

## MISSOURI RIVER MAIN STEM

06342500 MISSOURI RIVER AT BISMARCK, ND

LOCATION.--Lat 46°48'51", long 100°49'17", in SE $\frac{1}{4}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec.31, T.139 N., R.80 W., Burleigh County, Hydrologic Unit 10130101, on left bank 40 ft upstream from Bismarck City waterplant, 2,100 ft downstream from Burlington Northern Railway bridge, 1.6 mi northwest of Bismarck Post Office, 3.5 mi upstream from Heart River, and at mile 1,314.5.

DRAINAGE AREA.--186,400 mi<sup>2</sup>, approximately.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October to November 1927, April 1928 to current year. See WSP 1729 or 1917 for history of data prior to April 1928.

GAGE.--Water-stage recorder. Datum of gage is 1,618.28 ft above National Geodetic Vertical Datum of 1929, revised. See WSP 1729 or 1917 for history of changes prior to Sept. 30, 1937.

REMARKS.--Records good except for estimated daily discharges, which are fair. Flow regulated by Lake Sakakawea (station 06338000), 75.4 mi upstream, since November 1953.

EXTREMES PRIOR TO COMPLETION OF GARRISON DAM.--Maximum discharge, 500,000 ft<sup>3</sup>/s, Apr. 6, 1952, gage height, 27.90 ft.

EXTREMES SINCE COMPLETION OF GARRISON DAM.--Since completion of Garrison Dam in 1953, maximum discharge, 68,900 ft<sup>3</sup>/s, July 13, 1975, gage height, 14.24 ft; maximum gage height, 14.80 ft, Jan. 13, 1983, backwater from ice.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 31.6 ft, Mar. 31, 1881, present site and datum.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11,300	11,900	15,500	e15,900	e16,400	e12,300	12,800	17,900	16,000	16,200	15,800	16,900
2	10,500	11,400	15,600	e15,900	e16,500	e12,300	12,600	18,000	16,100	17,100	15,800	16,700
3	11,600	11,700	e15,800	e16,000	e15,700	e12,300	13,800	18,700	16,000	17,400	16,000	16,500
4	e11,200	14,700	e15,600	e16,000	e14,200	e12,600	16,300	17,200	15,900	e17,100	15,900	16,100
5	e11,600	16,500	e15,600	e16,200	e14,200	e12,900	19,600	17,400	15,700	e16,400	15,500	16,500
6	11,300	14,900	e15,700	e16,300	e13,600	e12,600	20,600	17,700	15,600	16,200	15,500	16,300
7	11,600	11,900	15,800	e16,300	e13,800	14,000	20,700	17,900	16,700	16,200	15,800	16,400
8	11,700	11,400	15,400	e16,200	e13,500	13,900	19,800	20,100	17,200	16,400	15,300	15,600
9	11,700	11,900	15,700	e16,100	e13,400	13,300	17,000	19,300	16,700	16,700	15,600	15,600
10	11,600	11,400	15,400	e15,800	e13,300	13,400	17,300	19,300	16,800	16,600	15,900	15,400
11	11,700	11,100	15,300	e15,700	e13,200	12,800	17,600	19,200	17,300	16,700	16,500	15,800
12	11,700	11,600	15,700	e15,700	e13,400	e12,800	17,900	18,500	16,900	16,300	16,000	16,100
13	11,600	11,400	15,100	e15,800	e13,600	13,100	17,900	19,400	16,400	16,000	15,900	15,900
14	11,700	11,700	15,100	e15,900	e13,500	13,100	17,700	18,400	16,500	16,100	15,900	15,800
15	11,900	11,600	15,300	e16,000	e13,600	13,200	17,800	19,000	16,000	e16,300	16,400	15,700
16	11,400	11,800	15,400	e16,100	e13,700	12,500	18,700	17,900	15,900	16,200	16,100	15,900
17	12,100	12,300	e15,400	e16,200	e13,400	12,300	17,600	16,300	15,900	16,400	16,400	16,000
18	11,700	11,400	e15,000	e16,000	e13,400	12,500	17,900	16,300	15,900	15,900	16,300	16,000
19	12,400	11,800	15,000	e15,800	e13,600	12,500	17,800	15,900	15,900	15,800	16,200	14,800
20	12,000	11,700	e15,700	e15,300	e13,600	12,400	18,100	16,100	15,700	16,000	16,400	12,600
21	11,400	12,200	e15,800	e15,600	e13,400	12,800	18,300	16,500	15,400	16,000	16,300	12,700
22	11,500	12,600	e15,900	e15,800	e13,100	12,800	19,600	17,500	15,700	16,000	16,300	12,700
23	11,400	12,600	e15,800	e15,800	e12,700	12,600	18,300	16,800	15,700	16,100	16,600	12,700
24	11,500	12,700	e15,800	e15,900	e12,300	12,800	19,200	17,200	15,600	15,900	16,300	12,800
25	11,500	12,900	e16,000	e16,000	e12,100	12,700	18,400	16,700	16,000	16,100	16,400	13,000
26	11,900	13,200	e16,400	e16,000	e11,900	12,600	17,700	16,100	15,400	15,800	16,500	12,700
27	11,200	14,000	e16,300	e16,300	e11,900	13,200	18,300	15,800	16,300	15,700	15,800	12,900
28	11,800	14,400	e15,800	e16,300	e12,200	12,800	18,100	15,800	15,900	15,900	16,700	12,700
29	11,800	14,300	e15,600	e16,200	---	13,700	19,200	15,700	16,500	15,600	17,000	12,700
30	11,700	14,400	e15,500	e16,300	---	13,100	18,900	16,000	17,100	15,900	16,400	12,900
31	11,200	---	e15,500	e16,500	---	13,000	---	15,800	---	15,900	16,800	---
TOTAL	359,200	377,400	483,500	495,900	379,200	398,900	535,500	540,400	484,700	502,900	500,300	444,400
MEAN	11,590	12,580	15,600	16,000	13,540	12,870	17,850	17,430	16,160	16,220	16,140	14,810
MAX	12,400	16,500	16,400	16,500	16,500	14,000	20,700	20,100	17,300	17,400	17,000	16,900
MIN	10,500	11,100	15,000	15,300	11,900	12,300	12,600	15,700	15,400	15,600	15,300	12,600
AC-FT	712,500	748,600	959,000	983,600	752,100	791,200	1,062,000	1,072,000	961,400	997,500	992,300	881,500

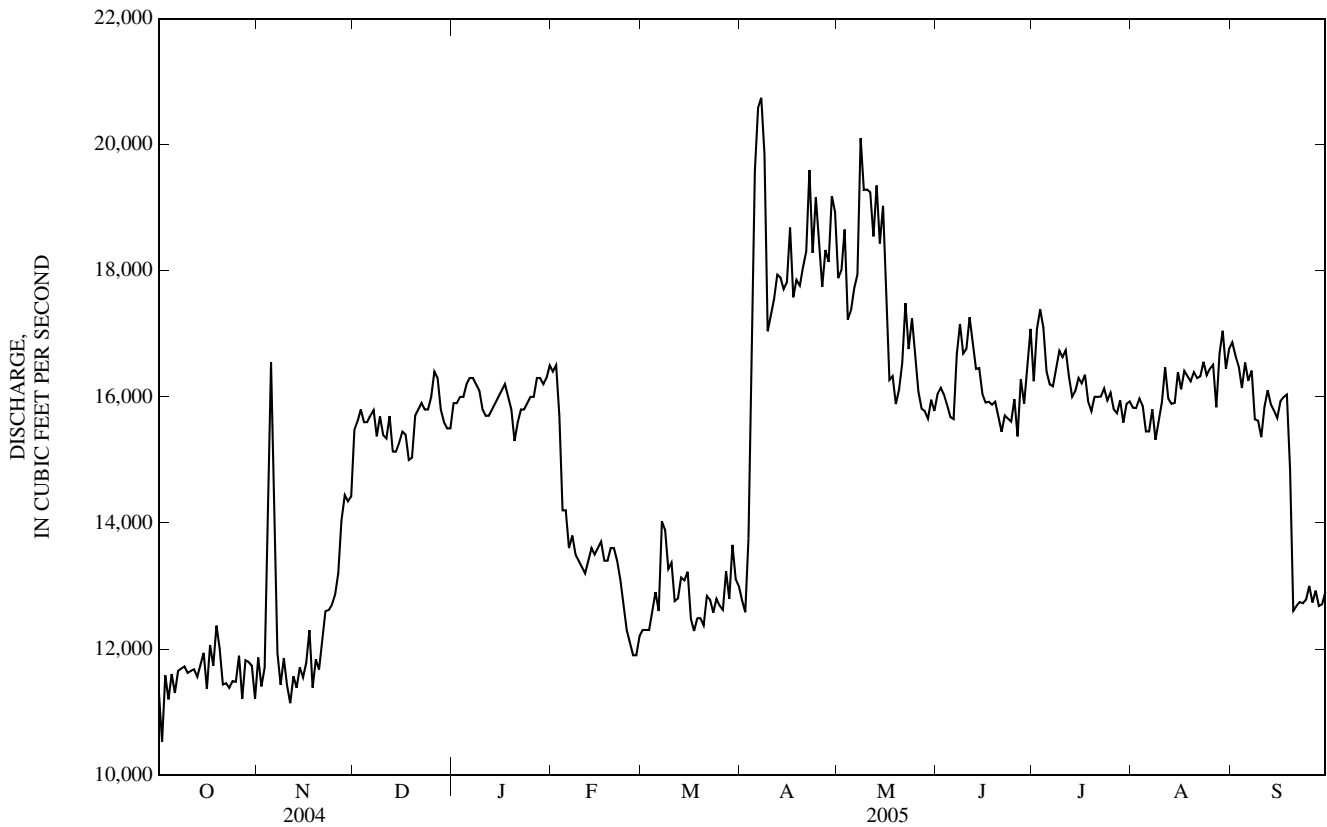
## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 2005, BY WATER YEAR (WY)

MEAN	20,750	20,870	20,510	22,520	24,600	22,170	21,100	22,460	24,050	24,950	24,730	21,840
MAX	48,180	43,240	31,690	32,350	34,840	34,370	40,370	42,030	43,540	64,610	57,010	45,060
(WY)	(1998)	(1998)	(1970)	(1969)	(1969)	(1972)	(1972)	(1972)	(1975)	(1975)	(1975)	(1997)
MIN	8,399	8,155	7,890	6,519	5,883	6,317	10,420	9,234	8,445	10,840	9,271	8,121
(WY)	(1963)	(1963)	(1955)	(1955)	(1956)	(1955)	(1993)	(1963)	(1960)	(1960)	(1962)	(1962)

06342500 MISSOURI RIVER AT BISMARCK, ND—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1954 - 2005 <sup>a</sup>	
ANNUAL TOTAL	6,253,400		5,502,300		22,540	
ANNUAL MEAN	17,090		15,070		14,320	
HIGHEST ANNUAL MEAN					35,630	1975
LOWEST ANNUAL MEAN					14,320	1960
HIGHEST DAILY MEAN	25,700	Feb 24	20,700	Apr 7	68,800	Jul 13, 1975
LOWEST DAILY MEAN	10,500	Oct 2	10,500	Oct 2	4,000	Mar 25, 1955
ANNUAL SEVEN-DAY MINIMUM	11,200	Sep 26	11,300	Oct 1	4,860	Mar 21, 1955
MAXIMUM PEAK FLOW			<sup>b</sup> 21,400	May 8	<sup>c</sup> 68,900	Jul 13, 1975
MAXIMUM PEAK STAGE			<sup>d</sup> 10.63	Dec 26	<sup>d</sup> 14.80	Jan 13, 1983
ANNUAL RUNOFF (AC-FT)	12,400,000		10,910,000		16,330,000	
10 PERCENT EXCEEDS	22,800		17,600		33,700	
50 PERCENT EXCEEDS	17,000		15,800		21,600	
90 PERCENT EXCEEDS	11,700		11,800		12,000	

- a Since completion of Garrison Dam
- b Gage height, 6.82 ft
- c Gage height, 14.24 ft
- d Backwater from ice
- e Estimated.



## MISSOURI-OAHE RIVER BASIN

06354882 OAK CREEK NEAR WAKPALA, SD

LOCATION.--Lat 45°42'43", long 100°33'32", in SW $\frac{1}{4}$  SE $\frac{1}{4}$  NW $\frac{1}{4}$  sec.9, T.20 N., R.29 E., Corson County, Hydrologic Unit 10130102, on right bank at upstream side of bridge on farm access road, 1.6 mi east of Rattlesnake Butte, and 4.0 mi northwest of Wakpala.

DRAINAGE AREA.--356 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--October 1984 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 1,690 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair except those for Apr. 10 to May 10, May 28 to June 7 and 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 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	5.1	0.75	e0.18	e1.5	e1.0	1.3	0.82	1.0	2.2	1.9	0.00
2	0.00	2.4	0.76	e0.17	e1.7	e1.5	1.1	0.78	1.0	2.3	1.6	0.00
3	0.00	1.4	0.80	e0.16	e2.0	e2.0	0.54	0.60	1.0	2.7	1.3	0.00
4	0.00	8.9	0.91	e0.15	e2.3	e3.0	0.35	0.57	1.0	2.1	0.81	0.00
5	0.00	8.7	0.84	e0.15	e2.5	e4.5	0.15	0.80	1.0	1.3	0.51	0.00
6	0.00	6.4	0.90	e0.16	e1.9	e6.0	0.04	0.62	1.0	1.8	0.33	0.00
7	0.00	4.6	1.0	e0.16	e1.5	e5.0	0.79	0.56	15	1.3	0.22	0.00
8	0.00	3.0	0.92	e0.17	e1.2	e4.0	1.1	0.59	426	0.83	0.15	0.00
9	0.00	2.1	0.86	e0.17	e1.0	e3.5	1.5	1.3	606	1.2	0.09	0.00
10	0.00	1.8	0.85	e0.18	e1.2	e3.0	1.0	2.1	231	1.2	0.11	0.00
11	0.00	1.1	0.63	e0.18	e1.8	e4.0	1.2	1.2	102	2.1	0.15	0.00
12	0.00	1.1	0.78	e0.20	e2.5	e3.5	2.0	41	66	5.3	0.11	0.00
13	0.00	0.92	0.52	e0.18	e3.5	e3.0	2.7	27	67	5.5	0.09	0.00
14	0.00	0.75	0.34	e0.15	e4.0	e2.5	3.1	15	90	4.4	0.04	0.00
15	0.00	0.84	0.37	e0.12	e3.7	2.4	2.3	12	120	3.5	0.01	0.00
16	0.00	0.95	0.39	e0.10	e3.0	2.5	1.5	9.1	74	2.6	0.00	0.00
17	0.00	0.91	0.32	e0.10	e1.4	1.9	0.93	7.6	45	2.6	0.00	0.00
18	0.00	0.96	0.37	e0.12	e1.0	1.8	0.66	25	30	2.1	0.00	0.00
19	0.00	1.0	0.30	e0.20	e0.80	1.7	0.66	8.0	23	1.7	0.00	0.00
20	0.00	1.1	0.24	e0.25	e0.70	1.8	0.95	5.6	18	2.0	0.00	0.00
21	0.00	1.1	e0.20	e0.22	e0.60	1.9	1.0	4.5	17	1.7	0.00	0.00
22	0.00	1.0	e0.15	e0.20	e0.60	2.1	1.5	3.6	13	1.4	0.00	0.00
23	0.00	1.1	e0.10	e0.30	e0.60	2.4	2.1	2.0	12	1.3	0.00	0.00
24	0.00	0.95	e0.10	e0.50	e0.70	2.3	1.5	11	8.0	1.0	0.00	0.00
25	0.00	0.91	e0.12	e0.80	e0.80	2.4	0.92	9.8	5.8	1.8	0.00	0.00
26	0.00	1.4	e0.14	e1.1	e0.90	2.9	0.72	5.7	4.2	2.0	0.00	0.00
27	0.00	1.3	e0.15	e1.4	e0.90	2.9	0.72	2.8	3.4	1.6	0.00	0.00
28	0.00	1.2	e0.18	e1.5	e0.80	2.4	0.65	1.3	2.8	1.6	0.00	0.00
29	1.9	1.1	e0.20	e1.4	---	2.3	0.59	1.0	3.3	2.1	0.00	0.00
30	30	0.93	e0.25	e1.4	---	2.5	0.83	1.0	2.9	2.5	0.00	0.00
31	9.5	---	e0.20	e1.7	---	1.3	---	1.0	---	2.3	0.00	---
TOTAL	41.40	65.02	14.64	13.77	45.10	84.0	34.40	203.94	1,991.40	68.03	7.42	0.00
MEAN	1.34	2.17	0.47	0.44	1.61	2.71	1.15	6.58	66.4	2.19	0.24	0.00
MAX	30	8.9	1.0	1.7	4.0	6.0	3.1	41	606	5.5	1.9	0.00
MIN	0.00	0.75	0.10	0.10	0.60	1.0	0.04	0.56	1.0	0.83	0.00	0.00
AC-FT	82	129	29	27	89	167	68	405	3,950	135	15	0.00

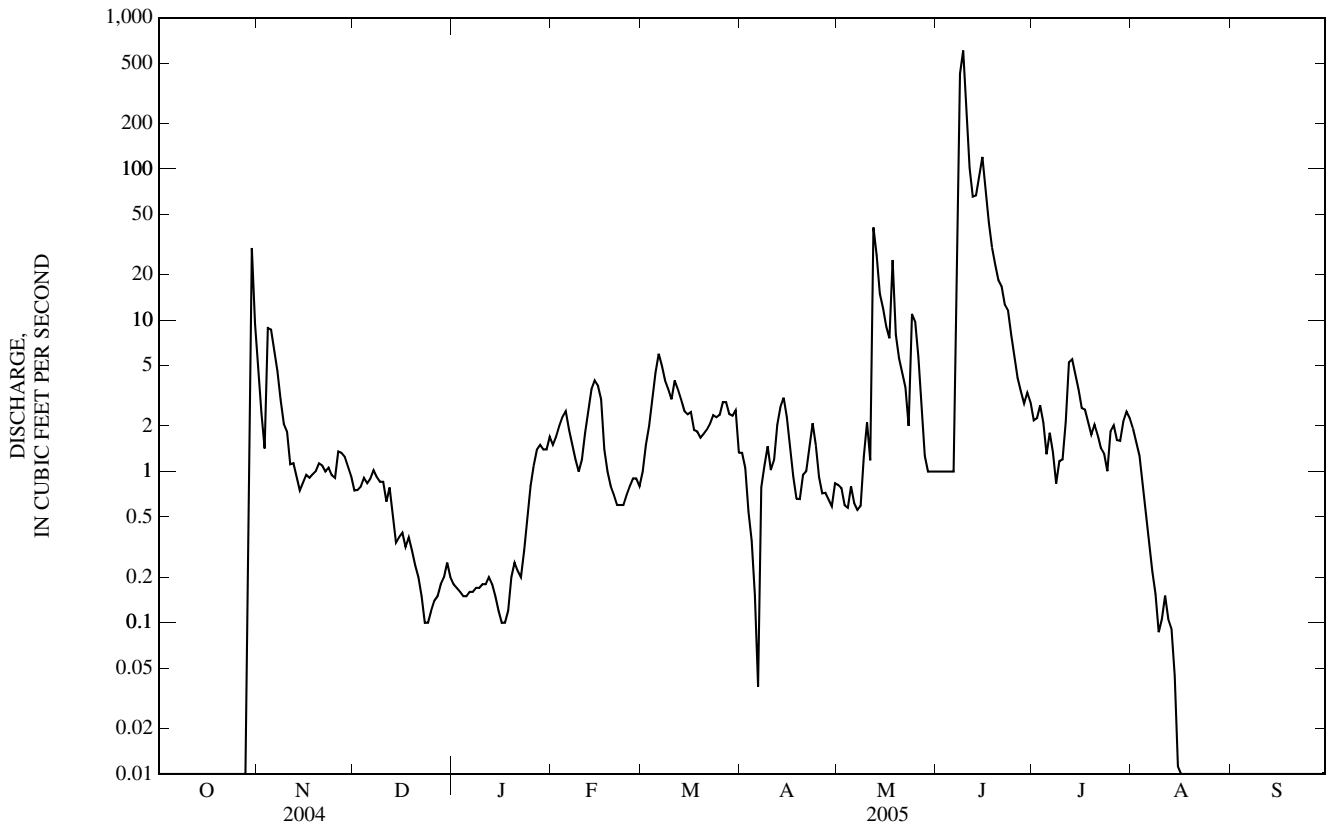
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1985 - 2005, BY WATER YEAR (WY)

MEAN	4.26	2.47	1.52	1.31	18.5	152	59.9	39.3	13.9	15.7	2.89	1.14
MAX	33.5	17.7	6.80	5.53	149	820	511	240	66.4	134	20.3	13.3
(WY)	(1997)	(1999)	(1999)	(1996)	(1995)	(1997)	(1997)	(1999)	(2005)	(2001)	(1998)	(1999)
MIN	0.00	0.00	0.00	0.00	0.00	1.81	0.79	0.10	0.00	0.00	0.00	0.00
(WY)	(1985)	(1989)	(1989)	(1989)	(1985)	(1992)	(1992)	(1992)	(1992)	(1985)	(1987)	(1987)

06354882 OAK CREEK NEAR WAKPALA, SD—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1985 - 2005	
ANNUAL TOTAL	4,136.86		2,569.12			
ANNUAL MEAN	11.3		7.04		<sup>a</sup> 26.2	
HIGHEST ANNUAL MEAN					126	1997
LOWEST ANNUAL MEAN					0.65	1992
HIGHEST DAILY MEAN	600	Mar 10	606	Jun 9	6,800	Mar 28, 1997
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 1	<sup>b</sup> 0.00	Oct 1, 1984
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 1	0.00	Oct 1, 1984
MAXIMUM PEAK FLOW			841	Jun 9	7,500	Mar 27, 1997
MAXIMUM PEAK STAGE			9.64	Jun 9	<sup>c</sup> 19.83	Mar 27, 1997
ANNUAL RUNOFF (AC-FT)	8,210		5,100		18,980	
10 PERCENT EXCEEDS	16		5.6		26	
50 PERCENT EXCEEDS	0.25		0.95		1.2	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

- a Median of annual mean discharges, 14 ft<sup>3</sup>/s.
- b No flow for many days in most years.
- c Backwater from ice.
- e Estimated.



