12323230 BLACKTAIL CREEK AT HARRISON AVENUE, AT BUTTE, MT

LOCATION.--Lat 45°59'07", long 112°30'26" (NAD 27), in $NE^1/_4SE^1/_4NE^1/_4$ sec.30, T.3 N., R.7 W., Silver Bow County, Hydrologic Unit 17010201, at culvert on Harrison Avenue near interchange off Interstate 90, at Butte.

PERIOD OF RECORD.--March 1993 to August 1995, December 1996 to August 2003, December 2004 to August 2005. Formerly published as 4558531123026.

GAGE.--None. Elevation at site is 4,544 ft (NGVD 29).

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

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf 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)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)
DEC													
15...	0900	3.3	7.7	326	3.5	5.5	130	36.2	9.00	2.0	2	.07	.07
MAR													
09...	0810	2.8	7.8	323	2.0	4.5	130	37.7	9.06	1.3	E1	E.03	E.04
APR													
18...	0910	7.1	7.6	264	0.5	5.0	100	29.4	7.29	2.6	4	.05	.07
MAY													
16...	0900	22	7.7	203	17.0	9.5	74	21.2	5.03	5.8	7	.04	.05
JUN													
01...	1120	25	7.7	161	7.0	9.0	65	19.3	4.09	5.0	7	.06	.07
13...	1030	20	7.8	200	12.0	8.5	83	24.6	5.23	5.9	6	E.04	.04
JUL													
25...	1050	2.8	7.8	335	16.0	12.5	140	39.7	8.88	2.8	3.3	E.04	.04
AUG													
23...	0930	2.3	7.8	333	18.5	12.0	130	38.6	8.48	2.3	3.0	E.03	.05

Date	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recoverable, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recoverable, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recoverable, ug/L (01051)	Manganese, water, fltrd, ug/L (01056)	Manganese, water, unfltrd recoverable, ug/L (01055)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recoverable, ug/L (01092)	Suspnd. sediment, percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
DEC													
15...	8.9	8.0	49	1,030	2.80	2.74	26.4	55	2.2	11	89	22	.20
MAR													
09...	.9	3.4	54	290	<.08	.41	28.7	29	3.2	5	83	8	.06
APR													
18...	3.4	7.2	201	690	.19	1.24	29.2	46	4.2	12	85	9	.17
MAY													
16...	8.5	12.4	179	540	.24	.92	19.0	28	3.9	7	54	13	.77
JUN													
01...	7.5	14.2	143	810	.25	2.67	23.1	51	6.2	18	71	24	1.6
13...	5.7	8.0	161	360	.12	.62	14.2	23	3.2	4	71	7	.38
JUL													
25...	2.5	3.7	41	200	E.07	.26	32.5	38	3.7	5	87	3	.02
AUG													
23...	1.7	4.1	43	300	<.08	.61	35.4	47	2.2	5	83	9	.06

E--Estimated.

12323240 BLACKTAIL CREEK AT BUTTE, MT

LOCATION.--Lat 45°59'41", long 112°32'09" (NAD 27), in $SW^1/_4$ $NE^1/_4$ $SE^1/_4$ sec.24, T.3 N., R.8 W., Silver Bow County, Hydrologic Unit 17010201, on left bank, 70 feet upstream from George Street culvert in Butte, and 0.2 mi upstream from Silver Bow Creek.

DRAINAGE AREA.--95.4 mi^2.

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

REVISED RECORDS.--WDR-MT-93-1: 1989-92 (M).

GAGE.--Water-stage recorder. Elevation of gage is 5,430 ft (NGVD 29).

REMARKS.--Records good except those for November to December, July to September, and those for estimated days, which are fair. Slight regulation by Basin Creek Reservoir. Diversions for irrigation of about 1,400 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 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.2	6.8	6.7	6.9	7.3	6.8	7.3	9.4	31	12	5.1	6.2
2	6.1	6.8	6.9	6.8	7.5	6.9	7.3	8.9	33	10	5.4	5.7
3	6.0	6.7	7.0	6.7	7.8	6.9	7.9	9.1	33	8.9	6.1	6.0
4	6.1	7.1	7.1	6.6	7.5	6.9	9.5	9.2	32	8.5	6.7	5.7
5	6.5	7.1	7.1	6.6	7.5	6.9	10	10	29	8.1	6.2	5.6
6	7.2	7.1	7.5	e6.8	7.2	6.9	9.4	11	29	8.2	5.7	5.5
7	6.3	6.6	7.0	6.5	7.2	6.8	11	11	29	8.3	5.7	5.8
8	6.4	6.5	7.0	6.7	7.3	6.9	14	12	27	7.9	15	9.2
9	6.5	6.3	6.9	6.7	7.2	6.8	13	17	24	7.5	8.7	6.5
10	6.5	6.3	6.9	6.6	7.2	6.8	10	35	22	9.3	7.3	9.6
11	6.6	6.3	7.0	6.7	7.2	6.8	8.9	40	21	9.8	6.5	7.6
12	6.7	6.3	7.0	6.7	7.3	7.0	8.5	42	24	9.5	7.9	6.8
13	6.7	6.5	7.1	6.7	7.5	6.9	8.2	30	24	8.9	6.9	6.7
14	6.8	6.6	7.2	6.7	7.4	6.7	10	27	22	7.7	6.9	6.5
15	7.0	7.3	7.2	e6.8	7.3	6.9	8.8	26	21	7.4	6.5	7.3
16	6.8	6.9	7.1	6.6	7.2	7.0	8.6	32	19	7.3	6.2	5.6
17	7.2	6.9	7.1	6.6	7.3	7.1	9.5	43	18	7.0	7.0	14
18	8.0	7.0	7.1	8.0	7.3	6.8	11	41	17	6.3	6.5	7.2
19	7.3	6.8	7.2	9.9	7.2	7.1	11	34	17	5.5	5.9	7.6
20	7.3	6.9	7.1	7.7	7.0	7.2	9.3	37	16	6.0	5.7	7.8
21	7.3	6.8	7.0	7.9	7.4	7.0	9.1	36	14	4.9	5.9	6.5
22	8.1	6.8	7.0	7.3	7.0	6.8	8.6	31	13	4.8	5.8	6.4
23	6.9	7.1	6.8	7.4	7.2	6.9	10	28	12	4.9	5.8	6.8
24	6.8	7.1	6.7	7.3	7.0	7.1	13	25	11	4.9	5.7	8.7
25	6.7	7.1	7.0	7.2	7.0	7.0	15	22	10	5.6	5.6	8.3
26	6.5	7.0	7.4	7.3	6.9	6.9	14	20	13	5.3	5.6	8.3
27	6.5	6.9	7.4	7.3	6.7	7.2	13	18	16	4.9	5.5	7.7
28	6.5	6.7	7.4	7.4	6.8	7.9	11	17	19	5.2	5.5	7.7
29	6.4	6.6	7.5	7.3	---	7.6	10	16	15	5.1	5.4	7.6
30	6.8	6.7	7.2	7.4	---	8.0	10	15	13	5.1	10	8.0
31	7.0	---	7.0	7.3	---	7.5	---	16	---	5.1	6.0	---
TOTAL	209.7	203.6	219.6	220.4	202.4	218.0	306.9	728.6	624	219.9	204.7	218.9
MEAN	6.76	6.79	7.08	7.11	7.23	7.03	10.2	23.5	20.8	7.09	6.60	7.30
MAX	8.1	7.3	7.5	9.9	7.8	8.0	15	43	33	12	15	14
MIN	6.0	6.3	6.7	6.5	6.7	6.7	7.3	8.9	10	4.8	5.1	5.5
AC-FT	416	404	436	437	401	432	609	1,450	1,240	436	406	434

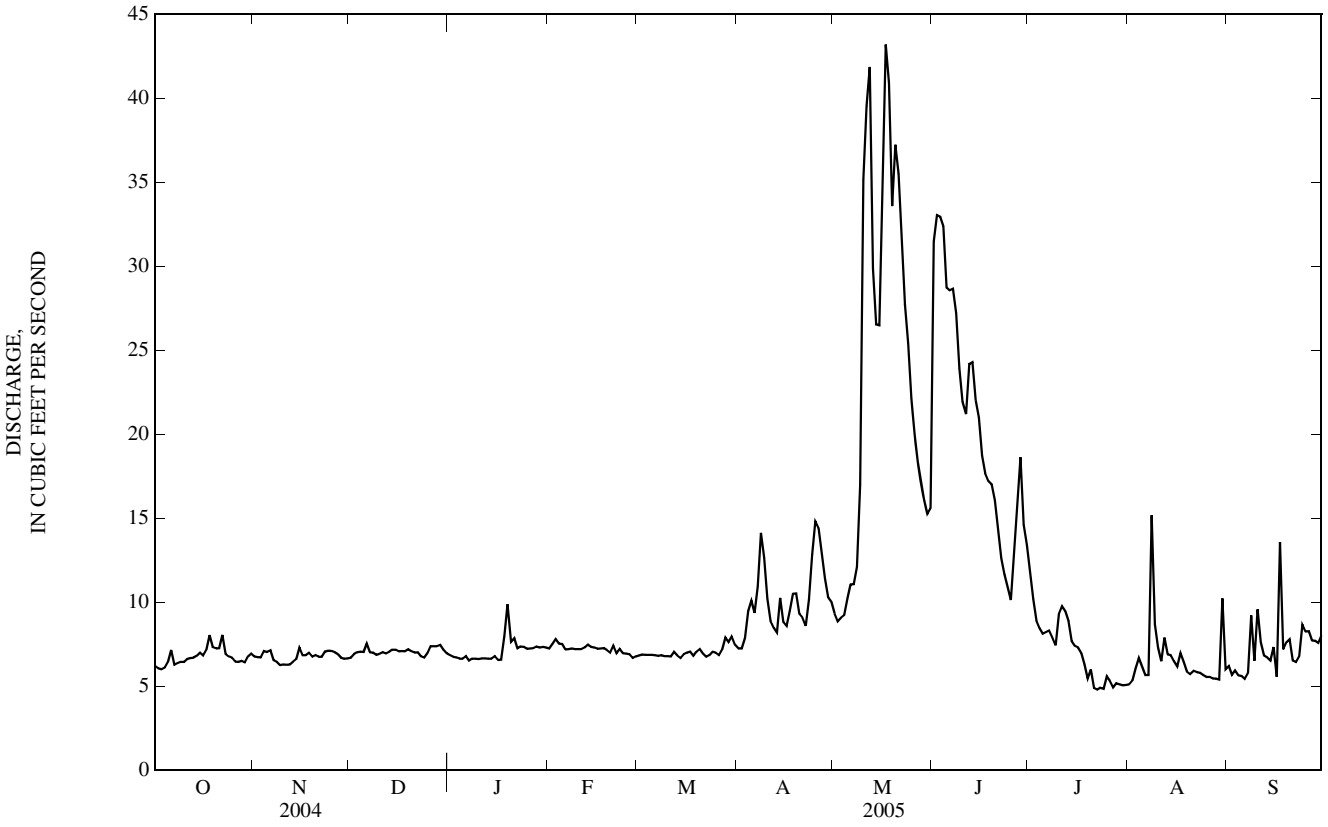
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 2005, BY WATER YEAR (WY)

MEAN	9.65	9.58	8.83	8.68	10.4	14.0	16.0	19.2	19.4	11.2	9.34	8.75
MAX	15.0	13.9	12.6	12.6	25.5	29.9	28.6	41.9	61.5	26.0	17.7	13.6
(WY)	(1998)	(1999)	(1999)	(1999)	(1995)	(1997)	(1996)	(1995)	(1995)	(1997)	(1997)	(1995)
MIN	6.76	6.79	6.68	6.49	6.33	7.03	9.36	7.31	8.11	6.07	5.28	5.98
(WY)	(2005)	(2005)	(2004)	(2004)	(1993)	(2005)	(1992)	(1992)	(2000)	(2003)	(2000)	(1992)

12323240 BLACKTAIL CREEK AT BUTTE, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1989 - 2005	
ANNUAL TOTAL	2,776.6		3,576.7			
ANNUAL MEAN	7.59		9.80		12.1	
HIGHEST ANNUAL MEAN					19.9	1995
LOWEST ANNUAL MEAN					7.57	2004
HIGHEST DAILY MEAN	32	Jun 26	43	May 17	211	Feb 20, 1995
LOWEST DAILY MEAN	4.9	Jul 29	4.8	Jul 22	4.2	Aug 22, 2000
ANNUAL SEVEN-DAY MINIMUM	5.0	Jul 26	5.0	Jul 21	4.4	Aug 19, 2000
MAXIMUM PEAK FLOW			89	May 17	b303	Feb 19, 1995
MAXIMUM PEAK STAGE			2.65	May 17	5.28	Feb 19, 1995
INSTANTANEOUS LOW FLOW			a4.5	Jul 22	4.1	Jul 28, 2004
ANNUAL RUNOFF (AC-FT)	5,510		7,090		8,750	
10 PERCENT EXCEEDS	11		17		20	
50 PERCENT EXCEEDS	6.9		7.2		9.5	
90 PERCENT EXCEEDS	5.7		6.0		6.6	

a--Gage height, 0.83 ft.
b--From indirect measurement.
e--Estimated.



12323250 SILVER BOW CREEK BELOW BLACKTAIL CREEK, AT BUTTE, MT

LOCATION.--Lat 45°59'47", long 112°33'45" (NAD 27), in SW$^1/_4$ SE$^1/_4$ $^1/_4$ sec. 23, T.3 N., R.8 W., Silver Bow County, Hydrologic Unit 17010201, on right bank at Interstate 90 overpass in Butte, 0.8 mi upstream from Whiskey Gulch, 1.3 mi downstream from Blacktail Creek, and at river mile 20.2.

DRAINAGE AREA.--103 mi^2.

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WDR-MT-92-1: 1984-90 (M). WDR-MT-98-1: Drainage area. WDR-MT-2000-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 5,409.47 ft (NGVD 29). October 1983 to Sept. 14, 1997, water-stage recorder 150 ft upstream at elevation 1.40 ft higher. Sept. 15, 1997 to Dec. 3, 1997, no gage in operation due to channel reconstruction during EPA Superfund cleanup operations. Dec. 3, 1997 to Aug. 16, 1999, water-stage recorder 0.8 mi downstream at different elevation. Aug. 16, 1999 to May 10, 2000, water-stage recorder 2.1 mi downstream at different elevation.

REMARKS.--Water-discharge records good. Flow slightly regulated by Silver Bow County sewage treatment plant. 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	16	16	14	15	14	15	15	18	44	21	14	15
2	15	16	15	15	15	15	15	17	41	19	14	15
3	15	16	14	15	15	15	15	17	42	18	15	15
4	15	16	14	15	15	15	18	18	40	18	15	14
5	15	15	14	15	15	14	20	18	36	18	15	15
6	16	15	15	15	15	14	19	19	37	16	14	14
7	15	15	15	15	15	14	19	20	36	16	14	14
8	15	15	15	15	15	14	21	21	34	16	25	15
9	15	15	15	15	15	15	21	28	31	15	18	14
10	15	15	14	15	15	15	18	48	29	17	18	19
11	15	15	14	15	15	14	17	49	29	19	15	17
12	15	15	14	15	14	15	18	54	33	17	17	16
13	15	15	14	15	15	15	17	42	32	16	16	17
14	15	15	14	15	15	15	20	37	29	15	16	17
15	15	16	14	15	15	15	16	37	29	15	15	18
16	15	15	15	15	15	15	17	43	27	e15	15	16
17	15	15	14	15	16	15	18	55	26	e14	16	28
18	17	15	14	17	15	15	20	51	25	14	15	18
19	16	14	14	20	14	15	20	44	25	14	14	18
20	16	14	14	17	15	16	18	46	24	14	14	19
21	16	15	14	17	15	15	17	46	22	13	14	18
22	17	15	14	15	14	15	17	41	20	12	14	17
23	16	15	14	16	15	15	19	37	19	12	14	18
24	16	15	14	16	16	16	22	34	19	12	14	21
25	16	15	14	15	16	16	26	31	18	15	14	19
26	16	15	15	15	15	15	24	29	22	15	14	19
27	15	15	15	15	15	16	23	27	25	14	14	18
28	14	15	15	16	15	18	21	25	31	14	14	18
29	15	14	15	15	---	17	19	23	24	13	14	17
30	16	14	15	14	---	16	19	23	23	13	22	18
31	16	---	15	14	---	16	---	24	---	13	15	---
TOTAL	479	451	446	477	419	471	569	1,022	872	473	478	517
MEAN	15.5	15.0	14.4	15.4	15.0	15.2	19.0	33.0	29.1	15.3	15.4	17.2
MAX	17	16	15	20	16	18	26	55	44	21	25	28
MIN	14	14	14	14	14	14	15	17	18	12	14	14
AC-FT	950	895	885	946	831	934	1,130	2,030	1,730	938	948	1,030

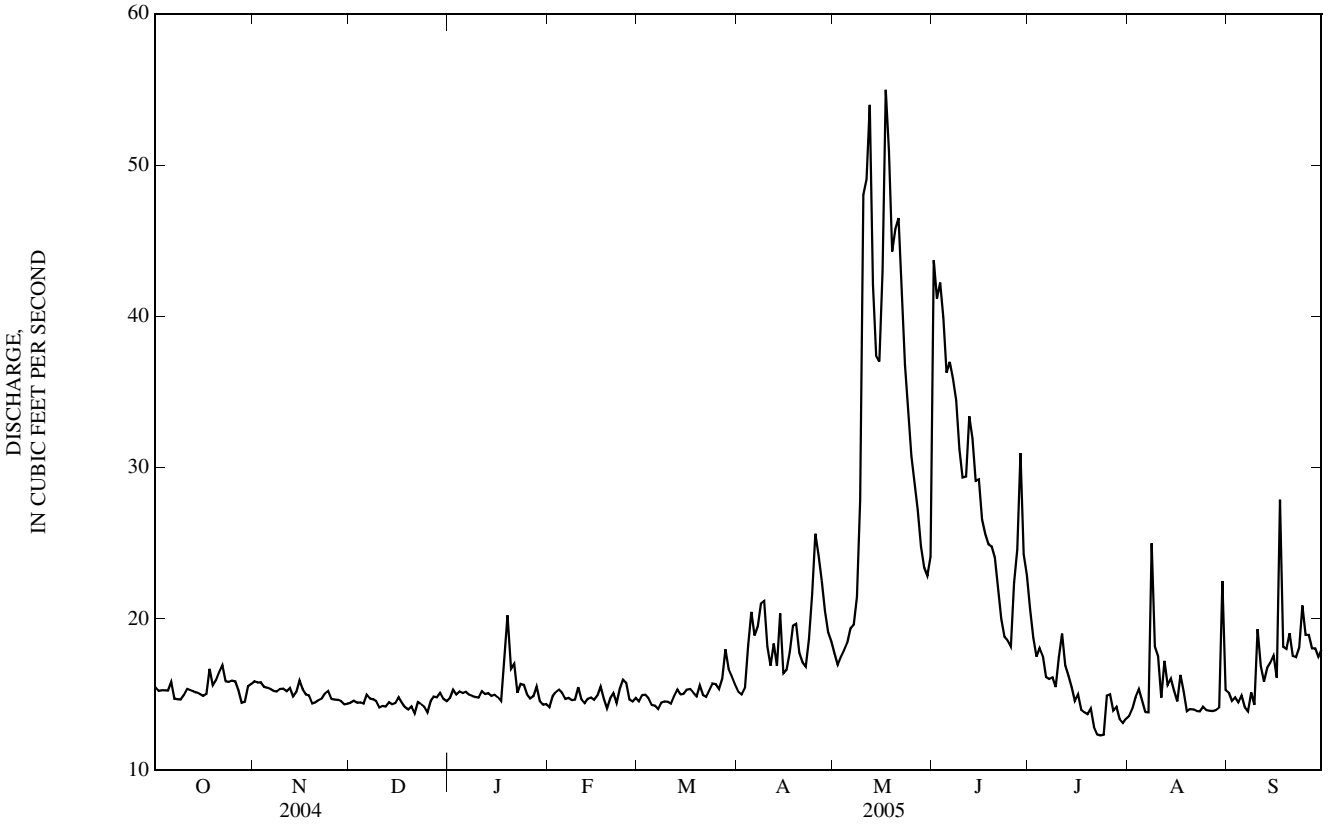
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 2005, BY WATER YEAR (WY)

MEAN	19.6	19.3	18.1	17.8	19.6	24.3	27.1	29.8	28.7	21.0	19.8	18.8
MAX	26.7	25.7	24.0	25.6	38.0	40.7	42.2	53.5	75.2	37.0	28.7	25.9
(WY)	(1984)	(1984)	(1998)	(1984)	(1995)	(1997)	(1998)	(1995)	(1995)	(1995)	(1993)	(1995)
MIN	14.7	15.0	14.4	13.4	14.2	15.2	14.9	12.6	15.5	12.4	14.0	14.1
(WY)	(2003)	(2005)	(2005)	(1989)	(2001)	(2005)	(1992)	(1992)	(2000)	(2003)	(2001)	(2000)

12323250 SILVER BOW CREEK BELOW BLACKTAIL CREEK, AT BUTTE, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1984 - 2005	
ANNUAL TOTAL	5,860		6,674			
ANNUAL MEAN	16.0		18.3		22.0	
HIGHEST ANNUAL MEAN					30.8	1995
LOWEST ANNUAL MEAN					16.1	2004
HIGHEST DAILY MEAN	37	Jun 26	55	May 17	258	Feb 20, 1995
LOWEST DAILY MEAN	13	Jul 10	12	Jul 22	8.0	May 8, 1992
ANNUAL SEVEN-DAY MINIMUM	13	Jul 26	13	Jul 18	11	May 2, 1992
MAXIMUM PEAK FLOW			88	May 17	b447	Jul 30, 1998
MAXIMUM PEAK STAGE			2.43	May 17	c8.11	Jul 30, 1998
INSTANTANEOUS LOW FLOW			a9.5	Jul 22	6.4	Aug 27, 1996
ANNUAL RUNOFF (AC-FT)	11,620		13,240		15,930	
10 PERCENT EXCEEDS	19		27		32	
50 PERCENT EXCEEDS	15		15		19	
90 PERCENT EXCEEDS	14		14		15	

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



12323250 SILVER BOW CREEK BELOW BLACKTAIL CREEK, AT BUTTE, MT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--March 1993 to August 1995, December 1996 to current year.

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

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

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf 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)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)
DEC													
15...	1005	16	7.5	554	4.0	6.5	160	44.9	12.1	2.9	3	.97	1.18
MAR													
09...	0935	16	7.6	564	9.0	6.5	170	47.7	12.0	2.3	3	1.18	1.54
APR													
18...	1030	21	7.6	475	1.0	7.0	140	39.4	8.90	3.6	4	.16	.26
MAY													
16...	1025	38	7.6	370	17.0	11.0	110	32.4	7.92	5.7	9	.10	.22
JUN													
01...	1240	67	7.6	238	6.0	9.0	79	23.4	5.02	6.9	19	.12	1.39
13...	0955	34	7.8	361	10.0	9.5	130	38.1	8.44	6.2	7	.09	.20
JUL													
25...	1215	16	7.9	545	17.0	15.0	190	53.2	13.1	5.6	6.5	.12	.18
AUG													
23...	1045	15	7.9	552	22.0	16.5	180	50.9	12.7	5.7	6.4	.10	.14

Date	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recoverable, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recoverable, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recoverable, ug/L (01051)	Manganese, water, fltrd, ug/L (01056)	Manganese, water, unfltrd recoverable, ug/L (01055)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recoverable, ug/L (01092)	Suspnd. sediment, percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
DEC													
15...	10.2	42.1	38	370	.26	2.27	331	366	277	286	84	10	.43
MAR													
09...	9.1	61.9	37	570	.30	2.73	498	509	284	323	83	9	.39
APR													
18...	11.3	21.8	268	290	.33	1.68	113	129	54.0	68	88	5	.28
MAY													
16...	12.1	22.5	126	460	.37	2.41	70.8	102	27.8	47	86	10	1.0
JUN													
01...	14.0	111	78	2,970	.68	31.0	88.7	340	35.3	230	76	97	18
13...	10.2	18.8	116	420	.26	2.27	58.1	98	27.2	38	86	9	.83
JUL													
25...	11.9	18.4	25	140	.27	1.11	61.3	88	26.7	38	77	5	.22
AUG													
23...	11.6	17.3	32	120	.27	1.09	48.4	70	31.9	43	81	4	.16

12323600 SILVER BOW CREEK AT OPPORTUNITY, MT

LOCATION.--Lat 46°06'28", long 112°48'17" (NAD 27), in $SE^1/_4SW^1/_4SE^1/_4$ sec.11, T.4 N., R.10 W., Deer Lodge County, Hydrologic Unit 17010201, on left bank 200 ft downstream from Stuart Street bridge, 0.5 mi east of Opportunity, and 1.0 mi upstream from Mill Creek.

