

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 observations of water temperature and specific conductance were made during the year.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	689	485	380	e350	e350	383	378	642	1,600	2,590	1,940	1,260
2	683	478	376	e350	e350	383	375	660	1,600	2,600	1,910	1,270
3	673	473	376	e350	e350	383	385	685	1,620	2,590	1,870	1,240
4	669	467	371	e340	e350	384	389	720	1,650	2,590	1,830	1,230
5	664	457	369	e340	e350	387	392	779	1,690	2,590	1,800	1,220
6	654	452	368	e340	e350	394	398	823	1,770	2,600	1,770	1,210
7	651	444	365	e340	e350	391	409	883	1,830	2,600	1,730	1,190
8	647	438	e360	e350	e350	388	419	950	1,920	2,580	1,670	1,160
9	635	435	e360	e350	e350	389	426	1,000	2,030	2,550	1,640	1,150
10	638	444	e360	e350	e350	386	434	1,040	2,180	2,530	1,600	1,120
11	640	456	e360	e350	e350	383	439	1,090	2,270	2,500	1,560	1,110
12	634	450	e360	e350	e350	387	443	1,120	2,320	2,470	1,540	1,090
13	615	444	e360	e350	e360	384	449	1,140	2,350	2,440	1,510	1,100
14	601	446	e360	e350	e360	383	462	1,170	2,360	2,430	1,470	1,100
15	594	440	e360	e350	e370	384	472	1,180	2,360	2,410	1,440	1,090
16	589	448	e350	e350	e370	386	478	1,210	2,330	2,390	1,400	1,080
17	580	448	e350	e350	e370	384	497	1,240	2,350	2,360	1,390	1,060
18	572	446	e350	e350	e380	381	518	1,260	2,350	2,330	1,380	1,050
19	565	450	e350	e350	e380	389	531	1,280	2,370	2,340	1,370	1,040
20	558	447	e350	e350	e380	374	546	1,300	2,380	2,330	1,350	1,060
21	554	435	e350	e350	384	372	555	1,350	2,370	2,310	1,330	1,040
22	550	427	e350	e350	383	371	556	1,390	2,380	2,290	1,330	1,030
23	550	424	e350	e350	381	375	561	1,430	2,410	2,280	1,360	1,040
24	534	418	e350	e350	380	374	563	1,440	2,430	2,250	1,320	1,030
25	522	420	e350	e350	380	371	569	1,460	2,460	2,210	1,330	1,030
26	518	407	e350	e350	381	377	574	1,470	2,480	2,180	1,340	1,020
27	515	403	e350	e350	382	381	586	1,500	2,510	2,140	1,350	1,010
28	515	398	e350	e350	378	380	600	1,530	2,540	2,110	1,340	1,010
29	516	394	e350	e350	379	377	618	1,570	2,570	2,070	1,310	1,000
30	489	389	e350	e350	---	379	631	1,600	2,580	2,040	1,290	1,000
31	487	---	e350	e350	---	380	---	1,600	---	1,990	1,280	---
TOTAL	18,301	13,163	11,085	10,810	10,598	11,840	14,653	36,512	66,060	73,690	46,750	33,040
MEAN	590	439	358	349	365	382	488	1,178	2,202	2,377	1,508	1,101
MAX	689	485	380	350	384	394	631	1,600	2,580	2,600	1,940	1,270
MIN	487	389	350	340	350	371	375	642	1,600	1,990	1,280	1,000
AC-FT	36,300	26,110	21,990	21,440	21,020	23,480	29,060	72,420	131,000	146,200	92,730	65,530
CFSM	0.60	0.44	0.36	0.35	0.37	0.39	0.49	1.19	2.22	2.40	1.52	1.11
IN.	0.69	0.49	0.42	0.41	0.40	0.44	0.55	1.37	2.48	2.77	1.75	1.24

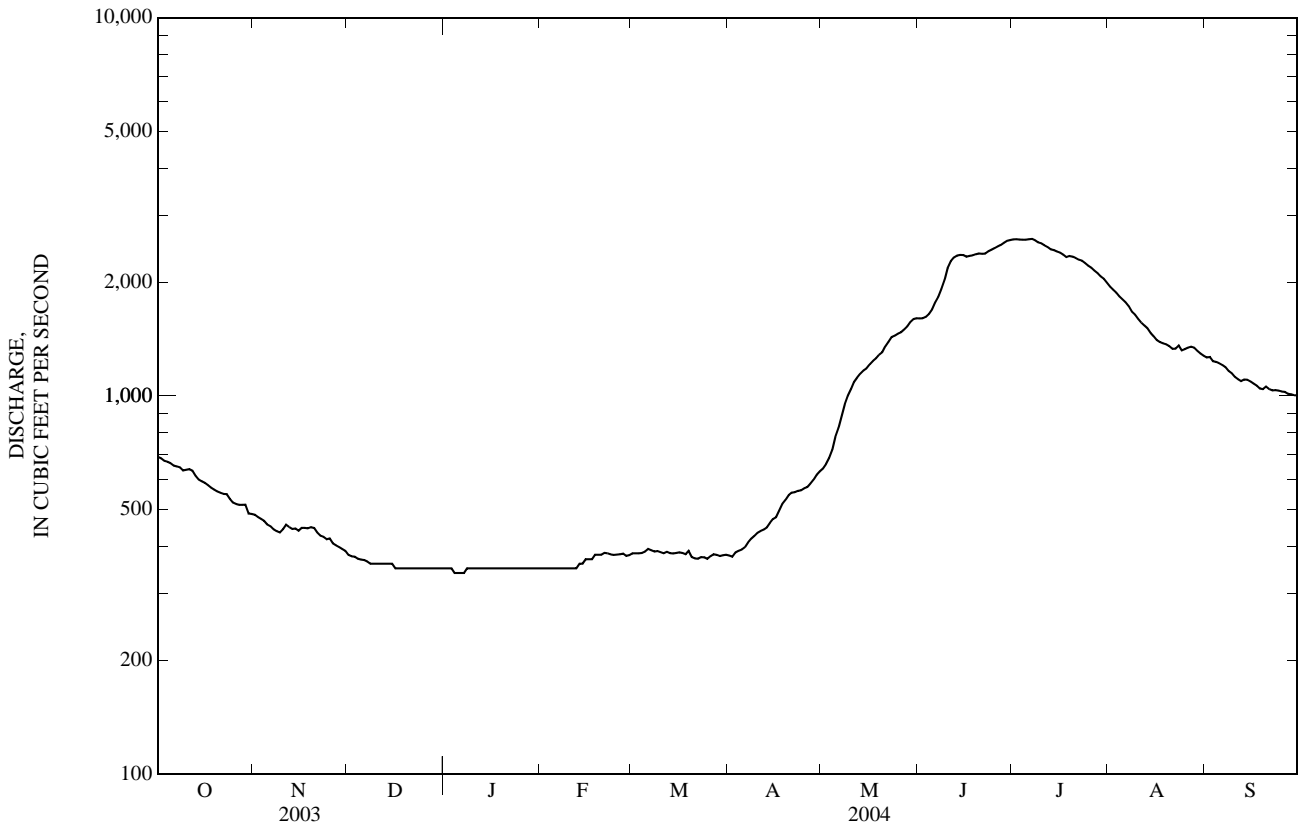
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1927 - 2004, BY WATER YEAR (WY)*

MEAN	796	602	473	397	387	445	541	1,161	3,686	4,012	2,196	1,205
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 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1927 - 2004*	
ANNUAL TOTAL	435,342		346,502			
ANNUAL MEAN	1,193		947		1,330	
HIGHEST ANNUAL MEAN					2,253	1997
LOWEST ANNUAL MEAN					682	1934
HIGHEST DAILY MEAN	4,900	Jun 21	2,600	Jul 2	9,930	Jun 19, 1997
LOWEST DAILY MEAN	350	Dec 16	340	Jan 4	100	Feb 18, 1993
ANNUAL SEVEN-DAY MINIMUM	350	Dec 16	344	Jan 1	113	Feb 11, 1989
MAXIMUM PEAK FLOW			2,670	Jul 7	9,950	Jun 18, 1997
MAXIMUM PEAK STAGE			5.10	Jul 7	8.90	Jun 18, 1997
ANNUAL RUNOFF (AC-FT)	863,500		687,300		963,600	
ANNUAL RUNOFF (CFSM)	1.20		0.955		1.34	
ANNUAL RUNOFF (INCHES)	16.34		13.01		18.24	
10 PERCENT EXCEEDS	3,710		2,330		3,460	
50 PERCENT EXCEEDS	522		554		676	
90 PERCENT EXCEEDS	370		350		340	

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



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

LOCATION.--Lat 45°00'11", long 110°00'04" (NAD 27), in SW $\frac{1}{4}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$ 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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.0	e6.5	4.0	3.6	e2.0	e1.0	10	39	96	288	46	24
2	6.9	e6.0	3.9	3.4	e1.5	e0.90	8.7	56	114	266	48	24
3	6.7	e6.5	3.9	e3.0	e1.5	e0.90	8.5	72	153	246	44	25
4	6.5	e7.0	3.6	e2.5	e1.5	1.1	9.7	95	227	247	40	23
5	6.4	e6.5	e3.5	e1.5	e2.0	1.1	11	131	303	241	38	22
6	6.4	e5.5	4.0	e2.0	e2.0	1.3	14	155	391	212	36	20
7	6.4	e5.5	3.8	e3.0	e2.0	1.5	16	171	427	222	33	19
8	6.4	e6.0	3.6	e3.5	2.0	1.3	18	162	414	207	31	18
9	6.3	e6.5	3.5	e3.0	e1.5	1.3	18	134	496	183	30	17
10	9.2	e7.0	3.9	e2.5	e1.5	1.5	15	123	458	185	29	17
11	7.6	e7.5	3.7	e2.5	e1.2	1.2	15	121	365	176	27	17
12	7.3	e7.0	3.6	e2.0	e1.0	1.3	17	99	284	159	26	16
13	7.1	e6.5	3.7	e2.0	e1.2	1.2	24	85	239	149	24	26
14	6.7	e6.0	3.5	e2.0	e1.2	1.3	28	77	219	148	23	31
15	6.7	6.3	3.4	e2.0	e2.0	1.2	24	71	219	134	23	24
16	6.8	5.8	3.6	e2.0	e2.0	1.2	21	70	202	125	22	37
17	7.9	5.5	3.5	e2.0	2.6	1.2	21	68	175	117	24	39
18	7.5	5.2	e3.0	e2.0	2.4	1.2	20	82	161	112	24	36
19	7.0	5.0	e3.0	e2.5	2.1	1.5	19	86	159	127	24	34
20	6.7	5.0	e3.5	e2.0	e1.5	1.6	19	77	166	104	22	42
21	6.6	4.5	e4.0	e2.0	e1.0	1.9	18	83	180	95	21	33
22	6.4	e4.0	e3.5	e2.0	e1.0	2.5	17	89	216	92	27	30
23	6.3	e3.5	e3.0	e2.5	e1.1	3.7	18	87	275	80	46	31
24	5.5	e4.0	e3.5	e2.5	e1.2	5.1	19	77	323	73	28	37
25	4.9	e4.0	e4.0	e2.5	e1.3	5.0	18	72	324	69	61	33
26	4.9	e4.0	e4.0	e2.0	e1.3	4.0	21	70	317	66	50	33
27	5.1	e4.0	3.7	e2.5	1.4	3.5	33	81	321	65	40	34
28	8.2	4.4	3.5	2.7	1.3	3.2	39	134	320	62	32	32
29	29	4.4	3.6	2.7	1.2	3.3	29	122	304	56	29	31
30	8.0	4.2	3.7	2.5	---	4.8	30	101	300	52	27	31
31	7.2	---	3.8	e2.0	---	7.8	---	92	---	49	26	---
TOTAL	231.6	163.8	112.5	74.9	45.5	69.60	578.9	2,982	8,148	4,407	1,001	836
MEAN	7.47	5.46	3.63	2.42	1.57	2.25	19.3	96.2	272	142	32.3	27.9
MAX	29	7.5	4.0	3.6	2.6	7.8	39	171	496	288	61	42
MIN	4.9	3.5	3.0	1.5	1.0	0.90	8.5	39	96	49	21	16
AC-FT	459	325	223	149	90	138	1,150	5,910	16,160	8,740	1,990	1,660
CFSM	0.24	0.17	0.12	0.08	0.05	0.07	0.62	3.08	8.71	4.56	1.03	0.89
IN.	0.28	0.20	0.13	0.09	0.05	0.08	0.69	3.56	9.71	5.25	1.19	1.00

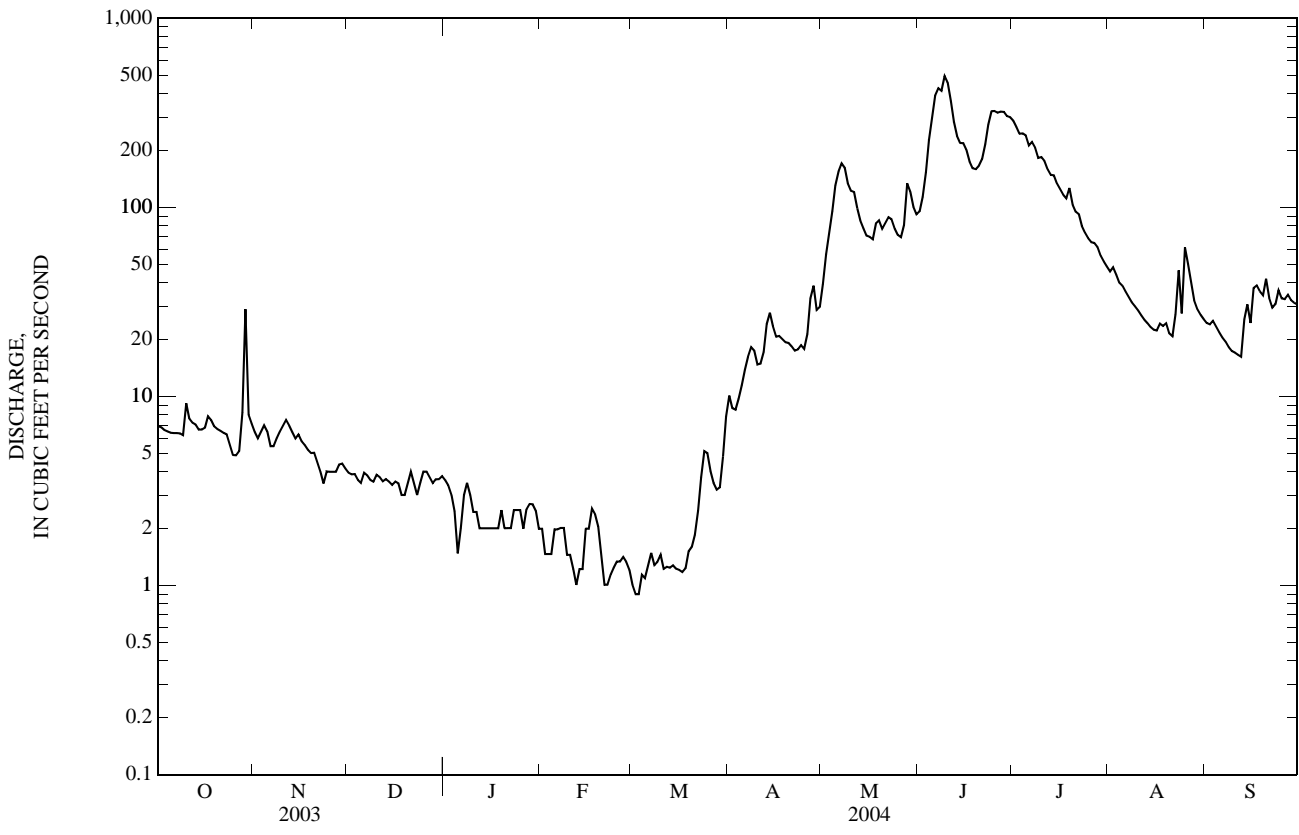
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 2004, BY WATER YEAR (WY)

MEAN	8.69	5.41	3.55	2.45	1.90	1.70	10.1	133	318	132	28.2	15.9
MAX	11.9	6.84	4.70	3.36	2.31	2.25	19.3	167	408	212	45.0	27.9
(WY)	(1999)	(1999)	(2002)	(2002)	(2002)	(2004)	(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 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1999 - 2004	
ANNUAL TOTAL	23,874.00		18,650.80			
ANNUAL MEAN	65.4		51.0		55.1	
HIGHEST ANNUAL MEAN					65.4	2003
LOWEST ANNUAL MEAN					38.5	2001
HIGHEST DAILY MEAN	730	May 31	496	Jun 9	735	Jun 1, 2002
LOWEST DAILY MEAN	0.80	Feb 23	0.90	Mar 2	0.80	Feb 23, 2003
ANNUAL SEVEN-DAY MINIMUM	0.99	Mar 23	1.1	Feb 28	0.99	Mar 23, 2003
MAXIMUM PEAK FLOW			613	Jun 9	912	Jun 1, 2002
MAXIMUM PEAK STAGE			2.82	Jun 9	3.49	Jun 1, 2002
INSTANTANEOUS LOW FLOW			a0.86	Feb 29		
ANNUAL RUNOFF (AC-FT)	47,350		36,990		39,950	
ANNUAL RUNOFF (CFSM)	2.10		1.63		1.77	
ANNUAL RUNOFF (INCHES)	28.47		22.24		24.02	
10 PERCENT EXCEEDS	264		168		202	
50 PERCENT EXCEEDS	7.0		8.9		7.8	
90 PERCENT EXCEEDS	1.5		1.5		1.8	

a--Gage height, 0.68 ft. Instantaneous low flow occurred during possible ice effect and may have been less.
 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 rated good.