## 06355500 NORTH FORK GRAND RIVER NEAR WHITE BUTTE, SD

LOCATION.--Lat 45°48'08", long 102°21'43", in SW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> sec.11, T.21 N., R.14 E., Perkins County, Hydrologic Unit 10130301, on left bank on upstream side of highway bridge and 9.8 mi south of White Butte.

DRAINAGE AREA.--1,190 mi<sup>2</sup>, approximately.

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

REVISED RECORDS.--WSP 1279: 1947, 1950.

GAGE.--Water-stage recorder. Elevation of gage is 2,296 ft above NGVD of 1929, from topographic map. See WSP 1917 for history of changes prior to June 12, 1951. June 12, 1951, to Aug. 20, 1975, water-stage recorder, and Aug. 21 to Sept. 10, 1975, nonrecording gage at site 100 ft upstream; Sept. 11, 1975, to Mar. 22, 1976, nonrecording gage, and July 29, 1976, to Sept. 30, 1989, water-stage recorder at site 1,400 ft upstream, and Mar. 23 to July 28, 1976, nonrecording gage at present site, all at present datum.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Flow regulated by Bowman-Haley Dam, capacity, 93,000 acre-ft, 71 mi upstream, beginning August 1966. Maximum discharge prior to October 1966, 30,900 ft<sup>3</sup>/s, Apr. 16, 1950, gage height, 20.0 ft, from floodmarks, from rating curve extended above 19,000 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; no flow at times most years. 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 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	e5.7	e2.7	e5.0	e6.0	7.6	0.00	7.0	0.46	0.00	0.00
2	0.00	0.00	e6.0	e2.7	e6.3	e6.2	4.9	0.00	6.1	0.40	0.00	0.00
3	0.00	8.3	e6.2	e2.6	e7.5	e6.7	4.8	0.00	4.3	0.56	0.00	0.00
4	0.00	14	e6.2	e2.4	e8.4	e7.0	4.5	0.00	3.3	0.44	0.00	0.00
5	0.00	17	e6.1	e2.2	e9.0	e7.4	3.6	0.00	2.9	0.25	0.00	0.00
6	0.00	19	e6.0	e2.1	e9.0	e7.9	4.1	0.00	2.4	0.20	0.00	0.00
7	0.00	17	e5.8	e1.9	e8.0	e8.2	4.9	0.00	3.6	0.08	0.00	0.00
8	0.00	15	e5.4	e1.7	e7.4	e8.8	3.6	0.00	5.4	0.06	0.00	0.00
9	0.00	14	e5.2	e1.5	e7.0	e9.0	3.0	0.00	3.0	0.04	0.00	0.00
10	0.00	11	e5.0	e1.3	e7.0	e9.7	2.8	0.00	2.9	0.02	0.00	0.00
11	0.00	14	e4.8	e1.1	e7.0	e11	2.6	0.00	2.1	0.01	0.00	0.00
12	0.00	12	e4.6	e0.90	e7.5	e12	3.0	0.00	0.91	0.01	0.00	0.00
13	0.00	8.8	e4.4	e0.80	e8.3	e12	2.8	0.00	1.8	0.00	0.00	0.00
14	0.00	5.6	e4.2	e0.70	e8.8	e11	3.3	0.01	2.5	0.00	0.00	0.00
15	0.00	3.6	e4.0	e0.60	e8.2	e10	2.8	0.21	1.7	0.00	0.00	0.00
16	0.00	2.1	e3.9	e0.50	e7.2	e9.5	1.4	0.27	1.5	0.00	0.00	0.00
17	0.00	2.2	e3.8	e0.40	e6.8	e9.0	0.89	0.20	0.83	0.00	0.00	0.00
18	0.00	2.7	e3.6	e0.30	e6.2	e8.5	0.62	0.48	0.64	0.00	0.00	0.00
19	0.00	3.8	e3.4	e0.20	e5.7	e8.0	0.62	0.41	0.39	0.00	0.00	0.00
20	0.00	3.4	e3.3	e0.30	e5.0	e9.0	0.75	0.55	0.18	0.00	0.00	0.00
21	0.00	3.4	e3.1	e0.40	e4.8	8.9	0.74	0.32	0.43	1.0	0.00	0.00
22	0.00	e3.2	e2.9	e0.40	e4.9	11	0.66	0.24	0.71	8.6	0.00	0.00
23	0.00	e3.6	e2.7	e0.50	e5.1	11	0.54	0.17	0.66	5.5	0.00	0.00
24	0.00	e3.5	e2.6	e0.60	e5.3	13	0.34	18	0.59	4.7	0.00	0.00
25	0.00	e3.6	e2.8	e0.80	e5.9	12	0.17	19	0.47	1.4	0.00	0.00
26	0.00	e6.0	e3.0	e1.5	e6.2	9.8	0.08	15	0.36	0.64	0.00	0.00
27	0.00	8.0	e3.2	e1.7	e6.4	10	0.04	12	0.47	0.35	0.00	0.00
28	0.00	8.0	e3.1	e2.0	e6.0	12	0.03	8.5	0.67	0.11	0.00	0.00
29	0.00	e7.0	e3.0	e2.7	---	10	0.03	6.1	0.60	0.05	0.00	0.00
30	0.00	e5.8	e2.8	e3.0	---	9.7	0.02	4.5	0.58	0.02	0.00	0.00
31	0.00	---	e2.7	e3.9	---	8.2	---	5.8	---	0.01	0.00	---
TOTAL	0.00	225.60	129.5	44.40	189.9	292.5	65.23	91.76	58.99	24.91	0.00	0.00
MEAN	0.00	7.52	4.18	1.43	6.78	9.44	2.17	2.96	1.97	0.80	0.00	0.00
MAX	0.00	19	6.2	3.9	9.0	13	7.6	19	7.0	8.6	0.00	0.00
MIN	0.00	0.00	2.6	0.20	4.8	6.0	0.02	0.00	0.18	0.00	0.00	0.00
AC-FT	0.00	447	257	88	377	580	129	182	117	49	0.00	0.00

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 2005, BY WATER YEAR (WY)\*

MEAN	7.14	7.33	4.67	6.19	18.0	172	119	83.6	51.5	24.0	10.1	3.97
MAX	72.1	56.9	21.2	61.1	169	964	895	414	230	154	79.7	27.1
(WY)	(1983)	(1983)	(1983)	(1973)	(1999)	(1978)	(1997)	(1982)	(1982)	(1993)	(2001)	(1979)
MIN	0.00	0.00	0.00	0.00	0.00	2.22	0.01	0.07	0.03	0.00	0.00	0.00
(WY)	(1969)	(1989)	(1989)	(1991)	(1969)	(1975)	(1981)	(1981)	(1981)	(1980)	(1968)	(1968)

06355500 NORTH FORK GRAND RIVER NEAR WHITE BUTTE, SD—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1967 - 2005*	
ANNUAL TOTAL	14,781.69		1,122.79			
ANNUAL MEAN	40.4		3.08		<sup>a</sup> 42.4	
HIGHEST ANNUAL MEAN					160	1978
LOWEST ANNUAL MEAN					2.72	1981
HIGHEST DAILY MEAN	1,890	Mar 10	19	Nov 6	6,030	Mar 28, 1978
LOWEST DAILY MEAN	0.00	Jul 27	0.00	Oct 1	<sup>b</sup> 0.00	Aug 3, 1967
ANNUAL SEVEN-DAY MINIMUM	0.00	Jul 27	0.00	Oct 1	0.00	Aug 3, 1967
MAXIMUM PEAK FLOW			38	Jul 22	<sup>c</sup> 6,710	Mar 28, 1978
MAXIMUM PEAK STAGE			1.73	Jul 22	<sup>d</sup> 12.08	Mar 23, 1978
ANNUAL RUNOFF (AC-FT)	29,320		2,230		30,710	
10 PERCENT EXCEEDS	89		8.8		86	
50 PERCENT EXCEEDS	1.9		0.83		5.4	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

\* Regulated period only (1967-2005). See REMARKS.

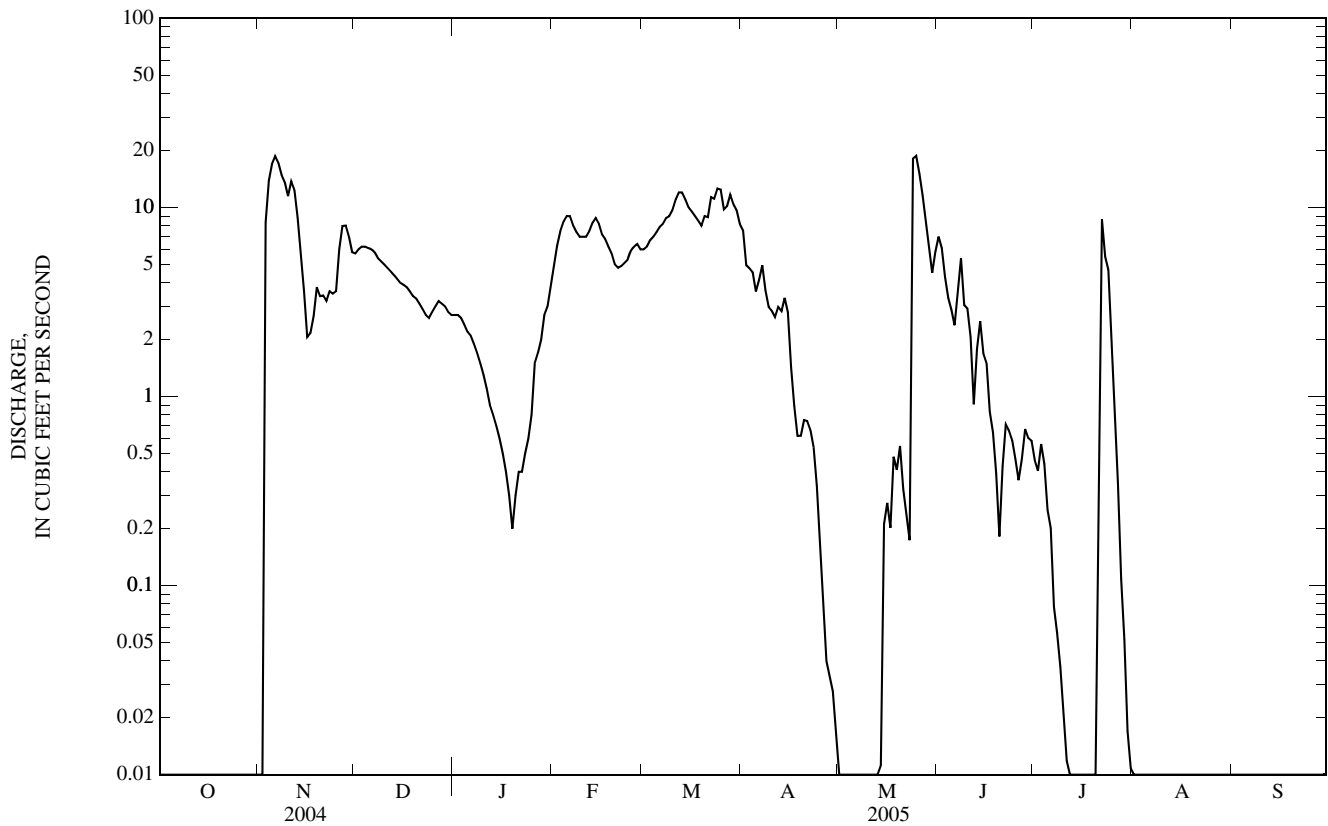
a Median of annual mean discharges, 35 ft<sup>3</sup>/s.

b No flow at times in most years.

c Gage height, 11.63 ft.

d Backwater from ice.

e Estimated.



## 06356500 SOUTH FORK GRAND RIVER NEAR CASH, SD

LOCATION.--Lat 45°38'56", long 102°38'27", in SE¼ NE¼ SE¼ sec.33, T.20 N., R.12 E., Perkins County, Hydrologic Unit 10130302, on left bank at downstream side of highway bridge, 1.0 mi upstream from Little Nasty Creek, 4.0 mi north of Cash, 10 mi south of Lodgepole, 12 mi northwest of Bison, and 16 mi downstream from Big Nasty Creek.

DRAINAGE AREA.--1,350 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--October 1945 to August 2001 (October 1995 to August 2001 seasonal records only), and April 2003 to current year. Monthly discharge only for some periods, published n WSP 1309.

GAGE.--Water-stage recorder. Datum of gage is 2,422.75 ft above NGVD of 1929. Prior to Oct. 25, 1946, nonrecording gage, and Oct. 25, 1946, to May 16, 1966, water-stage recorder, at site 500 ft upstream. May 17, 1966, to May 2, 1968, nonrecording gage, at present site, all at same datum.

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 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.6	142	e11	e4.0	e5.0	e16	14	13	18	14	5.6	5.3
2	8.4	67	e12	e3.8	e6.0	e17	14	13	62	15	5.2	5.3
3	8.5	38	12	e3.6	e6.4	e18	14	14	86	12	5.2	5.5
4	8.4	26	12	e3.4	e6.5	e19	14	14	53	10	5.4	5.8
5	8.5	20	e12	e3.2	e6.4	e19	14	14	38	10	5.2	5.7
6	8.4	17	e11	e3.0	e6.2	e18	15	13	36	9.3	5.3	5.7
7	8.7	15	e10	e2.8	e6.0	e16	14	14	34	8.3	6.0	5.6
8	8.9	13	e10	e2.6	e5.9	e17	13	14	25	8.3	6.1	5.8
9	9.0	13	e9.5	e2.4	e5.9	e18	13	16	20	12	6.2	5.8
10	9.0	12	e9.2	e2.0	e6.0	e18	13	15	22	16	7.3	5.8
11	8.8	11	e9.0	e1.7	e7.0	e17	14	16	23	9.0	7.0	6.0
12	9.0	11	e8.7	e1.4	e8.0	e16	14	19	23	7.2	7.3	6.1
13	8.9	12	e8.3	e1.3	e8.5	e15	13	21	27	6.2	9.8	7.1
14	9.4	12	e8.0	e1.2	e9.0	e14	13	51	35	5.3	9.1	7.7
15	9.2	12	e7.5	e1.3	e9.0	e14	13	154	56	4.9	14	8.4
16	9.1	11	e7.0	e1.5	e9.0	e14	13	114	49	4.4	12	9.7
17	9.4	11	e6.8	e2.0	e9.5	e15	12	58	53	4.0	9.0	9.1
18	9.4	11	e6.5	e2.8	e10	e16	12	36	48	3.8	7.7	7.9
19	9.9	11	e6.2	e3.0	e11	e17	12	25	37	3.7	8.7	8.2
20	9.5	e11	e5.8	e3.4	e12	e17	13	20	31	3.6	7.6	7.8
21	9.9	e10	e5.5	e3.9	e13	e17	20	16	24	3.9	6.8	7.4
22	10	e9.0	e5.0	e4.2	e14	e17	31	14	15	4.2	6.4	6.9
23	11	e10	e4.8	e4.5	e15	e15	33	13	13	4.0	6.2	6.8
24	12	e10	e4.8	e4.5	e15	e14	27	27	11	4.1	6.3	7.1
25	17	e11	e4.7	e4.5	e15	e13	21	25	9.3	4.7	6.0	7.1
26	23	e11	e4.8	e4.5	e15	16	18	18	9.3	5.0	5.9	7.4
27	20	e10	e5.0	e4.4	e16	16	15	15	9.3	6.6	6.2	7.3
28	16	e9.5	e5.1	e4.2	e16	15	14	13	9.3	8.8	6.2	7.7
29	19	e9.0	e5.0	e4.0	---	15	14	12	12	9.4	5.9	7.8
30	59	e10	e4.6	e4.1	---	15	13	12	16	8.6	5.6	7.8
31	192	---	e4.3	e4.6	---	15	---	16	---	6.4	6.0	---
TOTAL	567.9	575.5	236.1	97.8	272.3	499	473	835	904.2	232.7	217.2	207.6
MEAN	18.3	19.2	7.62	3.15	9.72	16.1	15.8	26.9	30.1	7.51	7.01	6.92
MAX	192	142	12	4.6	16	19	33	154	86	16	14	9.7
MIN	8.4	9.0	4.3	1.2	5.0	13	12	12	9.3	3.6	5.2	5.3
AC-FT	1,130	1,140	468	194	540	990	938	1,660	1,790	462	431	412

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947-1995, 2004 - 2005, BY WATER YEAR (WY)