DRAINAGE AREA.--363 mi^2. Prior to water year 2001, drainage area published as 284 mi^2.

PERIOD OF RECORD.--July 1988 to current year. Prior to October 1991, seasonal records only.

REVISED RECORDS.--WDR MT-2001-01: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 4,912.37 ft (NGVD 29).

REMARKS.-Records good except those for estimated daily discharges, which are fair. Numerous diversions 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	20	24	e21	e21	23	23	29	38	120	52	21	23
2	20	25	e22	e21	24	23	29	37	133	47	21	23
3	20	26	e22	e21	25	24	30	37	128	43	21	22
4	20	24	e22	e20	23	24	32	39	117	41	21	21
5	20	24	e22	e19	23	23	34	43	108	41	20	22
6	20	24	e22	e18	22	24	33	48	115	36	19	21
7	21	25	e22	e19	e22	25	35	49	121	34	19	20
8	20	25	e22	e20	23	27	40	57	105	33	18	20
9	20	24	e23	e20	e23	28	39	74	99	32	31	21
10	20	25	e25	e21	24	29	35	124	90	32	28	24
11	21	25	e24	e21	25	29	33	132	86	35	23	26
12	21	24	e22	e22	24	30	32	113	98	33	18	24
13	22	24	e22	e21	24	28	33	101	97	33	22	24
14	22	24	e22	e20	24	28	36	99	88	32	20	24
15	22	25	23	e19	24	27	35	101	83	28	18	24
16	23	25	23	e21	e23	28	33	114	86	25	17	24
17	23	24	23	e23	e23	28	35	175	96	25	17	33
18	25	24	24	e26	e24	26	38	145	97	25	19	37
19	25	24	21	e32	e26	27	37	146	88	25	17	28
20	24	23	21	e30	28	29	37	143	80	26	17	28
21	25	20	e20	e29	28	29	36	144	71	23	17	27
22	26	24	e19	e28	27	28	36	132	66	23	18	27
23	26	25	e18	e28	26	e27	38	129	62	22	17	27
24	25	25	e19	e28	26	e27	44	119	57	22	17	32
25	24	25	e20	e28	27	30	48	107	53	23	17	31
26	25	24	e21	e27	23	28	51	99	57	25	17	31
27	25	e21	e23	27	23	29	50	93	70	24	18	30
28	24	e21	e23	28	24	33	44	91	69	20	19	29
29	24	e21	e23	27	---	33	41	93	73	22	19	29
30	24	e21	e23	25	---	30	39	93	60	20	26	30
31	24	---	e22	e24	---	29	---	93	---	21	27	---
TOTAL	701	715	679	734	681	853	1,112	3,008	2,673	923	619	782
MEAN	22.6	23.8	21.9	23.7	24.3	27.5	37.1	97.0	89.1	29.8	20.0	26.1
MAX	26	26	25	32	28	33	51	175	133	52	31	37
MIN	20	20	18	18	22	23	29	37	53	20	17	20
AC-FT	1,390	1,420	1,350	1,460	1,350	1,690	2,210	5,970	5,300	1,830	1,230	1,550

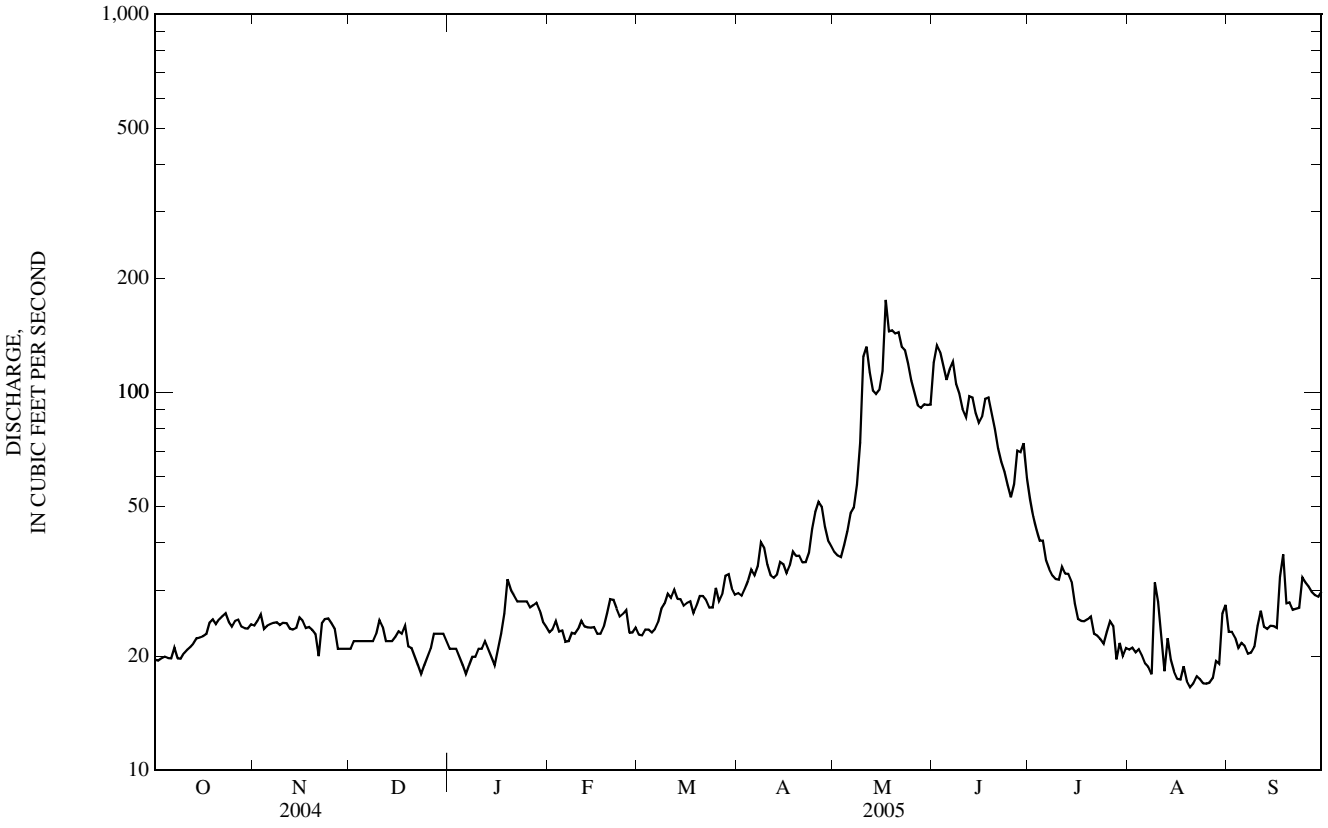
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 2005, BY WATER YEAR (WY)

MEAN	35.6	35.2	32.5	35.2	48.3	52.8	62.2	93.0	92.9	43.7	28.7	31.0
MAX	55.8	49.5	49.2	68.6	184	86.6	120	261	281	107	69.5	59.8
(WY)	(1998)	(1996)	(1998)	(1997)	(1996)	(1997)	(1996)	(1997)	(1997)	(1995)	(1993)	(1993)
MIN	21.5	23.0	21.9	22.2	21.9	27.5	37.1	31.3	23.6	16.7	14.5	18.2
(WY)	(2004)	(2004)	(2005)	(2001)	(2001)	(2005)	(2005)	(1992)	(2000)	(2003)	(2000)	(2003)

12323600 SILVER BOW CREEK AT OPPORTUNITY, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1988 - 2005	
ANNUAL TOTAL	9,881		13,480			
ANNUAL MEAN	27.0		36.9		50.3	
HIGHEST ANNUAL MEAN					99.0	1997
LOWEST ANNUAL MEAN					26.9	2004
HIGHEST DAILY MEAN	68	May 23	175	May 17	d1,300	Feb 11, 1996
LOWEST DAILY MEAN	12	Aug 12	17	Aug 16	11	Aug 2, 2003
ANNUAL SEVEN-DAY MINIMUM	13	Aug 10	17	Aug 19	12	Jul 18, 2003
MAXIMUM PEAK FLOW			a211	May 17	d1,300	Feb 11, 1996
MAXIMUM PEAK STAGE			b4.56	Nov 30	b6.91	Feb 11, 1996
INSTANTANEOUS LOW FLOW			c15	Nov 21	f9.1	Aug 20, 2004
ANNUAL RUNOFF (AC-FT)	19,600		26,740		36,440	
10 PERCENT EXCEEDS	40		89		93	
50 PERCENT EXCEEDS	25		25		38	
90 PERCENT EXCEEDS	18		20		21	

a--Gage height, 4.02 ft.
b--Backwater from ice.
c--Gage height, 2.23 ft.
d--Estimated daily discharge during a period of ice effect.
e--Estimated.
f--Gage height, 2.05 ft.



12323600 SILVER BOW CREEK AT OPPORTUNITY, MT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--March 1993 to August 1995, December 1996 to current year.

PERIOD OF DAILY RECORD.--
SUSPENDED-SEDIMENT DISCHARGE: March 1993 to September 1995.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--
SEDIMENT CONCENTRATION: Maximum daily mean, 563 mg/L, July 13, 1995; minimum daily mean, 3 mg/L, Sep. 16, 1993; Feb. 3-7, July 22, 1994.
SEDIMENT LOAD: Maximum daily, 495 tons, June 6, 1995; minimum daily, 0.19 ton, Feb. 4-7, 1994.

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

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf 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)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)
DEC													
15...	1635	21	8.4	565	6.0	3.0	200	59.9	13.2	11.0	14	.88	1.21
MAR													
08...	1330	26	8.8	558	19.0	7.5	200	57.4	12.7	12.5	17	.78	1.29
APR													
18...	1505	37	9.0	492	2.5	6.0	180	52.8	11.1	12.4	17	.39	.94
MAY													
17...	0710	165	7.9	316	6.5	6.5	110	34.6	6.44	10.3	46	.57	4.09
JUN													
01...	1720	119	8.2	319	10.0	8.5	120	38.7	6.60	9.5	80	.49	3.87
13...	1210	95	8.6	332	15.0	10.5	130	39.5	7.32	10.8	16	.24	.79
JUL													
26...	0735	27	8.2	493	7.0	11.0	180	52.5	11.3	16.6	19.2	.23	.78
AUG													
24...	0720	17	8.1	597	7.0	10.5	230	66.5	14.9	13.7	18.3	2.72	3.85

Date	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recoverable, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recoverable, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recoverable, ug/L (01051)	Manganese, water, fltrd, ug/L (01056)	Manganese, water, unfltrd recoverable, ug/L (01055)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recoverable, ug/L (01092)	Suspnd. sediment, percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
DEC													
15...	30.0	81.3	14	460	.40	12.7	359	391	256	315	83	11	.62
MAR													
08...	32.7	93.2	9	550	.30	15.1	489	482	157	263	86	11	.77
APR													
18...	23.1	87.8	9	570	.23	14.5	341	426	65.1	216	80	13	1.3
MAY													
17...	41.0	554	83	4,730	1.49	125	352	829	203	791	66	202	90
JUN													
01...	36.2	472	62	9,190	.93	149	335	1,050	147	1,100	73	93	30
13...	24.0	93.0	63	640	.96	17.6	159	213	77.2	159	89	18	4.6
JUL													
26...	18.5	79.6	23	450	.58	12.3	180	241	63.5	168	90	11	.80
AUG													
24...	60.0	206	13	440	.40	13.0	713	799	611	856	81	14	.64

12323670 MILL CREEK NEAR ANACONDA, MT

LOCATION.--Lat 46°04'59", long 112°54'58" (NAD 27), in $NW^1/_4NE^1/_4SW^1/_4$ sec. 24, T.4 N., R.11 W., Deer Lodge County, Hydrologic Unit 17010201, on right bank 500 ft downstream from private road bridge, 0.1 mi downstream from Cabbage Gulch, 1.0 mi downstream from Silver Creek, 2.8 mi southeast of Anaconda, and at river mile 6.7.

DRAINAGE AREA.--34.4 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 2004 to September 2005.

GAGE.--Water-stage recorder. Elevation of gage is 5,470 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	e16	13	e10	e9.0	8.8	7.3	9.2	23	153	86	19	11
2	e16	13	e10	e9.5	8.8	7.5	9.8	22	125	85	22	10
3	e16	13	11	e9.0	8.9	7.7	10	22	111	74	20	10
4	e16	13	10	e8.5	9.0	7.5	9.8	24	104	65	19	10
5	e16	13	e9.5	e8.0	8.7	7.5	9.5	28	105	61	18	11
6	e16	13	10	e7.5	e8.0	7.5	10	35	124	61	17	11
7	16	13	10	e8.5	e7.5	7.5	13	40	107	61	16	11
8	16	13	11	e9.0	e7.5	7.6	16	47	95	58	17	11
9	16	12	10	e8.5	e8.0	8.0	13	54	87	58	18	11
10	15	12	11	e8.5	e8.5	8.2	12	89	82	53	18	11
11	15	12	12	9.0	e8.5	8.1	12	94	81	50	17	12
12	15	12	11	8.8	8.2	8.4	12	83	83	46	16	12
13	15	11	e10	8.9	8.1	8.0	12	77	76	45	17	13
14	15	12	11	8.5	e7.5	8.0	13	82	76	43	16	12
15	15	12	10	8.6	e7.5	7.9	12	93	100	38	15	11
16	15	12	10	e8.5	e7.0	7.8	12	117	124	37	14	11
17	15	12	10	9.1	e7.0	8.1	14	148	158	36	14	15
18	16	11	10	10	e7.0	e7.5	14	129	149	33	14	14
19	15	11	10	12	e7.5	8.2	14	164	118	30	14	13
20	15	11	e10	11	7.8	8.8	13	167	118	29	13	12
21	15	e10	e9.5	10	7.6	8.6	13	164	154	28	12	12
22	15	e11	e9.0	10	e7.5	8.2	15	155	178	27	12	12
23	15	12	e8.5	10	e7.0	e7.0	18	158	170	26	12	12
24	14	12	e9.0	10	e7.0	e7.5	21	141	134	25	11	14
25	13	12	e10	9.7	7.3	e8.0	26	124	117	26	11	14
26	14	11	10	9.8	e7.0	e9.0	28	114	118	25	11	13
27	14	e10	9.7	9.8	e7.0	9.4	30	115	113	23	11	12
28	14	e9.0	9.6	9.7	e7.0	12	27	128	112	21	11	12
29	13	e9.0	9.7	9.6	---	10	25	143	100	21	10	11
30	13	e9.5	10	9.4	---	9.1	24	137	91	20	11	11
31	13	---	e9.5	9.0	---	8.8	---	146	---	20	11	---
TOTAL	463	349.5	311.0	287.4	217.2	254.7	467.3	3,063	3,463	1,311	457	355
MEAN	14.9	11.7	10.0	9.27	7.76	8.22	15.6	98.8	115	42.3	14.7	11.8
MAX	16	13	12	12	9.0	12	30	167	178	86	22	15
MIN	13	9.0	8.5	7.5	7.0	7.0	9.2	22	76	20	10	10
AC-FT	918	693	617	570	431	505	927	6,080	6,870	2,600	906	704

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

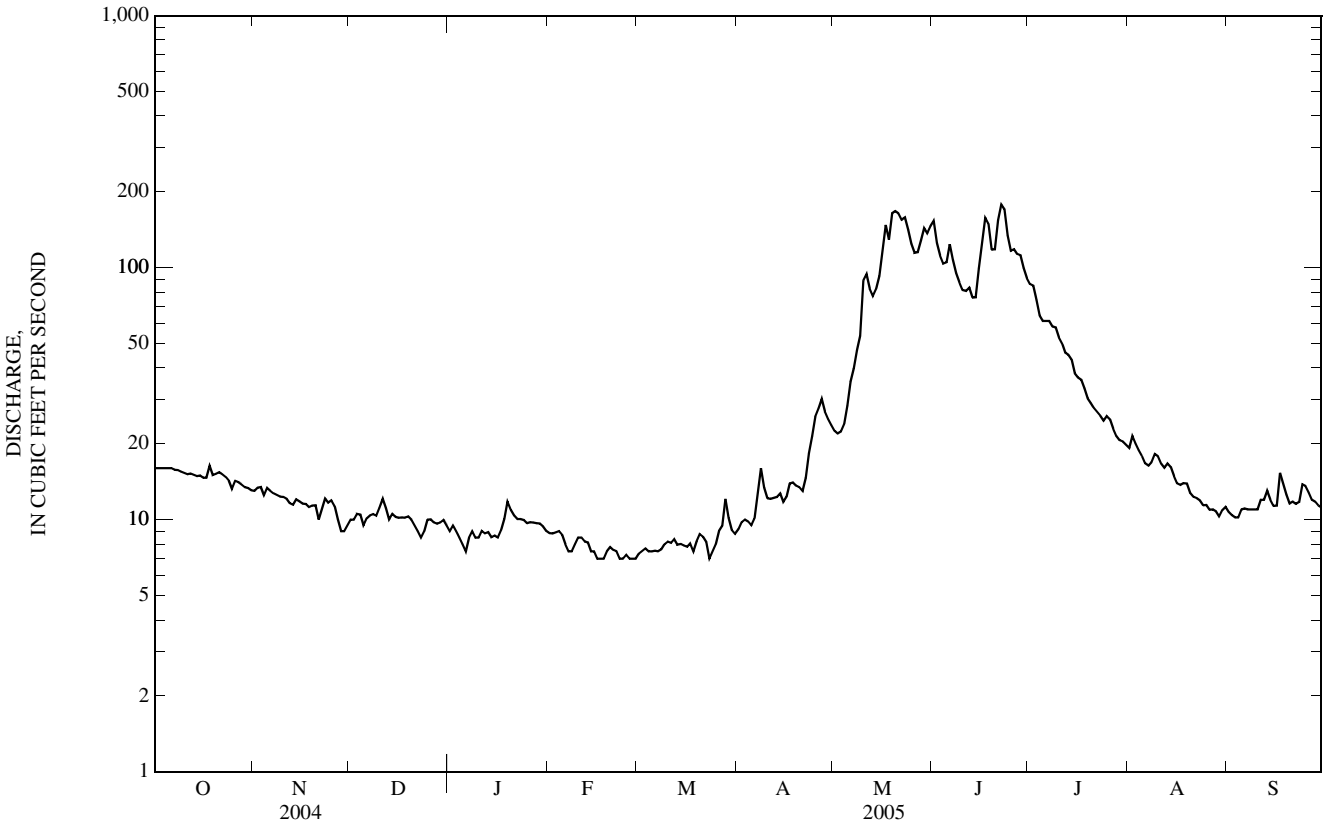
MEAN	14.9	11.7	10.0	9.27	7.76	8.22	15.6	98.8	115	42.3	14.7	11.8
MAX	14.9	11.7	10.0	9.27	7.76	8.22	15.6	98.8	115	42.3	14.7	11.8
(WY)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)
MIN	14.9	11.7	10.0	9.27	7.76	8.22	15.6	98.8	115	42.3	14.7	11.8
(WY)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)

SUMMARY STATISTICS FOR 2005 WATER YEAR

ANNUAL TOTAL	10,999.1	
ANNUAL MEAN	30.1	
HIGHEST DAILY MEAN	178	Jun 22
LOWEST DAILY MEAN	7.0	Feb 16
ANNUAL SEVEN-DAY MINIMUM	7.1	Feb 23
MAXIMUM PEAK FLOW	a202	Jun 23
MAXIMUM PEAK STAGE	b3.67	Dec 24
ANNUAL RUNOFF (AC-FT)	21,820	
10 PERCENT EXCEEDS	102	
50 PERCENT EXCEEDS	12	
90 PERCENT EXCEEDS	8.0	

a--Gage height, 3.62 ft.
b--Backwater from ice.
e--Estimated.

12323670 MILL CREEK NEAR ANACONDA, MT—Continued



WATER-QUALITY RECORDS

PERIOD OF RECORD.--December 2004 to August 2005.

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

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

Date	Time	Instantaneous discharge, cfs (00061)	Turbdty white light, det ang 90+/-30 corrctd NTRU (63676)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf 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)
DEC										
15...	1330	10	<2.0	8.3	179	4.0	3.0	82	21.7	6.75
MAR										
08...	0940	7.4	<2.0	8.6	195	9.5	3.5	92	24.4	7.58
APR										
18...	1155	14	<2.0	8.2	161	4.0	4.0	72	19.3	5.71
MAY										
16...	1315	113	8.7	7.7	86	10.0	8.0	33	9.40	2.25
JUN										
01...	1410	153	<2.0	8.0	67	11.0	6.0	28	8.29	1.83
22...	1145	165	11	7.8	56	26.5	9.5	24	7.12	1.45
JUL										
25...	1440	27	<2.0	8.2	129	16.5	13.0	58	16.6	4.08
AUG										
23...	1305	12	<2.0	8.5	169	28.5	15.0	78	21.8	5.60

12323670 MILL CREEK NEAR ANACONDA, MT—Continued

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

Date	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover -able, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover -able, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recover -able, ug/L (01051)	Manganese, water, fltrd, ug/L (01056)	Manganese, water, unfltrd recover -able, ug/L (01055)
DEC												
15...	9.8	10	.08	.05	1.0	1.3	41	90	.17	.27	6.4	7
MAR												
08...	8.7	9	.11	.05	1.1	1.9	27	90	E.05	.31	7.0	9
APR												
18...	11.3	13	.04	.06	1.6	2.8	42	130	.10	.54	5.8	13
MAY												
16...	19.1	25	.05	.18	4.5	10.3	62	620	.24	3.12	5.9	37
JUN												
01...	11.7	15	.04	.08	3.8	5.7	35	170	.11	.83	3.6	11
22...	7.3	10	.04	.15	2.4	7.2	26	590	.08	2.35	5.1	36
JUL												
25...	23.4	25.5	.05	.08	2.6	4.3	80	170	.22	.59	8.9	17
AUG												
23...	21.3	23.8	.04	.07	1.7	2.9	89	180	.16	.57	6.8	18

Date	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover -able, ug/L (01092)	Suspnd. sediment, percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
DEC					
15...	1.2	E1	81	1	.03
MAR					
08...	1.1	E1	75	2	.04
APR					
18...	1.3	E2	78	2	.08
MAY					
16...	2.1	8	64	29	8.8
JUN					
01...	2.4	4	51	6	2.5
22...	1.6	7	57	29	13
JUL					
25...	1.2	3	79	2	.15
AUG					
23...	.8	E2	75	3	.10

E--Estimated.

12323700 MILL CREEK AT OPPORTUNITY, MT

LOCATION.--Lat 46°06'52", long 112°49'11" (NAD 27), in $SE^1/_4SE^1/_4NE^1/_4$ sec. 10, T.4N., R.10W., Deer Lodge County, Hydrologic Unit 17010201, on right bank at Opportunity, 0.9 mi upstream from Mill-Willow Bypass, and at river mile 0.9.

DRAINAGE AREA.--43.2 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 2003 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 4,940 ft (NGVD 29).

