

WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005 STATION RECORDS, SURFACE WATER AND WATER QUALITY

YELLOWSTONE RIVER BASIN

06186500 YELLOWSTONE RIVER AT YELLOWSTONE LAKE OUTLET, YELLOWSTONE NATIONAL PARK

LOCATION.--Lat 44°34'03", long 110°22'48" (NAD 27), Yellowstone National Park, Hydrologic Unit 10070001, on left bank 450 ft downstream from Fishing Bridge, 0.3 mi downstream from outlet of Yellowstone Lake, and at river mile 616.4.

DRAINAGE AREA.--991 mi².

PERIOD OF RECORD.--December 1922 to September 1982, October 1983 to September 1986, October 1988 to current year. Prior to October 1926, gage heights only. Monthly discharge only for winter periods in water years 1927-30, 1932-33, 1935-38, 1940, 1942-46 published in WSP 1309; figures of daily discharge for these months published in WSP 646, 666, 686, 701, 731, 746, 786, 806, 826, 856, 896, 956, 976, 1006, 1036, and 1056, have been found to be unreliable and should not be used.

REVISED RECORDS.--WSP 1309: See PERIOD OF RECORD. WSP 1729: Drainage area. WDR MT-03-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 7,729.58 ft (NGVD 29). Prior to Oct. 2, 1928, nonrecording gage at site 450 ft upstream at elevation 1.07 ft higher.

REMARKS.--Records good except those for estimated daily discharges, which are poor. No artificial regulation. U.S. Geological Survey satellite telemeter at station. Several unpublished observations of water temperature and specific conductance were made during the year.

**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	1,000	811	619	e400	e330	e360	e450	588	2,760	3,470	1,970	1,170
2	998	800	612	e400	e330	e360	e450	593	2,790	3,450	1,950	1,150
3	991	791	601	e380	e330	e370	e450	602	2,790	3,420	1,930	1,120
4	983	788	592	e380	e330	e370	e450	616	2,790	3,380	1,910	1,100
5	977	789	590	e360	e330	e380	e450	636	2,790	3,330	1,870	1,090
6	971	780	589	e350	e330	e380	e460	660	2,860	3,290	1,830	1,060
7	953	770	587	e340	e330	e400	e460	697	2,900	3,240	1,780	1,040
8	946	765	e580	e340	e330	e400	e460	734	2,910	3,190	1,740	1,020
9	936	764	e580	e340	e330	e420	e460	768	2,910	3,150	1,710	1,010
10	922	762	e560	e340	e330	e420	e460	826	2,910	3,110	1,680	1,000
11	915	754	e560	e330	e330	e420	e460	861	2,870	3,080	1,650	978
12	905	751	e560	e330	e330	e430	e460	897	2,890	3,020	1,610	958
13	894	743	e540	e330	e330	e430	e460	922	2,910	2,970	1,560	959
14	886	741	e540	e330	e330	e430	e470	942	2,880	2,920	1,540	946
15	880	734	e540	e330	e320	e430	e470	973	2,870	2,850	1,520	926
16	874	729	e520	e330	e320	e430	472	1,020	2,860	2,820	1,480	906
17	858	726	e520	e330	e320	e440	472	1,100	2,900	2,730	1,470	893
18	867	719	e520	e330	e320	e440	475	1,150	2,950	2,680	1,480	887
19	850	710	e500	e330	e320	e440	477	1,220	3,000	2,620	1,520	874
20	845	702	e500	e330	e330	e440	481	1,290	3,060	2,550	1,490	858
21	843	695	e480	e340	e330	e440	486	1,270	3,140	2,490	1,470	854
22	837	686	e480	e340	e330	e440	488	1,740	3,230	2,440	1,440	844
23	845	679	e460	e340	e340	e450	490	1,940	3,330	2,410	1,440	847
24	849	677	e460	e340	e340	e450	494	2,120	3,420	2,340	1,410	848
25	841	677	e440	e340	e340	e450	506	2,270	3,490	2,270	1,360	849
26	831	661	e440	e340	e350	e450	522	2,370	3,530	2,220	1,330	837
27	825	651	e440	e340	e350	e450	546	2,440	3,530	2,180	1,300	825
28	823	637	e440	e340	e350	e450	563	2,510	3,540	2,130	1,270	814
29	827	636	e420	e340	---	e450	574	2,570	3,530	2,080	1,250	805
30	828	628	e420	e340	---	e450	581	2,620	3,500	2,040	1,230	795
31	814	---	e420	e340	---	e450	---	2,670	---	2,010	1,190	---
TOTAL	27,614	21,756	16,110	10,670	9,280	13,120	14,497	41,615	91,840	85,880	48,380	28,263
MEAN	891	725	520	344	331	423	483	1,342	3,061	2,770	1,561	942
MAX	1,000	811	619	400	350	450	581	2,670	3,540	3,470	1,970	1,170
MIN	814	628	420	330	320	360	450	588	2,760	2,010	1,190	795
AC-FT	54,770	43,150	31,950	21,160	18,410	26,020	28,750	82,540	182,200	170,300	95,960	56,060
CFSM	0.90	0.73	0.52	0.35	0.33	0.43	0.49	1.35	3.09	2.80	1.57	0.95
IN.	1.04	0.82	0.60	0.40	0.35	0.49	0.54	1.56	3.45	3.22	1.82	1.06

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1927 - 2005, BY WATER YEAR (WY)*

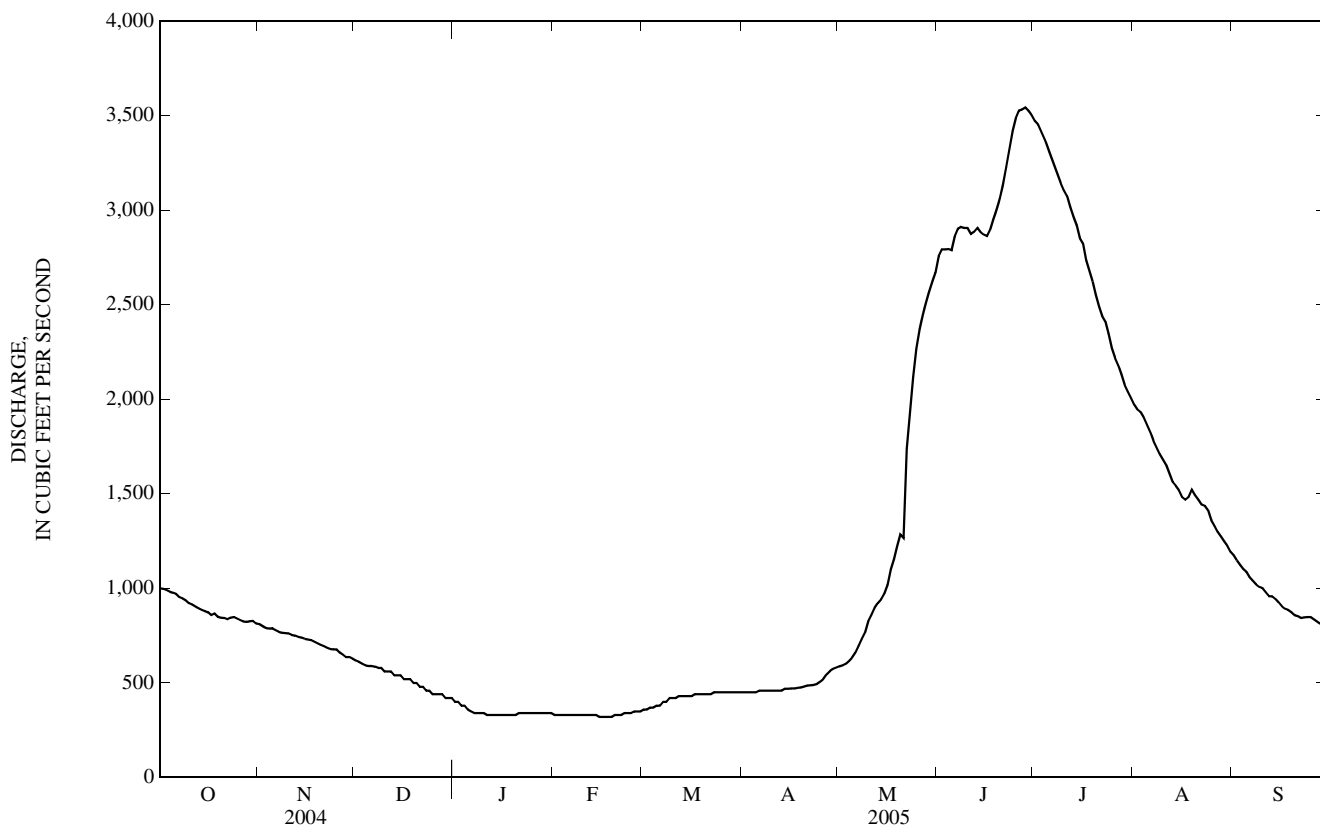
MEAN	797	604	473	396	386	444	540	1,164	3,678	3,995	2,188	1,202
MAX	1,259	984	775	699	637	717	801	2,214	8,574	7,160	4,031	1,954
(WY)	(1973)	(1951)	(1951)	(1998)	(1998)	(1962)	(1952)	(1997)	(1997)	(1982)	(1982)	(1982)
MIN	327	276	246	168	122	130	175	605	1,707	1,272	812	538
(WY)	(1989)	(1989)	(1932)	(1989)	(1989)	(1935)	(1937)	(1953)	(1934)	(1934)	(1934)	(1934)

06186500 YELLOWSTONE RIVER AT YELLOWSTONE LAKE OUTLET, YELLOWSTONE NATIONAL PARK—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1927 - 2005*	
ANNUAL TOTAL	369,433		409,025			
ANNUAL MEAN	1,009		1,121		1,327	
HIGHEST ANNUAL MEAN					2,253	
LOWEST ANNUAL MEAN					682	
HIGHEST DAILY MEAN	2,600	Jul 2	3,540	Jun 28	9,930	Jun 19, 1997
LOWEST DAILY MEAN	340	Jan 4	320	Feb 15	100	Feb 18, 1993
ANNUAL SEVEN-DAY MINIMUM	344	Jan 1	323	Feb 13	113	Feb 11, 1989
MAXIMUM PEAK FLOW			3,610		9,950	
MAXIMUM PEAK STAGE			5.82		8.90	
ANNUAL RUNOFF (AC-FT)	732,800		811,300		961,600	
ANNUAL RUNOFF (CFSM)	1.02		1.13		1.34	
ANNUAL RUNOFF (INCHES)	13.87		15.35		18.20	
10 PERCENT EXCEEDS	2,330		2,870		3,460	
50 PERCENT EXCEEDS	788		768		676	
90 PERCENT EXCEEDS	350		340		340	

*--During periods of operation (October 1926 to September 1982, October 1983 to September 1986, October 1988 to current year).

e--Estimated.



YELLOWSTONE RIVER BASIN

06187915 SODA BUTTE CREEK AT PARK BOUNDARY, AT SILVER GATE, MT

LOCATION.--Lat 45°00'11", long 110°00'04" (NAD 27), in SW¹/₄NW¹/₄SW¹/₄ sec.33, T.9 S., R.14 E., Park County, Hydrologic Unit 10070001, at Yellowstone National Park boundary, 0.25 mi downstream from Silver Creek, 0.75 mi southwest of Silver Gate, and at river mile 17.8.

DRAINAGE AREA.--31.2 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1998 to current year. October 1998 to September 2002 records collected by the National Park Service and U.S. Department of Agriculture, Forest Service, under the general supervision of the U.S. Geological Survey.

GAGE.--Water-stage recorder. Elevation of gage is 7,340 ft (NGVD 29).

REMARKS.--Water-discharge records good except for those discharges greater than 600 ft³/s, which are fair, and estimated daily discharges, which are poor. No known regulation or diversion upstream from station. U.S. Geological Survey satellite telemeter at 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	30	e12	e9.0	6.8	e4.0	e2.5	3.0	17	188	255	34	13
2	29	e13	e10	6.9	e4.0	e2.5	3.1	18	159	240	33	13
3	28	14	e10	6.8	e4.0	e2.3	3.3	19	143	209	32	12
4	27	14	e8.5	e5.0	e4.5	e2.3	3.1	20	141	186	30	12
5	26	14	e7.5	e5.5	e4.5	e2.5	2.9	29	e160	182	28	12
6	25	15	e8.0	e7.0	e4.0	e2.8	3.2	43	e270	180	26	11
7	24	14	e8.5	e7.0	e4.0	e3.0	5.0	48	e220	170	25	11
8	23	15	e9.0	e7.5	e4.0	e3.2	6.0	50	e180	172	24	11
9	22	14	e9.0	e7.5	e4.0	3.4	4.5	55	e160	157	24	11
10	22	14	9.1	e6.5	e3.5	3.5	4.0	58	e150	205	24	12
11	21	13	8.9	e6.0	e3.5	3.5	4.0	50	e160	188	27	12
12	20	15	8.1	e5.5	e4.0	3.5	4.6	46	e180	139	27	13
13	19	15	8.8	e6.0	e4.5	3.5	6.2	43	e160	134	28	12
14	19	13	9.2	e6.5	e3.5	e3.2	6.9	53	e160	122	23	11
15	21	14	8.4	e6.5	e2.5	e3.2	5.6	73	218	111	21	11
16	20	15	7.8	e6.0	e2.0	e3.2	7.1	154	e310	102	20	11
17	19	16	8.6	e6.5	e2.0	3.4	10	150	e380	91	21	11
18	18	13	8.4	6.6	e2.5	3.6	11	115	e360	82	40	12
19	18	e12	8.1	6.0	e3.0	3.5	9.0	308	e330	75	31	10
20	18	e10	7.7	5.5	e3.5	3.3	8.1	403	e380	69	22	9.7
21	18	e11	e6.0	5.1	e3.0	3.3	7.9	439	e430	64	20	9.5
22	18	e12	e5.0	4.7	e2.5	3.2	8.7	388	e480	59	20	9.5
23	17	e13	e4.0	e4.5	e2.2	3.2	13	408	517	57	19	10
24	16	e13	e5.0	e4.0	e2.2	3.1	18	341	485	52	18	16
25	18	e13	e6.0	e4.0	e2.2	3.2	24	257	418	60	17	15
26	17	e12	e6.0	e4.0	e2.2	3.1	25	221	337	52	16	11
27	16	e11	e6.5	e4.0	e2.2	3.1	20	219	308	45	16	13
28	16	e9.0	e7.0	e4.5	e2.2	3.1	17	243	299	42	15	15
29	16	e7.0	7.1	e4.5	---	3.1	17	238	258	40	14	11
30	15	e8.0	7.0	e4.5	---	3.0	17	201	243	38	14	11
31	15	---	6.9	e4.0	---	2.9	---	178	---	35	14	---
TOTAL	631	384.0	239.1	175.4	90.2	96.2	278.2	4,885	8,184	3,613	723	351.7
MEAN	20.4	12.8	7.71	5.66	3.22	3.10	9.27	158	273	117	23.3	11.7
MAX	30	16	10	7.5	4.5	3.6	25	439	517	255	40	16
MIN	15	7.0	4.0	4.0	2.0	2.3	2.9	17	141	35	14	9.5
AC-FT	1,250	762	474	348	179	191	552	9,690	16,230	7,170	1,430	698
CFSM	0.65	0.41	0.25	0.18	0.10	0.10	0.30	5.05	8.74	3.74	0.75	0.38
IN.	0.75	0.46	0.29	0.21	0.11	0.11	0.33	5.82	9.76	4.31	0.86	0.42

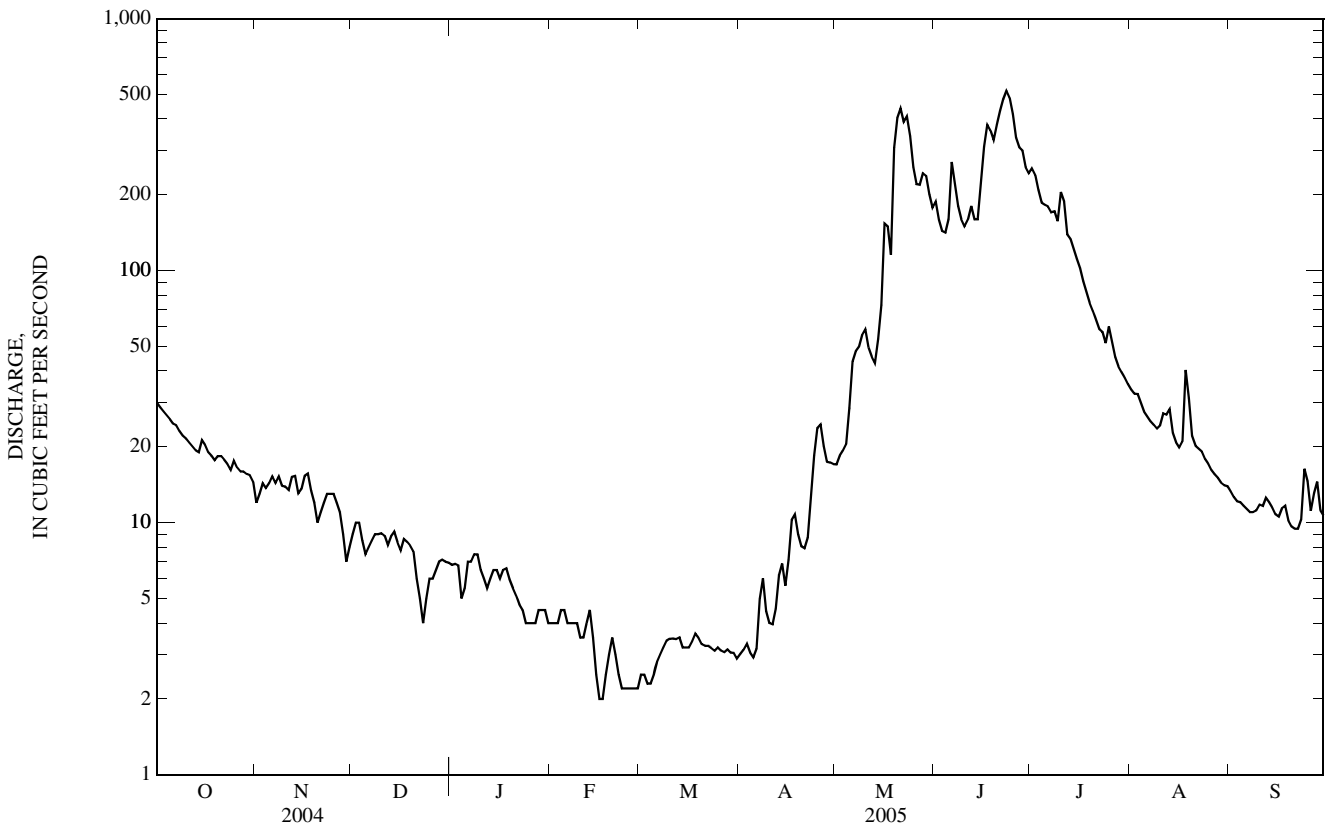
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 2005, BY WATER YEAR (WY)

MEAN	10.4	6.46	4.15	2.91	2.09	1.90	10.0	137	312	130	27.5	15.3
MAX	20.4	12.8	7.71	5.66	3.22	3.10	19.3	167	408	212	45.0	27.9
(WY)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2004)	(2001)	(2003)	(1999)	(1999)	(2004)
MIN	5.14	4.30	2.85	2.01	1.57	1.13	4.23	95.9	176	61.6	15.5	8.27
(WY)	(2002)	(2003)	(2001)	(2000)	(2004)	(2003)	(1999)	(1999)	(2001)	(2001)	(2001)	(2001)

06187915 SODA BUTTE CREEK AT PARK BOUNDARY, AT SILVER GATE, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1999 - 2005	
ANNUAL TOTAL	19,397.00		19,650.8			
ANNUAL MEAN	53.0		53.8		55.0	
HIGHEST ANNUAL MEAN					65.4	2003
LOWEST ANNUAL MEAN					38.5	2001
HIGHEST DAILY MEAN	496	Jun 9	517	Jun 23	735	Jun 1, 2002
LOWEST DAILY MEAN	0.90	Mar 2	2.0	Feb 16	0.80	Feb 23, 2003
ANNUAL SEVEN-DAY MINIMUM	1.1	Feb 28	2.2	Feb 22	0.99	Mar 23, 2003
MAXIMUM PEAK FLOW			604	Jun 23	912	Jun 1, 2002
MAXIMUM PEAK STAGE			2.84	Jun 23	3.49	Jun 1, 2002
INSTANTANEOUS LOW FLOW			a1.8	Mar 31		
ANNUAL RUNOFF (AC-FT)	38,470		38,980		39,820	
ANNUAL RUNOFF (CFSM)	1.70		1.73		1.76	
ANNUAL RUNOFF (INCHES)	23.13		23.43		23.93	
10 PERCENT EXCEEDS	168		187		200	
50 PERCENT EXCEEDS	18		13		8.7	
90 PERCENT EXCEEDS	1.5		3.2		1.9	

a--Gage height, 0.75 ft, may have been less during periods of ice effect.
 e--Estimated.



