontinued March 2003. Satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	55	55	53	e53	58	e52	62	55	54	52	48	e47
2	55	55	53	e54	60	e52	62	54	53	e54	48	e47
3	54	56	52	e50	e57	52	61	53	52	e57	52	48
4	54	56	52	e45	60	52	61	53	52	e58	51	49
5	54	52	e50	e44	57	52	61	53	53	e57	49	49
6	53	48	53	e47	e56	52	61	52	52	e54	49	48
7	54	53	53	e55	e53	52	61	52	52	52	49	48
8	54	54	53	71	60	53	61	52	52	51	49	47
9	54	54	52	60	57	54	59	52	52	51	49	47
10	55	54	52	56	55	56	59	52	52	51	50	47
11	56	54	53	54	53	54	59	53	53	50	49	47
12	55	54	e51	53	e50	54	57	54	53	50	49	47
13	55	53	53	53	e52	55	57	54	52	e50	48	46
14	55	52	55	53	59	53	56	53	52	e50	47	47
15	54	52	54	53	57	54	55	52	52	50	47	46
16	54	52	53	53	55	53	55	54	52	50	46	46
17	54	52	52	53	54	55	55	55	52	49	46	46
18	53	52	52	54	54	56	57	53	e57	49	47	45
19	53	52	51	55	54	58	56	52	e55	49	47	45
20	53	52	52	55	53	58	55	52	e53	50	47	46
21	53	53	52	55	53	56	58	59	51	49	47	47
22	53	53	51	55	52	56	58	56	51	49	48	47
23	53	e48	51	56	52	57	57	55	50	51	47	46
24	53	52	52	57	52	60	56	55	50	51	47	46
25	54	55	52	58	52	63	55	54	e50	50	47	46
26	55	54	52	e48	52	68	54	53	e50	49	47	45
27	55	53	53	e54	53	72	54	53	e50	49	47	46
28	55	53	50	e58	53	66	54	53	49	50	47	46
29	56	53	e47	e59	e51	63	56	54	50	50	47	46
30	57	53	e48	61	---	62	56	58	e50	50	47	44
31	56	---	e50	59	---	61	---	56	---	48	47	---
TOTAL	1,684	1,589	1,607	1,691	1,584	1,761	1,728	1,666	1,556	1,580	1,485	1,397
MEAN	54.3	53.0	51.8	54.5	54.6	56.8	57.6	53.7	51.9	51.0	47.9	46.6
MAX	57	56	55	71	60	72	62	59	57	58	52	49
MIN	53	48	47	44	50	52	54	52	49	48	46	44
AC-FT	3,340	3,150	3,190	3,350	3,140	3,490	3,430	3,300	3,090	3,130	2,950	2,770

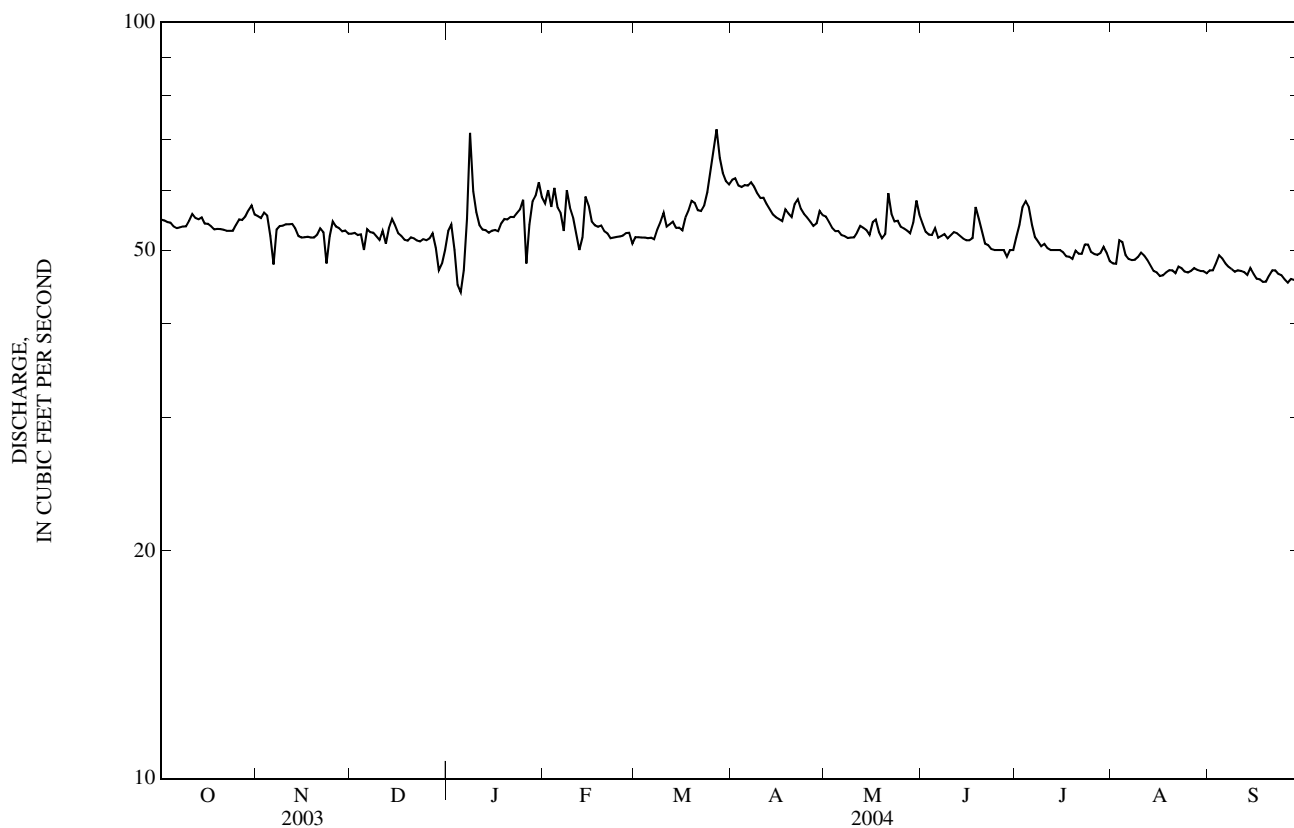
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1997, 2000 - 2004, BY WATER YEAR (WY)

MEAN	52.8	51.4	49.1	48.4	48.4	55.9	76.5	107	78.1	60.7	56.3	54.4
MAX	80.2	79.8	77.7	75.2	75.3	87.3	149	307	129	101	99.8	87.5
(WY)	(1997)	(1997)	(1997)	(1997)	(1997)	(1997)	(1997)	(1995)	(1996)	(1997)	(1997)	(1997)
MIN	35.5	37.2	29.8	31.8	37.0	39.5	44.8	45.3	41.4	37.7	35.9	34.9
(WY)	(1993)	(1991)	(1992)	(1992)	(1993)	(1993)	(1992)	(1992)	(1992)	(1990)	(1992)	(1991)

06430900 SPEARFISH CREEK ABOVE SPEARFISH, SD—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1989-1997, 2000-2004	
ANNUAL TOTAL	22,290		19,328			
ANNUAL MEAN	61.1		52.8		^a 61.4	
HIGHEST ANNUAL MEAN					103	1997
LOWEST ANNUAL MEAN					38.1	1992
HIGHEST DAILY MEAN	165	Jun 8	72	Mar 27	1,470	May 8, 1995
LOWEST DAILY MEAN	39	Feb 24	44	Jan 5	18	Jan 15, 1992
ANNUAL SEVEN-DAY MINIMUM	48	Feb 20	46	Sep 24	26	Jan 11, 1992
MAXIMUM PEAK FLOW			^b 77	Mar 27	^c 2,890	May 8, 1995
MAXIMUM PEAK STAGE			^d 6.54	Jan 6	7.42	May 8, 1995
ANNUAL RUNOFF (AC-FT)	44,210		38,340		44,490	
10 PERCENT EXCEEDS	74		58		91	
50 PERCENT EXCEEDS	56		53		53	
90 PERCENT EXCEEDS	52		47		37	

- a Median of annual mean discharges, 56 ft³/s.
- b Gage height, 3.16 ft.
- c Reflects water years 1989-2001 during crest-stage gage partial-record year.
- d Backwater from ice.
- e Estimated.



06431500 SPEARFISH CREEK AT SPEARFISH, SD—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1947 - 2004	
ANNUAL TOTAL	20,948		16,590			
ANNUAL MEAN	57.4		45.3		55.6	
HIGHEST ANNUAL MEAN					106	1999
LOWEST ANNUAL MEAN					27.1	1961
HIGHEST DAILY MEAN	180	Jun 8	63	Jul 5	1,880	May 15, 1965
LOWEST DAILY MEAN	30	Dec 12	28	Jan 4	^a 9.0	Dec 2, 1959
ANNUAL SEVEN-DAY MINIMUM	36	Sep 20	39	Nov 22	18	Dec 18, 1981
MAXIMUM PEAK FLOW			^b 75	Jul 5	^c 4,240	May 15, 1965
MAXIMUM PEAK STAGE			^d 8.60	Jan 7	10.54	Jun 15, 1976
ANNUAL RUNOFF (AC-FT)	41,550		32,910		40,310	
10 PERCENT EXCEEDS	75		51		86	
50 PERCENT EXCEEDS	55		45		47	
90 PERCENT EXCEEDS	42		41		32	

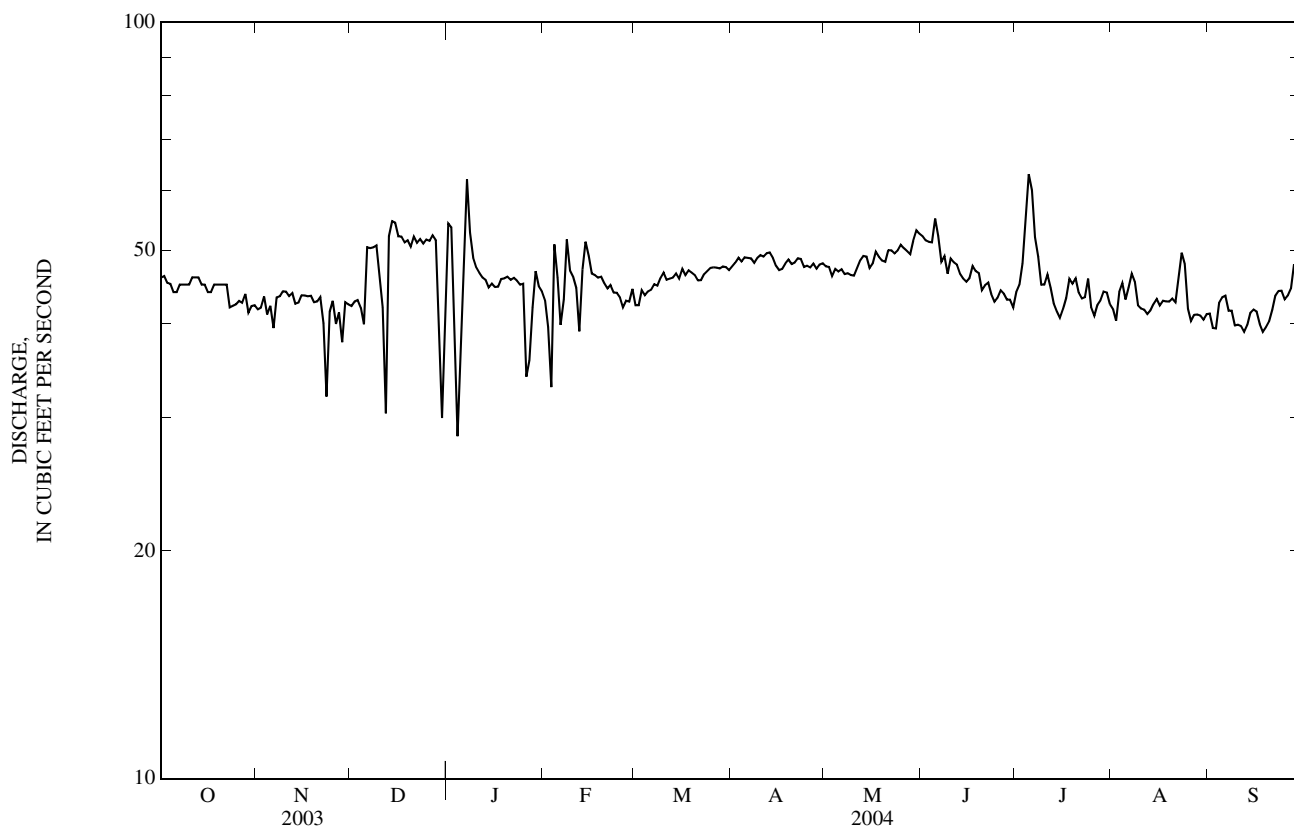
a No flow for part of Oct. 18, 1970.

b Gage height, 6.73 ft.

c From rating curve extended above 520 ft³/s on basis of slope-area measurement of peak flow, gage height, 10.53 ft.

d Backwater from ice.

e Estimated.



06433000 REDWATER RIVER ABOVE BELLE FOURCHE, SD

LOCATION.--Lat 44°40'02", long 103°50'20", in NW¹/₄ SE¹/₄ sec.11, T.8 N., R.2 E., Butte County, Hydrologic Unit 10120203, on right bank near downstream end of bridge on old U.S. Highway 212 in Belle Fourche, 0.5 mi upstream from Hay Creek, and 0.9 mi upstream from mouth.

DRAINAGE AREA.--920 mi².

PERIOD OF RECORD.--November 1945 to current year. Daily discharges for October 1946 estimated; yearly discharge published in WSP 1309 does not include October. Prior to October 1960, published as Redwater Creek above Belle Fourche.

REVISED RECORDS.--WSP 1389: 1954 (maximum gage height only).

GAGE.--Water-stage recorder. Elevation of gage is 3,000 ft above NGVD of 1929, from topographic map. Prior to Dec. 13, 1946, nonrecording gage at same site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Diversions for irrigation of about 13,000 acres upstream from station. Satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	142	161	144	e150	e152	145	138	99	80	41	80	21
2	142	160	145	e155	e158	133	137	98	80	36	75	19
3	142	160	144	e120	e158	133	138	90	73	37	54	19
4	124	155	144	e130	e157	133	139	70	74	42	128	24
5	122	155	130	e145	e156	133	138	66	82	71	96	41
6	123	e148	160	e150	e155	132	138	55	69	120	93	51
7	128	e150	154	e155	e154	131	140	37	49	109	98	53
8	137	149	155	e155	e153	142	141	19	50	98	85	53
9	139	151	153	e155	e152	157	141	33	56	90	89	55
10	139	151	e144	e152	e150	165	143	28	66	94	86	54
11	145	151	e140	e148	e146	152	145	21	69	92	87	53
12	140	148	e135	e145	e144	148	144	20	73	85	86	58
13	141	146	e140	e140	e144	149	141	21	66	70	49	64
14	143	146	e145	139	e142	145	141	21	67	64	52	83
15	144	147	e150	137	e140	143	139	20	75	70	45	100
16	145	146	152	136	e138	144	127	20	78	66	48	97
17	141	148	153	133	136	145	114	28	78	55	43	100
18	134	146	150	133	149	145	116	33	82	39	30	97
19	118	144	151	133	158	140	117	28	79	38	24	100
20	124	140	151	134	144	137	112	23	78	39	22	111
21	130	145	150	134	134	136	110	32	80	38	21	117
22	123	149	151	133	133	137	120	45	80	39	22	116
23	126	e145	150	134	134	138	118	60	78	46	27	119
24	142	e140	150	133	134	136	118	74	74	67	28	117
25	145	e138	150	134	132	135	118	77	74	68	28	117
26	142	e143	150	e115	130	138	119	68	51	63	27	114
27	144	e137	155	e91	131	141	109	78	41	58	29	114
28	149	e140	155	e96	133	139	105	77	32	72	33	115
29	155	146	e152	e127	147	138	108	79	27	74	36	105
30	157	147	e148	e135	---	137	111	86	20	72	34	103
31	163	---	e147	e145	---	136	---	80	---	76	32	---
TOTAL	4,289	4,432	4,598	4,222	4,194	4,363	3,825	1,586	1,981	2,029	1,687	2,390
MEAN	138	148	148	136	145	141	128	51.2	66.0	65.5	54.4	79.7
MAX	163	161	160	155	158	165	145	99	82	120	128	119
MIN	118	137	130	91	130	131	105	19	20	36	21	19
AC-FT	8,510	8,790	9,120	8,370	8,320	8,650	7,590	3,150	3,930	4,020	3,350	4,740

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 2004, BY WATER YEAR (WY)

MEAN	137	148	144	138	148	160	182	237	188	61.8	48.1	90.8
MAX	313	268	229	246	278	276	359	988	834	263	178	192
(WY)	(1999)	(1999)	(1999)	(1997)	(1996)	(1996)	(1997)	(1995)	(1946)	(1946)	(1998)	(1946)
MIN	50.6	82.7	69.9	83.5	91.7	105	62.9	20.0	4.07	2.13	2.72	19.3
(WY)	(1961)	(1961)	(1962)	(1957)	(1993)	(1961)	(1981)	(1992)	(1988)	(1960)	(1959)	(1959)

06433000 REDWATER RIVER ABOVE BELLE FOURCHE, SD—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1946 - 2004	
ANNUAL TOTAL	47,156.2		39,596		140	
ANNUAL MEAN	129		108		251	
HIGHEST ANNUAL MEAN					1999	
LOWEST ANNUAL MEAN					57.1	
HIGHEST DAILY MEAN	246	Mar 16	165	Mar 10	5,790	May 20, 1982
LOWEST DAILY MEAN	6.5	Aug 17	19	May 8	^a 0.00	May 1, 1981
ANNUAL SEVEN-DAY MINIMUM	7.6	Aug 12	22	May 10	0.56	Jul 30, 1960
MAXIMUM PEAK FLOW			^b 179	Feb 19	^c 16,400	Jun 16, 1962
MAXIMUM PEAK STAGE			^d 4.91	Jan 8	11.69	Jun 16, 1962
ANNUAL RUNOFF (AC-FT)	93,530		78,540		101,400	
10 PERCENT EXCEEDS	183		151		219	
50 PERCENT EXCEEDS	148		130		131	
90 PERCENT EXCEEDS	20		37		23	

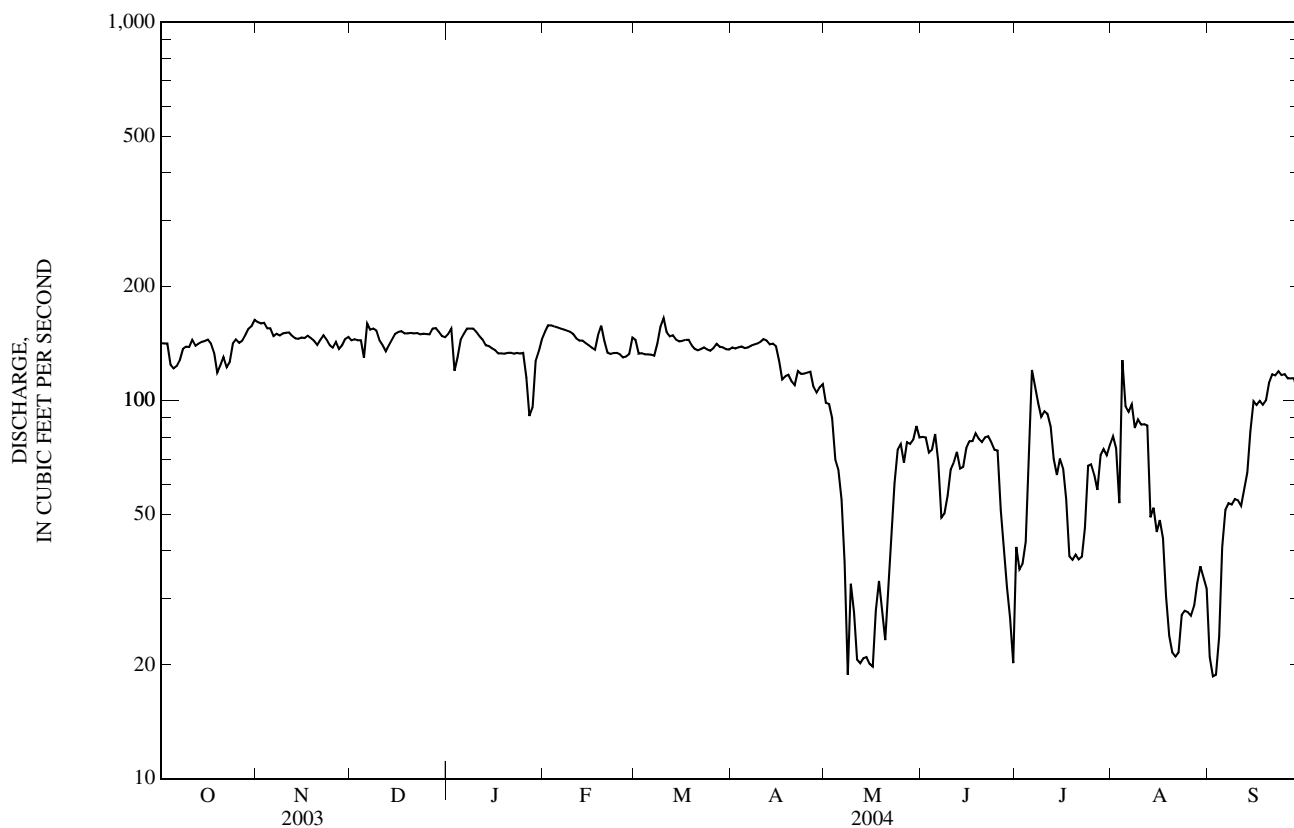
a No flow at times in 1960, 1968-69, 1981-82, and 1988.

b Gage height, 3.31 ft.

c From rating curve extended above 6,000 ft³/s on basis of slope-area measurement of peak flow.

d Backwater from ice.

e Estimated.