REMARKS.--Water-discharge records good except those for estimated daily discharges, which are poor. No regulation. Minor diversions for irrigation 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	e1.1	0.83	1.1	e1.0	1.9	1.6	0.40	0.82	116	66	3.1	1.2
2	e1.1	0.90	1.1	e1.2	1.8	1.4	0.40	0.71	100	66	3.5	0.92
3	e1.1	1.0	1.2	e1.0	1.9	1.2	0.40	0.59	87	57	3.2	1.2
4	e1.0	0.95	1.5	e1.0	1.7	1.0	0.40	0.60	79	49	2.9	1.3
5	e1.0	0.99	1.7	e0.90	1.5	0.86	0.39	0.90	76	41	2.5	1.4
6	e1.0	1.0	1.8	e0.70	e1.2	0.65	0.38	1.5	92	38	2.1	0.92
7	e1.0	0.98	1.7	e0.80	1.5	0.53	0.38	2.6	82	37	2.0	0.82
8	e0.90	0.97	1.7	e0.90	1.7	0.47	0.44	5.0	73	37	1.9	0.77
9	e0.90	0.98	1.7	e0.80	e1.4	0.46	0.39	8.3	65	36	2.1	0.77
10	e0.90	0.98	1.8	e0.90	e1.5	0.45	0.38	31	55	33	2.0	0.97
11	e0.90	1.0	2.1	e0.90	e1.7	0.43	0.38	46	52	29	1.6	1.3
12	e0.80	0.98	1.9	e1.0	1.9	0.47	0.39	44	54	25	1.6	1.4
13	e0.80	0.95	1.2	e0.90	1.9	0.44	0.40	40	49	23	1.7	1.4
14	e0.80	0.87	1.8	e0.80	e1.5	0.42	0.46	40	48	22	1.7	1.5
15	0.85	1.1	2.0	e0.90	e1.2	0.44	0.41	50	65	20	1.5	1.4
16	0.91	1.0	1.6	e1.1	e1.1	0.45	0.41	67	82	18	1.4	1.4
17	0.93	1.2	1.6	1.3	e1.2	0.45	0.40	95	107	16	1.3	2.1
18	1.1	1.4	1.5	1.5	1.3	0.43	0.45	88	109	13	1.3	2.2
19	1.1	1.4	1.4	1.5	1.4	0.44	0.48	107	86	9.4	1.3	2.1
20	0.98	1.4	1.2	1.6	1.6	0.45	0.50	121	83	7.0	1.2	1.9
21	1.0	e0.90	1.1	1.7	1.7	0.45	0.48	128	105	6.1	1.0	1.8
22	1.1	e0.80	e0.90	1.7	e1.5	0.44	0.46	122	122	5.8	1.3	1.9
23	1.1	e0.90	e0.70	1.8	e1.3	e0.40	0.43	122	120	4.5	1.1	1.9
24	1.1	e0.90	e0.80	1.8	e1.4	e0.40	0.43	114	94	4.4	0.94	2.3
25	0.97	e1.0	0.95	1.8	e1.5	e0.40	0.54	104	81	5.1	1.0	2.2
26	0.93	e0.90	1.1	1.8	e1.5	0.43	0.75	92	80	5.3	1.1	2.0
27	0.96	e0.80	1.4	1.9	e1.5	0.44	1.3	85	76	4.8	0.99	2.2
28	0.93	1.0	1.7	1.9	e1.5	0.47	1.2	91	75	4.3	1.0	2.2
29	0.92	0.90	1.8	1.8	---	0.45	1.2	102	67	4.3	1.1	2.1
30	0.91	0.96	1.8	1.9	---	0.42	1.1	99	64	4.5	1.0	1.7
31	0.92	---	e1.5	1.9	---	0.41	---	103	---	4.4	1.1	---
TOTAL	30.01	29.94	45.35	40.70	42.8	17.75	16.13	1,912.02	2,444	695.9	51.53	47.27
MEAN	0.97	1.00	1.46	1.31	1.53	0.57	0.54	61.7	81.5	22.4	1.66	1.58
MAX	1.1	1.4	2.1	1.9	1.9	1.6	1.3	128	122	66	3.5	2.3
MIN	0.80	0.80	0.70	0.70	1.1	0.40	0.38	0.59	48	4.3	0.94	0.77
AC-FT	60	59	90	81	85	35	32	3,790	4,850	1,380	102	94

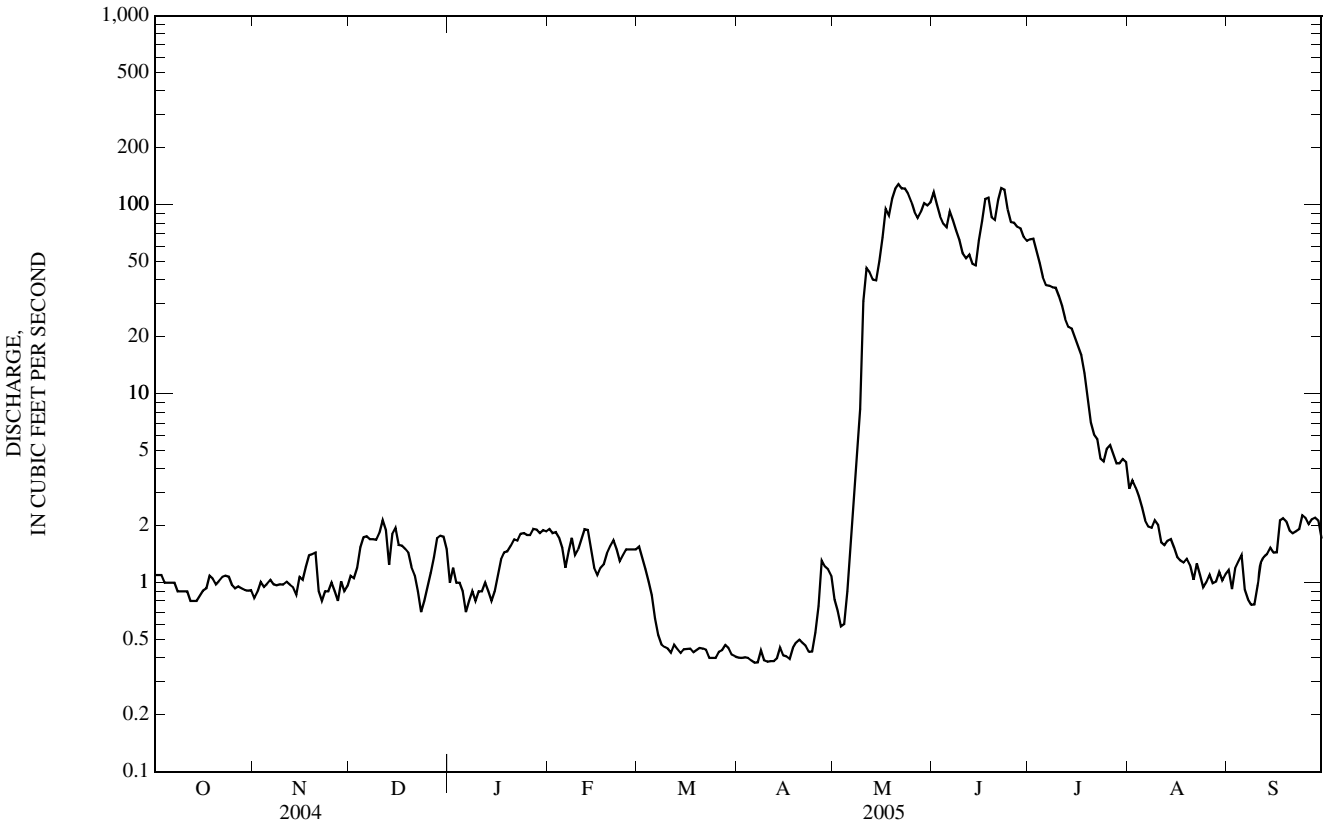
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2003 - 2005, BY WATER YEAR (WY)

MEAN	1.17	1.38	1.62	1.34	1.82	1.86	6.16	41.6	66.3	13.5	1.87	1.46
MAX	1.38	1.77	1.78	1.37	2.09	3.15	16.2	61.7	85.7	22.4	2.27	1.58
(WY)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2003)	(2005)	(2003)	(2005)	(2003)	(2005)
MIN	0.97	1.00	1.46	1.31	1.53	0.57	0.54	9.44	31.8	7.83	1.66	1.38
(WY)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2004)	(2004)	(2004)	(2005)	(2003)

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 2003 - 2005	
ANNUAL TOTAL	1,944.06		5,373.40			
ANNUAL MEAN	5.31		14.7		10.1	
HIGHEST ANNUAL MEAN					14.7	2005
LOWEST ANNUAL MEAN					5.44	2004
HIGHEST DAILY MEAN	60	Jun 6	128	May 21	260	Jun 1, 2003
LOWEST DAILY MEAN	0.70	Dec 23	0.38	Apr 6	0.38	Apr 6, 2005
ANNUAL SEVEN-DAY MINIMUM	0.85	Oct 9	0.39	Apr 5	0.39	Apr 5, 2005
MAXIMUM PEAK FLOW			141	Jun 23	284	Jun 1, 2003
MAXIMUM PEAK STAGE			2.63	Jun 23	3.34	Jun 1, 2003
INSTANTANEOUS LOW FLOW			a0.34	Apr 6	a0.34	Apr 6, 2005
ANNUAL RUNOFF (AC-FT)	3,860		10,660		7,300	
10 PERCENT EXCEEDS	18		69		32	
50 PERCENT EXCEEDS	1.8		1.4		1.7	
90 PERCENT EXCEEDS	0.96		0.45		0.85	

a--Gage height, 0.88 ft.
e--Estimated.

12323700 MILL CREEK AT OPPORTUNITY, MT—Continued



WATER-QUALITY RECORDS

PERIOD OF RECORD.--March 2003 to current year.

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

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

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf 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)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)
DEC													
15...	1515	2.0	8.0	200	6.5	2.0	86	23.6	6.66	18.6	20	.08	.10
MAR													
08...	1150	.48	8.1	214	14.5	5.0	94	25.8	7.12	9.0	10	.07	.07
APR													
18...	1340	.43	7.8	222	10.5	6.5	98	27.0	7.38	10.2	12	.05	.07
MAY													
16...	1600	68	7.8	95	14.5	9.0	36	10.1	2.56	27.0	46	.08	.63
JUN													
01...	1555	117	7.9	72	10.5	7.0	31	8.91	2.04	18.2	24	.07	.29
22...	1405	117	7.9	61	31.0	13.0	25	7.36	1.56	14.7	21	.06	.25
JUL													
25...	1615	5.5	8.2	147	18.0	16.5	65	18.6	4.56	36.6	40.0	.06	.08
AUG													
23...	1500	1.1	8.1	190	29.0	18.5	83	23.9	5.74	25.8	27.9	.05	.06

12323700 MILL CREEK AT OPPORTUNITY, MT—Continued

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

Date	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover -able, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover -able, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recover -able, ug/L (01051)	Mangan- ese, water, fltrd, ug/L (01056)	Mangan- ese, water, unfltrd recover -able, ug/L (01055)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover -able, ug/L (01092)	Suspnd. sedi- ment, percent <.063mm (70331)	Sus- pended sedi- ment concen- tration mg/L (80154)	Sus- pended sedi- ment dis- charge, tons/d (80155)
DEC													
15...	1.7	2.2	57	100	.14	.17	14.1	13	5.2	5	77	2	.01
MAR													
08...	1.2	2.2	64	120	<.08	.08	32.8	27	3.9	4	67	1	<.01
APR													
18...	1.5	2.5	70	130	E.06	.15	27.1	30	3.8	4	80	1	<.01
MAY													
16...	6.1	27.8	64	1,510	.31	9.55	7.5	79	4.5	28	65	81	15
JUN													
01...	4.7	9.9	40	490	.15	2.22	4.0	24	3.8	12	26	29	9.2
22...	3.5	12.4	31	710	.14	3.86	4.1	37	2.8	12	44	45	14
JUL													
25...	3.2	4.5	90	140	.23	.40	11.1	14	2.8	3	77	1	.01
AUG													
23...	2.1	3.0	75	120	E.07	.15	15.5	19	1.7	2	90	1	<.01

E--Estimated.

12323710 WILLOW CREEK NEAR ANACONDA, MT

LOCATION.--Lat 46°03'53", long 112°53'34" (NAD 27), in $SE^1/_4SE^1/_4SW^1/_4$ sec. 30, T.4 N., R.10 W., Deer Lodge County, Hydrologic Unit 17010201, on left bank 1.2 mi downstream from Long Canyon Creek, 4.5 mi southeast of Anaconda, and at river mile 6.5.

DRAINAGE AREA.--13.7 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 2005 to September 2005.

GAGE.--Water-stage recorder. Elevation of gage is 5,310 ft (NGVD 29).

REMARKS.--Water-discharge records good except those for May to June, which are fair. 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							1.6	5.1	28	8.5	2.4	1.4
2							1.9	5.1	26	8.1	2.5	1.4
3							1.9	5.3	22	7.7	2.4	1.3
4							1.9	6.0	23	7.4	2.3	1.2
5							1.7	7.3	22	7.0	2.1	1.5
6							2.0	9.5	22	6.5	2.0	1.4
7							2.7	11	18	6.0	2.0	1.3
8							4.1	17	17	5.6	2.2	1.2
9							2.6	20	17	5.4	2.6	1.2
10							2.2	47	16	5.5	2.6	1.7
11							2.2	68	15	5.2	2.3	1.6
12							2.3	42	16	4.9	2.2	1.5
13							2.4	36	14	4.6	2.4	1.5
14							2.5	37	14	4.4	2.2	1.4
15							2.5	40	13	4.2	2.0	1.3
16							2.4	42	14	4.0	1.8	1.3
17							2.8	52	15	3.9	1.8	2.9
18							2.8	49	14	3.7	1.9	2.0
19							1.7	56	14	3.5	1.8	1.6
20							2.4	57	13	3.3	1.7	1.5
21							2.5	50	12	3.2	1.6	1.5
22							3.0	40	13	3.1	1.6	1.5
23							3.8	38	12	3.0	1.6	1.5
24							6.1	32	12	3.0	1.6	2.0
25							6.6	28	11	3.2	1.6	1.9
26							7.7	26	13	3.1	1.5	1.6
27							8.0	25	12	2.9	1.4	1.5
28							7.6	25	11	2.7	1.4	1.5
29							7.6	25	10	2.6	1.3	1.4
30							5.5	26	9.2	2.5	1.6	1.4
31							---	27	---	2.4	1.6	---
TOTAL							105.0	954.3	468.2	141.1	60.0	46.0
MEAN							3.50	30.8	15.6	4.55	1.94	1.53
MAX							8.0	68	28	8.5	2.6	2.9
MIN							1.6	5.1	9.2	2.4	1.3	1.2
AC-FT							208	1,890	929	280	119	91

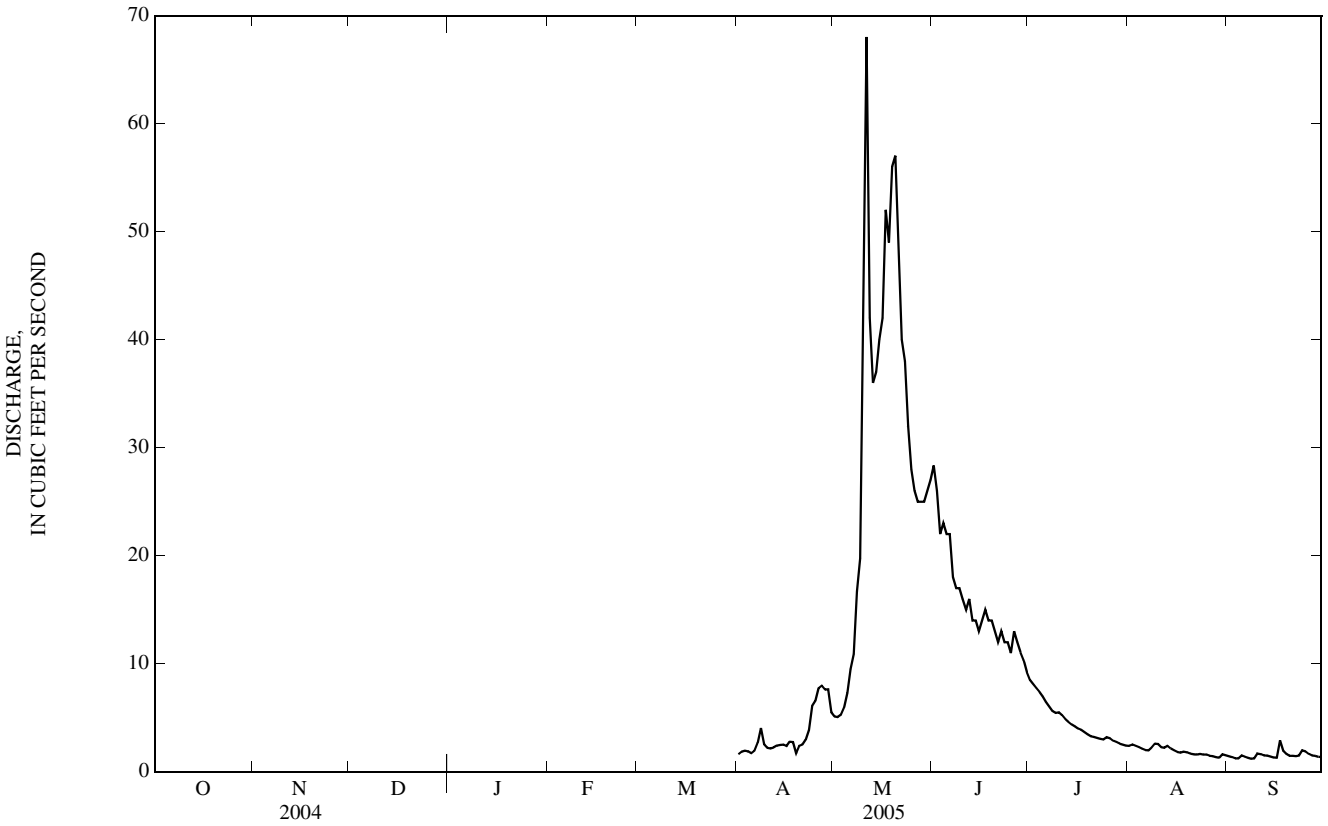
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2005 - 2005, BY WATER YEAR (WY)

MEAN	3.50	30.8	15.6	4.55	1.94	1.53
MAX	3.50	30.8	15.6	4.55	1.94	1.53
(WY)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)
MIN	3.50	30.8	15.6	4.55	1.94	1.53
(WY)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)

SUMMARY STATISTICS	FOR 2005 WATER YEAR	
HIGHEST ANNUAL MEAN	68	May 11
LOWEST ANNUAL MEAN	1.2	Sep 4
MAXIMUM PEAK FLOW	95	May 10
MAXIMUM PEAK STAGE	2.86	May 10
INSTANTANEOUS LOW FLOW	a0.76	Apr 1

a--Gage height, 1.22 ft.

12323710 WILLOW CREEK NEAR ANACONDA, MT—Continued



WATER-QUALITY RECORDS

PERIOD OF RECORD.--December 2004 to August 2005.

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

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

Date	Time	Instantaneous discharge, cfs (00061)	Turbdty white light, det ang 90+/-30 corrctd NTRU (63676)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf 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)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)
DEC												
15...	1145	1.0	<2.0	7.9	113	6.0	0.5	40	13.4	1.65	12.8	13
MAR												
09...	1125	1.0	<2.0	8.2	114	14.0	2.0	41	13.7	1.61	9.9	10
APR												
21...	0750	1.9	2.6	7.7	114	0.0	0.5	42	13.9	1.69	11.1	13
MAY												
16...	1200	39	18	7.5	66	22.0	6.0	23	7.74	.877	16.6	21
JUN												
02...	0745	26	3.5	7.8	80	6.5	5.0	31	10.6	1.04	12.2	14
22...	1015	13	<2.0	7.8	95	23.0	10.0	37	12.8	1.22	12.9	14
JUL												
25...	1340	3.3	<2.0	7.9	102	16.5	11.0	38	13.0	1.30	19.8	20.7
AUG												
23...	1210	1.9	2.8	7.6	108	25.5	13.0	40	13.6	1.41	24.3	27.0

E--Estimated.

12323710 WILLOW CREEK NEAR ANACONDA, MT—Continued

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

Date	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover -able, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover -able, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recover -able, ug/L (01051)	Mangan- ese, water, fltrd, ug/L (01056)	Mangan- ese, water, unfltrd recover -able, ug/L (01055)
DEC										
15...	E.03	E.03	1.2	1.5	43	110	.11	.25	17.8	20
MAR										
09...	E.02	E.03	1.0	1.7	36	90	E.05	.20	13.1	15
APR										
21...	E.03	.06	1.9	2.9	55	190	E.07	.48	18.2	29
MAY										
16...	.04	.19	4.2	10.5	125	1,260	.37	4.08	11.5	49
JUN										
02...	E.03	.06	3.1	4.1	68	270	.15	.75	11.4	19
22...	.05	.04	2.1	2.8	45	130	.12	.35	16.4	19
JUL										
25...	E.03	.06	2.4	3.0	66	170	.16	.47	20.0	30
AUG										
23...	E.04	.07	1.8	3.4	90	290	.18	.84	23.0	49

Date	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover -able, ug/L (01092)	Suspnd. sedi- ment, percent <.063mm (70331)	Sus- pended sedi- ment concen- tration mg/L (80154)	Sus- pended sedi- ment dis- charge, tons/d (80155)
DEC					
15...	1.7	E1	86	4	.01
MAR					
09...	1.1	E1	77	3	.01
APR					
21...	1.5	2	92	4	.02
MAY					
16...	2.5	10	44	93	9.8
JUN					
02...	2.5	3	46	13	.91
22...	1.9	2	76	5	.18
JUL					
25...	3.3	E2	89	4	.04
AUG					
23...	1.4	3	94	9	.05

E--Estimated.

12323720 WILLOW CREEK AT OPPORTUNITY, MT

LOCATION.--Lat 46°06'22", long 112°48'41" (NAD 27), in NW$^1/_4$ NE$^1/_4$ NW$^1/_4$ sec. 14, T4N., R.10W., Deer Lodge County, Hydrologic Unit 17010201, 1,300 ft upstream from Stuart Street culverts, at Opportunity, 1.2 mi upstream from Mill-Willow Bypass, and at river mile 1.2.

DRAINAGE AREA .--30.8 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 2003 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 4,930 ft (NGVD 29).