06187915 SODA BUTTE CREEK AT PARK BOUNDARY, AT SILVER GATE, MT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--January 1999 to 2001, April 2003 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: April 2003 to current year.

INSTRUMENTATION.--Temperature recorder installed April 23, 2003.

REMARKS.--Daily water temperature record good except for the period June 24 to July 20, which is poor. Several unpublished observations of specific conductance and water temperature were made during the year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 17.5°C, Aug. 15, 2003; minimum, 0.0°C, many days October through May.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 16.0°C, Aug. 4-7 and 21; minimum, 0.0°C, many days October through May.

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

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	7.5	3.5	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	9.5	3.0	5.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	8.5	2.5	5.0	1.5	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0
4	6.5	2.0	4.5	2.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
5	7.5	2.0	4.5	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	7.5	1.5	4.5	1.5	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0
7	6.0	2.5	4.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	7.5	1.0	4.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	7.0	2.0	4.5	2.5	0.5	1.0	0.0	0.0	0.0	0.0	0.0	0.0
10	6.0	3.0	4.5	2.5	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
11	7.5	2.5	4.5	1.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0
12	5.5	2.0	3.5	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0
13	5.5	1.0	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	5.0	1.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	5.0	4.0	4.5	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0
16	4.5	3.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	5.0	1.5	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	3.5	1.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	3.5	0.5	2.0	0.0	0.0	0.0	0.5	0.0	0.0	0.5	0.0	0.0
20	3.0	1.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0
21	3.5	1.5	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0
22	3.0	1.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	1.5	0.5	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0
24	1.5	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	1.5	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	3.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	3.5	0.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	2.5	0.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	2.0	0.0	1.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0
30	1.5	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0
31	1.5	0.0	0.5	---	---	---	0.0	0.0	0.0	0.0	0.0	0.0
MONTH	9.5	0.0	3.0	2.5	0.0	0.0	0.5	0.0	0.0	0.5	0.0	0.0

06187915 SODA BUTTE CREEK AT PARK BOUNDARY, AT SILVER GATE, MT—Continued

TEMPERATURE, WATER, DEGREES CELSIUS—CONTINUED
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	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	1.0	7.5	0.0	2.5
2	0.0	0.0	0.0	0.5	0.0	0.0	3.5	0.5	2.0	6.0	0.0	2.5
3	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.5	1.5	6.5	0.0	3.0
4	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.5	1.5	6.0	1.5	3.5
5	0.0	0.0	0.0	0.5	0.0	0.0	3.0	0.5	1.5	6.5	1.5	3.5
6	0.0	0.0	0.0	0.5	0.0	0.0	5.0	0.0	2.0	7.5	0.5	3.0
7	0.0	0.0	0.0	0.5	0.0	0.0	5.5	0.0	2.0	4.5	1.0	2.5
8	0.0	0.0	0.0	1.0	0.0	0.5	2.5	0.5	1.0	7.0	1.5	3.0
9	0.0	0.0	0.0	1.5	0.0	0.5	4.0	0.5	2.0	5.0	1.5	3.0
10	0.0	0.0	0.0	2.0	0.0	0.5	4.5	0.5	2.0	4.5	1.5	3.0
11	0.0	0.0	0.0	1.5	0.0	0.5	5.5	0.0	2.0	5.5	1.5	3.0
12	0.0	0.0	0.0	1.0	0.0	0.5	5.0	1.0	3.0	4.0	0.5	2.0
13	0.0	0.0	0.0	0.5	0.0	0.0	6.5	0.5	2.5	7.5	0.0	3.5
14	0.0	0.0	0.0	0.5	0.0	0.0	2.0	0.0	1.0	7.5	1.5	4.0
15	0.0	0.0	0.0	0.5	0.0	0.0	6.5	0.0	2.0	7.0	1.0	3.5
16	0.0	0.0	0.0	1.0	0.0	0.5	7.0	0.0	3.0	4.0	1.5	2.5
17	0.0	0.0	0.0	0.5	0.0	0.5	5.5	0.5	2.5	3.0	1.5	2.0
18	0.0	0.0	0.0	0.5	0.0	0.0	3.5	1.0	2.0	4.5	1.5	2.5
19	0.0	0.0	0.0	1.0	0.0	0.5	3.5	0.5	1.5	4.0	1.5	2.5
20	0.0	0.0	0.0	2.0	0.5	1.0	6.0	0.5	2.5	4.5	2.0	3.0
21	0.0	0.0	0.0	2.0	0.0	1.0	2.5	1.0	1.5	6.0	1.5	3.0
22	0.0	0.0	0.0	2.0	0.5	1.0	8.5	0.5	3.5	7.5	1.0	3.5
23	0.0	0.0	0.0	2.5	0.0	1.0	7.0	0.5	3.0	5.5	2.5	3.5
24	0.0	0.0	0.0	1.0	0.0	0.5	6.0	0.5	3.0	4.5	1.5	3.0
25	0.0	0.0	0.0	1.5	0.0	0.5	7.0	0.0	2.5	6.0	0.5	3.0
26	0.0	0.0	0.0	2.5	0.0	1.0	5.0	0.0	2.0	7.0	0.5	3.5
27	0.0	0.0	0.0	1.5	0.0	1.0	3.5	0.5	1.5	8.5	0.5	4.0
28	0.0	0.0	0.0	1.5	0.5	1.0	6.5	0.0	2.0	8.5	1.5	4.0
29	---	---	---	1.5	0.0	0.5	5.5	0.0	2.0	6.0	1.5	3.5
30	---	---	---	1.5	0.0	0.5	4.5	0.0	1.5	5.5	2.0	3.5
31	---	---	---	2.5	0.0	1.0	---	---	---	5.0	1.5	3.5
MONTH	0.0	0.0	0.0	2.5	0.0	0.5	8.5	0.0	2.0	8.5	0.0	3.0
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	3.5	1.5	3.0	11.0	3.5	6.5	15.5	6.5	10.5	13.0	4.0	8.0
2	4.0	1.5	2.5	8.5	4.0	5.5	14.5	8.0	10.5	12.5	4.0	8.5
3	5.5	2.0	3.5	9.5	3.0	6.0	15.5	8.0	10.5	11.5	5.0	8.5
4	7.0	2.5	4.5	10.5	3.0	6.5	16.0	6.0	10.5	11.0	5.5	8.0
5	8.0	2.5	4.5	11.0	3.5	7.0	16.0	6.5	11.0	10.5	5.0	8.0
6	5.0	2.5	4.0	12.0	4.0	7.5	16.0	7.0	11.0	12.5	5.0	8.5
7	5.5	0.5	3.0	11.0	4.5	7.5	16.0	7.0	11.0	12.5	4.5	8.5
8	4.5	0.5	2.5	12.5	5.0	8.0	14.0	7.5	10.5	13.5	5.0	9.5
9	5.5	2.0	3.0	11.5	5.0	8.0	15.5	8.0	11.5	11.0	6.5	9.0
10	7.5	2.0	4.0	8.0	6.0	6.5	14.0	7.5	10.5	9.0	6.5	7.5
11	9.0	2.5	5.0	12.0	5.0	8.0	11.0	7.0	9.0	7.0	4.5	5.5
12	5.0	2.5	3.5	13.0	4.5	8.5	11.5	6.0	8.0	5.5	3.0	4.5
13	7.0	2.0	4.0	13.5	6.0	9.0	12.0	5.5	8.0	7.5	3.0	5.0
14	10.5	2.0	5.5	13.5	6.0	9.5	15.0	6.0	9.5	9.0	2.0	6.0
15	9.0	3.0	5.5	13.5	6.0	9.5	15.0	5.5	10.0	9.5	3.0	6.5
16	8.5	2.5	4.5	13.0	7.0	9.5	13.0	6.0	9.5	7.5	3.0	5.5
17	8.0	3.0	5.0	12.0	5.5	8.5	13.0	8.0	10.0	7.0	4.0	5.5
18	5.5	3.0	4.0	13.5	4.5	8.5	10.0	6.5	8.0	6.0	4.0	5.0
19	8.5	2.5	4.5	13.5	5.5	9.5	15.5	6.0	9.5	9.5	2.0	5.5
20	9.5	2.5	5.5	14.5	6.0	10.0	15.5	5.0	10.0	10.5	2.5	6.5
21	8.5	3.0	5.0	15.5	6.0	10.5	16.0	6.0	10.5	8.5	6.0	7.0
22	9.0	3.0	5.5	12.5	7.0	10.0	13.0	7.0	10.0	8.5	4.5	6.0
23	9.0	3.0	5.0	15.0	7.5	11.0	13.5	7.0	10.0	8.0	5.0	6.0
24	9.5	3.0	5.5	14.5	6.5	10.0	12.0	7.5	9.5	6.0	4.5	5.0
25	8.5	3.0	5.5	11.5	6.5	8.5	12.5	4.0	8.0	6.0	3.5	4.5
26	6.0	3.5	4.5	14.5	5.5	9.0	14.0	4.0	8.5	9.5	3.0	6.0
27	8.0	3.5	5.5	14.5	4.5	9.5	14.0	5.0	9.0	6.0	3.0	5.0
28	7.5	3.5	5.0	13.5	5.5	9.5	14.5	5.5	9.5	9.0	3.5	5.5
29	7.5	3.5	5.0	12.0	6.0	9.0	14.5	5.5	10.0	8.5	1.5	5.0
30	10.5	3.5	6.0	14.0	6.5	10.0	10.5	6.0	8.0	8.0	3.0	5.5
31	---	---	---	12.5	7.0	9.5	12.5	3.0	7.5	---	---	---
MONTH	10.5	0.5	4.5	15.5	3.0	8.5	16.0	3.0	9.5	13.5	1.5	6.5

06187950 SODA BUTTE CREEK NEAR LAMAR RANGER STATION, YELLOWSTONE NATIONAL PARK

LOCATION.--Lat 44°52'06", long 110°09'53" (NAD 27), Yellowstone National Park, Hydrologic Unit 10070001, on left bank, 4 mi southeast of Lamar Ranger Station, and at river mile 1.5.

DRAINAGE AREA.--99.0 mi².

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Elevation of gage is 6,630 ft (NGVD 29).

REMARKS.--Water-discharge records good except those for estimated daily discharges, which are poor. No regulation or diversion upstream from station. U.S. Geological Survey satellite telemeter at 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	79	40	33	e28	e25	23	e23	71	419	375	94	52
2	76	40	32	e28	e25	e22	26	73	390	371	92	51
3	74	46	33	30	e25	e20	27	77	350	339	92	50
4	73	44	e31	e25	e24	e20	28	80	346	299	87	50
5	71	43	e30	e27	e22	e20	26	87	364	289	83	48
6	69	43	32	e28	e22	e21	26	115	505	284	81	47
7	69	42	34	e28	e22	e22	32	133	466	276	78	46
8	67	42	35	30	e22	23	37	137	435	270	77	45
9	65	46	36	30	e24	23	34	157	399	259	76	45
10	65	47	37	30	e20	23	31	175	382	288	76	47
11	64	46	38	e28	e22	21	30	161	394	359	85	47
12	62	42	e35	e25	24	22	33	151	421	250	87	53
13	60	40	e32	e29	24	e20	37	139	383	236	91	51
14	59	38	33	e28	e20	e21	43	150	374	222	79	48
15	61	37	34	e25	e16	23	37	191	458	206	74	46
16	62	40	e31	e26	e15	24	39	381	563	196	70	45
17	59	45	e32	e28	e17	e23	50	434	630	184	70	47
18	59	38	e32	30	e20	e22	58	326	641	168	99	49
19	57	42	34	29	24	25	52	604	597	159	110	47
20	57	e40	e32	30	24	23	49	817	627	149	79	44
21	59	e32	e30	30	24	23	51	960	684	137	72	44
22	56	e34	e25	e28	e22	22	49	821	714	131	69	43
23	58	35	e20	28	e18	22	59	829	797	126	68	45
24	56	35	e25	e25	e19	22	77	720	736	120	65	55
25	50	36	e27	e23	e19	22	94	571	622	131	63	59
26	51	36	e28	e24	e20	e22	104	500	533	142	61	50
27	51	e32	30	e25	e22	23	93	475	470	116	59	50
28	51	e28	31	26	e23	24	81	498	452	109	57	57
29	52	e25	31	27	---	24	76	504	413	105	55	50
30	51	e30	e31	27	---	23	73	445	375	101	54	46
31	50	---	e30	e25	---	e22	---	398	---	97	54	---
TOTAL	1,893	1,164	974	850	604	690	1,475	11,180	14,940	6,494	2,357	1,457
MEAN	61.1	38.8	31.4	27.4	21.6	22.3	49.2	361	498	209	76.0	48.6
MAX	79	47	38	30	25	25	104	960	797	375	110	59
MIN	50	25	20	23	15	20	23	71	346	97	54	43
AC-FT	3,750	2,310	1,930	1,690	1,200	1,370	2,930	22,180	29,630	12,880	4,680	2,890

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 2005, BY WATER YEAR (WY)

MEAN	44.2	31.7	25.5	25.1	23.1	23.5	62.2	395	672	281	92.3	57.6
MAX	68.8	40.3	31.4	33.3	32.0	32.0	127	580	1,251	447	162	92.0
(WY)	(1998)	(1997)	(2005)	(1997)	(2000)	(1997)	(1990)	(1993)	(1996)	(1998)	(1997)	(1997)
MIN	27.8	21.4	16.0	16.7	16.2	17.2	32.3	217	338	106	51.0	36.1
(WY)	(1989)	(1995)	(1989)	(1989)	(2002)	(2002)	(1993)	(1995)	(2001)	(1994)	(2001)	(2001)

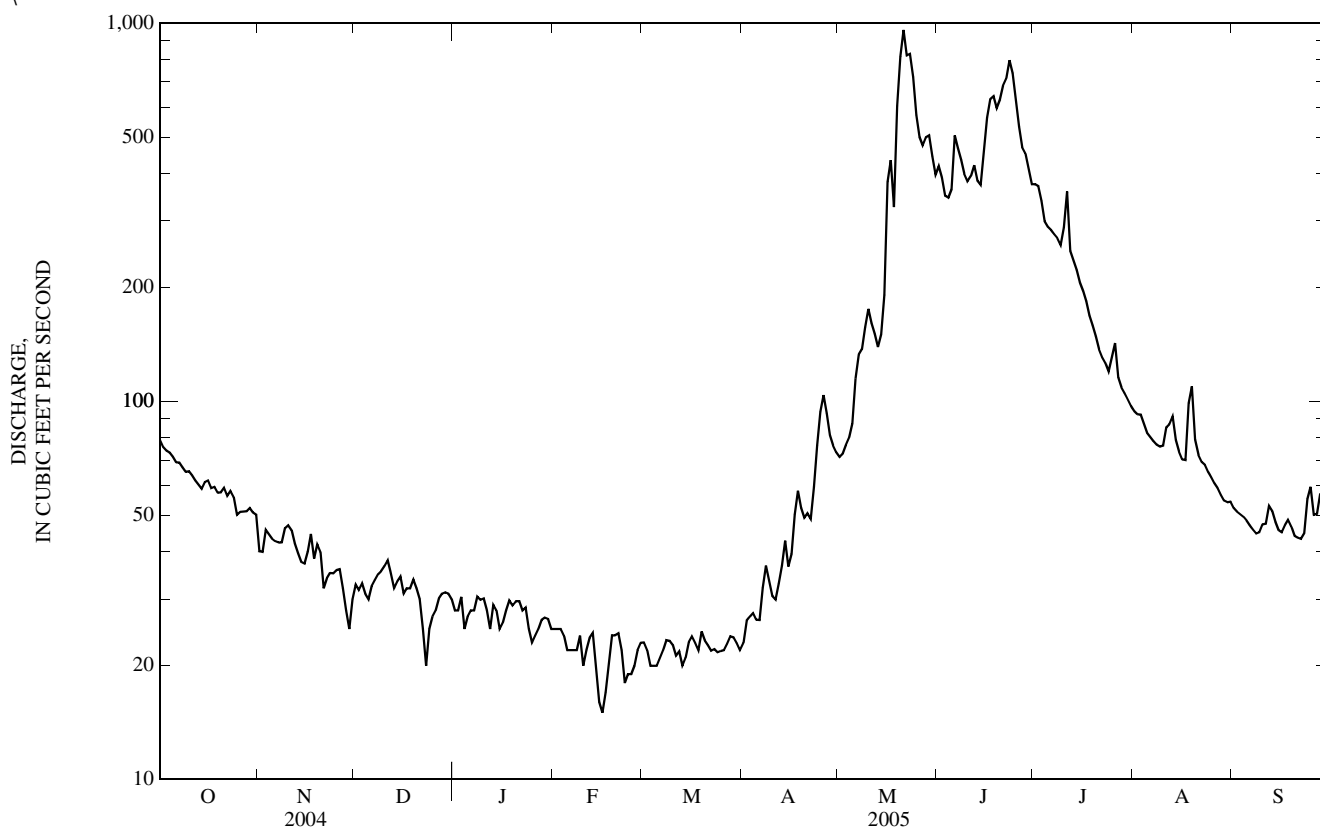
06187950 SODA BUTTE CREEK NEAR LAMAR RANGER STATION, YELLOWSTONE NATIONAL PARK—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1989 - 2005	
ANNUAL TOTAL	44,711		44,078			
ANNUAL MEAN	122		121		145	
HIGHEST ANNUAL MEAN					204	
LOWEST ANNUAL MEAN					96.5	
HIGHEST DAILY MEAN	963	Jun 10	960	May 21	2,070	Jun 9, 1996
LOWEST DAILY MEAN	13	Feb 12	15	Feb 16	12	Feb 4, 1989
ANNUAL SEVEN-DAY MINIMUM	17	Feb 9	19	Feb 12	13	Feb 2, 1989
MAXIMUM PEAK FLOW			1,070		b2,450	
MAXIMUM PEAK STAGE			6.71		7.20	
INSTANTANEOUS LOW FLOW			a12		11	
ANNUAL RUNOFF (AC-FT)	88,680		87,430		104,900	
10 PERCENT EXCEEDS	360		392		464	
50 PERCENT EXCEEDS	64		48		42	
90 PERCENT EXCEEDS	20		23		21	

a--Gage height, 4.20 ft.

b--Gage height, 5.61 ft.

e--Estimated.



WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1988.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: April 2005 to September 2005.

INSTRUMENTATION.--Temperature recorder installed April 20, 2005.

REMARKS.--Daily water temperature record rated excellent. Several unpublished observations of specific conductance and water temperature were made during the year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 19.5°C, Aug. 5, 2005; minimum, during reporting period, 0.0°C, Apr. 28 to May 1, 2005.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 19.5°C, Aug. 5; minimum, during reporting period, 0.0°C, Apr. 28 to May 1.