BELLE FOURCHE RIVER BASIN

06434505 INLET CANAL ABOVE BELLE FOURCHE RESERVOIR, SD

LOCATION.--Lat 44°42'05", long 103°44'00", in NW¹/₄ SE¹/₄ NE¹/₄ sec.34, T.9 N., R.3 E., Butte County, Hydrologic Unit 10120202, on left bank 6.5 mi downstream from diversion dam on Belle Fourche River, and 2.5 mi northwest of Fruitdale.

PERIOD OF RECORD.--October 1994 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,980 ft above NGVD of 1929 from topographic map. Prior to October 1994, another station located on Inlet Canal near Belle Fourche (station 06434500) at site 5.6 mi upstream (discharge records are not equivalent because of diversions for irrigation).

REMARKS.--Records good except those for estimated daily discharges, which are poor. Records show actual diversions to Belle Fourche Reservoir (see station 06435000), from Belle Fourche River and Crow Creek. Bureau of Reclamation satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

COOPERATION.--Records of diversion from the canal provided by the Belle Fourche Irrigation District.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	142	174	159	e135	e166	244	167	122	97	104	85	59
2	146	178	160	e150	e166	198	165	119	88	118	95	56
3	149	180	164	e140	e165	198	164	116	81	31	79	56
4	138	179	168	e105	e164	209	163	88	77	20	133	64
5	137	e176	166	e140	e163	197	161	83	82	146	133	76
6	128	e172	176	e145	e161	231	161	73	62	549	128	66
7	132	e174	173	e155	e163	211	163	35	53	437	114	62
8	140	e175	168	e180	e165	228	161	1.1	45	278	88	66
9	142	176	168	e175	e164	288	155	42	42	232	97	72
10	142	173	161	171	e163	419	154	39	59	183	88	73
11	149	167	e157	168	e147	335	154	26	61	141	95	74
12	147	167	e152	157	e142	258	153	20	70	119	93	84
13	149	170	148	151	e171	249	150	16	62	78	64	83
14	152	176	179	161	e175	217	149	11	66	69	49	109
15	157	177	177	151	173	209	148	8.4	73	64	49	148
16	153	169	167	157	170	217	141	7.8	66	56	31	161
17	158	179	171	143	170	220	124	7.9	57	33	19	144
18	153	172	168	143	181	216	128	8.1	63	21	0.33	141
19	142	174	160	141	211	209	128	0.00	67	11	0.25	139
20	142	173	159	140	186	212	128	0.01	61	21	0.07	172
21	148	167	157	144	171	213	123	0.10	63	12	0.00	129
22	141	152	159	151	187	211	126	0.18	69	10	0.00	128
23	142	e147	156	151	180	e202	130	87	62	20	0.00	129
24	160	e149	155	153	172	e198	130	329	57	37	0.00	129
25	158	e152	158	150	188	e188	131	205	57	36	0.00	129
26	157	e155	161	133	196	179	132	147	41	55	0.00	127
27	156	e157	169	94	206	180	123	135	20	62	67	125
28	154	e157	166	57	237	175	126	134	10	73	78	129
29	168	158	164	121	280	171	127	111	9.8	80	80	122
30	174	160	149	e160	---	166	138	112	0.75	79	69	119
31	176	---	e125	e165	---	166	---	96	---	96	74	---
TOTAL	4,632	5,035	5,020	4,487	5,183	6,814	4,303	2,179.59	1,721.55	3,271	1,808.65	3,171
MEAN	149	168	162	145	179	220	143	70.3	57.4	106	58.3	106
MAX	176	180	179	180	280	419	167	329	97	549	133	172
MIN	128	147	125	57	142	166	123	0.00	0.75	10	0.00	56
AC-FT	9,190	9,990	9,960	8,900	10,280	13,520	8,540	4,320	3,410	6,490	3,590	6,290

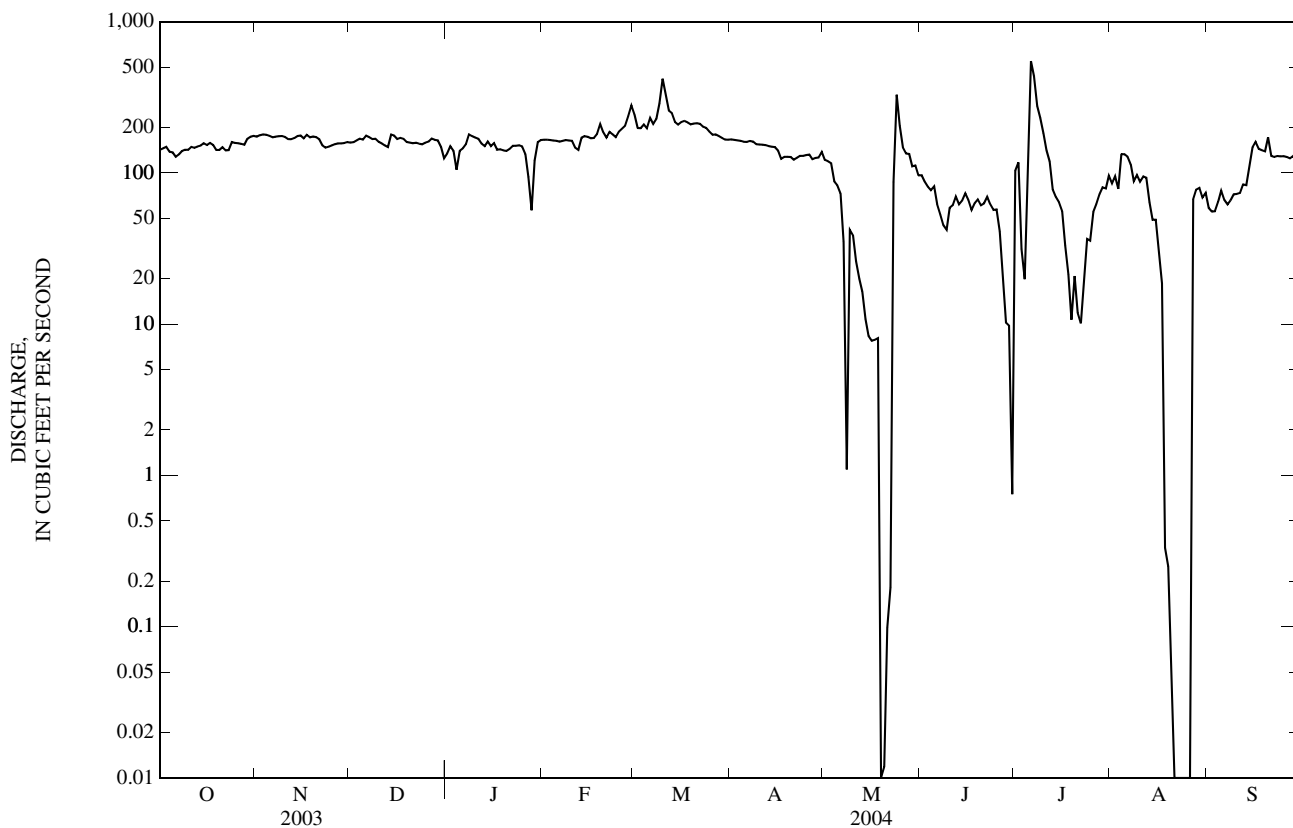
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 2004, BY WATER YEAR (WY)

MEAN	211	175	137	161	123	166	110	155	181	141	114	150
MAX	462	296	220	372	193	378	210	254	291	314	240	211
(WY)	(1999)	(2001)	(1998)	(1997)	(1997)	(2003)	(2003)	(2001)	(2001)	(1999)	(1998)	(2002)
MIN	54.5	0.04	1.70	1.64	2.06	0.95	4.88	70.3	57.4	54.2	52.5	96.2
(WY)	(2000)	(1997)	(1999)	(2000)	(2000)	(1996)	(1997)	(2004)	(2004)	(2003)	(2000)	(2001)

06434505 INLET CANAL ABOVE BELLE FOURCHE RESERVOIR, SD—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1995 - 2004	
ANNUAL TOTAL	62,297		47,625.79			
ANNUAL MEAN	171		130		152	
HIGHEST ANNUAL MEAN					183	2001
LOWEST ANNUAL MEAN					113	2000
HIGHEST DAILY MEAN	1,080	Mar 18	549	Jul 6	1,300	Oct 17, 1998
LOWEST DAILY MEAN	30	Aug 11	^a 0.00	May 19	^b 0.00	Dec 31, 1995
ANNUAL SEVEN-DAY MINIMUM	39	Aug 6	0.01	Aug 20	0.00	Nov 16, 1996
MAXIMUM PEAK FLOW			1,030	Jul 6	1,630	Oct 17, 1998
MAXIMUM PEAK STAGE			7.71	Jul 6	9.00	Oct 17, 1998
ANNUAL RUNOFF (AC-FT)	123,600		94,470		110,300	
10 PERCENT EXCEEDS	230		188		265	
50 PERCENT EXCEEDS	167		144		162	
90 PERCENT EXCEEDS	58		32		1.4	

a Also Aug. 21-26.
 b No flow at times in some years.
 e Estimated.



BELLE FOURCHE RIVER BASIN

06435000 BELLE FOURCHE RESERVOIR NEAR BELLE FOURCHE, SD

LOCATION.--Lat 44°44'12", long 103°40'27", in SW¹/₄ SE¹/₄ sec.18, T.9 N., R.4 E., Butte County, Hydrologic Unit 10120202, at dam on Owl Creek, 9.8 mi northeast of Belle Fourche.

PERIOD OF RECORD.--January 1912 to current year (monthend contents only).

GAGE.--Water-stage recorder. Elevations listed to NGVD of adjustment of 1912. Prior to June 6, 1967, nonrecording gage at present site and datum.

REMARKS.--Offstream reservoir formed by earthfill dam. Storage began in May 1910; dam completed in April 1911. Conservation capacity, 185,277 acre-ft (1949 survey), between elevations 2,927.0 ft (lowest outlet) and 2,975.0 ft. Dead storage below elevation 2,927.0 ft, 6,800 acre-ft. Figures given herein represent contents above elevation 2,927.0 ft. Water diverted from Belle Fourche River through Inlet Canal (see station 06434505) is stored in Belle Fourche Reservoir for irrigation.

COOPERATION.--Records of elevation and contents provided by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 197,400 acre-ft, Apr. 30, 1919, May 20, 1920, elevation, 2,974.9 ft; minimum observed, -3,000 acre-ft, Sept. 30, 1936, water was lowered below dead storage level of 2,927.0 ft by opening holes in crib walls.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 118,800 acre-ft, May 3, elevation, 2,965.88 ft; minimum, 22,600 acre-ft, Sept. 19, elevation, 2,943.05 ft.

MONTHEND ELEVATION AND CONTENTS AT 2400 HOURS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Elevation	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	2,952.34	49,400	--
Oct. 31	2,954.44	57,900	+8,500
Nov. 30	2,956.69	68,000	+10,100
Dec. 31	2,958.73	77,900	+9,900
CAL YR 2003	--	--	-1,700
Jan. 31	2,960.33	86,200	+8,300
Feb. 29	2,962.34	97,300	+11,100
Mar. 31	2,964.61	110,800	+13,500
Apr. 30	2,965.80	118,300	+7,500
May 31	2,965.41	115,800	-2,500
June 30	2,962.69	99,300	-16,500
July 31	2,958.23	75,400	-23,900
Aug. 31	2,948.58	36,600	-38,800
Sept. 30	2,944.03	24,700	-11,900
WTR YR 2004	--	--	-24,700

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06436000 BELLE FOURCHE RIVER NEAR FRUITDALE, SD

LOCATION.--Lat 44°41'27", long 103°44'14", in NW¼ NE¼ sec.3, T.8 N., R.3 E., Butte County, Hydrologic Unit 10120202, on left bank near downstream end of bridge on U.S. Highway 212, 2.5 mi northwest of Fruitdale, and 8.8 mi downstream from point of diversion to Belle Fourche Reservoir.

DRAINAGE AREA.--4,540 mi², approximately.

PERIOD OF RECORD.--October 1945 to current year. Monthly discharge only for October 1945, published in WSP 1309.

GAGE.--Water-stage recorder. Elevation of gage is 2,925 ft above NGVD of 1929, from topographic map. Prior to Apr. 9, 1947, nonrecording gage and Apr. 10, 1947, to Oct. 14, 1948, water-stage recorder, at site 100 ft upstream at same datum. Oct. 15, 1948, to Dec. 30, 1958, water-stage recorder and Dec. 31, 1958, to Sept. 23, 1959, nonrecording gage at present site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow regulated by Keyhole Dam since Oct. 25, 1952, usable capacity, 191,600 acre-ft, 180 mi upstream. Maximum discharge prior to Sept. 30, 1953, 7,460 ft³/s, June 23, 1947, gage height, 11.03 ft; no flow at times in 1945 and 1948. At a point 8.8 mi above station, water is diverted to Belle Fourche Reservoir (see station 06435000) through Inlet Canal (see station 06434505), with other smaller diversions from the main stem and tributaries for irrigation. Total diversions for irrigation of about 60,000 acres upstream from station. Satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section. Additional water-quality samples collected as part of a Total Maximum Daily Load (TMDL) sampling program to be published in a separate report.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.8	9.2	7.1	8.0	e6.0	6.0	6.4	4.5	4.8	31	9.0	8.3
2	6.0	8.9	7.1	8.4	e6.0	4.6	6.3	4.1	5.8	18	9.0	7.5
3	5.8	9.0	6.9	8.4	e5.8	4.1	6.2	3.9	9.0	11	12	7.7
4	6.0	8.8	7.2	e4.2	e5.7	3.9	6.5	3.6	8.1	9.3	18	17
5	5.9	7.8	6.4	e7.0	e5.6	3.9	6.4	3.7	7.4	11	15	20
6	5.7	6.1	6.4	e8.0	e5.5	4.2	6.1	4.7	6.7	24	13	12
7	5.8	6.1	5.7	e10	e5.4	4.2	6.1	5.6	7.5	61	12	10
8	6.3	6.6	7.2	e12	e5.3	4.5	5.9	4.4	6.4	20	15	12
9	6.4	7.6	7.0	16	e5.3	11	5.6	2.9	7.1	13	11	15
10	6.9	7.3	6.7	17	e5.3	18	5.9	1.8	7.3	14	13	8.4
11	6.9	8.2	6.6	15	e5.3	14	5.9	4.3	7.2	10	12	5.4
12	7.1	8.2	5.6	14	e5.2	12	5.9	3.4	7.0	9.2	12	5.9
13	7.2	8.8	5.3	12	e5.1	11	5.6	2.8	7.5	7.2	12	6.6
14	7.0	9.0	7.4	12	e5.0	9.3	5.3	3.3	9.4	6.4	11	12
15	6.6	9.2	8.0	11	e5.0	8.6	5.3	3.4	8.6	5.9	11	15
16	7.0	8.5	7.2	9.5	e5.0	9.0	5.0	4.2	8.3	6.2	10	10
17	7.2	8.3	7.3	7.9	e6.0	9.1	5.3	9.0	8.9	6.9	10	8.7
18	6.7	8.4	7.1	7.0	12	8.9	5.5	5.0	8.7	6.0	8.3	7.1
19	7.1	8.6	6.5	6.8	14	8.4	5.8	7.4	7.2	6.1	7.4	6.3
20	7.2	8.0	6.4	7.0	9.3	7.7	5.7	12	6.9	5.1	6.8	6.0
21	7.2	8.5	6.5	6.4	6.2	7.0	5.5	14	6.6	3.3	6.6	6.0
22	7.4	8.8	6.5	6.2	5.4	7.6	14	19	7.0	3.7	6.4	5.6
23	7.5	7.9	6.4	6.2	4.8	7.6	13	25	7.2	4.6	6.3	5.2
24	8.7	6.8	6.3	6.1	4.5	7.5	4.4	36	7.1	9.3	5.9	5.5
25	11	7.7	6.2	e4.7	4.3	7.3	4.1	15	8.3	12	5.0	5.6
26	10	8.0	6.3	e3.7	4.4	7.1	4.4	8.4	7.7	11	5.5	5.6
27	9.6	7.9	6.9	e4.2	4.5	7.8	4.4	7.2	6.7	11	8.1	5.3
28	9.0	7.2	6.8	e5.0	4.7	7.0	4.1	6.3	5.6	12	8.3	5.6
29	9.5	7.1	6.2	e5.5	6.0	6.4	4.9	6.6	7.1	12	5.8	5.5
30	9.3	7.5	4.4	e6.0	---	6.2	4.8	6.4	6.4	13	3.2	5.5
31	9.6	---	5.7	e6.3	---	6.3	---	6.3	---	9.8	3.5	---
TOTAL	229.4	240.0	203.3	261.5	172.6	240.2	180.3	244.2	219.5	383.0	292.1	256.3
MEAN	7.40	8.00	6.56	8.44	5.95	7.75	6.01	7.88	7.32	12.4	9.42	8.54
MAX	11	9.2	8.0	17	14	18	14	36	9.4	61	18	20
MIN	5.7	6.1	4.4	3.7	4.3	3.9	4.1	1.8	4.8	3.3	3.2	5.2
AC-FT	455	476	403	519	342	476	358	484	435	760	579	508

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 2004, BY WATER YEAR (WY)*

MEAN	19.0	28.1	20.4	22.0	51.1	112	158	310	209	40.6	14.3	11.2
MAX	228	594	298	280	535	1,125	984	2,256	1,149	525	88.0	54.4
(WY)	(2000)	(1999)	(1999)	(1999)	(1996)	(1996)	(1997)	(1995)	(1976)	(1993)	(1993)	(1993)
MIN	3.82	3.33	3.23	1.97	1.32	2.46	2.30	3.12	0.33	0.22	0.30	2.24
(WY)	(1961)	(1979)	(1968)	(1957)	(1955)	(1977)	(1981)	(1985)	(1961)	(1960)	(1960)	(1959)

06436000 BELLE FOURCHE RIVER NEAR FRUITDALE, SD—Continued

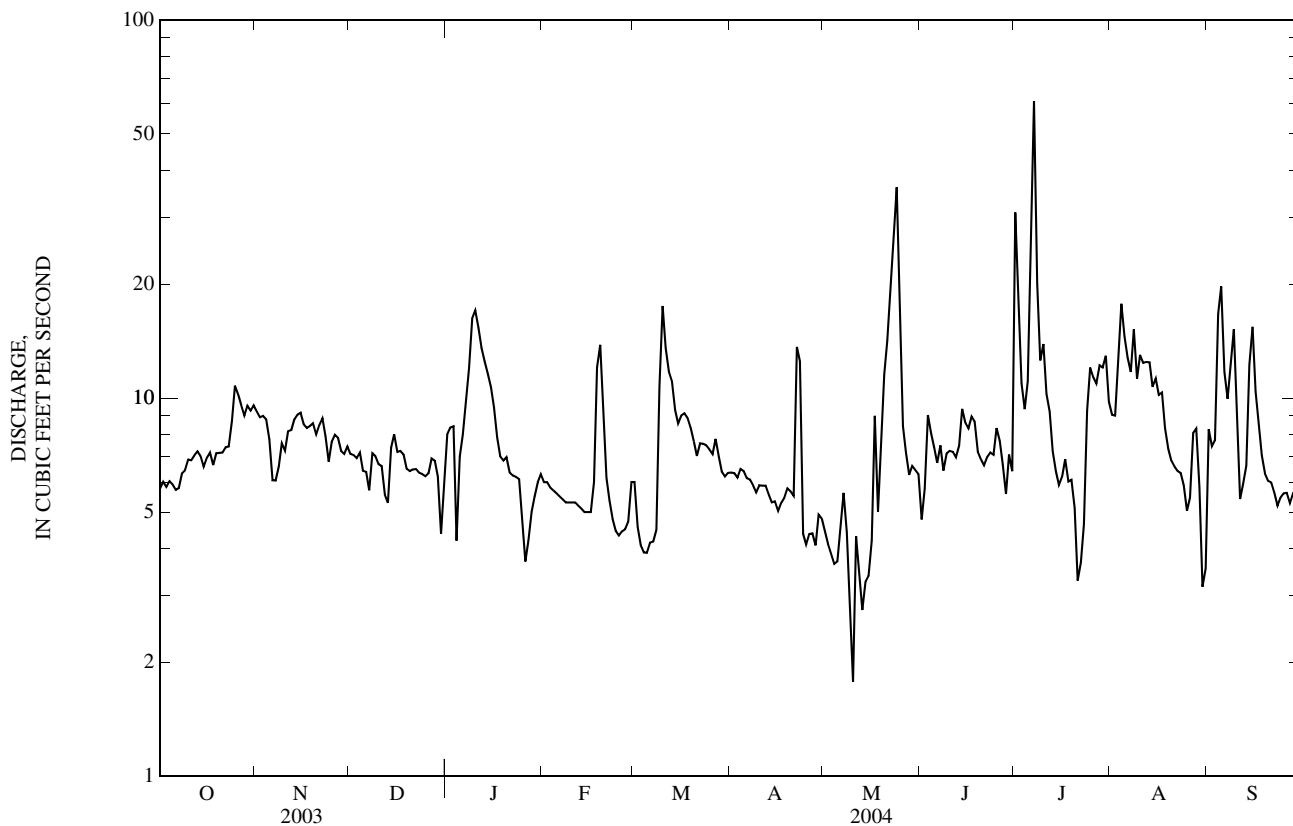
SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1954 - 2004*	
ANNUAL TOTAL	3,022.6		2,922.4		83.0	
ANNUAL MEAN	8.28		7.98		351	
HIGHEST ANNUAL MEAN					3.00	1999
LOWEST ANNUAL MEAN					11,100	1961
HIGHEST DAILY MEAN	130	Mar 17	61	Jul 7	0.00	May 10, 1995
LOWEST DAILY MEAN	2.4	May 23	1.8	May 10	0.00	Sep 10, 1959
ANNUAL SEVEN-DAY MINIMUM	2.8	May 17	3.1	May 9	0.00	Jun 4, 1961
MAXIMUM PEAK FLOW			212	Jul 7	12,700	May 20, 1982
MAXIMUM PEAK STAGE			3.31	Jul 7	14.32	May 20, 1982
ANNUAL RUNOFF (AC-FT)	6,000		5,800		60,110	
10 PERCENT EXCEEDS	12		12		250	
50 PERCENT EXCEEDS	7.5		7.0		6.8	
90 PERCENT EXCEEDS	3.5		4.5		3.1	

* Regulated period only (1954-2004). See REMARKS.

a Median of annual mean discharges, 54 ft³/s.

b No flow at times in 1959-62 and 1977.

e Estimated.