MEAN	21.8	11.8	6.90	6.29	25.7	162	159	85.5	74.6	44.4	20.3	15.1
MAX	135	26.6	20.5	64.1	267	807	2,446	523	336	590	85.6	62.8
(WY)	(1983)	(1973)	(1973)	(1973)	(1972)	(1972)	(1952)	(1995)	(1967)	(1993)	(1981)	(1986)
MIN	6.32	3.57	0.00	0.00	0.00	5.58	10.7	9.39	5.37	2.84	1.16	4.40
(WY)	(1959)	(1956)	(1956)	(1949)	(1949)	(1975)	(1981)	(1992)	(1961)	(1961)	(1959)	(1981)

06356500 SOUTH FORK GRAND RIVER NEAR CASH, SD—Continued

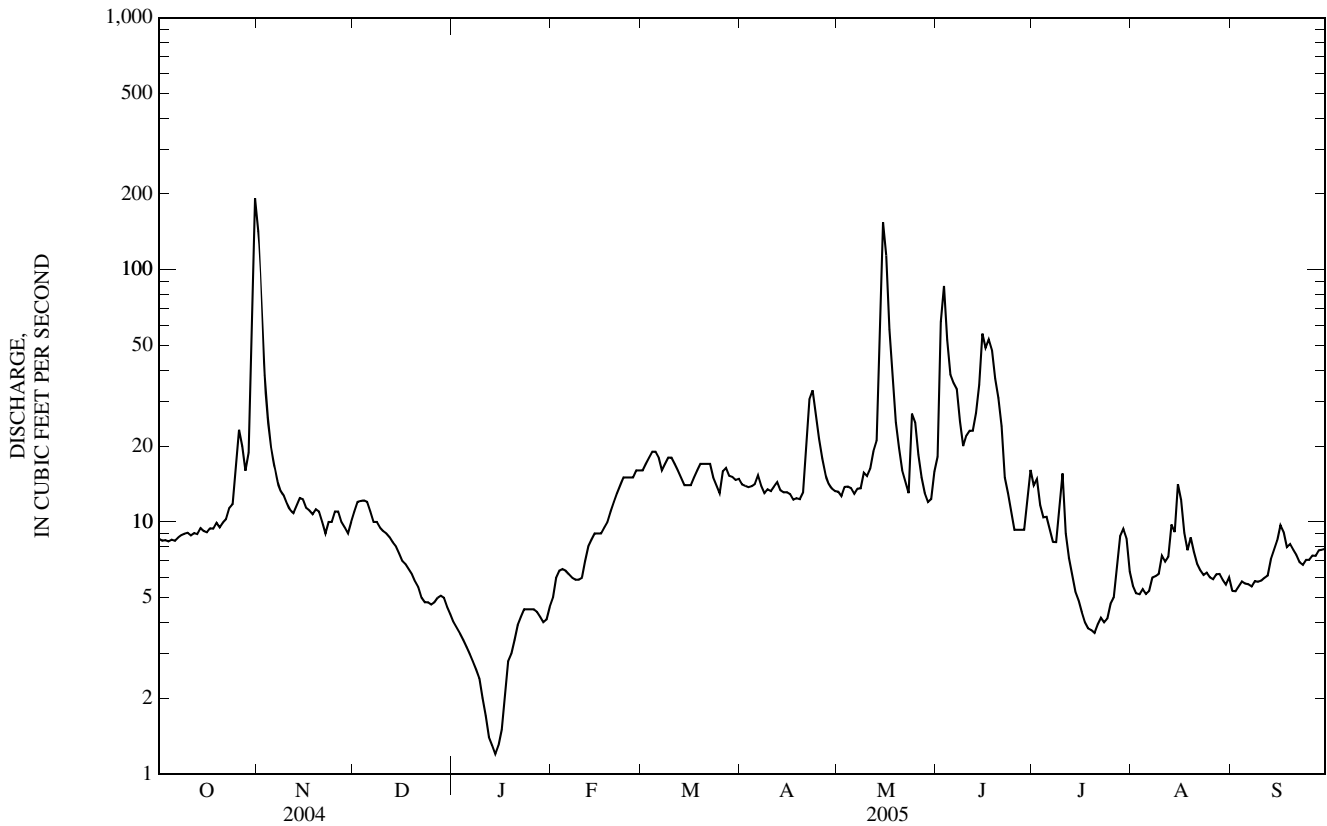
SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1947-1995,2004 - 2005	
ANNUAL TOTAL	21,747.2		5,118.3		<sup>a</sup> 51.4	
ANNUAL MEAN	59.4		14.0		221	
HIGHEST ANNUAL MEAN					10.1	
LOWEST ANNUAL MEAN					1950	
HIGHEST DAILY MEAN	2,300	Mar 9	192	Oct 31	15,600	Apr 16, 1950
LOWEST DAILY MEAN	1.6	Jan 29	1.2	Jan 14	<sup>b</sup> 0.00	Feb 6, 1948
ANNUAL SEVEN-DAY MINIMUM	1.8	Jan 27	1.5	Jan 10	0.00	Feb 6, 1948
MAXIMUM PEAK FLOW			271	Oct 31	<sup>c</sup> 27,000	Apr 15, 1950
MAXIMUM PEAK STAGE			2.97	Oct 31	15.40	Apr 15, 1950
ANNUAL RUNOFF (AC-FT)	43,140		10,150		37,220	
10 PERCENT EXCEEDS	54		22		71	
50 PERCENT EXCEEDS	11		10		12	
90 PERCENT EXCEEDS	3.9		4.5		2.2	

a Median of annual mean discharges, 36 ft<sup>3</sup>/s.

b No flow at times in most years.

c From rating curve extended above 14,000 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow.

e Estimated.





06357000 SHADEHILL RESERVOIR AT SHADEHILL, SD

LOCATION.--Lat 45°45'12", long 102°12'12", in E<sup>1</sup>/<sub>2</sub> sec.25, T.21 N., R.15 E., Perkins County, Hydrologic Unit 10130302, at dam on Grand River, 1.3 mi southwest of Shadehill.

DRAINAGE AREA.--3,120 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--June 1950 to current year (monthend contents only).

GAGE.--Water-stage recorder. Elevations listed to NGVD of 1929. Prior to Apr. 3, 1952, occasional elevations obtained by level circuits and Apr. 3, 1952, to Apr. 28, 1970, nonrecording gage at same site and datum.

REMARKS.--Reservoir formed by earthfill dam. Storage began July 1, 1950; dam completed August 1951. Conservation storage, 81,400 acre-ft between elevations 2,250.8 ft (invert of canal and river outlet) and elevation 2,272.0 ft (crest of morning-glory spillway). Dead storage, 58,231 acre-ft below elevation 2,250.8 ft. Flood control, 217,708 acre-ft between elevations 2,272.0 ft and 2,302.0 ft (crest of emergency spillway). Surcharge, 111,203 acre-ft at elevation 2,312.0 ft (maximum pool elevation). Total reservoir capacity is 468,585 acre-ft at elevation 2,312.0 ft. The reservoir provides flood control and water for irrigation purposes. Figures given herein represent usable contents above elevation 2,250.8 ft. Prior to Oct. 1, 1968, reservoir contents published as total contents and included dead storage.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum usable contents observed, 260,207 acre-ft, Apr. 10, 1952, elevation, 2,297.90 ft; minimum usable observed since first filling to spillway level, 14,357 acre-ft, Feb. 18, 2004.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 40,900 acre-ft, Oct.1, elevation, 2,267.55 ft; minimum, 23,100 acre-ft, Sept.30.

MONTHEND ELEVATION AND CONTENTS AT 2400 HOURS  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Elevation	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30 . . . . .	2,267.58	41,100	--
Oct. 31 . . . . .	2,267.12	39,100	-2,000
Nov. 30 . . . . .	2,266.91	38,100	-1,000
Dec. 31 . . . . .	2,266.46	36,200	-1,900
CAL YR 2004 . . . . .	--	--	+20,000
Jan. 31 . . . . .	2,265.96	34,100	-2,100
Feb. 28 . . . . .	2,265.80	33,400	-700
Mar. 31 . . . . .	2,275.67	32,900	-500
Apr. 30 . . . . .	2,275.31	31,400	-1,500
May 31 . . . . .	2,265.57	32,500	+1,100
June 30 . . . . .	2,265.53	32,300	-200
July 31 . . . . .	2,264.84	29,500	-2,800
Aug. 31 . . . . .	2,264.05	26,300	-3,200
Sept. 30 . . . . .	2,263.23	23,100	-3,200
WTR YR 2005 . . . . .	--	--	-18,000

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## GRAND-MOREAU RIVER BASIN

06357800 GRAND RIVER AT LITTLE EAGLE, SD

LOCATION.--Lat 45°39'28", long 100°49'04", in NE<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> sec.32, T.20 N., R.27 E., Corson County, Hydrologic Unit 10130303, on left bank at downstream side of bridge on State Highway 63, 1.3 mi southwest of Little Eagle, and 4.7 mi downstream from Little Oak Creek.

DRAINAGE AREA.--5,370 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--July 1958 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,624.63 ft above NGVD of 1929. Prior to May 12, 1959, nonrecording gage, and May 12, 1959, to Aug. 11, 1970, water-stage recorder at site 0.6 mi downstream at datum 2.00 ft higher. From Aug. 12, 1970, to Sept. 30, 1997, at present site at datum 4.00 ft higher than original datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. U.S. Army Corps of Engineers satellite data-collection platform at station. Flow regulated by Shadehill Dam 144 mi upstream since July 1, 1950. (See station 06357000.) 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 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	1,100	e23	e12	e17	e24	68	37	52	132	29	24
2	30	452	e22	e12	e18	e25	60	36	54	152	27	24
3	30	258	e24	e12	e25	e30	55	37	85	183	26	27
4	30	157	e25	e12	e40	e40	51	38	89	135	26	26
5	30	114	e24	e12	e30	e60	49	37	73	285	27	24
6	30	89	e23	e12	e25	e80	47	37	57	258	27	23
7	30	74	e22	e12	e22	e110	46	37	286	148	27	23
8	30	69	e21	e12	e20	e100	44	37	955	104	25	24
9	30	59	e20	e12	e19	e95	41	41	3,090	82	26	26
10	30	55	e19	e12	e18	e100	38	41	1,660	67	33	26
11	30	50	e24	e12	e20	e105	45	43	651	71	48	26
12	30	e47	e21	e12	e23	e105	55	92	363	60	84	26
13	30	e44	e21	e11	e25	e100	61	113	374	52	118	26
14	29	e42	e20	e11	e27	e95	69	688	429	47	124	24
15	30	e45	e20	e10	e26	e90	79	386	1,170	43	80	24
16	30	47	e22	e10	e25	e85	100	239	690	41	69	25
17	31	46	e20	e10	e24	e80	76	160	378	36	61	26
18	32	44	e19	e10	e24	e76	58	201	238	35	46	26
19	33	43	e19	e11	e23	e78	50	570	167	35	39	25
20	33	e40	e17	e11	e23	e76	47	832	128	34	36	26
21	33	e36	e15	e11	e23	e78	207	495	322	33	38	25
22	34	e41	e13	e10	e23	e85	296	291	2,880	32	51	26
23	41	e35	e12	e11	e23	e85	176	175	1,940	32	47	26
24	44	e33	e12	e12	e23	e80	107	129	874	32	43	26
25	44	e35	e12	e13	e23	e70	77	94	413	37	35	26
26	43	e34	e12	e14	e23	e70	60	80	264	33	31	26
27	39	e32	e13	e15	e23	e80	50	69	195	35	29	28
28	38	e30	e13	e16	e23	e90	45	61	155	34	28	29
29	59	e27	e14	e16	---	e100	41	55	136	33	29	30
30	145	e25	e14	e16	---	90	39	50	158	32	26	30
31	1,210	---	e13	e16	---	79	---	50	---	31	23	---
TOTAL	2,341	3,203	569	378	658	2,461	2,237	5,251	18,326	2,364	1,358	773
MEAN	75.5	107	18.4	12.2	23.5	79.4	74.6	169	611	76.3	43.8	25.8
MAX	1,210	1,100	25	16	40	110	296	832	3,090	285	124	30
MIN	29	25	12	10	17	24	38	36	52	31	23	23
AC-FT	4,640	6,350	1,130	750	1,310	4,880	4,440	10,420	36,350	4,690	2,690	1,530

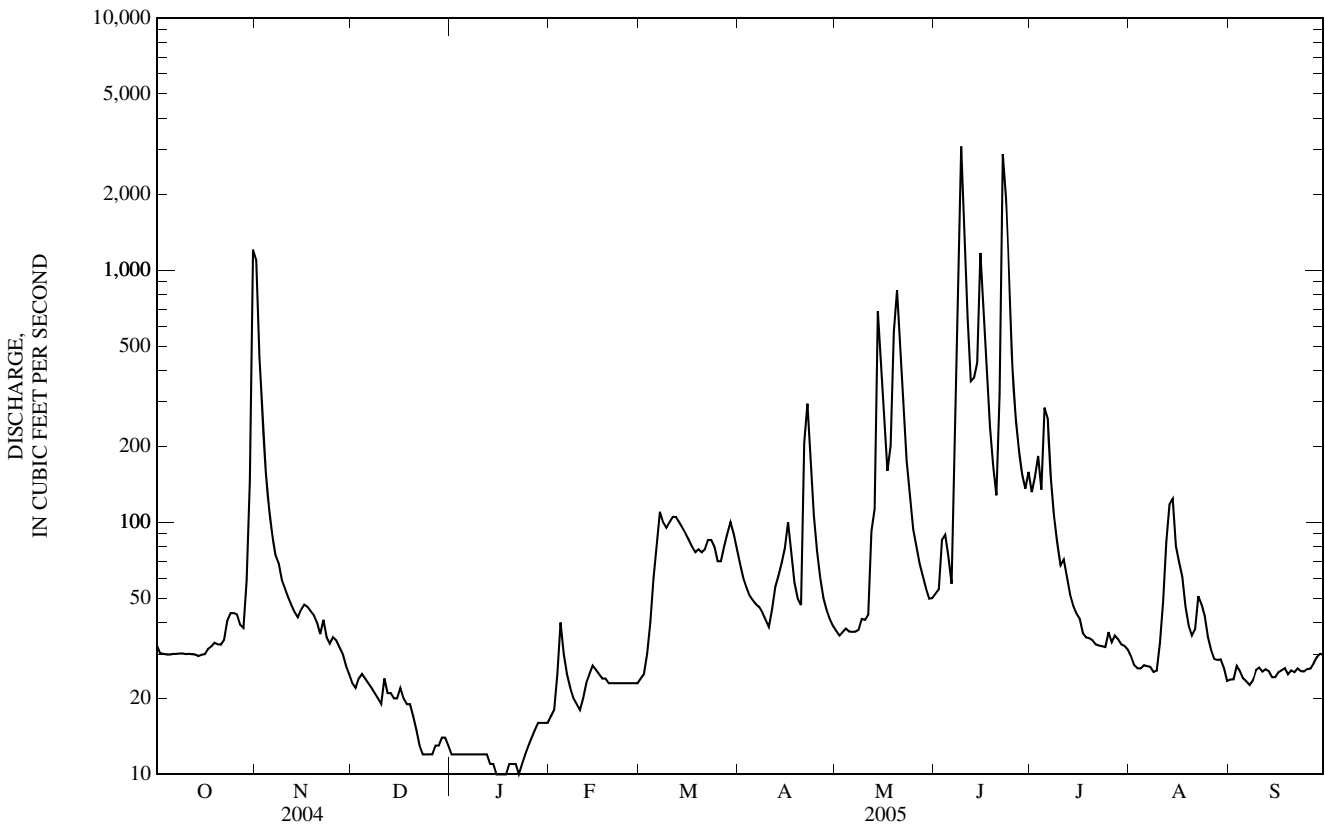
## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1959 - 2005, BY WATER YEAR (WY)

MEAN	90.0	59.3	35.7	45.3	148	810	553	469	320	207	108	86.0
MAX	317	204	103	867	1,564	3,866	4,919	2,292	1,045	2,298	554	318
(WY)	(1995)	(1961)	(1983)	(1973)	(1999)	(1987)	(1997)	(1986)	(1967)	(1993)	(1993)	(1996)
MIN	2.92	2.14	0.00	0.00	0.00	18.2	10.3	5.45	20.5	10.8	0.00	2.29
(WY)	(1959)	(1960)	(1960)	(1959)	(1959)	(1981)	(1981)	(1981)	(1989)	(1991)	(1959)	(1960)

06357800 GRAND RIVER AT LITTLE EAGLE, SD—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1959 - 2005	
ANNUAL TOTAL	34,163.5		39,919			
ANNUAL MEAN	93.3		109		<sup>a</sup> 245	
HIGHEST ANNUAL MEAN					1,007	1997
LOWEST ANNUAL MEAN					44.8	2002
HIGHEST DAILY MEAN	2,320	Mar 11	3,090	Jun 9	26,500	Mar 23, 1987
LOWEST DAILY MEAN	7.0	Jan 29	10	Jan 15	<sup>b</sup> 0.00	Oct 2, 1958
ANNUAL SEVEN-DAY MINIMUM	7.1	Jan 29	10	Jan 13	0.00	Oct 2, 1958
MAXIMUM PEAK FLOW			4,600	Jun 9	<sup>c</sup> 31,000	Mar 23, 1987
MAXIMUM PEAK STAGE			12.72	Jun 9	<sup>d</sup> 21.76	Mar 18, 1966
ANNUAL RUNOFF (AC-FT)	67,760		79,180		177,400	
10 PERCENT EXCEEDS	154		179		454	
50 PERCENT EXCEEDS	35		36		65	
90 PERCENT EXCEEDS	12		15		5.5	

- a Median of annual mean discharges, 180 ft<sup>3</sup>/s.
- b No flow at times.
- c Gage height, 19.16 ft, datum then in use.
- d From floodmarks, ice jam, site and datum then in use.
- e Estimated.



## GRAND-MOREAU RIVER BASIN

06359500 MOREAU RIVER NEAR FAITH, SD

LOCATION.--Lat 45°11'52", long 102°09'22", in NW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> sec.10, T.14 N., R.16 E., Perkins County, Hydrologic Unit 10130306, on left bank 10 ft downstream from bridge on State Highway 73, 3.1 mi downstream from Rabbit Creek, and 13.5 mi northwest of Faith.

DRAINAGE AREA.--2,660 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--March 1943 to current year.

REVISED RECORDS.--WSP 1176: 1944. WSP 1279: 1946(M).

GAGE.--Water-stage recorder. Datum of gage is 2,238.68 ft above NGVD of 1929. Prior to Oct. 5, 1949, nonrecording gage 0.3 mi upstream and Oct. 5, 1949, to July 16, 1959, nonrecording gage and crest-stage gage at present site; both at datum 1.0 ft higher. July 17, 1959, to Sept. 1, 1971, recording gage at site 500 ft downstream at present datum.