YELLOWSTONE RIVER BASIN

06187950 SODA BUTTE CREEK NEAR LAMAR RANGER STATION, YELLOWSTONE NATIONAL PARK—Continued

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

DAY	APRIL			MAY			JUNE			JULY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1				9.5	0.0	4.0	5.5	3.5	4.5	14.5	5.5	9.5
2				9.5	0.5	4.5	5.5	2.5	4.0	12.0	5.5	8.5
3				7.0	1.0	4.5	8.0	3.0	5.0	12.0	5.0	8.5
4				9.5	3.0	5.5	10.0	4.0	6.5	14.0	5.0	9.5
5				8.5	4.0	6.0	11.0	4.0	7.0	14.5	5.5	10.0
6				8.0	2.5	5.0	7.0	4.5	5.5	16.0	6.0	10.5
7				6.5	3.0	5.0	7.5	3.0	4.5	14.0	6.5	10.5
8				8.0	3.5	5.5	7.0	1.5	4.0	16.5	7.0	11.5
9				6.5	2.5	4.5	7.0	2.5	4.5	14.5	7.0	11.0
10				6.0	3.0	4.5	9.0	2.5	5.5	11.5	8.0	9.5
11				7.0	3.0	4.5	11.0	4.0	6.5	16.5	7.0	11.0
12				5.5	1.5	3.5	6.5	4.0	5.0	17.5	7.0	12.0
13				9.5	1.0	5.0	9.5	3.0	5.5	17.5	8.0	12.5
14				11.5	3.5	7.0	12.5	3.0	7.5	18.0	8.5	13.0
15				9.5	3.0	6.0	12.5	4.5	8.0	18.0	8.5	13.0
16				6.5	3.5	4.5	11.0	3.5	7.0	17.0	9.5	13.0
17				4.5	2.5	3.5	13.0	4.5	8.0	16.5	8.5	12.0
18				5.5	2.5	4.0	9.5	4.5	7.0	17.0	7.0	12.0
19				9.0	3.5	5.5	11.0	3.5	7.0	17.5	8.0	12.5
20				7.5	3.0	4.5	13.0	4.0	8.0	18.0	9.0	13.0
21	4.0	2.5	3.0	9.5	2.5	5.5	11.5	4.0	8.0	19.0	9.0	14.0
22	11.0	2.0	5.5	11.0	1.5	5.5	12.0	5.0	8.0	17.0	10.5	13.5
23	10.5	1.5	5.5	9.5	3.5	5.5	13.0	5.0	8.5	19.0	10.0	14.0
24	10.5	1.5	5.5	7.0	3.0	4.5	13.0	5.0	8.5	17.5	9.5	13.5
25	10.5	1.0	5.0	8.0	1.5	4.5	11.5	4.5	8.0	14.0	9.5	11.5
26	6.5	1.0	3.5	9.5	1.5	5.0	8.0	5.0	6.5	17.5	8.0	12.0
27	5.0	2.0	3.0	11.5	1.5	6.0	11.0	4.5	7.5	17.5	7.5	12.5
28	9.5	0.0	3.5	10.5	2.5	6.5	10.5	5.0	7.5	15.5	8.5	12.5
29	7.0	0.0	3.0	7.5	3.0	5.5	11.0	5.5	7.5	15.0	9.0	11.5
30	7.0	0.0	2.5	7.0	3.0	5.0	14.0	5.0	9.0	17.0	9.5	12.5
31	---	---	---	8.0	2.5	5.5	---	---	---	17.5	9.5	13.0
MONTH	11.0	0.0	4.0	11.5	0.0	5.0	14.0	1.5	6.5	19.0	5.0	11.5
	AUGUST			SEPTEMBER								
1	17.5	9.0	13.0	16.0	5.5	10.5						
2	17.0	10.5	13.5	14.5	6.0	10.0						
3	18.0	10.5	13.5	14.5	7.0	10.5						
4	19.0	8.5	13.5	14.5	7.0	10.5						
5	19.5	9.0	14.0	15.0	6.5	10.5						
6	17.0	9.5	13.5	15.0	6.5	10.5						
7	17.5	9.5	13.5	15.5	5.5	10.0						
8	17.0	9.5	13.0	16.5	7.0	11.0						
9	16.5	9.5	13.5	14.5	7.5	11.0						
10	16.5	10.0	13.0	12.5	7.5	9.5						
11	15.0	9.5	12.0	9.0	6.0	7.5						
12	14.0	8.0	10.5	8.5	5.5	6.5						
13	16.5	8.0	11.5	10.0	4.0	7.0						
14	18.0	8.0	12.5	12.5	4.5	8.0						
15	17.0	8.0	12.5	13.0	4.5	8.5						
16	15.0	8.0	11.5	11.0	5.0	7.5						
17	16.5	10.5	12.5	10.0	5.5	7.0						
18	11.5	8.5	10.0	9.5	5.5	7.0						
19	16.5	7.5	11.0	12.5	3.0	7.5						
20	18.0	7.5	12.5	13.5	4.0	8.5						
21	19.0	8.0	13.5	11.0	7.5	8.5						
22	15.0	9.5	12.0	12.5	6.0	8.5						
23	17.5	9.5	13.0	11.0	6.5	8.0						
24	15.5	9.0	12.0	8.0	6.5	7.0						
25	15.0	6.0	10.5	11.0	5.0	7.0						
26	16.0	6.0	11.0	13.0	4.5	8.0						
27	16.5	7.0	11.5	8.0	5.0	6.5						
28	17.0	7.5	12.0	12.5	4.5	7.5						
29	17.0	7.5	12.0	12.5	3.5	7.5						
30	11.5	7.5	9.5	10.0	4.0	7.0						
31	15.0	4.5	9.5	---	---	---						
MONTH	19.5	4.5	12.0	16.5	3.0	8.5						

06188000 LAMAR RIVER NEAR TOWER FALLS RANGER STATION, YELLOWSTONE NATIONAL PARK

LOCATION.--Lat 44°55'40", long 110°23'35" (NAD 27), Yellowstone National Park, Hydrologic Unit 10070001, on left bank 0.5 mi north of the Cooke City highway, 1.6 mi northeast of Tower Falls Ranger Station, 2.7 mi downstream from Slough Creek, and at river mile 0.5.

DRAINAGE AREA.--660 mi².

PERIOD OF RECORD.--September 1922, April 1923 to September 1969, May 1985 to September 1986 (seasonal records only), October 1988 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,000 ft (NGVD 29). Prior to Sept. 16, 1925, nonrecording gage and Sept. 16, 1925 to July 29, 1927, water-stage recorder at same site at elevation 1.00 ft higher. July 29, 1927 to Sept. 30, 1969, water-stage recorder at same site and elevation. May 1985 to September 1986, nonrecording gage at same site and elevation.

REMARKS.--Records good except those for estimated daily discharges, which are poor. No regulation or diversion upstream from station. U.S. Geological Survey satellite telemeter at station. Several unpublished observations of water temperature and specific conductance were made during the year.

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	475	246	e180	e150	e100	e120	127	738	3,160	1,960	358	183
2	446	252	e200	e150	e100	e110	147	780	2,960	1,900	345	175
3	423	302	e170	e160	e100	e105	178	838	2,500	1,860	396	168
4	410	285	e150	e100	e100	e105	202	987	2,400	1,530	358	166
5	396	269	e140	e110	e95	e105	188	1,340	2,520	1,410	310	163
6	382	272	e150	e120	e95	e110	173	2,000	3,760	1,330	288	160
7	371	277	e160	e120	e90	e120	248	2,240	3,480	1,260	275	156
8	372	275	e180	e130	e90	e130	381	2,050	3,150	1,190	266	152
9	352	312	e180	e130	e100	e130	346	2,390	2,960	1,120	267	149
10	344	330	e200	e120	e85	e130	287	2,620	2,740	1,080	270	160
11	344	298	e200	e100	e85	e120	244	2,250	2,730	1,480	306	171
12	330	263	e170	e90	e100	e120	271	1,870	2,960	1,040	303	180
13	323	246	e160	e110	e130	e110	339	1,570	2,870	921	313	204
14	315	241	e170	e100	e110	e100	522	1,740	2,530	855	288	200
15	319	251	e180	e90	e80	e105	401	2,590	2,970	778	256	184
16	346	281	e160	e100	e70	e110	388	4,160	3,760	708	238	170
17	335	284	e170	e120	e80	e105	551	4,650	4,090	664	234	171
18	327	233	e180	e150	e90	e100	783	3,250	4,370	606	304	194
19	322	248	e180	e150	e100	e120	628	5,250	3,870	560	662	191
20	322	e200	e180	e130	e130	e140	529	7,190	3,920	515	365	171
21	344	e180	e160	e110	e120	e130	542	8,580	4,090	488	283	161
22	333	e200	e120	e110	e100	e130	479	6,770	4,010	456	253	161
23	326	e210	e90	e100	e90	e120	680	7,070	4,470	437	255	165
24	332	e220	e110	e100	e90	e110	1,070	6,210	4,060	421	235	207
25	285	e220	e130	e100	e90	e110	1,500	4,580	3,450	410	221	304
26	303	e180	e150	e110	e95	e100	1,670	3,800	2,960	493	213	247
27	310	e160	e160	e120	e95	e115	1,360	3,720	2,640	404	204	215
28	318	e140	e170	e130	e100	e130	1,030	3,900	2,510	375	196	228
29	326	e120	e180	e120	---	e130	906	4,000	2,290	356	188	204
30	315	e140	e180	e120	---	e120	813	3,520	2,160	348	182	186
31	304	---	e170	e100	---	e110	---	3,060	---	336	187	---
TOTAL	10,750	7,135	5,080	3,650	2,710	3,600	16,983	105,713	96,340	27,291	8,819	5,546
MEAN	347	238	164	118	96.8	116	566	3,410	3,211	880	284	185
MAX	475	330	200	160	130	140	1,670	8,580	4,470	1,960	662	304
MIN	285	120	90	90	70	100	127	738	2,160	336	182	149
AC-FT	21,320	14,150	10,080	7,240	5,380	7,140	33,690	209,700	191,100	54,130	17,490	11,000

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1923 - 2005, BY WATER YEAR (WY)*

MEAN	213	157	120	106	102	114	477	2,868	4,213	1,335	350	230
MAX	485	330	202	200	171	204	1,684	6,885	9,044	3,256	886	518
(WY)	(1942)	(1928)	(1951)	(1969)	(1969)	(1999)	(1990)	(1928)	(1996)	(1943)	(1968)	(1968)
MIN	109	88.1	75.5	71.8	70.0	67.9	106	969	1,408	344	173	115
(WY)	(1989)	(1937)	(1953)	(1989)	(1942)	(1964)	(1945)	(1933)	(1934)	(1931)	(1940)	(1988)

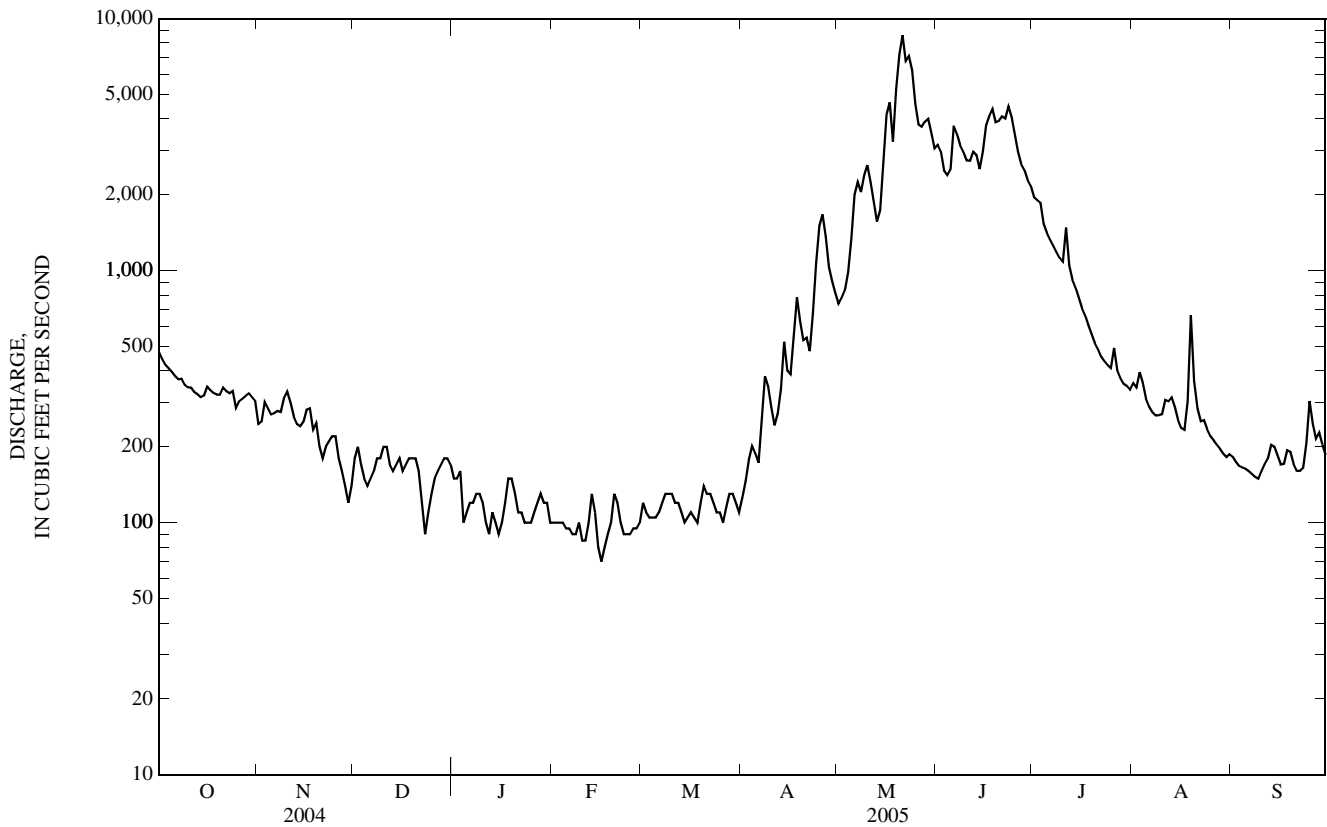
06188000 LAMAR RIVER NEAR TOWER FALLS RANGER STATION, YELLOWSTONE NATIONAL PARK—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1923 - 2005*	
ANNUAL TOTAL	280,696		293,617			
ANNUAL MEAN	767		804		863	
HIGHEST ANNUAL MEAN					1,531	1997
LOWEST ANNUAL MEAN					525	1934
HIGHEST DAILY MEAN	5,130	Jun 10	8,580	May 21	15,600	Jun 10, 1996
LOWEST DAILY MEAN	65	Jan 5	70	Feb 16	45	Mar 23, 1964
ANNUAL SEVEN-DAY MINIMUM	76	Feb 9	91	Feb 5	57	Mar 5, 1964
MAXIMUM PEAK FLOW			9,610	May 21	19,500	Jun 10, 1996
MAXIMUM PEAK STAGE			8.55	May 21	12.15	Jun 10, 1996
INSTANTANEOUS LOW FLOW					a40	Mar 16, 1945
ANNUAL RUNOFF (AC-FT)	556,800		582,400		625,300	
10 PERCENT EXCEEDS	2,240		2,790		2,900	
50 PERCENT EXCEEDS	319		248		183	
90 PERCENT EXCEEDS	85		100		90	

*--During periods of record [September 1922, April 1923 to September 1969, May 1985 to September 1986 (seasonal records only), October 1988 to current year].

a--Observed, but may have been lower during periods of no gage-height record in winter.

e--Estimated.



06190540 BOILING RIVER AT MAMMOTH, YELLOWSTONE NATIONAL PARK

LOCATION.--Lat 44°59'07", long 110°41'18" (NAD 27), Yellowstone National Park, Hydrologic Unit 10070001, on left bank 50 ft downstream from outfall, 150 ft upstream of mouth, and 0.8 mi northeast of U.S. Post Office at Mammoth.

DRAINAGE AREA.-- Indeterminate.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1988 to September 1995, October 2002 to September 2003. Published as "Hot River" at Mammoth from 1989-94.

GAGE.--Water-stage recorder. Elevation of gage is 5,666.11 ft (NGVD 29) (levels by U.S. National Park Service).

REMARKS.--Water-discharge records good. No regulation or diversion upstream from station, however, flow is added from sinkholes upstream from spring. U.S. Geological Survey satellite telemeter at 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	24	23	23	21	22	22	23	24	29	28	28	28
2	24	24	23	22	22	22	23	24	29	28	28	28
3	24	24	23	22	21	22	23	24	29	28	28	28
4	24	24	23	22	22	22	23	25	28	28	28	28
5	24	24	22	22	22	22	23	25	28	28	28	28
6	24	24	23	22	21	23	23	27	29	28	28	28
7	24	24	23	22	21	23	23	28	29	28	27	28
8	24	24	23	22	22	23	24	28	29	28	27	28
9	24	24	23	22	21	23	24	28	29	28	27	28
10	24	24	23	22	21	23	23	28	29	28	27	28
11	24	24	23	22	21	23	23	28	29	28	27	28
12	24	23	23	21	22	23	23	29	29	28	27	28
13	24	23	22	22	23	23	24	28	29	28	27	28
14	24	23	23	22	23	22	24	29	29	28	27	28
15	24	23	23	22	21	23	24	29	29	28	27	28
16	24	23	23	23	22	23	24	29	29	28	27	28
17	24	23	23	23	22	23	24	29	29	28	27	27
18	24	23	23	23	22	23	24	29	29	28	27	27
19	24	23	23	22	23	23	24	29	29	28	28	27
20	24	23	23	23	23	23	24	29	29	28	28	27
21	25	21	22	23	23	23	24	30	29	28	28	27
22	24	23	21	23	23	23	24	29	29	27	28	27
23	24	23	21	22	22	23	24	29	29	27	28	27
24	24	23	22	22	22	22	24	29	29	27	28	27
25	24	23	23	22	21	22	24	29	29	28	28	27
26	24	23	23	22	22	23	24	29	29	28	28	27
27	24	22	23	22	22	22	25	28	29	28	28	27
28	24	22	23	23	22	23	25	28	29	28	28	27
29	24	20	23	23	---	23	24	28	29	28	28	27
30	24	22	23	23	---	23	24	28	28	28	28	27
31	24	---	22	22	---	22	---	29	---	28	28	---
TOTAL	745	692	704	689	614	703	712	865	867	865	856	826
MEAN	24.0	23.1	22.7	22.2	21.9	22.7	23.7	27.9	28.9	27.9	27.6	27.5
MAX	25	24	23	23	23	23	25	30	29	28	28	28
MIN	24	20	21	21	21	22	23	24	28	27	27	27
AC-FT	1,480	1,370	1,400	1,370	1,220	1,390	1,410	1,720	1,720	1,720	1,700	1,640

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 2005, BY WATER YEAR (WY)*

MEAN	26.4	25.4	25.2	25.5	24.7	25.0	26.4	29.2	29.0	27.5	26.6	26.1
MAX	29.9	29.1	28.3	29.8	29.6	30.8	31.5	33.1	33.0	31.2	29.1	28.6
(WY)	(1989)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(1995)	(1995)	(1995)	(1995)	(1995)
MIN	21.3	21.4	21.9	21.0	20.9	21.6	23.7	25.5	26.9	25.0	23.5	21.3
(WY)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2003)	(2004)	(2003)

06190540 BOILING RIVER AT MAMMOTH, YELLOWSTONE NATIONAL PARK—Continued

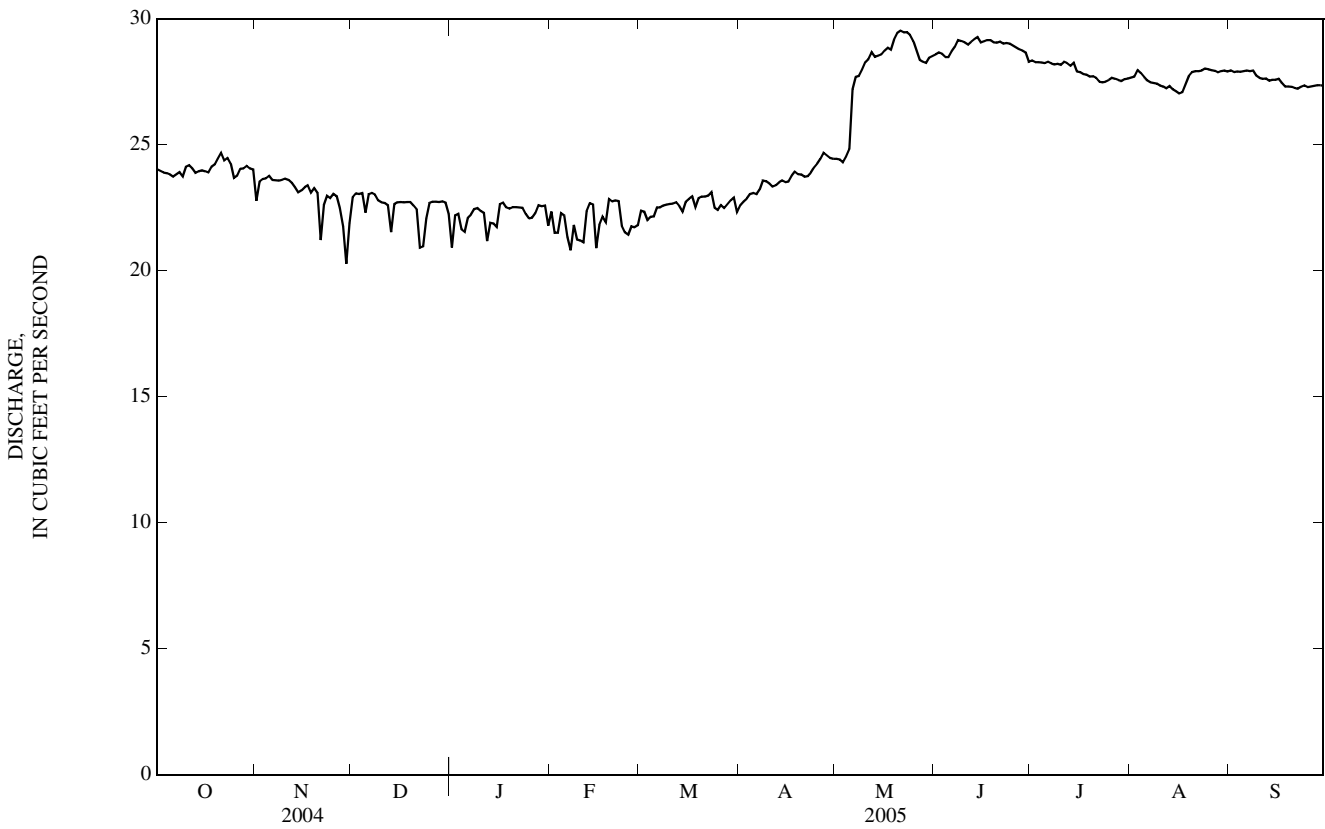
SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1989 - 2005*	
ANNUAL TOTAL	8,641		9,138			
ANNUAL MEAN	23.6		25.0		26.4	
HIGHEST ANNUAL MEAN					28.5 2003	
LOWEST ANNUAL MEAN					23.2 2004	
HIGHEST DAILY MEAN	27	May 29	30	May 21	36	May 20, 1995
LOWEST DAILY MEAN	19	Aug 15	20	Nov 29	19	Nov 23, 1993
ANNUAL SEVEN-DAY MINIMUM	20	Aug 10	21	Feb 5	20	Aug 10, 2004
MAXIMUM PEAK FLOW			30		b36 May 20, 1995	
MAXIMUM PEAK STAGE			1.36		May 14	
INSTANTANEOUS LOW FLOW			a19		May 14 1.50 May 17, 1993	
ANNUAL RUNOFF (AC-FT)	17,140		18,130		19,130	
10 PERCENT EXCEEDS	27		29		30	
50 PERCENT EXCEEDS	24		24		27	
90 PERCENT EXCEEDS	21		22		22	

*--During periods of operation (October 1988 to September 1995, October 2002 to current year).

a--Gage height, 1.07 ft.

b--Gage height, 1.45 ft.

c--Gage height, 1.06 ft.