06436165 DEADWOOD CREEK AT CENTRAL CITY, SD

LOCATION.--Lat 44°22'07", long 103°45'55", in NW¹/₄ SE¹/₄ NW¹/₄ sec.28, T.5 N., R.3 E., Lawrence County, Hydrologic Unit 10120202, on left bank 0.3 mi upstream from Blacktail Gulch, on State Highway 14A, at Central City.

DRAINAGE AREA.--4.86 mi².

PERIOD OF RECORD.--February to September 2004.

GAGE.--Water-stage recorder. Elevation of gage is 4,870 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

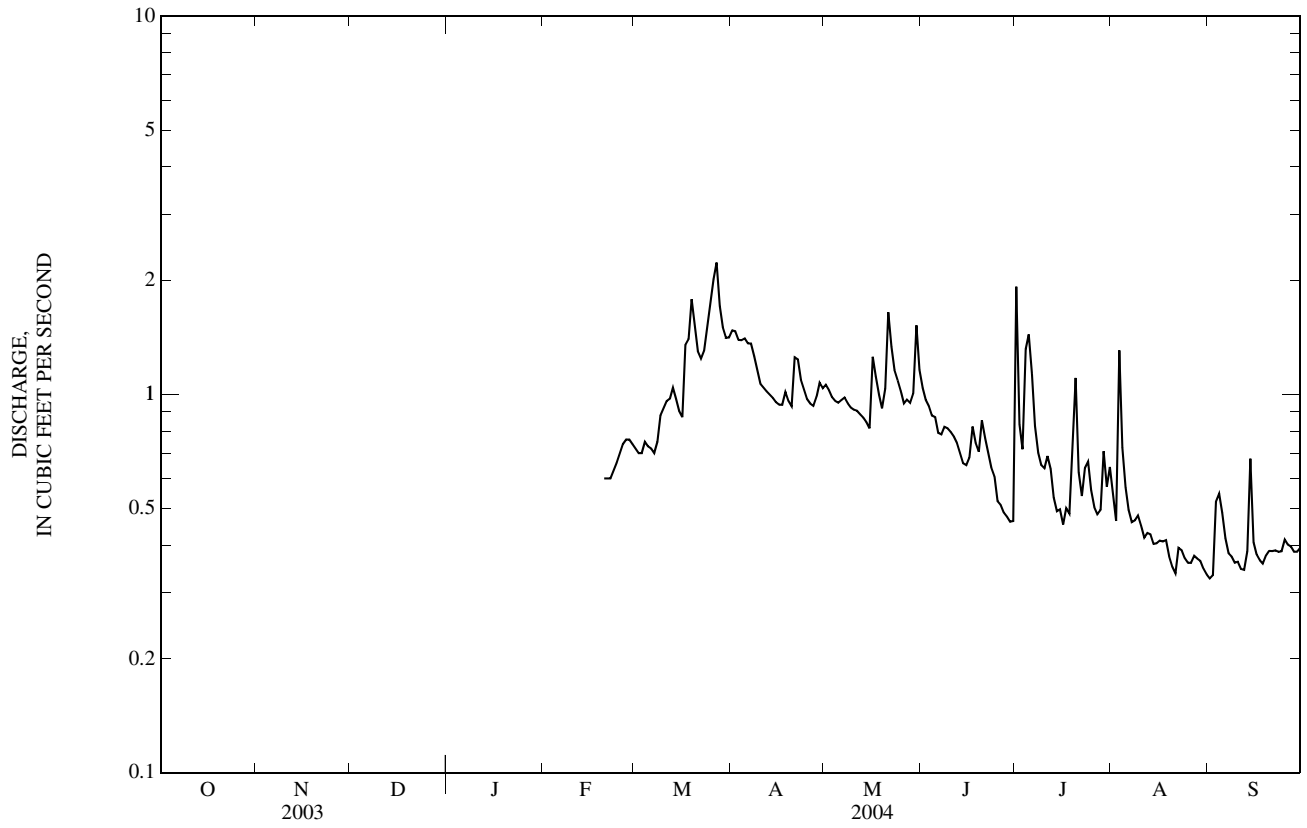
EXTREMES FOR CURRENT YEAR.--Maximum discharge during period February to September, 26 ft³/s, July 1, gage height, 4.11 ft; minimum daily discharge, 0.33 ft³/s, Aug. 31 to Sept. 2.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	e0.72	1.5	1.1	1.0	1.9	0.55	0.33
2	---	---	---	---	---	e0.70	1.5	1.0	0.97	0.83	0.46	0.33
3	---	---	---	---	---	e0.70	1.4	0.98	0.93	0.72	1.3	0.52
4	---	---	---	---	---	e0.75	1.4	0.96	0.88	1.3	0.72	0.55
5	---	---	---	---	---	e0.73	1.4	0.95	0.87	1.4	0.57	0.49
6	---	---	---	---	---	e0.72	1.4	0.97	0.79	1.1	0.50	0.42
7	---	---	---	---	---	e0.70	1.4	0.98	0.78	0.82	0.46	0.38
8	---	---	---	---	---	e0.75	1.3	0.95	0.82	0.70	0.46	0.37
9	---	---	---	---	---	e0.88	1.2	0.92	0.81	0.65	0.48	0.36
10	---	---	---	---	---	e0.92	1.1	0.91	0.80	0.64	0.45	0.36
11	---	---	---	---	---	e0.96	1.0	0.91	0.77	0.69	0.42	0.35
12	---	---	---	---	---	0.97	1.0	0.89	0.75	0.64	0.43	0.34
13	---	---	---	---	---	1.0	1.0	0.87	0.70	0.53	0.43	0.39
14	---	---	---	---	---	0.97	0.98	0.84	0.66	0.49	0.40	0.68
15	---	---	---	---	---	0.90	0.96	0.81	0.65	0.50	0.40	0.41
16	---	---	---	---	---	0.87	0.94	1.3	0.68	0.45	0.41	0.38
17	---	---	---	---	---	1.4	0.94	1.1	0.82	0.50	0.41	0.36
18	---	---	---	---	---	1.4	1.0	1.0	0.75	0.48	0.41	0.36
19	---	---	---	---	---	1.8	0.96	0.92	0.71	0.78	0.37	0.38
20	---	---	---	---	e0.60	1.5	0.93	1.0	0.85	1.1	0.35	0.39
21	---	---	---	---	e0.60	1.3	1.3	1.7	0.77	0.62	0.34	0.39
22	---	---	---	---	e0.60	1.2	1.2	1.3	0.70	0.54	0.39	0.39
23	---	---	---	---	e0.63	1.3	1.1	1.2	0.64	0.64	0.39	0.38
24	---	---	---	---	e0.66	1.5	1.0	1.1	0.61	0.66	0.37	0.38
25	---	---	---	---	e0.70	1.7	0.97	1.0	0.52	0.56	0.36	0.41
26	---	---	---	---	e0.74	2.0	0.95	0.95	0.51	0.50	0.36	0.40
27	---	---	---	---	e0.76	2.2	0.93	0.97	0.49	0.48	0.37	0.40
28	---	---	---	---	e0.76	1.7	0.99	0.95	0.48	0.50	0.37	0.38
29	---	---	---	---	e0.74	1.5	1.1	1.0	0.46	0.71	0.36	0.38
30	---	---	---	---	---	1.4	1.0	1.5	0.46	0.57	0.35	0.39
31	---	---	---	---	---	1.4	---	1.2	---	0.64	0.33	---
TOTAL	---	---	---	---	---	36.54	33.85	32.23	21.63	22.64	13.97	12.05
MEAN	---	---	---	---	---	1.18	1.13	1.04	0.72	0.73	0.45	0.40
MAX	---	---	---	---	---	2.2	1.5	1.7	1.0	1.9	1.3	0.68
MIN	---	---	---	---	---	0.70	0.93	0.81	0.46	0.45	0.33	0.33
AC-FT	---	---	---	---	---	72	67	64	43	45	28	24

e Estimated.

06436165 DEADWOOD CREEK AT CENTRAL CITY, SD—Continued



06436180 WHITEWOOD CREEK ABOVE WHITEWOOD, SD

LOCATION.--Lat 44°26'32", long 103°37'44", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.33, T.6 N., R.4 E., Lawrence County, Hydrologic Unit 10120202, on left bank 90 ft downstream from Crook Mountain Road and 1.1 mi south of Whitewood.

DRAINAGE AREA.--56.3 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1982 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 3,680 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow affected by occasional transbasin diversions for municipal water supplies. Satellite data-collection platform at station. Additional water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 15, 1962, discharge, 8,460 ft³/s, by contracted-opening measurement, 1.8 mi downstream from gage.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.5	e10	e5.0	e7.8	e6.1	e4.3	20	16	12	49	11	2.7
2	6.9	e9.5	e5.5	e6.8	e6.2	e7.6	21	15	10	24	7.8	1.5
3	7.3	e10	e6.0	e6.0	e6.2	e9.0	20	13	9.1	14	21	6.1
4	7.2	e8.5	e6.0	e5.0	e6.2	e9.5	19	13	9.3	20	16	10
5	6.9	e6.0	e3.5	e4.3	e6.0	e10	20	13	10	23	10	7.7
6	7.1	e4.6	e5.0	e3.8	e6.0	e12	19	11	7.8	22	8.9	5.6
7	7.3	e5.0	e5.8	e4.0	e5.8	e14	20	12	7.8	16	8.5	4.3
8	8.2	e5.2	e6.2	e4.4	e5.6	e15	19	12	7.2	14	7.8	4.2
9	8.6	e6.0	e6.0	e4.5	e5.6	e19	18	12	7.5	13	7.1	3.7
10	7.0	e6.5	e5.8	e5.0	e5.6	e28	17	11	7.2	12	8.2	3.4
11	9.5	e7.3	e5.5	e5.7	e5.7	e27	17	11	7.3	11	7.7	3.2
12	8.6	e8.3	e5.2	e6.0	e5.8	e20	16	13	7.3	11	7.2	2.6
13	8.6	e7.8	e6.0	e6.0	e6.0	17	16	12	6.9	8.8	7.4	2.7
14	8.3	e7.3	e6.1	e5.8	e6.4	14	15	11	6.8	8.2	7.3	5.2
15	9.3	e7.3	e6.2	e6.0	e7.0	15	15	10	6.8	7.4	6.6	6.3
16	8.5	e8.0	e6.2	e6.3	e8.0	13	14	14	7.1	7.7	6.2	3.9
17	8.7	e8.7	e6.3	e6.2	e9.0	21	14	18	8.0	7.9	6.9	2.8
18	8.6	e10	e6.4	e7.0	e11	22	15	12	11	7.0	6.8	2.5
19	9.0	e12	e6.5	e8.0	e13	26	15	11	8.3	10	6.5	2.3
20	9.1	e11	e6.7	e8.3	e14	28	14	12	9.5	16	6.2	3.1
21	8.9	e15	e6.8	e8.3	e15	21	19	22	12	14	6.7	3.1
22	7.5	e8.3	e7.0	e9.0	e15	20	21	18	11	9.1	7.2	3.7
23	8.8	e6.8	e7.1	e11	e14	20	17	15	10	10	9.1	3.5
24	9.6	e5.5	e7.4	e8.4	e13	24	16	13	11	10	6.6	3.0
25	10	e5.0	e8.0	e5.0	e13	30	14	12	11	11	5.9	2.8
26	11	e4.8	e8.0	e2.8	e13	32	13	11	11	8.7	6.2	2.6
27	13	e4.4	e7.0	e3.6	e13	44	12	11	10	8.2	6.8	2.9
28	14	e4.3	e5.7	e3.6	e12	31	12	10	10	8.6	4.1	2.7
29	11	e4.3	e4.7	e4.2	e9.0	27	18	11	11	10	3.5	3.2
30	12	e4.6	e5.2	e5.0	---	22	14	17	13	10	3.2	3.3
31	e11	---	e6.1	e5.7	---	21	---	14	---	8.7	2.9	---
TOTAL	279.0	222.0	188.9	183.5	262.2	623.4	500	406	276.9	410.3	237.3	114.6
MEAN	9.00	7.40	6.09	5.92	9.04	20.1	16.7	13.1	9.23	13.2	7.65	3.82
MAX	14	15	8.0	11	15	44	21	22	13	49	21	10
MIN	6.9	4.3	3.5	2.8	5.6	4.3	12	10	6.8	7.0	2.9	1.5
AC-FT	553	440	375	364	520	1,240	992	805	549	814	471	227

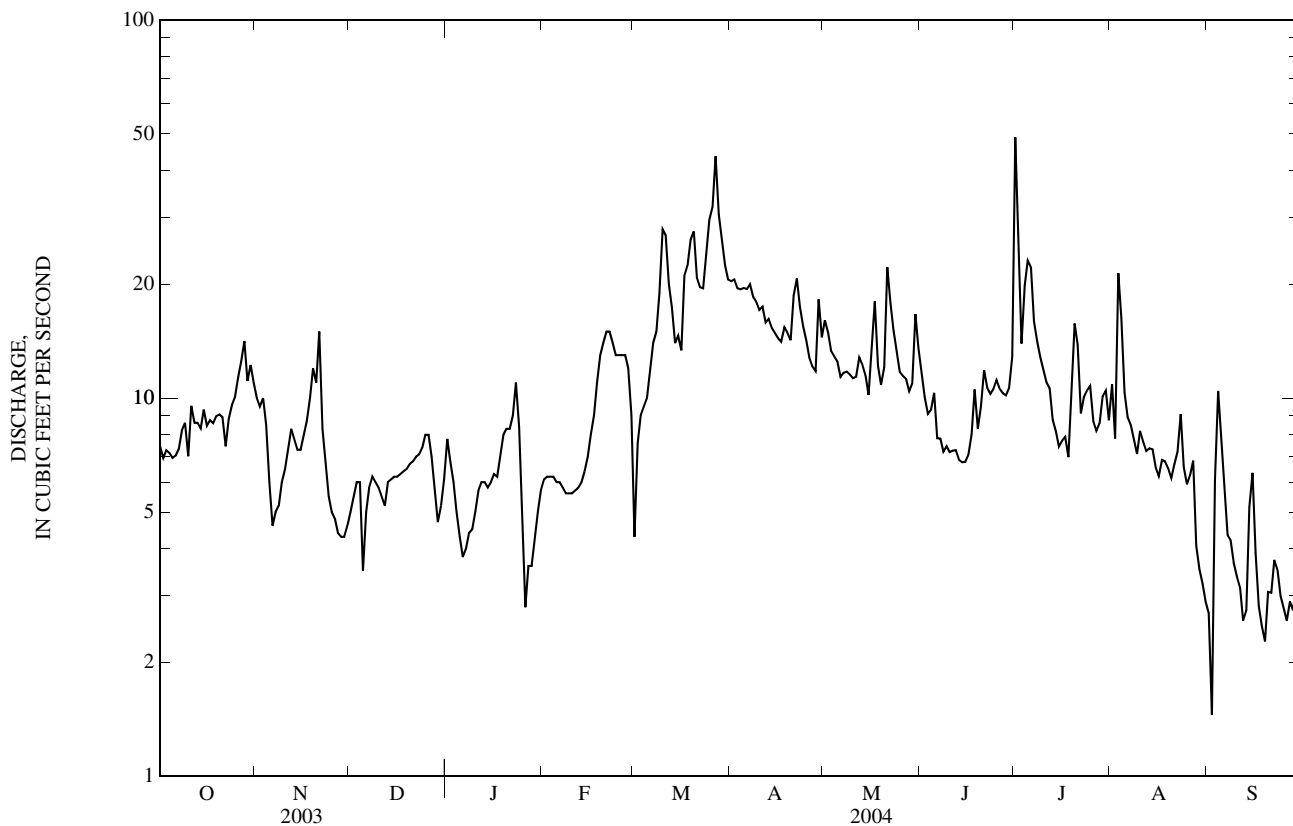
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 2004, BY WATER YEAR (WY)

MEAN	19.7	17.4	12.1	11.6	13.7	24.1	54.9	79.8	45.6	22.1	16.7	13.9
MAX	89.8	52.2	23.1	18.4	28.7	49.5	140	384	101	48.7	45.3	22.7
(WY)	(1999)	(1999)	(1999)	(1996)	(1996)	(1994)	(1997)	(1995)	(1984)	(1997)	(1998)	(1998)
MIN	9.00	7.40	4.28	3.22	4.15	3.07	16.7	13.1	9.23	5.17	7.65	3.82
(WY)	(2004)	(2004)	(2002)	(2002)	(2002)	(2002)	(2004)	(2004)	(2004)	(2002)	(2004)	(2004)

06436180 WHITEWOOD CREEK ABOVE WHITEWOOD, SD—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1983 - 2004	
ANNUAL TOTAL	7,084.0		3,704.1		26.9	
ANNUAL MEAN	19.4		10.1		59.5	
HIGHEST ANNUAL MEAN					1995	
LOWEST ANNUAL MEAN					9.59	
HIGHEST DAILY MEAN	117	Jun 8	49	Jul 1	2,370	May 9, 1995
LOWEST DAILY MEAN	2.7	Feb 23	1.5	Sep 2	1.5	Sep 2, 2004
ANNUAL SEVEN-DAY MINIMUM	4.4	Jan 10	2.9	Sep 24	2.4	Mar 17, 2002
MAXIMUM PEAK FLOW			^a 322	Jul 1	^b 3,800	May 8, 1995
MAXIMUM PEAK STAGE			^c 4.42	Mar 5	9.06	May 8, 1995
ANNUAL RUNOFF (AC-FT)	14,050		7,350		19,500	
10 PERCENT EXCEEDS	44		18		54	
50 PERCENT EXCEEDS	9.6		8.5		16	
90 PERCENT EXCEEDS	5.5		4.3		8.5	

- a Gage height, 3.16 ft.
- b On basis of slope-area measurement of peak flow.
- c Backwater from ice.
- e Estimated.



WATER-QUALITY RECORDS

PERIOD OF RECORD.--January 1983 to current year.