REMARKS.--Water-discharge records good except those from July to September, which are fair. No regulation. Minor diversions for irrigation 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	8.0	7.2	5.4	5.1	4.9	5.1	4.5	6.4	47	19	6.6	5.4
2	8.0	7.4	5.5	5.0	4.9	5.1	4.5	6.2	34	15	6.9	5.7
3	7.8	7.7	5.8	5.1	5.1	4.9	4.5	5.9	29	12	6.9	5.5
4	7.8	7.4	5.9	5.0	5.5	4.9	4.6	6.1	23	12	6.8	5.3
5	7.7	7.2	5.9	4.9	5.1	5.0	4.5	6.4	21	11	6.5	5.4
6	7.5	7.4	5.9	4.7	4.8	5.1	4.3	7.3	37	10	6.4	5.4
7	7.6	7.1	5.9	4.7	4.6	4.8	4.3	8.3	34	9.5	6.2	5.8
8	7.4	7.0	5.8	4.7	4.7	4.8	4.7	11	23	8.7	5.7	5.8
9	7.6	7.1	5.6	4.5	4.7	4.6	4.7	17	22	8.3	6.1	5.7
10	7.4	6.8	6.3	4.6	4.6	4.5	4.3	40	20	8.8	6.5	6.4
11	7.7	6.7	7.1	4.7	4.7	4.3	4.3	48	19	9.7	6.7	6.7
12	7.7	6.5	6.4	4.6	4.8	4.4	4.2	42	25	8.8	6.8	6.7
13	8.1	6.2	5.6	4.6	4.9	4.2	4.3	32	22	8.0	7.0	6.9
14	7.7	6.0	5.8	4.5	4.8	4.2	5.0	33	18	7.6	7.0	6.7
15	7.7	6.4	6.2	4.5	4.7	4.4	5.2	36	18	7.6	6.3	6.8
16	7.9	6.7	5.9	4.5	4.5	4.6	4.9	44	18	7.3	6.2	6.7
17	7.9	6.5	5.9	4.6	4.6	4.5	4.8	61	32	7.0	5.9	8.7
18	7.8	6.2	5.9	6.3	4.6	4.3	5.6	50	36	7.1	5.9	9.0
19	7.7	6.1	6.2	6.1	4.5	4.7	6.5	55	28	6.9	6.2	8.2
20	7.7	6.2	5.6	5.1	4.5	5.0	6.3	52	23	6.6	6.1	7.8
21	7.9	5.9	5.3	5.2	4.7	4.9	6.1	51	19	6.5	5.7	7.6
22	8.0	5.9	5.4	5.1	4.6	4.6	5.7	46	21	6.6	5.3	7.6
23	7.9	6.1	5.2	5.3	4.6	4.2	5.4	46	22	6.5	5.5	7.3
24	7.9	6.6	5.1	5.3	4.5	4.6	5.5	41	19	6.3	5.4	8.3
25	7.8	7.1	5.2	5.2	4.6	4.8	6.2	35	20	6.6	5.4	8.2
26	7.8	6.3	5.1	5.2	4.7	4.8	7.0	32	35	6.9	5.2	7.8
27	7.8	5.8	5.1	5.2	4.7	4.9	7.9	28	45	6.5	5.3	7.2
28	7.8	5.7	5.0	5.3	4.8	5.3	7.4	24	40	6.1	5.1	6.6
29	7.8	5.6	5.1	5.1	---	5.1	7.0	21	33	5.8	5.0	6.6
30	7.7	5.4	5.1	5.1	---	4.8	7.0	20	24	6.2	5.5	6.7
31	7.3	---	5.1	4.9	---	4.6	---	24	---	6.5	5.6	---
TOTAL	240.4	196.2	175.3	154.7	132.7	146.0	161.2	935.6	807	261.4	187.7	204.5
MEAN	7.75	6.54	5.65	4.99	4.74	4.71	5.37	30.2	26.9	8.43	6.05	6.82
MAX	8.1	7.7	7.1	6.3	5.5	5.3	7.9	61	47	19	7.0	9.0
MIN	7.3	5.4	5.0	4.5	4.5	4.2	4.2	5.9	18	5.8	5.0	5.3
AC-FT	477	389	348	307	263	290	320	1,860	1,600	518	372	406

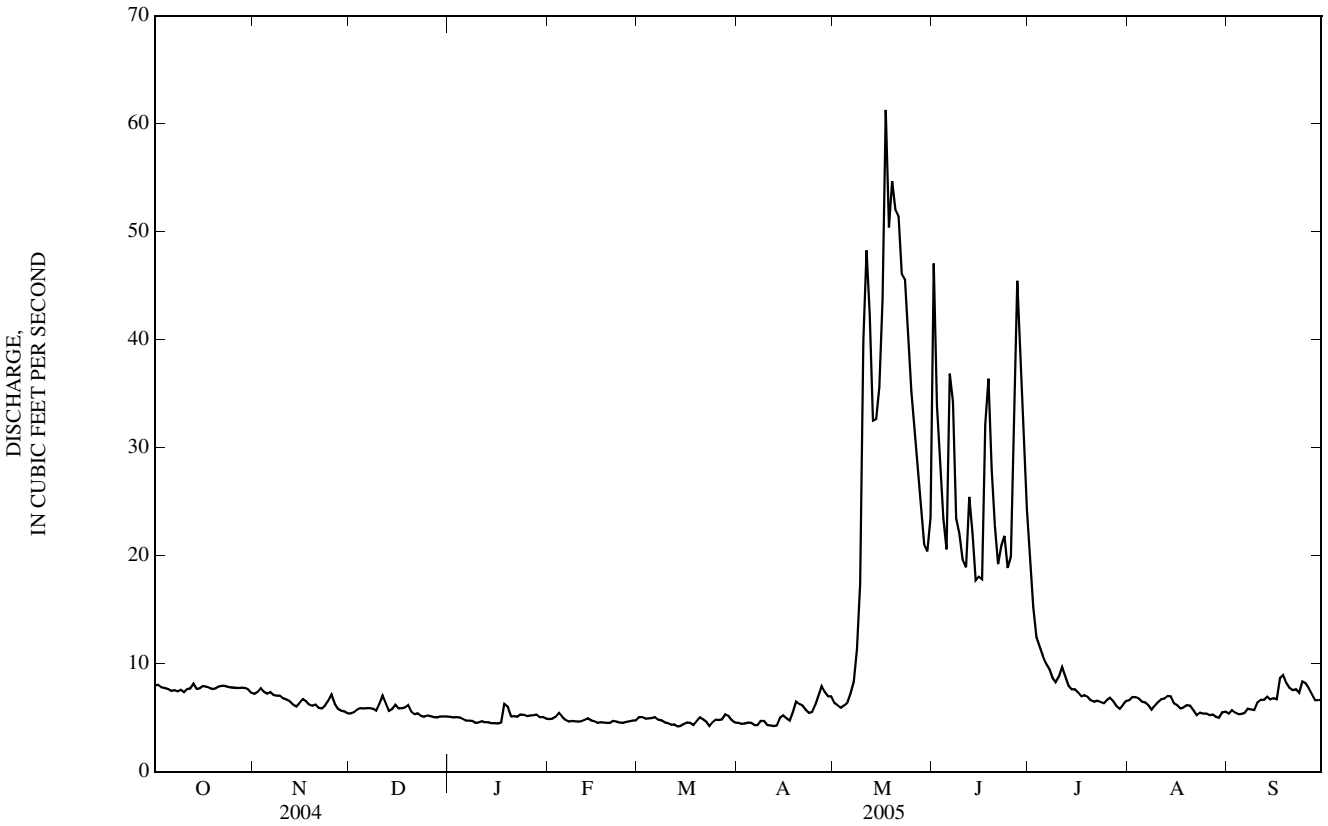
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2003 - 2005, BY WATER YEAR (WY)

MEAN	6.97	5.93	5.42	4.59	4.53	5.42	8.59	24.6	20.9	7.91	6.37	7.00
MAX	7.75	6.54	5.65	4.99	4.74	6.14	14.5	30.2	26.9	8.61	6.72	7.43
(WY)	(2005)	(2005)	(2005)	(2005)	(2005)	(2004)	(2003)	(2003)	(2005)	(2004)	(2004)	(2004)
MIN	6.19	5.33	5.18	4.18	4.32	4.71	5.37	13.4	17.8	6.68	6.05	6.75
(WY)	(2004)	(2004)	(2004)	(2004)	(2004)	(2005)	(2005)	(2004)	(2004)	(2003)	(2005)	(2003)

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 2003 - 2005	
ANNUAL TOTAL	2,883.6		3,602.7			
ANNUAL MEAN	7.88		9.87		8.74	
HIGHEST ANNUAL MEAN					9.87	2005
LOWEST ANNUAL MEAN					7.61	2004
HIGHEST DAILY MEAN	27	Jun 9	61	May 17	61	May 31, 2003
LOWEST DAILY MEAN	4.0	Jan 8	4.2	Mar 13	4.0	Jan 8, 2004
ANNUAL SEVEN-DAY MINIMUM	4.1	Jan 6	4.4	Mar 9	4.1	Jan 6, 2004
MAXIMUM PEAK FLOW			71	May 17	71	May 17, 2005
MAXIMUM PEAK STAGE			5.04	May 17	5.04	May 17, 2005
INSTANTANEOUS LOW FLOW			a3.2	Mar 23	3.1	Jan 31, 2004
ANNUAL RUNOFF (AC-FT)	5,720		7,150		6,330	
10 PERCENT EXCEEDS	15		23		18	
50 PERCENT EXCEEDS	6.6		6.2		6.2	
90 PERCENT EXCEEDS	4.2		4.6		4.5	

a--Gage height, 3.80 ft.

12323720 WILLOW CREEK AT OPPORTUNITY, MT—Continued



WATER-QUALITY RECORDS

PERIOD OF RECORD.--March 2003 to current year.

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

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf 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)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)
DEC													
15...	1540	6.2	8.2	305	4.5	5.5	130	37.0	9.31	13.3	14	E.02	.05
MAR													
08...	1225	4.5	8.3	298	14.5	8.5	130	36.5	8.72	11.5	13	E.03	.05
APR													
18...	1410	5.6	8.3	340	4.0	6.0	150	42.0	10.5	18.8	21	E.03	.07
MAY													
16...	1635	47	7.7	210	13.5	12.0	80	23.4	5.18	68.9	84	.06	.52
JUN													
01...	1625	53	8.0	272	10.0	10.0	120	34.8	7.57	117	133	.11	.28
22...	1435	23	8.3	348	33.5	20.5	170	47.3	12.3	164	164	.06	.12
JUL													
25...	1650	6.5	8.5	318	19.5	16.0	160	44.3	10.9	22.2	22.5	E.02	E.04
AUG													
23...	1525	5.4	8.4	312	29.0	16.5	140	39.8	9.00	17.0	18.1	E.03	.04

12323720 WILLOW CREEK AT OPPORTUNITY, MT—Continued

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

Date	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover -able, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover -able, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recover -able, ug/L (01051)	Mangan-ese, water, fltrd, ug/L (01056)	Mangan-ese, water, unfltrd recover -able, ug/L (01055)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover -able, ug/L (01092)	Suspnd. sedi-ment, sieve diametr percent <.063mm (70331)	Sus-pended sedi-ment concen-tration mg/L (80154)	Sus-pended sedi-ment dis-charge, tons/d (80155)
DEC													
15...	2.1	6.4	26	140	.18	1.18	20.1	21	2.9	5	89	5	.08
MAR													
08...	1.9	4.7	20	120	.09	.98	33.0	30	2.3	5	86	4	.05
APR													
18...	2.8	7.7	20	180	.10	1.62	45.7	56	4.2	9	95	4	.06
MAY													
16...	13.0	48.8	111	1,420	.52	14.4	47.7	104	16.7	68	75	84	11
JUN													
01...	21.4	37.0	91	520	.47	5.09	25.8	49	17.9	35	70	27	3.9
22...	11.0	17.0	41	220	.24	1.97	17.0	29	4.6	10	86	10	.62
JUL													
25...	2.9	4.0	8	50	E.06	.47	5.9	8	1.7	2	96	2	.04
AUG													
23...	3.0	4.6	9	60	E.06	.64	5.8	10	1.9	3	81	2	.03

E--Estimated.

12323750 SILVER BOW CREEK AT WARM SPRINGS, MT

LOCATION.--Lat 46°10'46", long 112°46'50" (NAD 27), in $SW^1/_4SE^1/_4SW^1/_4$ sec.18, T.5 N., R.9 W., Deer Lodge County, Hydrologic Unit 17010201, on left bank 1.0 mi upstream from confluence with Warm Springs Creek, 1.1 mi upstream from county highway bridge, and 0.5 mi east of Warm Springs.

DRAINAGE AREA.--473 mi^2; area at site used prior to May 24, 1994, 483 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1972 to September 1979, April 1993 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 4,800.31 ft (NGVD 29). Prior to May 24, 1994, gage located at sites 0.8 mi downstream at different elevation.

REMARKS.--Water-discharge records good except those for estimated daily discharges and those for July to September, which are fair. Flow is regulated by dam on tailing ponds about 0.2 mi upstream from gage. Diversions for irrigation of about 4,650 acres 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	33	41	e38	e32	39	38	36	41	261	134	38	22
2	34	42	39	e33	40	38	34	44	251	126	40	23
3	34	40	40	e32	40	37	34	47	238	115	39	23
4	35	39	42	e31	40	37	35	50	234	108	38	22
5	37	40	43	e30	38	37	35	51	227	93	36	23
6	39	41	43	e30	35	37	35	53	249	81	35	23
7	39	39	43	e31	34	36	36	56	245	80	34	23
8	41	38	42	e33	34	36	32	68	217	80	32	22
9	35	38	42	e32	34	36	30	86	204	76	34	20
10	35	38	43	e32	34	36	28	131	186	75	32	21
11	40	39	44	e32	34	35	26	149	177	72	43	23
12	49	39	45	e32	35	34	27	137	185	64	31	22
13	53	39	41	e31	37	34	28	125	178	62	34	23
14	53	38	42	e30	36	34	35	125	169	63	37	24
15	50	39	42	31	36	35	34	143	175	64	36	24
16	47	39	40	32	36	34	34	185	190	62	34	25
17	45	40	39	34	35	34	32	265	227	58	32	35
18	45	40	39	38	34	33	34	249	242	56	30	40
19	44	40	40	38	35	34	35	272	208	54	30	46
20	41	39	39	35	36	35	35	300	195	50	31	43
21	42	e37	37	35	37	36	35	313	210	49	31	38
22	42	38	36	34	36	36	36	298	211	50	31	38
23	41	38	e30	36	36	33	36	301	208	49	32	36
24	40	e40	e31	37	37	35	35	286	178	50	29	39
25	39	e45	32	36	37	35	37	267	157	47	27	41
26	40	e43	32	36	38	37	40	231	162	43	25	42
27	38	e41	32	37	38	37	40	214	174	42	25	40
28	38	e40	32	37	38	38	41	213	169	43	25	38
29	39	e39	33	37	---	39	40	215	157	41	24	40
30	40	e38	36	38	---	36	41	209	145	39	25	40
31	40	---	e34	38	---	35	---	212	---	39	23	---
TOTAL	1,268	1,187	1,191	1,050	1,019	1,107	1,036	5,336	6,029	2,065	993	919
MEAN	40.9	39.6	38.4	33.9	36.4	35.7	34.5	172	201	66.6	32.0	30.6
MAX	53	45	45	38	40	39	41	313	261	134	43	46
MIN	33	37	30	30	34	33	26	41	145	39	23	20
AC-FT	2,520	2,350	2,360	2,080	2,020	2,200	2,050	10,580	11,960	4,100	1,970	1,820

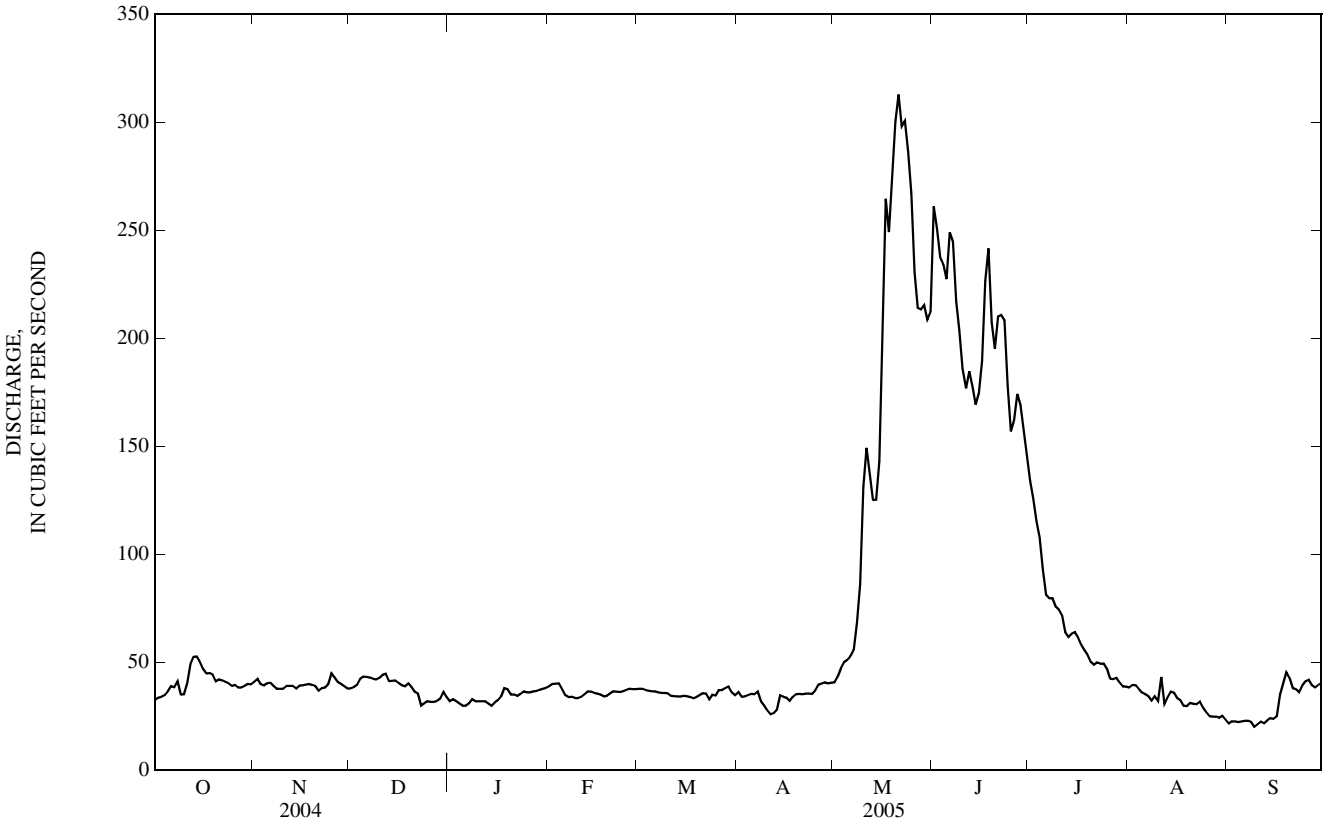
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 2005, BY WATER YEAR (WY)*

MEAN	66.4	73.1	68.5	72.2	76.7	103	121	231	260	110	63.0	58.5
MAX	193	161	156	152	130	207	281	586	770	356	201	137
(WY)	(1976)	(1976)	(1976)	(1974)	(1996)	(1976)	(1976)	(1976)	(1975)	(1975)	(1975)	(1975)
MIN	23.3	31.7	30.9	33.9	36.4	35.7	34.5	62.9	57.2	28.8	16.8	20.1
(WY)	(2004)	(2001)	(2002)	(2005)	(2005)	(2005)	(2005)	(2004)	(2000)	(2000)	(2000)	(2000)

12323750 SILVER BOW CREEK AT WARM SPRINGS, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1972 - 2005*	
ANNUAL TOTAL	15,532		23,200			
ANNUAL MEAN	42.4		63.6		108	
HIGHEST ANNUAL MEAN					228	1975
LOWEST ANNUAL MEAN					40.9	2004
HIGHEST DAILY MEAN	102	Jun 6	313	May 21	1,220	Jun 20, 1975
LOWEST DAILY MEAN	20	Aug 7	20	Sep 9	15	Sep 12, 1973
ANNUAL SEVEN-DAY MINIMUM	20	Aug 5	22	Sep 4	16	Aug 4, 2000
MAXIMUM PEAK FLOW			330	May 20	a1,320	Jun 20, 1975
MAXIMUM PEAK STAGE			3.03	May 20	b8.64	Jan 16, 1974
ANNUAL RUNOFF (AC-FT)	30,810		46,020		77,910	
10 PERCENT EXCEEDS	63		178		215	
50 PERCENT EXCEEDS	40		38		73	
90 PERCENT EXCEEDS	26		31		31	

*--During periods of operation (March 1972 to September 1979, April 1993 to current year).
a--Gage height, 7.47 ft, site and datum then in use.
b--Backwater from ice, site and datum then in use.
e--Estimated.



12323750 SILVER BOW CREEK AT WARM SPRINGS, MT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--March 1993 to current year.

PERIOD OF DAILY RECORD.--
SUSPENDED-SEDIMENT DISCHARGE: April 1993 to September 1995.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--
SEDIMENT CONCENTRATION: Maximum daily mean, 429 mg/L, Mar. 15, 1994; minimum daily mean, 1 mg/L, several days in October 1995.
SEDIMENT LOAD: Maximum daily, 302 tons, June 6, 1995; minimum daily, 0.12 ton, several days in August 1995.

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

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf 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)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)
DEC													
16...	0830	39	8.7	638	-1.5	2.0	270	74.7	19.7	15.8	17	.16	.19
MAR													
08...	1435	37	8.9	631	14.0	7.0	270	78.1	18.9	11.1	13	.08	.15
APR													
18...	1615	34	8.6	685	3.5	7.0	310	87.6	21.1	9.8	13	E.03	.08
MAY													
17...	0840	270	8.8	442	8.0	8.0	170	45.5	13.3	36.9	49	E.03	.37
JUN													
02...	0930	249	9.1	356	13.5	8.0	150	41.6	10.1	29.2	34	.04	.12
13...	1250	183	9.0	407	17.0	12.0	180	52.1	10.9	26.2	28	.07	.14
JUL													
26...	0835	42	8.6	512	13.0	13.5	240	68.5	15.7	27.0	28.6	E.03	.06
AUG													
24...	0820	30	8.8	590	12.5	13.5	260	76.3	17.8	31.1	32.5	E.04	.07

Date	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recoverable, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recoverable, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recoverable, ug/L (01051)	Manganese, water, fltrd, ug/L (01056)	Manganese, water, unfltrd recoverable, ug/L (01055)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recoverable, ug/L (01092)	Suspnd. sediment, percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
DEC													
16...	6.6	10.1	E5	110	E.08	.35	78.0	80	6.5	10	79	4	.42
MAR													
08...	4.7	10.2	E6	190	<.08	.58	168	189	4.6	12	87	4	.40
APR													
18...	2.7	7.8	E4	250	E.05	1.09	195	245	4.7	12	82	3	.28
MAY													
17...	6.6	28.8	72	1,000	.25	6.72	175	304	4.3	38	89	37	27
JUN													
02...	6.6	13.4	37	240	.12	1.18	207	265	3.4	14	87	5	3.4
13...	7.7	11.4	22	200	.11	1.06	192	222	6.6	13	88	4	2.0
JUL													
26...	3.3	5.1	16	140	E.07	.58	62.8	135	3.5	5	75	3	.34
AUG													
24...	2.9	4.4	6	120	<.08	.55	55.0	127	3.7	5	72	3	.24

E--Estimated.

12323760 WARM SPRINGS CREEK NEAR ANACONDA, MT

LOCATION.--Lat 46°08'01", long 112°54'48" (NAD 27), in $SW^1/_4NW^1/_4NE^1/_4$ sec. 1, T.4N., R.11W., Deer Lodge County, Hydrologic Unit 17010201, on left bank 0.3 mi downstream from Arbiter Bridge on private road, 1.0 mi upstream from Dutchman Creek, 1.2 mi northeast of Anaconda, and at river mile 9.5.

DRAINAGE AREA.--157 mi^2.

PERIOD OF RECORD.--October 1997 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 5,150 ft (NGVD 29).