REMARKS.--Records good except those for Aug. 23 to Sept. 30, 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 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.4	158	11	e0.50	e0.30	e0.50	10	5.5	33	27	0.96	0.05
2	3.7	110	12	e0.45	e0.40	e0.60	8.1	4.7	25	24	0.89	0.00
3	3.3	78	12	e0.40	e0.50	e0.70	7.7	4.6	35	27	1.2	0.00
4	2.8	52	12	e0.36	e0.70	e0.80	6.8	4.3	39	46	1.3	0.00
5	2.7	39	11	e0.30	e0.60	e0.90	5.7	4.2	45	179	1.1	0.00
6	2.7	30	14	e0.28	e0.40	e1.1	6.2	3.9	31	135	0.87	0.00
7	2.7	23	13	e0.27	e0.30	e1.3	5.4	2.8	28	70	0.60	0.00
8	2.5	19	11	e0.26	e0.20	e1.7	3.2	3.4	83	57	0.26	0.00
9	2.3	16	e11	e0.25	e0.19	e2.0	3.5	9.1	152	37	0.01	0.00
10	2.1	14	9.7	e0.25	e0.30	e3.0	3.6	14	159	25	0.00	0.02
11	2.2	13	13	e0.25	e0.50	e4.0	4.5	51	127	16	0.00	0.10
12	2.1	13	e7.0	e0.25	e0.60	e5.0	23	164	101	12	0.00	0.23
13	2.1	13	e12	e0.20	e0.70	e6.0	20	168	165	13	0.04	0.42
14	3.4	11	e16	e0.17	e0.60	e6.0	12	202	249	9.9	0.00	0.51
15	3.0	11	e18	e0.18	e0.50	e6.0	9.7	172	279	6.0	0.00	0.52
16	2.3	10	e18	e0.18	e0.50	e5.9	7.4	128	186	3.2	0.00	0.42
17	2.9	9.8	e18	e0.20	e0.50	e5.9	6.3	83	116	1.7	0.00	0.31
18	2.6	9.1	e17	e0.30	e0.50	e6.2	5.1	90	67	2.2	17	0.18
19	3.1	9.9	e11	e0.40	e0.40	e7.0	11	103	53	1.6	33	0.15
20	4.1	10	e8.0	e0.60	e0.50	e7.4	38	73	48	3.2	15	0.02
21	4.0	10	e6.0	e0.50	e0.50	e8.0	30	49	36	6.3	8.2	0.00
22	4.7	10	e5.5	e0.40	e0.50	e10	23	37	28	82	4.8	0.00
23	5.8	9.0	e5.0	e0.50	e0.60	e11	15	29	31	53	3.5	0.00
24	6.3	12	e5.0	e0.60	e0.65	e12	11	23	63	16	5.2	0.00
25	7.0	13	e4.0	e0.60	e0.70	e14	7.5	22	46	54	4.7	0.00
26	7.1	13	e3.5	e0.60	e0.70	e16	15	21	46	46	9.9	0.00
27	7.8	12	e3.0	e0.60	e0.50	16	12	16	34	15	3.2	0.00
28	8.4	e12	e2.0	e0.50	e0.50	13	9.3	15	26	4.9	0.76	0.00
29	118	12	e1.0	e0.40	---	12	7.8	11	23	1.7	0.75	0.00
30	464	11	e0.80	e0.30	---	11	6.5	9.5	26	1.7	1.1	0.00
31	275	---	e0.60	e0.30	---	11	---	13	---	1.7	0.30	---
TOTAL	965.1	762.8	291.10	11.35	13.84	206.00	334.3	1,536.0	2,380	978.1	114.64	2.93
MEAN	31.1	25.4	9.39	0.37	0.49	6.65	11.1	49.5	79.3	31.6	3.70	0.10
MAX	464	158	18	0.60	0.70	16	38	202	279	179	33	0.52
MIN	2.1	9.0	0.60	0.17	0.19	0.50	3.2	2.8	23	1.6	0.00	0.00
AC-FT	1,910	1,510	577	23	27	409	663	3,050	4,720	1,940	227	5.8

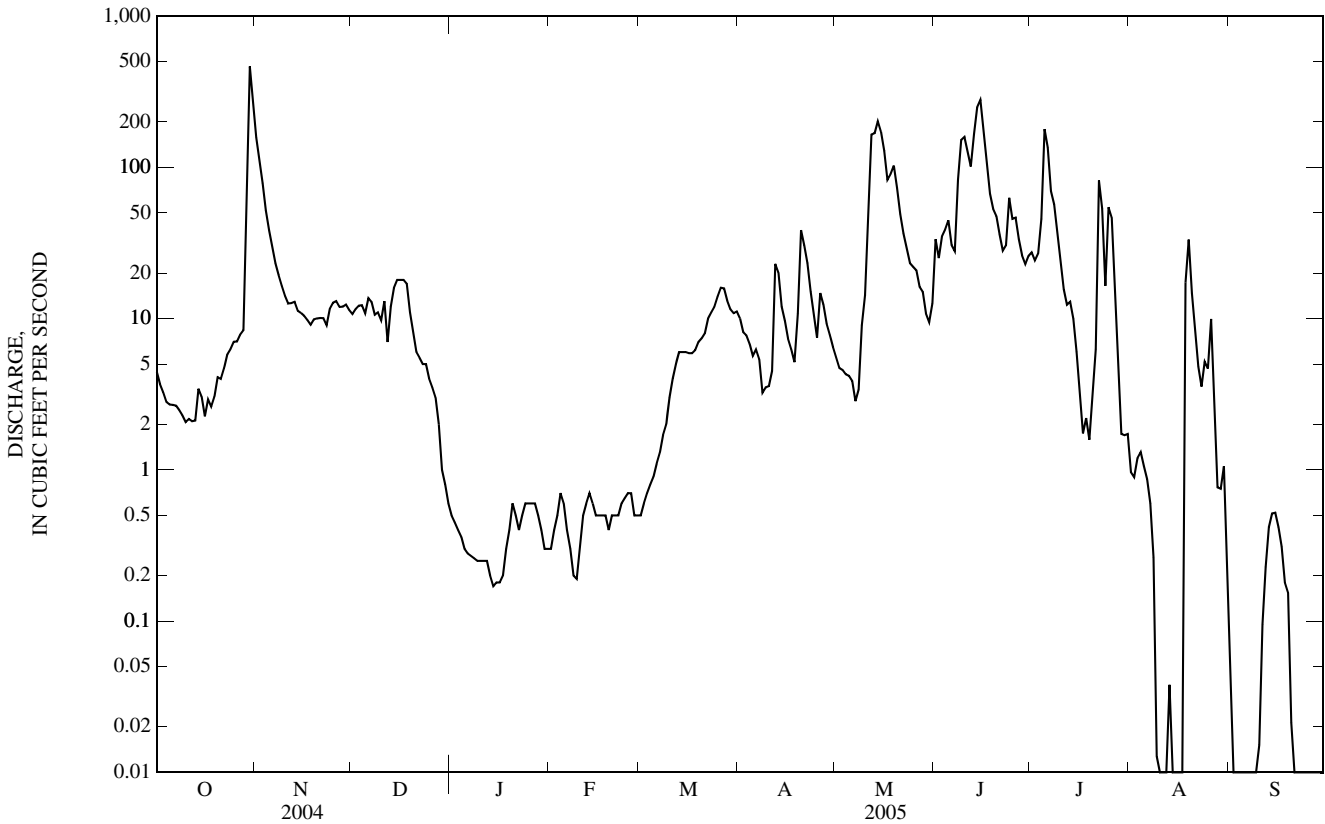
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 2005, BY WATER YEAR (WY)

MEAN	32.6	15.3	7.77	7.07	72.9	391	367	293	270	112	34.2	16.6
MAX	463	139	44.8	99.0	1,045	2,757	4,355	2,203	1,850	1,530	258	262
(WY)	(1983)	(1999)	(1999)	(1973)	(1996)	(1978)	(1952)	(1982)	(1944)	(1993)	(1993)	(1986)
MIN	0.00	1.10	0.00	0.00	0.00	0.19	5.27	4.60	2.04	0.00	0.00	0.00
(WY)	(1959)	(1946)	(1956)	(1944)	(1944)	(1944)	(1981)	(1980)	(2002)	(2002)	(1949)	(1958)

06359500 MOREAU RIVER NEAR FAITH, SD—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1944 - 2005	
ANNUAL TOTAL	20,807.40		7,596.16		<sup>a</sup> 135	
ANNUAL MEAN	56.9		20.8		496	
HIGHEST ANNUAL MEAN					1997	
LOWEST ANNUAL MEAN					7.60	
HIGHEST DAILY MEAN	1,060	Aug 5	464	Oct 30	25,300	Apr 8, 1944
LOWEST DAILY MEAN	0.50	Jan 28	0.00	Aug 10	<sup>b</sup> 0.00	Dec 15, 1943
ANNUAL SEVEN-DAY MINIMUM	0.69	Jan 26	0.00	Sep 2	0.00	Dec 15, 1943
MAXIMUM PEAK FLOW			596	Oct 30	<sup>c</sup> 26,000	Apr 9, 1944
MAXIMUM PEAK STAGE			3.96	Oct 30	<sup>d</sup> 20.90	Apr 9, 1944
ANNUAL RUNOFF (AC-FT)	41,270		15,070		97,800	
10 PERCENT EXCEEDS	160		51		187	
50 PERCENT EXCEEDS	11		5.7		11	
90 PERCENT EXCEEDS	1.5		0.19		0.22	

- a Median of annual mean discharges, 93 ft<sup>3</sup>/s.
- b No flow at times in most years.
- c From rating curve extended above 12,000 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow.
- d From floodmarks, site and datum then in use.
- e Estimated.



## GRAND-MOREAU RIVER BASIN

## 06360500 MOREAU RIVER NEAR WHITEHORSE, SD

LOCATION.--Lat 45°15'21", long 100°50'33", in SW $\frac{1}{4}$  SE $\frac{1}{4}$  sec.17, T.15 N., R.27 E., Dewey County, Hydrologic Unit 10130306, on left bank 30 ft downstream from bridge, 2.4 mi southeast of Whitehorse, 8.8 mi downstream from Little Moreau River, and 16.3 mi southeast of town of Timber Lake.

DRAINAGE AREA.--4,880 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--June 1954 to current year.

REVISED RECORDS.--WDR SD-78-1: 1977.

GAGE.--Water-stage recorder. Datum of gage is 1,661.48 ft above NGVD of 1929. Prior to Nov. 24, 1954, nonrecording gage at same site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. 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 June 1953 reached a stage of about 26.2 ft. Flood in March 1947 was probably higher.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.5	1,780	e6.5	e1.7	e0.80	e13	16	12	31	52	33	0.00
2	5.9	1,020	e7.0	e1.3	e1.3	e16	14	10	31	45	27	0.00
3	4.5	518	e7.0	e1.0	e2.0	e20	13	8.9	33	45	23	0.00
4	3.9	285	e6.5	e0.80	e4.0	e30	12	7.5	28	43	21	0.00
5	3.3	206	e6.0	e0.60	e10	e40	11	6.6	24	37	17	0.00
6	2.9	146	e6.5	e0.60	e8.0	e50	9.3	6.4	23	30	14	0.00
7	2.4	115	e6.0	e0.50	e6.0	e60	8.5	7.2	25	28	12	0.00
8	2.1	84	e5.5	e0.50	e5.0	e55	7.2	7.2	124	27	10	0.00
9	1.8	63	e5.5	e0.40	e4.0	e50	6.3	8.5	79	29	9.4	0.00
10	1.7	50	e5.5	e0.40	e4.0	43	5.4	7.3	421	99	9.5	0.00
11	1.6	40	e6.5	e0.40	e5.0	52	7.4	7.2	703	183	9.9	0.00
12	1.3	e29	e5.5	e0.40	e7.0	48	17	345	323	121	9.3	0.00
13	1.2	e25	e5.0	e0.30	e15	37	20	422	266	83	8.9	0.00
14	1.0	e20	e4.5	e0.20	e18	e30	16	101	276	60	8.0	1.6
15	1.0	e19	e5.0	e0.10	e16	e26	13	153	440	43	7.5	1.1
16	0.91	e17	e5.0	e0.00	e15	e26	11	252	774	38	7.0	0.50
17	0.86	17	e4.5	e0.00	e14	e20	8.4	197	563	36	6.5	0.24
18	0.85	16	e4.0	e0.00	e13	18	6.8	810	341	29	52	0.27
19	0.83	15	e4.0	e0.10	e12	18	24	512	280	24	85	0.14
20	0.80	e12	e4.0	e0.10	e11	18	131	195	188	21	29	0.00
21	0.73	e16	e3.5	e0.10	e11	16	179	217	239	16	17	0.00
22	0.85	e14	e3.0	e0.10	e11	18	61	230	383	14	11	0.00
23	1.0	e8.0	e2.5	e0.20	e11	19	31	153	145	13	7.6	0.00
24	0.84	e11	e2.0	e0.30	e12	18	22	104	152	12	6.5	0.00
25	0.93	12	e2.0	e0.40	e12	21	17	88	108	11	5.2	0.00
26	0.98	12	e2.0	e0.50	e12	17	14	70	80	11	3.5	0.00
27	1.1	e10	e2.0	e0.60	e12	18	20	55	61	9.9	2.3	0.00
28	1.3	e11	e2.0	e0.60	e11	17	19	43	48	9.0	1.3	0.00
29	3.7	e6.0	e2.5	e0.70	---	16	17	36	64	11	0.62	0.00
30	1,750	e6.0	e2.5	e0.70	---	17	14	31	56	25	0.16	0.00
31	921	---	e2.0	e0.70	---	15	---	30	---	32	0.02	---
TOTAL	2,728.78	4,583.0	136.0	14.30	263.10	862	751.3	4,132.8	6,309	1,236.9	454.20	3.85
MEAN	88.0	153	4.39	0.46	9.40	27.8	25.0	133	210	39.9	14.7	0.13
MAX	1,750	1,780	7.0	1.7	18	60	179	810	774	183	85	1.6
MIN	0.73	6.0	2.0	0.00	0.80	13	5.4	6.4	23	9.0	0.02	0.00
AC-FT	5,410	9,090	270	28	522	1,710	1,490	8,200	12,510	2,450	901	7.6

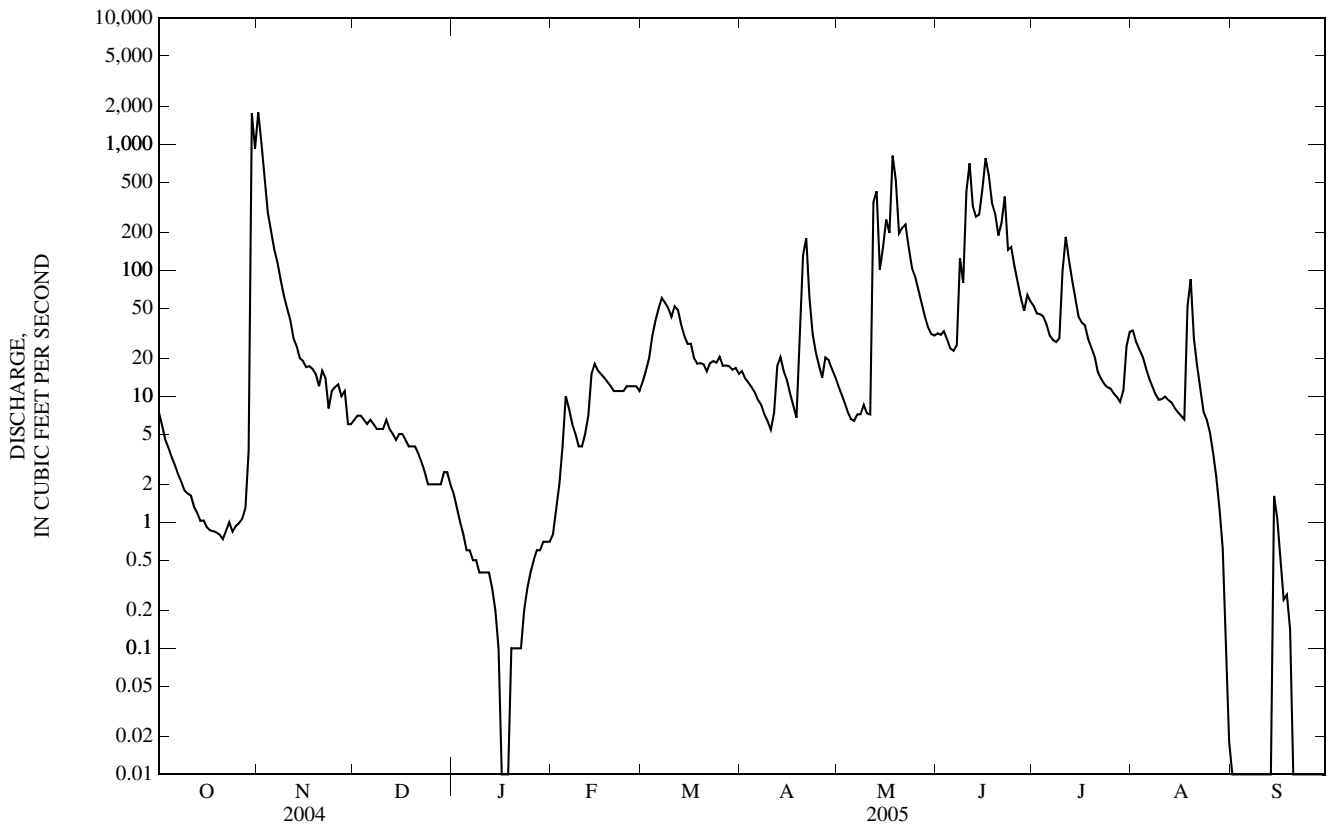
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1955 - 2005, BY WATER YEAR (WY)

MEAN	52.7	18.7	6.53	7.48	98.2	924	466	612	376	186	54.2	27.1
MAX	642	182	59.1	210	1,253	8,022	5,071	3,759	2,433	2,438	452	362
(WY)	(1983)	(1999)	(1999)	(1973)	(1996)	(1997)	(1997)	(1982)	(1967)	(1993)	(1993)	(1996)
MIN	0.00	0.00	0.00	0.00	0.00	2.28	0.00	0.00	0.17	0.00	0.00	0.00
(WY)	(1957)	(1959)	(1956)	(1956)	(1955)	(1964)	(1981)	(1981)	(2002)	(2002)	(1955)	(1958)

06360500 MOREAU RIVER NEAR WHITEHORSE, SD—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1955 - 2005	
ANNUAL TOTAL	27,167.12		21,475.23			
ANNUAL MEAN	74.2		58.8		<sup>a</sup> 237	
HIGHEST ANNUAL MEAN					1,428	1997
LOWEST ANNUAL MEAN					8.39	1980
HIGHEST DAILY MEAN	1,780	Nov 1	1,780	Nov 1	28,100	Mar 23, 1997
LOWEST DAILY MEAN	0.00	Jan 30	0.00	Jan 16	<sup>b</sup> 0.00	Jan 12, 1955
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 30	0.00	Sep 1	0.00	Jan 12, 1955
MAXIMUM PEAK FLOW			2,470	Oct 30	<sup>c</sup> 29,700	Mar 23, 1997
MAXIMUM PEAK STAGE			7.84	Oct 30	<sup>d</sup> 27.68	Mar 21, 1997
ANNUAL RUNOFF (AC-FT)	53,890		42,600		171,600	
10 PERCENT EXCEEDS	220		137		433	
50 PERCENT EXCEEDS	7.5		11		12	
90 PERCENT EXCEEDS	0.10		0.20		0.00	

- a Median of annual mean discharges, 140 ft<sup>3</sup>/s.
- b No flow at times in most years.
- c Gage height, 26.93 ft.
- d Backwater from ice.
- e Estimated.





## CHEYENNE RIVER BASIN

06386500 CHEYENNE RIVER NEAR SPENCER, WY

LOCATION.--Lat 43°25'16", long 104°07'52", in NE<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub> sec. 25, T.40 N., R.61 W., Niobrara County, Hydrologic Unit 10120106, on right bank at downstream side of old highway bridge, 0.1 mi downstream from Sage Creek, 1.8 mi downstream from Robbers Roost Creek, and 17.0 mi northwest of Edgemont, SD.