REMARKS.--On Sept. 1, 2004, a field blank sample was collected at this site for quality-control purposes. The analytical results for the field duplicate sample are noted in the water-quality results.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	Hardness, water, mg/L as CaCO3 (00900)	ANC, wat unfltrd end pt, lab, mg/L as CaCO3 (90410)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)
DEC 03...	1300	6.9	1,050	8.3	11.0	.0	674	15.9	109	430	185	100	43.8
APR 22...	0940	21	775	8.3	7.0	7.0	675	12.4	103	300	127	73.9	28.4
MAY 21...	0908	23	694	7.9	15.0	11.5	670	11.1	102	250	114	60.9	23.3
SEP 01...	1030	3.4	964	8.6	33.5	17.0	675	12.3	127	440	171	97.9	47.8
Date	Sodium, water, fltrd, mg/L (00930)	Sodium adsorption ratio (00931)	Sulfate water, fltrd, mg/L (00945)	Silica, water, fltrd, mg/L (00955)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water unfltrd ug/L (01002)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)	Cadmium water, unfltrd ug/L (01027)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, unfltrd recoverable, ug/L (01034)
DEC 03...	67.7	1	289	6.02	<2	.39	20	20.1	54	<.06	E.04	.04	<.8
APR 22...	51.6	1	198	5.73	7	.40	13	12.9	42	<.06	E.02	E.03	<.8
MAY 21...	46.1	1	176	5.28	3	.48	21	14.2	38	<.06	.06	.06	E.5
SEP 01...	56.8	1	256	2.34	3	.56	51	47.0	37	<.06	.06	.06	<.8
Date	Chromium, water, fltrd, ug/L (01030)	Cobalt water, fltrd, ug/L (01035)	Copper, water, unfltrd recoverable, ug/L (01042)	Copper, water, fltrd, ug/L (01040)	Cyanide water, fltrd, mg/L (00723)	Iron, water, unfltrd recoverable, ug/L (01045)	Iron, water, fltrd, ug/L (01046)	Lead, water, unfltrd recoverable, ug/L (01051)	Lead, water, fltrd, ug/L (01049)	Lithium water, fltrd, ug/L (01130)	Manganese, water, unfltrd recoverable, ug/L (01055)	Manganese, water, fltrd, ug/L (01056)	Mercury water, unfltrd recoverable, ug/L (71900)
DEC 03...	<.8	2.40	5.3	4.8	<.01	20	E5	.08	E.06	9.8	M	.2	<.02
APR 22...	<.8	1.47	2.9	2.1	<.01	M	16	.19	<.08	9.6	9	3.1	<.02
MAY 21...	<.8	1.45	3.4	2.6	--	1,020	14	1.16	E.05	8.0	34	4.1	E.02
SEP 01...	<.8	1.08	5.7	4.8	<.01	30	<6	.13	.10	10.2	2	.9	<.02
Date	Mercury water, fltrd, ug/L (71890)	Molybdenum, water, fltrd, ug/L (01060)	Nickel, water, unfltrd recoverable, ug/L (01067)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, unfltrd ug/L (01147)	Selenium, water, fltrd, ug/L (01145)	Silver, water, unfltrd recoverable, ug/L (01077)	Silver, water, fltrd, ug/L (01075)	Strontium, water, fltrd, ug/L (01080)	Vanadium, water, fltrd, ug/L (01085)	Zinc, water, unfltrd recoverable, ug/L (01092)	Zinc, water, fltrd, ug/L (01090)	Uranium natural water, fltrd, ug/L (22703)
DEC 03...	<.02	4.3	5.02	4.37	1.0	1.1	<.16	<.2	371	.4	5	4.7	2.71
APR 22...	<.02	3.0	3.36	2.58	1.0	1.0	<.16	<.2	280	.9	4	2.7	2.03
MAY 21...	<.02	4.5	3.94	2.44	.6	.8	<.16	<.2	239	.9	8	3.5	1.24
SEP 01...	<.02	4.3	5.44	5.91	1.1	1.4	<.16	<.2	343	.9	6	5.2	2.81

06436180 WHITEWOOD CREEK ABOVE WHITEWOOD, SD—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

		Suspended sediment concentration mg/L (80154)												
		Date												
		DEC 03... 1												
		APR 22... 6												
		MAY 21... 17												
		SEP 01... 2												
Date	Time	Specif. conductance, wat unflab, uS/cm 25 degC (90095)	ANC, wat unfl fixed end pt, lab, mg/L as CaCO3 (90410)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Sodium, water, fltrd, mg/L (00930)	Sulfate water, fltrd, mg/L (00945)	Silica, water, fltrd, mg/L (00955)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water unfltrd ug/L (01002)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	
SEP a01...	1035	3	<2	.03	<.008	<.10	<.2	.08	<2	.66	<2	E.1	<.2	
Date	Beryllium, water, fltrd, ug/L (01010)	Cadmium water, unfltrd ug/L (01027)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, unfltrd recover-able, ug/L (01034)	Chromium, water, fltrd, ug/L (01030)	Cobalt water, fltrd, ug/L (01035)	Copper, water, unfltrd recover-able, ug/L (01042)	Copper, water, fltrd, ug/L (01040)	Cyanide water, fltrd, mg/L (00723)	Iron, water, unfltrd recover-able, ug/L (01045)	Iron, water, fltrd, ug/L (01046)	Lead, water, unfltrd recover-able, ug/L (01051)	Lead, water, fltrd, ug/L (01049)	
SEP a01...	<.06	<.04	<.04	<.8	<.8	.019	.6	E.4	<.01	<9.0	<6	<.06	<.08	
Date	Lithium water, fltrd, ug/L (01130)	Manganese, water, unfltrd recover-able, ug/L (01055)	Manganese, water, fltrd, ug/L (01056)	Mercury water, unfltrd recover-able, ug/L (71900)	Mercury water, fltrd, ug/L (71890)	Molybdenum, water, fltrd, ug/L (01060)	Nickel, water, unfltrd recover-able, ug/L (01067)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, unfltrd ug/L (01147)	Selenium, water, fltrd, ug/L (01145)	Silver, water, unfltrd recover-able, ug/L (01077)	Silver, water, fltrd, ug/L (01075)	Strontium, water, fltrd, ug/L (01080)	
SEP a01...	<.6	<.2	.6	<.02	<.02	<.4	E.09	.11	E.3	<.4	<.16	<.2	<.40	
Date				Vanadium, water, fltrd, ug/L (01085)	Zinc, water, unfltrd recover-able, ug/L (01092)	Zinc, water, fltrd, ug/L (01090)	Uranium natural water, fltrd, ug/L (22703)							
SEP a01...				.2	3	3.2	<.04							

< Less than.
a Field blank sample collected for quality-control purposes.
E Estimated value.
M Presence verified, not quantified.

06436190 WHITEWOOD CREEK NEAR WHITEWOOD, SD

LOCATION.--Lat 44°32'30", long 103°34'16", in SE¹/₄ NW¹/₄ SE¹/₄ NE¹/₄ sec.25, T.7 N., R.4 E., Lawrence County, Hydrologic Unit 10120202, on right bank 30 ft downstream from county highway bridge and 6.9 mi northeast of Whitewood.

DRAINAGE AREA.--77.4 mi², approximately.

PERIOD OF RECORD.--October 1981 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 3,175 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good. Small diversions upstream for irrigation of 256 acres. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.7	8.6	3.3	7.9	6.6	7.6	20	15	8.6	13	8.2	1.1
2	7.4	7.5	3.2	7.2	6.9	5.9	20	14	6.6	69	6.3	1.2
3	7.2	8.8	3.2	5.7	6.4	7.8	18	13	5.4	10	14	1.2
4	7.3	6.7	3.0	5.0	5.9	9.1	17	12	4.8	13	37	3.3
5	7.1	4.6	2.1	4.2	6.8	9.3	18	13	5.8	25	11	3.8
6	7.0	3.6	2.9	4.0	5.9	e9.5	17	13	4.0	25	8.3	3.0
7	6.2	4.5	4.2	3.8	5.5	e10	17	11	3.7	13	7.6	2.1
8	6.0	4.6	4.3	4.1	6.6	e11	17	12	3.9	9.7	7.1	1.8
9	7.2	4.2	4.6	4.3	6.7	e12	16	12	4.3	8.7	5.9	1.5
10	5.9	5.1	4.4	5.0	7.1	23	15	12	4.6	8.3	5.8	1.2
11	7.3	6.9	3.4	5.7	6.0	16	15	10	4.2	7.6	6.2	1.1
12	7.5	7.1	3.7	5.6	5.2	16	15	11	4.4	6.6	5.4	1.0
13	7.4	5.8	3.8	5.4	6.7	18	15	11	4.2	6.4	4.3	0.96
14	7.3	6.2	4.6	5.0	7.0	14	13	11	3.9	5.5	4.2	0.97
15	7.0	5.8	5.0	5.5	7.5	15	13	9.4	3.5	5.9	3.8	2.4
16	7.6	5.2	5.0	6.1	7.9	14	13	13	3.4	5.8	3.3	1.9
17	7.2	6.5	5.1	5.5	8.7	15	13	19	4.4	6.2	3.6	1.4
18	6.9	6.0	5.7	6.8	10	20	14	16	5.7	5.7	3.8	0.91
19	6.5	6.5	5.3	6.9	12	20	14	12	5.1	5.1	3.7	0.87
20	6.5	8.1	5.5	6.8	13	23	13	10	4.8	9.2	3.6	0.85
21	6.7	8.3	6.4	6.5	13	18	14	19	5.4	22	3.2	1.0
22	6.5	5.1	6.4	8.7	12	16	24	17	4.7	10	3.5	1.3
23	6.1	3.9	7.2	9.3	12	16	18	18	4.0	10	5.6	1.6
24	6.1	4.1	7.3	8.3	11	18	16	13	3.8	13	3.8	1.4
25	6.9	3.6	8.3	5.3	9.5	21	15	e12	4.0	11	3.1	1.2
26	7.9	3.4	8.9	3.5	10	26	15	e12	3.7	8.6	2.8	0.99
27	8.7	3.4	9.6	3.5	10	40	13	11	3.4	7.3	3.4	1.0
28	9.9	3.2	7.7	3.4	11	31	12	9.9	3.1	7.3	3.1	1.0
29	8.4	3.2	6.0	4.7	11	29	17	9.1	3.0	8.2	2.0	1.1
30	9.1	3.4	7.0	5.3	---	23	15	13	3.1	10	1.6	1.0
31	9.1	---	7.3	6.0	---	20	---	12	---	7.6	1.3	---
TOTAL	225.6	163.9	164.4	175.0	247.9	534.2	472	395.4	133.5	373.7	186.5	44.15
MEAN	7.28	5.46	5.30	5.65	8.55	17.2	15.7	12.8	4.45	12.1	6.02	1.47
MAX	9.9	8.8	9.6	9.3	13	40	24	19	8.6	69	37	3.8
MIN	5.9	3.2	2.1	3.4	5.2	5.9	12	9.1	3.0	5.1	1.3	0.85
AC-FT	447	325	326	347	492	1,060	936	784	265	741	370	88

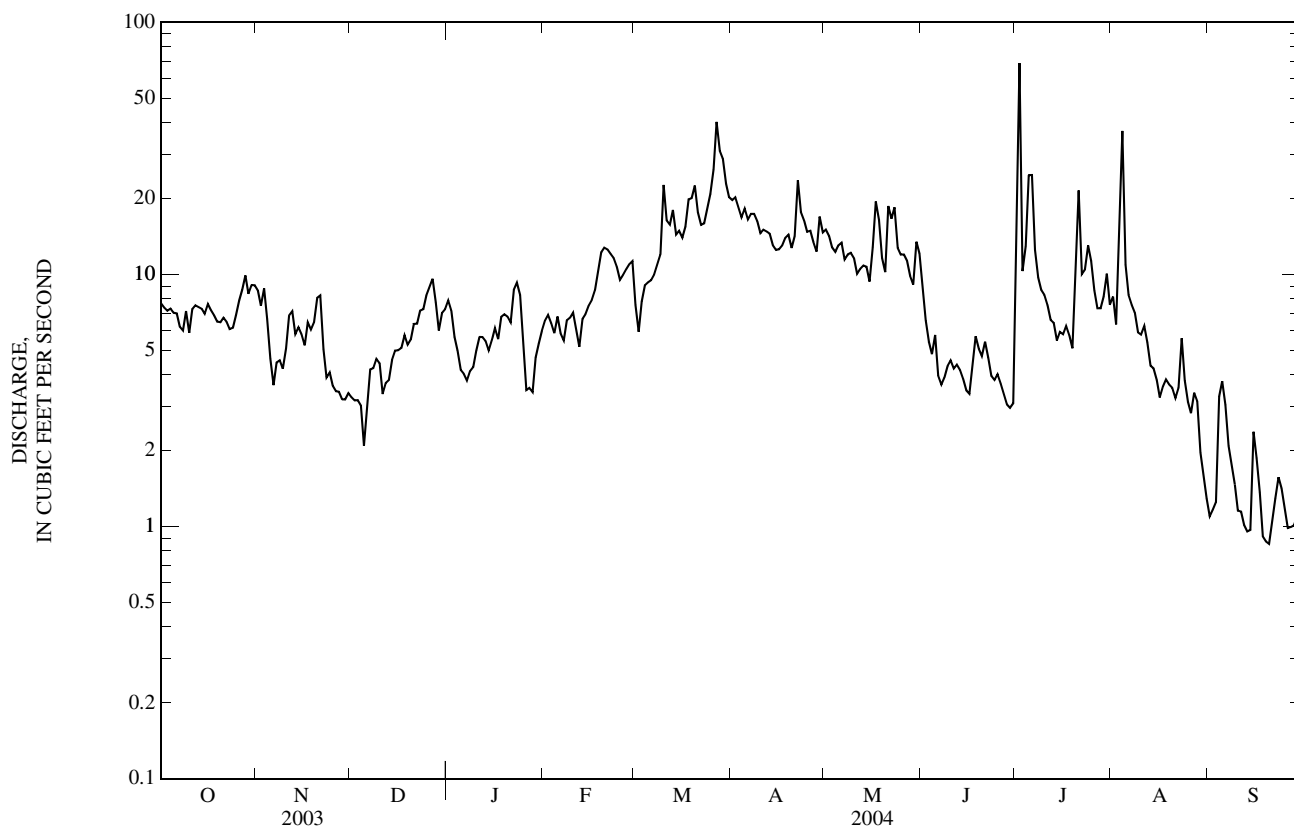
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 2004, BY WATER YEAR (WY)

MEAN	21.9	18.4	13.2	13.1	15.5	25.8	59.3	92.9	49.1	21.3	14.8	13.1
MAX	104	56.2	27.2	23.9	26.5	53.2	165	404	122	40.5	42.0	24.5
(WY)	(1999)	(1999)	(1999)	(1983)	(1996)	(1997)	(1997)	(1995)	(1999)	(1997)	(1998)	(1986)
MIN	7.28	5.46	5.30	5.22	6.41	8.34	15.7	12.8	4.45	1.74	4.68	1.47
(WY)	(2004)	(2004)	(2004)	(2002)	(2002)	(2002)	(2004)	(2004)	(2004)	(2002)	(2003)	(2004)

06436190 WHITEWOOD CREEK NEAR WHITEWOOD, SD—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1982 - 2004	
ANNUAL TOTAL	7,367.8		3,116.25		a29.9	
ANNUAL MEAN	20.2		8.51		62.8	
HIGHEST ANNUAL MEAN					8.51 1995	
LOWEST ANNUAL MEAN					2,060 May 9, 1995	
HIGHEST DAILY MEAN	137	Jun 8	69	Jul 2	0.39	Aug 6, 2002
LOWEST DAILY MEAN	1.9	Aug 27	0.85	Sep 20	0.42	Aug 1, 2002
ANNUAL SEVEN-DAY MINIMUM	2.6	Aug 23	1.1	Sep 24	3,930	May 8, 1995
MAXIMUM PEAK FLOW			345	Jul 2	6.01	May 8, 1995
MAXIMUM PEAK STAGE			2.47	Jul 2		
ANNUAL RUNOFF (AC-FT)	14,610		6,180		21,670	
10 PERCENT EXCEEDS	50		16		61	
50 PERCENT EXCEEDS	8.0		6.9		17	
90 PERCENT EXCEEDS	4.1		3.1		7.3	

a Median of annual mean discharges, 29 ft³/s.
 e Estimated.



BELLE FOURCHE RIVER BASIN

06436198 WHITEWOOD CREEK ABOVE VALE, SD

LOCATION.--Lat 44°37'04", long 103°28'52", in SE $\frac{1}{4}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.35, T.8 N., R.5 E., Butte County, Hydrologic Unit 10120202, on right bank at point where South Canal crosses creek, 3.2 mi above mouth, and 3.7 mi west of Vale.

DRAINAGE AREA.--102 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1982 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 2,840 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Diversions upstream from station for irrigation of about 800 acres. Additional water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurement and Field Determinations section.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.4	8.1	e7.0	e7.0	e3.4	11	21	14	14	5.6	2.8	0.17
2	5.7	8.1	e6.8	e6.7	e4.0	e9.0	21	13	11	37	2.6	0.08
3	4.5	8.3	e6.6	e6.0	e4.0	11	20	11	9.2	20	1.2	0.08
4	4.2	7.4	e6.3	e5.4	e3.7	11	19	9.9	8.2	20	17	0.07
5	4.4	4.6	e6.1	e5.0	e4.2	11	17	8.3	8.5	33	10	0.44
6	4.1	4.5	e6.0	e4.0	e4.0	11	16	7.7	7.7	29	6.7	1.4
7	3.7	5.1	e6.0	e3.0	e3.7	e10	17	6.8	6.2	22	4.9	1.0
8	3.6	5.8	e6.0	e4.0	e4.0	9.5	17	7.0	5.2	19	4.8	0.54
9	4.1	5.0	e5.5	e4.7	e4.0	12	16	6.7	4.9	17	3.0	0.29
10	3.8	6.4	e5.0	e6.0	e4.7	20	14	6.6	6.9	16	2.4	0.10
11	3.7	8.1	e4.6	e7.0	e4.0	18	15	6.5	5.2	14	2.8	0.07
12	4.4	8.5	e4.0	e6.0	e3.0	13	14	6.7	2.8	12	1.9	0.06
13	4.3	7.0	e4.7	e5.0	e3.8	16	14	7.4	3.8	9.5	1.2	0.06
14	4.4	7.8	e5.0	e5.2	e4.0	13	13	7.4	1.9	7.4	0.84	0.06
15	4.4	9.0	e5.1	e6.0	e4.5	13	11	6.4	1.2	6.7	0.68	0.06
16	5.4	7.8	e5.2	e8.0	e5.2	12	10	7.5	0.95	7.1	0.34	0.08
17	4.8	8.3	e5.3	e7.0	e6.0	13	11	13	2.6	6.8	0.27	0.37
18	5.0	8.0	e5.3	e8.0	e10	20	e12	12	4.6	6.0	1.4	0.10
19	4.8	7.6	e5.4	e8.5	e13	14	13	9.4	6.4	5.0	e1.4	0.06
20	5.1	7.8	e5.5	e8.3	e18	20	11	8.5	5.9	6.6	e1.4	0.08
21	5.2	7.6	e6.5	e8.0	e18	17	12	16	6.1	11	e1.2	0.08
22	4.8	6.3	e6.3	e9.0	e18	15	20	16	5.7	6.8	e1.2	0.04
23	4.2	e3.7	e6.0	e12	e16	15	15	22	5.1	5.1	3.5	0.06
24	5.1	e4.2	e6.0	e10	e13	16	13	15	4.8	9.9	3.3	0.04
25	5.9	e6.3	e6.8	e5.0	e12	19	12	13	5.1	9.4	2.0	0.07
26	7.2	e6.4	e8.0	e3.0	e13	23	11	11	4.7	8.0	1.5	0.08
27	7.2	e6.6	e9.0	e3.7	12	37	10	11	5.6	5.7	1.2	0.08
28	7.8	e6.7	e5.2	e3.4	10	35	10	11	5.3	3.1	2.0	0.06
29	8.0	e6.8	e4.0	e3.2	13	30	16	e11	5.0	3.8	1.7	0.05
30	8.2	e7.0	e5.0	e3.0	---	27	15	e13	4.9	5.4	0.74	0.05
31	8.2	---	e6.0	e3.0	---	22	---	17	---	4.5	0.33	---
TOTAL	162.6	204.8	180.2	184.1	236.2	523.5	436	331.8	169.45	372.4	86.30	5.78
MEAN	5.25	6.83	5.81	5.94	8.14	16.9	14.5	10.7	5.65	12.0	2.78	0.19
MAX	8.2	9.0	9.0	12	18	37	21	22	14	37	17	1.4
MIN	3.6	3.7	4.0	3.0	3.0	9.0	10	6.4	0.95	3.1	0.27	0.04
AC-FT	323	406	357	365	469	1,040	865	658	336	739	171	11