REMARKS.--Records good except those for estimated daily discharges, which are fair. Some regulation by Storm King Lake. Minor diversions upstream from station for irrigation and municipal use. 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 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	72	33	23	e22	31	31	29	27	253	265	95	68
2	60	35	23	e22	31	29	29	25	262	259	89	67
3	54	35	23	e20	31	28	28	24	219	240	84	66
4	51	29	26	e20	31	27	27	27	236	221	80	65
5	50	34	23	e19	30	27	32	31	227	204	78	66
6	47	33	22	e18	26	27	37	38	251	194	75	66
7	44	32	22	e20	28	27	31	37	220	187	72	66
8	43	31	24	e23	28	27	34	48	187	176	73	65
9	41	31	29	e24	26	27	32	54	162	155	79	67
10	41	31	32	25	30	27	29	84	149	148	79	73
11	41	31	39	25	28	27	28	79	147	140	77	75
12	40	30	40	24	32	29	28	67	166	129	75	73
13	39	30	35	25	33	28	28	59	152	125	77	75
14	39	31	36	e23	31	28	31	59	144	121	75	76
15	39	35	33	e22	29	27	29	67	196	115	70	74
16	38	35	32	e27	e27	27	30	94	253	111	68	73
17	38	34	32	35	e28	28	35	136	322	115	68	80
18	40	33	32	45	e30	25	35	103	339	111	70	81
19	40	35	32	48	33	29	31	128	280	104	70	79
20	50	34	31	46	35	29	30	151	270	99	67	77
21	41	e25	28	42	35	28	29	145	339	96	64	75
22	40	32	e26	36	31	27	28	139	406	94	63	75
23	38	34	e20	36	27	27	30	160	400	104	68	75
24	37	34	e23	34	28	e25	32	197	356	102	66	81
25	35	31	e25	29	29	e26	32	126	316	104	63	80
26	36	29	e24	30	29	27	33	117	309	102	62	77
27	35	e20	e24	31	29	28	36	121	310	96	65	75
28	35	e23	25	32	30	32	32	147	312	91	66	74
29	34	e21	27	31	---	30	31	182	303	87	65	72
30	33	e22	30	31	---	29	31	175	285	85	67	74
31	33	---	e24	30	---	28	---	172	---	84	68	---
TOTAL	1,304	923	865	895	836	861	927	3,019	7,771	4,264	2,238	2,190
MEAN	42.1	30.8	27.9	28.9	29.9	27.8	30.9	97.4	259	138	72.2	73.0
MAX	72	35	40	48	35	32	37	197	406	265	95	81
MIN	33	20	20	18	26	25	27	24	144	84	62	65
AC-FT	2,590	1,830	1,720	1,780	1,660	1,710	1,840	5,990	15,410	8,460	4,440	4,340

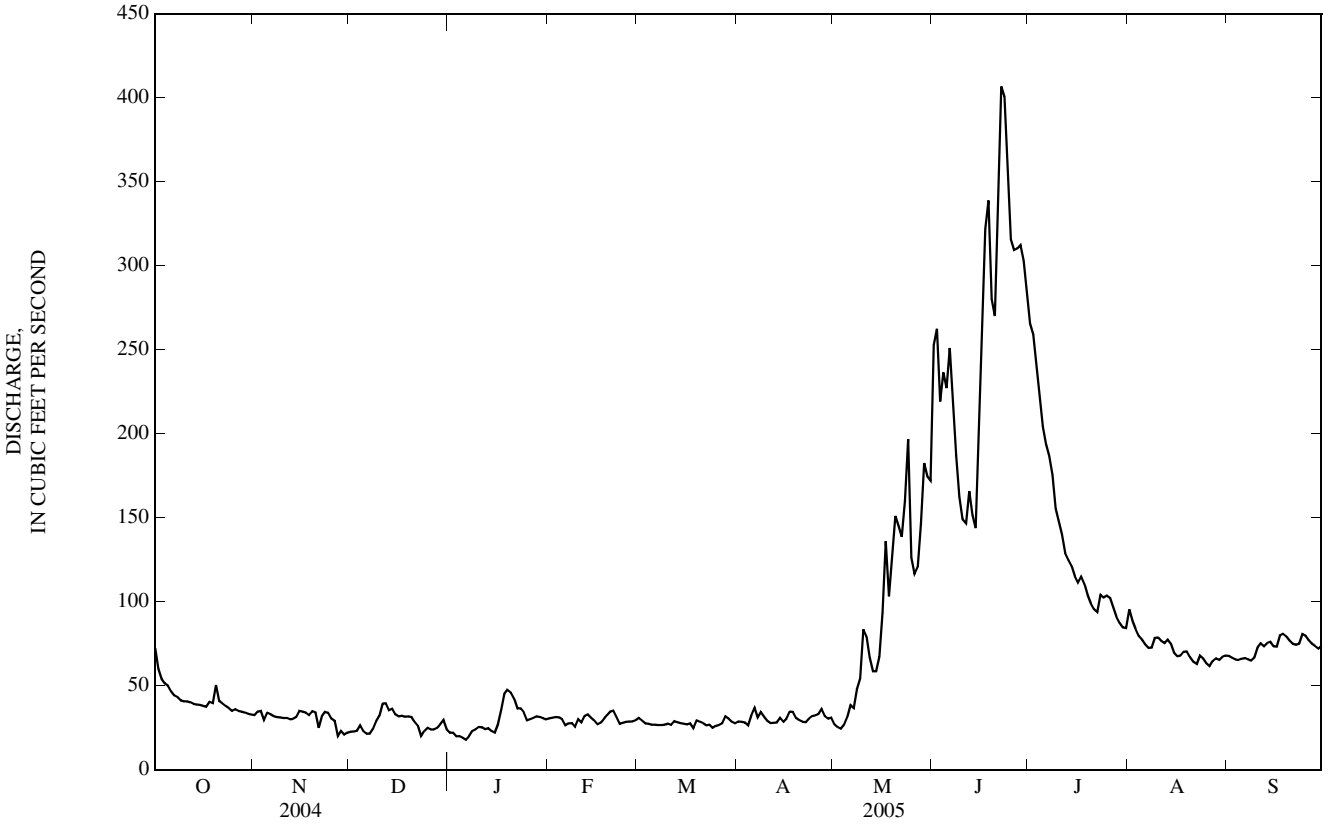
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1998 - 2005, BY WATER YEAR (WY)

MEAN	72.0	58.2	48.2	47.0	46.3	47.7	52.6	111	192	110	82.4	78.0
MAX	113	99.5	78.6	71.0	68.0	67.3	66.5	159	266	196	99.0	95.1
(WY)	(1998)	(1998)	(1998)	(1998)	(1998)	(1998)	(1998)	(1998)	(2003)	(1998)	(1999)	(1999)
MIN	42.1	30.8	27.9	28.9	29.9	27.8	30.9	70.0	93.0	65.2	63.2	68.4
(WY)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2002)	(2000)	(2000)	(2000)	(2000)

12323760 WARM SPRINGS CREEK NEAR ANACONDA, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1998 - 2005	
ANNUAL TOTAL	21,760		26,093			
ANNUAL MEAN	59.5		71.5		78.8	
HIGHEST ANNUAL MEAN					112	1998
LOWEST ANNUAL MEAN					61.5	2004
HIGHEST DAILY MEAN	179	Jun 11	406	Jun 22	598	May 31, 2003
LOWEST DAILY MEAN	15	Jan 4	18	Jan 6	15	Jan 4, 2004
ANNUAL SEVEN-DAY MINIMUM	18	Jan 3	20	Jan 1	18	Jan 3, 2004
MAXIMUM PEAK FLOW			443	Jun 23	a675	May 31, 2003
MAXIMUM PEAK STAGE			3.76	Jun 23	b4.89	Dec 26, 1998
INSTANTANEOUS LOW FLOW					c10	Jan 6, 2004
ANNUAL RUNOFF (AC-FT)	43,160		51,760		57,120	
10 PERCENT EXCEEDS	93		168		127	
50 PERCENT EXCEEDS	54		36		64	
90 PERCENT EXCEEDS	30		25		39	

a--Gage height, 4.17 ft.
b--Backwater from ice.
c--Gage height, 1.79 ft, result of freezeup.
e--Estimated.



12323770 WARM SPRINGS CREEK AT WARM SPRINGS, MT

LOCATION.--Lat 46°10'49", long 112°47'06" (NAD 27), in $SW^1/_4SW^1/_4SW^1/_4$ sec.18, T.5 N., R.9 W., Deer Lodge County, Hydrologic Unit 17010201, on right bank at I-90 frontage road bridge 0.2 mi southeast of Warm Springs post office, and at river mile 0.9.

DRAINAGE AREA.--163 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1983 to current year. October 1983 to June 26, 2002 at site 200 ft upstream at different datum.

GAGE.--Water-stage recorder. Elevation of gage is 4,810 ft (NGVD 29).

REMARKS.--Water-discharge records good except those for estimated daily discharges, which are poor. Numerous diversions 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	38	21	19	e17	19	20	17	17	152	204	56	38
2	38	23	18	e16	19	20	17	15	176	199	50	37
3	33	24	17	e15	19	19	17	14	154	189	45	35
4	31	22	20	e15	19	19	16	16	169	176	41	31
5	29	23	e17	e15	19	19	17	18	161	162	38	33
6	26	24	18	e14	19	19	20	21	193	154	36	35
7	26	23	18	e12	e18	18	19	22	177	150	34	34
8	27	23	17	e14	18	18	20	27	152	143	34	32
9	27	24	17	e14	e17	18	19	34	135	124	43	34
10	28	23	19	e14	e20	17	18	56	124	110	44	42
11	29	23	23	e15	e20	17	17	55	115	101	43	47
12	28	23	25	e18	21	18	17	37	128	88	40	45
13	26	22	22	e17	22	19	17	31	121	83	42	47
14	26	23	23	e17	21	18	19	33	112	81	41	50
15	27	26	23	e16	e18	18	17	37	146	67	36	47
16	27	24	23	e16	e17	19	17	57	190	53	36	47
17	28	22	23	e22	e19	20	19	93	253	56	36	57
18	29	21	23	e25	e20	18	21	65	281	54	39	60
19	29	25	23	e25	e20	20	20	75	236	47	41	58
20	34	26	22	e26	24	20	18	102	212	41	37	56
21	32	20	20	e24	24	19	18	96	250	41	34	54
22	29	24	e17	23	23	16	17	90	292	38	36	52
23	28	27	e16	22	22	16	17	100	292	43	39	55
24	28	27	e19	22	22	e15	18	129	251	43	38	61
25	26	25	e23	19	20	e16	19	87	229	46	36	61
26	25	24	e25	18	20	16	19	73	213	49	35	52
27	26	18	e25	19	20	16	21	77	221	41	37	46
28	24	e18	e22	19	20	18	20	97	220	36	40	47
29	23	17	e20	19	---	18	19	122	218	40	37	47
30	20	14	e20	19	---	17	19	122	209	39	37	48
31	19	---	e18	18	---	16	---	103	---	44	39	---
TOTAL	866	679	635	565	560	557	549	1,921	5,782	2,742	1,220	1,388
MEAN	27.9	22.6	20.5	18.2	20.0	18.0	18.3	62.0	193	88.5	39.4	46.3
MAX	38	27	25	26	24	20	21	129	292	204	56	61
MIN	19	14	16	12	17	15	16	14	112	36	34	31
AC-FT	1,720	1,350	1,260	1,120	1,110	1,100	1,090	3,810	11,470	5,440	2,420	2,750

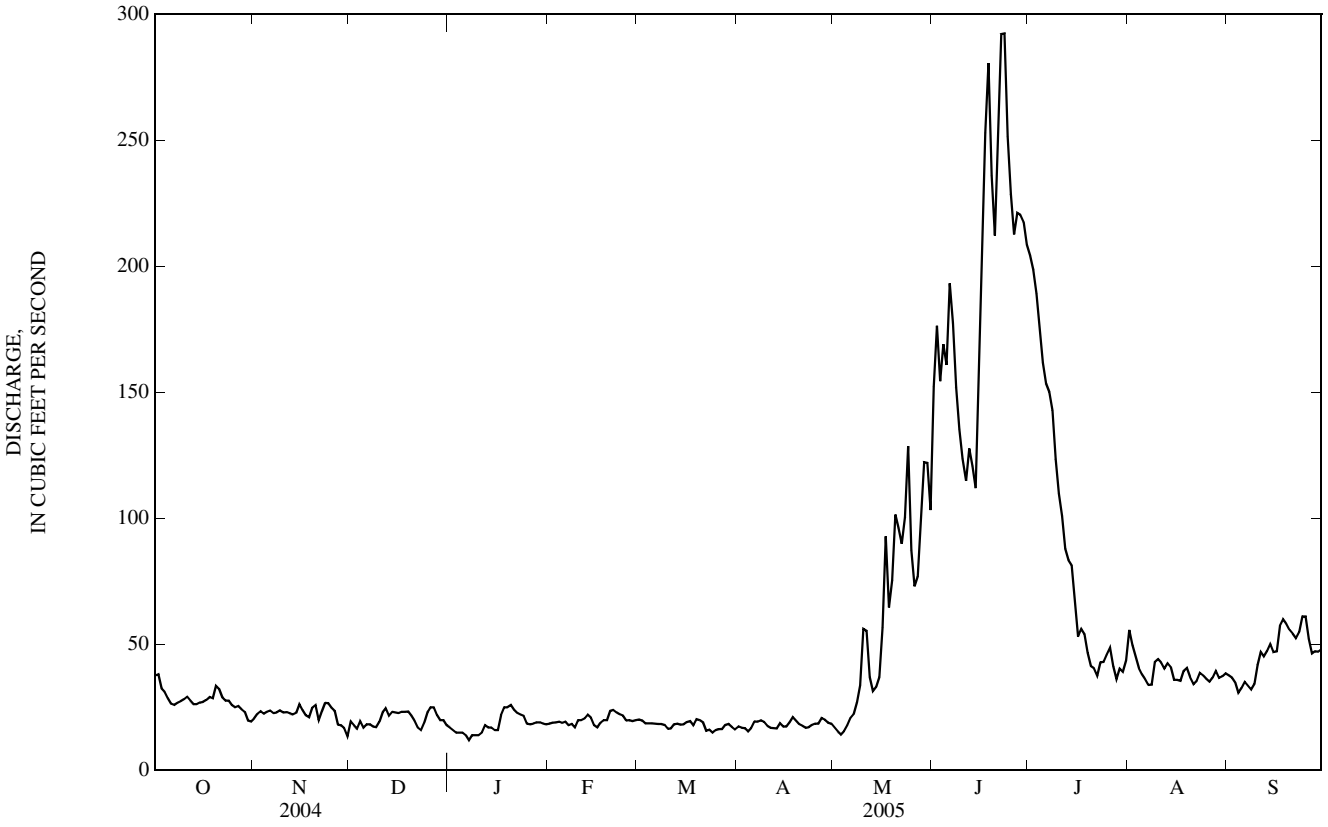
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 2005, BY WATER YEAR (WY)

MEAN	42.7	42.5	33.0	35.0	35.1	34.8	41.0	80.4	137	54.7	25.9	32.7
MAX	95.2	84.5	77.8	82.1	63.0	53.5	62.8	196	362	170	125	81.6
(WY)	(1998)	(1998)	(1985)	(1985)	(1986)	(1998)	(1986)	(1997)	(1997)	(1997)	(1997)	(1997)
MIN	10.6	13.1	5.89	4.21	4.54	18.0	13.3	19.3	7.05	0.42	0.46	2.61
(WY)	(1988)	(1993)	(1993)	(1993)	(1993)	(2005)	(1991)	(1992)	(1992)	(1985)	(1988)	(1988)

12323770 WARM SPRINGS CREEK AT WARM SPRINGS, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1984 - 2005	
ANNUAL TOTAL	11,599.0		17,464			
ANNUAL MEAN	31.7		47.8		49.5	
HIGHEST ANNUAL MEAN					108	1997
LOWEST ANNUAL MEAN					16.6	1992
HIGHEST DAILY MEAN	112	Jun 11	292	Jun 22	475	Jun 6, 1997
LOWEST DAILY MEAN	8.0	Jan 4	12	Jan 7	0.00	Aug 4, 1988
ANNUAL SEVEN-DAY MINIMUM	8.9	Jan 1	14	Jan 4	0.05	Aug 3, 1988
MAXIMUM PEAK FLOW			321	Jun 22	a494	Jun 5, 1997
MAXIMUM PEAK STAGE			4.81	Jun 22	b5.70	Feb 2, 1986
INSTANTANEOUS LOW FLOW					0.00	Aug 4, 1988
ANNUAL RUNOFF (AC-FT)	23,010		34,640		35,860	
10 PERCENT EXCEEDS	50		124		95	
50 PERCENT EXCEEDS	29		25		36	
90 PERCENT EXCEEDS	17		17		8.0	

a--Gage height, 4.55 ft, site and datum then in use.
b--Backwater from ice.
e--Estimated.



12323770 WARM SPRINGS CREEK AT WARM SPRINGS, MT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--March 1993 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: July 2000 to current year.

INSTRUMENTATION.--Temperature recorder installed July 6, 2000.

REMARKS.--Daily water temperature records rated excellent except for the period Jan. 21 to May 20, which is fair. Several unpublished observations of specific conductance and water temperature were made during the year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Maximum, 23.5°C, July 21, 29, 2000, July 14, 2002; minimum 0.0°C, many days during winter period.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum, 21.0°C, July 20, 21, 23 and Aug. 5 and 6; minimum 0.0°C, many days November to January.

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

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf 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)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)
DEC													
16...	0815	22	8.3	424	-1.5	0.0	210	64.3	12.4	4.5	5	.05	.08
APR													
18...	1550	22	8.5	430	3.5	5.5	220	67.9	12.8	6.3	7	.04	.08
MAY													
17...	0745	94	8.1	281	7.0	7.0	130	40.2	7.68	8.2	22	.04	.41
JUN													
02...	0855	177	8.0	176	9.5	5.5	84	26.3	4.30	6.1	11	E.03	.17
JUL													
26...	0810	50	8.2	295	12.0	10.0	150	47.0	7.81	6.9	7.6	E.03	.07
AUG													
24...	0800	39	8.3	338	13.5	10.5	170	52.2	8.99	6.5	7.2	E.04	.07

Date	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover-able, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover-able, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recover-able, ug/L (01051)	Manganese, water, fltrd, ug/L (01056)	Manganese, water, unfltrd recover-able, ug/L (01055)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover-able, ug/L (01092)	Suspnd. sediment, sieve diametr percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
DEC													
16...	2.1	7.2	9	70	<.08	.36	394	435	3.0	3	73	9	.53
APR													
18...	3.0	6.6	7	60	<.08	.23	219	242	1.1	2	73	2	.12
MAY													
17...	5.1	108	20	1,700	.10	10.3	160	1,270	2.0	39	60	106	27
JUN													
02...	5.0	45.5	23	670	.09	3.90	65.3	298	7.6	17	63	37	18
JUL													
26...	2.9	8.2	18	90	E.06	.51	217	249	1.5	3	74	4	.54
AUG													
24...	2.6	8.7	16	100	E.05	.55	177	255	1.4	3	67	4	.42

E--Estimated.

12323770 WARM SPRINGS CREEK AT WARM SPRINGS, MT—Continued

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

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

12323770 WARM SPRINGS CREEK AT WARM SPRINGS, 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
		JUNE			JULY			AUGUST			SEPTEMBER	
1	8.5	6.0	7.5	14.5	10.0	12.5	18.5	13.0	16.0	15.5	8.5	12.0
2	8.0	5.5	6.5	14.5	10.5	12.0	18.0	13.0	15.0	15.0	9.0	12.0
3	9.0	6.0	7.5	15.0	9.0	11.5	20.0	13.0	16.0	16.5	10.0	13.0
4	13.0	6.0	9.0	16.0	9.0	12.5	20.5	12.0	16.0	16.0	10.5	13.0
5	12.5	7.5	9.5	17.5	10.0	13.5	21.0	13.0	17.0	15.0	10.0	12.5
6	9.0	6.5	8.0	16.5	11.0	13.5	21.0	13.0	16.5	15.0	9.0	12.0
7	10.0	5.0	7.5	16.5	11.5	14.0	20.5	13.5	17.0	16.0	9.0	12.5
8	8.5	5.5	7.0	19.0	12.0	15.0	18.0	14.5	16.0	16.0	10.0	12.5
9	9.5	6.5	8.0	15.5	12.0	14.0	18.0	13.0	15.5	13.5	10.5	12.0
10	12.0	6.0	8.5	14.5	10.0	12.0	18.0	13.0	15.5	11.0	8.5	9.5
11	12.0	7.5	9.5	17.5	10.0	13.5	19.0	12.5	15.5	10.5	6.0	8.0
12	10.0	7.5	8.5	19.5	11.5	15.5	17.5	12.0	14.5	10.0	6.0	8.0
13	14.5	6.0	10.0	20.0	13.5	16.5	16.0	10.0	12.5	11.5	7.0	9.0
14	14.0	7.5	11.0	19.0	12.0	15.5	17.0	9.5	13.0	12.5	7.0	9.5
15	15.0	9.5	12.0	20.0	11.5	16.0	18.5	10.5	14.0	12.5	7.5	10.0
16	11.5	8.0	10.0	19.5	14.0	16.5	18.0	11.5	14.5	12.5	8.0	10.5
17	9.5	8.0	8.5	18.5	10.5	14.5	15.5	11.5	14.0	10.5	8.5	9.5
18	11.5	7.0	8.5	20.0	11.0	15.5	16.0	10.0	13.0	10.5	8.0	9.0
19	13.0	6.5	9.5	20.5	12.5	16.5	17.0	9.5	13.0	12.5	7.0	9.5
20	15.5	8.0	11.5	21.0	12.5	16.5	18.0	10.0	14.0	13.5	8.0	10.5
21	14.0	9.0	12.0	21.0	12.5	17.0	19.0	11.5	15.0	12.5	8.5	10.5
22	16.0	10.0	13.0	19.5	14.0	17.0	17.0	12.5	14.5	11.5	6.5	9.0
23	15.0	9.5	12.0	21.0	14.0	17.5	16.5	12.5	14.5	10.0	7.0	8.5
24	14.5	9.0	11.5	17.5	12.5	15.5	15.0	10.5	12.5	7.0	6.0	6.5
25	14.0	9.5	11.5	17.0	12.0	14.0	15.5	8.5	12.0	10.5	5.5	8.0
26	12.0	9.0	10.0	18.5	10.0	14.0	16.5	9.0	12.5	11.5	6.0	8.5
27	12.0	8.5	10.5	19.5	11.0	15.0	17.5	10.5	13.5	12.0	7.5	9.5
28	11.0	9.5	10.0	17.0	12.0	14.5	18.0	11.0	14.5	11.0	5.5	8.0
29	12.5	8.5	10.5	17.5	12.0	15.0	16.0	11.0	14.0	11.5	6.5	9.0
30	15.0	8.5	11.5	20.0	12.5	16.0	13.5	11.0	12.0	12.5	9.5	11.0
31	---	---	---	19.0	13.0	16.0	15.0	8.0	11.0	---	---	---
MONTH	16.0	5.0	9.5	21.0	9.0	15.0	21.0	8.0	14.5	16.5	5.5	10.0

12323800 CLARK FORK NEAR GALEN, MT

LOCATION.--Lat 46°12'30", long 112°45'59" (NAD 27), in $NE^1/_4NE^1/_4NE^1/_4$ sec.7, T.5 N., R.9 W., Deer Lodge County, Hydrologic Unit 17010201, on right bank at upstream side of bridge on county road, 2.6 mi downstream from Silver Bow Creek and Warm Springs Creek, 2 mi south of Galen, and at river mile 482.7.

DRAINAGE AREA.--651 mi^2, area at site used prior to Oct. 1, 1994, 793 mi^2.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Elevation of gage is 4,749.24 ft (NGVD 29).