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. 14; minimum, 0.0°C, many days October through May.

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

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	8.5	2.0	5.5	0.0	0.0	0.0	0.5	0.0	0.5	0.0	0.0	0.0
2	9.0	3.5	6.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0
3	8.5	2.5	5.0	0.0	0.0	0.0	0.5	0.5	0.5	0.0	0.0	0.0
4	8.5	2.5	5.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0
5	8.5	2.5	5.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	8.5	3.0	5.5	0.0	0.0	0.0	0.5	0.0	0.5	0.0	0.0	0.0
7	7.5	3.5	5.5	0.0	0.0	0.0	0.5	0.0	0.5	0.0	0.0	0.0
8	8.0	5.5	6.5	0.0	0.0	0.0	0.5	0.0	0.5	0.0	0.0	0.0
9	8.5	4.0	6.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	7.0	3.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	4.5	1.5	3.0	0.0	0.0	0.0	0.5	0.0	0.0	0.5	0.0	0.0
12	5.0	3.0	4.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0
13	4.5	2.5	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	4.5	1.5	3.0	0.5	0.0	0.5	0.5	0.0	0.0	0.0	0.0	0.0
15	4.5	2.0	3.0	0.5	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0
16	5.5	1.5	3.0	1.0	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0
17	6.5	3.5	5.0	1.0	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0
18	6.5	2.0	4.5	0.5	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0
19	6.5	2.0	4.0	1.0	0.5	1.0	0.0	0.0	0.0	0.0	0.0	0.0
20	6.5	2.5	4.5	1.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0
21	7.0	3.5	5.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	6.5	2.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	5.5	2.0	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	3.0	0.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	2.5	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	4.5	1.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	3.5	2.0	3.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	4.0	3.0	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	3.5	0.0	2.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	0.5	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0
31	0.0	0.0	0.0	---	---	---	0.0	0.0	0.0	0.0	0.0	0.0
MONTH	9.0	0.0	3.8	1.0	0.0	0.1	0.5	0.0	0.1	0.5	0.0	0.0

YELLOWSTONE RIVER BASIN

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

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	0.0	0.0	0.0	0.0	0.0	0.0	5.5	1.0	2.5	9.5	1.0	4.0
2	0.0	0.0	0.0	0.5	0.0	0.0	4.5	1.0	2.0	9.5	0.5	4.0
3	0.0	0.0	0.0	0.5	0.0	0.0	6.5	0.0	2.5	7.0	1.5	3.5
4	0.0	0.0	0.0	0.5	0.0	0.0	4.0	1.0	2.5	8.0	1.0	3.5
5	0.0	0.0	0.0	0.0	0.0	0.0	6.0	0.5	2.5	8.5	1.5	4.0
6	0.0	0.0	0.0	0.0	0.0	0.0	4.5	0.5	2.5	7.5	1.5	4.0
7	0.0	0.0	0.0	0.0	0.0	0.0	7.0	1.5	3.0	7.5	1.5	3.5
8	0.0	0.0	0.0	0.5	0.0	0.0	6.0	1.0	3.0	5.5	1.5	3.0
9	0.0	0.0	0.0	0.5	0.0	0.5	3.5	1.0	2.0	5.0	2.0	3.0
10	0.0	0.0	0.0	1.0	0.0	0.5	6.0	0.0	2.0	7.0	1.5	4.0
11	0.0	0.0	0.0	1.0	0.0	0.5	7.0	0.0	3.0	3.0	1.0	2.5
12	0.0	0.0	0.0	1.5	0.0	0.5	7.5	0.0	3.0	3.5	0.5	2.0
13	0.0	0.0	0.0	2.0	0.0	1.0	7.0	0.5	3.0	3.5	0.0	1.5
14	0.0	0.0	0.0	0.5	0.0	0.5	5.5	1.0	2.5	4.5	0.0	2.0
15	0.0	0.0	0.0	1.5	0.0	0.5	4.0	0.5	2.0	8.0	0.5	4.0
16	0.0	0.0	0.0	1.0	0.5	0.5	5.0	0.0	2.5	4.0	1.0	2.5
17	0.0	0.0	0.0	2.0	0.5	1.0	3.5	0.0	2.0	9.0	1.5	4.5
18	0.0	0.0	0.0	2.5	0.5	1.5	5.5	1.0	2.5	6.0	2.5	3.5
19	0.0	0.0	0.0	2.0	1.0	1.5	5.5	1.0	2.5	5.5	2.0	3.5
20	0.5	0.0	0.0	3.5	0.0	1.5	4.0	0.5	2.0	7.0	1.5	4.0
21	0.0	0.0	0.0	3.5	0.0	1.5	7.5	0.0	3.0	5.5	2.5	3.5
22	0.0	0.0	0.0	3.5	0.0	1.5	7.5	0.0	3.0	4.0	0.5	2.5
23	0.0	0.0	0.0	3.5	0.0	1.0	9.5	0.0	4.0	4.5	1.5	2.5
24	0.0	0.0	0.0	4.0	0.0	1.0	6.0	0.5	3.0	5.0	1.0	3.0
25	0.0	0.0	0.0	3.0	0.0	1.0	9.0	0.0	4.0	6.5	1.0	3.5
26	0.5	0.0	0.0	2.5	0.5	1.0	10.0	1.0	4.5	3.5	2.0	2.5
27	0.5	0.0	0.0	3.5	0.0	1.0	9.0	1.0	4.5	6.0	2.5	4.0
28	0.5	0.0	0.0	5.0	0.0	1.5	3.5	1.0	2.5	5.0	2.5	3.5
29	0.5	0.0	0.0	6.0	0.0	2.0	7.0	0.0	2.5	5.5	1.5	3.0
30	---	---	---	6.0	0.0	2.0	9.5	0.0	4.0	4.5	1.0	2.5
31	---	---	---	5.5	0.5	2.0	---	---	---	7.5	1.5	4.0
MONTH	0.5	0.0	0.0	6.0	0.0	0.8	10.0	0.0	2.8	9.5	0.0	3.3
	JUNE			JULY			AUGUST			SEPTEMBER		
1	8.5	2.5	5.0	10.5	3.5	6.0	14.5	6.0	10.0	13.0	5.0	9.0
2	8.5	2.0	5.0	8.0	3.0	5.5	12.0	7.5	9.5	9.5	6.5	8.0
3	9.5	2.0	5.0	9.5	3.0	5.5	14.0	7.0	10.0	7.5	5.0	6.0
4	8.0	2.5	4.5	7.5	4.0	5.5	13.5	6.0	9.5	10.0	3.0	6.5
5	8.5	2.0	4.5	9.0	3.5	5.5	12.5	7.0	9.5	10.0	3.5	6.5
6	7.0	3.0	4.5	10.5	3.5	6.0	12.5	6.0	9.0	12.0	3.5	7.0
7	8.0	2.5	4.5	9.5	3.5	6.0	13.5	5.0	9.0	12.0	3.5	7.5
8	8.5	2.5	4.5	10.5	4.0	6.0	14.5	4.5	9.0	11.5	4.0	7.5
9	8.5	2.5	4.5	11.0	2.5	6.5	15.5	5.5	10.0	12.0	4.5	8.0
10	3.5	1.0	2.5	12.0	4.0	7.0	15.0	6.0	10.0	11.0	4.5	7.5
11	4.5	2.0	3.0	12.0	4.0	7.0	15.0	5.5	9.5	13.0	4.0	8.0
12	6.5	2.5	4.0	12.5	3.5	7.5	15.0	5.0	9.5	9.0	6.0	7.5
13	6.5	3.0	4.0	10.0	4.5	7.0	15.5	5.0	10.0	7.0	4.0	6.0
14	8.5	2.5	5.0	13.0	5.0	8.5	16.0	6.0	10.5	7.0	3.0	4.5
15	8.5	2.5	4.5	11.0	6.0	8.0	14.5	6.5	10.0	4.5	3.0	4.0
16	6.0	2.0	3.5	12.5	5.0	8.5	13.5	7.0	10.0	7.0	3.5	5.0
17	7.0	1.5	4.0	12.0	5.0	8.5	12.5	8.5	10.0	11.0	3.0	6.5
18	6.5	2.5	4.0	10.5	5.5	8.0	11.0	8.0	9.5	10.5	5.0	7.0
19	8.5	3.0	5.0	11.0	6.5	8.0	15.5	7.5	10.5	7.0	4.0	5.5
20	7.0	3.0	4.5	12.5	5.5	8.0	13.5	6.5	9.5	5.5	3.0	4.0
21	10.0	2.5	5.0	13.0	5.5	9.0	12.0	6.0	9.0	6.0	1.5	3.0
22	9.0	2.0	5.0	11.0	6.5	8.0	10.5	6.5	8.5	3.5	0.5	2.0
23	10.0	2.5	5.5	11.5	6.0	8.5	8.0	5.5	6.5	5.5	2.5	4.0
24	9.5	3.0	5.5	13.5	4.5	8.5	9.0	5.0	7.0	9.5	3.5	6.0
25	7.5	3.0	5.0	12.5	5.0	9.0	8.0	4.5	6.5	9.5	2.0	5.5
26	9.0	3.0	5.5	13.0	6.0	9.0	8.5	3.5	5.5	8.0	2.5	5.5
27	8.0	3.5	5.0	14.0	5.5	9.0	10.0	4.5	6.5	8.5	4.0	6.0
28	9.0	3.0	5.0	14.5	5.5	9.0	10.0	4.5	7.0	8.5	4.0	6.0
29	8.5	3.0	5.5	13.5	5.0	9.0	13.5	5.5	9.0	8.5	1.5	5.0
30	7.5	4.0	5.5	14.5	5.0	9.5	13.5	5.0	9.0	7.5	4.5	6.0
31	---	---	---	15.0	5.5	10.0	14.5	5.0	9.0	---	---	---
MONTH	10.0	1.0	4.6	15.0	2.5	7.6	16.0	3.5	9.0	13.0	0.5	6.0

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.

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

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

REMARKS.--Records good except those for estimated daily discharges, which are poor. No regulation or diversion upstream from station. Several 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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	e30	28	e27	e17	e20	55	124	268	455	104	70
2	36	31	26	e25	e16	e21	59	160	299	438	109	68
3	36	33	29	e22	e16	22	52	215	349	405	111	72
4	35	e30	e25	e18	e16	21	63	260	429	414	101	70
5	35	e24	e25	e15	21	e20	64	330	517	417	97	66
6	35	e24	30	e15	22	e20	78	366	670	359	93	64
7	35	e25	28	e22	21	e20	85	381	715	363	89	61
8	35	e26	27	e25	e21	22	94	373	703	350	84	59
9	34	27	e22	e22	e21	21	89	331	804	311	81	57
10	43	28	23	e20	e20	22	74	299	963	294	78	56
11	39	29	24	e22	e15	e20	73	306	751	287	76	55
12	37	28	25	e20	e13	e21	75	262	614	267	73	55
13	38	e26	26	e20	e16	21	95	228	538	252	70	67
14	37	30	e25	e20	e16	18	111	208	499	243	68	91
15	36	28	e25	e20	20	20	100	191	489	230	66	82
16	36	28	24	e20	21	20	91	191	465	213	66	98
17	36	28	e22	e20	21	20	94	186	423	203	69	107
18	37	26	e20	e20	22	22	93	215	402	207	72	101
19	37	28	e22	20	22	27	86	243	388	252	71	92
20	36	29	e25	e20	e20	26	84	211	385	198	66	114
21	36	e27	27	e18	e17	25	79	219	383	184	66	95
22	36	e21	e23	e18	e16	27	74	255	412	194	68	88
23	35	e20	e20	21	e17	31	72	259	457	172	104	87
24	34	24	e23	21	e19	36	76	231	502	154	83	95
25	31	e24	25	e20	21	35	72	214	520	144	123	93
26	31	26	e24	e20	22	33	77	213	504	137	134	88
27	32	e25	e22	e21	22	30	106	232	515	134	105	88
28	34	e26	e23	e22	22	29	140	337	507	132	89	86
29	69	27	24	22	21	30	117	342	484	121	81	84
30	46	28	e22	e20	---	33	111	301	476	114	76	82
31	33	---	25	e18	---	41	---	274	---	110	73	---
TOTAL	1,146	806	759	634	554	774	2,539	7,957	15,431	7,754	2,646	2,391
MEAN	37.0	26.9	24.5	20.5	19.1	25.0	84.6	257	514	250	85.4	79.7
MAX	69	33	30	27	22	41	140	381	963	455	134	114
MIN	31	20	20	15	13	18	52	124	268	110	66	55
AC-FT	2,270	1,600	1,510	1,260	1,100	1,540	5,040	15,780	30,610	15,380	5,250	4,740

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

MEAN	43.1	31.3	25.1	25.0	23.2	23.6	63.0	397	683	286	93.3	58.2
MAX	68.8	40.3	31.2	33.3	32.0	32.0	127	580	1,251	447	162	92.0
(WY)	(1998)	(1997)	(1996)	(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)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

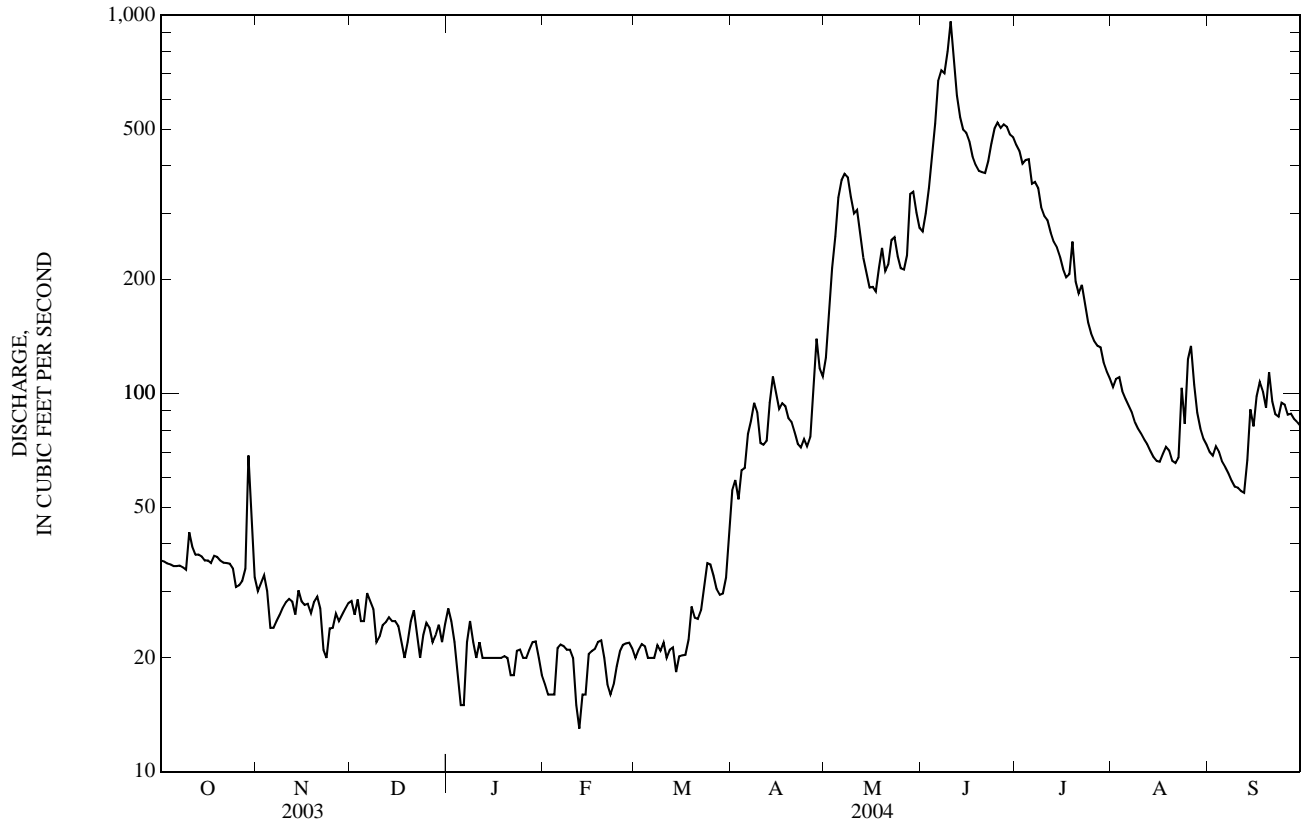
WATER YEARS 1989 - 2004

ANNUAL TOTAL	53,179	43,391	
ANNUAL MEAN	146	119	146
HIGHEST ANNUAL MEAN			204
LOWEST ANNUAL MEAN			96.5
HIGHEST DAILY MEAN	1,430	May 29	963
LOWEST DAILY MEAN	15	Feb 24	13
ANNUAL SEVEN-DAY MINIMUM	19	Feb 22	17
MAXIMUM PEAK FLOW			1,120
MAXIMUM PEAK STAGE			6.76
INSTANTANEOUS LOW FLOW			a12
ANNUAL RUNOFF (AC-FT)	105,500	86,070	105,900
10 PERCENT EXCEEDS	478	360	471
50 PERCENT EXCEEDS	36	54	42
90 PERCENT EXCEEDS	21	20	21

a--Gage height, 4.13 ft.

b--Gage height, 5.61 ft.

c--Estimated.