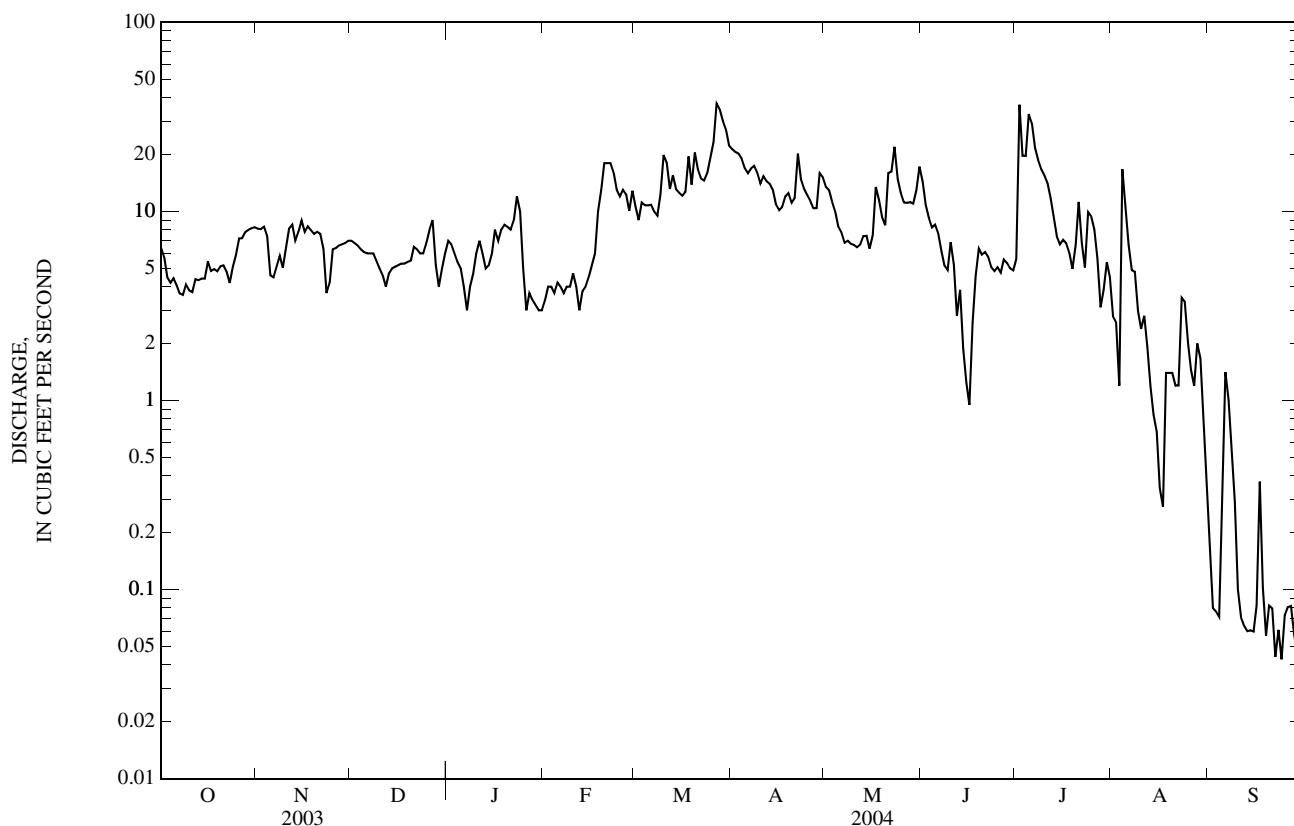
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 2004, BY WATER YEAR (WY)

MEAN	21.1	17.3	13.0	13.3	18.7	29.4	59.7	87.2	55.6	20.5	12.9	11.3
MAX	126	55.7	27.1	44.3	60.1	59.7	173	435	163	47.5	52.1	38.9
(WY)	(1999)	(1999)	(1999)	(1997)	(1997)	(1997)	(1997)	(1995)	(1999)	(1997)	(1998)	(1986)
MIN	5.25	6.83	5.05	4.90	6.27	6.42	14.5	10.7	5.35	0.18	0.72	0.19
(WY)	(2004)	(2004)	(2002)	(2002)	(2002)	(2002)	(2004)	(2004)	(2002)	(2002)	(2003)	(2004)

06436198 WHITEWOOD CREEK ABOVE VALE, SD—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1984 - 2004	
ANNUAL TOTAL	7,188.61		2,893.13			
ANNUAL MEAN	19.7		7.90		^a 30.0	
HIGHEST ANNUAL MEAN					64.1	1995
LOWEST ANNUAL MEAN					7.82	2002
HIGHEST DAILY MEAN	177	Mar 14	37	Mar 27	2,920	May 9, 1995
LOWEST DAILY MEAN	0.00	Aug 28	0.04	Sep 22	^b 0.00	Jul 21, 1985
ANNUAL SEVEN-DAY MINIMUM	0.11	Aug 24	0.06	Sep 19	0.00	Jul 11, 2002
MAXIMUM PEAK FLOW			^c 123	Jul 2	4,250	May 8, 1995
MAXIMUM PEAK STAGE			^d 2.32	Feb 5	5.72	May 8, 1995
ANNUAL RUNOFF (AC-FT)	14,260		5,740		21,750	
10 PERCENT EXCEEDS	44		16		63	
50 PERCENT EXCEEDS	9.0		6.4		16	
90 PERCENT EXCEEDS	1.4		1.1		5.5	

- a Median of annual mean discharges, 28 ft³/s.
- b Also July 22 and Aug. 19, 1985, July 11 to Aug. 8, 2002.
- c Gage height, 2.03 ft.
- d Backwater from ice.
- e Estimated.



BELLE FOURCHE RIVER BASIN
06436198 WHITEWOOD CREEK ABOVE VALE—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--January 1983 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unfiltered, uS/cm (00095)	pH, water, unfiltered, std units (00400)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	Hardness, water, mg/L as CaCO3 (00900)	ANC, wat unfiltered end pt, lab, mg/L as CaCO3 (90410)	Calcium water, filtered, mg/L (00915)	Magnesium, water, filtered, mg/L (00925)
DEC 04...	1030	6.1	1,360	7.5	-2.0	.0	702	13.7	94	640	156	152	62.2
APR 22...	1200	24	1,110	8.1	10.5	12.0	698	11.2	104	490	167	120	46.4
MAY 21...	1130	15	1,210	7.9	19.5	18.0	689	9.9	105	560	184	132	54.5
SEP 02...	1100	.07	1,510	6.8	24.5	20.5	690	9.4	105	670	156	147	74.0

Date	Sodium, water, filtered, mg/L (00930)	Sodium adsorption ratio (00931)	Sulfate water, filtered, mg/L (00945)	Silica, water, filtered, mg/L (00955)	Aluminum, water, filtered, ug/L (01106)	Antimony, water, filtered, ug/L (01095)	Arsenic water unfiltered, ug/L (01002)	Arsenic water, filtered, ug/L (01000)	Barium, water, filtered, ug/L (01005)	Beryllium, water, filtered, ug/L (01010)	Cadmium water, unfiltered, ug/L (01027)	Cadmium water, filtered, ug/L (01025)	Chromium, water, unfiltered recoverable, ug/L (01034)
DEC 04...	64.4	1	497	5.95	<2	.27	48	29.5	26	<.06	<.04	E.03	<.8
APR 22...	60.2	1	361	4.30	2	.25	62	37.8	27	<.06	E.03	E.02	<.8
MAY 21...	64.6	1	414	6.65	E1	.23	99	52.6	29	<.06	.05	.09	1.6
SEP 02...	94.2	2	589	15.4	E1	.33	272	112	60	<.06	.05	E.02	<.8

Date	Chromium, water, filtered, ug/L (01030)	Cobalt water, filtered, ug/L (01035)	Copper, water, unfiltered recoverable, ug/L (01042)	Copper, water, filtered, ug/L (01040)	Cyanide water, filtered, mg/L (00723)	Iron, water, unfiltered recoverable, ug/L (01045)	Iron, water, filtered, ug/L (01046)	Lead, water, unfiltered recoverable, ug/L (01051)	Lead, water, filtered, ug/L (01049)	Lithium water, filtered, ug/L (01130)	Manganese, water, unfiltered recoverable, ug/L (01055)	Manganese, water, filtered, ug/L (01056)	Mercury water, unfiltered recoverable, ug/L (71900)
DEC 04...	<.8	1.80	6.8	6.4	<.01	370	55	.08	<.08	21.3	112	110	<.02
APR 22...	<.8	1.77	4.5	2.6	<.01	920	26	.62	<.08	14.3	106	56.8	E.02
MAY 21...	<.8	1.56	6.1	4.1	--	2,100	34	1.26	<.08	18.3	174	59.8	.04
SEP 02...	<.8	1.82	8.5	3.2	<.01	1,830	19	.67	<.08	31.7	2,480	2,200	.02

06436198 WHITEWOOD CREEK ABOVE VALE—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Mercury water, fltrd, ug/L (71890)	Molyb- denum, water, fltrd, ug/L (01060)	Nickel, water, unfltrd recover- able, ug/L (01067)	Nickel, water, fltrd, ug/L (01065)	Selen- ium, water, unfltrd ug/L (01147)	Selen- ium, water, fltrd, ug/L (01145)	Silver, water, unfltrd recover- able, ug/L (01077)	Silver, water, fltrd, ug/L (01075)	Stront- ium, water, fltrd, ug/L (01080)	Vanad- ium, water, fltrd, ug/L (01085)	Zinc, water, unfltrd recover- able, ug/L (01092)	Zinc, water, fltrd, ug/L (01090)	Uranium natural water, fltrd, ug/L (22703)
DEC 04...	<.02	2.5	5.58	5.20	2.0	2.2	<.16	<.2	956	.3	3	2.7	3.15
APR 22...	<.02	2.6	4.86	3.15	1.7	1.7	<.16	<.2	705	.9	5	2.4	2.59
MAY 21...	<.02	3.3	6.67	3.46	1.8	2.0	<.16	<.2	814	1.2	6	2.2	2.33
SEP 02...	<.02	5.8	7.91	7.50	.7	1.0	<.16	<.2	943	.5	6	2.3	2.03

Date	Sus- pended sediment concentration mg/L (80154)
DEC 04...	5
APR 22...	35
MAY 21...	56
SEP 02...	40

< Less than.
E Estimated value.

BELLE FOURCHE RIVER BASIN
06436760 HORSE CREEK ABOVE VALE, SD

LOCATION.--Lat 44°39'08", long 103°21'59", in SW $\frac{1}{4}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.14, T.8 N., R.6 E., Butte County, Hydrologic Unit 10120202, on left bank 2.6 mi upstream from Dry Creek, 5.5 mi upstream from mouth, 3.0 mi northeast of Vale, and 4.5 mi southeast of Newell.

DRAINAGE AREA.--464 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1980 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 2,710 ft above NGVD of 1929, from topographic map. April 1962 to September 1980, water-stage recorder, at site 2.7 mi downstream, at different datum.

REMARKS.--Records good except those for Oct. 1 to Nov. 6, Apr. 14 to May 18, and Sept. 28-30, which are fair, and those for estimated daily discharges, which are poor. Natural flow of stream affected by diversions for irrigation upstream from station and by return flow from Belle Fourche Irrigation Project. Satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e3.7	2.4	1.7	1.6	e1.6	34	2.9	0.64	14	19	17	52
2	2.9	2.4	1.6	1.5	1.6	38	2.6	0.72	17	29	18	49
3	2.8	2.4	1.7	2.4	1.4	57	2.5	0.77	15	111	21	44
4	2.7	2.4	1.6	1.6	1.4	56	2.2	0.78	12	268	26	48
5	2.7	2.4	1.4	1.3	1.5	30	2.1	0.78	11	125	21	46
6	2.7	2.3	1.3	0.79	1.4	19	1.8	0.93	9.9	110	20	48
7	2.6	2.1	1.4	0.57	1.5	13	2.1	0.86	8.8	68	20	52
8	2.6	2.1	1.5	0.51	1.5	13	2.4	1.2	6.8	56	19	49
9	2.4	2.1	1.6	0.61	1.5	12	2.4	1.4	4.6	52	21	46
10	2.4	2.0	1.5	0.77	1.5	19	2.4	1.6	14	56	24	43
11	2.4	2.2	1.4	0.91	1.6	13	2.5	1.5	19	55	27	43
12	2.4	2.6	1.6	1.1	1.9	132	2.3	1.2	17	51	29	46
13	2.4	2.4	1.3	1.3	2.1	127	2.3	1.0	21	48	34	38
14	2.4	2.6	1.1	1.4	2.0	74	2.6	1.2	18	46	34	39
15	2.4	2.8	1.3	1.7	2.1	78	2.4	1.5	8.7	46	42	45
16	e2.4	2.6	1.2	1.7	2.0	47	2.5	2.1	6.8	46	41	45
17	e2.7	2.6	1.3	1.7	2.3	33	2.1	2.3	9.8	43	45	32
18	e2.9	2.4	1.4	1.6	3.0	31	1.8	1.8	15	45	44	25
19	e2.8	2.1	1.3	1.6	6.0	25	1.7	2.0	17	41	46	25
20	e2.7	2.1	1.2	1.7	8.0	20	1.6	12	15	45	53	23
21	e2.7	2.2	1.2	1.8	8.8	20	1.5	9.6	13	47	52	21
22	e2.7	2.3	1.2	1.7	16	15	1.4	26	14	42	52	18
23	e2.7	2.1	1.2	1.7	14	13	1.1	31	15	44	55	14
24	e2.7	2.1	1.1	1.8	102	9.3	0.84	591	10	43	45	13
25	e2.7	2.1	1.0	1.6	109	7.1	e0.78	319	20	33	50	8.7
26	e2.8	1.9	1.1	e1.0	74	5.5	e0.68	114	23	25	51	6.1
27	e3.3	1.7	1.1	e0.65	57	4.7	e0.64	62	20	20	54	5.4
28	e2.9	1.7	e1.1	e0.47	61	3.7	e0.62	44	17	16	61	5.8
29	2.5	1.6	e1.0	e0.55	63	3.9	0.60	32	13	18	64	5.1
30	2.4	1.7	e0.90	e0.85	---	3.1	0.58	23	15	23	61	5.3
31	2.4	---	e0.80	e1.3	---	2.7	---	17	---	19	57	---
TOTAL	82.8	66.4	40.10	39.78	550.7	959.0	53.94	1,304.88	420.4	1,690	1,204	940.4
MEAN	2.67	2.21	1.29	1.28	19.0	30.9	1.80	42.1	14.0	54.5	38.8	31.3
MAX	3.7	2.8	1.7	2.4	109	132	2.9	591	23	268	64	52
MIN	2.4	1.6	0.80	0.47	1.4	2.7	0.58	0.64	4.6	16	17	5.1
AC-FT	164	132	80	79	1,090	1,900	107	2,590	834	3,350	2,390	1,870

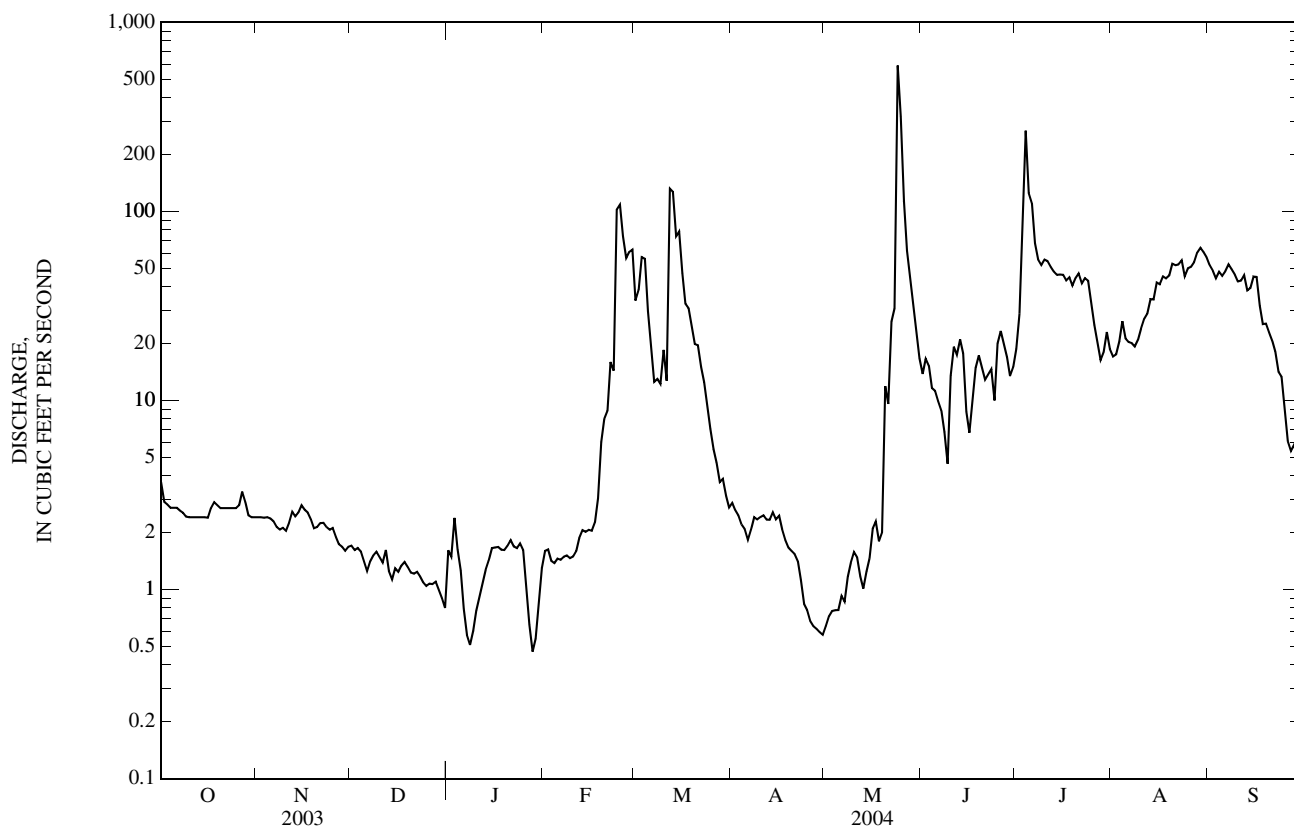
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1981 - 2004, BY WATER YEAR (WY)

MEAN	17.7	4.96	2.98	3.96	39.3	67.3	44.6	147	72.0	70.3	48.1	49.5
MAX	169	26.9	8.50	31.7	424	251	229	901	272	464	82.6	311
(WY)	(1983)	(1999)	(1983)	(1983)	(1997)	(1986)	(1987)	(1982)	(1998)	(1993)	(1987)	(1986)
MIN	1.46	1.82	1.15	0.96	1.24	1.30	0.75	6.44	11.3	35.8	25.7	11.3
(WY)	(1992)	(1991)	(1993)	(1992)	(1992)	(1992)	(1992)	(2003)	(1991)	(1991)	(1992)	(1992)

06436760 HORSE CREEK ABOVE VALE, SD—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1981 - 2004	
ANNUAL TOTAL	4,666.50		7,352.40			
ANNUAL MEAN	12.8		20.1		^a 47.4	
HIGHEST ANNUAL MEAN					131	1996
LOWEST ANNUAL MEAN					10.4	1992
HIGHEST DAILY MEAN	64	Aug 30	591	May 24	14,000	May 21, 1982
LOWEST DAILY MEAN	0.80	Dec 31	0.47	Jan 28	0.07	Nov 7, 1985
ANNUAL SEVEN-DAY MINIMUM	1.0	Dec 25	0.64	Apr 26	0.28	Dec 25, 1990
MAXIMUM PEAK FLOW			738	May 24	17,700	May 21, 1982
MAXIMUM PEAK STAGE			7.06	May 24	24.80	May 21, 1982
ANNUAL RUNOFF (AC-FT)	9,260		14,580		34,330	
10 PERCENT EXCEEDS	40		51		69	
50 PERCENT EXCEEDS	3.3		2.8		8.9	
90 PERCENT EXCEEDS	1.5		1.1		1.8	

a Median of annual mean discharges, 36 ft³/s.
 e Estimated.



BELLE FOURCHE RIVER BASIN
 06436760 HORSE CREEK ABOVE VALE, SD—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analysis: Water years 1986-91, 1994, 2002-03. Sediment records: Periodic samples taken August 1986 to March 1987 and May to September 2004.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: May to September 2004.
 SPECIFIC CONDUCTANCE: May to September 2004.
 pH: May to September 2004.
 DISSOLVED OXYGEN: May to September 2004.
 TURBIDITY: May to September 2004.