06190540 BOILING RIVER AT MAMMOTH, YELLOWSTONE NATIONAL PARK—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1988 to September 1994, October 2002 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1988 to September 1990.

WATER TEMPERATURE: October 1988 to September 1994, October 2002 to current year.

INSTRUMENTATION.--Temperature recorder installed Sept. 25, 2002.

REMARKS.--Daily water temperature record rated good except for Jan. 20 to July 30, which is fair. Several unpublished observations of specific conductance and water temperature were made during the year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 2,410 microsiemens per centimeter ($\mu\text{S}/\text{cm}$) at 25.0°C, Jan. 29, 1990; minimum daily, 1,500 $\mu\text{S}/\text{cm}$ at 25.0°C, July, 17, 22, 23, 1990.

WATER TEMPERATURE: Maximum, 59.0°C, many days October 2003 to January 2004 and August 2004; minimum, 38.0°C, June 16, 27, 1989, Apr. 19, 1990.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 58.5°C, Feb. 25; minimum, 41.5°C, May 21.

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

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	49.0	48.5	49.0	53.0	46.5	49.5	49.5	49.0	49.5	56.5	51.5	54.5
2	49.5	48.5	49.0	48.0	47.0	47.5	49.5	49.0	49.0	51.5	51.5	51.5
3	49.5	48.5	49.0	48.0	47.0	47.5	49.0	49.0	49.0	51.5	51.5	51.5
4	49.5	48.5	49.0	48.5	47.0	47.5	49.5	49.0	49.5	54.5	51.5	53.0
5	49.5	49.0	49.0	48.0	47.0	47.5	56.5	49.5	51.0	55.0	51.0	53.5
6	49.5	49.0	49.5	48.5	47.5	48.0	49.5	49.5	49.5	53.0	51.0	52.0
7	49.5	48.5	49.0	49.0	47.0	48.0	49.5	49.5	49.5	52.0	51.0	51.5
8	49.0	48.0	48.5	49.0	47.5	48.0	50.0	49.5	49.5	51.0	51.0	51.0
9	49.5	48.5	49.0	48.5	48.0	48.5	50.0	49.5	49.5	51.0	51.0	51.0
10	49.0	47.5	48.0	48.5	48.0	48.0	49.5	49.5	49.5	53.5	51.0	51.5
11	48.5	47.5	48.0	48.5	48.0	48.0	50.0	49.5	50.0	56.0	51.0	51.5
12	48.0	47.5	48.0	48.5	48.0	48.0	55.5	50.0	50.0	56.5	51.5	54.0
13	48.5	47.5	48.0	50.0	47.5	48.5	55.5	49.0	52.5	54.5	51.0	52.5
14	48.5	47.5	48.0	51.0	47.5	49.0	50.0	49.5	50.0	55.5	51.0	52.5
15	48.5	48.0	48.5	50.0	48.0	49.0	50.0	50.0	50.0	56.5	50.0	53.0
16	48.5	48.0	48.0	49.0	48.0	48.5	50.0	50.0	50.0	56.5	50.0	50.5
17	48.5	47.5	48.0	49.0	48.5	48.5	50.0	50.0	50.0	50.5	50.0	50.5
18	48.0	47.0	47.5	51.0	48.0	49.0	50.0	50.0	50.0	51.5	50.5	51.0
19	47.5	47.0	47.0	49.5	48.5	48.5	50.5	50.0	50.0	51.5	51.0	51.5
20	47.5	46.0	47.0	54.5	48.5	49.0	51.5	49.5	50.5	51.5	51.0	51.5
21	47.0	46.0	46.5	56.5	49.5	53.5	54.0	50.0	50.5	51.5	51.5	51.5
22	47.5	46.0	46.5	51.0	49.0	50.0	56.5	51.0	54.5	51.5	51.5	51.5
23	47.0	45.5	46.5	49.5	49.0	49.5	56.0	52.5	54.5	51.5	51.5	51.5
24	48.5	46.0	46.5	49.5	49.5	49.5	52.5	50.5	51.5	56.5	51.0	52.0
25	50.5	46.0	47.5	49.5	49.5	49.5	50.5	50.0	50.0	56.5	51.0	52.5
26	48.5	46.5	47.5	55.0	49.0	49.5	50.0	50.0	50.0	57.0	51.0	52.0
27	48.0	46.5	47.0	55.5	48.5	50.5	50.5	50.0	50.0	56.5	51.0	51.5
28	47.5	47.0	47.0	56.5	49.0	52.5	50.5	50.5	50.5	51.5	51.0	51.5
29	47.0	46.5	47.0	58.0	54.5	56.0	50.5	50.5	50.5	51.5	51.0	51.5
30	47.5	47.0	47.0	54.5	49.5	52.0	51.0	50.5	50.5	51.5	51.0	51.5
31	48.5	46.5	47.0	---	---	---	55.5	50.5	51.5	56.0	51.0	53.0
MONTH	50.5	45.5	48.0	58.0	46.5	49.5	56.5	49.0	50.5	57.0	50.0	52.0

YELLOWSTONE RIVER BASIN

06190540 BOILING RIVER AT MAMMOTH, YELLOWSTONE NATIONAL PARK—Continued

TEMPERATURE, WATER, DEGREES CELSIUS—CONTINUED
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	56.5	51.0	51.5	52.5	52.5	52.5	53.5	52.0	52.5	50.5	49.5	50.0
2	57.5	51.0	54.0	53.0	52.5	52.5	52.5	52.0	52.5	50.5	49.5	50.0
3	57.5	51.0	54.0	56.5	52.0	53.5	52.5	52.0	52.0	50.5	49.5	49.5
4	52.5	51.5	52.0	56.5	52.0	53.0	52.0	52.0	52.0	50.0	48.5	49.5
5	56.0	51.5	52.0	56.0	52.0	53.0	52.5	51.5	52.0	49.0	47.5	48.5
6	57.0	51.5	54.5	53.0	52.0	52.5	52.5	51.5	52.0	47.5	43.0	44.5
7	57.5	52.0	55.5	52.5	52.0	52.5	52.5	51.0	51.5	43.5	42.5	43.0
8	55.5	51.5	53.0	53.0	52.5	52.5	51.0	50.5	50.5	44.0	42.0	43.0
9	58.0	51.5	54.5	53.0	52.5	52.5	51.0	50.5	51.0	43.0	42.0	42.5
10	57.5	51.5	54.5	53.0	52.5	52.5	51.5	50.5	51.0	42.5	42.0	42.0
11	57.5	51.5	54.5	52.5	52.5	52.5	51.5	50.5	51.0	43.5	42.0	42.5
12	55.0	51.5	51.5	52.5	52.0	52.5	51.5	51.0	51.0	43.5	42.5	43.0
13	52.0	51.5	52.0	56.0	52.0	52.5	51.5	50.5	51.0	45.0	43.0	44.0
14	55.5	51.5	52.0	56.0	52.0	53.0	51.0	50.0	50.5	45.5	43.5	44.5
15	57.5	52.0	56.0	56.0	52.0	52.5	51.0	50.5	50.5	44.5	43.5	44.0
16	56.0	51.0	53.5	52.5	52.0	52.5	51.5	50.5	51.0	44.0	42.5	43.0
17	56.0	50.5	52.5	52.5	52.0	52.5	51.0	50.5	50.5	43.0	42.0	42.5
18	56.0	51.0	53.5	55.5	52.0	53.0	50.5	50.0	50.0	44.0	42.5	43.0
19	51.5	51.0	51.0	52.5	52.5	52.5	50.5	50.0	50.5	43.5	42.5	43.0
20	52.0	51.5	51.5	52.5	52.5	52.5	51.0	50.0	50.5	43.5	42.0	42.5
21	52.0	51.5	52.0	52.5	52.0	52.5	50.5	50.5	50.5	43.5	41.5	42.5
22	52.0	51.5	51.5	52.5	52.0	52.5	51.5	50.5	51.0	44.5	42.0	43.5
23	57.0	51.0	54.0	52.5	52.0	52.0	51.5	50.5	50.5	44.0	43.0	43.5
24	57.5	51.5	54.5	54.5	52.0	53.0	51.0	50.0	50.5	43.5	42.5	43.0
25	58.5	51.5	55.0	56.5	52.0	53.5	51.0	49.5	50.0	44.0	42.5	43.0
26	57.0	51.5	54.0	55.5	52.0	53.0	50.5	49.0	50.0	44.5	42.5	43.5
27	57.0	51.5	54.0	53.0	52.5	52.5	49.0	48.5	49.0	45.0	43.0	44.0
28	57.5	51.5	54.0	52.5	52.0	52.0	49.5	49.0	49.0	45.0	43.5	44.0
29	---	---	---	52.5	52.0	52.0	50.0	49.0	49.5	45.0	43.5	44.5
30	---	---	---	52.0	51.5	52.0	50.5	49.5	50.0	45.0	43.5	44.0
31	---	---	---	55.5	51.5	53.0	---	---	---	44.5	43.5	44.0
MONTH	58.5	50.5	53.5	56.5	51.5	52.5	53.5	48.5	51.0	50.5	41.5	44.5
	JUNE			JULY			AUGUST			SEPTEMBER		
1	44.5	43.0	43.5	46.5	44.5	45.5	48.0	46.5	47.5	47.0	45.0	46.0
2	44.0	42.5	43.0	46.0	45.0	45.5	48.0	47.0	47.5	47.0	45.0	46.0
3	44.5	43.5	44.0	46.0	44.5	45.0	47.5	46.5	47.0	47.0	45.5	46.5
4	45.0	43.5	44.5	46.5	44.5	45.5	48.0	46.5	47.5	47.0	45.5	46.5
5	45.0	44.0	44.5	47.0	45.0	46.0	48.5	47.0	47.5	47.0	45.5	46.0
6	45.0	43.0	43.5	47.0	45.0	46.0	48.5	47.0	48.0	47.0	45.5	46.0
7	43.5	42.5	43.0	47.0	45.5	46.5	48.5	47.5	48.0	47.0	45.0	46.0
8	44.0	42.5	43.0	47.5	45.5	46.5	48.5	47.5	48.0	47.0	45.5	46.0
9	44.0	43.0	43.5	47.5	45.5	46.5	48.5	47.5	48.0	47.0	46.0	46.5
10	44.5	43.0	43.5	47.0	45.5	46.5	48.5	47.5	48.0	46.5	45.5	46.0
11	44.5	43.5	44.0	47.0	45.0	46.0	48.0	47.5	48.0	46.0	45.0	45.5
12	44.0	42.5	43.5	47.5	45.5	46.5	48.0	47.0	47.5	45.5	45.0	45.0
13	44.0	42.5	43.0	48.0	46.0	47.0	47.5	46.5	47.0	45.5	44.5	45.0
14	45.0	43.0	44.0	48.0	46.5	47.0	48.0	46.5	47.5	46.0	44.5	45.5
15	45.5	44.0	44.5	48.0	46.0	47.0	48.5	47.0	48.0	46.0	45.0	45.5
16	45.0	43.5	44.5	48.0	46.5	47.0	48.5	47.0	48.0	46.0	45.0	45.5
17	45.0	43.5	44.5	47.5	46.0	47.0	48.5	47.5	48.0	46.0	45.0	45.5
18	45.0	43.5	44.5	47.5	46.0	46.5	48.0	46.5	47.0	46.0	45.0	45.5
19	45.5	43.5	44.5	48.0	46.0	47.0	47.5	46.0	46.5	46.0	44.5	45.5
20	45.5	44.0	45.0	48.0	46.5	47.0	47.5	46.0	47.0	46.0	45.0	45.5
21	45.5	44.0	45.0	48.0	46.5	47.5	48.0	46.0	47.0	46.0	45.5	46.0
22	46.0	44.0	45.0	48.0	47.0	47.5	47.0	46.5	47.0	46.0	45.0	45.5
23	45.5	44.0	45.0	48.5	47.0	48.0	47.5	46.5	47.0	46.0	45.5	45.5
24	46.0	44.0	45.0	48.5	46.5	47.5	47.5	46.5	46.5	45.5	45.0	45.0
25	46.0	44.0	45.0	47.5	46.5	47.0	47.0	45.5	46.0	45.5	44.5	45.0
26	45.5	44.5	45.0	47.5	46.0	47.0	47.5	45.5	46.5	45.5	44.5	45.0
27	45.5	44.0	45.0	48.0	46.0	47.0	47.5	46.0	46.5	45.5	45.0	45.0
28	45.0	44.0	45.0	47.5	46.5	47.0	47.5	46.0	46.5	45.5	44.5	45.0
29	45.5	44.5	45.0	48.0	46.5	47.5	47.5	45.5	46.5	45.5	44.5	45.0
30	46.5	44.5	45.5	48.0	47.0	47.5	47.0	45.5	46.0	46.0	45.0	45.5
31	---	---	---	48.0	47.0	47.5	46.5	45.0	45.5	---	---	---
MONTH	46.5	42.5	44.5	48.5	44.5	46.5	48.5	45.0	47.0	47.0	44.5	45.5

06191000 GARDNER RIVER NEAR MAMMOTH, YELLOWSTONE NATIONAL PARK

LOCATION.--Lat 44°59'33", long 110°41'26" (NAD 27), Yellowstone National Park, Hydrologic Unit 10070001, on left bank at Wyoming-Montana state line, 400 ft upstream from highway bridge, 0.5 mi downstream from Boiling River (formerly Hot River), 1.5 mi north of Mammoth, and at river mile 2.9.

DRAINAGE AREA.--202 mi².

PERIOD OF RECORD.--October 1938 to September 1972, April 1984 to current year. Prior to October 1959, published as Gardiner River near Mammoth.

REVISED RECORDS.--WSP 1729: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 5,623.97 ft (NGVD 29) (levels by National Park Service).

REMARKS.--Records good. No regulation or diversion upstream from station. U.S. Geological Survey satellite telemeter at station. Several unpublished observations of water temperature and specific conductance were made during the year.

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	115	95	88	88	88	89	86	142	587	342	155	121
2	115	105	92	92	84	88	88	148	566	333	159	119
3	112	106	93	93	86	88	90	163	485	314	169	117
4	112	105	94	88	87	88	93	186	452	292	157	116
5	112	107	88	77	87	88	92	220	460	278	149	115
6	112	106	92	86	86	90	91	259	584	267	145	115
7	115	104	94	87	86	90	97	287	548	259	143	113
8	115	105	94	89	86	90	104	295	509	256	143	113
9	112	106	95	91	86	91	99	353	479	245	143	114
10	113	107	98	92	84	92	95	396	441	255	146	116
11	112	104	101	92	79	90	93	349	417	293	148	117
12	113	101	98	82	94	90	96	294	457	247	149	119
13	115	99	89	83	88	87	106	268	445	230	154	119
14	112	97	97	87	88	88	114	296	398	219	142	117
15	112	98	96	87	72	90	105	384	412	211	137	114
16	115	99	94	91	73	90	106	568	480	204	132	113
17	115	101	93	94	86	89	120	620	500	200	132	118
18	115	95	92	92	88	88	134	506	514	195	147	122
19	112	97	92	93	99	90	121	897	481	189	157	117
20	116	92	87	94	93	91	117	968	480	183	140	113
21	119	74	86	93	90	90	115	1,010	509	179	134	111
22	113	91	75	90	89	90	113	870	521	177	131	112
23	116	100	68	90	85	90	131	903	611	173	134	114
24	113	95	82	88	86	89	158	820	557	170	129	128
25	108	98	92	87	86	89	184	647	492	169	128	122
26	110	97	93	88	86	89	207	554	457	173	126	115
27	112	89	95	88	85	88	200	526	437	166	124	113
28	113	84	94	90	86	91	167	523	422	160	123	112
29	112	61	93	89	---	89	154	531	387	158	121	109
30	110	79	89	89	---	89	146	521	364	157	122	108
31	109	---	92	85	---	86	---	488	---	155	124	---
TOTAL	3,505	2,897	2,826	2,755	2,413	2,767	3,622	14,992	14,452	6,849	4,343	3,472
MEAN	113	96.6	91.2	88.9	86.2	89.3	121	484	482	221	140	116
MAX	119	107	101	94	99	92	207	1,010	611	342	169	128
MIN	108	61	68	77	72	86	86	142	364	155	121	108
AC-FT	6,950	5,750	5,610	5,460	4,790	5,490	7,180	29,740	28,670	13,580	8,610	6,890

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2005, BY WATER YEAR (WY)*

MEAN	126	112	102	96.8	92.8	93.7	141	507	703	298	161	136
MAX	175	151	135	134	128	128	304	1,067	1,354	662	236	190
(WY)	(1969)	(1998)	(1998)	(1998)	(1998)	(1998)	(1990)	(1997)	(1971)	(1943)	(1943)	(1968)
MIN	94.9	85.5	79.3	77.6	75.0	75.4	84.1	283	212	133	103	93.4
(WY)	(2002)	(1940)	(1941)	(1941)	(1940)	(1942)	(1945)	(1960)	(1987)	(1988)	(1988)	(1988)

06191000 GARDNER RIVER NEAR MAMMOTH, YELLOWSTONE NATIONAL PARK—Continued

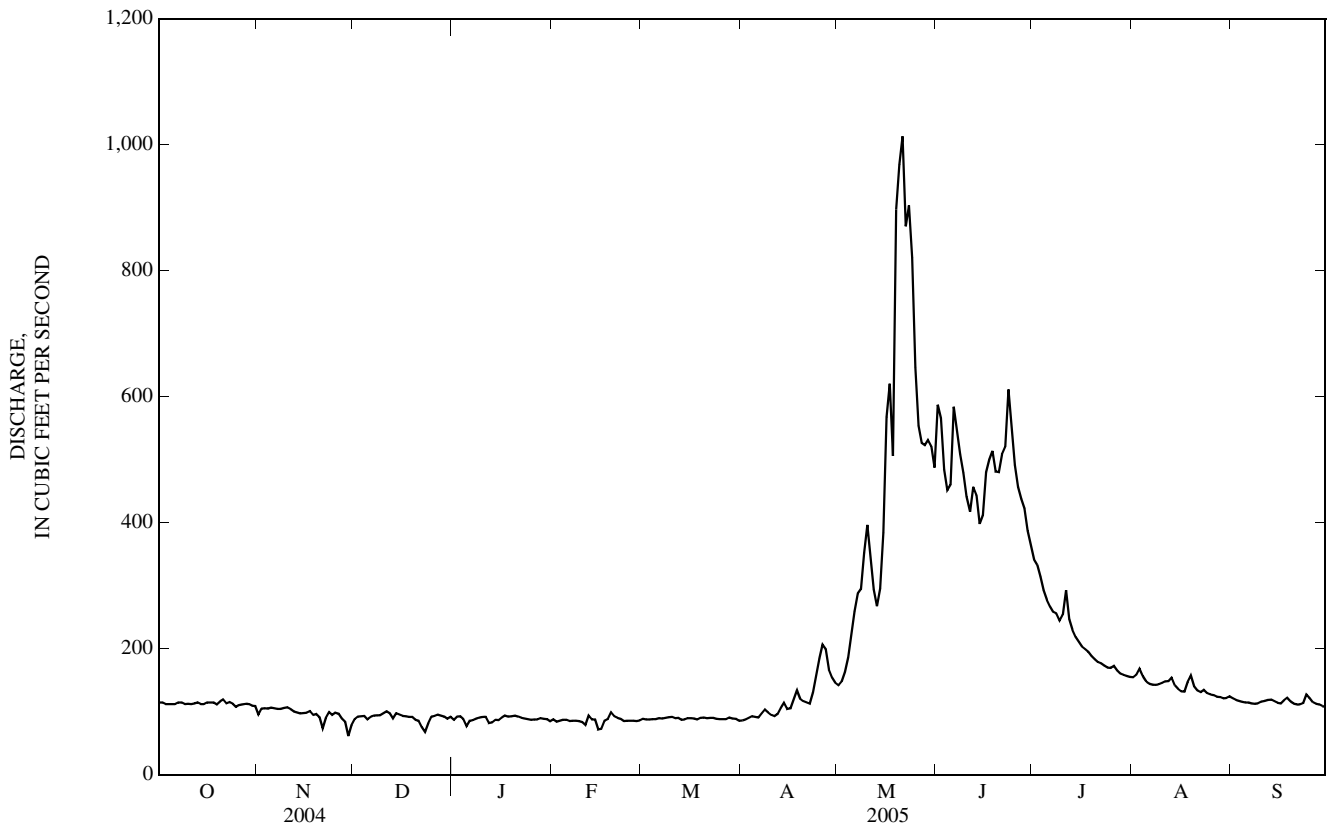
SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1939 - 2005*	
ANNUAL TOTAL	61,962		64,893			
ANNUAL MEAN	169		178		214	
HIGHEST ANNUAL MEAN					324	1997
LOWEST ANNUAL MEAN					138	1988
HIGHEST DAILY MEAN	677	Jun 10	1,010	May 21	1,830	May 29, 1956
LOWEST DAILY MEAN	61	Nov 29	61	Nov 29	53	Dec 15, 1988
ANNUAL SEVEN-DAY MINIMUM	80	Mar 2	83	Feb 10	61	Feb 1, 1989
MAXIMUM PEAK FLOW			1,130	May 20	b2,080	Jun 4, 1956
MAXIMUM PEAK STAGE			4.02	May 20	5.03	Jun 2, 1997
INSTANTANEOUS LOW FLOW			a48	Nov 29	c35	Mar 28, 1942
ANNUAL RUNOFF (AC-FT)	122,900		128,700		155,300	
10 PERCENT EXCEEDS	360		454		502	
50 PERCENT EXCEEDS	115		112		121	
90 PERCENT EXCEEDS	85		87		87	

*--During periods of operation (October 1938 to September 1972, April 1984 to current year).

a--Gage height, 1.78 ft, result of freezeup.

b--Gage height, 4.46 ft.

c--Gage height, 1.08 ft.