06188000 LAMAR RIVER NEAR TOWER 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. Formerly published as Lamar River near Tower Falls Ranger Station.

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 observations of water temperature and specific conductance were made during the year.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	128	e100	e110	e100	e80	e75	582	1,250	2,050	2,060	409	291
2	127	e110	e110	e90	e80	e80	663	1,700	2,310	1,930	395	282
3	125	e110	e120	e80	e80	e85	551	2,450	2,770	1,770	438	304
4	125	e100	e110	e70	e80	e90	703	2,930	3,500	1,790	391	329
5	124	e90	e110	e65	e90	e90	774	3,840	4,150	2,070	381	285
6	124	e90	e120	e65	e90	e85	990	4,310	4,880	1,650	363	266
7	124	e95	e110	e85	e90	e90	1,050	4,320	4,990	1,530	348	251
8	125	e100	e100	e100	e90	e90	1,220	4,180	4,450	1,550	325	241
9	124	e110	e90	e90	e85	e90	1,070	3,700	4,510	1,330	309	233
10	157	e130	e95	e80	e85	e90	793	3,070	5,130	1,230	296	225
11	192	e120	e100	e80	e70	e85	749	3,170	4,190	1,160	284	220
12	160	e110	e110	e75	e65	e90	740	2,370	3,570	1,060	269	211
13	154	e100	e120	e75	e70	e95	1,020	1,890	3,170	977	257	260
14	147	e110	e110	e80	e70	e95	1,320	1,610	2,910	936	247	431
15	142	e120	e100	e80	e85	e100	1,160	1,450	2,780	885	238	472
16	142	e120	e95	e80	e85	e120	929	1,470	2,650	832	235	464
17	140	e120	e90	e85	e100	e140	909	1,470	2,320	764	247	585
18	148	e120	e85	e80	e120	e150	860	1,600	2,200	757	283	518
19	156	e130	e90	e85	e110	e150	750	2,190	2,120	1,170	276	426
20	147	e110	e100	e90	e90	e150	743	1,820	2,090	914	284	595
21	141	e100	e110	e85	e75	e160	687	1,920	2,040	831	261	574
22	138	e90	e100	e80	e70	e170	660	2,350	2,080	812	267	510
23	134	e85	e90	e85	e75	e200	636	2,380	2,200	792	349	493
24	131	e100	e95	e90	e80	e250	732	2,000	2,390	674	354	609
25	117	e100	e100	e90	e85	e300	687	1,740	2,480	604	424	657
26	116	e100	e95	e90	e85	401	739	1,660	2,360	576	879	563
27	119	e90	e85	e85	e85	319	1,180	1,740	2,330	563	608	543
28	125	e95	e80	e85	e85	269	1,720	2,750	2,210	531	467	523
29	218	e100	e85	e85	e80	231	1,230	3,010	2,120	489	389	487
30	243	e120	e80	e85	---	272	1,090	2,470	2,510	461	344	477
31	e120	---	e90	e80	---	399	---	2,120	---	429	314	---
TOTAL	4,413	3,175	3,085	2,575	2,435	5,011	26,937	74,930	89,460	33,127	10,931	12,325
MEAN	142	106	99.5	83.1	84.0	162	898	2,417	2,982	1,069	353	411
MAX	243	130	120	100	120	401	1,720	4,320	5,130	2,070	879	657
MIN	116	85	80	65	65	75	551	1,250	2,040	429	235	211
AC-FT	8,750	6,300	6,120	5,110	4,830	9,940	53,430	148,600	177,400	65,710	21,680	24,450

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1923 - 2004, BY WATER YEAR (WY)*

MEAN	211	155	119	106	102	114	476	2,860	4,229	1,342	351	231
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)

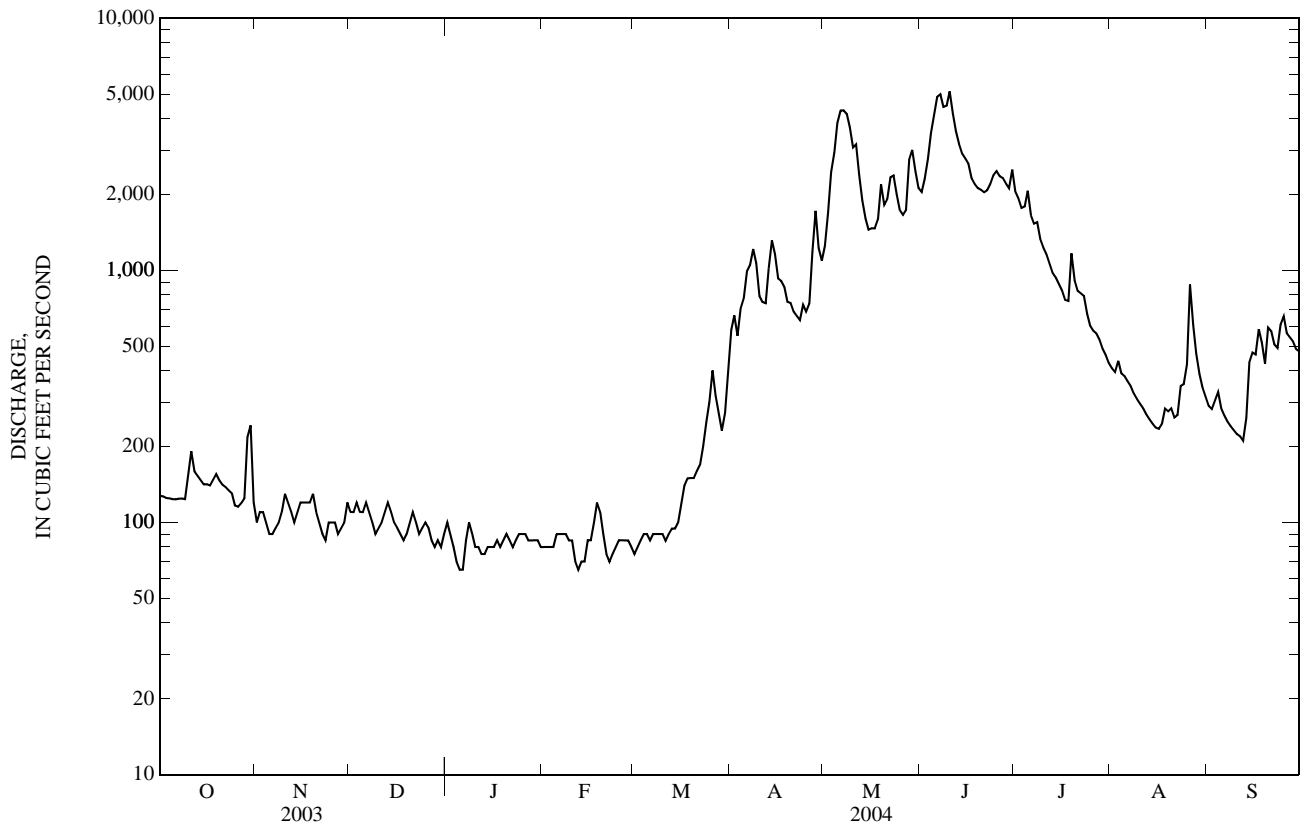
06188000 LAMAR RIVER NEAR TOWER RANGER STATION, YELLOWSTONE NATIONAL PARK—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1923 - 2004*	
ANNUAL TOTAL	297,974		268,404			
ANNUAL MEAN	816		733		864	
HIGHEST ANNUAL MEAN					1,531	1997
LOWEST ANNUAL MEAN					525	1934
HIGHEST DAILY MEAN	11,600	May 29	5,130	Jun 10	15,600	Jun 10, 1996
LOWEST DAILY MEAN	70	Feb 24	65	Jan 5	45	Mar 23, 1964
ANNUAL SEVEN-DAY MINIMUM	76	Feb 24	76	Feb 9	57	Mar 5, 1964
MAXIMUM PEAK FLOW			5,790	Jun 7	19,500	Jun 10, 1996
MAXIMUM PEAK STAGE			6.63	Jun 7	12.15	Jun 10, 1996
INSTANTANEOUS LOW FLOW					a40	Mar 16, 1945
ANNUAL RUNOFF (AC-FT)	591,000		532,400		626,000	
10 PERCENT EXCEEDS	2,180		2,240		2,910	
50 PERCENT EXCEEDS	141		245		182	
90 PERCENT EXCEEDS	90		85		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 current year. 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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	20	22	e22	20	21	23	24	26	27	26	24
2	22	21	22	e22	20	21	23	24	26	27	26	24
3	22	21	22	e21	20	21	23	24	26	27	26	24
4	22	21	22	e21	21	21	23	24	27	27	26	24
5	22	20	22	e21	21	21	23	25	27	27	26	24
6	22	20	22	e21	21	21	23	25	27	27	26	24
7	22	21	e22	21	21	21	23	26	27	27	26	24
8	22	21	e22	21	21	21	23	26	27	27	26	24
9	22	21	e22	21	21	21	24	26	27	27	23	24
10	22	21	e22	21	21	21	23	26	27	26	20	24
11	21	21	e22	21	21	21	23	26	27	26	20	24
12	21	21	e22	21	21	21	23	26	27	26	20	24
13	21	21	e22	21	21	22	24	26	27	26	20	24
14	21	22	e22	21	21	22	24	25	27	26	20	24
15	21	22	e22	21	21	22	24	25	27	26	19	24
16	21	22	e22	21	21	22	24	25	27	26	20	24
17	21	22	e22	21	21	22	24	25	27	26	23	24
18	21	22	e21	21	21	22	24	26	27	26	24	24
19	21	22	e22	21	21	22	24	26	27	26	24	24
20	21	22	e22	21	21	22	24	26	27	26	24	24
21	21	22	e22	20	21	22	24	25	27	26	24	24
22	21	21	e22	20	21	22	24	26	27	26	24	24
23	21	21	e21	21	21	22	24	26	27	26	24	24
24	21	22	e22	21	21	22	24	26	27	26	24	24
25	21	22	e22	21	21	22	24	26	27	26	24	24
26	21	22	e22	21	21	22	24	25	27	26	24	24
27	21	22	e22	21	21	22	24	25	27	26	24	24
28	21	22	e21	21	22	22	25	26	27	26	24	24
29	21	22	e21	21	21	22	24	27	27	26	24	24
30	21	22	e22	21	---	22	24	27	27	26	24	24
31	20	---	e22	20	---	22	---	27	---	26	24	---
TOTAL	659	642	678	650	607	670	710	792	807	815	729	720
MEAN	21.3	21.4	21.9	21.0	20.9	21.6	23.7	25.5	26.9	26.3	23.5	24.0
MAX	22	22	22	22	22	22	25	27	27	27	26	24
MIN	20	20	21	20	20	21	23	24	26	26	19	24
AC-FT	1,310	1,270	1,340	1,290	1,200	1,330	1,410	1,570	1,600	1,620	1,450	1,430

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

MEAN	26.7	25.6	25.4	25.9	25.0	25.3	26.7	29.3	29.0	27.4	26.4	25.9
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 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1989 - 2004*	
ANNUAL TOTAL	9,716		8,479			
ANNUAL MEAN	26.6		23.2		26.6	
HIGHEST ANNUAL MEAN					28.5	
LOWEST ANNUAL MEAN					23.2	
HIGHEST DAILY MEAN	33	May 16	27	May 29	36	May 20, 1995
LOWEST DAILY MEAN	20	Oct 31	19	Aug 15	19	Nov 23, 1993
ANNUAL SEVEN-DAY MINIMUM	20	Oct 31	20	Aug 10	20	Aug 10, 2004
MAXIMUM PEAK FLOW			28	Jul 4	b36	May 20, 1995
MAXIMUM PEAK STAGE			1.33	Jul 4	1.50	May 17, 1993
INSTANTANEOUS LOW FLOW			a19	Oct 31	c17	Jan 30, 1994
ANNUAL RUNOFF (AC-FT)	19,270		16,820		19,240	
10 PERCENT EXCEEDS	32		27		30	
50 PERCENT EXCEEDS	27		22		27	
90 PERCENT EXCEEDS	21		21		23	

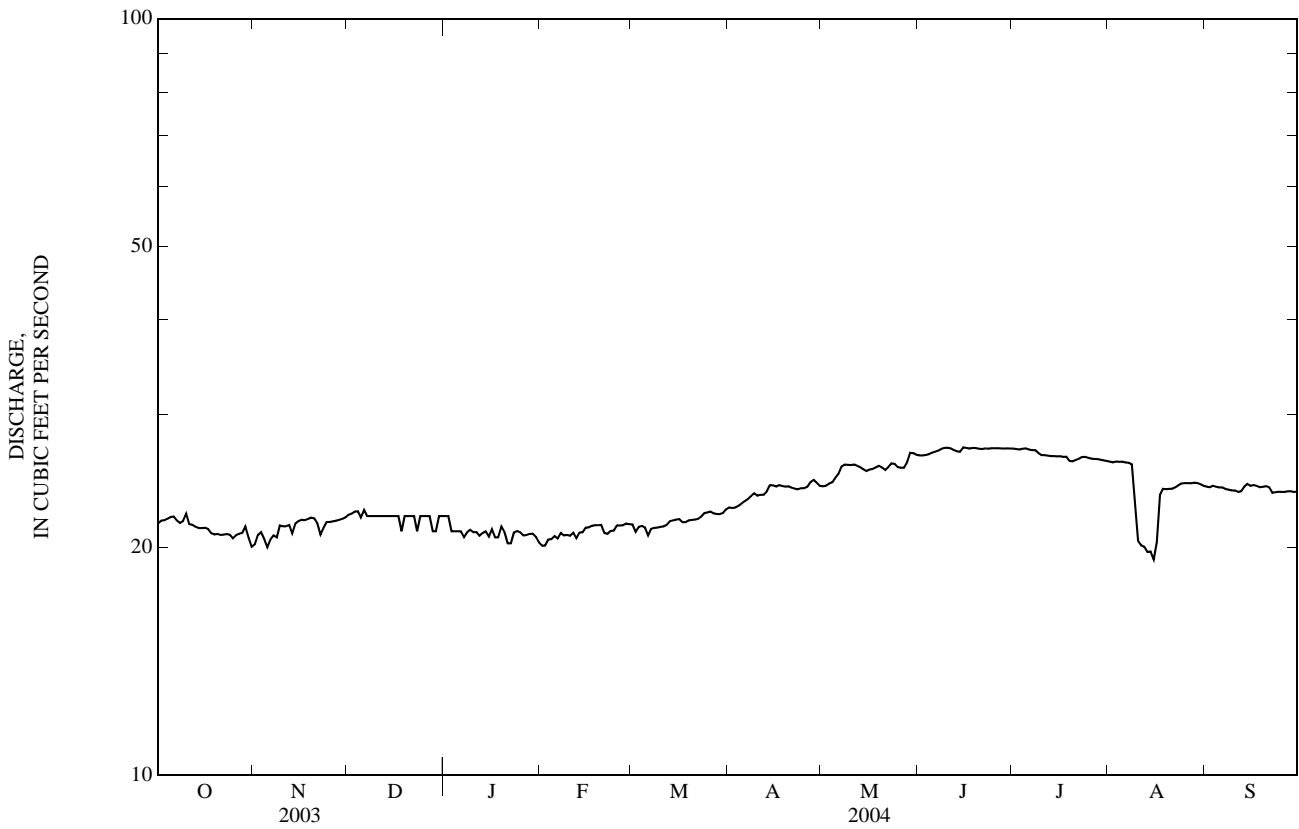
*--During periods of operation (October 1988 to September 1995, October 2002 to current year).

a--Gage height, 1.02 ft.

b--Gage height, 1.45 ft.

c--Gage height, 1.06 ft.

e--Estimated.