DRAINAGE AREA.--5,270 mi<sup>2</sup>, approximately.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1948 to September 1974, October 2003 to current year. Published as South Fork Cheyenne River near Spencer October 1949 to September 1951.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 3,600 ft above NGVD of 1929, from topographic map. Prior to Oct. 18, 1955, water-stage recorder at site 400 ft upstream. Oct. 18, 1955, to Aug. 1, 1961, at site 2,500 ft upstream, and Aug. 1, 1961, to Aug. 22, 1962, at site 2,200 ft upstream, all at different datums.

REMARKS.--Records fair except those for estimated periods, which are poor. Many small reservoirs above station used for stock and irrigation water, total capacity, about 45,000 acre-ft. Rain gage and 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. Station operated by the Wyoming District from October 1948 to September 1974.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.01	e0.03	e0.03	e0.02	0.11	0.18	1.8	e5.8	7.8	0.68	1.2
2	0.00	0.01	e0.03	e0.02	e0.03	0.11	0.16	1.8	e5.7	9.5	0.63	1.2
3	0.00	0.01	e0.03	e0.01	e0.04	0.12	0.16	2.0	e5.8	9.7	0.61	1.3
4	0.00	0.01	e0.03	e0.01	e0.04	0.12	0.16	2.3	e5.9	11	0.60	1.2
5	0.00	0.01	e0.03	e0.01	e0.03	0.13	0.20	2.4	e6.0	12	0.57	1.2
6	0.00	0.01	e0.03	e0.01	e0.03	0.13	0.20	2.2	e6.4	12	0.55	1.1
7	0.00	0.01	e0.03	e0.01	e0.02	0.14	1.4	2.7	e6.9	16	0.52	1.1
8	0.00	0.01	e0.03	e0.00	e0.02	0.13	0.61	3.6	e7.3	17	0.48	1.0
9	0.00	0.01	e0.03	e0.00	e0.02	0.13	0.64	4.1	e7.3	10	0.45	0.99
10	0.00	0.02	e0.03	e0.00	e0.03	0.14	0.63	5.6	e7.2	6.9	0.46	0.91
11	0.00	0.02	e0.04	e0.00	e0.04	0.15	0.64	5.5	e7.2	5.1	0.46	0.81
12	0.00	0.02	e0.04	e0.00	e0.05	0.15	0.64	6.5	e15	3.6	0.64	0.74
13	0.00	0.02	e0.04	e0.00	e0.06	0.14	0.61	5.9	236	2.2	4.7	0.70
14	0.00	0.02	e0.03	e0.00	e0.07	0.14	0.73	7.0	227	1.3	2.2	0.67
15	0.00	0.02	e0.03	e0.00	e0.08	0.15	0.79	23	105	0.73	33	0.62
16	0.00	0.02	e0.03	e0.00	e0.08	0.15	0.69	41	26	0.62	51	0.55
17	0.00	0.02	e0.04	e0.00	e0.08	0.15	0.59	24	17	0.59	21	0.49
18	0.00	0.02	e0.04	e0.00	e0.08	0.15	0.53	15	16	0.57	12	0.45
19	0.00	0.03	e0.04	e0.00	e0.08	0.16	0.62	11	17	0.58	8.3	0.52
20	0.00	0.03	e0.04	e0.00	e0.08	0.20	1.4	e9.5	16	0.55	5.7	0.49
21	0.00	0.03	e0.04	e0.00	0.08	0.16	5.9	e8.3	12	0.51	3.5	0.45
22	0.00	0.03	e0.04	e0.00	0.08	0.16	15	e7.4	9.9	0.47	2.4	0.39
23	0.00	0.03	e0.03	e0.00	0.09	0.16	6.5	e6.8	7.2	0.43	2.1	0.35
24	0.00	0.03	e0.02	e0.00	0.09	0.17	3.4	e6.4	4.9	0.58	2.7	0.34
25	0.00	0.03	e0.02	e0.00	0.08	0.18	2.6	e6.1	9.7	0.63	2.4	0.36
26	0.00	0.04	e0.03	e0.00	0.09	0.18	2.2	e6.0	11	0.73	2.1	0.34
27	0.00	0.04	e0.03	e0.00	0.09	0.18	2.2	e6.0	18	0.77	21	0.31
28	0.00	0.04	e0.03	e0.00	0.10	0.18	2.1	e6.0	16	0.77	11	0.27
29	0.01	e0.03	e0.03	e0.00	---	0.18	2.0	e5.9	14	0.73	2.5	0.24
30	0.01	e0.03	e0.03	e0.01	---	0.18	1.8	e5.8	9.5	0.69	1.5	0.22
31	0.01	---	e0.03	e0.02	---	0.18	---	e5.8	---	0.69	1.3	---
TOTAL	0.03	0.66	1.00	0.13	1.68	4.71	55.28	247.4	858.7	134.74	197.05	20.51
MEAN	0.00	0.02	0.03	0.00	0.06	0.15	1.84	7.98	28.6	4.35	6.36	0.68
MAX	0.01	0.04	0.04	0.03	0.10	0.20	15	41	236	17	51	1.3
MIN	0.00	0.01	0.02	0.00	0.02	0.11	0.16	1.8	4.9	0.43	0.45	0.22
AC-FT	0.06	1.3	2.0	0.3	3.3	9.3	110	491	1,700	267	391	41

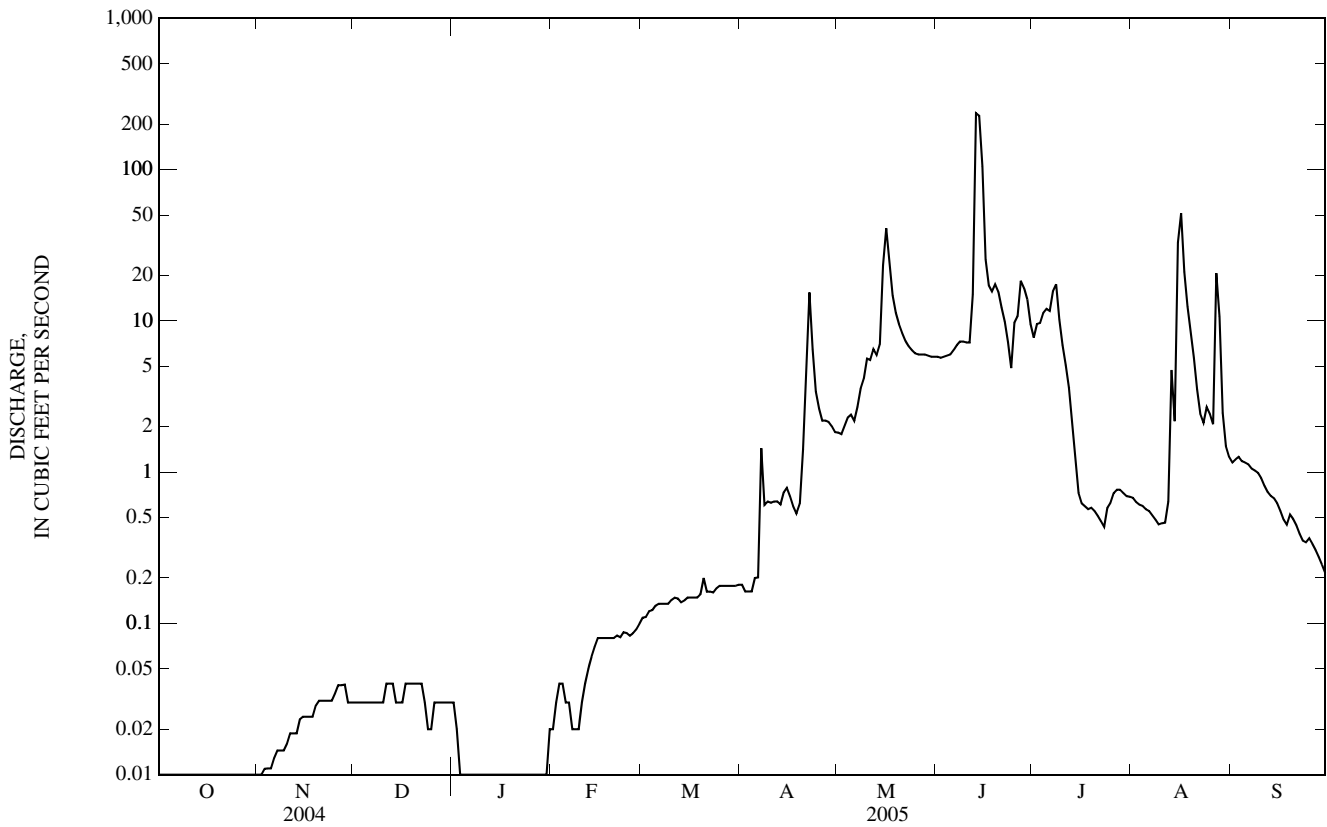
## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 2005, BY WATER YEAR (WY)

MEAN	2.31	0.91	0.35	3.21	15.0	15.6	31.5	175	216	113	48.5	27.3
MAX	28.4	19.9	5.94	84.9	120	80.0	502	1,663	1,260	680	409	292
(WY)	(1963)	(1974)	(1974)	(1974)	(1963)	(1955)	(1955)	(1962)	(1962)	(1958)	(1955)	(1973)
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
(WY)	(1951)	(1950)	(1949)	(1949)	(1950)	(1951)	(1951)	(1951)	(1966)	(2004)	(1959)	(1953)

06386500 CHEYENNE RIVER NEAR SPENCER, WY—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1949-1974,2004-2005	
ANNUAL TOTAL	25.95		1,521.89		54.2	
ANNUAL MEAN	0.07		4.17		280	
HIGHEST ANNUAL MEAN					0.09	1962
LOWEST ANNUAL MEAN					12,100	2004
HIGHEST DAILY MEAN	1.8	Mar 11	236	Jun 13	16,000	May 27, 1962
LOWEST DAILY MEAN	0.00	Jan 26	0.00	Oct 1	<sup>a</sup> 0.00	Oct 4, 1948
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 26	0.00	Oct 1	0.00	Oct 4, 1948
MAXIMUM PEAK FLOW			703	Jun 13	16,000	May 27, 1962
MAXIMUM PEAK STAGE			8.00	Jun 13	<sup>b</sup> 13.74	May 27, 1962
ANNUAL RUNOFF (AC-FT)	51		3,020		39,240	
10 PERCENT EXCEEDS	0.20		9.5		66	
50 PERCENT EXCEEDS	0.03		0.18		0.00	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

- a No flow at times in most years.
- b Site and datum then in use.
- e Estimated.



## 06386500 CHEYENNE RIVER NEAR SPENCER, WY—Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analysis: Water years 1951-54, 1969-70, and 1972-79. Sediment records: Periodic samples taken May 1971 to July 1974.

PERIOD OF DAILY RECORD.--March 2004 to current year(seasonal).

WATER TEMPERATURE: March 2004 to current year(seasonal).

SPECIFIC CONDUCTANCE: March 2004 to current year(seasonal).

pH: March 2004 to current year(seasonal).

DISSOLVED OXYGEN: March 2004 to current year(seasonal).

TURBIDITY: March 2004 to current year(seasonal).

REMARKS.--Data published in the tables below are rated as follows: temperature, good; specific conductance, good. pH, good; dissolved oxygen, fair; turbidity, fair. Daily records are collected at 15-minute intervals using multi-parameter water-quality instrument from March to November. Satellite data-collection platform at station.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum daily, 34.8°C, June 22, 2005; minimum daily, 2.3°C, Apr. 12, 2004.

SPECIFIC CONDUCTANCE: Maximum daily, 8,760 µS/cm, April 21, 2005; minimum daily, 471 µS/cm, August 28, 2005.

pH: Maximum daily, 9.4 standard units, Aug. 13, 14, 2005; minimum daily, 6.8 standard units, June 15, 2005.

DISSOLVED OXYGEN: Maximum daily, 16.6 mg/L, June 16, 2004; minimum daily, 1.6 mg/L, July 1, 2004.

TURBIDITY: Maximum daily, > 1,500 FN units, at times most years; minimum daily, 2.0 FN units, June 30, 2004.

TEMPERATURE, WATER, DEGREES CELSIUS  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	---	---	---	12.4	---	---	8.8	4.4	6.6
2	---	---	---	---	---	---	14.9	7.8	10.5	12.5	5.1	8.2
3	---	---	---	---	---	---	15.5	8.2	11.4	14.1	6.4	9.7
4	---	---	---	---	---	---	14.6	9.6	11.7	16.4	10.0	12.9
5	---	---	---	---	---	---	12.6	9.3	10.8	20.9	11.3	15.4
6	---	---	---	---	---	---	14.2	7.1	10.5	20.5	13.4	16.8
7	---	---	---	---	---	---	19.3	8.7	13.5	19.0	14.6	16.7
8	---	---	---	---	---	---	16.3	9.8	12.9	15.5	10.1	12.4
9	---	---	---	---	---	---	12.9	8.8	10.6	18.2	9.4	12.4
10	---	---	---	---	---	---	11.0	7.2	9.0	16.3	12.0	13.1
11	---	---	---	---	---	---	11.5	4.9	8.0	12.0	6.5	9.0
12	---	---	---	---	---	---	14.0	5.7	9.9	16.0	5.5	9.7
13	---	---	---	---	---	---	16.3	7.6	11.7	14.9	7.8	10.7
14	---	---	---	---	---	---	15.5	8.5	11.6	17.8	10.1	13.4
15	---	---	---	---	---	---	16.2	7.7	11.3	22.3	11.1	15.9
16	---	---	---	---	---	---	17.9	8.4	12.9	22.9	15.6	19.0
17	---	---	---	---	---	---	19.0	11.1	14.8	18.8	13.6	17.2
18	---	---	---	---	---	---	18.8	12.1	15.4	21.8	11.7	16.4
19	---	---	---	---	---	---	16.8	12.5	14.7	26.1	14.4	19.9
20	---	---	---	---	---	---	13.8	10.7	12.2	26.9	17.4	22.1
21	---	---	---	---	---	---	10.7	5.6	7.6	24.6	18.2	21.3
22	---	---	---	---	---	---	16.4	3.5	9.3	25.8	16.2	20.9
23	---	---	---	---	---	---	17.4	6.7	11.8	26.1	18.3	21.5
24	---	---	---	---	---	---	19.5	9.3	13.8	25.8	18.2	20.9
25	---	---	---	---	---	---	16.6	10.1	13.1	20.1	14.5	17.1
26	---	---	---	---	---	---	11.5	7.5	9.1	19.1	13.0	15.9
27	---	---	---	---	---	---	8.8	6.7	7.7	18.9	12.0	15.3
28	---	---	---	---	---	---	8.8	5.9	7.3	21.9	12.5	16.8
29	---	---	---	---	---	---	10.6	6.6	8.1	19.4	14.6	16.8
30	---	---	---	---	---	---	11.1	6.5	8.5	15.6	12.2	13.5
31	---	---	---	---	---	---	---	---	---	20.5	11.5	15.3
MONTH	---	---	---	---	---	---	19.5	3.5	11.0	26.9	4.4	15.3









06386500 CHEYENNE RIVER NEAR SPENCER, WY—Continued

TURBIDITY, WATER, MONOCHROME NEAR INFRA-RED LED LIGHT, 780-900 NM, DETECTION ANGLE 90 +/- 2.5 DEGREES, FNU  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	---	---	---	---	---	---	---	12	---	19	10	15
2	---	---	---	---	---	---	72	13	31	19	6	11
3	---	---	---	---	---	---	101	12	28	11	3	6
4	---	---	---	---	---	---	118	15	39	28	3	11
5	---	---	---	---	---	---	54	15	31	29	11	17
6	---	---	---	---	---	---	153	14	48	77	16	29
7	---	---	---	---	---	---	102	18	28	38	20	26
8	---	---	---	---	---	---	35	16	24	55	20	34
9	---	---	---	---	---	---	46	14	24	35	10	18
10	---	---	---	---	---	---	25	10	18	117	10	25
11	---	---	---	---	---	---	17	9	11	76	10	24
12	---	---	---	---	---	---	22	9	13	31	3	8
13	---	---	---	---	---	---	24	14	19	15	3	8
14	---	---	---	---	---	---	34	10	18	51	7	15
15	---	---	---	---	---	---	98	11	18	208	12	43
16	---	---	---	---	---	---	34	12	17	>1,500	86	---
17	---	---	---	---	---	---	30	10	16	>1,500	>1,500	---
18	---	---	---	---	---	---	55	14	28	>1,500	568	---
19	---	---	---	---	---	---	53	12	26	607	272	440
20	---	---	---	---	---	---	49	18	33	410	194	289
21	---	---	---	---	---	---	90	14	31	322	157	235
22	---	---	---	---	---	---	46	11	20	260	109	177
23	---	---	---	---	---	---	191	16	113	186	97	142
24	---	---	---	---	---	---	141	32	86	150	85	113
25	---	---	---	---	---	---	171	18	34	192	90	132
26	---	---	---	---	---	---	56	12	24	150	89	108
27	---	---	---	---	---	---	22	9	13	137	47	81
28	---	---	---	---	---	---	17	5	8	104	36	67
29	---	---	---	---	---	---	13	4	7	100	37	59
30	---	---	---	---	---	---	22	4	12	75	47	60
31	---	---	---	---	---	---	---	---	---	80	32	52
MONTH	---	---	---	---	---	---	191	4	28	1,500	3	80
JUNE			JULY			AUGUST			SEPTEMBER			
1	---	---	---	412	163	261	1,080	35	111	341	97	199
2	---	---	---	237	90	165	193	46	56	186	33	86
3	---	---	---	200	69	132	87	45	55	123	24	69
4	---	---	---	178	42	98	67	42	50	125	30	64
5	---	---	---	167	70	e105	70	44	53	96	31	58
6	---	---	---	598	38	e139	71	46	54	78	34	55
7	---	---	---	---	---	---	76	48	59	77	28	51
8	---	---	---	375	204	277	78	47	61	85	25	46
9	---	---	---	326	174	235	145	56	74	113	26	52
10	---	---	---	323	159	216	146	74	100	196	36	63
11	---	---	---	237	60	e140	155	97	118	79	22	37
12	---	---	---	147	41	e95	810	104	183	113	30	49
13	>1,500	---	---	---	---	---	>1,500	254	---	97	18	29
14	>1,500	538	---	---	---	---	>1,500	230	---	37	16	21
15	>1,500	452	---	---	---	---	>1,500	123	---	46	16	24
16	>1,500	>1,500	---	58	28	40	>1,500	904	---	49	15	27
17	>1,500	1,090	---	65	20	31	>1,500	>1,500	---	59	18	28
18	1,160	698	---	34	12	19	>1,500	>1,500	---	135	17	43
19	1,200	707	948	152	18	29	>1,500	>1,500	---	81	24	41
20	1,140	570	810	51	17	26	>1,500	817	---	71	16	39
21	672	301	477	64	16	27	878	432	630	138	26	56
22	365	162	268	61	15	30	526	217	343	97	32	46
23	248	156	203	191	17	31	363	101	174	59	19	31
24	228	131	170	149	28	51	163	55	98	169	27	46
25	304	228	258	87	22	45	127	40	85	137	26	50
26	305	171	214	1,010	20	53	112	32	76	139	25	49
27	407	298	344	40	14	23	>1,500	51	---	130	26	48
28	>1,500	407	1,100	56	17	26	>1,500	>1,500	---	144	22	46
29	1,240	534	851	43	15	23	>1,500	1,420	---	103	18	39
30	818	307	493	56	17	25	>1,500	469	849	200	22	55
31	---	---	---	112	20	34	521	240	372	---	---	---
MONTH	>1,500	131	511	1,010	12	88	>1,500	32	180	341	15	52
YEAR	>1,500	3	115									

> Actual value is known to be greater than the value shown  
e Estimated



## CHEYENNE RIVER BASIN

06386500 CHEYENNE RIVER NEAR SPENCER, WY—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

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)	Suspended sediment discharge, tons/d (80155)
APR 22...	1110	18	4,900	--	13.0	18	30	1.5
MAY 17...	1405	24	--	--	17.5	1,530	1,230	81
JUN 13...	1125	31	1,590	12.5	13.5	630	348	29
JUL 15...	1510	.62	--	31.0	29.0	50	81	0.14
AUG 23...	1449	1.9	--	--	--	150	93	0.47

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## 06392900 BEAVER CREEK AT MALLO CAMP, NEAR FOUR CORNERS, WY

LOCATION.--Lat 44°05'06", long 104°03'36" (NAD 27), in SE $\frac{1}{4}$  NE $\frac{1}{4}$  NE $\frac{1}{4}$  sec.4, T.47 N., R.60 W., Weston County, Hydrologic Unit 10120107, on right bank in Mallo Campgrounds, 250 ft upstream from mouth, 750 ft upstream from dam on Stockade Beaver Creek, and 3.8 mi east of Four Corners.