REMARKS.--Data published in the tables below are rated as follows: temperature, good; specific conductance, good; pH, good; dissolved oxygen, good except those for June 1 and Aug. 12-30, which are poor; turbidity, good except those for July 24-28, which are poor. Daily records are collected at 15-minute intervals using multi-parameter water-quality instrument. Satellite data-collection platform at station.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum daily, 30.3°C, July 18, 2004; minimum daily, 11.3°C, Sept. 24, 2004.
 SPECIFIC CONDUCTANCE: Maximum daily, 2,790 µS/cm, Sept. 30, 2004; minimum daily, 760 µS/cm, July 4, 2004.
 pH: Maximum daily, 8.5 standard units, June 3, 23, 2004; minimum daily, 7.7 standard units, July 3, 4, 2004.
 DISSOLVED OXYGEN: Maximum daily, 13.7 mg/L, Sept. 29, 2004; minimum daily, 4.2 mg/L, July 4, 2004.
 TURBIDITY: Maximum daily, 1,200 NT units, May 28, 2004; minimum daily, 4.0 NT units, Sept. 30, 2004.

TEMPERATURE, WATER, DEGREES CELSIUS
 WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
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14	---	---	---	---	---	---	---	---	---	---	---	---
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16	---	---	---	---	---	---	---	---	---	---	---	---
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19	---	---	---	---	---	---	---	---	---	---	---	---
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26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	22.4	16.4	19.3
29	---	---	---	---	---	---	---	---	---	20.9	17.8	19.6
30	---	---	---	---	---	---	---	---	---	17.8	14.8	16.1
31	---	---	---	---	---	---	---	---	---	17.7	13.1	15.5
MONTH	---	---	---	---	---	---	---	---	---	22.4	13.1	17.6

BELLE FOURCHE RIVER BASIN

06436760 HORSE CREEK ABOVE VALE, SD—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
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16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
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25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	2,190	1,190	1,580
29	---	---	---	---	---	---	---	---	---	2,200	1,530	1,790
30	---	---	---	---	---	---	---	---	---	1,530	1,460	1,480
31	---	---	---	---	---	---	---	---	---	1,540	1,480	1,520
MONTH	---	---	---	---	---	---	---	---	---	2,200	1,190	1,590
	JUNE			JULY			AUGUST			SEPTEMBER		
1	1,730	1,540	1,590	1,930	1,800	1,840	2,080	1,980	2,030	1,760	1,740	1,750
2	1,700	1,540	1,590	1,960	1,840	1,900	2,070	1,950	2,010	1,790	1,760	1,770
3	1,700	1,540	1,600	2,090	1,170	1,910	2,000	1,920	1,950	1,860	1,790	1,840
4	1,900	1,700	1,760	1,170	760	823	1,980	1,910	1,930	1,840	1,790	1,820
5	2,100	1,730	1,820	1,240	973	1,090	1,990	1,930	1,960	1,880	1,790	1,840
6	2,030	1,850	1,880	1,550	1,210	1,300	1,970	1,880	1,920	1,940	1,860	1,890
7	1,890	1,810	1,840	1,680	1,520	1,580	2,010	1,880	1,930	1,870	1,850	1,870
8	1,960	1,840	1,890	1,630	1,440	1,560	2,040	1,970	2,000	1,910	1,840	1,870
9	2,330	1,960	2,150	1,460	1,380	1,410	2,050	1,920	1,980	1,890	1,870	1,880
10	2,330	1,840	2,100	1,450	1,350	1,400	2,140	1,900	1,990	1,890	1,840	1,860
11	2,080	1,790	1,930	1,440	1,380	1,410	2,170	2,020	2,080	1,900	1,840	1,850
12	2,040	1,960	2,020	1,440	1,380	1,400	2,150	1,940	2,030	1,960	1,840	1,880
13	1,970	1,830	1,880	1,440	1,420	1,420	2,020	1,900	1,970	1,840	1,780	1,800
14	2,420	1,860	2,150	1,500	1,420	1,460	1,980	1,940	1,960	1,820	1,700	1,770
15	1,980	1,820	1,880	1,520	1,500	1,510	1,950	1,800	1,850	1,810	1,710	1,770
16	1,900	1,850	1,880	1,770	1,520	1,620	1,850	1,780	1,820	1,860	1,760	1,790
17	1,910	1,600	1,850	1,820	1,700	1,740	1,800	1,740	1,780	2,040	1,860	1,970
18	1,870	1,590	1,690	1,720	1,690	1,700	1,760	1,740	1,750	2,080	2,000	2,040
19	2,080	1,870	2,010	1,830	1,670	1,740	1,770	1,740	1,750	2,030	1,950	1,980
20	2,080	1,940	2,010	1,730	1,660	1,690	1,770	1,720	1,740	2,040	1,950	1,980
21	2,000	1,960	1,980	1,850	1,640	1,700	1,740	1,710	1,730	2,130	2,040	2,080
22	2,020	1,940	1,980	1,840	1,700	1,750	1,750	1,720	1,730	2,140	2,080	2,120
23	1,990	1,870	1,900	1,710	1,680	1,690	1,760	1,730	1,740	2,170	2,060	2,130
24	2,130	1,880	2,000	1,750	1,660	1,710	1,760	1,720	1,730	2,170	2,060	2,110
25	2,140	1,750	1,970	1,690	1,640	1,670	1,850	1,730	1,780	2,260	2,090	2,190
26	1,760	1,650	1,710	1,750	1,690	1,730	1,850	1,740	1,780	2,360	---	2,290
27	1,760	1,650	1,710	1,820	1,750	1,780	1,780	1,740	1,760	2,440	2,340	2,390
28	1,700	1,640	1,670	1,830	1,780	1,810	1,750	1,700	1,720	2,590	2,440	e2,520
29	1,710	1,640	1,680	1,880	1,810	1,840	1,730	1,700	1,720	2,680	2,590	2,640
30	1,800	1,700	1,740	1,910	1,800	1,850	1,740	1,670	1,730	2,790	2,680	2,730
31	---	---	---	1,980	1,860	1,890	---	1,780	1,750	---	---	---
MONTH	2,420	1,540	1,860	2,090	760	1,610	2,170	1,670	1,860	2,790	1,700	2,010
YEAR	2,790	760	1,830									

e Estimated

BELLE FOURCHE RIVER BASIN

06436760 HORSE CREEK ABOVE VALE, SD—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
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7	---	---	---	---	---	---	---	---	---	---	---	---
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9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
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12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	10.2	8.2	9.0
29	---	---	---	---	---	---	---	---	---	8.9	8.2	8.4
30	---	---	---	---	---	---	---	---	---	9.7	8.2	8.9
31	---	---	---	---	---	---	---	---	---	8.4	---	8.1
MONTH	---	---	---	---	---	---	---	---	---	10.2	8.2	8.6
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	---	---	---	10.7	6.9	8.6	12.0	6.8	8.9	8.7	7.3	8.0
2	10.5	9.0	9.7	10.8	7.2	8.7	11.3	5.7	8.0	8.7	7.4	8.0
3	12.9	9.4	10.9	11.1	4.3	7.3	8.4	5.6	6.9	8.9	7.2	7.9
4	10.5	9.2	9.7	7.8	4.2	6.3	10.2	6.3	8.1	9.0	7.3	8.0
5	9.9	8.6	9.2	8.6	7.1	8.0	10.6	7.0	8.4	9.5	7.8	8.4
6	10.0	7.9	8.9	9.1	7.9	8.6	9.2	6.1	7.6	10.1	8.3	9.0
7	10.3	7.5	8.7	8.3	7.5	8.0	9.2	5.8	7.1	10.0	8.5	9.1
8	10.2	7.4	8.8	9.4	6.4	7.2	9.7	6.1	7.7	9.9	8.2	8.9
9	10.6	8.6	9.5	7.0	6.4	6.7	10.0	6.8	7.9	9.6	7.8	8.5
10	11.1	9.2	10.1	7.2	6.4	6.8	9.4	6.7	7.9	9.4	7.5	8.3
11	11.0	9.1	10.2	7.8	6.6	7.1	9.9	6.7	8.2	9.7	7.7	8.4
12	12.3	8.3	10.9	8.2	6.6	7.1	---	6.7	---	9.5	7.4	8.1
13	11.3	9.5	10.4	8.6	6.5	7.3	---	---	---	9.2	7.2	8.0
14	11.5	9.1	10.3	8.9	6.3	7.5	---	---	---	9.2	7.7	8.3
15	12.0	7.0	10.0	7.6	6.3	6.9	---	---	---	9.8	8.1	8.8
16	11.4	8.4	9.8	8.6	6.9	7.7	---	---	---	10.0	8.0	8.9
17	11.8	9.1	10.4	8.3	6.7	7.3	---	---	---	10.1	7.9	8.8
18	12.3	9.5	11.0	8.3	6.4	7.2	---	---	---	9.9	7.4	8.4
19	13.2	10.6	11.6	8.5	6.4	7.2	---	---	---	9.7	6.9	8.0
20	13.1	10.1	11.4	8.4	6.6	7.3	---	---	---	9.1	6.9	7.9
21	12.5	9.3	10.8	8.8	6.6	7.6	---	---	---	10.9	7.7	9.2
22	12.5	9.0	10.8	9.0	6.9	7.8	---	---	---	11.7	8.5	9.8
23	12.8	9.1	10.9	9.1	7.5	8.4	---	---	---	10.9	8.6	9.5
24	12.9	8.2	10.3	10.6	8.5	9.3	---	---	---	11.5	9.0	9.9
25	12.6	9.2	10.7	10.6	8.2	9.2	---	---	---	11.6	8.5	9.6
26	11.6	9.1	10.2	10.3	7.4	8.8	---	---	---	12.2	7.6	9.2
27	12.2	8.9	10.3	10.1	7.0	8.4	---	---	---	12.3	7.3	9.5
28	12.7	8.5	10.4	10.5	6.9	8.7	---	---	---	12.1	8.2	9.7
29	12.3	7.8	10	11.0	7.7	9.2	---	---	---	13.7	8.0	10.0
30	11.4	6.2	8.7	11.4	7.6	9.2	---	---	---	11.5	8.7	10.0
31	---	---	---	11.7	7.5	9.1	8.9	---	e8.1	---	---	---
MONTH	13.2	6.2	10.2	11.7	4.2	7.9	12.0	5.6	7.9	13.7	6.9	8.8
YEAR	13.7	4.2	8.8									

e Estimated

BELLE FOURCHE RIVER BASIN

06436760 HORSE CREEK ABOVE VALE, SD—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Turbidity, IR LED light, det ang 90 deg, FNU (63680)	Suspended sediment concentration mg/L (80154)
MAY							
27...	1110	64	1,130	21.0	14.5	1,230	1,280
JUN							
02...	1002	--	--	--	15.3	--	203
02...	1112	15	1,590	20.0	15.5	140	203
JUL							
06...	1305	115	1,240	21.0	19.0	523	860
08...	0954	56	1,630	22.0	21.0	176	320
AUG							
06...	1245	22	1,930	29.0	22.0	31.0	58
20...	0930	51	1,720	19.0	17.0	40.0	81
20...	0931	51	1,720	19.0	17.0	40.0	80
SEP							
07...	1135	52	1,870	17.0	15.0	--	41
28...	1045	--	2,530	17.0	13.0	--	96

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06437000 BELLE FOURCHE RIVER NEAR STURGIS, SD

LOCATION.--Lat 44°30'47", long 103°08'11", in SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.3, T.6 N., R.8 E., Meade County, Hydrologic Unit 10120202, on right bank near upstream end of bridge on State Highway 34, 0.5 mi upstream from Bear Butte Creek, and 20 mi northeast of Sturgis.

DRAINAGE AREA.--5,870 mi², approximately.

PERIOD OF RECORD.--October 1945 to current year. Monthly discharge only for some periods, published in WSP 1309.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 2,526.13 ft above NGVD of 1929. Prior to Oct. 31, 1946, nonrecording gage at same site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow regulated by Keyhole Dam, usable capacity, 191,600 acre-ft, 246 mi upstream since Oct. 25, 1952. At a point 75 mi upstream, water is diverted to Belle Fourche Reservoir (see station 06435000), through Inlet Canal (see station 06434505), with other small diversions from the main stem and tributaries for irrigation. Total diversion for irrigation of about 60,000 acres upstream from station. Maximum discharge prior to Sept. 30, 1953, 17,900 ft³/s, May 24, 1946, gage height, 13.86 ft; no flow for many days in 1945 and 1950. Satellite data-collection platform at station. Water-quality samples were collected July-September and will be compiled in a separate report. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42	44	e27	e17	e14	e70	45	32	103	86	159	196
2	41	43	e26	e16	e14	e80	42	30	90	102	149	174
3	40	37	e25	e10	e14	e90	39	27	86	165	159	161
4	39	e32	e25	e8.2	e14	e85	38	27	81	346	187	179
5	37	e27	e25	e8.0	e14	e74	38	23	79	452	232	224
6	37	e25	e26	e8.5	e15	e64	36	19	82	877	222	257
7	37	e25	e27	e9.2	e15	e56	34	18	83	584	205	267
8	35	e26	e28	e10	e15	e50	33	20	84	298	177	285
9	34	e27	e27	e12	e15	e45	32	23	85	227	155	281
10	33	e28	e26	e12	e15	e40	32	17	86	198	148	268
11	32	e29	e24	e13	e15	e160	30	10	131	185	164	241
12	31	e31	e23	e14	e15	297	30	23	137	180	171	223
13	30	e35	e23	e15	e15	366	30	30	128	149	170	242
14	30	52	e23	e16	e15	264	30	26	127	133	154	240
15	30	55	e23	e17	e16	195	29	18	139	144	152	256
16	31	53	e24	e17	e16	172	27	24	113	143	179	243
17	32	46	e24	e17	e16	142	25	34	96	122	200	213
18	33	42	e24	e16	e17	137	25	52	107	115	223	193
19	34	40	e24	e15	e18	139	28	66	115	123	217	184
20	34	39	e24	e14	e19	121	30	58	127	141	208	166
21	32	33	e24	e14	e23	104	32	76	129	146	230	150
22	31	e27	e24	e14	e34	89	31	141	136	138	250	154
23	30	e21	e24	e15	e150	75	33	217	119	135	248	136
24	30	e23	e24	e15	e145	66	38	630	97	151	259	111
25	28	e24	e24	e15	e130	59	33	825	89	153	250	94
26	28	e25	e24	e14	e100	56	35	337	125	170	237	78
27	31	e27	e24	e14	e80	59	30	222	113	175	242	61
28	31	e28	e23	e14	e70	62	27	155	97	158	234	45
29	35	e28	e21	e14	e68	62	29	131	91	127	228	38
30	40	e28	e20	e14	---	55	28	115	74	137	239	35
31	41	---	e18	e14	---	49	---	110	---	151	236	---
TOTAL	1,049	1,000	748	421.9	1,107	3,383	969	3,536	3,149	6,411	6,284	5,395
MEAN	33.8	33.3	24.1	13.6	38.2	109	32.3	114	105	207	203	180
MAX	42	55	28	17	150	366	45	825	139	877	259	285
MIN	28	21	18	8.0	14	40	25	10	74	86	148	35
AC-FT	2,080	1,980	1,480	837	2,200	6,710	1,920	7,010	6,250	12,720	12,460	10,700

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 2004, BY WATER YEAR (WY)*

MEAN	112	80.3	53.1	44.7	133	326	336	686	591	330	277	227
MAX	607	835	379	319	1,311	1,731	1,787	3,805	2,499	1,473	625	723
(WY)	(1999)	(1999)	(1999)	(1999)	(1996)	(1996)	(1997)	(1995)	(1976)	(1993)	(1976)	(1986)
MIN	16.2	20.1	11.5	4.71	6.62	23.3	21.2	15.8	80.7	52.4	2.39	10.2
(WY)	(1962)	(1960)	(1962)	(1979)	(1979)	(2002)	(1981)	(1961)	(1961)	(1960)	(1961)	(1961)

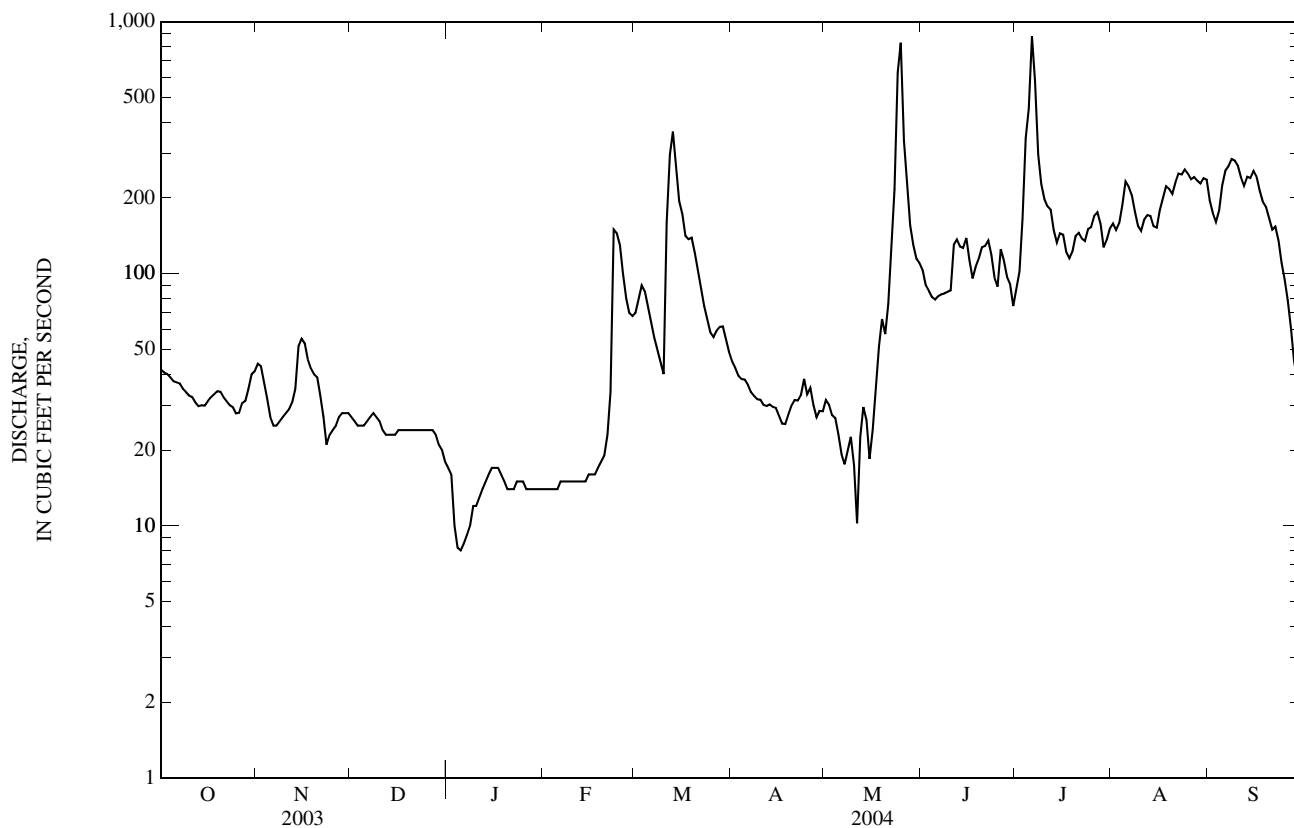
06437000 BELLE FOURCHE RIVER NEAR STURGIS, SD—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1954 - 2004*	
ANNUAL TOTAL	34,201		33,452.9			
ANNUAL MEAN	93.7		91.4		^a 267	
HIGHEST ANNUAL MEAN					773	1996
LOWEST ANNUAL MEAN					27.4	1961
HIGHEST DAILY MEAN	1,220	Mar 19	877	Jul 6	29,700	May 21, 1982
LOWEST DAILY MEAN	18	Dec 31	8.0	Jan 5	0.00	Aug 9, 1961
ANNUAL SEVEN-DAY MINIMUM	22	Dec 25	9.4	Jan 3	0.56	Aug 8, 1961
MAXIMUM PEAK FLOW			1,220	Jul 6	36,400	May 21, 1982
MAXIMUM PEAK STAGE			5.40	Jul 6	19.10	May 21, 1982
ANNUAL RUNOFF (AC-FT)	67,840		66,350		193,300	
10 PERCENT EXCEEDS	196		223		500	
50 PERCENT EXCEEDS	51		40		101	
90 PERCENT EXCEEDS	25		15		25	

* Regulated period only (1954-2004). See REMARKS.

a Median of annual mean discharges, 230 ft³/s.

e Estimated.



06437020 BEAR BUTTE CREEK NEAR DEADWOOD, SD

LOCATION.--Lat 44°20'08", long 103°38'06", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.4, T.4 N., R.4 E., Lawrence County, Hydrologic Unit 10120202, on right bank 0.4 mi northeast of Galena, 0.5 mi downstream from Butcher Gulch, and 5.3 mi southeast of Deadwood.

DRAINAGE AREA.--16.6 mi².