06190540 BOILING RIVER AT MAMMOTH, YELLOWSTONE NATIONAL PARK—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1988 to September 1994, October 2002 to September 2003.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1988 to September 1990.

WATER TEMPERATURE: October 1988 to September 1994, October 2002 to September 2003.

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

REMARKS.--Daily water temperature record rated good.

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 59.0°C, many days October to January and August; minimum, 44.5°C, May 29, 30, June 10-12.

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

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	56.0	56.0	56.0	59.0	54.0	57.5	55.5	55.5	55.5	55.0	55.0	55.0
2	56.0	56.0	56.0	57.0	54.0	55.5	55.5	55.5	55.5	58.5	55.0	56.0
3	56.0	56.0	56.0	55.5	55.0	55.0	55.5	55.5	55.5	59.0	55.5	58.0
4	56.0	56.0	56.0	58.5	54.5	56.5	56.5	55.5	55.5	59.0	56.0	58.0
5	56.0	56.0	56.0	59.0	56.5	58.0	58.5	55.5	56.5	57.5	57.0	57.5
6	56.0	56.0	56.0	58.5	55.0	57.0	55.5	55.5	55.5	57.0	56.0	56.5
7	56.5	56.0	56.0	58.5	55.0	56.5	55.5	55.5	55.5	56.0	55.0	56.0
8	56.5	56.0	56.0	59.0	54.5	56.5	55.5	55.5	55.5	55.0	54.5	55.0
9	56.5	56.0	56.0	55.0	54.5	54.5	58.5	55.5	56.5	55.0	54.5	54.5
10	56.5	54.5	55.0	55.0	54.5	55.0	55.5	55.5	55.5	55.5	55.0	55.0
11	56.5	54.5	55.5	55.5	55.0	55.0	56.0	55.5	55.5	55.5	55.0	55.0
12	55.5	55.0	55.5	55.0	55.0	55.0	58.5	55.5	56.0	58.0	55.0	56.0
13	56.0	55.5	55.5	59.0	55.0	56.5	56.5	55.5	56.0	56.0	55.0	55.5
14	56.0	55.5	55.5	55.5	55.0	55.0	56.5	55.5	56.0	56.0	55.5	55.5
15	56.0	55.5	56.0	55.5	55.0	55.0	57.0	55.5	56.0	58.5	55.0	56.5
16	56.0	55.0	55.5	55.5	55.0	55.0	58.0	55.5	56.0	55.5	55.0	55.5
17	56.0	55.5	56.0	56.0	55.0	55.5	57.5	55.5	56.0	59.0	55.0	56.5
18	56.0	56.0	56.0	56.0	55.0	55.5	59.0	55.5	57.5	59.0	55.0	57.0
19	56.0	56.0	56.0	55.5	55.0	55.0	58.5	55.0	56.5	55.5	55.0	55.5
20	56.0	56.0	56.0	55.5	55.0	55.5	55.5	54.5	55.0	55.5	55.5	55.5
21	56.0	56.0	56.0	58.5	55.0	56.0	55.0	54.5	55.0	59.0	55.5	57.5
22	56.0	56.0	56.0	58.5	57.0	58.0	59.0	55.0	56.0	59.0	55.5	57.0
23	56.0	56.0	56.0	57.5	56.0	56.5	59.0	56.0	57.5	55.5	55.0	55.5
24	56.5	55.0	56.0	56.0	55.5	55.5	56.5	54.5	55.5	55.5	55.5	55.5
25	57.0	54.5	56.0	56.0	55.5	55.5	55.0	54.5	54.5	55.5	55.0	55.5
26	56.5	55.0	56.0	55.5	55.5	55.5	55.0	55.0	55.0	58.0	55.0	56.0
27	56.0	55.5	56.0	55.5	55.5	55.5	57.0	55.0	55.0	56.0	55.0	55.5
28	56.0	55.5	55.5	55.5	55.5	55.5	59.0	56.0	58.0	55.5	55.0	55.0
29	55.5	54.5	54.5	55.5	55.5	55.5	57.5	55.0	56.0	55.5	55.0	55.0
30	57.0	54.5	56.0	55.5	55.5	55.5	57.0	55.0	56.0	55.5	55.0	55.0
31	59.0	55.0	57.5	---	---	---	55.5	55.0	55.0	57.0	55.0	56.0
MONTH	59.0	54.5	56.0	59.0	54.0	56.0	59.0	54.5	56.0	59.0	54.5	56.0

YELLOWSTONE RIVER BASIN

06190540 BOILING RIVER AT MAMMOTH, YELLOWSTONE NATIONAL PARK—Continued

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	57.0	55.0	56.0	54.0	53.5	54.0	53.0	52.5	53.0	51.0	49.5	50.0
2	57.0	55.0	56.0	58.5	54.0	55.0	53.0	52.5	53.0	51.0	49.5	50.5
3	55.0	55.0	55.0	56.5	54.0	54.5	53.5	52.5	53.0	50.5	49.5	50.0
4	57.0	55.0	55.5	54.5	54.0	54.0	53.0	52.0	52.5	50.0	49.0	49.5
5	55.0	55.0	55.0	56.5	54.0	54.5	53.0	52.0	52.5	50.0	48.5	49.0
6	57.0	55.0	56.0	57.5	54.0	56.0	52.0	51.5	52.0	49.5	48.0	48.5
7	57.0	55.0	55.0	56.5	54.5	55.0	52.5	51.5	52.0	48.5	47.0	47.5
8	55.0	55.0	55.0	55.0	54.5	54.5	52.0	51.5	51.5	48.0	46.5	47.5
9	55.0	55.0	55.0	55.0	54.5	54.5	52.0	51.0	51.5	48.0	46.5	47.5
10	58.0	55.0	55.5	54.5	54.5	54.5	52.0	51.5	51.5	48.0	47.0	47.5
11	57.0	55.0	56.0	54.5	54.5	54.5	52.0	51.0	51.5	47.5	46.5	47.0
12	58.5	55.0	56.5	54.5	54.0	54.5	52.5	51.5	52.0	47.5	46.5	47.0
13	57.0	55.0	56.0	54.5	53.5	54.0	51.5	50.0	51.0	47.5	46.5	47.0
14	57.5	55.0	56.0	54.0	53.5	54.0	51.0	50.0	50.5	48.0	47.0	47.5
15	55.0	55.0	55.0	54.0	53.5	54.0	50.5	50.0	50.0	48.5	47.5	48.0
16	56.5	55.0	55.0	54.0	53.5	54.0	51.0	50.5	50.5	48.5	48.0	48.0
17	55.0	55.0	55.0	54.0	53.5	54.0	50.5	50.5	50.5	49.0	47.5	48.0
18	55.0	55.0	55.0	54.0	53.5	54.0	51.0	50.5	50.5	48.5	47.5	48.0
19	55.0	55.0	55.0	54.0	53.5	53.5	51.5	50.5	51.0	48.0	47.0	47.5
20	55.0	55.0	55.0	54.0	53.5	53.5	51.0	50.5	50.5	48.5	47.5	48.0
21	58.0	55.0	56.5	54.0	53.5	54.0	51.5	50.5	51.0	48.5	48.0	48.0
22	58.0	55.0	56.5	54.0	53.5	53.5	51.5	50.5	51.0	48.5	47.0	47.5
23	57.5	55.0	56.0	54.0	53.0	53.5	51.5	50.5	51.0	47.0	46.5	46.5
24	57.5	55.0	56.0	53.5	52.5	53.0	51.0	50.5	51.0	47.0	46.5	46.5
25	55.5	54.0	54.0	53.0	52.5	53.0	51.5	50.5	51.0	48.0	47.0	47.5
26	54.0	54.0	54.0	53.0	52.5	53.0	51.5	50.5	51.0	48.0	47.5	47.5
27	54.0	54.0	54.0	53.5	53.0	53.0	51.0	50.0	50.5	48.5	47.5	48.0
28	54.0	53.5	54.0	53.5	53.0	53.5	50.0	49.0	49.5	48.0	46.0	47.0
29	54.0	53.5	54.0	54.0	53.5	53.5	50.0	49.0	49.5	46.0	44.5	45.0
30	---	---	---	54.0	53.0	53.5	50.5	49.5	50.0	46.0	44.5	45.0
31	---	---	---	53.5	52.5	53.0	---	---	---	46.5	45.0	45.5
MONTH	58.5	53.5	55.5	58.5	52.5	54.0	53.5	49.0	51.0	51.0	44.5	47.5
	JUNE			JULY			AUGUST			SEPTEMBER		
1	47.0	45.5	46.0	47.5	46.0	47.0	49.5	48.0	48.5	50.5	49.0	50.0
2	47.0	45.5	46.5	47.5	46.0	47.0	50.0	48.5	49.0	50.5	49.5	50.0
3	47.0	45.5	46.5	47.0	46.0	46.5	49.5	48.5	49.0	50.0	49.0	49.0
4	47.0	46.0	46.5	47.0	46.5	47.0	49.0	48.0	48.5	49.5	48.5	49.0
5	47.0	45.5	46.0	47.0	46.0	46.5	49.5	48.0	48.5	49.5	49.0	49.5
6	46.5	45.5	46.0	48.0	46.0	47.0	49.5	48.0	49.0	50.0	48.5	49.5
7	46.5	45.0	45.5	48.0	46.5	47.5	49.5	48.0	48.5	50.0	49.0	49.5
8	46.0	45.0	45.5	48.0	46.5	47.0	49.5	48.0	48.5	50.5	49.0	50.0
9	46.0	45.0	45.5	48.0	46.5	47.5	58.5	48.0	53.5	50.5	49.5	50.0
10	45.5	44.5	45.0	48.5	47.0	47.5	58.5	58.5	58.5	50.0	49.5	50.0
11	45.5	44.5	45.0	48.5	47.0	47.5	59.0	58.5	58.5	50.5	49.5	50.0
12	46.0	44.5	45.5	48.5	46.5	47.5	59.0	58.5	59.0	50.5	49.5	50.0
13	46.5	45.0	45.5	48.0	47.0	47.5	59.0	59.0	59.0	49.5	48.5	49.0
14	47.0	45.0	46.0	49.0	47.0	48.0	59.0	59.0	59.0	48.5	48.0	48.0
15	46.5	45.0	45.5	49.0	47.5	48.5	59.0	59.0	59.0	48.5	48.0	48.0
16	46.0	45.0	45.5	49.0	47.5	48.0	59.0	51.5	56.5	49.0	48.0	48.5
17	46.5	45.0	45.5	49.0	47.5	48.5	51.5	50.0	50.5	49.5	48.5	49.0
18	46.0	45.0	45.5	49.0	47.5	48.5	50.0	49.5	50.0	49.5	49.0	49.0
19	46.5	45.0	46.0	49.0	48.5	49.0	50.5	49.5	50.0	49.5	48.5	49.0
20	46.5	45.5	46.0	49.5	48.5	48.5	50.0	49.0	49.5	48.5	48.0	48.5
21	47.0	45.0	46.0	49.0	48.0	48.5	50.0	49.5	50.0	48.5	48.0	48.0
22	47.0	45.5	46.0	49.0	48.0	48.5	50.0	49.0	49.5	48.0	47.5	48.0
23	47.0	45.5	46.5	49.0	47.5	48.0	49.5	49.0	49.0	48.5	48.0	48.0
24	47.0	45.5	46.5	49.0	47.5	48.0	49.5	48.5	49.0	49.0	48.0	48.5
25	47.0	46.0	46.5	49.0	47.5	48.0	49.5	48.5	49.0	49.0	48.0	48.5
26	47.0	45.5	46.5	49.0	48.0	48.5	48.5	48.0	48.5	49.0	48.5	49.0
27	47.0	46.0	46.5	49.0	47.5	48.5	49.0	48.0	48.5	49.5	48.5	49.0
28	47.5	46.0	46.5	49.0	47.5	48.5	49.5	48.0	49.0	49.0	48.5	49.0
29	47.5	46.0	47.0	49.0	47.5	48.5	50.0	48.5	49.5	49.0	48.0	49.0
30	47.0	46.5	46.5	49.0	47.5	48.5	50.0	49.0	49.5	49.5	48.5	49.0
31	---	---	---	49.0	48.0	48.5	50.5	49.0	50.0	---	---	---
MONTH	47.5	44.5	46.0	49.5	46.0	48.0	59.0	48.0	51.5	50.5	47.5	49.0

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, 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 observations of water temperature and specific conductance were made during the year.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	100	85	98	100	82	85	125	210	393	305	147	117
2	100	96	96	94	83	81	129	253	396	304	145	117
3	100	97	96	91	90	82	130	303	429	289	148	120
4	100	94	94	89	86	81	143	363	491	294	146	120
5	100	77	93	80	88	81	160	440	545	314	143	119
6	100	82	97	87	87	70	179	482	645	276	138	117
7	100	84	99	105	87	80	188	489	655	264	136	116
8	100	89	97	102	86	82	193	502	608	262	134	115
9	98	99	88	102	85	85	186	473	608	243	133	114
10	111	99	97	96	83	87	157	430	677	231	131	113
11	105	95	95	96	83	86	152	429	577	224	129	112
12	105	95	93	90	68	86	155	376	496	216	127	112
13	104	93	89	90	87	85	177	332	450	211	125	128
14	102	96	90	90	84	85	196	299	428	206	123	142
15	101	94	92	85	87	86	190	279	428	200	122	132
16	103	95	91	93	86	86	168	306	416	197	122	143
17	101	91	93	85	85	86	178	306	381	192	125	132
18	98	94	79	85	88	89	176	323	371	190	132	123
19	98	97	89	92	87	95	168	358	363	221	128	124
20	96	95	102	88	84	96	172	321	359	203	126	136
21	96	94	104	78	76	94	164	318	350	196	126	129
22	96	79	91	83	75	98	159	409	341	199	130	125
23	95	76	80	89	82	104	158	447	350	183	145	126
24	94	92	96	89	83	111	168	388	360	175	140	125
25	91	89	105	87	84	111	163	339	360	170	145	120
26	95	93	97	85	85	109	178	327	354	167	156	118
27	96	95	96	83	85	103	216	333	347	164	141	119
28	96	95	84	87	84	100	246	484	339	159	132	120
29	109	97	92	86	83	99	214	585	323	154	126	115
30	87	98	90	87	---	103	206	489	323	151	122	115
31	87	---	101	83	---	112	---	422	---	148	119	---
TOTAL	3,064	2,755	2,904	2,777	2,433	2,838	5,194	11,815	13,163	6,708	4,142	3,664
MEAN	98.8	91.8	93.7	89.6	83.9	91.5	173	381	439	216	134	122
MAX	111	99	105	105	90	112	246	585	677	314	156	143
MIN	87	76	79	78	68	70	125	210	323	148	119	112
AC-FT	6,080	5,460	5,760	5,510	4,830	5,630	10,300	23,440	26,110	13,310	8,220	7,270

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2004, BY WATER YEAR (WY)*

MEAN	127	112	102	96.9	92.9	93.8	142	507	707	300	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