REMARKS.--Water-discharge records good except those for estimated daily discharges, which are fair. Some regulation by Storm and Silver Lakes and settling ponds on Silver Bow Creek near Warm Springs. Numerous diversions 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	68	62	65	e52	56	59	57	62	401	374	91	60
2	70	67	61	e55	58	59	53	63	428	356	90	60
3	64	65	e62	e52	59	57	53	66	391	334	85	57
4	64	64	64	e52	59	56	54	70	397	314	70	53
5	65	64	e62	e50	55	56	55	74	387	281	64	56
6	65	67	65	e46	51	56	58	79	446	253	62	62
7	64	64	65	e50	51	54	59	85	438	238	59	55
8	66	62	63	e50	51	54	54	100	380	233	57	51
9	61	63	62	e48	e48	55	52	126	351	204	66	53
10	65	63	65	e48	e50	52	48	183	320	188	68	63
11	69	63	70	e50	e50	51	46	216	298	178	81	70
12	78	63	71	e55	55	52	45	191	322	156	67	72
13	82	62	66	e52	58	52	45	174	317	145	71	71
14	83	62	68	e52	58	52	57	174	296	144	75	68
15	80	67	68	e48	51	52	55	197	333	132	71	66
16	72	66	67	e50	e50	53	54	248	392	112	69	66
17	66	64	66	e60	e55	53	54	373	491	109	69	87
18	67	65	66	70	e55	51	58	345	545	105	72	99
19	72	67	68	70	e55	53	58	373	461	96	72	103
20	75	69	64	69	59	54	57	438	415	85	72	99
21	78	e62	58	66	62	55	56	435	466	82	65	94
22	73	e65	e55	59	59	51	55	407	527	78	63	91
23	71	67	e50	58	57	50	55	408	541	81	67	90
24	70	70	e55	58	57	e50	56	420	462	82	65	99
25	67	82	e58	55	58	52	58	361	404	81	63	101
26	65	90	60	54	58	55	60	310	391	78	60	95
27	65	e85	e58	54	58	55	63	296	424	71	61	81
28	64	e80	e56	56	58	58	64	307	424	66	63	70
29	64	e75	54	56	---	61	62	324	411	68	61	71
30	62	e70	58	56	---	57	62	321	392	65	62	73
31	60	---	e55	56	---	54	---	302	---	74	61	---
TOTAL	2,135	2,035	1,925	1,707	1,551	1,679	1,663	7,528	12,251	4,863	2,122	2,236
MEAN	68.9	67.8	62.1	55.1	55.4	54.2	55.4	243	408	157	68.5	74.5
MAX	83	90	71	70	62	61	64	438	545	374	91	103
MIN	60	62	50	46	48	50	45	62	296	65	57	51
AC-FT	4,230	4,040	3,820	3,390	3,080	3,330	3,300	14,930	24,300	9,650	4,210	4,440

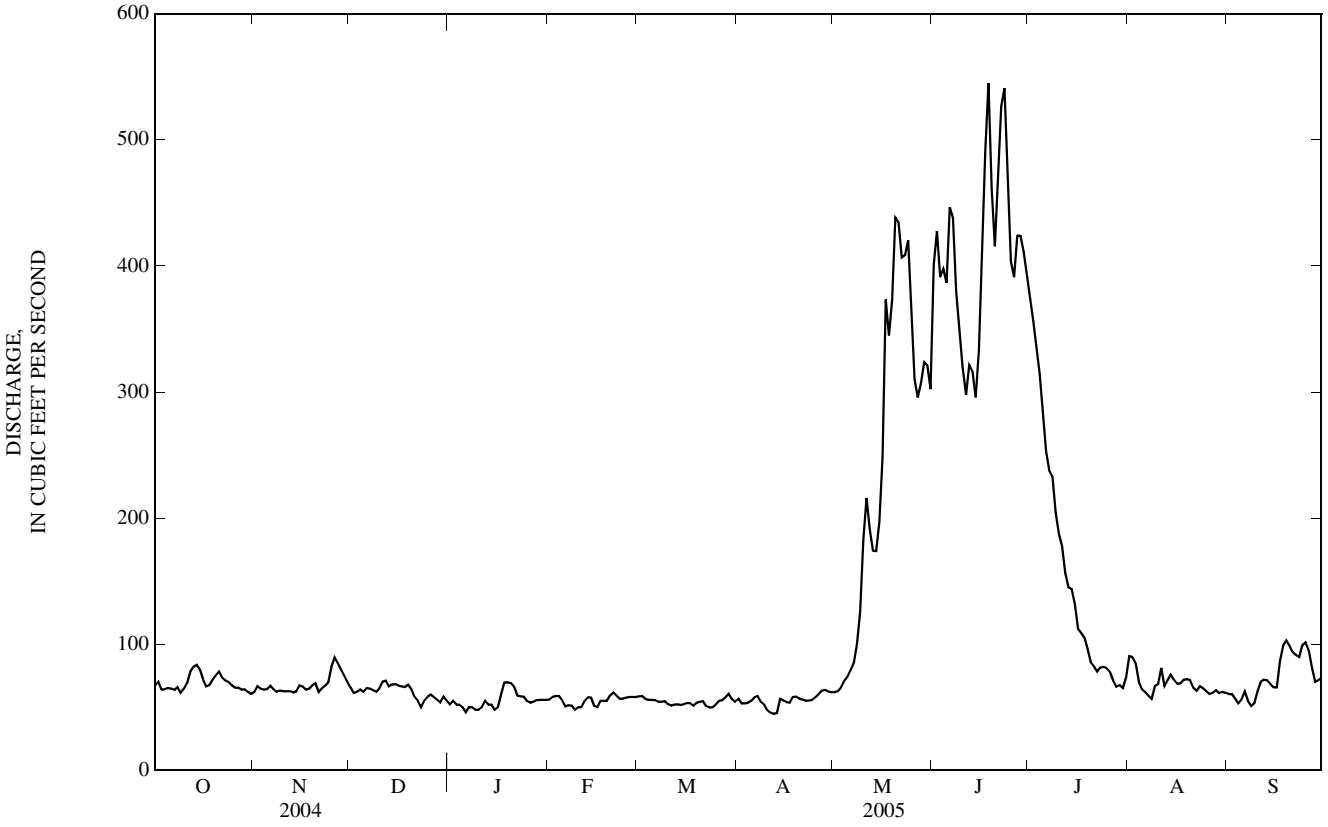
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 2005, BY WATER YEAR (WY)

MEAN	87.2	92.2	81.2	82.8	90.3	111	131	246	348	135	69.2	70.2
MAX	170	159	132	169	174	167	257	668	974	381	233	184
(WY)	(1998)	(1998)	(1998)	(1997)	(1996)	(1997)	(1996)	(1997)	(1997)	(1997)	(1997)	(1993)
MIN	40.6	50.7	40.7	42.5	43.5	54.2	55.4	68.6	51.1	21.4	10.2	20.3
(WY)	(1989)	(1993)	(1993)	(1993)	(1993)	(2005)	(2005)	(1992)	(1992)	(1988)	(1988)	(1988)

12323800 CLARK FORK NEAR GALEN, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1988 - 2005	
ANNUAL TOTAL	27,131		41,695			
ANNUAL MEAN	74.1		114		130	
HIGHEST ANNUAL MEAN					288	1997
LOWEST ANNUAL MEAN					59.6	1992
HIGHEST DAILY MEAN	202	Jun 11	545	Jun 18	1,210	Jun 7, 1997
LOWEST DAILY MEAN	26	Aug 7	45	Apr 12	9.7	Aug 11, 1988
ANNUAL SEVEN-DAY MINIMUM	28	Aug 7	49	Jan 5	9.8	Aug 15, 1988
MAXIMUM PEAK FLOW			571	Jun 18	1,240	Jun 7, 1997
MAXIMUM PEAK STAGE			3.49	Jun 18	5.07	Jun 7, 1997
INSTANTANEOUS LOW FLOW					a9.0	Aug 9, 1988
ANNUAL RUNOFF (AC-FT)	53,810		82,700		93,950	
10 PERCENT EXCEEDS	111		333		272	
50 PERCENT EXCEEDS	70		65		87	
90 PERCENT EXCEEDS	41		52		44	

a--Gage height, 1.39 ft.
e--Estimated.



12323800 CLARK FORK NEAR GALEN, MT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1971-74, 1988 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: October 1991 to September 1998, October 2000 to September 2002,

REMARKS.--Sampling conducted since 1988 as part of EPA Superfund program. Several unpublished observations of specific conductance and water temperature were made during the year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE.: Maximum 25.5 °C, June 23, 1991; minimum 0.0 °C, on many days during winter period.

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

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf 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)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)
DEC													
16...	1005	65	9.0	569	-2.0	1.0	250	72.3	17.0	11.4	12	.12	.17
MAR													
08...	1550	54	8.7	593	14.0	8.0	280	81.7	17.6	9.1	11	.07	.13
APR													
19...	0745	59	8.2	592	2.0	5.0	280	82.3	18.1	7.3	10	.06	.12
MAY													
17...	0955	383	8.6	401	8.5	9.0	160	44.5	12.1	29.6	50	E.03	.64
JUN													
02...	1050	427	8.8	289	14.0	8.5	120	35.3	6.90	20.4	27	.04	.18
22...	1615	566	8.6	218	29.5	16.5	93	28.7	5.29	21.0	28	E.03	.22
JUL													
26...	0950	77	8.4	390	18.0	13.0	190	58.0	11.7	15.2	16.1	E.04	.06
AUG													
23...	1700	70	9.0	440	24.0	18.0	220	63.9	13.5	20.1	21.5	E.03	.07

Date	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recoverable, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recoverable, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recoverable, ug/L (01051)	Manganese, water, fltrd, ug/L (01056)	Manganese, water, unfltrd recoverable, ug/L (01055)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recoverable, ug/L (01092)	Suspnd. sediment, sieve diametr percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
DEC													
16...	4.9	9.3	7	90	<.08	.36	158	152	5.3	9	96	2	.35
MAR													
08...	4.8	12.2	E4	180	<.08	.82	176	208	4.4	12	79	6	.87
APR													
19...	4.8	8.2	11	210	E.04	.98	204	274	7.2	12	84	4	.64
MAY													
17...	6.8	89.3	63	2,030	.22	14.3	177	785	3.2	80	67	94	97
JUN													
02...	6.8	31.3	29	520	.10	2.94	116	307	2.8	20	71	20	23
22...	7.8	53.3	18	780	.12	4.95	52.5	251	2.4	24	70	35	53
JUL													
26...	4.0	8.1	13	100	E.06	.57	91.3	152	2.3	5	85	4	.83
AUG													
23...	4.0	9.0	7	120	E.05	.80	41.1	139	1.2	6	76	4	.76

E--Estimated.

12323840 LOST CREEK NEAR ANACONDA, MT

LOCATION.--Lat 46°09'43", long 112°53'30" (NAD 27), in $SE^1/_4NE^1/_4NE^1/_4$ sec. 30, T.5 N., R.10 W., Deer Lodge County, Hydrologic Unit 17010201, on left bank 400 ft upstream from Montana Secondary Highway 273, 700 ft upstream from Gardiner Ditch, 5.2 mi upstream from Dutchman Creek, 2.7 mi northeast of Anaconda, and at river mile 10.2.

DRAINAGE AREA.--26.4 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 2004 to September 2005.

GAGE.--Water-stage recorder. Elevation of gage is 5,100 ft (NGVD 29).

REMARKS.--Water-discharge records good except those for estimated daily discharges and those for June to August, which are fair. No regulation; numerous diversions for irrigation 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	e0.50	4.6	3.8	e3.5	3.3	3.1	2.9	2.0	15	12	1.3	0.45
2	e0.50	4.6	4.6	e3.7	3.4	2.9	2.9	1.4	15	11	3.9	0.43
3	e0.50	4.6	5.2	e3.5	3.4	2.9	2.9	2.1	17	11	14	0.39
4	e0.50	4.3	5.2	e3.0	3.4	2.8	2.9	2.3	19	11	14	0.46
5	e0.50	4.6	4.8	e3.0	3.3	2.8	2.8	2.7	21	8.9	13	0.46
6	e0.50	4.5	4.9	e2.5	2.9	2.8	2.8	2.5	28	6.6	13	0.46
7	0.49	4.5	4.8	3.5	3.4	2.8	3.2	2.4	26	6.1	12	0.41
8	0.51	4.6	4.7	4.0	3.4	2.8	3.7	3.5	23	5.6	12	0.39
9	0.61	4.6	4.6	3.9	e3.2	2.8	3.3	4.2	21	5.2	12	0.45
10	1.8	4.5	4.7	3.8	e3.4	2.8	3.7	9.4	18	5.5	12	0.56
11	1.7	4.6	4.8	3.7	e3.6	2.8	3.7	7.0	19	5.1	12	0.61
12	1.8	4.5	4.5	3.7	3.7	3.1	3.6	5.6	19	6.1	12	0.55
13	1.7	4.5	4.0	3.8	3.7	2.9	3.6	5.6	17	6.3	12	0.48
14	1.5	4.4	4.6	3.8	3.8	2.9	4.0	6.6	15	5.3	11	0.44
15	1.4	4.5	4.4	e3.0	e3.5	2.9	3.7	4.9	16	4.8	10	0.40
16	1.4	4.5	4.3	e3.3	e3.0	2.9	3.8	7.7	16	4.2	9.5	0.37
17	1.4	4.6	4.3	3.8	e3.2	2.9	4.0	13	20	4.3	9.5	0.46
18	1.9	4.5	4.3	5.5	e3.3	e3.0	4.1	11	22	4.2	9.3	0.40
19	3.8	4.7	4.3	5.4	e3.4	3.4	3.9	15	20	2.7	8.5	0.40
20	3.8	4.5	4.2	4.6	3.7	3.2	4.0	16	18	1.5	6.7	0.43
21	3.7	3.3	3.4	4.1	3.6	3.1	3.8	17	17	1.1	5.3	0.40
22	3.5	4.6	e3.0	3.8	e3.5	3.0	3.8	15	17	0.98	4.7	0.39
23	4.3	4.9	e2.0	3.7	e3.5	e2.8	3.9	12	19	1.1	3.7	0.38
24	4.8	4.9	2.4	3.6	e3.4	e3.0	4.1	12	17	0.98	3.0	0.59
25	4.8	5.0	3.7	3.5	3.4	e3.2	4.6	11	17	0.89	2.6	0.50
26	4.6	4.7	3.9	3.5	3.3	e3.3	3.2	8.7	17	1.9	2.2	0.38
27	4.6	3.4	3.9	3.5	3.2	3.4	3.3	6.3	17	3.8	1.4	0.35
28	4.6	3.6	3.5	3.5	3.1	3.5	2.7	7.6	16	2.3	1.1	0.35
29	4.5	2.6	4.1	3.4	---	3.2	2.7	9.3	15	2.1	0.48	0.31
30	4.5	2.7	4.7	3.3	---	3.0	2.8	10	14	1.4	0.49	0.27
31	4.5	---	4.2	3.4	---	2.8	---	12	---	1.2	0.51	---
TOTAL	75.21	130.4	129.8	114.3	95.0	92.8	104.4	245.8	551	145.15	233.18	12.92
MEAN	2.43	4.35	4.19	3.69	3.39	2.99	3.48	7.93	18.4	4.68	7.52	0.43
MAX	4.8	5.0	5.2	5.5	3.8	3.5	4.6	17	28	12	14	0.61
MIN	0.49	2.6	2.0	2.5	2.9	2.8	2.7	1.4	14	0.89	0.48	0.27
AC-FT	149	259	257	227	188	184	207	488	1,090	288	463	26

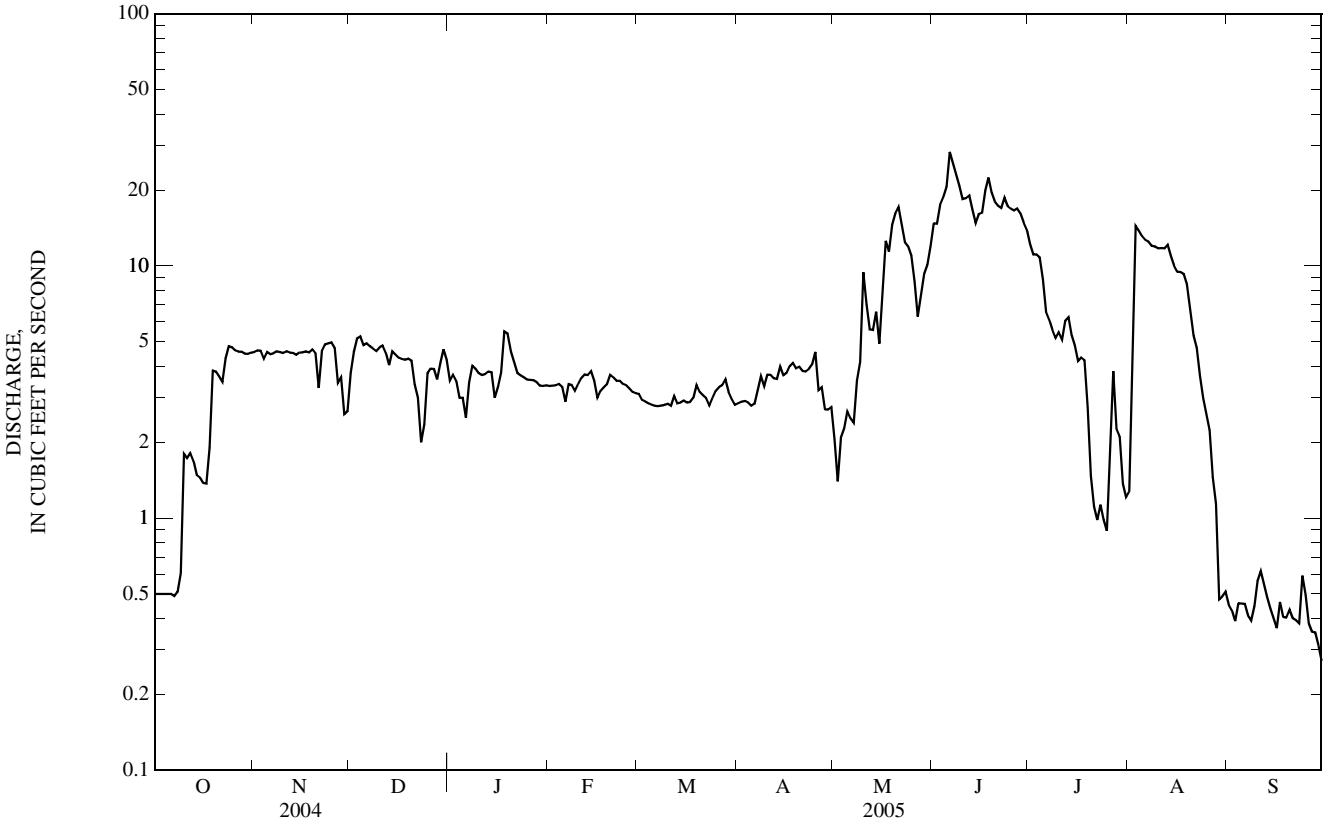
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2005 - 2005, BY WATER YEAR (WY)

MEAN	2.43	4.35	4.19	3.69	3.39	2.99	3.48	7.93	18.4	4.68	7.52	0.43
MAX	2.43	4.35	4.19	3.69	3.39	2.99	3.48	7.93	18.4	4.68	7.52	0.43
(WY)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)
MIN	2.43	4.35	4.19	3.69	3.39	2.99	3.48	7.93	18.4	4.68	7.52	0.43
(WY)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)

12323840 LOST CREEK NEAR ANACONDA, MT—Continued

SUMMARY STATISTICS	FOR 2005 WATER YEAR	
ANNUAL TOTAL	1,929.96	
ANNUAL MEAN	5.29	
HIGHEST DAILY MEAN	28	Jun 6
LOWEST DAILY MEAN	0.27	Sep 30
ANNUAL SEVEN-DAY MINIMUM	0.39	Sep 24
MAXIMUM PEAK FLOW	a32	Jun 6
MAXIMUM PEAK STAGE	b4.26	Jan 6
INSTANTANEOUS LOW FLOW	c0.25	Sep 29
ANNUAL RUNOFF (AC-FT)	3,830	
10 PERCENT EXCEEDS	13	
50 PERCENT EXCEEDS	3.7	
90 PERCENT EXCEEDS	0.51	

a--Gage height, 3.66 ft.
b--Backwater from ice.
c--Gage height, 2.16 ft.
e--Estimated.



12323840 LOST CREEK NEAR ANACONDA, MT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--December 2004 to August 2005.

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

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

Date	Time	Instantaneous discharge, cfs (00061)	Turbdty white light, det ang 90+/-30 corrctd NTRU (63676)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf 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)
DEC										
15...	1430	4.5	<2.0	8.4	221	8.5	3.0	100	30.8	6.69
MAR										
08...	1100	2.8	<2.0	8.6	221	13.0	4.5	110	31.4	6.79
APR										
18...	1250	4.0	<2.0	8.4	211	4.5	4.5	100	30.3	6.46
MAY										
16...	1400	8.3	E24,200	7.4	163	12.0	8.5	50	15.7	2.71
JUN										
01...	1500	15	2.6	8.2	170	9.5	7.0	84	26.0	4.60
22...	1310	17	2.1	8.2	176	32.0	13.0	87	27.2	4.48
JUL										
25...	1520	.97	<2.0	8.4	227	17.5	13.0	110	35.7	6.16
AUG										
23...	1400	4.0	<2.0	8.3	224	32.0	14.5	110	33.9	6.11

Date	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recoverable, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recoverable, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recoverable, ug/L (01051)	Manganese, water, fltrd, ug/L (01056)	Manganese, water, unfltrd recoverable, ug/L (01055)
DEC												
15...	2.7	3	E.02	E.02	1.2	1.7	<6	30	<.08	.13	.5	1
MAR												
08...	2.5	2	.05	E.03	1.5	4.5	<6	60	<.08	.38	.8	2
APR												
18...	2.8	3	E.03	E.04	1.5	3.6	E4	60	<.08	.35	.9	3
MAY												
16...	156	3,860	.90	147	90.5	29,100	25	99,700	.18	1,290	42.4	8,830
JUN												
01...	8.0	11	.04	.11	4.5	18.9	15	640	E.06	2.80	2.0	18
22...	10.2	10	.04	.07	3.4	8.2	11	210	E.04	.95	2.3	8
JUL												
25...	9.3	8.9	.04	.04	3.3	4.4	8	20	<.08	.18	1.9	3
AUG												
23...	5.6	6.2	.05	.08	3.6	8.9	<6	160	E.05	.70	1.2	6

E--Estimated.

12323840 LOST CREEK NEAR ANACONDA, MT—Continued

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

Date	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover -able, ug/L (01092)	Suspnd. sedi- ment, percent <.063mm (70331)	Sus- pended sedi- ment concen- tration mg/L (80154)	Sus- pended sedi- ment dis- charge, tons/d (80155)
DEC					
15...	1.2	3	83	3	.04
MAR					
08...	1.0	3	87	11	.08
APR					
18...	1.1	E2	66	2	.02
MAY					
16...	30.0	7,780	97	58,900	1,320
JUN					
01...	1.8	11	30	53	2.1
22...	1.7	4	41	16	.73
JUL					
25...	1.2	2	73	1	.00
AUG					
23...	1.3	4	80	8	.09

E--Estimated.

12323850 LOST CREEK NEAR GALEN, MT

LOCATION.--Lat 46°13'07", long 112°46'23" (NAD 27), in $NW^1/_4SW^1/_4SE^1/_4$ sec. 6, T.5N., R.9W., Deer Lodge County, Hydrologic Unit 17010201, on left bank 40 ft upstream from frontage road bridge, 1.2 mi south of Galen, and at river mile 1.8.

DRAINAGE AREA.--60.5 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 2003 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 4,750 ft (NGVD 29).