06191500 YELLOWSTONE RIVER AT CORWIN SPRINGS, MT

LOCATION.--Lat 45°06'43", long 110°47'37" (NAD 27), in NW¹/₄ SE¹/₄ NW¹/₄sec.30, T.8 S., R.8 E., Park County, Hydrologic Unit 10070002, on left bank 20 ft downstream from county road bridge at Corwin Springs, 1.3 mi upstream from Mol Heron Creek, 7 mi northwest of Gardiner, and at river mile 549.7.

DRAINAGE AREA.--2,619 mi².

PERIOD OF RECORD.--August 1889 to November 1893 (published as "at Horr"), September 1910 to current year. Monthly discharge only for some periods, published in WSP 1309.

REVISED RECORDS.--WSP 1309: 1912. WSP 1509: 1889-94, 1911, 1913, 1916-18, 1920-21, 1925, 1927. WSP 1559: Drainage area. WDR MT-04-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 5,079.09 ft (NGVD 29). Aug. 12, 1889, to Nov. 4, 1893, nonrecording gages at site 2 mi upstream at different elevations. Sept. 2, 1910, to Apr. 19, 1935, nonrecording gages on bridge at present elevation.

REMARKS.--Records good. Natural storage in Yellowstone Lake. Diversions for irrigation of about 960 acres of which 40 acres lies downstream from station. U.S. Geological Survey satellite telemeter at station. Several unpublished observations of water temperature and specific conductance were made during the year.

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	1,930	1,440	e1,150	e850	805	849	900	1,940	8,320	7,080	2,980	1,790
2	1,890	1,430	1,170	816	777	860	912	2,000	8,390	6,920	2,990	1,760
3	1,860	1,510	1,150	789	771	860	956	2,110	7,510	6,820	3,050	1,720
4	1,830	1,470	1,090	e800	786	858	1,000	2,330	7,290	6,280	2,940	1,690
5	1,800	1,460	1,080	e750	815	865	1,010	2,790	7,400	6,010	2,820	1,670
6	1,780	1,450	1,060	e700	787	874	973	3,850	9,350	5,820	2,730	1,640
7	1,760	1,440	1,100	e800	804	896	1,020	4,380	9,270	5,660	2,660	1,610
8	1,760	1,430	1,080	858	783	914	1,230	4,110	8,580	5,520	2,610	1,580
9	1,720	1,460	1,060	827	787	933	1,250	4,770	8,260	5,340	2,580	1,550
10	1,720	1,480	1,120	823	770	949	1,140	5,120	7,850	5,210	2,550	1,570
11	1,710	1,450	1,150	819	753	945	1,070	4,730	7,680	5,760	2,560	1,590
12	1,690	1,390	1,150	784	794	955	1,070	4,030	7,880	5,100	2,510	1,570
13	1,650	1,340	1,020	758	805	887	1,160	3,610	8,140	4,820	2,470	1,600
14	1,630	1,320	1,080	e740	818	817	1,430	3,770	7,380	4,660	2,390	1,580
15	1,630	1,290	1,100	e720	780	880	1,340	4,950	7,800	4,490	2,320	1,530
16	1,670	1,310	1,050	e750	744	902	1,280	7,410	9,170	4,330	2,250	1,480
17	1,660	1,380	1,040	790	773	914	1,440	9,220	9,790	4,230	2,210	1,480
18	1,630	1,310	1,050	808	786	860	1,840	6,780	10,600	4,050	2,320	1,540
19	1,650	1,320	1,050	820	806	910	1,730	9,500	9,680	3,940	2,780	1,490
20	1,620	1,250	1,040	822	808	929	1,550	13,500	9,780	3,810	2,440	1,430
21	1,670	1,110	960	830	811	934	1,520	15,300	10,300	3,700	2,270	1,390
22	1,640	1,130	934	814	810	926	1,460	12,900	10,300	3,600	2,190	1,380
23	1,630	1,230	e800	805	804	935	1,660	13,900	11,500	3,530	2,190	1,390
24	1,670	1,240	e820	794	802	907	2,140	12,900	10,800	3,460	2,130	1,510
25	1,570	1,260	e850	779	812	890	2,870	10,200	9,740	3,370	2,070	1,670
26	1,580	1,250	879	783	819	891	3,270	8,760	8,940	3,430	2,010	1,550
27	1,580	1,120	900	796	822	901	2,920	8,550	8,410	3,260	1,960	1,460
28	1,580	1,140	992	806	827	913	2,410	8,890	8,180	3,170	1,920	1,440
29	1,610	e950	986	810	---	939	2,180	9,360	7,740	3,090	1,880	1,400
30	1,570	e1,050	978	802	---	887	2,060	8,780	7,450	3,050	1,850	1,360
31	1,570	---	986	786	---	867	---	8,060	---	3,000	1,830	---
TOTAL	52,260	39,410	31,875	24,629	22,259	27,847	46,791	218,500	263,480	142,510	74,460	46,420
MEAN	1,686	1,314	1,028	794	795	898	1,560	7,048	8,783	4,597	2,402	1,547
MAX	1,930	1,510	1,170	858	827	955	3,270	15,300	11,500	7,080	3,050	1,790
MIN	1,570	950	800	700	744	817	900	1,940	7,290	3,000	1,830	1,360
AC-FT	103,700	78,170	63,220	48,850	44,150	55,230	92,810	433,400	522,600	282,700	147,700	92,070

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1889 - 2005, BY WATER YEAR (WY)*

MEAN	1,515	1,185	961	848	837	919	1,553	6,104	11,400	6,734	3,159	1,942
MAX	2,429	2,058	1,424	1,361	1,340	1,376	3,542	13,590	22,540	13,260	5,688	3,207
(WY)	(1973)	(1928)	(1984)	(1997)	(1997)	(1997)	(1990)	(1928)	(1997)	(1982)	(1982)	(1968)
MIN	781	702	551	448	411	412	576	2,575	4,245	2,025	1,319	938
(WY)	(1989)	(1989)	(1937)	(1937)	(1937)	(1937)	(1937)	(1975)	(1934)	(1919)	(1919)	(1988)

06191500 YELLOWSTONE RIVER AT CORWIN SPRINGS, MT—Continued

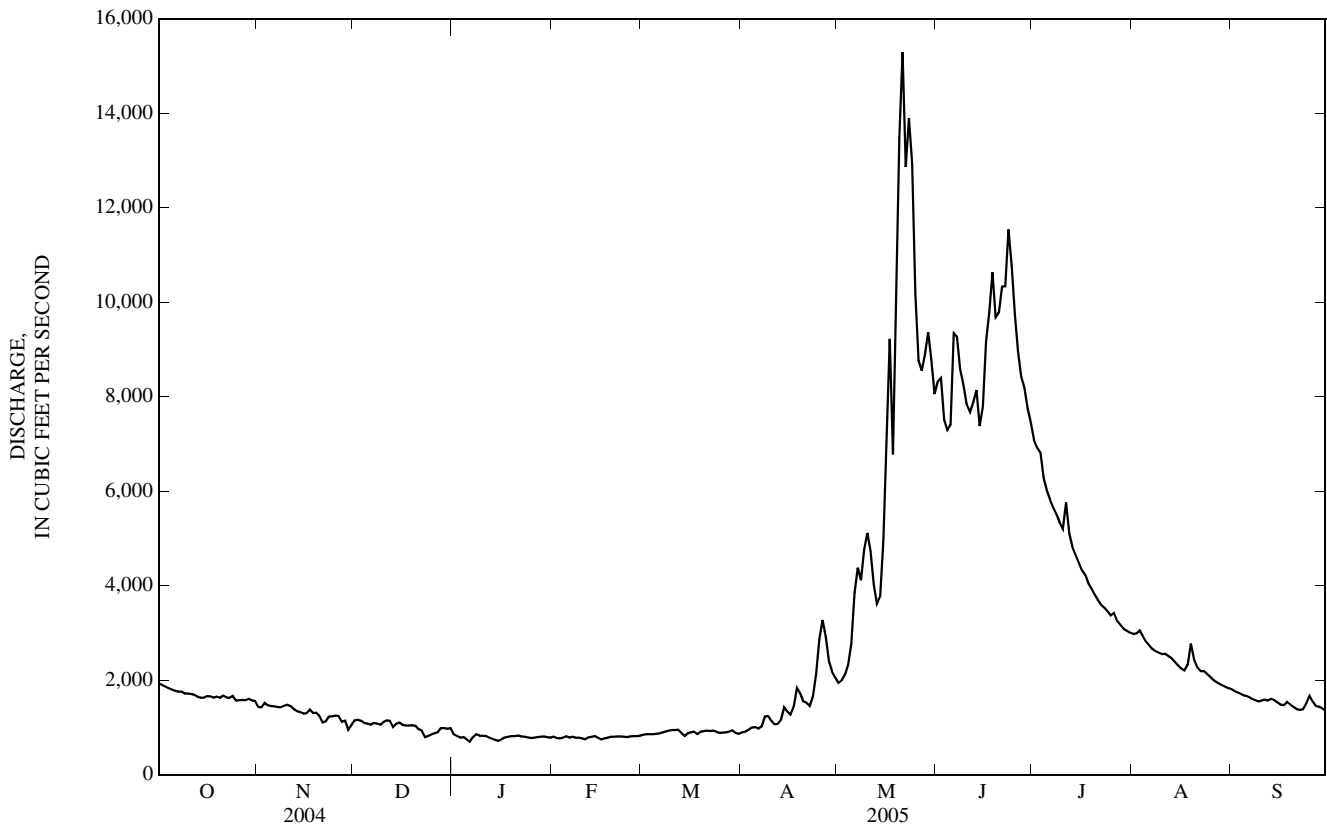
SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1889 - 2005*	
ANNUAL TOTAL	899,907		990,441			
ANNUAL MEAN	2,459		2,714		3,105	
HIGHEST ANNUAL MEAN					5,158	1997
LOWEST ANNUAL MEAN					1,903	1934
HIGHEST DAILY MEAN	11,100	Jun 10	15,300	May 21	32,000	Jun 14, 1918
LOWEST DAILY MEAN	660	Jan 5	700	Jan 6	380	Feb 5, 1989
ANNUAL SEVEN-DAY MINIMUM	719	Jan 1	764	Jan 12	393	Feb 4, 1937
MAXIMUM PEAK FLOW			16,800	May 21	a32,200	Jun 10, 1996
MAXIMUM PEAK STAGE			7.86	May 21	11.50	Jun 14, 1918
INSTANTANEOUS LOW FLOW					b343	Feb 2, 1989
ANNUAL RUNOFF (AC-FT)	1,785,000		1,965,000		2,249,000	
10 PERCENT EXCEEDS	6,000		7,820		8,460	
50 PERCENT EXCEEDS	1,760		1,530		1,400	
90 PERCENT EXCEEDS	752		805		760	

*--During periods of operation (August 1889 to November 1893, September 1910 to current year).

a--Gage height, 10.92 ft.

b--Gage height, 0.12 ft, result of freezeup.

c--Estimated.



06192500 YELLOWSTONE RIVER NEAR LIVINGSTON, MT

LOCATION.--Lat 45°35'50", long 110°33'55" (NAD 27), in NE¹/₄NW¹/₄NW¹/₄ sec. 12, T.3 S., R.9 E., Park County, Hydrologic Unit 10070002, on right bank 50 ft downstream from bridge on Montana Secondary Highway 540, 2 mi downstream from Suce Creek, 4 mi south of Livingston, and at river mile 501.4.

DRAINAGE AREA.--3,551 mi².

PERIOD OF RECORD.--May 1897 to December 1905, August 1928 to September 1932, October 1937 to current year. Monthly discharge only for some periods, published in WSP 1309.

REVISED RECORDS.--WSP 1309: 1899. WSP 1509: 1902. WSP 1629: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 4,542.49 ft (NGVD 29). May 2, 1897, to Dec. 31, 1905, nonrecording gage on highway bridge at different elevation. Aug. 23, 1928, to Sept. 30, 1932, and Mar. 14, 1938, to Feb. 3, 1951, nonrecording gage on highway bridge at present elevation.

REMARKS.--Water-discharge records good except those for estimated daily discharges, which are fair. Diversions for irrigation of about 24,200 acres of which about 2,000 acres is downstream from station. U.S. Geological Survey satellite telemeter at station. Several unpublished observations of water temperature and specific conductance were made during the year.

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	2,300	1,980	1,370	e1,350	1,080	1,120	1,130	2,400	8,950	8,480	3,120	2,080
2	2,300	1,850	1,560	1,190	1,090	1,140	1,160	2,340	9,740	8,210	3,120	2,030
3	2,280	1,940	1,550	1,140	1,060	1,150	1,200	2,370	8,680	8,030	3,190	1,990
4	2,240	1,960	1,500	1,180	1,060	1,140	1,280	2,490	8,300	7,450	3,160	1,970
5	2,210	1,920	1,520	1,100	1,080	1,140	1,340	2,820	8,360	7,080	3,000	1,940
6	2,190	1,910	1,400	e1,100	1,090	1,150	1,300	3,690	9,820	6,810	2,900	1,900
7	2,160	1,900	1,480	e1,250	1,070	1,160	1,290	4,440	11,100	6,570	2,840	1,870
8	2,150	1,880	1,520	1,310	1,070	1,190	1,440	4,490	10,000	6,410	2,790	1,830
9	2,130	1,880	1,490	1,260	1,080	1,210	1,630	4,850	9,400	6,160	2,770	1,800
10	2,160	1,940	1,450	1,260	1,070	1,240	1,550	5,220	8,870	5,980	2,740	1,800
11	2,200	1,950	1,520	1,270	1,050	1,250	1,440	5,230	8,490	6,490	2,760	1,820
12	2,160	1,880	1,550	1,150	1,060	1,240	1,380	4,590	8,570	5,960	2,760	1,830
13	2,130	1,820	1,480	e1,100	1,090	1,250	1,450	4,180	9,200	5,490	2,760	1,830
14	2,100	1,790	1,400	e1,050	1,100	1,120	1,590	4,010	8,340	5,250	2,700	1,840
15	2,090	1,750	1,480	e1,000	1,100	1,130	1,820	4,770	8,590	5,000	2,610	1,820
16	2,110	1,750	1,460	e1,100	e1,100	1,170	1,650	6,530	10,200	4,780	2,530	1,790
17	2,130	1,770	1,410	e1,300	e1,050	1,190	1,660	9,620	11,100	4,650	2,460	1,780
18	2,110	1,800	1,410	e1,350	e1,100	1,180	2,050	7,990	12,200	4,500	2,530	1,800
19	2,120	1,740	1,420	e1,400	1,140	1,140	2,280	8,160	11,400	4,350	2,830	1,800
20	2,100	1,750	1,410	1,330	1,110	1,210	2,030	14,200	11,100	4,190	2,970	1,740
21	2,110	1,610	1,390	1,290	1,100	1,220	1,920	16,200	11,900	4,030	2,630	1,700
22	2,130	1,480	1,320	1,160	1,100	1,210	1,900	14,700	12,300	3,890	2,510	1,690
23	2,100	1,620	e1,250	1,140	1,090	1,210	1,860	15,100	13,700	3,800	2,480	1,710
24	2,150	1,680	e1,100	1,110	1,080	1,210	2,280	14,700	13,100	3,730	2,450	1,790
25	2,080	1,670	e1,150	1,080	1,090	1,150	2,950	12,000	11,900	3,640	2,390	1,930
26	2,020	1,700	1,330	1,070	1,100	1,170	3,510	10,100	10,900	3,640	2,320	1,950
27	2,040	1,610	1,340	1,080	1,100	1,150	3,490	9,720	10,200	3,540	2,250	1,840
28	2,050	1,530	1,370	1,090	1,110	1,180	3,070	9,930	9,750	3,380	2,210	1,810
29	2,130	1,470	1,420	1,100	---	1,220	2,710	10,500	9,230	3,300	2,160	1,790
30	2,060	e1,300	1,380	1,100	---	1,190	2,540	10,000	8,840	3,220	2,130	1,730
31	2,040	---	1,370	1,090	---	1,170	---	9,190	---	3,160	2,110	---
TOTAL	66,280	52,830	43,800	36,500	30,420	36,600	56,900	236,530	304,230	161,170	82,180	55,200
MEAN	2,138	1,761	1,413	1,177	1,086	1,181	1,897	7,630	10,140	5,199	2,651	1,840
MAX	2,300	1,980	1,560	1,400	1,140	1,250	3,510	16,200	13,700	8,480	3,190	2,080
MIN	2,020	1,300	1,100	1,000	1,050	1,120	1,130	2,340	8,300	3,160	2,110	1,690
AC-FT	131,500	104,800	86,880	72,400	60,340	72,600	112,900	469,200	603,400	319,700	163,000	109,500

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1897 - 2005, BY WATER YEAR (WY)*

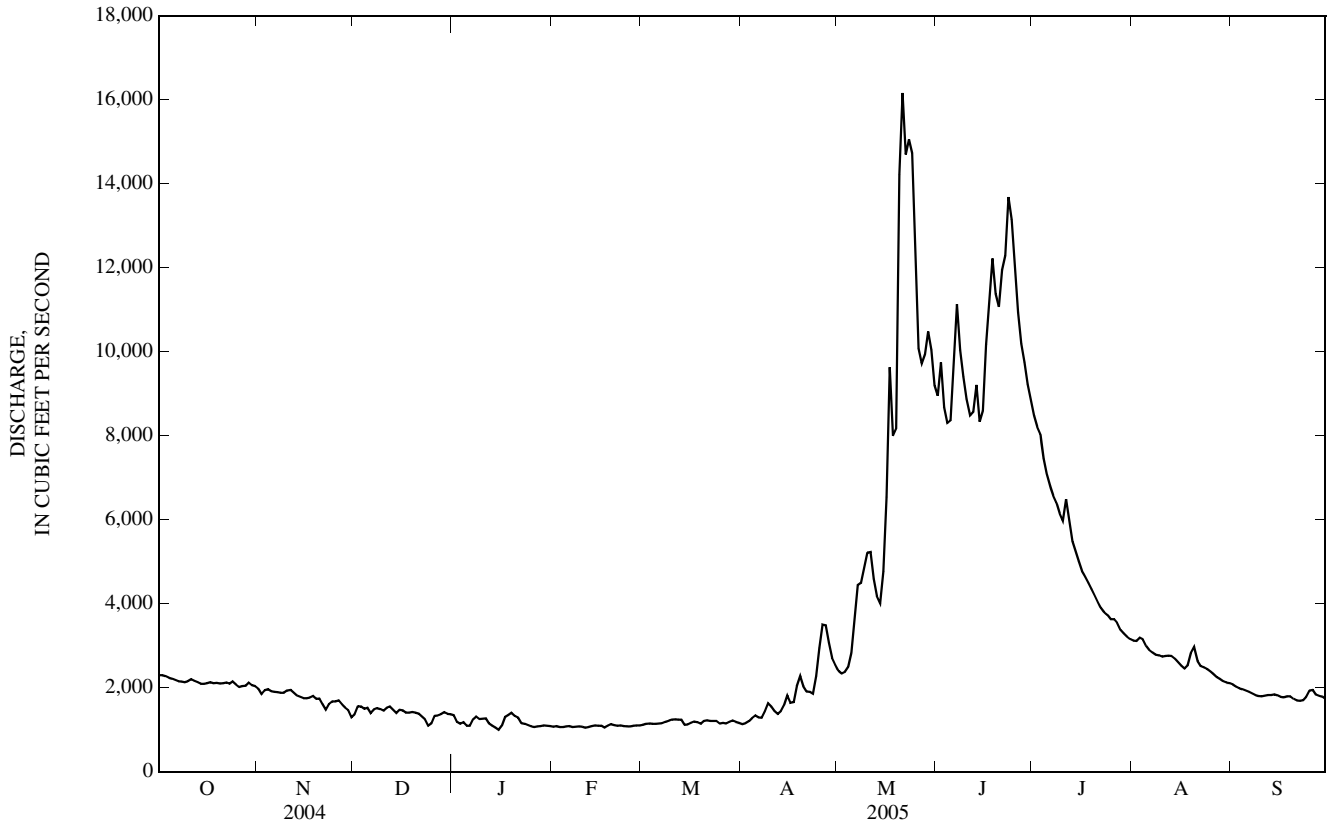
MEAN	2,013	1,678	1,383	1,220	1,214	1,294	1,968	6,996	13,290	7,626	3,608	2,399
MAX	3,115	2,599	1,984	1,757	1,800	1,901	3,852	13,070	27,140	14,990	6,000	3,806
(WY)	(1973)	(1984)	(1984)	(1984)	(1898)	(1898)	(1990)	(1897)	(1997)	(1975)	(1899)	(1968)
MIN	1,131	1,099	930	727	763	899	1,174	2,751	4,999	2,748	1,713	1,281
(WY)	(1989)	(1932)	(2002)	(1989)	(1989)	(1964)	(1961)	(1905)	(1987)	(1931)	(1988)	(2001)