DRAINAGE AREA.--10.3 mi<sup>2</sup>.

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

REVISED RECORD.--WDR-85-1: 1981, 1982.

GAGE.--Water-stage recorder. Elevation of gage is 6,030 ft above NGVD of 1929, from topographic map. October 1974 to September 1982, at site 50 ft upstream from station at datum 3.11 ft lower. U.S. Geological Survey data collection with satellite telemetry at station.

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

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.6	1.4	e1.4	1.5	1.5	1.7	1.5	1.0	1.2	2.4	1.3	0.96
2	1.6	1.5	e1.4	1.4	e1.6	1.7	1.7	1.00	1.1	2.2	1.2	0.97
3	1.6	1.3	e1.5	e1.4	1.7	1.6	1.7	0.97	1.1	2.0	1.2	0.94
4	1.6	1.3	e1.5	e1.4	1.7	1.6	1.7	0.94	0.99	2.0	1.2	0.92
5	1.6	1.3	1.6	1.4	1.7	1.6	1.8	0.93	1.1	1.9	1.2	0.90
6	1.6	1.3	1.6	e1.4	1.7	1.6	1.7	0.87	1.0	2.0	1.2	0.89
7	1.5	1.3	1.6	e1.4	1.7	1.5	1.6	0.92	0.99	1.7	1.2	0.89
8	1.5	1.3	1.6	e1.5	1.6	1.5	1.7	1.1	0.95	0.96	1.1	0.93
9	1.5	1.3	1.6	1.5	1.6	1.6	1.8	1.1	1.0	0.99	1.1	0.93
10	1.5	1.3	1.5	1.5	1.6	1.5	1.6	0.96	0.99	0.82	1.0	0.91
11	1.4	1.3	1.6	1.5	1.7	1.6	1.6	0.90	0.94	0.80	1.0	0.88
12	1.4	1.3	1.5	e1.4	1.7	1.6	1.5	0.93	0.98	1.5	0.94	0.87
13	1.4	1.3	e1.5	e1.3	1.7	1.6	1.5	0.92	0.90	1.6	0.98	0.84
14	1.5	1.3	e1.4	e1.2	1.6	1.5	1.5	0.88	0.82	1.3	1.0	0.77
15	1.4	1.7	e1.5	e1.4	1.5	1.5	1.4	0.82	0.78	1.0	1.0	0.77
16	1.2	1.7	1.5	e1.5	1.4	1.6	1.4	0.81	0.70	0.97	1.00	1.3
17	1.3	1.7	1.5	1.7	e1.5	1.5	1.4	0.68	0.66	1.1	1.00	1.3
18	1.3	1.7	1.5	1.7	1.6	1.5	1.3	0.69	1.3	1.0	1.0	1.4
19	1.5	1.7	1.5	1.7	e1.6	1.5	1.2	0.69	1.2	0.84	1.0	1.3
20	1.6	e1.6	1.5	1.7	e1.6	1.6	1.2	0.68	1.2	0.85	1.0	1.3
21	1.6	e1.6	1.5	1.6	1.6	1.5	1.3	0.62	1.2	0.77	1.0	1.3
22	1.3	e1.6	1.4	e1.5	1.6	1.5	1.1	0.58	1.2	0.55	1.0	1.3
23	1.3	e1.6	e1.2	1.6	1.6	1.6	1.0	0.57	1.1	0.95	0.96	1.3
24	1.3	e1.5	e1.3	1.6	1.6	1.5	1.0	0.57	1.2	0.83	0.94	1.3
25	1.4	1.6	e1.4	1.6	1.7	1.5	1.1	0.58	1.4	0.71	0.97	1.4
26	1.4	1.6	1.5	1.6	1.7	1.5	1.1	0.54	1.3	0.68	0.97	1.3
27	e1.4	e1.5	1.5	1.6	1.7	1.6	1.1	0.51	1.4	0.68	0.96	1.2
28	1.4	1.5	1.5	1.6	1.6	1.7	1.1	0.51	1.5	1.2	0.96	1.2
29	1.4	e1.5	1.5	1.7	---	1.7	1.1	0.98	1.7	1.3	0.99	1.2
30	1.3	e1.4	1.5	1.7	---	1.6	1.1	1.2	2.0	1.3	0.98	1.2
31	1.4	---	1.5	1.7	---	1.6	---	1.2	---	1.2	0.95	---
TOTAL	44.8	44.0	46.1	47.3	45.4	48.7	41.8	25.65	33.90	38.10	32.30	32.67
MEAN	1.45	1.47	1.49	1.53	1.62	1.57	1.39	0.83	1.13	1.23	1.04	1.09
MAX	1.6	1.7	1.6	1.7	1.7	1.7	1.8	1.2	2.0	2.4	1.3	1.4
MIN	1.2	1.3	1.2	1.2	1.4	1.5	1.0	0.51	0.66	0.55	0.94	0.77
AC-FT	89	87	91	94	90	97	83	51	67	76	64	65

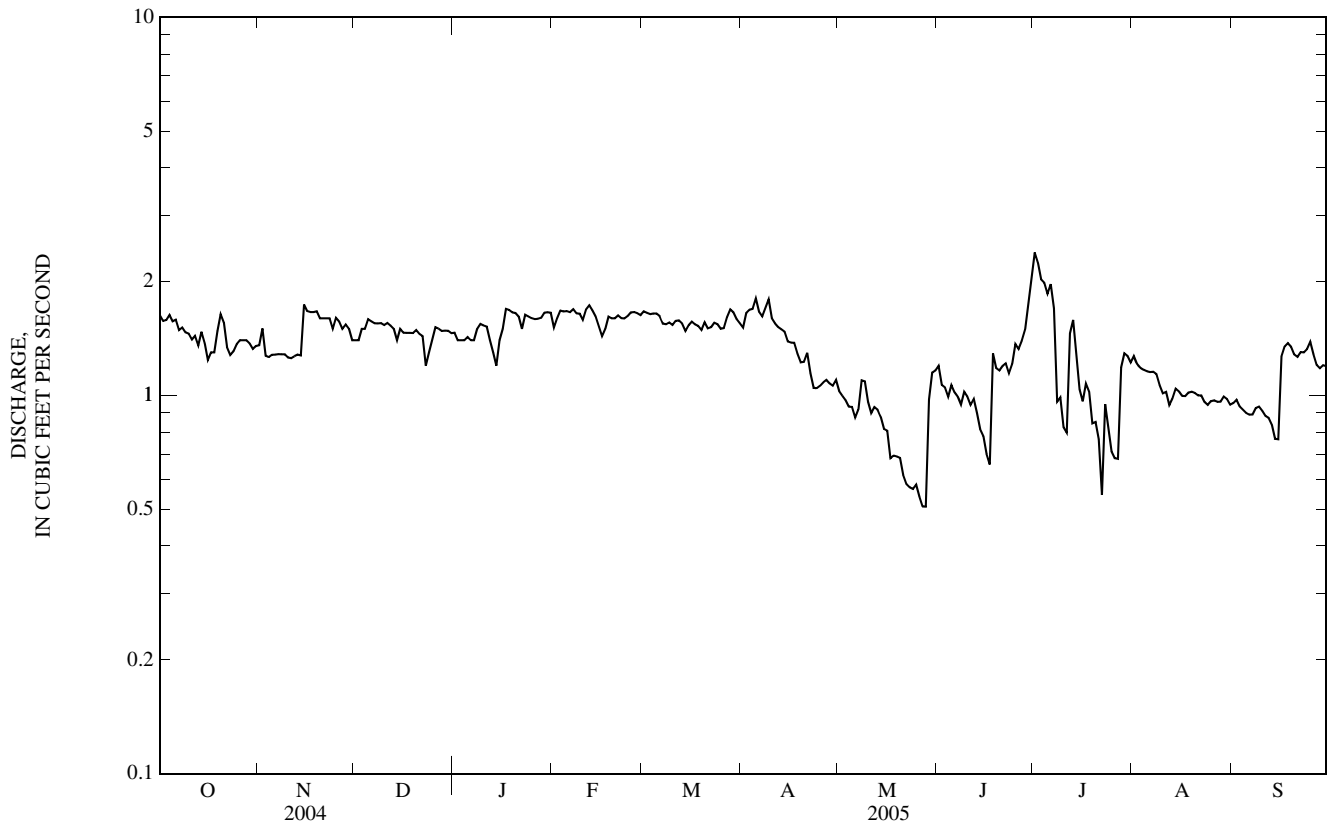
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975-1982, 1992 - 2005, BY WATER YEAR (WY)

MEAN	1.85	1.71	1.62	1.56	1.71	1.97	2.20	2.10	2.27	2.04	1.93	1.84
MAX	3.16	3.30	2.68	2.95	2.90	5.83	4.07	3.44	4.05	3.09	2.89	3.08
(WY)	(2000)	(2000)	(1999)	(1999)	(1999)	(1999)	(1994)	(1978)	(1980)	(1979)	(1978)	(2000)
MIN	0.31	0.47	0.44	0.42	0.46	0.71	0.88	0.81	1.13	1.23	0.75	0.62
(WY)	(1977)	(1977)	(1977)	(1993)	(1977)	(1977)	(1993)	(1993)	(2005)	(2005)	(1976)	(1976)

06392900 BEAVER CREEK AT MALLO CAMP, NEAR FOUR CORNERS, WY—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1975-1982, 1992 - 2005	
ANNUAL TOTAL	495.21		480.72		--	
ANNUAL MEAN	1.35		1.32		1.91	
HIGHEST ANNUAL MEAN	--		--		3.20 1999	
LOWEST ANNUAL MEAN	--		--		0.94 1977	
HIGHEST DAILY MEAN	2.0	Mar 27	2.4	Jul 1	34	Mar 26, 1999
LOWEST DAILY MEAN	0.54	Jun 21	0.51	May 27-28	0.10	Jan 20, 1993
ANNUAL SEVEN-DAY MINIMUM	0.77	Apr 16	0.55	May 22	0.12	Jan 17, 1993
MAXIMUM PEAK FLOW	--		9.1 <sup>a</sup>		103 <sup>b</sup> Apr 22, 1994	
MAXIMUM PEAK STAGE	--		1.80 <sup>c</sup>		2.88 <sup>c</sup> Dec 25, 1998	
ANNUAL RUNOFF (AC-FT)	982		954		1,380	
10 PERCENT EXCEEDS	1.6		1.7		2.8	
50 PERCENT EXCEEDS	1.4		1.4		1.8	
90 PERCENT EXCEEDS	0.91		0.89		1.0	

- a Gage height, 1.43 ft.
- b From rating curve extended above 8.5 ft<sup>3</sup>/s.
- c Backwater from ice.
- e Estimated.



PRECIPITATION RECORDS

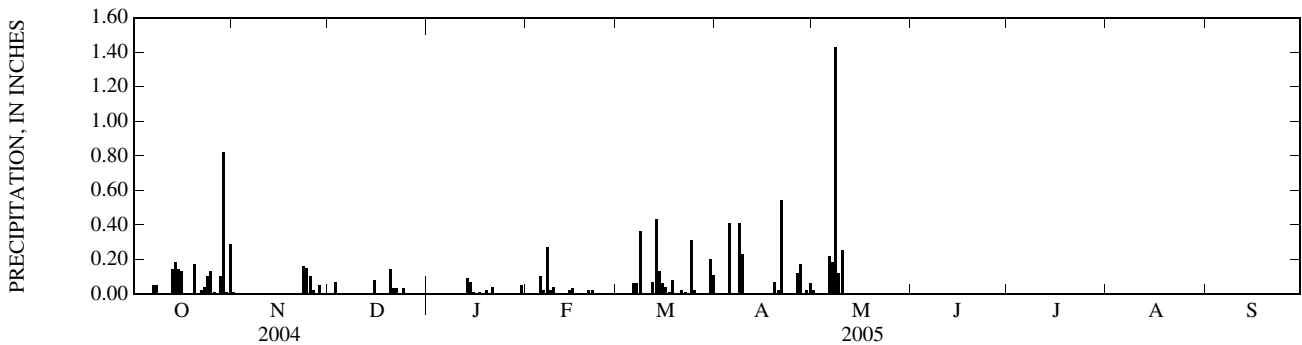
PERIOD OF RECORD.--May 1989 to May 2005(discontinued).

INSTRUMENTATION.--Precipitation recorder with shielded 8.0-in. orifice and 12-in. capacity. Elevation of gage is 6,000 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair. Precipitation gage is located 0.2 mi south of streamflow gaging station.

PRECIPITATION, INCHES  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.02	---	---	---	---
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	---	---	---	---
3	0.00	0.00	0.07	---	0.00	0.00	0.00	0.00	---	---	---	---
4	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	---	---	---	---
5	0.00	0.00	0.00	---	0.10	0.00	0.41	0.00	---	---	---	---
6	0.00	0.00	0.00	---	0.02	0.06	0.00	0.22	---	---	---	---
7	0.05	0.00	0.00	---	0.27	0.06	0.00	0.18	---	---	---	---
8	0.05	0.00	0.00	---	0.02	0.36	0.41	1.43	---	---	---	---
9	0.00	0.00	0.00	---	0.04	0.00	0.23	0.12	---	---	---	---
10	0.00	0.00	0.00	---	0.00	0.00	0.00	0.25	---	---	---	---
11	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	---	---	---	---
12	0.00	0.00	0.00	---	0.00	0.07	0.00	---	---	---	---	---
13	0.14	0.00	0.00	0.09	0.00	0.43	0.00	---	---	---	---	---
14	0.18	0.00	0.00	0.07	0.02	0.13	0.00	---	---	---	---	---
15	0.14	0.00	0.08	0.01	0.03	0.06	0.00	---	---	---	---	---
16	0.13	0.00	0.00	0.00	0.00	0.04	0.00	---	---	---	---	---
17	0.00	0.00	0.00	0.01	0.00	0.01	0.00	---	---	---	---	---
18	0.00	0.00	0.00	0.00	0.00	0.08	0.00	---	---	---	---	---
19	0.00	0.00	0.00	0.02	0.00	0.00	0.07	---	---	---	---	---
20	0.17	0.00	0.14	0.00	0.02	0.00	0.02	---	---	---	---	---
21	0.00	0.00	0.03	0.04	0.02	0.02	0.54	---	---	---	---	---
22	0.02	0.00	0.03	0.00	0.00	0.01	0.00	---	---	---	---	---
23	0.04	0.16	0.00	0.00	0.00	0.00	0.00	---	---	---	---	---
24	0.10	0.15	0.03	0.00	0.00	0.31	0.00	---	---	---	---	---
25	0.13	0.10	0.00	0.00	0.00	0.02	0.00	---	---	---	---	---
26	0.01	0.02	0.00	0.00	0.00	0.00	0.12	---	---	---	---	---
27	0.00	0.00	0.00	0.00	0.00	0.00	0.17	---	---	---	---	---
28	0.10	0.05	0.00	0.00	0.00	0.00	0.00	---	---	---	---	---
29	0.82	0.00	0.00	0.00	---	0.00	0.02	---	---	---	---	---
30	0.01	0.00	0.00	0.05	---	0.20	0.06	---	---	---	---	---
31	0.29	---	0.00	0.00	---	0.11	---	---	---	---	---	---
TOTAL	2.38	0.49	0.38	---	0.54	1.97	2.05	---	---	---	---	---
CAL YR	2004	TOTAL 16.06										



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## CHEYENNE RIVER BASIN

06392950 STOCKADE BEAVER CREEK NEAR NEWCASTLE, WY

LOCATION.--Lat 43°51'32", long 104°06'24" (NAD 27), in SW<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> sec.19, T.45 N., R.60 W., Weston County, Hydrologic Unit 10120107, on right bank 20 ft upstream from culverts on county road, 0.6 mi upstream from South Draw, 2.5 mi upstream from LAK Reservoir Dam, and 4.7 mi east of Newcastle.

DRAINAGE AREA.--107 mi<sup>2</sup>.