PERIOD OF RECORD.--October 1988 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 4,750 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in Miscellaneous Temperature Measurements and Field Determinations section.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	e1.2	e1.1	e0.80	e0.90	e1.9	5.6	3.5	2.4	3.4	0.57	0.28
2	1.2	e1.2	e1.1	e0.75	e0.85	e1.8	6.0	3.0	2.2	3.5	0.54	0.27
3	1.1	e1.2	e1.0	e0.70	e0.80	e1.8	5.3	2.5	2.0	1.6	1.9	0.35
4	1.2	e1.1	e1.1	e0.65	e0.80	e1.8	5.8	2.4	2.0	1.7	1.1	0.50
5	1.1	e1.1	e1.2	e0.60	e0.85	e1.8	4.5	2.3	2.0	2.1	0.64	0.58
6	1.1	e1.0	e1.1	e0.60	e0.85	e1.8	3.8	2.3	1.7	2.5	0.58	0.44
7	1.2	e1.0	e1.0	e0.60	e0.85	e1.8	3.9	2.2	1.7	1.3	0.54	0.40
8	1.1	e1.0	e0.95	e0.70	e0.90	e1.9	3.5	2.2	1.7	1.2	0.53	0.38
9	1.1	e1.1	e0.90	e0.75	e0.95	e2.5	3.4	2.1	1.7	1.0	0.51	0.37
10	1.1	e1.1	e0.90	e0.80	e0.95	e3.4	3.2	2.1	1.7	0.96	0.49	0.36
11	1.2	e1.2	e0.80	e0.90	e0.95	e4.0	3.3	2.0	1.6	0.92	0.46	0.35
12	1.1	e1.2	e0.70	e1.0	e0.85	e3.4	4.1	2.1	1.5	0.86	0.46	0.33
13	1.1	e1.1	e0.75	e1.0	e0.85	e3.1	3.1	2.1	1.5	0.81	0.45	0.34
14	1.0	e1.1	e0.80	e1.1	e0.90	e3.0	2.8	2.0	1.4	0.78	0.44	0.38
15	1.0	e1.2	e0.85	e1.1	e0.95	e1.9	2.6	2.0	1.4	0.76	0.41	0.42
16	1.0	e1.1	e0.75	e1.1	e1.0	e1.7	2.4	2.3	1.7	0.69	0.38	0.38
17	1.1	e1.1	e0.75	e1.1	e1.0	e2.4	2.3	3.0	1.7	0.67	0.37	0.36
18	1.0	e1.0	e0.75	e1.0	e1.0	e4.5	2.4	2.3	1.5	0.68	0.34	0.34
19	1.1	e1.1	e0.80	e1.0	e1.0	e6.5	2.5	2.1	1.5	0.65	0.32	0.32
20	1.0	e1.1	e0.75	e1.1	e1.1	e6.5	2.4	2.0	1.4	0.80	0.31	0.34
21	1.2	e1.1	e0.75	e1.1	e1.2	e5.6	3.1	4.7	1.5	0.75	0.29	0.42
22	1.1	e1.0	e0.70	e1.1	e1.3	e5.7	4.7	7.1	1.4	0.68	0.35	0.43
23	1.1	e0.90	e0.70	e1.1	e1.4	6.7	4.0	5.6	1.3	0.70	0.52	0.42
24	1.1	e1.0	e0.75	e1.1	e1.6	7.9	3.3	3.8	1.3	0.68	0.36	0.40
25	1.1	e1.0	e0.75	e1.0	e1.8	8.8	2.9	3.1	1.2	0.65	0.33	0.38
26	1.2	e1.1	e0.70	e1.0	e2.0	10	2.6	2.8	1.1	0.63	0.32	0.37
27	1.4	e1.1	e0.70	e1.0	e2.2	11	2.4	2.6	1.1	0.60	0.34	0.37
28	1.3	e1.1	e0.65	e0.90	e2.1	6.7	2.4	2.4	1.1	0.59	0.34	0.36
29	1.4	e1.2	e0.65	e0.95	e2.0	5.5	2.8	2.2	1.1	0.58	0.33	0.36
30	1.3	e1.1	e0.70	e0.95	---	5.3	3.1	3.1	1.1	0.69	0.31	0.36
31	e1.3	---	e0.75	e0.95	---	5.1	---	2.8	---	0.57	0.29	---
TOTAL	35.4	32.80	25.85	28.50	33.90	135.8	104.2	86.7	46.5	34.00	15.12	11.36
MEAN	1.14	1.09	0.83	0.92	1.17	4.38	3.47	2.80	1.55	1.10	0.49	0.38
MAX	1.4	1.2	1.2	1.1	2.2	11	6.0	7.1	2.4	3.5	1.9	0.58
MIN	1.0	0.90	0.65	0.60	0.80	1.7	2.3	2.0	1.1	0.57	0.29	0.27
AC-FT	70	65	51	57	67	269	207	172	92	67	30	23

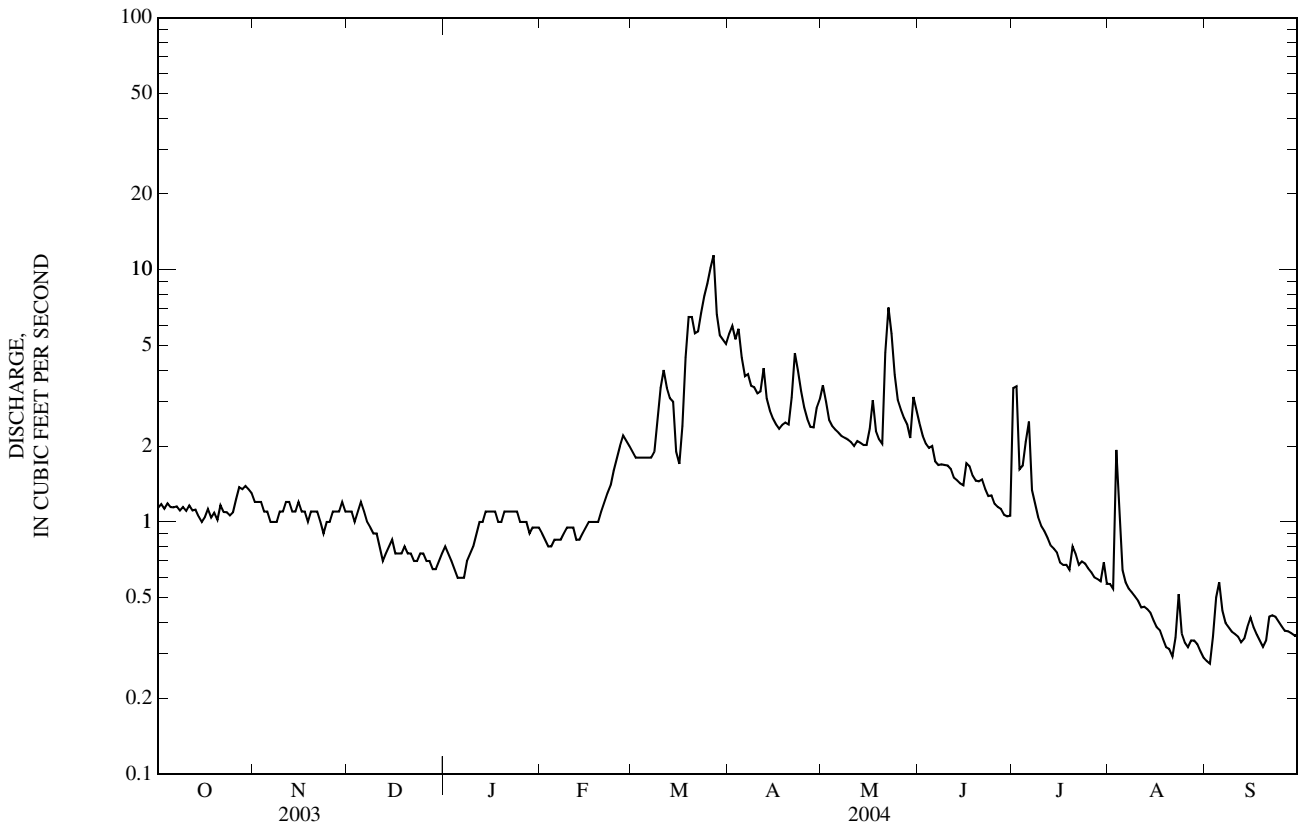
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 2004, BY WATER YEAR (WY)

MEAN	4.68	2.96	2.01	1.71	1.91	6.62	19.3	23.5	16.1	4.39	2.93	2.00
MAX	37.5	15.8	6.53	4.42	4.66	21.2	73.7	94.8	44.7	9.68	10.3	6.26
(WY)	(1999)	(1999)	(1999)	(1997)	(1997)	(1997)	(1997)	(1995)	(1991)	(1997)	(1998)	(1998)
MIN	0.69	0.78	0.28	0.30	0.45	1.67	3.47	2.80	1.55	1.07	0.49	0.31
(WY)	(1993)	(2003)	(1991)	(1991)	(1991)	(2002)	(2004)	(2004)	(2004)	(2002)	(2004)	(1990)

06437020 BEAR BUTTE CREEK NEAR DEADWOOD, SD—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1989 - 2004	
ANNUAL TOTAL	1,435.14		590.13			
ANNUAL MEAN	3.93		1.61		7.35	
HIGHEST ANNUAL MEAN					17.1	1997
LOWEST ANNUAL MEAN					1.61	2004
HIGHEST DAILY MEAN	32	Mar 14	11	Mar 27	543	May 8, 1995
LOWEST DAILY MEAN	0.30	Feb 24	0.27	Sep 2	0.00	Sep 1, 1990
ANNUAL SEVEN-DAY MINIMUM	0.40	Feb 23	0.31	Aug 27	0.05	Aug 29, 1990
MAXIMUM PEAK FLOW			^a 23	Jul 1	1,590	May 8, 1995
MAXIMUM PEAK STAGE			^b 4.70	Mar 2	8.34	May 8, 1995
ANNUAL RUNOFF (AC-FT)	2,850		1,170		5,330	
10 PERCENT EXCEEDS	10		3.3		18	
50 PERCENT EXCEEDS	1.1		1.1		2.5	
90 PERCENT EXCEEDS	0.50		0.39		0.75	

a Gage height, 4.40 ft.
 b Backwater from ice.
 e Estimated.



06438000 BELLE FOURCHE RIVER NEAR ELM SPRINGS, SD

LOCATION.--Lat 44°22'11", long 102°33'56", in NE¹/₄ NE¹/₄ sec.29, T.5 N., R.13 E., Meade County, Hydrologic Unit 10120202, on right bank 50 ft downstream from highway bridge, 4.3 mi northwest of Elm Springs, and 4.7 mi downstream from Hay Creek.

DRAINAGE AREA.--7,210 mi², approximately.

PERIOD OF RECORD.--August 1928 to June 1932, March 1934 to current year. Monthly discharge only for some periods, published in WSP 1309.

REVISED RECORDS.--WSP 786: Drainage area. WSP 926: 1929, 1931(M), 1935, 1937.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 2,171.60 ft above NGVD of 1929. Prior to July 27, 1939, nonrecording gage at same site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow regulated by Keyhole Dam, usable capacity, 191,600 acre-ft, 304 mi upstream since Oct. 25, 1952. At a point 133 mi above station, water is diverted to Belle Fourche Reservoir (see station 06435000), through Inlet Canal near Belle Fourche (see station 06434500), with other smaller diversions from the main stem and tributaries for irrigation. Total diversion for irrigation of about 60,000 acres upstream from station. Maximum discharge prior to Sept. 30, 1953, 35,700 ft³/s, June 10, 1941, gage height, 14.30 ft; no flow for many days in 1936-37, 1939-40. Satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 1927 reached a stage of 21.8 ft. Flood in spring of 1933 reached a stage of about 20 ft, from floodmarks.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42	e50	e28	e16	e9.6	e100	49	22	86	61	108	210
2	40	e50	e29	e15	e9.2	e90	46	20	81	55	115	171
3	39	e48	e29	e12	e9.0	e100	41	20	75	65	112	158
4	37	e44	e29	e9.0	e8.8	e120	37	20	63	110	190	162
5	36	e36	e30	e7.5	e8.6	e150	37	17	65	401	148	188
6	35	e29	e30	e6.0	e8.3	e160	35	14	60	967	193	211
7	35	e29	e31	e5.0	e8.0	e120	33	13	54	1,790	199	234
8	34	e29	e32	e4.0	e8.0	e90	32	12	57	722	193	254
9	32	e30	e30	e3.0	e8.2	e60	26	9.7	60	372	154	276
10	32	e30	e28	e3.5	e8.4	e80	25	10	82	254	133	273
11	35	e32	e26	e4.0	e8.7	e100	24	40	67	205	123	260
12	33	e34	e25	e5.0	e9.0	e200	24	29	80	175	137	228
13	30	e37	e24	e6.0	e9.2	e400	22	13	104	155	154	208
14	30	48	e24	e7.4	e9.5	588	21	7.3	100	124	145	222
15	30	53	e25	e9.0	e9.8	377	20	6.1	95	106	136	242
16	32	51	e25	e12	e10	246	19	26	105	100	128	239
17	34	51	e26	e16	e12	232	16	25	101	114	146	240
18	33	78	e26	e20	e14	209	17	18	77	95	169	207
19	34	78	e27	e25	e16	185	16	22	72	83	186	182
20	33	71	e27	e30	e18	174	16	33	85	87	193	178
21	33	e54	e28	e24	e20	145	18	53	95	104	181	164
22	33	e39	e28	e20	e25	117	19	53	100	107	201	149
23	32	e34	e29	e23	e40	102	23	94	103	103	237	159
24	32	e30	e30	e27	e90	88	23	572	102	101	235	140
25	30	e27	e30	e30	e200	74	19	883	80	107	245	107
26	30	e27	e28	e25	e250	62	22	795	69	111	234	85
27	33	e27	e26	e20	e220	66	24	392	79	121	220	76
28	33	e28	e24	e17	e200	81	22	250	92	148	224	60
29	34	e28	e22	e14	e170	78	27	164	77	128	221	48
30	36	e28	e20	e12	---	62	24	124	69	102	198	38
31	45	---	e18	e10	---	56	---	99	---	91	206	---
TOTAL	1,057	1,230	834	437.4	1,417.3	4,712	777	3,856.1	2,435	7,264	5,464	5,369
MEAN	34.1	41.0	26.9	14.1	48.9	152	25.9	124	81.2	234	176	179
MAX	45	78	32	30	250	588	49	883	105	1,790	245	276
MIN	30	27	18	3.0	8.0	56	16	6.1	54	55	108	38
AC-FT	2,100	2,440	1,650	868	2,810	9,350	1,540	7,650	4,830	14,410	10,840	10,650

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 2004, BY WATER YEAR (WY)*

MEAN	138	85.2	55.7	48.6	184	471	485	992	803	354	271	228
MAX	1,361	1,081	479	440	2,283	2,457	2,671	6,264	2,985	1,791	634	768
(WY)	(1999)	(1999)	(1999)	(1999)	(1997)	(1978)	(1997)	(1995)	(1976)	(1993)	(1976)	(1986)
MIN	13.9	14.8	2.45	0.02	0.45	27.9	13.4	13.6	76.1	34.0	0.77	2.65
(WY)	(1962)	(1960)	(1962)	(1991)	(1991)	(2002)	(1981)	(1961)	(1961)	(1960)	(1961)	(1961)

06438000 BELLE FOURCHE RIVER NEAR ELM SPRINGS, SD—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1954 - 2004*	
ANNUAL TOTAL	40,093		34,852.8			
ANNUAL MEAN	110		95.2		^a 344	
HIGHEST ANNUAL MEAN					1,036	1996
LOWEST ANNUAL MEAN					28.4	1961
HIGHEST DAILY MEAN	3,700	Mar 19	1,790	Jul 7	35,700	May 28, 1996
LOWEST DAILY MEAN	18	Jan 14	3.0	Jan 9	^b 0.00	Jun 5, 1961
ANNUAL SEVEN-DAY MINIMUM	23	Jan 12	4.4	Jan 6	0.00	Aug 9, 1961
MAXIMUM PEAK FLOW			2,730	Jul 6	^c 45,100	Jun 8, 1964
MAXIMUM PEAK STAGE			3.97	Jul 6	18.22	May 21, 1982
ANNUAL RUNOFF (AC-FT)	79,520		69,130		248,900	
10 PERCENT EXCEEDS	179		210		648	
50 PERCENT EXCEEDS	66		44		108	
90 PERCENT EXCEEDS	29		12		20	

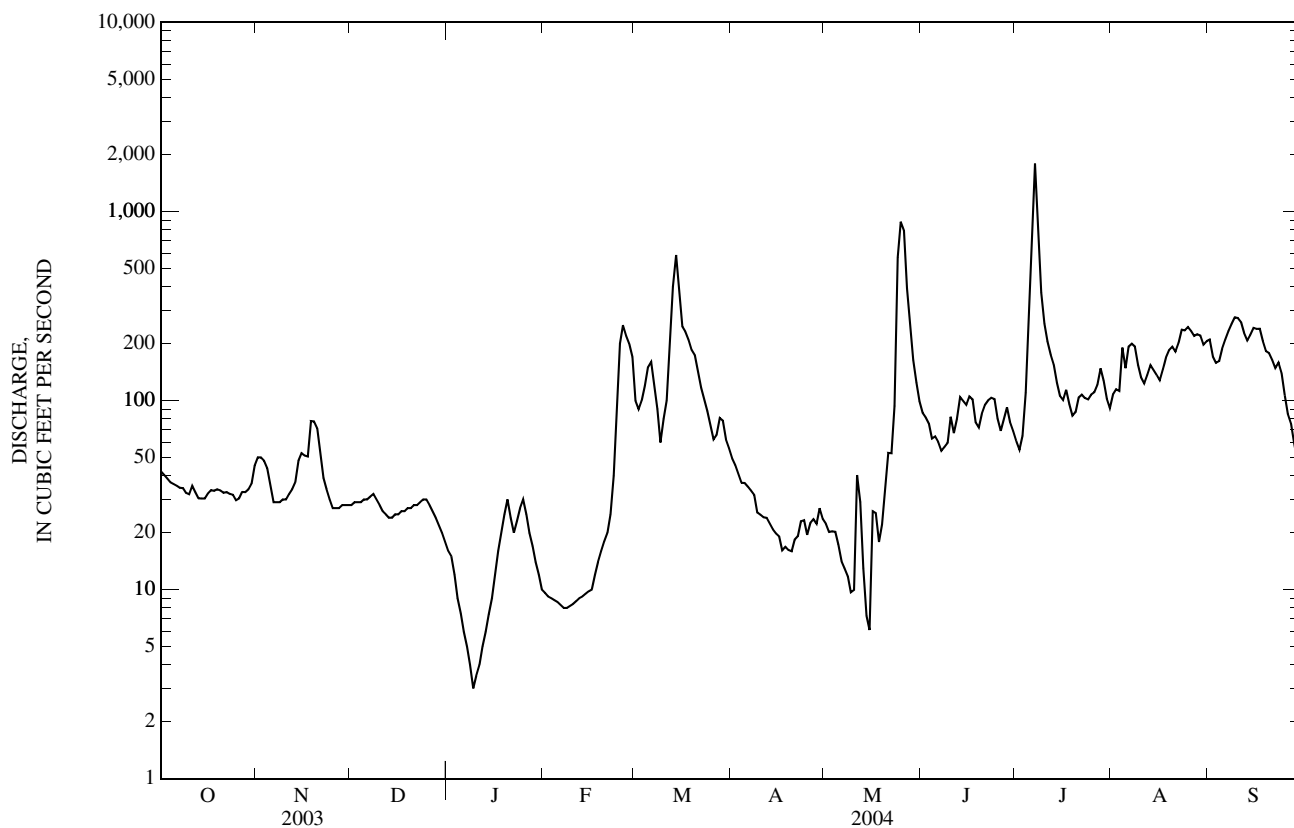
* Regulated period only (1954-2004). See REMARKS.

a Median of annual mean discharges, 260 ft³/s.

b No flow for many days in 1961-62, 1981, and 1991.

c Gage height, 15.90 ft.

e Estimated.



06438500 CHEYENNE RIVER NEAR PLAINVIEW, SD

LOCATION.--Lat 44°31'51", long 101°55'43", in NW¹/₄ NW¹/₄ NE¹/₄ sec.34, T.7 N., R.18 E., Ziebach County, Hydrologic Unit 10120112, on SD Highway 34 and 73 bridge, 10.5 mi south of Howes.

DRAINAGE AREA.--21,640 mi², approximately.