YELLOWSTONE RIVER BASIN

06192500 YELLOWSTONE RIVER NEAR LIVINGSTON, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1897 - 2005*	
ANNUAL TOTAL	1,034,723		1,162,640			
ANNUAL MEAN	2,827		3,185		3,722	
HIGHEST ANNUAL MEAN					6,119	1997
LOWEST ANNUAL MEAN					2,395	2001
HIGHEST DAILY MEAN	12,200	Jun 10	16,200	May 21	36,000	Jun 6, 1997
LOWEST DAILY MEAN	900	Jan 5	1,000	Jan 15	540	Feb 4, 1989
ANNUAL SEVEN-DAY MINIMUM	986	Jan 1	1,070	Feb 6	571	Feb 1, 1989
MAXIMUM PEAK FLOW			17,900	May 21	38,000	Jun 6, 1997
MAXIMUM PEAK STAGE			8.04	May 21	10.72	Jun 6, 1997
ANNUAL RUNOFF (AC-FT)	2,052,000		2,306,000		2,697,000	
10 PERCENT EXCEEDS	6,480		8,740		9,740	
50 PERCENT EXCEEDS	2,130		1,880		1,880	
90 PERCENT EXCEEDS	1,050		1,100		1,130	

*--During periods of operation (May 1897 to December 1905, August 1928 to September 1932, and October 1937 to current year).
 e--Estimated.



06195600 SHIELDS RIVER NEAR LIVINGSTON, MT

LOCATION.--Lat 45°44'18", long 110°28'45" (NAD 27), in NE¹/₄SE¹/₄NW¹/₄ sec.22, T.1 S., R.10 E., Park County, Hydrologic Unit 10070003, on right bank 0.2 mi downstream from private road bridge, 6.5 mi northeast of Livingston, and at river mile 2.0.

DRAINAGE AREA.--852 mi².

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

GAGE.--Water-stage recorder. Elevation of gage is 4,420 ft (NGVD 29). Oct. 1, 1978, to Aug. 12, 1980, water-stage recorder at site 0.2 mi upstream at elevation 7.89 ft higher.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Diversions for irrigation of about 32,000 acres upstream from station. National Weather Service satellite telemeter at station. Several unpublished observations of water temperature and specific conductance were made during the year.

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	111	121	e80	e50	85	71	88	199	345	451	61	69
2	116	116	e85	e55	79	69	88	191	437	470	61	73
3	114	119	e90	e60	80	69	95	182	615	440	72	64
4	112	116	e95	e50	87	70	102	183	836	395	73	61
5	113	112	e90	e45	88	70	112	201	738	354	65	61
6	111	116	e90	e50	e65	74	109	247	804	324	64	58
7	109	115	e95	e50	e55	75	112	336	1,050	301	60	55
8	108	113	95	e50	e60	76	131	385	970	285	62	52
9	108	112	96	e45	e65	78	147	406	791	284	64	50
10	112	111	96	e50	e70	86	140	457	647	285	62	48
11	112	109	100	e55	e75	87	124	608	538	290	66	47
12	110	105	106	e50	e80	88	116	563	509	252	62	49
13	111	100	74	e45	83	82	116	479	682	218	67	51
14	113	97	100	e40	78	77	128	442	609	193	71	50
15	124	94	105	e35	e55	72	143	486	602	166	69	53
16	134	100	89	e50	e50	78	136	619	782	142	67	52
17	129	101	92	e70	e55	81	130	833	881	134	61	56
18	125	96	92	e90	e55	68	160	875	1,000	134	75	69
19	129	103	98	e100	e60	78	185	759	874	122	81	67
20	124	e95	89	e120	e65	80	171	926	750	110	74	64
21	119	e80	78	e140	e65	82	159	1,170	818	99	70	61
22	116	e90	e70	154	63	84	157	1,220	897	88	64	63
23	116	102	e40	134	64	e80	164	1,170	1,020	89	62	75
24	119	102	e45	113	69	e70	181	1,090	846	83	60	120
25	120	107	e50	103	68	e60	201	837	680	92	59	144
26	117	110	e60	102	71	e75	226	646	608	113	59	135
27	115	86	e55	98	68	86	241	530	649	97	61	120
28	119	e80	e55	98	67	98	234	457	587	77	59	110
29	144	e70	e60	93	---	113	213	399	491	69	55	109
30	141	e75	e70	91	---	106	204	389	488	70	58	111
31	131	---	e55	82	---	93	---	357	---	62	63	---
TOTAL	3,682	3,053	2,495	2,368	1,925	2,476	4,513	17,642	21,544	6,289	2,007	2,197
MEAN	119	102	80.5	76.4	68.8	79.9	150	569	718	203	64.7	73.2
MAX	144	121	106	154	88	113	241	1,220	1,050	470	81	144
MIN	108	70	40	35	50	60	88	182	345	62	55	47
AC-FT	7,300	6,060	4,950	4,700	3,820	4,910	8,950	34,990	42,730	12,470	3,980	4,360

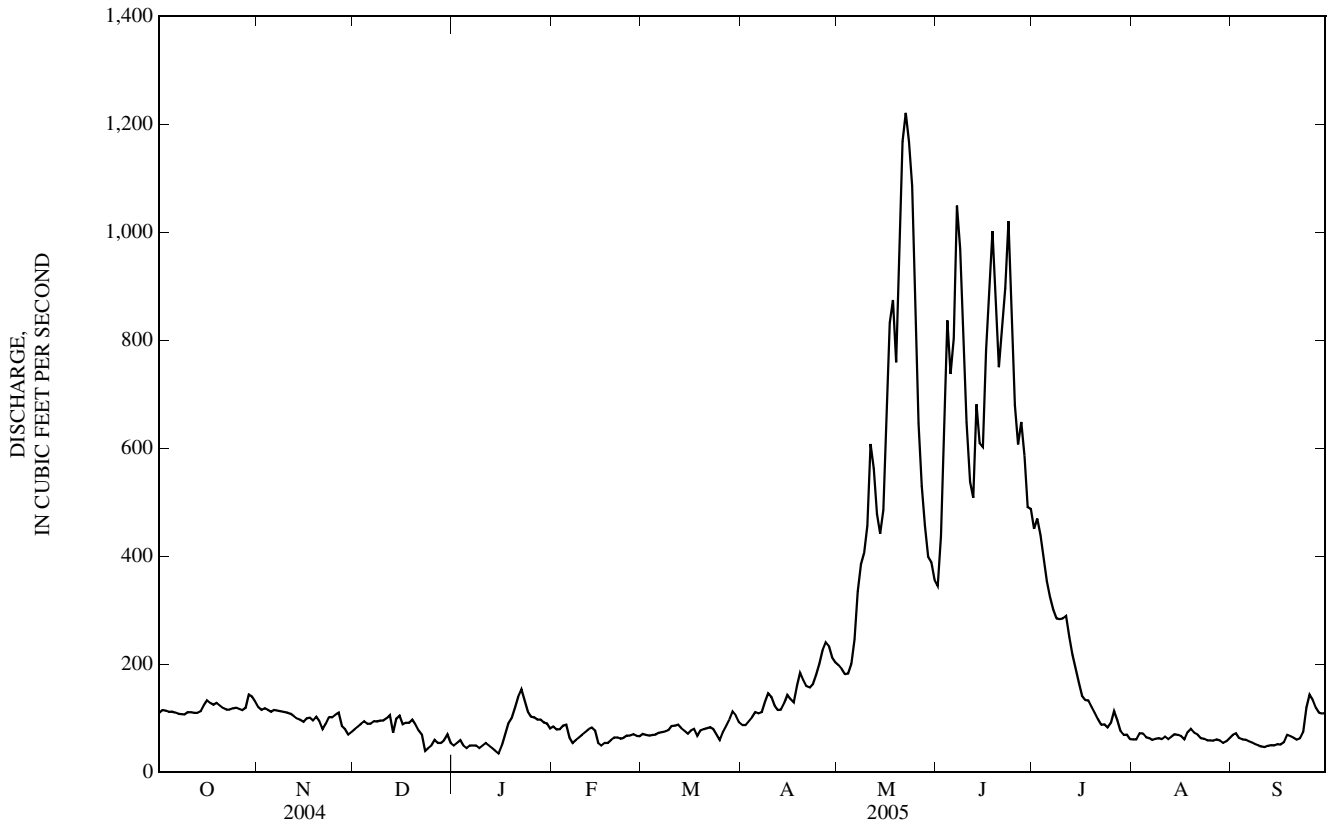
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 2005, BY WATER YEAR (WY)

MEAN	145	130	106	100	120	175	361	782	751	305	125	127
MAX	275	195	145	225	363	461	627	1,962	2,260	1,135	677	388
(WY)	(1979)	(1984)	(1990)	(1984)	(1996)	(1997)	(1996)	(1997)	(1997)	(1993)	(1993)	(1993)
MIN	51.5	73.8	73.6	55.5	59.8	76.9	145	127	152	53.6	25.6	31.2
(WY)	(1989)	(1989)	(1988)	(1988)	(1988)	(2002)	(2000)	(2004)	(1985)	(1988)	(1988)	(1988)

06195600 SHIELDS RIVER NEAR LIVINGSTON, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1979 - 2005	
ANNUAL TOTAL	51,895		70,191			
ANNUAL MEAN	142		192		269	
HIGHEST ANNUAL MEAN					610	1997
LOWEST ANNUAL MEAN					114	2000
HIGHEST DAILY MEAN	1,910	Jun 12	1,220	May 22	4,760	Jun 20, 1979
LOWEST DAILY MEAN	35	Aug 15	35	Jan 15	20	Aug 21, 1988
ANNUAL SEVEN-DAY MINIMUM	40	Aug 11	46	Jan 9	22	Aug 20, 1988
MAXIMUM PEAK FLOW			1,330	May 21	5,600	Jun 20, 1979
MAXIMUM PEAK STAGE			3.98	May 21	a6.80	Jun 20, 1979
INSTANTANEOUS LOW FLOW					b17	Aug 20, 1988
ANNUAL RUNOFF (AC-FT)	102,900		139,200		195,000	
10 PERCENT EXCEEDS	257		573		667	
50 PERCENT EXCEEDS	102		98		133	
90 PERCENT EXCEEDS	55		55		68	

a--Site and datum then in use.
 b--Gage height, 1.44 ft.
 e--Estimated.



06200000 BOULDER RIVER AT BIG TIMBER, MT

LOCATION.--Lat 45°50'03", long 109°56'17" (NAD 27), in SE¹/₄NE¹/₄SE¹/₄ sec.14, T.1 N., R.14 E., Sweet Grass County, Hydrologic Unit 10070002, on left bank 150 ft upstream from Old Boulder Bridge, 1 mi east of Big Timber, and at river mile 1.6.

DRAINAGE AREA.--523 mi².

PERIOD OF RECORD.--April 1947 to December 1953, March 1955 to current year. Monthly discharge only for April 1947, published in WSP 1309.

GAGE.--Water-stage recorder. Elevation of gage is 4,056.39 ft (NGVD 29) (levels by U.S. Army Corps of Engineers).

REMARKS.--Records good except those for estimated daily discharges, which are poor. Diversions for irrigation of about 13,300 acres, of which about 250 acres is downstream from station. Several unpublished observations of water temperature and specific conductance were made during the year. U.S. Geological Survey satellite telemeter at 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	103	190	e120	e75	117	104	100	174	1,300	1,880	157	91
2	105	167	e130	e70	115	104	100	164	1,290	1,920	168	85
3	103	190	e130	e80	112	103	102	158	1,100	1,780	183	76
4	102	189	e140	e70	115	103	109	147	1,060	1,540	189	74
5	98	176	e140	e65	116	101	117	137	1,210	1,460	162	73
6	95	178	145	e70	106	100	112	154	1,780	1,420	150	71
7	97	176	149	e80	e80	101	107	262	1,890	1,410	146	68
8	115	175	150	e80	e85	102	108	376	1,490	1,390	143	68
9	115	173	148	e75	e85	100	122	370	1,230	1,330	139	67
10	116	186	150	e80	e90	104	120	439	1,050	1,240	146	65
11	120	198	158	e90	e100	105	117	892	959	1,370	147	66
12	123	192	159	e80	e110	108	112	695	1,020	1,050	142	67
13	143	171	122	e65	119	112	111	550	1,020	860	147	65
14	139	163	150	e60	117	106	116	519	948	819	155	65
15	172	158	160	e60	e95	105	129	545	1,320	703	140	63
16	246	163	137	e80	e85	107	122	715	2,330	606	131	63
17	245	168	137	e120	e80	110	120	1,180	2,780	570	126	63
18	232	164	142	e150	e85	108	145	1,040	3,300	481	137	65
19	215	154	137	e200	e95	109	184	1,110	2,810	389	161	64
20	199	162	135	178	e100	110	167	2,070	2,660	345	157	62
21	197	140	117	164	e110	106	153	2,610	3,340	306	142	60
22	194	146	e90	149	106	106	151	2,350	3,660	275	132	60
23	190	169	e70	147	104	107	143	2,700	4,660	264	129	62
24	205	170	e65	140	105	e95	158	2,500	3,990	257	124	68
25	187	163	e80	130	110	e90	184	1,850	3,250	256	116	87
26	182	164	e100	124	108	107	206	1,490	2,850	264	110	97
27	189	143	e95	122	105	102	244	1,320	2,570	237	104	91
28	196	146	e90	121	103	100	222	1,400	2,380	211	101	87
29	272	e100	e110	119	---	107	198	1,670	2,180	197	97	85
30	223	e105	e100	117	---	106	183	1,590	1,890	176	93	81
31	208	---	e80	113	---	101	---	1,340	---	162	96	---
TOTAL	5,126	4,939	3,836	3,274	2,858	3,229	4,262	32,517	63,317	25,168	4,270	2,159
MEAN	165	165	124	106	102	104	142	1,049	2,111	812	138	72.0
MAX	272	198	160	200	119	112	244	2,700	4,660	1,920	189	97
MIN	95	100	65	60	80	90	100	137	948	162	93	60
AC-FT	10,170	9,800	7,610	6,490	5,670	6,400	8,450	64,500	125,600	49,920	8,470	4,280

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1948 - 2005, BY WATER YEAR (WY)*

MEAN	215	189	152	134	126	127	208	1,126	2,725	1,227	234	185
MAX	417	282	214	214	197	179	390	2,241	4,638	4,307	709	534
(WY)	(1973)	(1998)	(1976)	(1984)	(1985)	(1979)	(1962)	(1976)	(1997)	(1975)	(1968)	(1968)
MIN	74.9	108	71.8	54.7	55.2	92.9	66.7	429	894	193	21.9	27.7
(WY)	(2002)	(1988)	(1988)	(2001)	(2001)	(2002)	(1961)	(1953)	(1987)	(1988)	(1961)	(1988)

06200000 BOULDER RIVER AT BIG TIMBER, MT—Continued

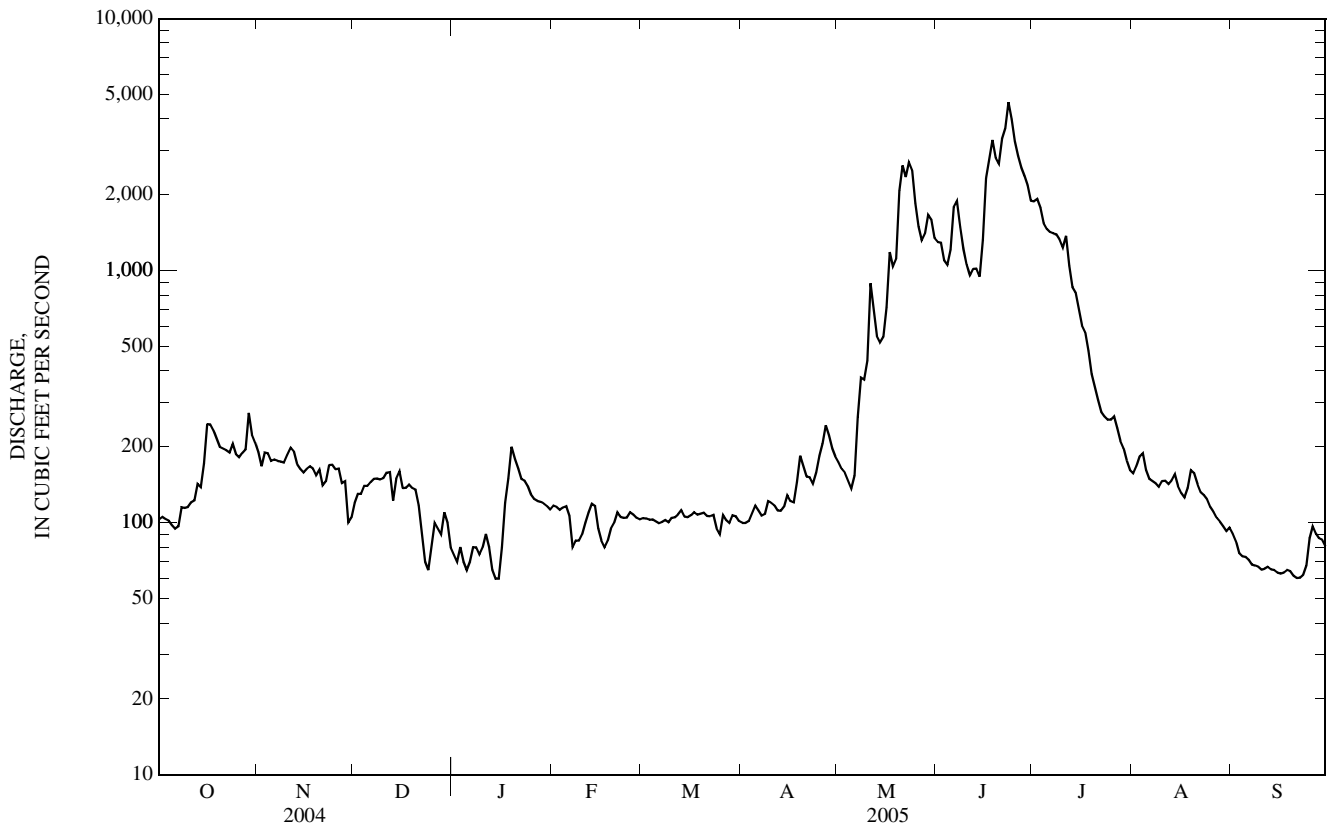
SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1948 - 2005*	
ANNUAL TOTAL	123,288		154,955			
ANNUAL MEAN	337		425		556	
HIGHEST ANNUAL MEAN					905	1975
LOWEST ANNUAL MEAN					310	2001
HIGHEST DAILY MEAN	2,900	Jun 10	4,660	Jun 23	8,540	Jul 5, 1975
LOWEST DAILY MEAN	60	Jan 5	60	Jan 14	12	Aug 26, 1961
ANNUAL SEVEN-DAY MINIMUM	65	Sep 8	62	Sep 17	13	Aug 25, 1961
MAXIMUM PEAK FLOW			5,160	Jun 23	b9,940	Jun 5, 1997
MAXIMUM PEAK STAGE			6.41	Jun 23	9.00	Jun 5, 1997
INSTANTANEOUS LOW FLOW			a52	Dec 24	10	Aug 26, 1961
ANNUAL RUNOFF (AC-FT)	244,500		307,400		403,200	
10 PERCENT EXCEEDS	996		1,380		1,710	
50 PERCENT EXCEEDS	140		140		179	
90 PERCENT EXCEEDS	80		80		100	

*--During periods of operation (April 1947 to December 1953, March 1955 to current year).

a--Gage height, 1.06 ft.

b--From rating curve extended above 6,000 ft³/s.

c--Estimated.