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

GAGE.--Water-stage recorder. Elevation of gage is 4,460 ft above NGVD of 1929, from topographic map. October 1974 to September 1982, at same site and 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. A few small diversions upstream from station for irrigation.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	10	11	12	13	13	12	8.1	11	9.4	11	12
2	10	10	11	12	13	13	12	8.0	11	9.4	11	12
3	10	10	11	12	13	13	12	7.9	10	9.1	11	12
4	10	10	11	11	13	13	12	7.9	10	9.1	11	12
5	10	10	11	e11	13	13	13	7.9	10	9.2	9.4	12
6	10	10	11	e12	13	13	12	7.9	10	9.2	9.6	12
7	10	10	11	13	13	13	12	8.8	10	9.1	9.1	12
8	10	10	11	13	14	13	11	9.2	10	9.0	9.2	12
9	10	10	11	12	14	12	10	8.4	11	9.0	14	12
10	10	10	12	12	14	12	10	8.7	10	8.8	11	12
11	10	10	12	13	14	12	10	11	10	7.1	12	12
12	10	10	12	13	14	12	10	14	11	7.5	39	12
13	10	10	11	12	14	12	8.8	13	11	7.3	14	12
14	10	10	11	13	14	12	8.7	12	10	7.7	13	12
15	10	10	12	e12	13	12	8.6	12	10	7.5	12	12
16	10	10	12	13	13	11	8.5	11	9.8	6.8	12	12
17	10	11	12	e12	13	8.9	8.4	9.5	9.6	7.2	12	12
18	10	11	12	13	13	9.0	8.4	9.9	9.5	7.5	12	12
19	10	11	12	13	14	9.5	8.4	9.7	9.4	7.1	12	12
20	10	11	12	13	14	9.9	8.7	11	9.5	6.6	12	12
21	10	11	11	13	13	11	9.5	11	9.5	6.6	12	12
22	11	11	11	13	13	12	8.8	11	9.3	6.6	12	12
23	10	11	11	13	13	12	8.5	10	9.3	6.7	12	12
24	10	11	12	13	13	13	8.5	11	9.5	7.2	12	12
25	10	11	12	13	13	12	8.4	13	9.2	8.2	12	13
26	10	11	12	13	13	12	8.1	11	9.1	12	11	12
27	10	11	12	13	13	12	8.1	11	9.2	8.6	10	12
28	10	11	12	13	13	12	8.0	11	9.2	7.7	11	12
29	10	11	12	13	---	12	8.0	11	9.6	7.6	12	12
30	10	11	12	13	---	12	8.1	11	9.5	7.8	12	12
31	10	---	12	13	---	12	---	11	---	9.2	12	---
TOTAL	311	314	358	390	373	368.3	288.5	317.9	296.2	251.8	384.3	361
MEAN	10.0	10.5	11.5	12.6	13.3	11.9	9.62	10.3	9.87	8.12	12.4	12.0
MAX	11	11	12	13	14	13	13	14	11	12	39	13
MIN	10	10	11	11	13	8.9	8.0	7.9	9.1	6.6	9.1	12
AC-FT	617	623	710	774	740	731	572	631	588	499	762	716

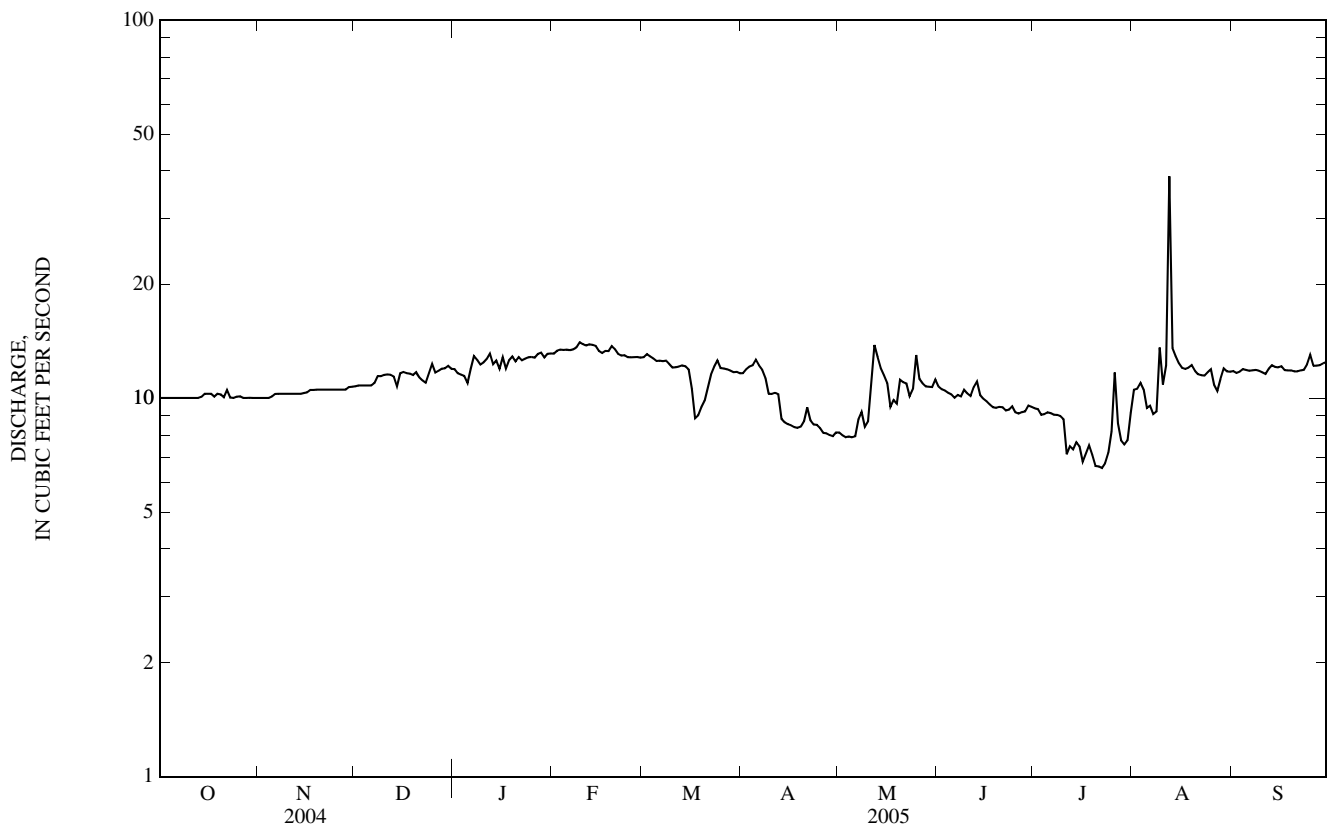
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975-1982, 1992 - 2005, BY WATER YEAR (WY)

MEAN	13.4	13.6	13.5	13.2	13.5	14.9	13.7	11.6	11.7	11.5	12.3	12.7
MAX	18.9	19.0	18.1	17.6	17.6	21.3	19.4	18.5	17.8	17.0	20.9	20.0
(WY)	(2000)	(2001)	(2000)	(2000)	(2000)	(1996)	(2000)	(2000)	(1999)	(1999)	(1999)	(1999)
MIN	9.40	9.74	10.2	9.52	10.6	10.8	9.53	6.45	5.92	8.12	6.33	8.89
(WY)	(1982)	(1994)	(1993)	(1980)	(1993)	(1993)	(1981)	(1992)	(1992)	(2005)	(1992)	(1991)

06392950 STOCKADE BEAVER CREEK NEAR NEWCASTLE, WY—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1975-1982, 1992-2005	
ANNUAL TOTAL	4,240.9		4,014.0		--	
ANNUAL MEAN	11.6		11.0		13.0	
HIGHEST ANNUAL MEAN	--		--		17.4 2000	
LOWEST ANNUAL MEAN	--		--		9.80 1992	
HIGHEST DAILY MEAN	17	Jan 11	39	Aug 12	143	Jul 16, 1993
LOWEST DAILY MEAN	6.8	Jul 18	6.6	Jul 20-22	3.9	May 21, 1992
ANNUAL SEVEN-DAY MINIMUM	7.4	Jul 17	6.9	Jul 17	4.6	Aug 2, 1992
MAXIMUM PEAK FLOW	--		374	Aug 12	<sup>a</sup> 776	Jul 16, 1993
MAXIMUM PEAK STAGE	--		9.41	Aug 12	12.44	Jul 16, 1993
ANNUAL RUNOFF (AC-FT)	8,410		7,960		9,420	
10 PERCENT EXCEEDS	15		13		17	
50 PERCENT EXCEEDS	11		11		13	
90 PERCENT EXCEEDS	9.5		8.5		9.1	

a From rating curve extended above 18 ft<sup>3</sup>/s on basis of culvert backwater computation.  
 e Estimated.





## 06395000 CHEYENNE RIVER AT EDGEMONT, SD

LOCATION.--Lat 43°18'20", long 103°49'14", in SW¼ SE¼ sec.36, T.8 S., R.2 E., Fall River County, Hydrologic Unit 10120106, on right bank at downstream side of bridge on old U.S. Highway 18, at Edgemont, 300 ft downstream from Burlington Northern Railroad bridge, and 600 ft upstream from Cottonwood Creek.

DRAINAGE AREA.--7,143 mi<sup>2</sup>.

PERIOD OF RECORD.--June 1903 to November 1906 (no winter records), April 1928 to February 1933 (monthly discharge only), October 1946 to current year.

REVISED RECORDS.--WSP 1086: Drainage area. WSP 1116: 1947. WDR SD-78-1: 1977.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 3,414.56 ft above NGVD of 1929. Prior to Dec. 1, 1906, nonrecording gage 20 ft upstream at datum 0.7 ft lower. Apr. 11, 1928, to Feb. 28, 1933, Oct. 4, 1946, to Oct. 23, 1947, and Jan. 11, 1961, to Apr. 24, 1963, nonrecording gage, and Oct. 24, 1947, to Jan. 10, 1961, and Apr. 25, 1963, to Sept. 30, 1972, water-stage recorder all at present site at datum 2.00 ft higher.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Many small reservoirs above station used for stock and irrigation water, total capacity, about 45,000 acre-ft. U.S. 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.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 12, 1920, reached a stage of 13.0 ft and May 1, 1922, 14.0 ft, present datum, from floodmarks at railroad bridge.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e0.00	e3.1	e11	e8.5	e40	e13	4.9	6.5	e16	13	1.0	7.6
2	e0.00	e3.3	e11	e8.7	e28	e14	10	6.1	e16	8.7	0.94	6.9
3	e0.00	e2.9	e10	e9.3	e28	e13	7.7	6.1	e14	5.1	1.3	5.4
4	e0.00	e2.7	e10	e9.1	e29	e13	4.8	6.7	e14	4.6	1.2	5.9
5	e0.00	e6.0	e11	e9.3	e29	e12	6.1	5.8	e14	8.5	1.2	6.3
6	e0.00	e11	e12	e9.9	e27	11	4.6	5.8	e14	8.3	1.1	6.3
7	e0.00	e9.0	e12	e11	e23	8.9	3.9	12	e16	7.3	1.3	5.7
8	e0.00	e10	e13	e10	e21	7.1	4.1	13	e18	7.4	0.74	4.9
9	e0.00	e9.1	e14	e10	e21	6.1	4.4	13	e18	12	0.49	5.1
10	e0.00	9.0	e13	e10	e23	6.7	4.1	16	e18	9.3	0.67	4.8
11	e0.00	9.8	e15	e11	e24	5.9	3.8	17	e18	7.6	1.2	4.6
12	e0.00	9.1	e14	e10	e23	5.8	3.6	e20	e82	6.4	2.6	5.2
13	e0.01	8.5	e12	e9.0	e29	5.1	3.8	e30	473	5.4	134	5.0
14	e0.01	10	e12	e9.0	e29	5.0	4.1	e40	464	4.7	44	5.8
15	e0.02	11	e12	e9.0	e26	5.7	4.2	e66	188	4.1	39	6.5
16	e0.02	12	e11	e9.0	e21	6.0	3.8	e76	139	5.4	85	8.1
17	e0.04	12	e10	e12	e20	6.6	3.8	e67	80	4.5	119	7.0
18	e0.04	13	e11	e12	e20	6.4	4.3	e49	69	4.0	78	6.2
19	e0.05	13	e13	e12	e18	6.6	4.4	e30	63	4.2	56	5.5
20	e0.07	12	e12	e12	e18	6.1	5.4	e18	57	4.2	38	8.9
21	e0.42	12	e8.5	e12	e18	5.4	16	e14	48	2.2	28	8.5
22	e1.4	11	e8.8	e12	e21	5.6	59	e12	40	1.0	21	8.2
23	e1.1	13	e9.2	e12	e19	5.4	47	e12	32	0.64	17	8.3
24	e1.4	14	e8.3	e12	e15	6.0	18	e14	27	2.9	15	8.4
25	e1.4	14	e7.6	e13	e15	6.1	14	e16	25	1.8	11	9.2
26	e1.3	14	e7.9	e13	e14	6.4	9.2	e16	20	2.8	10	9.0
27	e1.1	e12	e7.9	e15	e14	6.2	8.0	e14	19	2.2	8.1	8.8
28	e1.9	e12	e8.5	e15	e14	8.0	8.6	e14	31	1.7	26	8.2
29	e2.5	e9.2	e9.2	e15	---	7.0	7.9	e14	29	1.2	25	8.3
30	e2.5	e9.9	e9.1	e19	---	6.0	7.0	e16	21	1.3	16	7.7
31	e3.2	---	e8.8	e33	---	6.0	---	e16	---	1.2	11	---
TOTAL	18.48	297.6	332.8	371.8	627	232.1	290.5	662.0	2,083	153.64	794.84	206.3
MEAN	0.60	9.92	10.7	12.0	22.4	7.49	9.68	21.4	69.4	4.96	25.6	6.88
MAX	3.2	14	15	33	40	14	59	76	473	13	134	9.2
MIN	0.00	2.7	7.6	8.5	14	5.0	3.6	5.8	14	0.64	0.49	4.6
AC-FT	37	590	660	737	1,240	460	576	1,310	4,130	305	1,580	409

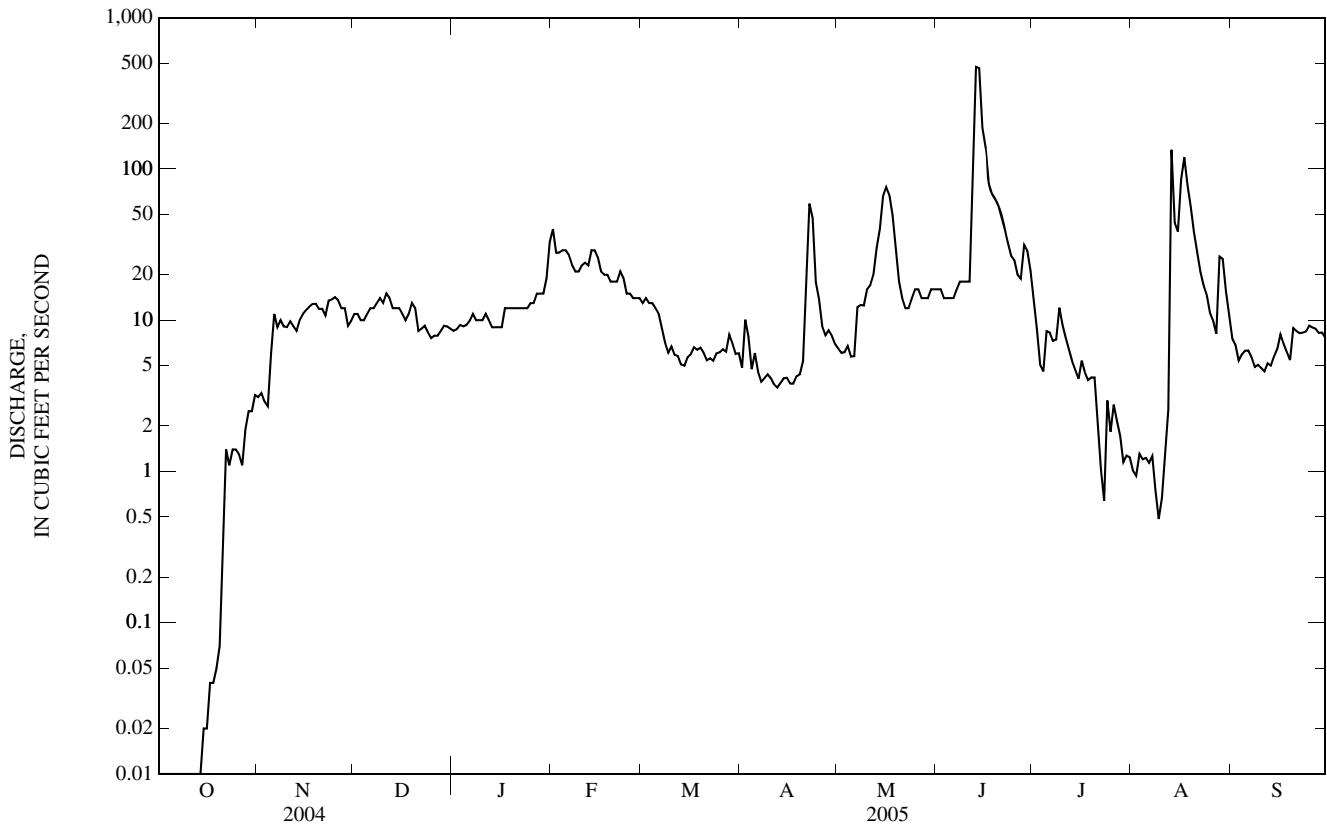
## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 2005, BY WATER YEAR (WY)

MEAN	20.8	16.4	9.30	9.17	40.5	120	64.9	200	238	117	62.7	25.2
MAX	291	266	50.5	37.3	302	506	558	2,192	2,084	806	388	275
(WY)	(1999)	(1999)	(1999)	(1999)	(1997)	(1994)	(1955)	(1978)	(1962)	(1958)	(1955)	(1973)
MIN	0.00	0.02	0.00	0.00	0.00	3.39	0.22	0.27	1.28	0.15	0.00	0.00
(WY)	(1961)	(1962)	(1960)	(1950)	(1960)	(1961)	(1961)	(1960)	(2004)	(1985)	(1960)	(1956)

06395000 CHEYENNE RIVER AT EDGEMONT, SD—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATERYEARS 1929-1932,1947-2005	
ANNUAL TOTAL	3,049.68		6,070.06		<sup>a</sup> 85.5	
ANNUAL MEAN	8.33		16.6		434	
HIGHEST ANNUAL MEAN					9.10 1962	
LOWEST ANNUAL MEAN					24,000 2004	
HIGHEST DAILY MEAN	80	Feb 25	473	Jun 13	28,000	May 20, 1978
LOWEST DAILY MEAN	0.00	Jul 21	0.00	Oct 1	<sup>b</sup> 0.00	Jan 5, 1947
ANNUAL SEVEN-DAY MINIMUM	0.00	Jul 27	0.00	Oct 1	<sup>c</sup> 0.00	Aug 31, 1947
MAXIMUM PEAK FLOW			1,460	Jun 13	28,000	May 20, 1978
MAXIMUM PEAK STAGE			6.88	Jun 13	13.65	May 20, 1978
ANNUAL RUNOFF (AC-FT)	6,050		12,040		62,000	
10 PERCENT EXCEEDS	16		29		<sup>c</sup> 145	
50 PERCENT EXCEEDS	3.8		9.2		<sup>c</sup> 12	
90 PERCENT EXCEEDS	0.00		1.3		<sup>c</sup> 0.12	

- a Median of annual mean discharges, 64 ft<sup>3</sup>/s.
- b No flow at times in most years.
- c Reflects water years 1947-2005 only.
- e Estimated.



## CHEYENNE RIVER BASIN

## 06400000 HAT CREEK NEAR EDGEMONT, SD

LOCATION.--Lat 43°14'24", long 103°35'16", in SW $\frac{1}{4}$  SE $\frac{1}{4}$  NE $\frac{1}{4}$  sec.25, T.9 S., R.4 E., Fall River County, Hydrologic Unit 10120108, on right bank at upstream side of bridge on State Highway 71, 2.4 mi upstream from mouth, 2.0 mi west of Heppner, and 12.5 mi southeast of Edgemont.

DRAINAGE AREA.--1,044 mi<sup>2</sup>.

PERIOD OF RECORD.--April 1905 to September 1906, October 1950 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 3,295.71 ft above NGVD of 1929. Nonrecording gage Apr. 8, 1905, to May 2, 1906, at site 0.6 mi downstream and May 3 to July 7, 1906, at site 0.4 mi upstream at different datum. Nov. 6, 1950, to May 1, 1951, and July 18 to Sept. 7, 1975, nonrecording gage and May 2, 1951, to July 17, 1975, recording gage, at site 0.4 mi downstream at present datum.