PERIOD OF RECORD.--October 1950 to September 1981, October 1994 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 1,868 ft above NGVD of 1929, from topographic map. Prior to October 1994 at site 3 mi upstream at different datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flows regulated by: Angostura Dam, 167 mi upstream on the Cheyenne River (see station 06401000) since October 1949 significantly affect peak flows; Pactola Reservoir, 25.4 mi upstream from Rapid City (see station 06411000) since June 1963; Keyhole Reservoir (see station 06427000) near Moorcroft, WY, since Oct. 25, 1952; and Belle Fourche Reservoir near Belle Fourche (see station 06435000) since May 1910. Flow also affected by diversions for irrigation of about 70,000 acres and return flow from irrigated areas. U.S. Army Corps of Engineers satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood late in May 1920 reached a stage of about 17.5 ft, previous datum, and flood in May 1927 reached a stage of about 14 ft, previous datum, from information by local residents.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	122	143	e200	e190	e95	e460	177	86	198	116	169	224
2	123	e152	e200	e160	e95	e420	166	84	176	119	163	218
3	124	e160	e190	e140	e95	e400	156	86	176	100	162	186
4	116	e160	e190	e120	e95	e400	156	79	171	110	250	193
5	112	e155	e185	e105	e95	e450	154	69	155	299	230	224
6	112	e150	e190	e95	e95	e511	149	56	150	640	181	4,920
7	107	e140	e195	e90	e100	e1,270	146	56	223	1,780	196	2,180
8	106	e130	e200	e90	e100	458	134	61	175	1,860	214	633
9	105	e140	e200	e90	e100	479	130	63	153	836	206	442
10	101	e180	e195	e90	e100	800	125	55	165	514	175	389
11	112	e210	e190	e95	e95	659	123	53	278	390	153	363
12	107	e280	e180	e90	e90	464	124	41	856	307	138	491
13	109	e290	e160	e105	e90	511	126	50	364	266	139	364
14	116	e260	e150	e105	e95	644	125	60	260	224	149	296
15	119	e220	e150	e105	e105	671	122	97	206	195	155	335
16	126	e200	e150	e110	e110	504	117	78	180	160	151	312
17	130	e190	e160	e110	e120	410	112	80	185	146	140	310
18	129	188	e170	e115	e130	375	109	87	184	157	149	314
19	125	185	e180	e120	e150	356	109	93	166	140	160	292
20	125	184	e200	e120	e190	321	105	95	164	129	173	259
21	127	e180	e210	e120	e210	295	104	109	175	130	183	243
22	123	e170	e210	e115	e210	270	99	119	177	278	167	234
23	121	e160	e220	e115	e210	246	110	174	195	348	183	275
24	118	e145	e220	e110	e220	231	254	193	184	206	211	300
25	114	e140	e215	e110	e260	214	154	644	181	179	237	348
26	121	e150	e210	e105	e290	199	125	1,110	155	190	259	253
27	132	e150	e210	e100	e340	192	113	811	132	182	249	210
28	132	e160	e210	e100	e420	187	100	483	122	171	242	189
29	128	e170	e205	e95	e470	187	92	351	143	182	238	178
30	123	e180	e200	e95	---	205	91	255	128	164	230	161
31	130	---	e200	e95	---	187	---	212	---	146	221	---
TOTAL	3,695	5,322	5,945	3,405	4,775	12,976	3,907	5,890	6,177	10,664	5,873	15,336
MEAN	119	177	192	110	165	419	130	190	206	344	189	511
MAX	132	290	220	190	470	1,270	254	1,110	856	1,860	259	4,920
MIN	101	130	150	90	90	187	91	41	122	100	138	161
AC-FT	7,330	10,560	11,790	6,750	9,470	25,740	7,750	11,680	12,250	21,150	11,650	30,420

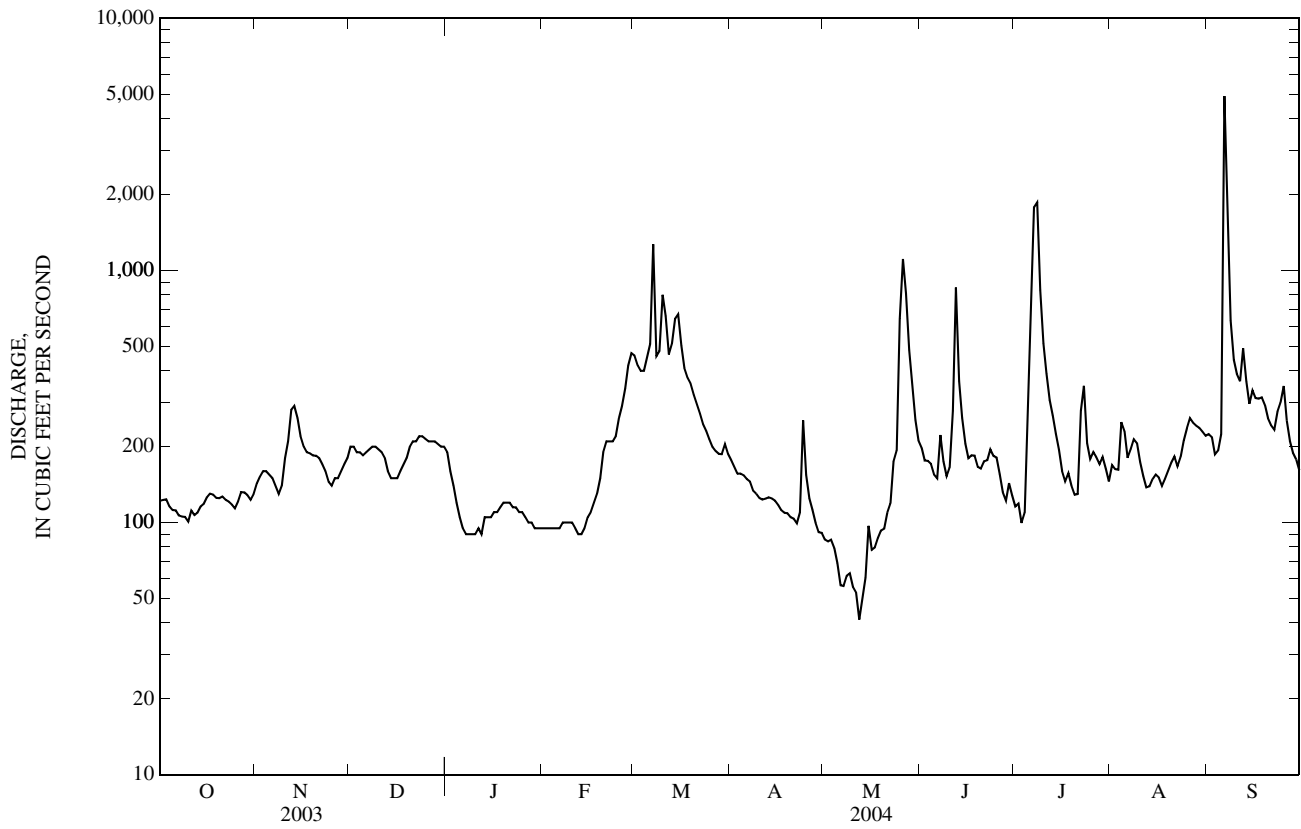
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 1981, 1995 - 2004, BY WATER YEAR (WY)

MEAN	329	271	182	162	464	1,009	1,100	1,805	1,959	730	488	384
MAX	2,927	3,016	907	954	4,980	4,359	5,182	8,471	8,981	2,585	1,949	1,110
(WY)	(1999)	(1999)	(1999)	(1997)	(1997)	(1978)	(2000)	(1995)	(1967)	(1962)	(1997)	(1955)
MIN	39.2	93.8	28.6	10.0	42.1	124	71.3	83.3	172	61.8	48.0	16.2
(WY)	(1962)	(1960)	(1962)	(1962)	(1979)	(1981)	(1961)	(1961)	(1961)	(1960)	(1961)	(1961)

06438500 CHEYENNE RIVER NEAR PLAINVIEW, SD—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1951-1981, 1995-2004	
ANNUAL TOTAL	101,466		83,965		a740	
ANNUAL MEAN	278		229		2,417	
HIGHEST ANNUAL MEAN					97.2 1997	
LOWEST ANNUAL MEAN					61,200 May 28, 1996	
HIGHEST DAILY MEAN	4,460	Mar 20	4,920	Sep 6	b0.00 Dec 14, 1961	
LOWEST DAILY MEAN	90	Jan 18	41	May 12	1.0 Jan 17, 1962	
ANNUAL SEVEN-DAY MINIMUM	97	Jan 16	54	May 7	69,700 May 28, 1996	
MAXIMUM PEAK FLOW			c13,800	Sep 6	22.10 May 28, 1996	
MAXIMUM PEAK STAGE			d15.90	Mar 7		
ANNUAL RUNOFF (AC-FT)	201,300		166,500		536,100	
10 PERCENT EXCEEDS	428		379		1,480	
50 PERCENT EXCEEDS	199		166		278	
90 PERCENT EXCEEDS	128		95		80	

- a Median of annual mean discharges, 650 ft³/s.
- b Also Dec. 19-21, 1961.
- c Gage height, 15.16 ft.
- d Backwater from ice.
- e Estimated.



CHEYENNE RIVER BASIN

06439000 CHERRY CREEK NEAR PLAINVIEW, SD

LOCATION.--Lat 44°44'35", long 102°03'11", in SW¹/₄ NE¹/₄ sec.16, T.9 N., R.17 E., Meade County, Hydrologic Unit 10120113, on right upstream wingwall of bridge on State Highway 73, 0.2 mi downstream from small right-bank tributary, 6.2 mi downstream from Red Owl Creek, and 11 mi northeast of Plainview.

DRAINAGE AREA.--1,190 mi², approximately.

PERIOD OF RECORD.--October 1945 to current year. Monthly discharge only for October and November 1945, published in WSP 1309.

REVISED RECORDS.--WDR SD-85-1: Location and datum.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 2,157.91 ft above NGVD of 1929. Prior to June 8, 1948, nonrecording gage at same site and datum. Prior to Sept. 27, 1985, recording gage at site 100 ft downstream at same datum.

REMARKS.--Records fair. Satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	72	1.5	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	72	0.99	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	63	0.79	0.00	0.00	0.00	17	0.00
4	0.00	0.00	0.00	0.00	0.00	54	0.70	0.00	0.00	7.6	396	0.00
5	0.00	0.00	0.00	0.00	0.00	39	0.56	0.00	0.00	4.5	673	0.00
6	0.00	0.00	0.00	0.00	0.00	31	0.45	0.00	0.00	2.0	463	0.00
7	0.00	0.00	0.00	0.00	0.00	24	0.27	0.00	0.00	61	208	0.00
8	0.00	0.00	0.00	0.00	0.00	15	0.14	0.00	0.00	41	122	0.00
9	0.00	0.00	0.00	0.00	0.00	14	0.00	0.00	0.00	237	66	0.00
10	0.00	0.00	0.00	0.00	0.00	20	0.00	0.00	0.00	132	45	0.00
11	0.00	0.00	0.00	0.00	0.00	27	0.00	0.00	0.00	67	28	0.00
12	0.00	0.00	0.00	0.00	0.00	52	0.00	0.00	0.00	41	18	0.00
13	0.00	0.00	0.00	0.00	0.00	61	0.00	0.00	10	28	12	0.00
14	0.00	0.00	0.00	0.00	0.00	46	0.00	0.00	4.7	19	9.2	0.00
15	0.00	0.00	0.00	0.00	0.00	63	0.00	0.00	1.8	13	6.8	0.00
16	0.00	0.00	0.00	0.00	0.00	47	0.00	0.00	0.79	9.2	4.4	0.00
17	0.00	0.00	0.00	0.00	0.00	49	0.00	0.00	0.50	5.7	3.1	0.00
18	0.00	0.00	0.00	0.00	e0.00	40	0.00	0.00	0.16	3.2	2.0	0.00
19	0.00	0.00	0.00	0.00	e0.00	27	0.00	0.00	0.00	1.6	1.2	0.00
20	0.00	0.00	0.00	0.00	e0.50	21	0.00	0.00	0.00	0.77	0.79	0.00
21	0.00	0.00	0.00	0.00	e1.1	17	0.00	0.00	0.00	0.39	0.48	0.00
22	0.00	0.00	0.00	0.00	e4.2	15	0.00	0.00	0.00	0.01	0.31	0.00
23	0.00	0.00	0.00	0.00	e10	16	0.00	0.00	0.00	0.00	0.29	0.05
24	0.00	0.00	0.00	0.00	e33	13	0.00	0.00	0.00	0.00	0.15	0.00
25	0.00	0.00	0.00	0.00	48	11	0.00	0.00	0.00	0.00	0.04	0.00
26	0.00	0.00	0.00	0.00	63	8.6	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	86	7.6	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	63	5.4	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	67	3.7	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	---	3.1	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	2.3	---	0.00	---	0.00	0.00	---
TOTAL	0.00	0.00	0.00	0.00	375.80	939.7	5.40	0.00	17.95	673.97	2,076.76	0.05
MEAN	0.00	0.00	0.00	0.00	13.0	30.3	0.18	0.00	0.60	21.7	67.0	0.00
MAX	0.00	0.00	0.00	0.00	86	72	1.5	0.00	10	237	673	0.05
MIN	0.00	0.00	0.00	0.00	0.00	2.3	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	0.00	0.00	745	1,860	11	0.00	36	1,340	4,120	0.1

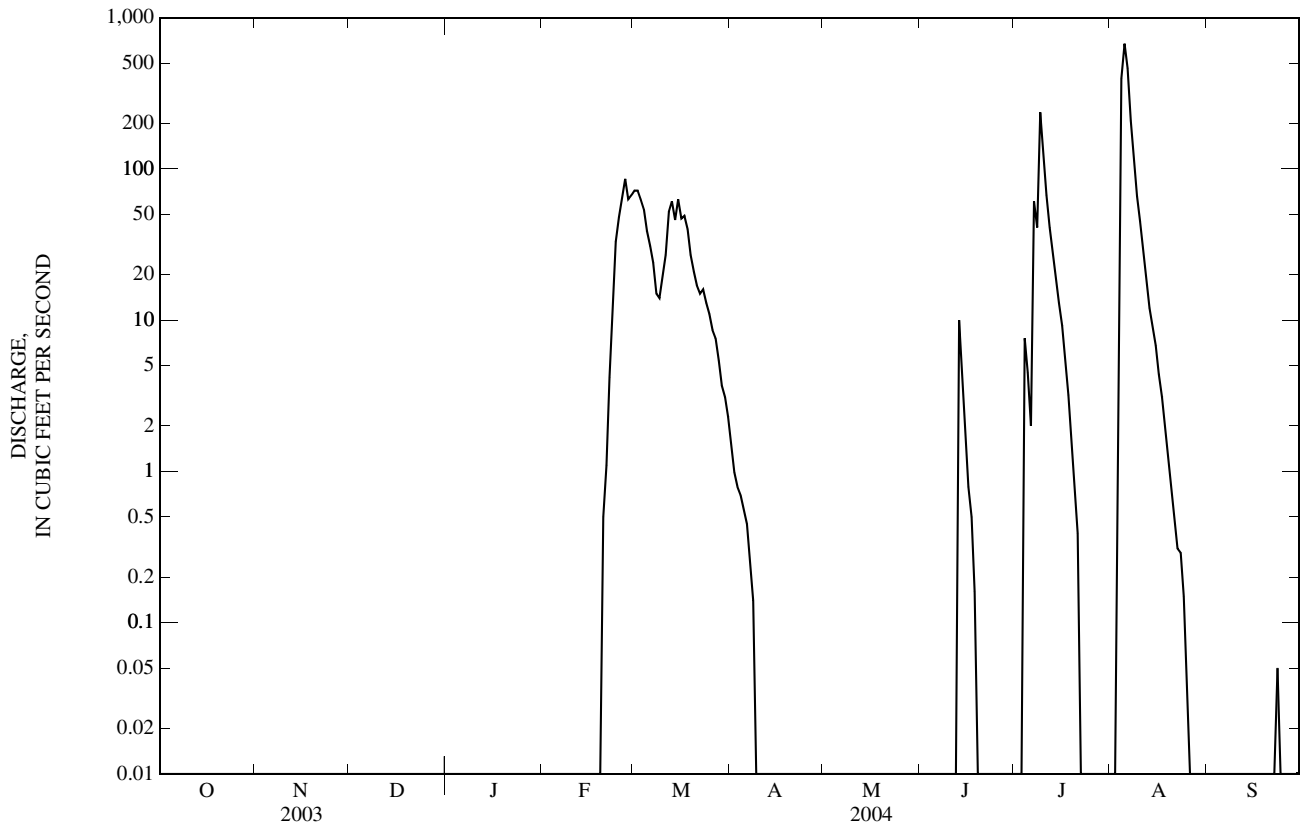
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 2004, BY WATER YEAR (WY)

MEAN	4.73	1.85	0.91	1.13	29.2	165	140	130	108	27.7	9.10	0.77
MAX	109	50.7	10.6	16.5	721	1,475	2,221	1,215	794	685	175	16.6
(WY)	(1983)	(1999)	(1999)	(1947)	(1996)	(1997)	(1952)	(1982)	(1953)	(1993)	(1953)	(1986)
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)	(1946)	(1946)	(1946)	(1946)	(1946)	(1957)	(1957)	(1955)	(1955)	(1949)	(1946)	(1946)

06439000 CHERRY CREEK NEAR PLAINVIEW, SD—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1946 - 2004	
ANNUAL TOTAL	1,403.02		4,089.63		a51.6	
ANNUAL MEAN	3.84		11.2		269	
HIGHEST ANNUAL MEAN					1997	
LOWEST ANNUAL MEAN					0.00	
HIGHEST DAILY MEAN	383	Mar 21	673	Aug 5	13,800	Apr 2, 1952
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 1	b0.00	Oct 1, 1945
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 1	0.00	Oct 1, 1945
MAXIMUM PEAK FLOW			839	Aug 5	17,500	Apr 1, 1952
MAXIMUM PEAK STAGE			8.62	Aug 5	22.63	Apr 1, 1952
ANNUAL RUNOFF (AC-FT)	2,780		8,110		37,350	
10 PERCENT EXCEEDS	0.58		25		57	
50 PERCENT EXCEEDS	0.00		0.00		0.00	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

- a Median of annual mean discharges, 27 ft³/s.
- b No flow for long periods in most years.
- c Estimated.



MISSOURI-OAHE RIVER BASIN
06439980 LAKE OAHE NEAR PIERRE, SD

LOCATION.--Lat 44°27'30", long 100°23'29", in NE¹/₄ sec.1, T.111 N., R.80 W., 5th principal meridian, Hughes County, Hydrologic Unit 10130105, in Pier A of Control Tower No. 1 of powerhouse intake structure of dam on Missouri River, 6.0 mi northwest of Pierre, 7.1 mi upstream from Bad River, and at mile 1,072.3.

DRAINAGE AREA.--243,500 mi², approximately.

PERIOD OF RECORD.--August 1958 to current year (monthend contents only). Prior to October 1967, published as Oahe Reservoir near Pierre.

GAGE.--Water-stage recorder. Elevations listed to NGVD of 1929. Prior to Jan. 14, 1958, nonrecording gages at various locations upstream from outlet works, Jan. 14, 1959, to Sept. 30, 1962, recorder in Tower No. 1 of outlet works, all at same datum.

REVISED RECORDS.--WDR SD-88-1: September monthend elevation.

REMARKS.--Reservoir is formed by an earthfill dam; storage began in August 1958. Maximum capacity, 23,338,000 acre-ft below elevation 1,620.0 ft (top of spillway gates). Normal maximum, 22,240,000 acre-ft below 1,617.0 ft, of which about 2,390,000 acre-ft is designated for flood control. Inactive storage, 5,451,000 acre-ft below elevation 1,540.0 ft. Dead storage, 1,970 acre-ft below elevation 1,425.0 ft (invert of lowest outlet tunnel). Figures given herein represent elevations at powerhouse intake structure and total contents adjusted for wind effect.

The spillway consists of a gated chute with flat crest at elevation 1,596.5 ft, 8 gates, 50 by 23.5 ft each; design capacity, 300,000 ft³/s. The outlet works consist of 7 turbines with a generating capacity of 85,000 kilowatts each. Water is used for flood control, navigation, power, and incidental uses.

COOPERATION.--Records of elevation and contents provided by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 22,764,000 acre-ft, May 14, 1986, affected by wind; maximum elevation, 1,618.71 ft, June 25, 1995; minimum since initial filling, 10,102,000 acre-ft, Sept. 4, 2004.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 12,153,000 acre-ft, Apr. 4; minimum contents, 10,102,000 acre-ft, Sept. 4.

MONTHEND ELEVATION AND CONTENTS AT 2400 HOURS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Elevation	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	1,581.00	11,932,000	--
Oct. 31	1,578.23	11,377,000	-555,000
Nov. 30	1,576.70	11,033,000	-344,000
Dec. 31	1,576.85	11,049,000	+16,000
CAL YR 2003	--	--	-1,741,000
Jan. 31	1,577.59	11,204,000	+155,000
Feb. 29	1,579.15	11,504,000	+300,000
Mar. 31	1,582.06	12,110,000	+606,000
Apr. 30	1,581.61	12,056,000	-54,000
May 31	1,578.37	11,338,000	-718,000
June 30	1,576.81	11,045,000	-293,000
July 31	1,574.28	10,540,000	-505,000
Aug. 31	1,572.09	10,112,000	-428,000
Sept. 30	1,573.21	10,316,000	+204,000
WTR YR 2004	--	--	-1,616,000

NOTE.--Lake frozen over Jan. 28 to Mar. 19.

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