06204000 MYSTIC LAKE NEAR ROSCOE, MT

LOCATION.--Lat 45°13'30", long 109°45'36" (NAD 27), in sec.9, T.7 S., R.16 E., (unsurveyed), Stillwater County, Hydrologic Unit 10070005, at dam on West Rosebud Creek, 15 mi southwest of Roscoe, 25 mi southwest of Absarokee and at river mile 28.8.

DRAINAGE AREA.--46.9 mi².

PERIOD OF RECORD.--January 1936 to current year. Records prior to September 1939, published only in WSP 1309. Record of daily elevations since October 1965 are in files of the USGS Water Science Center located in Helena, Montana. Water-stage recorder. Prior to October 1965, only monthend figures furnished.

GAGE.--Elevation of gage is at sea level (levels by The Montana Power Co.).

REMARKS.--Reservoir is formed by thin-section reinforced concrete arch dam completed in 1925. Usable capacity, 21,000 acre-ft between elevation 7,612.00 ft, minimum operating level, and 7,673.50 ft, top of 3.5 ft stop logs. No dead storage. Figures given herein represent usable contents. Water is used for power development and recreation. Records furnished by PPL EnergyPlus, LLC. REVISED RECORDS, WSP 1916: Drainage area.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 21,130 acre-ft, July 10, 1983, elevation, 7,673.8 ft; no storage most days Mar. 23 to May 5, 1981, Apr. 10 to May 19, 1982, May 4,5, 1983, May 14, 1984, Mar. 23,26,27, 1986, Apr. 8-11, 1988, Apr. 18-20, 1999, Apr. 12 to May 1, 2000, and several days in April 2003.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 21,000 acre-ft, July 11, 17, 18, elevation, 7,673.50 ft; minimum observed, 152 ac-ft, Apr. 23 to May 7, elevation 7,612.54 ft.

MONTHEND ELEVATION AND CONTENTS, SEPTEMBER 2004 TO SEPTEMBER 2005

Date	Elevation (feet)	Contents (acre-feet)	Change in Contents (acre-feet)
September 30	7,666.77	18,140	--
October 31	7,655.03	13,580	-4,560
November 30	7,644.96	10,090	-3,490
December 31	7,637.33	7,610	-2,480
Calendar Year 2004	--	--	-1,250
January 31	7,628.15	4,780	-2,830
February 28	7,619.75	2,260	-2,520
March 31	7,615.26	919	-1,341
April 30	7,612.54	151	-768
May 31	7,633.85	6,520	+6,369
June 30	7,671.77	20,240	+13,720
July 31	7,672.70	20,650	+410
August 31	7,669.62	19,330	-1,320
September 30	7,662.95	16,590	-2,740
Water Year 2005	--	--	-1,550

YELLOWSTONE RIVER BASIN

06204050 WEST ROSEBUD CREEK NEAR ROSCOE, MT

LOCATION.--Lat 45°14'35", long 109°43'50" (NAD 27), in NE¹/₄ sec.10, T.7 S., R.16 E., Stillwater County, Hydrologic Unit 10070005, on left bank at Mystic Lake powerplant, 2.0 mi downstream from Mystic Lake, 13.5 mi southwest of Roscoe, and at river mile 26.8.

DRAINAGE AREA.--52.1 mi².

PERIOD OF RECORD.--September 1965 to current year.

GAGE.--Water-stage recorder and rectangular weir. Elevation of gage is 6,535.60 ft (NGVD 29).

REMARKS.--Records good. Flow regulated by Mystic Lake (station number 06204000). Several unpublished observations of water temperature and specific conductance were made during the year. U.S. Geological Survey satellite telemeter at station.

AVERAGE DISCHARGE.--40 years, 121 ft³/s, 31.54 in/yr, 87,660 acre-ft/yr, adjusted for change in contents in Mystic Lake.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,630 ft³/s, July 6, 1975, gage height, 4.71 ft; minimum daily, 2.5 ft³/s, Apr. 3, 4, 6, 7, 1967.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 916 ft³/s, July 11, gage height, 3.32 ft; minimum daily, 26 ft³/s, Apr. 9.

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	124	128	75	74	71	37	38	27	95	336	206	172
2	124	128	74	74	71	37	38	27	63	343	205	169
3	106	129	73	73	71	37	38	27	95	376	205	167
4	124	129	74	72	71	36	38	27	96	389	205	166
5	124	127	73	72	71	36	39	28	100	350	202	166
6	124	128	74	72	71	36	40	28	103	296	200	146
7	125	128	74	72	69	36	41	29	100	291	199	102
8	125	128	73	72	69	35	32	41	99	329	196	101
9	126	102	74	72	69	37	26	45	89	444	195	101
10	126	90	73	72	69	37	27	58	118	462	192	102
11	126	90	73	72	69	37	27	50	137	676	196	102
12	126	89	73	72	69	37	27	59	137	592	195	101
13	126	88	73	73	69	37	27	58	111	433	195	101
14	126	88	73	74	69	37	36	61	92	405	193	101
15	126	88	73	72	69	37	40	69	93	402	191	102
16	128	88	73	71	69	37	40	75	95	341	187	101
17	128	89	72	71	65	37	40	74	101	350	186	101
18	128	92	72	71	64	37	41	69	106	368	188	101
19	e128	93	72	71	64	37	41	74	104	334	187	100
20	e128	91	73	72	64	37	41	82	103	303	185	99
21	128	91	73	72	64	37	41	87	105	281	185	100
22	128	90	74	72	64	36	42	78	155	259	185	101
23	129	90	73	72	64	38	42	82	230	251	181	101
24	129	80	72	72	64	38	36	80	231	256	181	101
25	128	76	72	71	46	38	28	44	230	264	180	101
26	128	75	72	71	37	37	28	28	228	261	182	101
27	128	75	72	71	37	37	29	95	227	249	182	101
28	128	76	69	71	37	37	27	94	249	232	179	101
29	129	75	72	71	---	38	28	97	309	218	178	101
30	128	76	72	71	---	38	27	95	341	209	177	101
31	128	---	74	71	---	37	---	94	---	207	175	---
TOTAL	3,909	2,917	2,259	2,229	1,786	1,145	1,045	1,882	4,342	10,507	5,893	3,410
MEAN	126	97.2	72.9	71.9	63.8	36.9	34.8	60.7	145	339	190	114
MAX	129	129	75	74	71	38	42	97	341	676	206	172
MIN	106	75	69	71	37	35	26	27	63	207	175	99
AC-FT	7,750	5,790	4,480	4,420	3,540	2,270	2,070	3,730	8,610	20,840	11,690	6,760

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 2005, BY WATER YEAR (WY)

	MEAN	MAX	MIN	(WY)	MEAN	MAX	MIN	(WY)	MEAN	MAX	MIN	(WY)	MEAN	MAX	MIN	(WY)	MEAN	MAX	MIN	(WY)
1966	94.7	167	33.4	(1977)	83.4	178	31.2	(1986)	74.4	118	28.4	(1980)	67.3	148	25.7	(1980)	60.7	124	21.7	(1979)
1967	42.7	108	3.57	(1979)	54.7	124	2.7	(1979)	42.7	108	3.57	(1969)	73.3	134	16.2	(1978)	214	558	72.9	(2004)
1968	73.3	134	16.2	(1969)	214	558	72.9	(2004)	363	712	158	(1985)	363	712	158	(1985)	363	712	158	(1985)
1969	214	558	72.9	(2004)	363	712	158	(1985)	363	712	158	(1985)	195	277	103	(1988)	195	277	103	(1988)
1970	195	277	103	(1988)	195	277	103	(1988)	121	183	38.5	(1988)	121	183	38.5	(1988)	121	183	38.5	(1988)

ADJUSTED FOR CHANGE IN CONTENTS IN MYSTIC LAKE

	MEAN	CFSM	IN	AC-FT	MEAN	CFSM	IN	AC-FT	MEAN	CFSM	IN	AC-FT	MEAN	CFSM	IN	AC-FT
1966	51.9	1.00	1.15	3,190	38.7	0.74	0.83	2,300	32.7	0.63	0.72	2,010	25.7	0.49	0.57	1,580
1967	18.4	0.35	0.37	1,020	15.1	0.29	0.34	931	21.9	0.42	0.47	1,301	164	3.15	3.63	10,098
1968	164	3.15	3.63	10,098	375	7.20	8.04	22,330	346	6.64	7.65	21,250	212	4.07	4.68	13,010
1969	212	4.07	4.68	13,010	116	2.23	2.48	6,900	116	2.23	2.48	6,900	116	2.23	2.48	6,900

OBSERVED

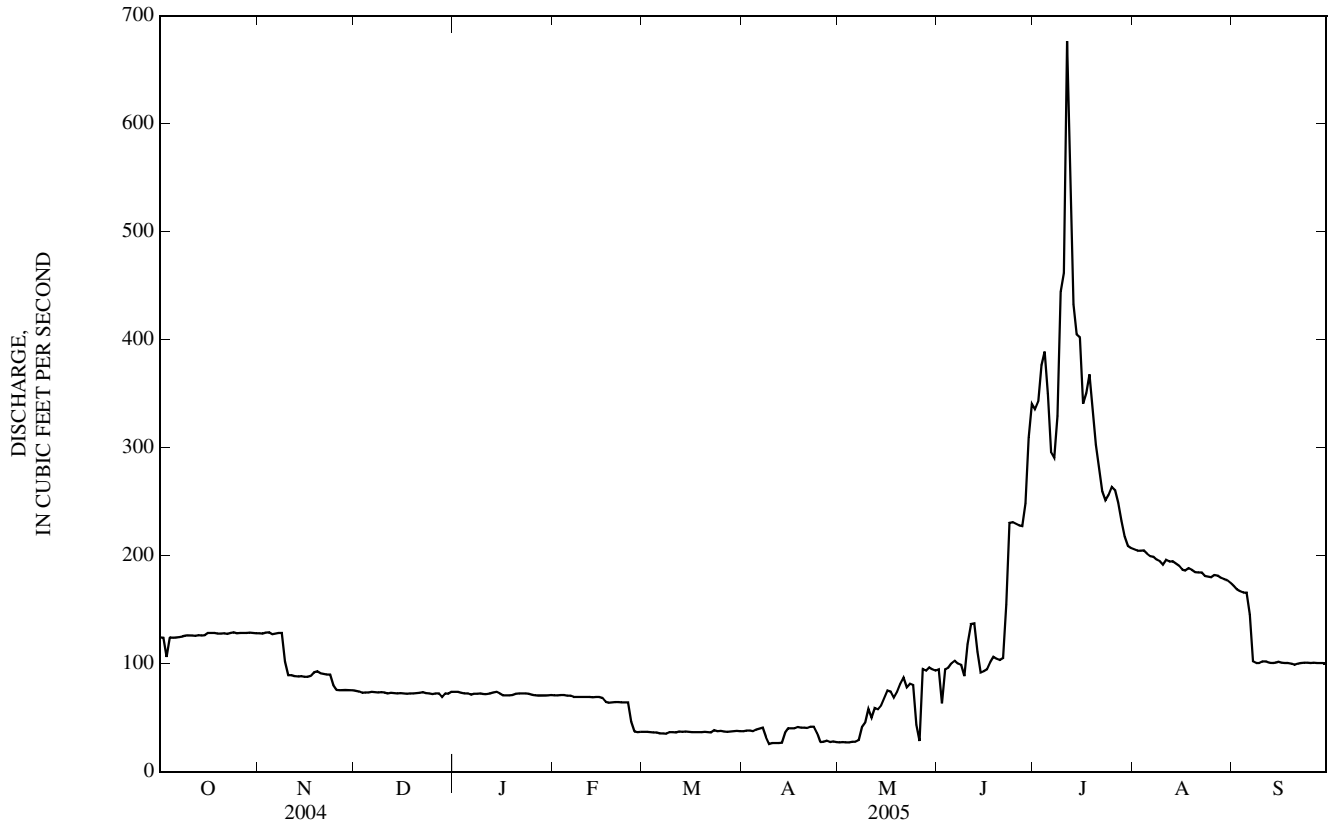
CALENDAR YEAR 2004	TOTAL	MEAN	MAX	MIN	AC-FT
2004	37,380	102	357	31	74,150
WATER YEAR 2005	41,320	113	676	26	81,970

ADJUSTED

CALENDAR YEAR 2004	TOTAL	MEAN	CFSM	IN	AC-FT
2004	39,270	107	2.05	28.03	77,890
WATER YEAR 2005	41,320	119	2.28	30.93	85,940

e--Estimated.

06204050 WEST ROSEBUD CREEK NEAR ROSCOE, MT—Continued



06205000 STILLWATER RIVER NEAR ABSAROKEE, MT

LOCATION.--Lat 45°33'04", long 109°23'12" (NAD 27), in NE¹/₄NE¹/₄NW¹/₄ sec.28, T.3 S., R.19 E., Stillwater County, Hydrologic Unit 10070005, on right bank 3 mi downstream from Rosebud Creek, 3.5 mi northeast of Absarokee, 9 mi southwest of Columbus, and at river mile 9.4.

DRAINAGE AREA.--975 mi².

PERIOD OF RECORD.--July 1910 to September 1914 (no winter records), March 1935 to September 1995, October 1995 to September 2000 (seasonal records only), October 2000 to current year.

REVISED RECORDS.--WSP 1309: 1911(M). WSP 1729: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 3,950 ft (NGVD 29). Prior to Oct. 1, 1914, nonrecording gage; Mar. 26, 1935, to July 16, 1942, nonrecording gage at bridge 0.5 mi upstream at different elevations; July 17, 1942 to Mar. 23, 2005, water-stage recorder 1.5 mi downstream at elevation 3,873.8 ft (levels by U.S. Army Corps of Engineers).

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow partly regulated by Mystic Lake (station number 06204000). Diversions for irrigation of about 24,300 acres, of which 400 acres lies downstream from station. U.S. Geological Survey satellite telemeter at station. Several unpublished observations of water temperature and specific conductance were made during the year.

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	584	463	e250	e190	258	198	205	315	1,820	2,330	794	549
2	546	435	286	e170	255	195	205	302	1,770	2,410	794	526
3	522	479	327	e180	259	194	203	299	1,540	2,470	829	503
4	498	464	358	e170	266	192	210	303	1,450	2,180	837	491
5	500	456	334	e170	261	192	217	313	1,590	1,970	779	489
6	494	449	297	e180	e250	192	214	358	2,240	1,890	725	477
7	486	434	309	e180	e240	190	210	472	2,510	1,900	708	418
8	491	432	325	e170	e240	204	218	605	2,070	1,990	706	384
9	499	429	320	e170	e240	204	246	589	1,750	2,110	730	358
10	492	392	325	e180	e250	236	227	1,220	1,540	2,190	767	349
11	498	384	344	e200	e250	225	221	4,310	1,440	2,600	812	362
12	492	375	332	e180	e260	227	212	2,360	1,510	2,500	816	371
13	497	361	263	e160	263	213	212	1,680	1,520	2,020	871	394
14	492	363	310	e150	258	202	218	1,770	1,350	1,880	825	391
15	575	357	325	e160	e250	198	226	1,790	1,600	1,830	753	387
16	578	358	290	e200	e240	204	221	1,920	2,660	1,690	712	379
17	551	355	299	e300	e230	207	221	2,340	3,600	1,650	674	389
18	537	352	294	e400	230	201	240	2,050	4,240	1,580	716	402
19	523	364	295	718	239	201	301	2,240	3,650	1,370	895	396
20	521	368	287	561	249	204	306	3,640	3,400	1,260	848	378
21	516	314	252	388	237	208	286	4,630	3,930	1,180	787	379
22	506	344	e240	312	226	e210	293	3,860	4,340	1,110	752	398
23	500	369	e190	311	222	e220	302	3,940	5,370	1,050	734	410
24	521	367	e210	305	225	e210	326	3,890	4,830	1,090	698	495
25	499	351	e240	281	231	e210	349	2,870	4,100	1,070	685	502
26	485	344	e270	270	212	214	371	2,240	3,500	1,120	663	495
27	486	e270	e290	264	196	213	398	1,950	3,010	1,000	641	472
28	486	e260	298	267	194	218	370	2,010	2,770	899	616	482
29	565	e250	292	258	---	213	343	2,340	2,650	825	586	478
30	513	e240	289	255	---	209	330	2,320	2,400	785	567	450
31	485	---	e230	245	---	204	---	1,960	---	764	570	---
TOTAL	15,938	11,179	8,971	7,945	6,731	6,408	7,901	60,886	80,150	50,713	22,890	12,954
MEAN	514	373	289	256	240	207	263	1,964	2,672	1,636	738	432
MAX	584	479	358	718	266	236	398	4,630	5,370	2,600	895	549
MIN	485	240	190	150	194	190	203	299	1,350	764	567	349
AC-FT	31,610	22,170	17,790	15,760	13,350	12,710	15,670	120,800	159,000	100,600	45,400	25,690

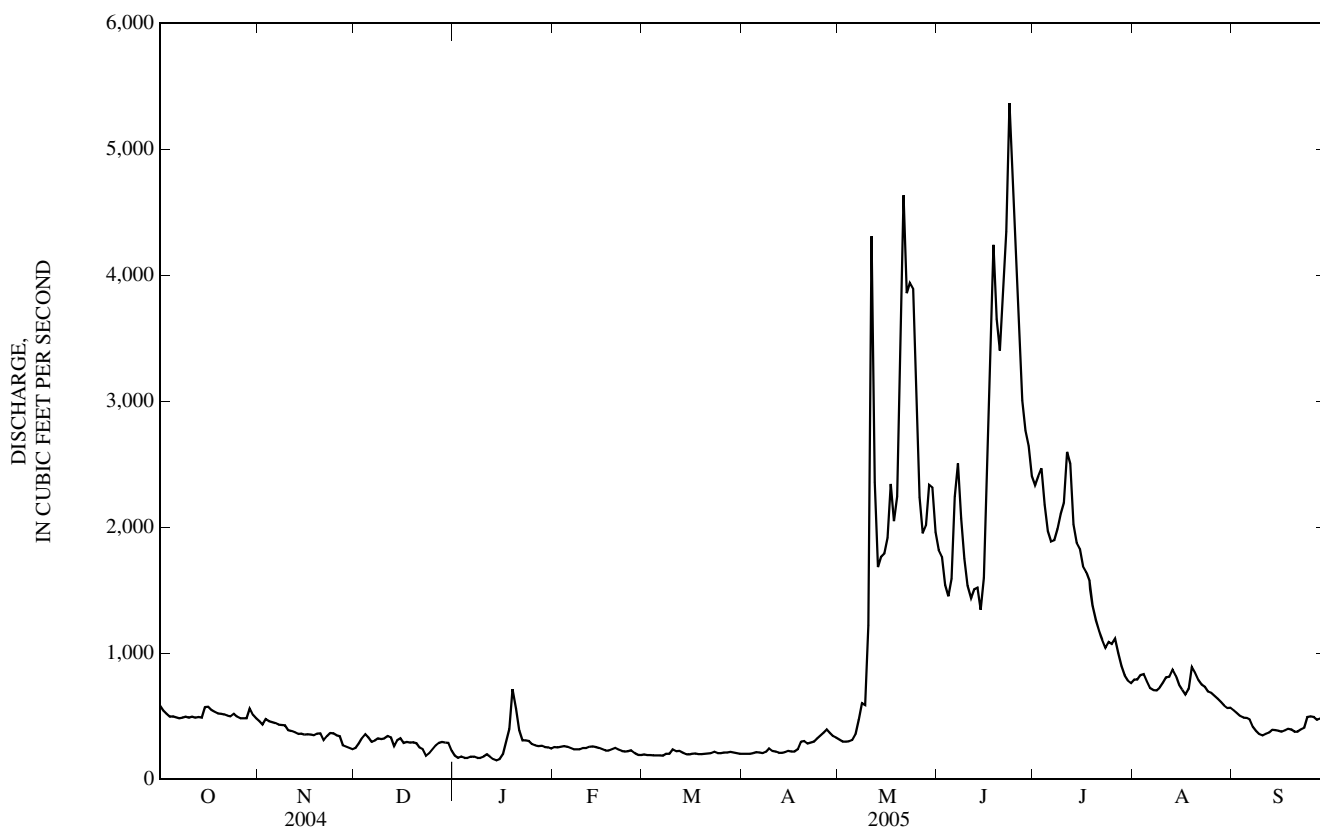
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1935 - 2005, BY WATER YEAR (WY)*

MEAN	510	400	317	276	264	284	408	1,499	3,427	2,312	865	601
MAX	852	574	430	413	449	565	1,185	2,879	5,776	6,368	1,639	1,099
(WY)	(1942)	(1984)	(1962)	(1942)	(1972)	(1979)	(1943)	(1976)	(1957)	(1975)	(1997)	(1941)
MIN	270	227	184	116	103	162	144	661	1,565	626	280	275
(WY)	(1937)	(1936)	(1937)	(1937)	(1936)	(1936)	(1961)	(1960)	(1939)	(1936)	(1988)	(1939)

06205000 STILLWATER RIVER NEAR ABSAROKEE, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1935 - 2005*	
ANNUAL TOTAL	246,011		292,666			
ANNUAL MEAN	672		802		930	
HIGHEST ANNUAL MEAN					1,468	1975
LOWEST ANNUAL MEAN					507	1936
HIGHEST DAILY MEAN	3,760	Jun 10	5,370	Jun 23	10,900	Jun 18, 1974
LOWEST DAILY MEAN	140	Jan 5	150	Jan 14	58	Apr 2, 1936
ANNUAL SEVEN-DAY MINIMUM	200	Jan 1	171	Jan 9	72	Mar 29, 1936
MAXIMUM PEAK FLOW			6,150	Jun 23	12,000	Jun 15, 1967
MAXIMUM PEAK STAGE			5.55	Jun 23	7.17	Jun 15, 1967
INSTANTANEOUS LOW FLOW					a58	Apr 2, 1936
ANNUAL RUNOFF (AC-FT)	488,000		580,500		673,500	
10 PERCENT EXCEEDS	1,740		2,180		2,500	
50 PERCENT EXCEEDS	456		389		443	
90 PERCENT EXCEEDS	250		205		230	

*--During period of operation (1911-12, 1936 to current year. Seasonal records from 1996-2000).
a--Observed.
e--Estimated.