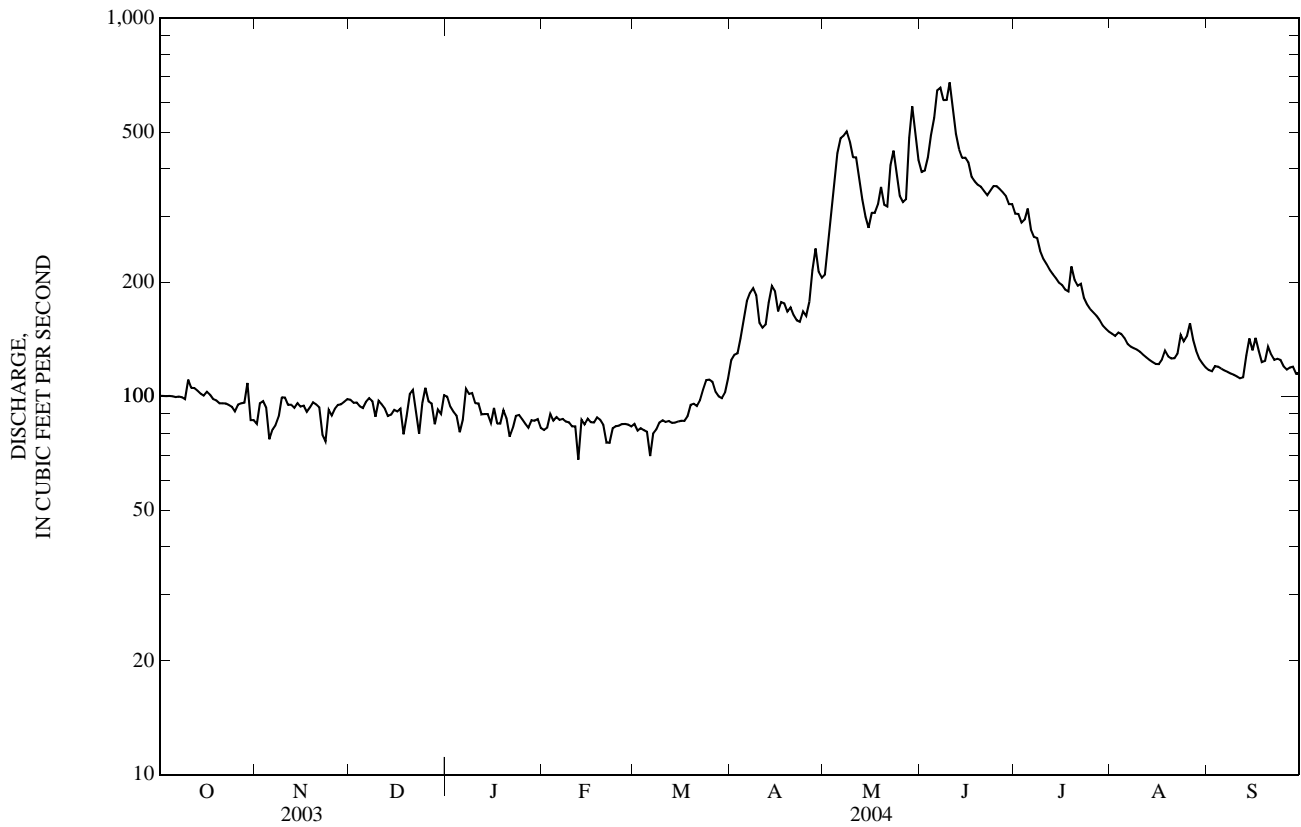
SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1939 - 2004*	
ANNUAL TOTAL	64,091		61,457			
ANNUAL MEAN	176		168		215	
HIGHEST ANNUAL MEAN					324	1997
LOWEST ANNUAL MEAN					138	1988
HIGHEST DAILY MEAN	1,520	Jun 1	677	Jun 10	1,830	May 29, 1956
LOWEST DAILY MEAN	55	Feb 24	68	Feb 12	53	Dec 15, 1988
ANNUAL SEVEN-DAY MINIMUM	76	Feb 19	80	Mar 2	61	Feb 1, 1989
MAXIMUM PEAK FLOW			711	Jun 7	b2,080	Jun 4, 1956
MAXIMUM PEAK STAGE			3.42	Jun 7	5.03	Jun 2, 1997
INSTANTANEOUS LOW FLOW			a44	Feb 12	c35	Mar 28, 1942
ANNUAL RUNOFF (AC-FT)	127,100		121,900		155,800	
10 PERCENT EXCEEDS	367		360		504	
50 PERCENT EXCEEDS	101		112		121	
90 PERCENT EXCEEDS	82		85		87	

*--During periods of record (October 1938 to September 1972, April 1984 to present).

a--Gage height, 1.82 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 NW $\frac{1}{4}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.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 observations of water temperature and specific conductance were made during the year.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,160	857	854	783	722	744	1,430	2,660	5,290	6,100	2,820	1,970
2	1,150	937	812	768	751	723	1,570	3,200	5,540	5,870	2,760	1,950
3	1,130	962	838	723	759	737	1,510	4,180	6,110	5,650	2,790	1,980
4	1,130	950	829	e680	759	755	1,660	4,920	7,190	5,590	2,700	1,970
5	1,120	809	730	e660	759	751	1,830	6,270	8,450	6,090	2,630	1,920
6	1,110	824	817	e680	760	721	2,080	7,150	9,870	5,480	2,580	1,880
7	1,110	856	871	e740	762	676	2,200	7,240	10,500	5,190	2,520	1,850
8	1,110	878	822	789	760	766	2,420	7,200	9,580	5,250	2,470	1,820
9	1,100	903	773	787	762	774	2,330	6,690	9,640	4,880	2,400	1,790
10	1,170	901	726	773	739	808	1,960	5,790	11,100	4,660	2,360	1,760
11	1,220	914	791	770	751	788	1,850	5,980	9,780	4,520	2,280	1,730
12	1,170	916	792	767	712	794	1,830	5,040	8,620	4,360	2,240	1,720
13	1,150	860	805	745	711	808	2,140	4,320	7,830	4,190	2,200	1,780
14	1,110	908	806	750	732	793	2,550	3,880	7,320	4,100	2,160	2,060
15	1,090	910	790	742	736	801	2,510	3,690	7,150	3,990	2,110	2,130
16	1,090	899	735	748	745	796	2,220	3,710	6,920	3,900	2,080	2,060
17	1,080	909	776	742	757	797	2,150	3,880	6,470	3,780	2,080	2,230
18	1,070	871	723	731	780	824	2,140	3,990	6,240	3,690	2,170	2,090
19	1,070	902	700	740	804	875	2,000	5,010	6,130	4,340	2,110	1,950
20	1,060	921	724	753	784	965	1,960	4,450	6,060	4,020	2,080	2,170
21	1,040	870	791	741	751	903	1,900	4,530	6,000	3,880	2,050	2,180
22	1,020	810	780	724	728	935	1,850	5,260	6,010	3,760	2,050	2,040
23	1,010	793	705	734	736	1,020	1,780	5,760	6,200	3,770	2,170	2,020
24	1,000	914	682	756	748	1,130	1,900	5,150	6,490	3,530	2,240	2,130
25	952	780	768	773	757	1,270	1,890	4,600	6,610	3,390	2,150	2,190
26	961	765	784	751	769	1,240	1,950	4,460	6,540	3,310	2,830	2,080
27	967	778	762	734	770	1,140	2,450	4,520	6,420	3,250	2,480	2,030
28	974	754	717	754	777	1,030	3,300	5,960	6,350	3,150	2,300	2,000
29	1,080	798	736	770	758	967	2,750	6,860	6,240	3,040	2,180	1,950
30	1,150	853	749	780	---	983	2,530	6,160	6,550	2,960	2,090	1,930
31	917	---	753	761	---	1,140	---	5,520	---	2,900	2,020	---
TOTAL	33,471	26,002	23,941	23,149	21,839	27,454	62,640	158,030	219,200	132,590	72,100	59,360
MEAN	1,080	867	772	747	753	886	2,088	5,098	7,307	4,277	2,326	1,979
MAX	1,220	962	871	789	804	1,270	3,300	7,240	11,100	6,100	2,830	2,230
MIN	917	754	682	660	711	676	1,430	2,660	5,290	2,900	2,020	1,720
AC-FT	66,390	51,570	47,490	45,920	43,320	54,460	124,200	313,500	434,800	263,000	143,000	117,700

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1889 - 2004, BY WATER YEAR (WY)*

MEAN	1,513	1,184	961	849	837	919	1,553	6,094	11,430	6,756	3,166	1,946
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 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1889 - 2004*	
ANNUAL TOTAL	1,012,864		859,776			
ANNUAL MEAN	2,775		2,349		3,109	
HIGHEST ANNUAL MEAN					5,158	1997
LOWEST ANNUAL MEAN					1,903	1934
HIGHEST DAILY MEAN	21,200	Jun 1	11,100	Jun 10	32,000	Jun 14, 1918
LOWEST DAILY MEAN	682	Dec 24	660	Jan 5	380	Feb 5, 1989
ANNUAL SEVEN-DAY MINIMUM	729	Dec 18	719	Jan 1	393	Feb 4, 1937
MAXIMUM PEAK FLOW			11,800	Jun 10	b32,200	Jun 10, 1996
MAXIMUM PEAK STAGE			6.56	Jun 10	11.50	Jun 14, 1918
INSTANTANEOUS LOW FLOW			a611	Mar 7	c343	Feb 2, 1989
ANNUAL RUNOFF (AC-FT)	2,009,000		1,705,000		2,252,000	
10 PERCENT EXCEEDS	7,140		6,000		8,480	
50 PERCENT EXCEEDS	1,120		1,350		1,400	
90 PERCENT EXCEEDS	774		745		760	

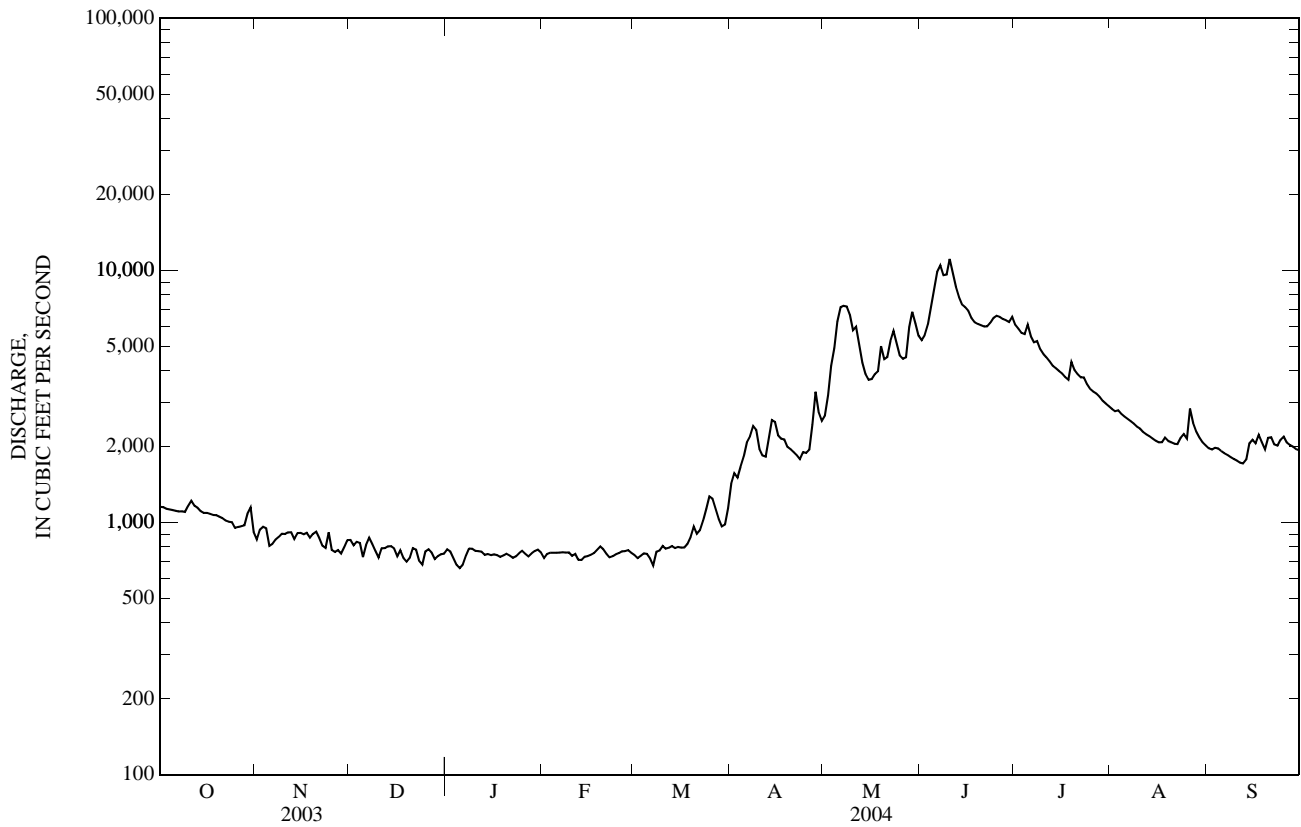
*--During periods of operation (August 1889 to November 1893, September 1910 to current year).

a--Gage height, 0.82 ft, result of freezeup.

b--Gage height, 10.92 ft.

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

e--Estimated.



06192500 YELLOWSTONE RIVER NEAR LIVINGSTON, MT

LOCATION.--Lat 45°35'50", long 110°33'55" (NAD 27), in NE $\frac{1}{4}$ NW $\frac{1}{4}$ NW $\frac{1}{4}$ 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.--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 observations of water temperature and specific conductance were made during the year.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,410	1,190	1,240	e1,100	1,010	1,020	1,540	2,760	5,610	6,880	3,080	2,230
2	1,410	1,200	1,210	e1,050	e1,000	1,010	1,820	3,110	5,630	6,520	3,020	2,230
3	1,400	1,290	1,170	e1,000	e1,000	994	1,880	3,970	6,050	6,290	2,990	2,230
4	1,380	1,320	1,200	e950	1,030	1,010	1,830	4,930	7,030	6,140	2,940	2,220
5	1,370	1,230	1,150	e900	1,050	1,020	2,100	6,230	8,470	6,720	2,870	2,220
6	1,360	e1,150	1,070	e900	1,040	1,010	2,300	7,430	10,200	6,370	2,790	2,160
7	1,360	e1,150	1,240	e1,000	1,020	944	2,540	7,690	11,400	5,910	2,730	2,120
8	1,350	1,200	1,230	e1,100	1,050	975	2,710	7,730	10,600	5,880	2,680	2,080
9	1,340	1,290	1,160	e1,150	1,050	1,040	2,830	7,390	10,300	5,550	2,600	2,040
10	1,380	1,280	1,060	e1,150	1,030	1,060	2,590	6,470	12,200	5,260	2,530	2,000
11	1,470	1,280	1,100	e1,130	e1,000	1,070	2,260	6,320	11,800	5,110	2,470	1,950
12	1,510	1,280	1,130	1,110	e1,000	1,050	2,180	5,800	10,300	4,910	2,400	1,940
13	1,470	1,260	1,150	1,130	e950	1,070	2,270	5,020	9,160	4,750	2,350	1,980
14	1,450	1,240	1,170	1,110	e1,000	1,070	2,750	4,520	8,430	4,620	2,300	2,130
15	1,430	1,270	1,160	1,070	e1,020	1,060	2,970	4,200	8,070	4,480	2,250	2,420
16	1,410	1,260	1,060	1,080	1,030	1,060	2,760	4,020	7,790	4,370	2,230	2,370
17	1,410	1,260	1,090	1,040	1,050	1,060	2,510	4,220	7,380	4,240	2,230	2,470
18	1,380	1,270	1,070	1,020	1,100	1,070	2,540	4,130	6,980	4,110	2,310	2,460
19	1,370	1,230	1,040	1,060	1,110	1,110	2,420	4,850	6,810	4,400	2,310	2,340
20	1,360	1,280	1,120	1,060	1,080	1,200	2,230	4,790	6,780	4,590	2,270	2,330
21	1,340	1,280	1,110	1,060	1,050	1,210	2,190	4,700	6,630	4,310	2,250	2,560
22	1,330	1,180	1,150	e1,000	1,010	1,180	2,130	5,090	6,590	4,130	2,230	2,440
23	1,310	e1,100	1,040	e1,000	1,000	1,230	2,040	5,900	6,760	4,150	2,270	2,380
24	1,290	e1,200	991	1,100	1,020	1,340	2,020	5,680	7,140	3,920	2,460	2,420
25	1,280	e1,100	1,100	e1,050	1,030	1,500	2,150	5,080	7,380	3,710	2,390	2,540
26	1,230	e1,050	1,140	e1,050	1,050	1,590	2,080	4,840	7,360	3,580	2,790	2,500
27	1,260	e1,050	1,130	e1,000	1,070	1,520	2,310	4,810	7,210	3,490	2,870	2,410
28	1,280	1,070	e1,100	e1,050	1,070	1,390	3,150	5,520	7,070	3,390	2,650	2,390
29	1,340	1,190	e1,050	e1,050	1,050	1,290	3,360	7,050	6,990	3,280	2,500	2,350
30	1,520	1,190	e1,100	e1,050	---	1,240	2,840	6,760	7,110	3,170	2,380	2,310
31	1,380	---	e1,100	e1,050	---	1,310	---	6,010	---	3,140	2,290	---
TOTAL	42,580	36,340	34,831	32,570	29,970	35,703	71,300	167,020	241,230	147,370	78,430	68,220
MEAN	1,374	1,211	1,124	1,051	1,033	1,152	2,377	5,388	8,041	4,754	2,530	2,274
MAX	1,520	1,320	1,240	1,150	1,110	1,590	3,360	7,730	12,200	6,880	3,080	2,560
MIN	1,230	1,050	991	900	950	944	1,540	2,760	5,610	3,140	2,230	1,940
AC-FT	84,460	72,080	69,090	64,600	59,450	70,820	141,400	331,300	478,500	292,300	155,600	135,300

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1897 - 2004, BY WATER YEAR (WY)*