REMARKS.--Water-discharge records good except those for estimated daily discharges, which are fair. No regulation. Numerous diversions for irrigation 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	22	33	42	e40	41	39	40	21	8.2	9.1	1.9	8.9
2	21	32	42	e40	41	40	37	16	11	8.3	2.3	8.8
3	21	35	42	e40	41	39	34	16	10	8.0	2.5	8.7
4	21	33	42	e40	41	37	36	16	8.5	7.9	2.8	8.4
5	21	32	42	e38	41	37	36	17	7.7	7.8	2.8	9.0
6	21	33	42	e36	40	37	36	17	11	7.7	2.7	8.9
7	20	32	42	e40	40	37	35	6.7	10	7.7	2.8	8.5
8	21	33	42	e40	40	37	37	6.5	6.8	7.3	3.3	8.3
9	21	37	42	e38	40	37	38	9.6	5.9	7.1	4.2	8.2
10	21	37	44	e38	40	37	37	26	5.4	7.8	4.0	10
11	21	37	46	e40	39	37	36	37	5.6	8.8	3.5	11
12	22	36	45	e42	39	39	36	27	7.8	7.9	3.4	9.8
13	22	35	43	e40	39	41	35	16	7.8	7.1	4.3	10
14	22	35	43	e40	39	41	39	17	5.9	6.7	4.0	10
15	22	35	44	e38	e38	41	41	18	6.1	6.6	3.4	9.8
16	22	36	44	e40	e36	42	41	12	6.0	7.1	3.3	9.9
17	22	36	43	e45	e37	41	39	19	10	6.8	3.3	18
18	22	36	43	50	e37	41	40	15	18	7.2	3.6	24
19	22	36	44	55	37	41	42	14	14	7.0	3.5	20
20	22	38	43	46	38	41	40	12	12	6.6	3.1	18
21	25	e40	43	45	38	41	40	11	11	6.4	2.8	18
22	29	43	43	43	38	41	38	9.8	11	6.5	3.2	17
23	29	44	e42	44	38	40	37	10	7.6	4.4	6.3	20
24	29	44	e38	43	38	e38	37	8.9	3.6	4.9	4.0	39
25	28	46	e40	42	38	40	36	8.8	1.5	4.2	3.8	37
26	28	45	42	42	38	41	34	8.4	2.1	2.2	4.9	35
27	30	43	41	41	38	42	29	8.0	4.5	1.8	4.3	34
28	38	43	e40	42	38	43	30	5.1	8.0	1.7	4.1	34
29	38	e42	41	42	---	42	29	3.4	11	1.7	3.7	34
30	34	e42	42	41	---	41	27	3.4	9.6	1.7	6.7	34
31	34	---	41	41	---	40	---	3.6	---	1.9	9.4	---
TOTAL	771	1,129	1,313	1,292	1,088	1,231	1,092	419.2	247.6	187.9	117.9	530.2
MEAN	24.9	37.6	42.4	41.7	38.9	39.7	36.4	13.5	8.25	6.06	3.80	17.7
MAX	38	46	46	55	41	43	42	37	18	9.1	9.4	39
MIN	20	32	38	36	36	37	27	3.4	1.5	1.7	1.9	8.2
AC-FT	1,530	2,240	2,600	2,560	2,160	2,440	2,170	831	491	373	234	1,050

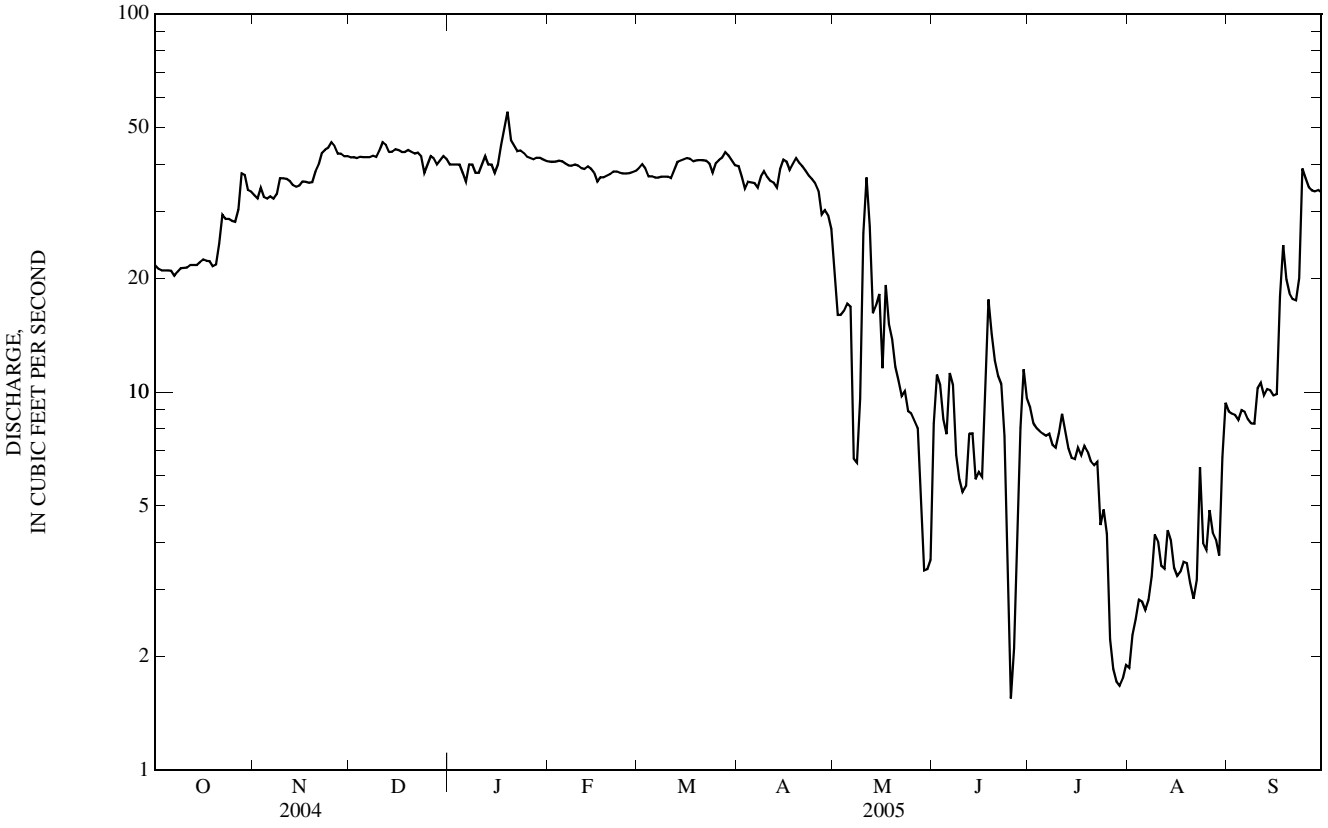
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2003 - 2005, BY WATER YEAR (WY)

MEAN	26.7	42.1	43.6	41.5	40.7	43.0	32.4	11.6	5.26	3.88	3.14	15.8
MAX	28.6	46.5	44.8	41.7	42.4	46.3	36.4	18.6	8.25	6.06	3.80	18.6
(WY)	(2004)	(2004)	(2004)	(2005)	(2004)	(2004)	(2005)	(2003)	(2005)	(2005)	(2005)	(2004)
MIN	24.9	37.6	42.4	41.3	38.9	39.7	26.8	2.58	1.53	1.55	2.75	11.1
(WY)	(2005)	(2005)	(2005)	(2004)	(2005)	(2005)	(2004)	(2004)	(2004)	(2004)	(2003)	(2003)

12323850 LOST CREEK NEAR GALEN, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 2003 - 2005	
ANNUAL TOTAL	8,783.6		9,418.8			
ANNUAL MEAN	24.0		25.8		25.5	
HIGHEST ANNUAL MEAN					25.8	2005
LOWEST ANNUAL MEAN					25.3	2004
HIGHEST DAILY MEAN	54	Mar 9	55	Jan 19	60	Apr 1, 2003
LOWEST DAILY MEAN	1.4	Jun 14	1.5	Jun 25	1.4	Jul 30, 2003
ANNUAL SEVEN-DAY MINIMUM	1.4	Jun 21	1.8	Jul 26	1.4	Jun 21, 2004
MAXIMUM PEAK FLOW			a59	Jan 18	a61	Apr 2, 2003
MAXIMUM PEAK STAGE			b4.38	Jan 7	b5.34	Jan 5, 2004
INSTANTANEOUS LOW FLOW			c1.3	Jun 25	d1.2	Jul 22, 2003
ANNUAL RUNOFF (AC-FT)	17,420		18,680		18,490	
10 PERCENT EXCEEDS	45		42		45	
50 PERCENT EXCEEDS	22		33		30	
90 PERCENT EXCEEDS	1.5		4.2		1.7	

a--Gage height, 2.08 ft.
b--Backwater from ice.
c--Gage height, 1.21 ft.
d--Gage height, 1.16 ft.
e--Estimated.



12323850 LOST CREEK NEAR GALEN, MT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--March 2003 to current year.

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

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

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf 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)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)
DEC													
16...	0935	43	8.7	618	-2.0	1.5	310	89.0	20.3	8.7	8	E.02	.04
MAR													
08...	1520	37	8.7	627	15.0	9.5	320	95.5	20.9	13.7	14	E.03	.04
APR													
19...	0720	42	8.3	702	2.0	4.0	380	109	25.5	15.9	15	.04	.09
MAY													
17...	0925	20	8.2	934	9.0	8.5	450	122	35.7	36.9	37	E.03	.06
JUN													
02...	1020	11	8.4	705	13.0	8.5	340	97.0	24.6	12.6	14	E.02	.06
22...	1545	11	8.5	663	34.0	22.0	330	93.6	24.4	15.7	15	E.02	E.03
JUL													
26...	0930	2.4	8.0	668	16.0	13.0	310	85.2	24.0	24.6	24.7	.04	.08
AUG													
23...	1630	5.6	8.3	680	25.0	18.0	330	92.9	24.4	23.6	23.4	E.04	.07

Date	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recoverable, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recoverable, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recoverable, ug/L (01051)	Manganese, water, fltrd, ug/L (01056)	Manganese, water, unfltrd recoverable, ug/L (01055)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recoverable, ug/L (01092)	Suspnd. sediment, percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
DEC													
16...	1.7	4.0	E5	80	<.08	.25	6.1	8	2.4	4	29	29	3.4
MAR													
08...	2.6	7.4	E5	80	<.08	.33	13.5	14	2.3	3	63	10	1.0
APR													
19...	2.9	10.1	10	160	E.04	.63	15.7	24	3.8	7	65	15	1.7
MAY													
17...	5.4	18.7	61	110	E.06	.38	39.5	45	2.8	8	67	7	.38
JUN													
02...	2.6	6.3	14	50	E.05	.12	8.3	10	1.3	2	49	11	.33
22...	3.0	4.4	7	40	<.08	.19	3.8	6	1.2	E1	36	17	.50
JUL													
26...	3.2	6.3	25	80	.11	.45	28.3	32	3.6	3	76	6	.04
AUG													
23...	3.5	6.1	17	80	.10	.39	11.3	17	1.7	2	72	5	.08

E--Estimated.

12324200 CLARK FORK AT DEER LODGE, MT

LOCATION.--Lat 46°23'52", long 112°44'31" (NAD 27), in $SW^1/_4SW^1/_4SW^1/_4$ sec.33, T.8 N., R.9 W., Powell County, Hydrologic Unit 17010201, on left bank 35 ft upstream from Milwaukee Avenue Bridge in Deer Lodge, 0.05 mi upstream from Taylor Creek, 0.24 mi downstream from Tin Cup Joe Creek, and at river mile 461.2.

DRAINAGE AREA.--995 mi^2, area at site used prior to Oct. 1, 1994, 1,005 mi^2. Area used October 1994 to September 2000, 916 mi^2.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Elevation of gage is 4,502.24 ft (NGVD 29).

REMARKS.--Water-discharge records good except for estimated daily discharges, which are fair. Diversions upstream from station for irrigation of about 31,000 acres. Some regulation by settling ponds on Silver Bow Creek near Warm Springs. 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	126	154	e140	e140	171	158	141	133	403	485	96	109
2	132	160	e160	e140	172	156	141	125	522	462	103	111
3	135	168	171	e140	172	155	139	126	518	436	97	108
4	132	168	172	e130	175	149	140	124	511	404	93	102
5	133	165	175	e120	171	150	141	120	484	372	82	100
6	132	172	179	e110	157	151	142	121	533	319	77	103
7	130	168	178	e130	159	149	144	120	577	294	75	102
8	132	164	177	e150	161	146	146	123	490	292	73	106
9	130	168	178	e150	151	146	148	165	453	268	88	91
10	136	170	183	e150	154	145	140	249	412	243	90	108
11	152	170	195	e150	156	142	134	322	370	241	85	128
12	163	168	196	e160	164	143	131	278	388	213	94	127
13	164	165	183	e150	164	143	129	237	418	187	88	133
14	171	166	189	e140	158	143	147	214	363	175	91	130
15	169	168	189	e130	150	144	153	231	398	166	91	127
16	165	177	185	e150	143	145	150	270	448	145	86	124
17	160	173	185	160	151	146	146	438	598	130	84	149
18	166	173	183	193	157	143	150	438	785	125	86	166
19	163	175	187	250	161	143	158	435	690	116	88	165
20	168	180	187	223	163	148	155	539	572	101	88	162
21	175	169	171	205	159	147	150	550	585	95	90	157
22	169	172	e160	192	153	143	146	520	656	94	85	155
23	165	192	e130	191	152	140	143	507	711	93	96	151
24	162	200	e160	185	153	132	142	504	615	91	94	174
25	158	214	174	178	157	146	141	448	512	91	94	187
26	154	222	e180	173	153	144	142	373	480	98	87	179
27	156	202	e180	172	154	147	144	320	541	92	85	170
28	163	e190	e170	172	154	152	146	313	571	83	89	165
29	168	e170	e170	174	---	157	144	323	558	82	91	168
30	164	e150	176	173	---	150	142	323	529	82	100	166
31	158	---	e150	171	---	143	---	302	---	85	112	---
TOTAL	4,751	5,253	5,413	5,052	4,445	4,546	4,315	9,291	15,691	6,160	2,778	4,123
MEAN	153	175	175	163	159	147	144	300	523	199	89.6	137
MAX	175	222	196	250	175	158	158	550	785	485	112	187
MIN	126	150	130	110	143	132	129	120	363	82	73	91
AC-FT	9,420	10,420	10,740	10,020	8,820	9,020	8,560	18,430	31,120	12,220	5,510	8,180

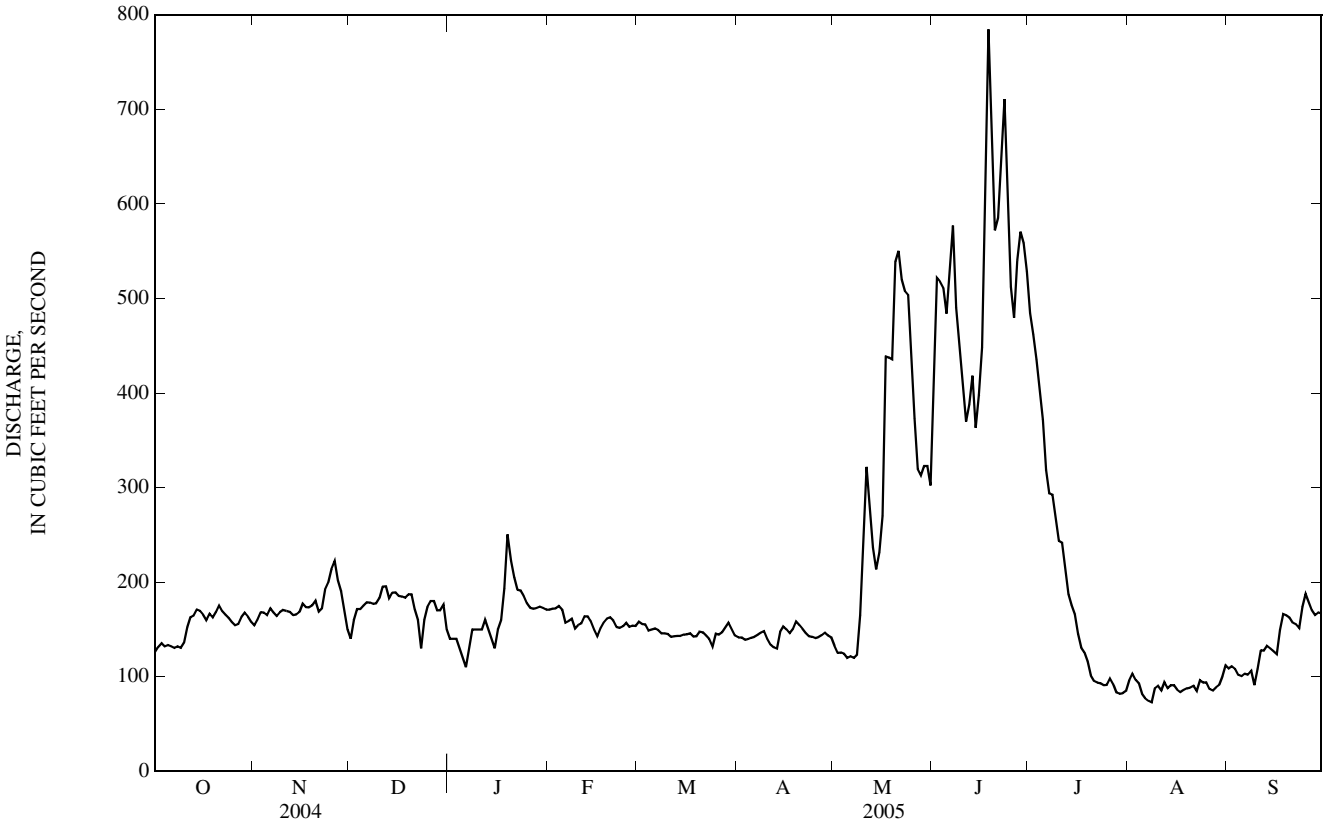
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 2005, BY WATER YEAR (WY)

MEAN	233	244	219	219	240	261	272	378	483	211	103	169
MAX	421	384	353	342	481	387	422	971	1,450	593	337	315
(WY)	(1983)	(1981)	(1981)	(1983)	(1982)	(1979)	(1982)	(1981)	(1997)	(1982)	(1997)	(1993)
MIN	115	156	122	140	137	147	144	80.2	57.8	29.9	27.8	57.8
(WY)	(1989)	(1989)	(1993)	(1992)	(1989)	(2005)	(2005)	(1992)	(1992)	(1985)	(1988)	(1988)

12324200 CLARK FORK AT DEER LODGE, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1979 - 2005	
ANNUAL TOTAL	52,787		71,818			
ANNUAL MEAN	144		197		252	
HIGHEST ANNUAL MEAN					465	1997
LOWEST ANNUAL MEAN					130	1992
HIGHEST DAILY MEAN	267	Mar 9	785	Jun 18	2,390	May 23, 1981
LOWEST DAILY MEAN	27	Aug 15	73	Aug 8	22	Aug 18, 1988
ANNUAL SEVEN-DAY MINIMUM	29	Aug 10	81	Aug 5	23	Aug 9, 1991
MAXIMUM PEAK FLOW			a848	Jun 18	d2,500	May 23, 1981
MAXIMUM PEAK STAGE			b5.02	Nov 30	b5.92	Nov 1, 1991
INSTANTANEOUS LOW FLOW			c67	Aug 8	f21	Aug 6, 1991
ANNUAL RUNOFF (AC-FT)	104,700		142,500		182,800	
10 PERCENT EXCEEDS	198		414		403	
50 PERCENT EXCEEDS	162		158		213	
90 PERCENT EXCEEDS	52		96		91	

a--Gage height, 3.90 ft.
b--Backwater from ice.
c--Gage height, 2.40 ft.
d--Gage height, 5.35 ft.
e--Estimated.
f--Gage height, 2.19 ft.



12324200 CLARK FORK AT DEER LODGE, MT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1963, 1969-71, 1979-83, 1985 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: October 1978 to September 1983, October 1991 to September 1998, seasonal records for May 2001 to September 2002.
SUSPENDED-SEDIMENT DISCHARGE: March 1985 through August 1986, April 1987 to March 2003, August 2003 to current year.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE : Maximum, 24.5°C, July 26, 1998, July 11-14, 2002; minimum, 0.0°C on many days during winter periods.
SEDIMENT CONCENTRATION: Maximum daily mean, 835 mg/L, Feb. 8, 1996; minimum daily mean, 1 mg/L, Aug. 19, 2002.
SEDIMENT LOAD: Maximum daily, 2,840 tons, Feb. 24, 1986; minimum daily, 0.18 ton, Aug. 19, 2002.

EXTREMES FOR CURRENT YEAR.--
SEDIMENT CONCENTRATION: Maximum daily mean, 330 mg/L, May 17; minimum daily mean, 2 mg/L, July 26.
SEDIMENT LOAD: Maximum daily, 390 tons, May 17; minimum daily, 0.53 ton, July 26.

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

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf 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)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)
DEC													
16...	1105	186	8.4	541	2.0	1.0	240	71.5	16.0	9.1	11	.06	.15
MAR													
08...	1705	146	8.7	565	14.0	8.0	270	78.6	17.2	10.2	12	.06	.13
APR													
18...	1735	152	8.6	605	5.5	7.0	280	82.0	18.7	11.5	13	.05	.14
MAY													
17...	1110	436	8.1	438	11.0	10.0	180	51.6	13.2	18.2	78	E.04	2.06
JUN													
02...	1200	552	8.2	353	9.0	9.5	150	44.3	10.2	20.8	39	.06	.52
23...	0715	698	8.1	259	14.0	15.0	110	35.0	6.53	19.3	31	.07	.43
JUL													
26...	1055	88	8.5	484	16.5	14.5	210	64.0	13.2	16.2	17.1	.06	.06
AUG													
24...	0935	90	8.1	524	13.0	12.0	240	70.6	14.7	14.2	15.9	.06	.07

Date	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recoverable, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recoverable, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recoverable, ug/L (01051)	Manganese, water, fltrd, ug/L (01056)	Manganese, water, unfltrd recoverable, ug/L (01055)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recoverable, ug/L (01092)	Suspnd. sediment, percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
DEC													
16...	4.4	20.0	6	290	E.04	2.13	47.0	74	8.4	23	78	17	8.5
MAR													
08...	6.0	22.9	7	300	E.06	2.46	66.5	95	4.2	20	79	14	5.5
APR													
18...	5.4	18.8	E4	250	E.06	1.95	51.2	88	5.1	19	84	10	4.1
MAY													
17...	10.6	468	41	6,960	.40	61.7	97.9	1,010	9.3	359	67	387	456
JUN													
02...	12.7	97.6	35	1,690	.20	14.1	35.6	339	8.1	87	58	83	124
23...	11.4	96.8	23	1,740	.19	14.2	18.3	255	7.4	72	37	114	215
JUL													
26...	8.6	11.8	7	40	E.07	.37	13.0	18	5.1	7	82	1	.24
AUG													
24...	8.4	14.2	6	70	E.04	.69	21.6	47	10.8	13	79	3	.73

E--Estimated.