06205450 CLARKS FORK YELLOWSTONE RIVER AT MONTANA-WYOMING STATE LINE, NEAR COOKE CITY, MT

LOCATION.--Lat 44°57'28", long 109°48'21" (NAD 27), Park County, WY, Hydrologic Unit 10070006, Shoshone National Forest, at bridge on U.S. Highway 212, 300 ft upstream from Pilot Creek, 0.9 mi downstream from Rock Creek, 1.8 mi northwest of Crazy Creek Campground, and 7.5 mi southeast of Cooke City, MT.

PERIOD OF RECORD.--August 1975 to October 1977, November 1990 to current year.

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

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dis-solved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unfltrd, uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
NOV 18...	0845	17	596	11.2	98	7.8	98	-6.0	0.0	46	14.1	2.48	.44
FEB 01...	0900	11	594	12.4	109	8.2	114	-8.0	0.0	56	17.7	2.74	.43
JUN 16...	1515	481	588	10.0	114	7.4	46	20.0	9.5	20	5.80	1.21	.26
AUG 31...	0830	31	596	8.8	93	7.8	89	-1.0	7.0	42	13.3	2.11	.35

Date	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Ammonia as N, fltrd, mg/L (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)
NOV 18...	.1	1.62	7	45	.22	<.1	5.0	5.8	57	.08	2.59	<.04	E.03
FEB 01...	.1	1.52	6	52	.39	<.2	5.2	6.3	66	.09	1.95	<.04	.10
JUN 16...	.1	1.15	11	21	E.16	<.1	4.1	3.6	--	--	--	<.04	<.06
AUG 31...	.1	1.26	6	42	<.20	<.1	3.7	4.5	--	--	--	<.04	<.06

Date	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Cobalt water, fltrd, ug/L (01035)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)
NOV 18...	<.008	<.02	4	<.20	.3	18	<.06	E4.6	.06	<.8	.045	.8	E4
FEB 01...	<.008	<.02	2	<.20	.3	18	<.06	E4.0	.17	<.8	.042	.6	E5
JUN 16...	<.008	<.02	19	<.20	.2	11	<.06	<7.0	.12	<.8	.039	10.4	14
AUG 31...	<.008	<.02	6	<.20	.2	15	<.06	E4.4	.04	.08	.039	2.2	8

Date	Lead, water, fltrd, ug/L (01049)	Lithium water, fltrd, ug/L (01130)	Manganese, water, fltrd, ug/L (01056)	Mercury water, fltrd, ug/L (71890)	Molybdenum, water, fltrd, ug/L (01060)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Strontium, water, fltrd, ug/L (01080)	Vanadium, water, fltrd, ug/L (01085)	Zinc, water, fltrd, ug/L (01090)	Uranium natural water, fltrd, ug/L (22703)
NOV 18...	<.08	<2	1.1	.01	E.2	.10	<.4	<.2	49.0	E1	.8	.11
FEB 01...	<.08	<2	.7	E.01	<.4	.45	E.3	<.2	51.4	<2	.9	.13
JUN 16...	.46	<2	1.9	.01	<.4	1.88	<.4	<.2	25.8	<2	7.2	.07
AUG 31...	E.05	<2	.9	.01	<.4	.64	<.4	<.2	39.8	<2	2.4	.08

E--Estimated.

06207500 CLARKS FORK YELLOWSTONE RIVER NEAR BELFRY, MT

LOCATION.--Lat 45°00'37", long 109°03'53" (NAD 27), in NW¹/₄ SW¹/₄ NW¹/₄ sec.32, T.9 S., R.22 E., Carbon County, Hydrologic Unit 10070006, on left bank 0.2 mi upstream from county road bridge and Big Sand Coulee, 0.8 mi north of Wyoming-Montana State line, 9.5 mi southwest of Belfry, and at river mile 71.2.

DRAINAGE AREA.--1,154 mi².

PERIOD OF RECORD.--July 1921 to current year. Monthly discharge only for some periods, published in WSP 1309. Published as Clarks Fork at Chance prior to October 1956 and as Clarks Fork Yellowstone River at Chance October 1956 to September 1968.

REVISED RECORDS.--WSP 1309: 1922 (M). WSP 1729: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 3,986.24 ft (NGVD 29) (levels by U.S. Army Corps of Engineers). Prior to Nov. 15, 1934, nonrecording gage, and Nov. 15, 1934, to July 26, 1951, water-stage recorder at bridge 0.4 mi downstream from different elevation. July 27, 1951 to Sept. 30, 1953, water-stage recorder at present site at elevation 0.98 ft higher.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Diversions for irrigation of about 11,100 acres upstream from station. U.S. Geological Survey satellite telemeter at station. Several unpublished observations of water temperature and specific conductance were made during the year.

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	432	327	e160	e220	215	206	161	441	1,970	2,440	379	143
2	412	250	e170	e210	211	203	163	421	1,930	2,540	366	132
3	373	340	e200	e220	212	203	171	424	1,680	2,560	526	125
4	351	346	e230	e210	214	200	181	461	1,510	2,280	420	119
5	333	355	e220	e220	212	196	187	499	1,530	2,000	366	117
6	313	350	e230	e230	204	197	182	705	1,860	1,880	334	114
7	292	345	e240	e220	e170	202	179	927	2,330	1,920	308	108
8	282	336	e250	e210	e170	209	258	941	2,160	1,980	285	93
9	264	337	e260	e220	e180	205	309	1,010	1,870	2,040	282	88
10	251	358	e270	e230	e180	211	242	1,290	1,610	2,030	272	87
11	247	361	e260	e220	e190	214	215	2,070	1,430	2,260	275	88
12	229	326	e240	e210	e200	212	201	1,350	1,470	2,310	276	93
13	222	287	e250	e200	219	215	220	1,060	1,590	1,930	276	102
14	215	274	e260	e190	214	183	279	1,120	1,380	1,750	274	108
15	222	275	e260	e180	198	181	301	1,380	1,600	1,670	244	106
16	239	272	e250	e190	e170	211	230	1,870	2,470	1,530	222	99
17	248	278	e260	e200	e170	195	243	2,650	3,280	1,420	213	94
18	249	300	e250	e210	e180	191	337	2,260	4,320	1,270	242	94
19	250	268	e260	e230	e190	182	371	2,660	4,270	1,040	553	95
20	246	276	e250	e260	e200	196	325	4,480	4,400	861	444	93
21	249	221	e230	263	e210	192	313	6,420	4,840	750	350	87
22	252	209	e210	237	206	193	316	5,630	5,010	670	315	86
23	243	261	e200	232	197	193	324	5,700	5,750	630	294	89
24	251	303	e210	232	196	193	455	5,650	5,900	600	278	111
25	247	293	e220	215	202	180	555	4,150	5,080	580	249	188
26	228	294	e230	207	201	190	628	3,020	4,130	675	230	165
27	240	269	e240	208	201	187	614	2,590	3,230	567	205	133
28	240	253	e250	223	202	186	547	2,580	2,990	490	190	143
29	348	e205	e240	226	---	188	495	2,870	2,800	424	173	173
30	262	e160	e230	225	---	187	463	2,650	2,540	383	156	146
31	263	---	e220	220	---	175	---	2,200	---	361	152	---
TOTAL	8,493	8,729	7,250	6,768	5,514	6,076	9,465	71,479	86,930	43,841	9,149	3,419
MEAN	274	291	234	218	197	196	316	2,306	2,898	1,414	295	114
MAX	432	361	270	263	219	215	628	6,420	5,900	2,560	553	188
MIN	215	160	160	180	170	175	161	421	1,380	361	152	86
AC-FT	16,850	17,310	14,380	13,420	10,940	12,050	18,770	141,800	172,400	86,960	18,150	6,780

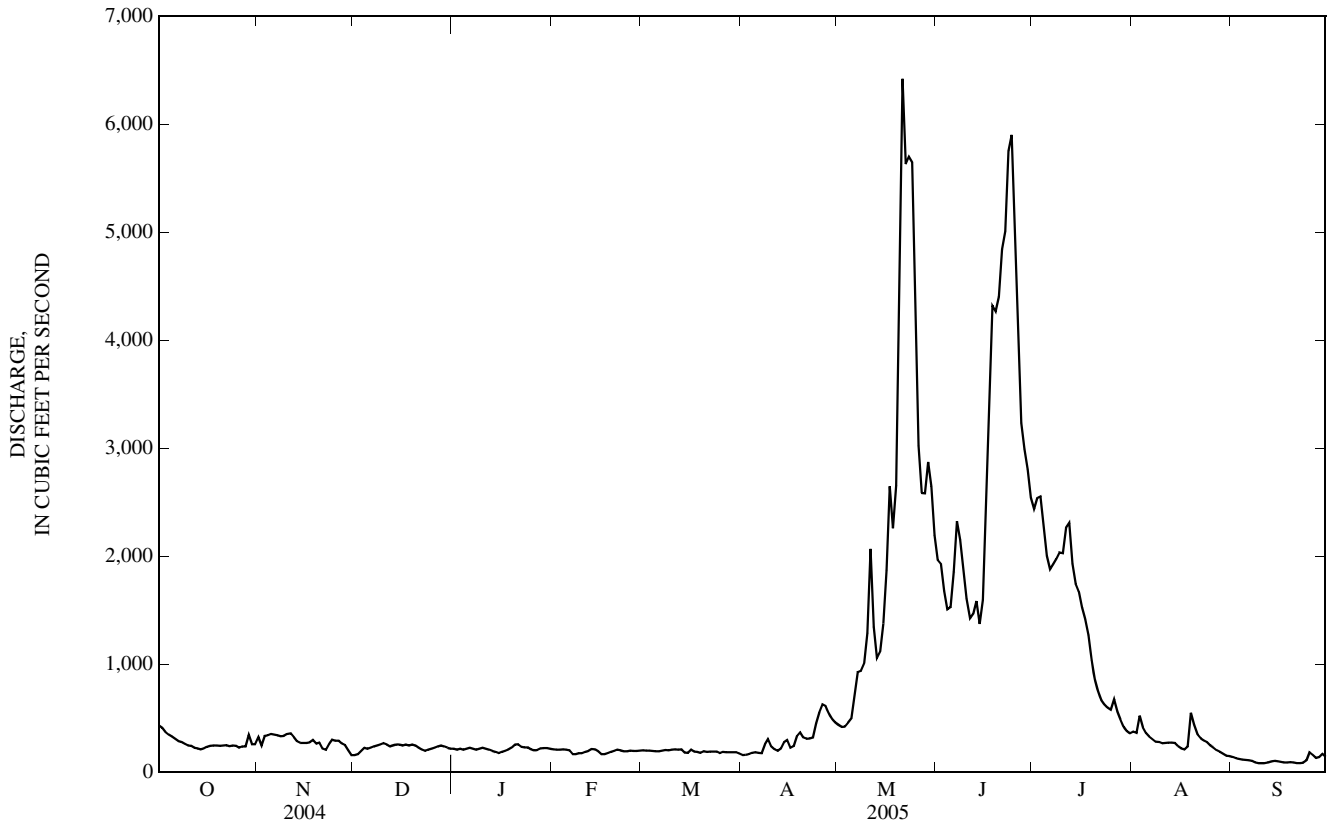
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1921 - 2005, BY WATER YEAR (WY)

MEAN	276	294	262	231	222	222	426	2,040	4,078	2,173	605	311
MAX	725	648	379	359	329	364	1,167	5,704	7,225	5,744	1,453	834
(WY)	(1931)	(1928)	(1951)	(1997)	(1963)	(1972)	(1943)	(1928)	(1997)	(1975)	(1951)	(1941)
MIN	45.5	115	110	110	100	96.3	110	839	1,607	349	66.5	50.1
(WY)	(1989)	(1989)	(1922)	(1922)	(1922)	(1922)	(1961)	(1968)	(1987)	(1988)	(1988)	(1988)

06207500 CLARKS FORK YELLOWSTONE RIVER NEAR BELFRY, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1921 - 2005	
ANNUAL TOTAL	254,798		267,113			
ANNUAL MEAN	696		732		930	
HIGHEST ANNUAL MEAN					1,485	1997
LOWEST ANNUAL MEAN					547	1977
HIGHEST DAILY MEAN	5,640	Jun 10	6,420	May 21	12,300	Jun 9, 1981
LOWEST DAILY MEAN	160	Jan 5	86	Sep 22	33	Apr 26, 1961
ANNUAL SEVEN-DAY MINIMUM	187	Jan 1	91	Sep 17	37	Oct 8, 1988
MAXIMUM PEAK FLOW			7,090	May 21	14,800	Jun 9, 1981
MAXIMUM PEAK STAGE			6.62	May 21	9.97	Jun 9, 1981
INSTANTANEOUS LOW FLOW			a84	Sep 10	b32	Apr 26, 1961
ANNUAL RUNOFF (AC-FT)	505,400		529,800		673,600	
10 PERCENT EXCEEDS	1,880		2,220		2,860	
50 PERCENT EXCEEDS	298		250		300	
90 PERCENT EXCEEDS	205		170		170	

a--Gage height, 0.38 ft.
 b--Result of discharge measurement.
 e--Estimated.



06208500 CLARKS FORK YELLOWSTONE RIVER AT EDGAR, MT

LOCATION.--Lat 45°27'58", long 108°50'35" (NAD 27), in SE¹/₄ SE¹/₄ SE¹/₄ sec.23, T.4 S., R.23 E., Carbon County, Hydrologic Unit 10070006, on right bank 400 ft downstream from county bridge, 0.5 mi east of Edgar, 6 mi upstream from Rock Creek, and at river mile 22.1.

DRAINAGE AREA.--2,022 mi².

PERIOD OF RECORD.--July 1921 to September 1969, October 1986 to current year.

REVISED RECORDS.--WSP 1509: 1924, 1932(M). WSP 1729: Drainage area. WDR MT-04-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 3,460 ft (NGVD 29). Prior to Aug. 31, 1953, nonrecording gage at same site and elevation.

REMARKS.--Records good except those for the estimated daily discharges, which are poor. Diversions for irrigation of about 41,500 acres, of which about 840 acres lie downstream from the station. In addition, about 6,300 acres of land upstream from the station are irrigated by diversions from the adjoining Rock Creek basin. U.S. Geological Survey satellite telemeter at station. Several unpublished observations of water temperature and specific conductance were made during the year. **Discharge values given herein have the diversions to White Horse Canal subtracted.**

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	704	671	e410	e340	e390	308	273	572	1,900	2,470	224	152
2	736	648	e390	e320	e400	310	261	539	1,800	2,420	221	151
3	698	578	e400	e330	e410	309	263	520	1,720	2,460	233	151
4	662	673	e420	e320	e400	307	272	526	1,460	2,300	434	148
5	637	662	e410	e330	e350	304	286	559	1,330	1,970	383	146
6	629	642	e410	e340	e320	302	287	608	1,460	1,700	314	142
7	600	634	e420	e330	e280	302	277	914	2,020	1,610	268	132
8	569	629	e420	e320	e290	321	285	1,230	2,220	1,650	254	124
9	559	627	e430	e320	e300	321	421	1,120	2,000	1,660	225	119
10	529	622	e440	e340	e320	326	415	1,340	1,740	1,730	223	117
11	520	640	e450	e350	e340	324	346	2,410	1,510	2,180	237	115
12	502	625	e420	e350	e360	325	318	2,500	1,410	2,200	256	123
13	506	589	e400	e330	e340	321	299	1,450	1,670	1,910	313	139
14	513	546	e400	e310	e320	318	318	1,270	1,510	1,580	354	148
15	609	530	e410	e300	e300	290	386	1,390	1,450	1,450	323	154
16	643	542	e400	e320	e290	286	377	1,670	2,040	1,330	273	158
17	628	541	e410	e350	e300	321	328	2,440	2,890	1,230	216	168
18	616	557	e400	e380	e310	303	368	2,550	3,770	1,120	200	174
19	614	556	e410	e410	e320	294	518	2,200	4,150	933	254	176
20	606	533	e390	e430	e330	287	541	3,870	4,120	706	559	156
21	616	509	e350	e410	332	299	513	5,260	4,320	604	490	145
22	619	448	e290	e400	316	297	532	5,700	4,560	480	394	144
23	617	441	e220	e410	312	299	e560	5,250	5,010	434	330	150
24	625	505	e230	e390	305	304	e590	5,450	5,480	382	290	194
25	628	537	e290	e380	305	295	626	4,490	5,160	371	287	312
26	616	521	e340	e380	311	280	681	3,340	4,270	405	268	492
27	613	516	e360	e380	309	286	781	2,730	3,480	489	234	460
28	628	479	e380	e390	308	285	734	2,540	3,050	345	206	424
29	906	e460	e400	e390	---	286	653	2,640	2,960	299	172	427
30	991	e430	e380	e390	---	290	599	2,650	2,620	267	155	483
31	720	---	e360	e380	---	287	---	2,270	---	231	148	---
TOTAL	19,659	16,891	11,840	11,120	9,168	9,387	13,108	71,998	83,080	38,916	8,738	6,124
MEAN	634	563	382	359	327	303	437	2,323	2,769	1,255	282	204
MAX	991	673	450	430	410	326	781	5,700	5,480	2,470	559	492
MIN	502	430	220	300	280	280	261	520	1,330	231	148	115
AC-FT	38,990	33,500	23,480	22,060	18,180	18,620	26,000	142,800	164,800	77,190	17,330	12,150

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1921 - 2005, BY WATER YEAR (WY)*

MEAN	532	502	409	351	350	364	556	2,095	4,034	2,005	603	472
MAX	1,010	777	593	512	584	554	1,398	5,578	7,256	4,771	1,541	1,395
(WY)	(1942)	(1928)	(1996)	(1997)	(1963)	(1943)	(1943)	(1928)	(1996)	(1943)	(1951)	(1941)
MIN	298	310	217	200	180	220	123	757	1,768	290	49.5	156
(WY)	(1956)	(1936)	(1937)	(1922)	(1922)	(1924)	(1961)	(1968)	(1987)	(1988)	(1988)	(1988)

06208500 CLARKS FORK YELLOWSTONE RIVER AT EDGAR, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1921 - 2005*	
ANNUAL TOTAL	282,375		300,029			
ANNUAL MEAN	772		822		1,024	
HIGHEST ANNUAL MEAN					1,623	
LOWEST ANNUAL MEAN					644	
HIGHEST DAILY MEAN	6,360	Jun 11	5,700	May 22	10,600	Jun 2, 1936
LOWEST DAILY MEAN	43	Apr 28	115	Sep 11	37	May 11, 1961
ANNUAL SEVEN-DAY MINIMUM	131	Apr 23	124	Sep 7	43	Apr 18, 1961
MAXIMUM PEAK FLOW			6,260	May 21	11,100	Jun 12, 1997
MAXIMUM PEAK STAGE			7.18	May 21	9.30	Jun 12, 1997
INSTANTANEOUS LOW FLOW					36	Apr 22, 1961
ANNUAL RUNOFF (AC-FT)	560,100		595,100		741,700	
10 PERCENT EXCEEDS	1,810		2,200		2,810	
50 PERCENT EXCEEDS	518		410		467	
90 PERCENT EXCEEDS	290		231		270	

*--During period of operation (water years 1921-69, 1987 to current year).
 e--Estimated.