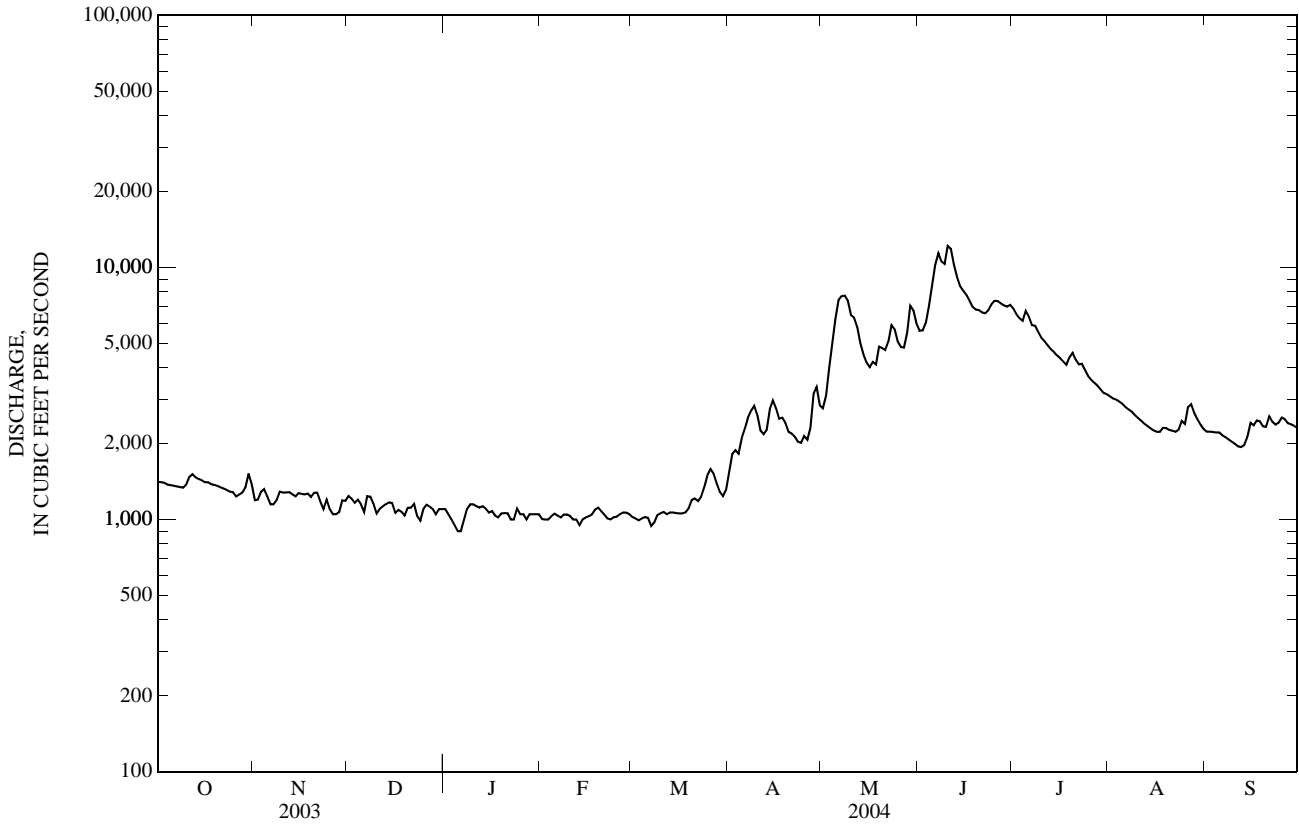
MEAN	2,012	1,677	1,383	1,220	1,216	1,296	1,969	6,988	13,330	7,656	3,620	2,406
MAX	3,115	2,599	1,984	1,757	1,800	1,901	3,852	13,070	27,140	14,990	6,000	3,806
(WY)	(1973)	(1984)	(1984)	(1984)	(1898)	(1898)	(1990)	(1897)	(1997)	(1975)	(1899)	(1968)
MIN	1,131	1,099	930	727	763	899	1,174	2,751	4,999	2,748	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 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1897 - 2004*	
ANNUAL TOTAL	1,207,061		985,564			
ANNUAL MEAN	3,307		2,693		3,729	
HIGHEST ANNUAL MEAN					6,119	1997
LOWEST ANNUAL MEAN					2,395	2001
HIGHEST DAILY MEAN	24,800	Jun 1	12,200	Jun 10	36,000	Jun 6, 1997
LOWEST DAILY MEAN	991	Dec 24	900	Jan 5	540	Feb 4, 1989
ANNUAL SEVEN-DAY MINIMUM	1,070	Dec 18	986	Jan 1	571	Feb 1, 1989
MAXIMUM PEAK FLOW			13,300	Jun 10	38,000	Jun 6, 1997
MAXIMUM PEAK STAGE			7.16	Jun 10	10.72	Jun 6, 1997
ANNUAL RUNOFF (AC-FT)	2,394,000		1,955,000		2,702,000	
10 PERCENT EXCEEDS	8,270		6,480		9,750	
50 PERCENT EXCEEDS	1,400		1,560		1,880	
90 PERCENT EXCEEDS	1,140		1,040		1,130	

*--During periods operation (May 1897 to December 1905, August 1928 to September 1932, 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 observations of water temperature and specific conductance were made during the year.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	65	e80	107	e60	e70	77	181	142	268	293	52	77
2	65	e85	102	e50	e64	75	195	139	229	303	52	77
3	64	e85	101	e45	e65	69	186	150	208	295	53	80
4	65	e75	e90	e40	e65	78	171	160	204	282	50	79
5	67	e70	e80	e45	e66	74	173	151	256	298	50	73
6	66	e75	e100	e55	e65	66	179	164	345	292	49	72
7	67	e80	108	e70	e70	60	197	146	366	275	46	76
8	68	e85	e90	e75	73	91	209	129	309	260	46	78
9	67	e100	e88	e80	69	119	246	112	277	243	45	74
10	68	110	e90	e85	e65	144	219	96	417	233	45	68
11	72	114	e90	e82	e62	134	189	85	1,220	220	43	68
12	78	111	e85	e80	e60	126	176	82	1,910	210	44	74
13	81	103	105	e85	e62	135	170	73	1,400	195	41	83
14	82	112	101	e85	e64	121	183	68	999	179	42	91
15	89	108	e90	e80	e66	116	198	62	832	158	35	91
16	91	107	e70	e80	69	114	196	62	724	146	35	87
17	93	108	e70	e78	71	118	183	66	608	138	39	83
18	90	106	e75	e75	83	125	181	60	523	123	46	79
19	85	110	e75	81	93	153	187	55	492	115	58	82
20	81	e100	e80	77	85	168	196	55	447	122	50	103
21	79	e85	e80	e65	75	153	201	52	386	118	55	114
22	77	e80	e75	e65	70	145	192	63	314	104	59	115
23	79	e85	e75	74	69	148	179	121	311	94	61	115
24	77	e95	e80	77	74	162	167	159	321	92	69	116
25	79	e90	e85	e55	83	181	163	150	355	82	75	114
26	80	e95	e82	e55	83	179	154	136	364	79	83	112
27	81	e95	e75	e50	86	171	151	141	354	75	85	108
28	83	e100	e60	e50	85	159	165	169	321	70	90	107
29	93	e105	e62	e65	80	147	179	244	296	65	91	107
30	99	110	e60	87	---	142	159	329	299	54	85	108
31	87	---	e70	73	---	154	---	310	---	53	83	---
TOTAL	2,418	2,864	2,601	2,124	2,092	3,904	5,525	3,931	15,355	5,266	1,757	2,711
MEAN	78.0	95.5	83.9	68.5	72.1	126	184	127	512	170	56.7	90.4
MAX	99	114	108	87	93	181	246	329	1,910	303	91	116
MIN	64	70	60	40	60	60	151	52	204	53	35	68
AC-FT	4,800	5,680	5,160	4,210	4,150	7,740	10,960	7,800	30,460	10,450	3,490	5,380

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 2004, BY WATER YEAR (WY)

MEAN	146	131	107	101	122	179	369	790	752	308	128	129
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)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1979 - 2004

ANNUAL TOTAL	85,489	50,548	
ANNUAL MEAN	234	138	272
HIGHEST ANNUAL MEAN			610
LOWEST ANNUAL MEAN			114
HIGHEST DAILY MEAN	1,670	May 27	1,910
LOWEST DAILY MEAN	38	Aug 25	35
ANNUAL SEVEN-DAY MINIMUM	40	Sep 5	40
MAXIMUM PEAK FLOW			2,080
MAXIMUM PEAK STAGE			4.74
INSTANTANEOUS LOW FLOW			a33
ANNUAL RUNOFF (AC-FT)	169,600	100,300	197,100
10 PERCENT EXCEEDS	659	257	670
50 PERCENT EXCEEDS	89	87	135
90 PERCENT EXCEEDS	48	60	70

a--Gage height, 1.69 ft.

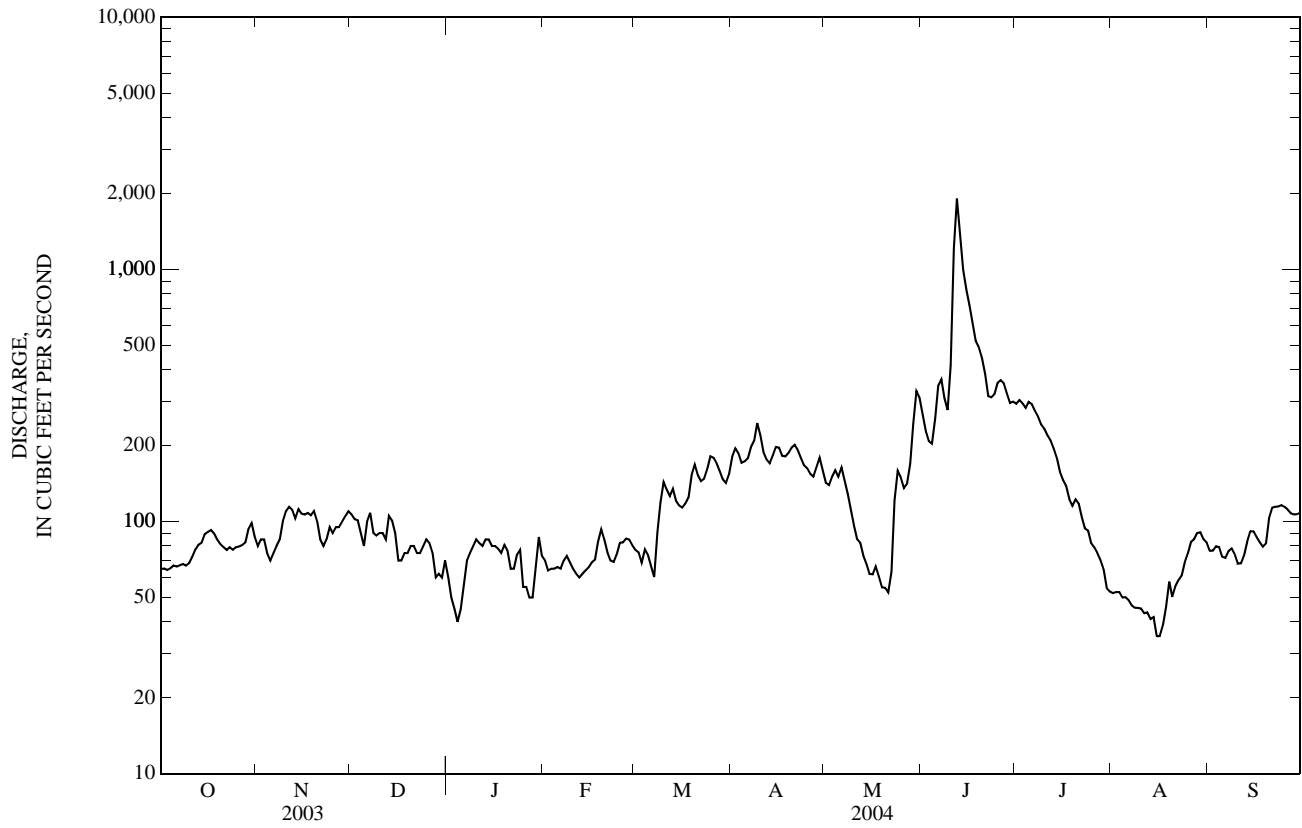
b--Site and datum then in use.

c--Gage height, 1.44 ft.

e--Estimated.

YELLOWSTONE RIVER BASIN

06195600 SHIELDS RIVER NEAR LIVINGSTON, MT—Continued



06200000 BOULDER RIVER AT BIG TIMBER, MT

LOCATION.--Lat 45°50'03", long 109°56'17" (NAD 27), in SE $\frac{1}{4}$ NE $\frac{1}{4}$ SE $\frac{1}{4}$ 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 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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	76	e120	152	e110	e80	95	135	199	445	1,640	195	82
2	75	e130	146	e90	e80	92	166	198	457	1,560	195	82
3	74	e130	144	e80	e80	90	162	271	514	1,440	218	86
4	72	e110	e120	e70	e75	94	155	406	855	1,390	214	83
5	72	e90	e90	e60	e85	93	173	609	1,540	1,650	191	79
6	73	e110	e130	e65	e80	92	205	847	2,350	1,470	172	77
7	74	e130	153	e90	e90	85	249	946	2,670	1,300	156	74
8	76	e150	149	e100	e90	106	261	980	2,110	1,410	138	72
9	83	e170	e120	e110	e85	116	296	943	1,840	1,190	132	67
10	100	181	e100	e110	e85	118	259	763	2,900	1,060	120	64
11	109	175	e95	e120	e80	113	214	685	2,750	1,030	107	63
12	112	166	e85	e120	e70	105	202	580	2,070	954	96	60
13	115	158	e120	e125	e75	105	201	461	1,710	816	90	60
14	112	161	150	126	e85	104	242	375	1,550	728	88	72
15	113	156	129	124	e95	100	284	307	1,470	708	82	75
16	116	152	e90	121	e95	99	283	265	1,400	645	74	76
17	118	151	e120	e115	103	100	263	278	1,230	544	76	75
18	125	151	e110	e105	108	102	260	264	1,090	517	80	77
19	132	150	e130	121	119	104	240	361	982	528	85	78
20	126	157	141	115	104	110	206	359	1,080	630	81	87
21	122	e100	131	e105	95	110	185	381	1,080	562	77	96
22	119	e90	e110	e110	89	106	169	432	1,150	484	76	90
23	117	e80	e100	e115	92	109	154	505	1,420	439	73	88
24	130	e100	e110	114	97	114	147	466	1,780	386	74	101
25	136	e100	124	e95	96	124	153	398	2,060	338	75	117
26	131	e110	e110	e85	94	133	139	372	2,020	309	93	111
27	140	e110	e95	e70	94	130	141	364	1,930	299	117	106
28	147	e130	e85	e70	101	123	215	454	1,750	274	111	107
29	195	170	e95	e100	102	118	278	702	1,790	247	100	102
30	e150	165	e90	e90	---	114	220	588	1,780	221	92	98
31	e130	---	e110	e85	---	117	---	496	---	202	87	---
TOTAL	3,470	4,053	3,634	3,116	2,624	3,321	6,257	15,255	47,773	24,971	3,565	2,505
MEAN	112	135	117	101	90.5	107	209	492	1,592	806	115	83.5
MAX	195	181	153	126	119	133	296	980	2,900	1,650	218	117
MIN	72	80	85	60	70	85	135	198	445	202	73	60
AC-FT	6,880	8,040	7,210	6,180	5,200	6,590	12,410	30,260	94,760	49,530	7,070	4,970

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1948 - 2004, BY WATER YEAR (WY)*

MEAN	216	189	152	134	127	127	209	1,128	2,736	1,234	236	187
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)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1948 - 2004*