REMARKS.--Records good. A few small diversions upstream from station for irrigation. Lander ditch diverts water from Hat Creek 0.4 mi upstream from gaging station for irrigating hay meadows downstream 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. Results of discharge measurements, in cubic feet per second, of Lander ditch during water year 2005 are given herewith:

Oct. 12	0	Feb. 14	0	July 8	0
Oct. 22	0	Apr. 4	5.5	Aug. 16	0
Nov. 15	0	Apr. 22	e1.0	Sept. 7	0
Jan. 7	0	June 23	0		

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.24	0.67	0.48	3.6	2.7	0.62	2.6	1.6	24	2.8	0.06
2	0.00	0.34	0.71	0.39	5.0	2.9	0.57	2.4	13	18	2.3	0.03
3	0.00	0.27	0.73	0.15	4.0	2.7	0.90	2.2	9.7	13	2.0	0.01
4	1.6	4.1	0.71	e0.11	3.5	2.4	0.83	1.5	4.4	9.8	1.8	0.00
5	1.4	3.3	0.74	e0.10	5.4	2.2	0.42	0.34	11	8.2	1.6	0.00
6	0.08	1.2	0.73	e0.09	7.2	2.2	0.41	0.38	5.9	7.2	1.4	0.00
7	0.03	0.77	0.69	e0.11	4.4	2.1	0.45	1.0	10	6.4	1.2	0.00
8	0.03	1.8	0.67	0.14	2.5	1.9	0.49	1.5	5.3	5.9	0.91	0.00
9	0.09	1.8	0.64	0.13	2.6	2.1	0.46	1.6	3.5	5.2	0.79	0.00
10	0.06	1.4	0.69	0.15	2.2	2.3	0.52	1.5	3.0	4.7	0.77	0.00
11	0.02	1.2	0.60	0.29	3.1	1.8	0.48	1.4	4.8	4.2	0.82	0.00
12	0.00	0.85	0.37	0.37	2.7	1.9	0.53	2.2	7.6	3.9	1.4	0.00
13	0.00	0.97	0.38	0.33	3.5	1.8	0.48	4.0	1,050	3.6	3.1	0.00
14	0.00	1.0	0.48	0.30	6.3	1.7	0.51	8.1	1,130	3.2	3.3	0.00
15	0.00	1.1	0.51	0.27	3.7	1.8	0.50	14	1,150	3.3	3.3	0.00
16	0.00	2.6	0.52	0.20	2.6	1.8	0.50	5.6	643	3.9	9.9	0.00
17	0.00	1.4	0.55	0.13	e3.0	1.8	0.51	10	283	3.5	4.3	0.00
18	0.00	1.2	0.58	0.19	3.9	2.0	0.50	4.7	141	3.3	2.7	0.00
19	0.00	1.0	0.57	0.20	3.4	2.1	0.48	4.6	61	3.9	5.1	0.00
20	0.00	0.89	0.56	0.47	4.1	2.1	0.49	3.7	45	3.8	3.6	0.00
21	0.69	0.83	0.56	1.0	3.0	2.4	5.0	1.4	37	3.5	2.4	0.00
22	1.8	0.81	e0.50	1.4	3.2	2.4	14	1.5	31	3.4	1.8	0.00
23	23	0.79	e0.50	1.2	3.3	2.6	33	1.5	25	3.4	1.3	0.00
24	18	0.75	e0.52	1.3	2.6	2.8	57	1.1	37	4.2	1.0	0.00
25	37	0.79	e0.45	1.5	2.4	3.2	45	1.2	25	3.5	0.79	0.00
26	11	0.74	e0.53	1.9	2.4	2.6	22	1.1	15	4.1	0.66	0.00
27	1.8	0.73	e0.46	5.3	2.3	5.0	11	0.97	14	4.1	0.53	0.00
28	5.7	0.75	e0.49	6.5	2.4	2.2	6.4	0.84	29	3.8	0.37	0.00
29	5.2	0.72	e0.50	3.3	---	0.78	3.3	0.74	18	4.9	0.25	0.00
30	1.9	0.68	e0.51	3.0	---	0.73	2.9	1.5	20	6.1	0.16	0.00
31	0.64	---	e0.52	4.0	---	0.68	---	2.2	---	3.9	0.10	---
TOTAL	110.04	35.02	17.64	35.00	98.3	67.69	210.25	87.37	4,833.8	183.9	62.45	0.10
MEAN	3.55	1.17	0.57	1.13	3.51	2.18	7.01	2.82	161	5.93	2.01	0.00
MAX	37	4.1	0.74	6.5	7.2	5.0	57	14	1,150	24	9.9	0.06
MIN	0.00	0.24	0.37	0.09	2.2	0.68	0.41	0.34	1.6	3.2	0.10	0.00
AC-FT	218	69	35	69	195	134	417	173	9,590	365	124	0.2

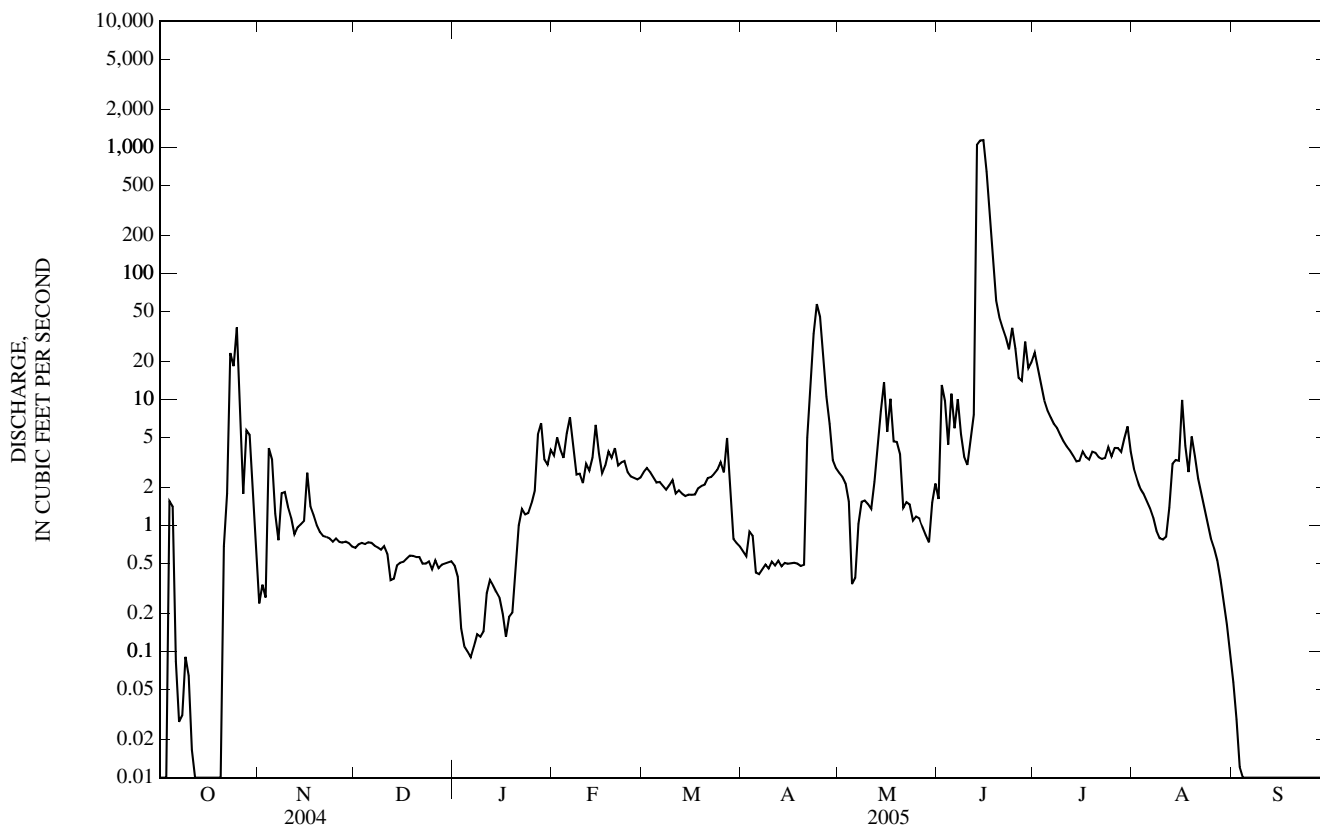
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 2005, BY WATER YEAR (WY)

MEAN	1.63	2.49	1.59	2.14	5.07	21.7	27.7	43.4	68.4	18.1	6.02	2.56
MAX	19.8	68.7	16.0	25.5	52.6	150	456	444	1,223	174	68.4	70.1
(WY)	(1999)	(1999)	(1956)	(1974)	(1980)	(1993)	(2000)	(1957)	(1967)	(1951)	(1955)	(1955)
MIN	0.00	0.00	0.00	0.00	0.00	0.10	0.04	0.03	0.00	0.00	0.00	0.00
(WY)	(1954)	(1951)	(1954)	(1954)	(1954)	(1981)	(1981)	(2004)	(2004)	(1953)	(1960)	(1954)

06400000 HAT CREEK NEAR EDGEMONT, SD—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1951 - 2005	
ANNUAL TOTAL	214.69		5,741.56			
ANNUAL MEAN	0.59		15.7		<sup>a</sup> 16.7	
HIGHEST ANNUAL MEAN					112	1967
LOWEST ANNUAL MEAN					0.16	1989
HIGHEST DAILY MEAN	37	Oct 25	1,150	Jun 15	8,350	Jun 16, 1967
LOWEST DAILY MEAN	0.00	Apr 20	0.00	Oct 1	<sup>b</sup> 0.00	Nov 1, 1950
ANNUAL SEVEN-DAY MINIMUM	0.00	May 30	0.00	Oct 12	0.00	Nov 1, 1950
MAXIMUM PEAK FLOW			2,050	Jun 13	<sup>c</sup> 13,300	Jun 16, 1967
MAXIMUM PEAK STAGE			13.99	Jun 13	15.40	Apr 23, 2000
ANNUAL RUNOFF (AC-FT)	426		11,390		12,120	
10 PERCENT EXCEEDS	0.91		9.9		20	
50 PERCENT EXCEEDS	0.06		1.5		0.56	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

- a Median of annual mean discharges, 11 ft<sup>3</sup>/s.
- b No flow for many days in most years.
- c Gage height, 13.35 ft, at different site, same datum.
- e Estimated.



## CHEYENNE RIVER BASIN

06400875 HORSEHEAD CREEK AT OELRICHS, SD

LOCATION.--Lat 43°11'17", long 103°13'34", in SW<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> sec.7, T.10 S., R.8 E., Fall River County, Hydrologic Unit 10120106, on left bank on downstream side of bridge on Highway 18, 1.5 mi upstream from Lone Well Creek, and 0.6 mi northeast of Oelrichs.

DRAINAGE AREA.--187 mi<sup>2</sup>.

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

REVISED RECORDS.--WDR SD-86-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 3,320 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good. Diversions for irrigation of 624 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 2004 TO SEPTEMBER 2005  
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	0.01	0.01	0.01	0.00	1.5	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.00	1.1	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.00	0.87	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.00	0.79	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.00	0.70	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.00	0.85	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.00	0.60	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.00	0.67	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.00	0.43	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.18	0.00	0.00
11	0.00	0.00	0.00	0.00	0.01	0.00	0.01	0.07	0.00	0.10	0.00	0.00
12	0.00	0.00	0.00	0.00	0.02	0.00	0.01	0.61	0.04	0.16	0.00	0.00
13	0.00	0.00	0.00	0.00	0.01	0.00	0.01	0.82	38	0.12	0.00	0.00
14	0.00	0.00	0.00	0.00	0.01	0.00	0.01	6.6	495	0.04	0.00	0.00
15	0.00	0.00	0.00	0.00	0.01	0.00	0.00	3.4	294	0.02	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.4	117	0.01	0.00	0.00
17	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.27	71	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.02	54	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	36	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	24	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.01	0.01	0.59	0.00	22	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.01	0.01	0.95	0.00	20	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.01	0.01	0.16	0.00	18	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.01	0.02	0.02	0.00	15	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.01	0.02	0.01	0.00	16	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.00	8.2	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.00	4.4	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.01	0.01	0.02	0.00	2.9	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	---	0.01	0.01	0.00	2.4	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	---	0.01	0.01	0.00	1.9	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	0.01	---	0.01	---	0.00	0.00	---
TOTAL	0.00	0.00	0.00	0.00	0.18	0.25	1.95	13.32	1,239.84	8.14	0.00	0.00
MEAN	0.00	0.00	0.00	0.00	0.01	0.01	0.07	0.43	41.3	0.26	0.00	0.00
MAX	0.00	0.00	0.00	0.00	0.02	0.02	0.95	6.6	495	1.5	0.00	0.00
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	0.4	0.5	3.9	26	2,460	16	0.00	0.00

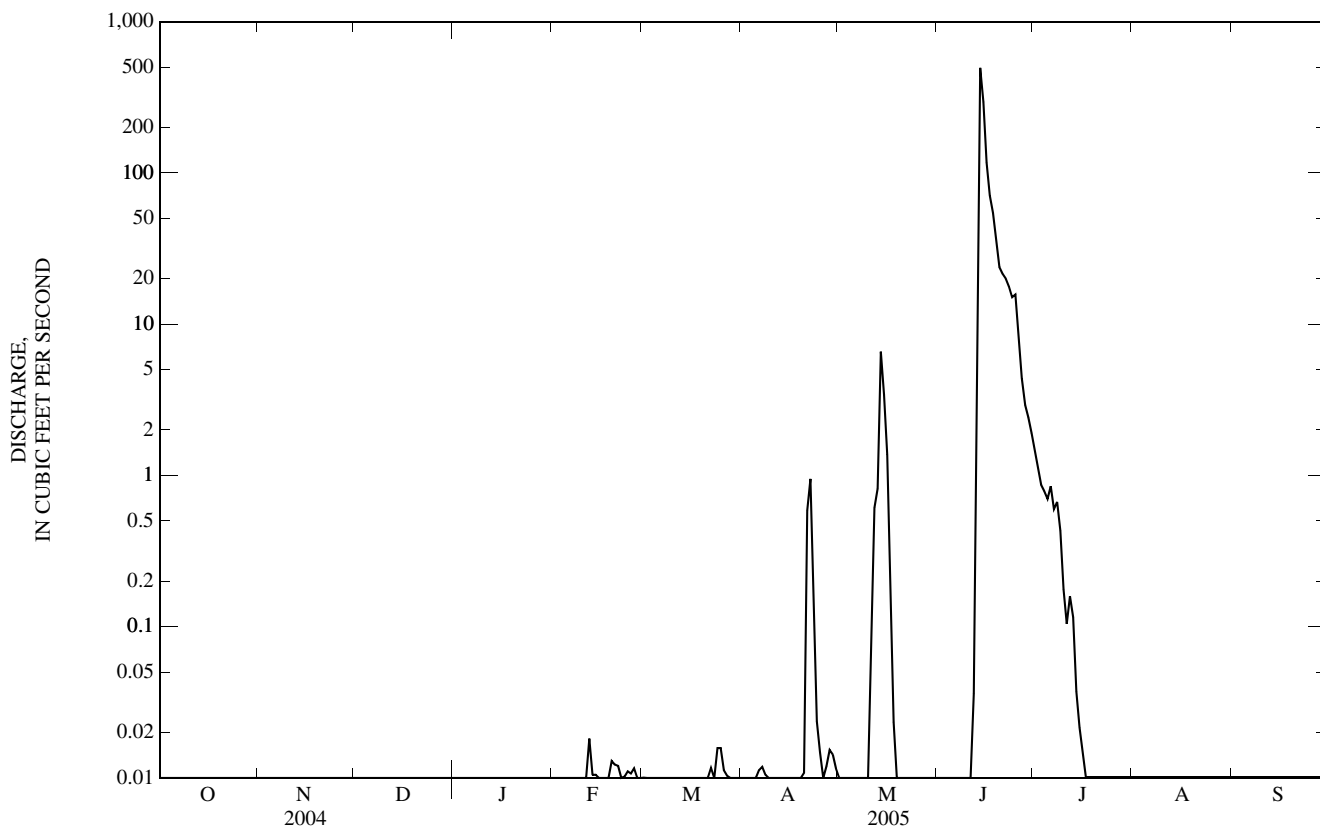
## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 2005, BY WATER YEAR (WY)

MEAN	0.05	0.32	0.21	0.40	1.27	6.93	18.6	19.4	26.3	3.49	0.11	0.00
MAX	0.46	5.66	2.72	6.39	11.6	58.9	164	246	187	31.4	0.74	0.07
(WY)	(2000)	(1999)	(1997)	(1997)	(1994)	(1986)	(2000)	(1991)	(1986)	(1993)	(1986)	(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)	(1984)	(1984)	(1984)	(1985)	(1989)	(1989)	(1989)	(1985)	(1985)	(1985)	(1985)	(1984)

06400875 HORSEHEAD CREEK AT OELRICHS, SD—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR	FOR 2005 WATER YEAR	WATER YEARS 1984 - 2005	
ANNUAL TOTAL	5.28	1,263.68		
ANNUAL MEAN	0.01	3.46	6.41	
HIGHEST ANNUAL MEAN			29.3	1986
LOWEST ANNUAL MEAN			0.00	1990
HIGHEST DAILY MEAN	0.15 Feb 20	495 Jun 14	4,080	May 11, 1991
LOWEST DAILY MEAN	0.00 May 7	0.00 Oct 1	<sup>a</sup> 0.00	Oct 1, 1983
ANNUAL SEVEN-DAY MINIMUM	0.00 May 7	0.00 Oct 1	0.00	Oct 1, 1983
MAXIMUM PEAK FLOW		644 Jun 14	8,270	May 11, 1991
MAXIMUM PEAK STAGE		9.74 Jun 14	18.57	May 11, 1991
ANNUAL RUNOFF (AC-FT)	10	2,510	4,650	
10 PERCENT EXCEEDS	0.05	0.17	3.5	
50 PERCENT EXCEEDS	0.00	0.00	0.01	
90 PERCENT EXCEEDS	0.00	0.00	0.00	

a No flow for many days in most years.



## CHEYENNE RIVER BASIN

## 06401000 ANGOSTURA RESERVOIR NEAR HOT SPRINGS, SD

LOCATION.--Lat 43°20'35", long 103°26'16", in SW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> sec.20, T.8 S., R.6 E., Fall River County, Hydrologic Unit 10120106, at dam on Cheyenne River, 6.5 mi southeast of Hot Springs.

DRAINAGE AREA.--9,100 mi<sup>2</sup>, approximately.

REVISED RECORDS.--WDR SD-04-01: 1960-2003 minimum observed contents; 1962-2003 maximum observed contents.

PERIOD OF RECORD.--October 1949 to current year (monthend contents only).

GAGE.--Water-stage recorder. Elevations listed to NGVD of 1929. Prior to Aug. 26, 1965, nonrecording gage at same site and datum.

REMARKS.--Reservoir formed by concrete gravity dam with earth embankment with gated concrete gravity spillway section. Storage began Oct. 3, 1949; dam completed December 1949. Conservation capacity, 82,400 acre-ft between elevations 3,163.0 ft and 3,187.2 ft (top of spillway gates). Inactive storage, 39,700 acre-ft between elevations 3,139.75 ft (invert of lowest outlet) and 3,163.0 ft. Dead storage below elevation 3,139.75 ft, 8,600 acre-ft. Surge capacity, 56,400 acre-ft between elevations 3,187.2 ft and 3,198.1 ft (maximum water surface). Figures given herein represent contents above elevation 3,139.75 ft. Water stored for irrigation.

COOPERATION.--Records of elevation, contents, and diversions to Angostura project provided by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 160,400 acre-ft, June 18, 1962, elevation, 3,189.00 ft; minimum since normal operating level reached, 45,600 acre-ft, Sept. 16, 2004.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 78,400 acre-ft, June 24, elevation, 3,176.23 ft; minimum, 46,100 acre-ft, Oct. 1.

MONTHEND ELEVATION AND CONTENTS AT 2400 HOURS  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Elevation	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30 .....	3,165.53	46,100	--
Oct. 31 .....	3,166.08	47,500	+1400
Nov. 30 .....	3,166.78	49,400	+1,900
Dec. 31 .....	3,167.47	51,300	+1,900
CAL YR 2004 .....	--	--	-26,500
Jan. 31 .....	3,168.32	53,600	+2,300
Feb. 28 .....	3,169.30	56,400	+2,800
Mar. 31 .....	3,170.03	58,400	+2,000
Apr. 30 .....	3,170.82	60,800	+2,400
May 31 .....	3,171.33	62,300	+1,500
June 30 .....	3,176.11	77,600	+15,300
July 31 .....	3,172.42	65,600	-12,000
Aug. 31 .....	3,168.86	55,100	-10,500
Sept. 30 .....	3,166.70	49,200	-5,900
WTR YR 2005 .....	--	--	+3,100

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