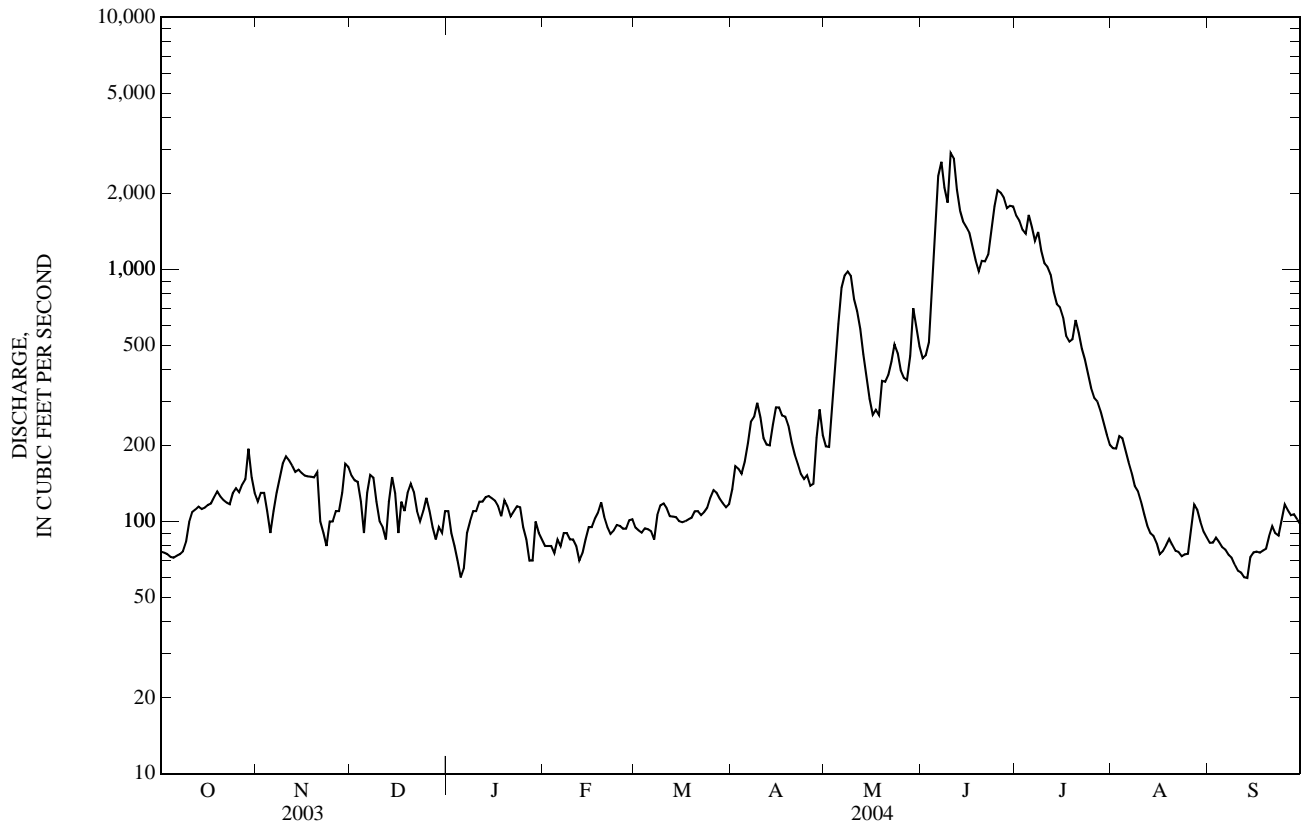
ANNUAL TOTAL	156,765	120,544		
ANNUAL MEAN	429	329	559	
HIGHEST ANNUAL MEAN			905	1975
LOWEST ANNUAL MEAN			310	2001
HIGHEST DAILY MEAN	5,370	May 30	2,900	Jun 10
LOWEST DAILY MEAN	55	Feb 24	60	Jan 5
ANNUAL SEVEN-DAY MINIMUM	61	Sep 4	65	Sep 8
MAXIMUM PEAK FLOW			3,230	Jun 10
MAXIMUM PEAK STAGE			5.25	Jun 10
INSTANTANEOUS LOW FLOW				10
ANNUAL RUNOFF (AC-FT)	310,900	239,100	404,900	
10 PERCENT EXCEEDS	1,410	996	1,710	
50 PERCENT EXCEEDS	119	120	180	
90 PERCENT EXCEEDS	74	78	100	

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

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

e--Estimated.

YELLOWSTONE RIVER BASIN
06200000 BOULDER RIVER AT BIG TIMBER, MT—Continued



06204050 WEST ROSEBUD CREEK NEAR ROSCOE, MT

LOCATION.--Lat 45°14'35", long 109°43'50" (NAD 27), in NE¼ 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 observations of water temperature and specific conductance were made during the year. U.S. Geological Survey satellite telemeter at station.

AVERAGE DISCHARGE.--39 years, 121 ft³/s, 31.50 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, 392 ft³/s, July 9, gage height, 1.91 ft; minimum daily, 31 ft³/s, Aug. 11.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	85	85	79	74	64	72	58	60	68	192	203	111
2	78	85	78	74	57	72	58	60	68	223	202	103
3	79	84	77	75	42	72	58	60	68	224	200	101
4	80	85	79	74	58	72	58	61	71	224	198	99
5	79	84	78	73	57	72	58	61	71	229	195	99
6	80	84	77	72	57	72	58	62	72	247	192	99
7	79	83	78	72	57	72	59	63	72	293	189	99
8	78	84	78	72	57	72	59	63	71	357	186	99
9	79	85	77	72	60	64	59	62	70	339	183	99
10	83	84	78	72	69	57	58	62	83	321	155	99
11	82	83	78	72	72	57	58	62	88	336	31	99
12	81	85	77	73	72	57	58	61	77	315	41	99
13	82	84	78	76	72	57	58	60	73	291	48	99
14	82	83	78	74	71	57	58	59	71	300	60	100
15	82	83	78	77	71	57	58	60	71	298	72	99
16	81	83	77	75	71	57	58	59	70	345	84	99
17	82	84	76	77	71	57	58	59	70	323	136	99
18	83	83	79	76	72	57	58	60	70	308	202	99
19	80	88	78	75	72	57	58	60	68	306	196	99
20	83	80	78	76	73	58	58	60	68	281	190	101
21	81	80	78	77	73	57	59	61	68	236	182	99
22	82	80	78	75	73	58	60	61	68	274	178	116
23	83	80	78	75	72	58	60	61	69	261	176	124
24	82	78	78	76	72	58	60	60	71	233	174	124
25	83	78	78	76	72	58	60	60	73	222	175	124
26	80	80	79	76	72	58	59	60	72	217	175	124
27	83	80	79	75	72	58	59	60	73	214	176	124
28	84	78	78	74	72	58	60	62	72	213	178	124
29	86	77	78	75	72	58	60	67	73	210	176	124
30	84	79	78	76	---	58	60	68	107	208	147	124
31	84	---	88	76	---	58	---	68	---	206	132	---
TOTAL	2,530	2,469	2,426	2,312	1,945	1,905	1,760	1,902	2,186	8,246	4,832	3,208
MEAN	81.6	82.3	78.3	74.6	67.1	61.5	58.7	61.4	72.9	266	156	107
MAX	86	88	88	77	73	72	60	68	107	357	203	124
MIN	78	77	76	72	42	57	58	59	68	192	31	99
AC-FT	5,020	4,900	4,810	4,590	3,860	3,780	3,490	3,770	4,340	16,360	9,580	6,360

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 2004, BY WATER YEAR (WY)

MEAN	93.9	83.0	74.4	67.1	60.6	55.2	42.9	73.6	216	363	195	122
MAX	167	178	118	148	92.0	124	108	134	558	712	277	183
(WY)	(1977)	(1986)	(1980)	(1980)	(1979)	(1979)	(1979)	(1969)	(1974)	(1975)	(1997)	(1971)
MIN	33.4	31.2	28.4	25.7	28.9	21.7	3.57	16.2	72.9	158	103	38.5
(WY)	(1989)	(1975)	(1979)	(1979)	(1985)	(1987)	(1967)	(1978)	(2004)	(1985)	(1988)	(1988)

ADJUSTED FOR CHANGE IN CONTENTS IN MYSTIC LAKE

MEAN	45.3	44.1	30.6	28.5	24.3	24.9	40	107	305	328	177	127
CFSM	0.87	0.85	0.59	0.55	0.47	0.48	0.77	2.05	5.85	6.30	3.40	2.44
IN	1.00	0.95	0.68	0.63	0.50	0.55	0.86	2.37	6.54	7.25	3.91	2.72
AC-FT	2,780	2,630	1,880	1,750	1,400	1,530	2,380	6,590	18,160	20,140	10,880	7,560

OBSERVED

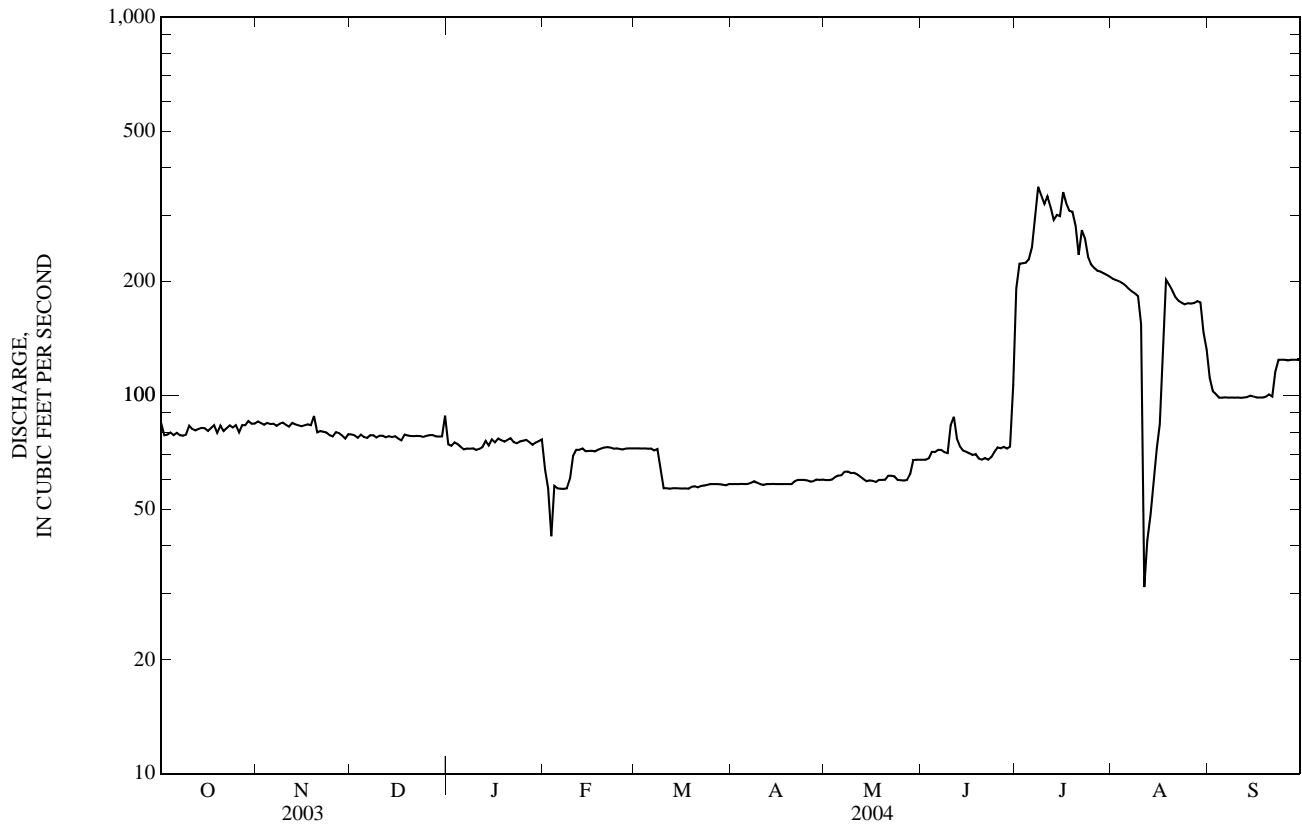
CALENDAR YEAR 2003	TOTAL	41,350	MEAN	113	MAX	439	MIN	20	AC-FT	82,010
WATER YEAR 2004	TOTAL	35,720	MEAN	97.6	MAX	357	MIN	31	AC-FT	70,850

ADJUSTED

CALENDAR YEAR 2003	TOTAL	41,410	MEAN	113	CFSM	2.17	IN	29.09	AC-FT	80,830
WATER YEAR 2004	TOTAL	39,160	MEAN	107	CFSM	2.05	IN	26.15	AC-FT	72,680

YELLOWSTONE RIVER BASIN

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 3,873.8 ft (NGVD 29) (levels by U.S. Army Corps of Engineers). Prior to Oct. 1, 1914, nonrecording gage, and Mar. 26, 1935, to Sept. 30, 1942, nonrecording gage, at bridge 2 mi upstream at different elevations.

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 observations of water temperature and specific conductance were made during the year.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	338	344	337	283	219	283	324	464	539	2,400	866	515
2	335	389	330	e270	229	270	370	476	550	2,460	819	483
3	328	406	326	e200	235	269	373	547	655	2,420	809	500
4	314	394	316	e150	218	266	361	678	965	2,280	792	502
5	305	352	274	e140	241	269	377	919	1,610	2,840	755	482
6	311	372	350	e150	224	252	411	1,170	2,360	2,500	716	462
7	314	374	332	e210	228	254	452	1,310	2,840	2,340	681	452
8	313	374	326	e300	233	321	477	1,340	2,450	2,610	652	448
9	311	393	292	341	223	353	558	1,300	2,210	2,460	623	432
10	399	396	259	348	e210	366	497	1,150	3,760	2,200	600	418
11	409	391	283	327	e200	309	468	1,090	3,750	2,190	515	406
12	380	373	250	309	e180	303	448	996	2,600	2,140	407	392
13	375	366	301	309	e240	316	445	842	2,040	1,990	377	430
14	370	380	356	296	240	293	486	717	1,750	1,960	357	456
15	380	372	304	296	237	284	509	613	1,660	1,980	353	462
16	387	361	257	281	239	295	483	522	1,660	1,980	353	465
17	381	357	295	270	245	314	441	509	1,540	1,860	374	463
18	374	346	281	264	290	323	452	472	1,470	1,750	487	445
19	375	374	292	272	324	333	457	e570	1,400	1,850	523	472
20	365	370	330	261	289	326	432	e550	1,440	1,920	515	530
21	360	e320	302	246	285	302	409	e530	1,440	1,730	521	555
22	357	e290	283	248	289	295	395	601	1,450	1,660	525	530
23	360	e250	267	262	293	304	379	661	1,610	1,600	523	539
24	348	e260	295	263	298	316	367	622	2,060	1,410	543	539
25	346	286	291	248	296	339	372	542	2,580	1,270	563	537
26	345	287	295	e200	280	340	364	492	2,660	1,190	652	540
27	351	315	275	e190	280	316	380	471	2,570	1,140	712	539
28	359	306	230	e170	296	301	468	547	2,360	1,100	664	535
29	404	370	218	e240	284	293	532	814	2,280	1,040	621	530
30	443	372	242	317	---	289	484	725	2,410	985	579	526
31	369	---	242	266	---	299	---	611	---	921	529	---
TOTAL	11,106	10,540	9,031	7,927	7,345	9,393	12,971	22,851	58,669	58,176	18,006	14,585
MEAN	358	351	291	256	253	303	432	737	1,956	1,877	581	486
MAX	443	406	356	348	324	366	558	1,340	3,760	2,840	866	555
MIN	305	250	218	140	180	252	324	464	539	921	353	392
AC-FT	22,030	20,910	17,910	15,720	14,570	18,630	25,730	45,320	116,400	115,400	35,710	28,930

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1935 - 2004, BY WATER YEAR (WY)*

MEAN	510	401	317	276	264	286	410	1,492	3,437	2,322	866	604
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)

YELLOWSTONE RIVER BASIN

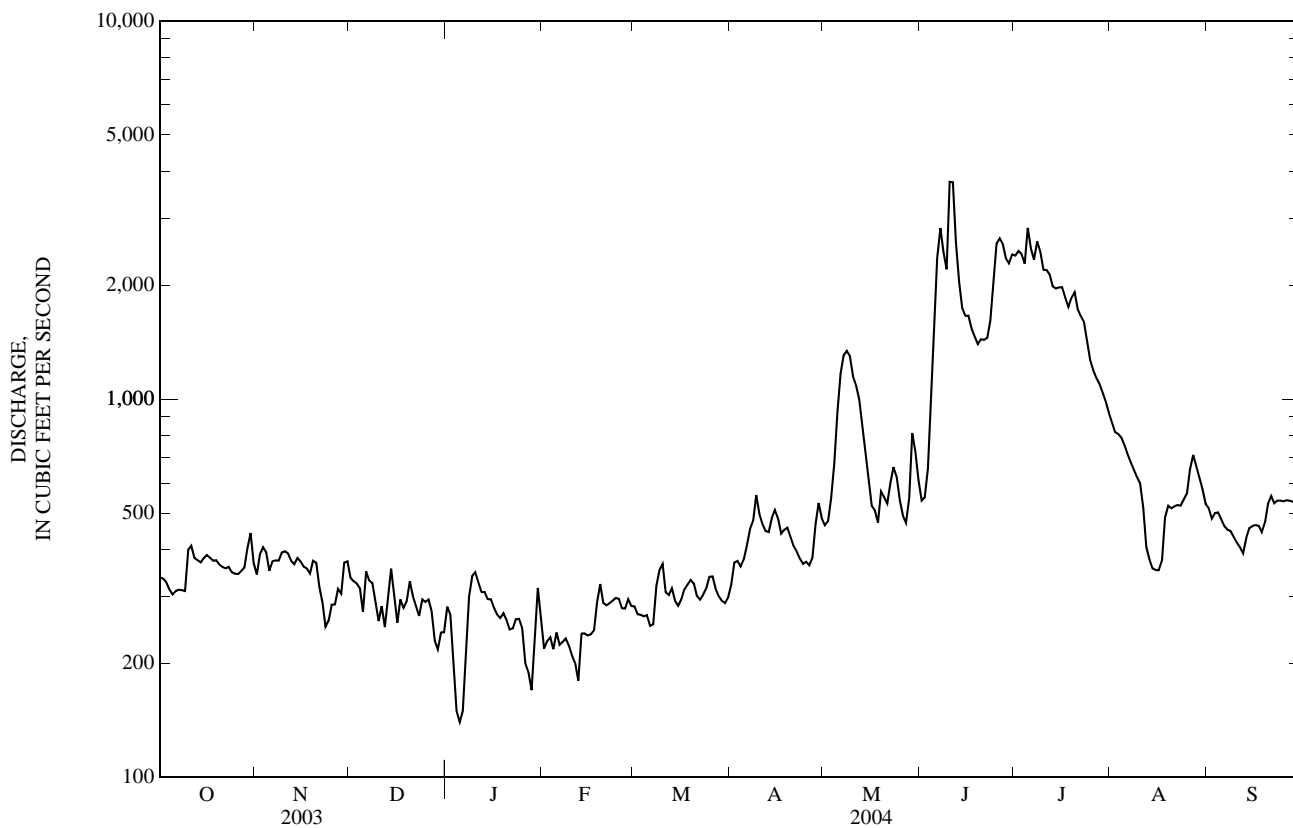
06205000 STILLWATER RIVER NEAR ABSAROKEE, MT—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1935 - 2004*	
ANNUAL TOTAL	290,414		240,600			
ANNUAL MEAN	796		657		932	
HIGHEST ANNUAL MEAN					1,468	1975
LOWEST ANNUAL MEAN					507	1936
HIGHEST DAILY MEAN	6,260	May 30	3,760	Jun 10	10,900	Jun 18, 1974
LOWEST DAILY MEAN	163	Feb 24	140	Jan 5	58	Apr 2, 1936
ANNUAL SEVEN-DAY MINIMUM	216	Jan 10	200	Jan 1	72	Mar 29, 1936
MAXIMUM PEAK FLOW			4,540	Jun 10	12,000	Jun 15, 1967
MAXIMUM PEAK STAGE			4.54	Jun 10	7.17	Jun 15, 1967
INSTANTANEOUS LOW FLOW					a58	Apr 2, 1936
ANNUAL RUNOFF (AC-FT)	576,000		477,200		674,900	
10 PERCENT EXCEEDS	2,220		1,740		2,510	
50 PERCENT EXCEEDS	372		380		444	
90 PERCENT EXCEEDS	248		253		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", 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 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, water, 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)
OCT 29...	1045	59	578	9.8	96	8.1	111	2.0	3.0	45	13.5	2.72	.64
JAN 29...	0850	10	588	10.3	93	7.8	119	-2.0	0.5	58	18.6	2.82	.45
MAY 12...	0910	286	592	11.3	104	8.5	42	0.0	1.5	20	6.13	1.13	.27
AUG 18...	0845	52	611	8.3	97	--	70	10.5	12.0	34	10.7	1.75	.41
Date	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	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 mg/L (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)	Nitrite water, fltrd, mg/L as N (00613)
OCT 29...	.2	3.72	50	.75	<.2	5.7	7.2	65	.09	10.3	<.04	.15	<.008
JAN 29...	.1	1.46	56	.35	<.2	5.4	5.8	69	.09	1.86	<.04	.09	E.004
MAY 12...	.1	.85	19	.37	<.2	4.1	3.6	28	.04	21.7	<.04	E.04	<.008
AUG 18...	.1	1.06	33	E.19	<.2	3.3	4.7	--	--	--	<.04	<.06	<.008
Date	Orthophosphate, 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)	Lead, water, fltrd, ug/L (01049)
OCT 29...	.02	6	<.20	.5	16	<.06	7.2	<.04	<.8	.066	1.5	16	<.08
JAN 29...	<.02	3	<.20	E.2	18	<.06	E6.5	E.02	<.8	.055	.7	E4	<.08
MAY 12...	<.02	22	<.20	E.2	10	<.06	<7.0	.14	<.8	.034	2.6	18	<.08
AUG 18...	<.02	5	<.20	E.2	14	<.06	E4.0	<.04	<.8	.031	.9	6	<.08
Date	Lithium water, fltrd, ug/L (01130)	Manganese, water, fltrd, ug/L (01056)	Mercury, 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)		
OCT 29...	<3	4.0	E.02	E.3	.45	<.4	<.2	60.1	E3	1.5	.13		
JAN 29...	<3	.8	<.02	E.2	.25	<.4	<.2	49.8	<5	.6	.13		
MAY 12...	<3	1.9	E.01	<.4	.28	<.4	<.2	24.4	<5	1.0	.07		
AUG 18...	<3	1.0	E.01	<.4	.14	<.4	<.2	38.1	<5	1.0	.07		

E--Estimated.

06207500 CLARKS FORK YELLOWSTONE RIVER NEAR BELFRY, MT

LOCATION.--Lat 45°00'37", long 109°03'53" (NAD 27), in NW $\frac{1}{4}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$ 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 observations of water temperature and specific conductance were made during the year.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	96	249	315	e210	e190	205	437	477	904	3,150	508	397
2	100	278	304	e200	e200	198	495	530	917	3,100	470	363
3	98	288	297	e190	e210	196	440	760	1,130	2,820	457	395
4	96	300	299	e170	e230	193	388	1,080	1,710	2,640	436	446
5	95	265	252	e160	231	193	454	1,630	2,540	2,750	433	388
6	95	253	299	e170	232	188	565	2,110	3,540	2,490	425	343
7	95	260	296	e210	222	184	633	2,410	4,720	2,270	379	311
8	94	260	286	269	226	200	690	2,530	4,740	2,230	342	286
9	94	281	275	250	223	214	674	2,340	4,330	2,080	310	262
10	111	319	e220	271	211	221	608	1,950	5,640	1,920	281	233
11	126	305	e220	261	e200	221	553	1,830	5,370	1,860	257	229
12	109	288	e220	259	e180	224	539	1,600	3,900	1,820	239	216
13	112	285	e260	250	e190	238	595	1,290	3,010	1,740	221	218
14	122	297	316	253	e200	241	669	1,040	2,480	1,620	205	275
15	123	302	288	253	208	229	643	889	2,290	1,600	190	360
16	122	296	236	247	212	224	592	785	2,220	1,550	176	313
17	120	290	256	245	217	219	512	749	1,930	1,480	174	387
18	125	282	270	236	246	225	491	715	1,690	1,380	192	399
19	133	290	256	233	230	240	438	852	1,560	1,380	198	398
20	129	327	307	236	214	285	386	847	1,560	1,370	220	500
21	126	315	305	229	204	280	344	839	1,600	1,320	238	608
22	125	e260	283	209	198	297	322	918	1,710	1,260	229	563
23	124	e220	252	225	205	346	297	1,010	2,020	1,330	230	519
24	120	e240	244	230	212	426	277	982	2,510	1,130	282	511
25	131	e250	291	223	217	458	281	872	2,990	950	269	539
26	140	e260	284	218	208	415	261	776	3,320	822	1,080	501
27	145	e270	274	e180	205	351	336	734	3,360	790	910	485
28	163	e280	e220	e170	213	306	538	895	3,120	757	724	470
29	194	320	e200	e180	215	278	597	1,180	2,990	672	622	442
30	382	347	e200	e190	---	276	517	1,150	3,150	619	538	424
31	278	---	e200	e200	---	341	---	1,000	---	561	468	---
TOTAL	4,123	8,477	8,225	6,827	6,149	8,112	14,572	36,770	82,951	51,461	11,703	11,781
MEAN	133	283	265	220	212	262	486	1,186	2,765	1,660	378	393
MAX	382	347	316	271	246	458	690	2,530	5,640	3,150	1,080	608
MIN	94	220	200	160	180	184	261	477	904	561	174	216
AC-FT	8,180	16,810	16,310	13,540	12,200	16,090	28,900	72,930	164,500	102,100	23,210	23,370

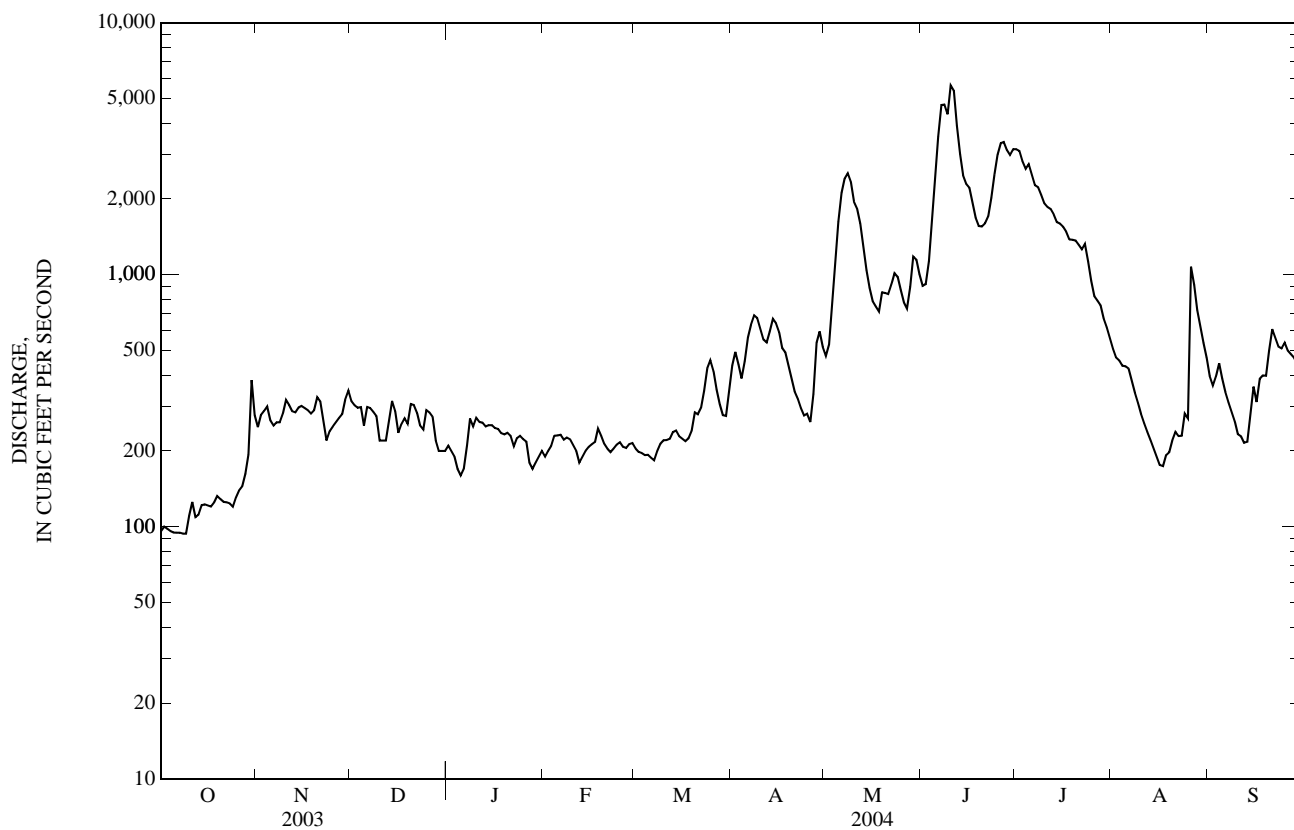
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1921 - 2004, BY WATER YEAR (WY)

MEAN	276	294	262	231	222	222	427	2,037	4,092	2,182	609	313
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 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1921 - 2004	
ANNUAL TOTAL	326,249		251,151			
ANNUAL MEAN	894		686		932	
HIGHEST ANNUAL MEAN					1,485	1997
LOWEST ANNUAL MEAN					547	1977
HIGHEST DAILY MEAN	10,000	Jun 1	5,640	Jun 10	12,300	Jun 9, 1981
LOWEST DAILY MEAN	86	Sep 29	94	Oct 8	33	Apr 26, 1961
ANNUAL SEVEN-DAY MINIMUM	93	Sep 24	95	Oct 3	37	Oct 8, 1988
MAXIMUM PEAK FLOW			6,300	Jun 11	14,800	Jun 9, 1981
MAXIMUM PEAK STAGE			6.26	Jun 11	9.97	Jun 9, 1981
INSTANTANEOUS LOW FLOW			88	Oct 1	a32	Apr 26, 1961
ANNUAL RUNOFF (AC-FT)	647,100		498,200		675,300	
10 PERCENT EXCEEDS	2,690		1,880		2,870	
50 PERCENT EXCEEDS	274		296		300	
90 PERCENT EXCEEDS	120		180		170	

a--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 SE¹/₄SE¹/₄SE¹/₄ 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 lies 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 observations of water temperature and specific conductance were made during the year. **Discharge values given herein have the diversion of White Horse Canal subtracted.**

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	266	619	556	e310	e340	322	425	192	940	3,040	486	463
2	289	577	514	e290	e340	310	536	146	769	3,080	456	408
3	289	589	493	e270	e340	302	586	170	793	2,880	430	437
4	283	597	488	e250	e340	301	504	377	1,120	2,650	792	605
5	276	633	480	e240	e330	298	477	864	1,860	3,050	569	660
6	268	624	e420	e260	e340	297	547	1,440	2,710	2,680	539	572
7	263	613	e480	e310	e340	287	664	1,820	3,700	2,340	540	485
8	273	598	473	e350	e350	283	725	2,010	4,200	2,220	482	418
9	278	567	456	e340	e340	299	783	1,960	3,920	2,120	427	370
10	306	586	437	e340	e340	317	746	1,680	4,520	1,950	353	342
11	375	614	e380	e340	e310	320	651	1,490	6,360	1,800	311	339
12	404	589	e370	e340	e300	313	636	1,500	4,440	1,670	269	342
13	400	565	e420	e340	e320	320	612	1,300	3,420	1,540	225	362
14	417	557	454	e350	e330	328	659	1,080	2,790	1,430	191	377
15	458	561	472	e350	e400	329	736	831	2,500	1,310	156	456
16	462	558	e420	e350	e500	321	713	631	2,360	1,260	133	567
17	462	552	e370	e350	e600	315	642	560	2,230	1,200	127	556
18	456	539	e370	e340	e700	308	569	502	1,980	1,110	128	658
19	456	533	e380	e350	489	316	568	468	1,820	1,020	148	673
20	459	549	e390	e350	371	334	487	598	1,750	1,060	153	720
21	457	e540	e450	e350	346	382	374	569	1,770	1,040	148	861
22	436	e470	445	e350	320	369	308	939	1,720	1,040	183	909
23	438	e400	e410	e350	311	385	241	1,010	1,900	1,140	205	865
24	430	e520	e380	e360	318	440	162	1,030	2,390	1,050	220	813
25	435	539	e380	e330	325	526	100	923	2,760	914	243	806
26	450	551	e430	e300	324	552	76	796	3,120	805	420	791
27	445	553	e410	e280	320	495	49	677	3,220	702	1,180	764
28	482	563	e400	e280	323	425	43	656	3,110	680	951	769
29	539	538	e330	e300	338	385	246	931	2,900	662	814	738
30	619	569	e320	e330	---	350	298	1,200	2,840	594	699	707
31	727	---	e330	e350	---	355	---	1,080	---	550	553	---
TOTAL	12,598	16,863	13,108	10,000	10,645	10,884	14,163	29,430	79,912	48,587	12,531	17,833
MEAN	406	562	423	323	367	351	472	949	2,664	1,567	404	594
MAX	727	633	556	360	700	552	783	2,010	6,360	3,080	1,180	909
MIN	263	400	320	240	300	283	43	146	769	550	127	339
AC-FT	24,990	33,450	26,000	19,840	21,110	21,590	28,090	58,370	158,500	96,370	24,860	35,370

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1921 - 2004, BY WATER YEAR (WY)*

MEAN	530	501	409	351	350	365	558	2,092	4,053	2,017	608	476
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)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1921 - 2004*

ANNUAL TOTAL	352,592	279,426		
ANNUAL MEAN	966	763	1,027	
HIGHEST ANNUAL MEAN			1,623	1997
LOWEST ANNUAL MEAN			644	2001
HIGHEST DAILY MEAN	8,760	Jun 1	10,600	Jun 2, 1936
LOWEST DAILY MEAN	116	Aug 28	37	May 11, 1961
ANNUAL SEVEN-DAY MINIMUM	125	Aug 23	43	Apr 18, 1961
MAXIMUM PEAK FLOW			11,100	Jun 12, 1997
MAXIMUM PEAK STAGE		7.59	Jun 11	Jun 12, 1997
INSTANTANEOUS LOW FLOW			36	Apr 22, 1961
ANNUAL RUNOFF (AC-FT)	699,400	554,200	744,000	
10 PERCENT EXCEEDS	2,500	1,820	2,820	
50 PERCENT EXCEEDS	450	472	469	
90 PERCENT EXCEEDS	259	282	271	

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

e--Estimated.

06208500 CLARKS FORK YELLOWSTONE RIVER AT EDGAR, MT—Continued