12324200 CLARK FORK AT DEER LODGE, MT—Continued

SUSPENDED-SEDIMENT
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Day	Mean concentration (mg/l)	Load (tons/day)	Mean concentration (mg/l)	Load (tons/day)	Mean concentration (mg/l)	Load (tons/day)	Mean concentration (mg/l)	Load (tons/day)	Mean concentration (mg/l)	Load (tons/day)	Mean concentration (mg/l)	Load (tons/day)
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	11	3.7	15	6.2	20	7.6	17	6.4	31	14	16	6.8
2	10	3.6	20	8.6	19	8.2	17	6.4	29	13	16	6.7
3	10	3.6	21	9.5	18	8.3	19	7.2	28	13	15	6.3
4	10	3.6	19	8.6	17	7.9	24	8.4	26	12	15	6.0
5	10	3.6	16	7.1	16	7.6	23	7.5	25	12	15	6.1
6	10	3.6	13	6.0	15	7.2	20	5.9	25	11	15	6.1
7	11	3.9	11	5.0	15	7.2	17	6.0	24	10	15	6.0
8	11	3.9	11	4.9	14	6.7	16	6.5	24	10	14	5.5
9	12	4.2	12	5.4	14	6.7	16	6.5	23	9.4	13	5.1
10	12	4.4	13	6.0	16	7.9	16	6.5	22	9.1	12	4.7
11	14	5.7	14	6.4	19	10	16	6.5	21	8.8	12	4.6
12	17	7.5	14	6.4	20	11	16	6.9	20	8.9	18	6.9
13	18	8.0	14	6.2	20	9.9	16	6.5	20	8.9	23	8.9
14	18	8.3	15	6.7	19	9.7	16	6.0	20	8.5	24	9.3
15	15	6.8	15	6.8	18	9.2	16	5.6	22	8.9	26	10
16	13	5.8	18	8.6	17	8.5	16	6.5	23	8.9	28	11
17	12	5.2	21	9.8	16	8.0	19	8.2	23	9.4	28	11
18	12	5.4	22	10	17	8.4	44	23	23	9.7	28	11
19	12	5.3	22	10	18	9.1	116	78	23	10	25	9.7
20	12	5.4	21	10	19	9.6	73	44	23	10	20	8.0
21	16	7.6	20	9.1	20	9.2	72	40	23	9.9	18	7.1
22	14	6.4	20	9.3	20	8.6	56	29	23	9.5	18	6.9
23	13	5.8	20	10	21	7.4	50	26	22	9.0	18	6.8
24	12	5.2	23	12	21	9.1	39	19	20	8.3	18	6.4
25	11	4.7	26	15	22	10	31	15	19	8.1	19	7.5
26	11	4.6	26	16	24	12	30	14	18	7.4	19	7.4
27	12	5.1	26	14	28	14	30	14	17	7.1	20	7.9
28	12	5.3	24	12	30	14	32	15	16	6.7	20	8.2
29	13	5.9	22	10	27	12	31	15	---	---	19	8.1
30	13	5.8	20	8.1	23	11	31	14	---	---	17	6.9
31	13	5.5	---	---	20	8.1	31	14	---	---	14	5.4
TOTAL	---	163.4	---	263.7	---	284.1	---	473.5	---	271.5	---	228.3

12324200 CLARK FORK AT DEER LODGE, MT—Continued

SUSPENDED-SEDIMENT--CONTINUED
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Day	Mean concentration (mg/l)	Load (tons/day)	Mean concentration (mg/l)	Load (tons/day)	Mean concentration (mg/l)	Load (tons/day)	Mean concentration (mg/l)	Load (tons/day)	Mean concentration (mg/l)	Load (tons/day)	Mean concentration (mg/l)	Load (tons/day)
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	12	4.6	14	5.0	63	69	14	18	10	2.6	29	8.5
2	10	3.8	12	4.0	90	127	12	15	10	2.8	28	8.4
3	14	5.3	9	3.1	65	91	10	12	16	4.2	24	7.0
4	18	6.8	12	4.0	72	99	8	8.7	19	4.8	20	5.5
5	19	7.2	12	3.9	77	101	7	7.0	19	4.2	20	5.4
6	18	6.9	22	7.2	83	119	6	5.2	18	3.7	22	6.1
7	16	6.2	22	7.1	85	132	5	4.0	17	3.4	24	6.6
8	14	5.5	51	17	33	44	4	3.2	16	3.2	26	7.4
9	15	6.0	60	27	19	23	3	2.2	14	3.3	26	6.4
10	14	5.3	61	41	17	19	3	2.0	12	2.9	26	7.6
11	12	4.3	61	53	22	22	3	2.0	8	1.8	25	8.6
12	12	4.2	62	47	34	36	3	1.7	8	2.0	24	8.2
13	14	4.9	44	28	28	32	3	1.5	6	1.4	24	8.6
14	16	6.4	39	23	15	15	5	2.4	6	1.5	23	8.1
15	23	9.5	44	27	37	40	13	5.8	6	1.5	23	7.9
16	19	7.7	90	66	92	111	21	8.2	5	1.2	22	7.4
17	19	7.5	330	390	205	331	22	7.7	5	1.1	21	8.4
18	15	6.1	155	183	120	254	19	6.4	6	1.4	20	9.0
19	16	6.8	137	161	69	129	15	4.7	8	1.9	19	8.5
20	20	8.4	210	306	82	127	10	2.7	9	2.1	19	8.3
21	20	8.1	145	215	98	155	10	2.6	8	1.9	18	7.6
22	17	6.7	86	121	101	179	11	2.8	6	1.4	18	7.5
23	20	7.7	85	116	102	196	12	3.0	4	1.0	18	7.3
24	21	8.1	78	106	58	96	10	2.5	3	0.76	18	8.5
25	20	7.6	56	68	38	53	6	1.5	7	1.8	18	9.1
26	16	6.1	42	42	35	45	2	0.53	14	3.3	18	8.7
27	14	5.4	46	40	40	58	12	3.0	21	4.8	20	9.2
28	20	7.9	40	34	30	46	28	6.3	25	6.0	20	8.9
29	18	7.0	34	30	25	38	23	5.1	26	6.4	20	9.1
30	14	5.4	35	31	20	29	17	3.8	27	7.3	20	9.0
31	---	---	27	22	---	---	12	2.8	29	8.8	---	---
TOTAL	---	193.4	---	2,228.3	---	2,816	---	154.33	---	94.46	---	236.8

TOTAL LOAD FOR YEAR: 7,407.79 tons

12324590 LITTLE BLACKFOOT RIVER NEAR GARRISON, MT

LOCATION.--Lat 46°31'11", long 112°47'33" (NAD 27), in NE$^1/_4$ NW$^1/_4$ SE$^1/_4$ sec.24, T.9 N., R.10 W., Powell County, Hydrologic Unit 17010201, on right bank 20 ft upstream from bridge on frontage road, 0.7 mi southeast of Garrison, and at river mile 0.5.

DRAINAGE AREA.--407 mi^2.

PERIOD OF RECORD.--October 1972 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 4,343.97 ft (NGVD 29). Prior to Oct. 1, 1992, at site 3.5 mi upstream at different elevation.

REMARKS.--Records good except those for estimated daily discharges, which are poor. A few minor irrigation holding reservoirs in upper reaches of drainage. Diversions for irrigation of about 11,000 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 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	66	65	e65	e40	68	55	81	173	490	277	68	32
2	66	65	e70	e40	66	58	91	167	871	250	63	31
3	67	72	62	e40	65	61	104	154	1,150	225	56	30
4	67	74	59	e40	65	64	102	155	1,440	218	54	33
5	72	71	e60	e35	64	67	96	171	1,220	203	55	35
6	71	73	e60	e35	e60	75	93	187	1,130	191	52	34
7	69	73	60	e40	e60	84	104	223	1,030	181	51	28
8	68	72	60	e40	e65	90	120	286	877	170	52	31
9	67	71	60	e40	e65	96	127	319	778	156	54	32
10	65	71	60	e40	e65	104	111	449	689	157	50	36
11	64	71	63	e40	e60	92	97	982	621	157	48	40
12	65	69	66	e45	e58	92	96	859	675	157	48	42
13	76	65	e60	e40	59	78	97	723	754	144	51	42
14	74	65	e60	e35	e55	75	108	655	584	136	52	42
15	77	65	62	e35	e50	74	101	631	614	128	51	38
16	75	67	62	e35	e45	73	109	657	561	121	44	39
17	77	68	60	e40	e45	74	128	828	636	118	42	59
18	84	65	60	e50	e50	67	130	787	633	118	30	64
19	79	67	62	e80	e50	67	132	805	516	116	37	58
20	76	67	62	e100	e55	70	129	783	462	110	36	52
21	75	e60	e60	e95	e55	73	123	796	423	106	36	49
22	76	e60	e50	e100	e50	72	124	711	392	100	35	57
23	73	64	e40	e95	e50	e65	130	678	365	87	37	49
24	71	67	e45	e90	e50	e60	145	608	329	90	39	57
25	69	70	e50	e90	e50	64	166	554	310	95	38	61
26	68	72	e50	e85	e52	63	177	509	323	93	37	54
27	67	e65	e45	e85	54	70	189	448	353	87	33	58
28	67	e60	e45	e80	54	113	181	388	389	82	35	54
29	66	e60	e50	e80	---	125	175	362	368	71	35	55
30	64	e55	e55	74	---	96	181	346	316	73	35	61
31	64	---	e45	70	---	82	---	330	---	71	33	---
TOTAL	2,185	2,009	1,768	1,834	1,585	2,399	3,747	15,724	19,299	4,288	1,387	1,353
MEAN	70.5	67.0	57.0	59.2	56.6	77.4	125	507	643	138	44.7	45.1
MAX	84	74	70	100	68	125	189	982	1,440	277	68	64
MIN	64	55	40	35	45	55	81	154	310	71	30	28
AC-FT	4,330	3,980	3,510	3,640	3,140	4,760	7,430	31,190	38,280	8,510	2,750	2,680

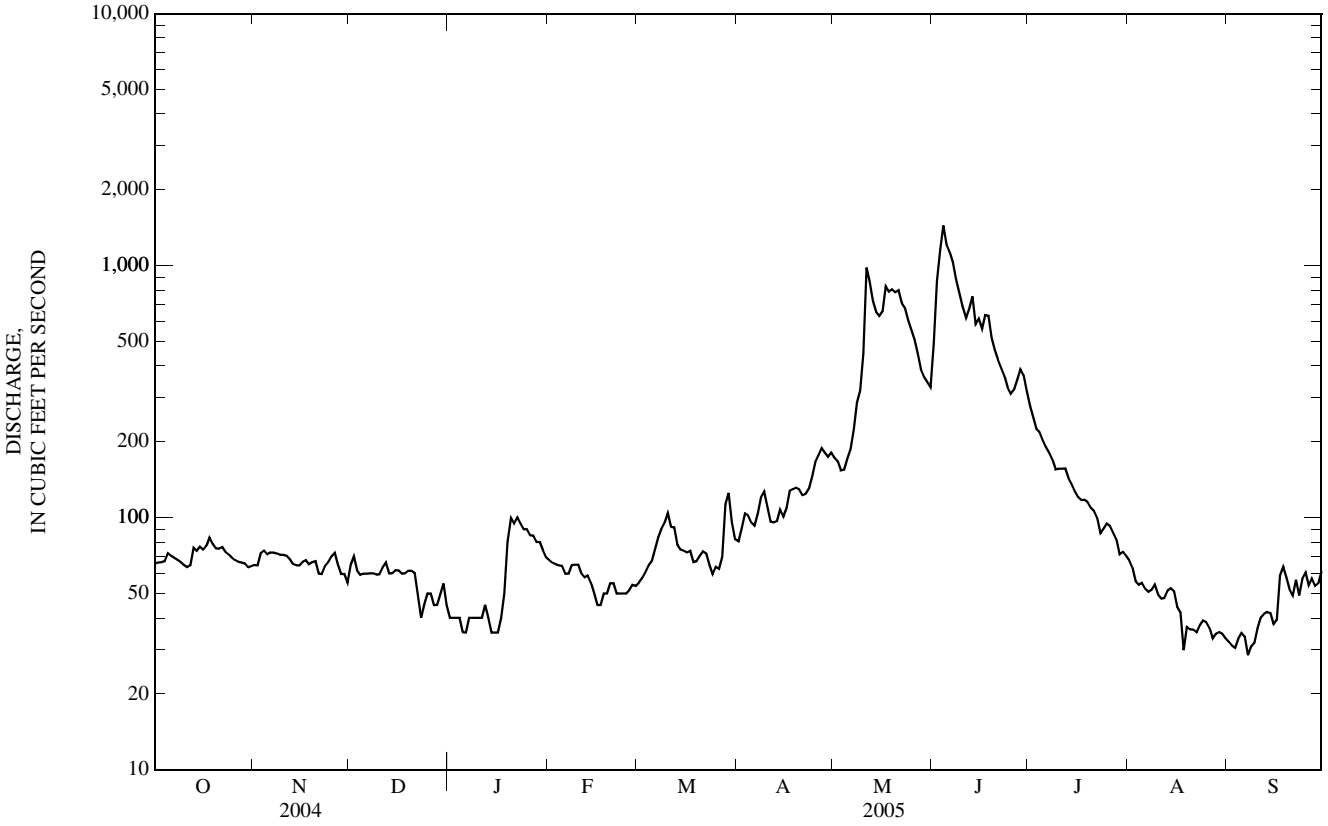
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 2005, BY WATER YEAR (WY)

MEAN	70.7	69.9	62.9	61.1	81.9	119	223	482	386	132	60.2	56.1
MAX	129	122	199	135	262	271	486	1,460	1,803	410	191	184
(WY)	(1976)	(1976)	(1976)	(1976)	(1996)	(1986)	(1976)	(1981)	(1975)	(1975)	(1975)	(1993)
MIN	35.4	39.8	32.9	36.3	36.4	55.4	88.8	76.9	60.1	23.6	11.9	19.9
(WY)	(1974)	(1988)	(1993)	(1993)	(1989)	(1975)	(1973)	(1992)	(1992)	(1973)	(1977)	(1977)

12324590 LITTLE BLACKFOOT RIVER NEAR GARRISON, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1972 - 2005	
ANNUAL TOTAL	34,733		57,578			
ANNUAL MEAN	94.9		158		151	
HIGHEST ANNUAL MEAN					322	1975
LOWEST ANNUAL MEAN					58.4	1973
HIGHEST DAILY MEAN	356	Mar 10	1,440	Jun 4	6,280	May 22, 1981
LOWEST DAILY MEAN	16	Aug 15	28	Sep 7	6.5	Aug 23, 1977
ANNUAL SEVEN-DAY MINIMUM	18	Aug 13	32	Sep 2	6.7	Aug 22, 1977
MAXIMUM PEAK FLOW			1,500	Jun 4	8,650	May 21, 1981
MAXIMUM PEAK STAGE			4.91	Jun 4	b8.79	May 21, 1981
INSTANTANEOUS LOW FLOW			a22	Aug 18	c6.0	Aug 24, 1977
ANNUAL RUNOFF (AC-FT)	68,890		114,200		109,100	
10 PERCENT EXCEEDS	183		454		367	
50 PERCENT EXCEEDS	68		69		74	
90 PERCENT EXCEEDS	41		40		38	

a--Gage height, 0.77 ft.
b--Site and datum then in use.
c--Gage height, 2.94 ft, site and datum then in use.
e--Estimated.



12324680 CLARK FORK AT GOLDCREEK, MT

LOCATION.--Lat 46°35'26", long 112°55'40" (NAD 27), in $SE^1/_4$ $NW^1/_4SW^1/_4$ sec.25, T.10 N., R.11 W., Powell County, Hydrologic Unit 17010201, on right bank at county road bridge, 0.4 mi north of the town of Goldcreek, 1.1 mi downstream from Gold Creek, and at river mile 434.7.

DRAINAGE AREA.--1,760 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1977 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 4,172.80 ft (NGVD 29). June 13 to Oct. 21, 1982, nonrecording gage at site 350 ft downstream at same elevation.

REMARKS.--Water-discharge records good except those for estimated daily discharges, which are fair. Some regulation by settling ponds on Silver Bow Creek near Warm Springs. Diversion for irrigation of about 40,100 acres 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	286	306	e310	e200	306	274	281	373	1,100	1,090	200	205
2	286	309	325	e160	304	278	292	361	1,860	998	215	204
3	291	327	322	e140	303	278	302	348	2,390	919	213	200
4	287	331	324	e150	303	279	303	348	3,000	863	207	195
5	293	326	e310	e140	303	280	298	363	2,590	773	198	190
6	292	333	e320	e130	289	290	294	377	2,470	697	190	192
7	289	332	323	e150	280	304	304	412	2,350	643	185	188
8	291	322	314	e200	290	314	332	473	1,980	616	185	192
9	296	320	312	e220	273	313	342	544	1,700	566	201	193
10	290	322	313	e230	e270	318	320	758	1,500	545	202	201
11	298	321	337	e250	e280	298	299	1,420	1,330	537	199	232
12	307	322	342	e280	289	300	292	1,340	1,380	512	209	250
13	322	323	319	e300	285	283	293	1,110	1,590	455	214	252
14	328	319	317	e300	278	278	330	987	1,310	400	217	252
15	332	310	322	e280	e260	278	334	961	1,360	392	209	246
16	335	323	320	e240	e240	278	328	1,020	1,440	358	201	246
17	335	322	314	e270	e220	281	336	1,420	1,720	334	197	287
18	338	318	314	372	e250	269	346	1,460	2,070	323	190	312
19	333	318	317	451	e260	269	361	1,450	1,780	305	206	305
20	331	321	321	567	298	279	365	1,500	1,500	285	203	297
21	343	305	318	475	282	283	363	1,620	1,390	260	204	288
22	358	300	311	435	270	278	358	1,560	1,430	247	199	296
23	351	326	e240	405	268	265	357	1,520	1,480	236	209	294
24	334	332	e220	389	268	252	351	1,390	1,330	232	217	323
25	322	343	318	377	270	265	349	1,260	1,200	238	213	345
26	316	354	325	354	266	263	362	1,110	1,140	236	206	336
27	313	335	319	341	268	272	381	980	1,230	232	193	330
28	315	e320	279	341	268	316	380	901	1,330	226	188	319
29	318	e300	295	346	---	344	374	878	1,320	202	189	319
30	320	e300	327	326	---	314	382	877	1,240	202	191	324
31	313	---	e270	309	---	289	---	837	---	203	205	---
TOTAL	9,763	9,640	9,618	9,128	7,741	8,882	10,009	29,958	49,510	14,125	6,255	7,813
MEAN	315	321	310	294	276	287	334	966	1,650	456	202	260
MAX	358	354	342	567	306	344	382	1,620	3,000	1,090	217	345
MIN	286	300	220	130	220	252	281	348	1,100	202	185	188
AC-FT	19,360	19,120	19,080	18,110	15,350	17,620	19,850	59,420	98,200	28,020	12,410	15,500

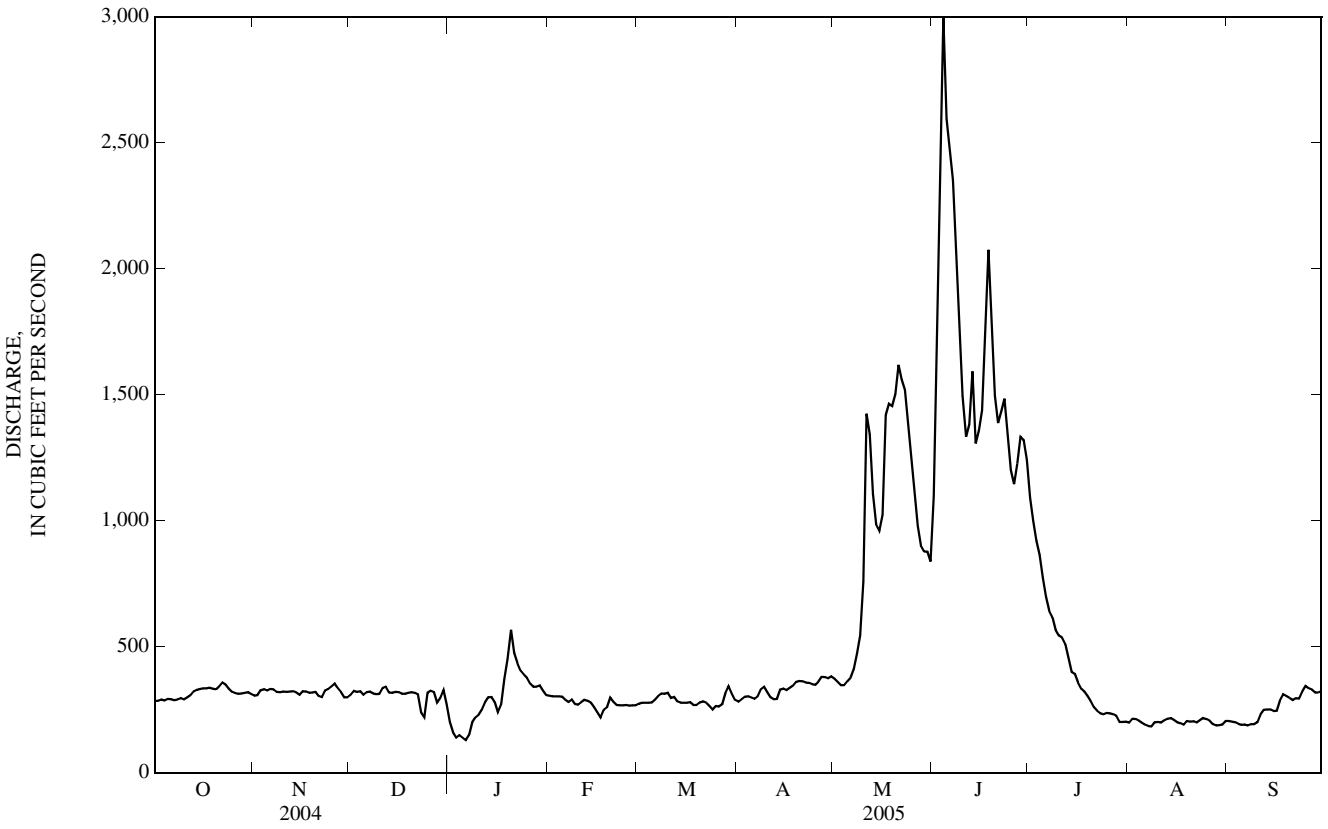
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 2005, BY WATER YEAR (WY)

MEAN	387	395	345	343	409	485	589	1,018	1,110	472	228	298
MAX	699	651	622	596	860	721	918	2,914	3,002	1,196	646	707
(WY)	(1983)	(1981)	(1981)	(1984)	(1996)	(1978)	(1996)	(1981)	(1980)	(1982)	(1993)	(1993)
MIN	198	244	193	199	208	287	334	198	138	85.7	67.5	99.8
(WY)	(1989)	(1989)	(1993)	(1988)	(1989)	(2005)	(2005)	(1992)	(1992)	(1985)	(2000)	(1988)

12324680 CLARK FORK AT GOLDCREEK, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1978 - 2005	
ANNUAL TOTAL	113,600		172,442			
ANNUAL MEAN	310		472		506	
HIGHEST ANNUAL MEAN					860	1981
LOWEST ANNUAL MEAN					243	1992
HIGHEST DAILY MEAN	905	Jun 11	3,000	Jun 4	9,100	May 23, 1981
LOWEST DAILY MEAN	73	Aug 16	130	Jan 6	55	Sep 4, 1988
ANNUAL SEVEN-DAY MINIMUM	87	Aug 13	153	Jan 1	58	Sep 3, 1988
MAXIMUM PEAK FLOW			3,140	Jun 4	a12,000	May 22, 1981
MAXIMUM PEAK STAGE			7.25	Jun 4	b12.50	Jan 2, 1997
INSTANTANEOUS LOW FLOW					c54	Sep 3, 1988
ANNUAL RUNOFF (AC-FT)	225,300		342,000		366,800	
10 PERCENT EXCEEDS	443		1,250		907	
50 PERCENT EXCEEDS	314		314		370	
90 PERCENT EXCEEDS	169		204		190	

a--From rating curve extended above 6,500 ft^3/s on basis of contracted-opening measurement of peak flow; gage height, 11.17 ft, from floodmark.
b--Backwater from ice.
c--Gage height, 3.73 ft.
e--Estimated.



12324680 CLARK FORK AT GOLDCREEK, MT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--March 1993 to current year.

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

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: October 1991 to September 1998.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Maximum, 25.5°C, July 26, 1995; minimum, 0.0°C on many days during winter period.

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

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf 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)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)
DEC													
16...	1255	322	8.8	458	3.5	1.0	210	60.1	13.3	7.2	8	E.03	.10
MAR													
09...	1410	312	8.8	442	19.0	8.0	210	61.0	13.3	7.9	10	.05	.12
APR													
19...	0915	365	8.4	446	4.5	4.5	210	60.7	13.6	7.5	8	E.03	.14
MAY													
17...	1315	1,460	8.2	280	16.5	10.0	110	31.9	7.34	9.6	24	E.03	.60
JUN													
02...	1400	1,880	8.1	286	9.5	8.5	130	36.7	8.19	11.1	22	.05	.43
23...	1015	1,500	8.2	253	16.0	14.5	120	35.7	6.83	12.4	18	.07	.29
JUL													
26...	1225	248	8.5	392	24.0	16.5	190	55.4	11.5	10.5	11.1	E.03	.05
AUG													
24...	1055	221	8.4	431	14.5	13.5	200	58.3	12.3	10.9	11.1	E.03	.04

Date	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover-able, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover-able, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recover-able, ug/L (01051)	Manganese, water, fltrd, ug/L (01056)	Manganese, water, unfltrd recover-able, ug/L (01055)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover-able, ug/L (01092)	Suspnd. sediment, sieve diametr percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
DEC													
16...	3.1	14.1	E4	200	<.08	1.52	16.8	54	3.4	16	85	10	8.7
MAR													
09...	4.9	21.4	7	390	E.06	2.38	27.0	71	2.7	21	78	19	16
APR													
19...	3.7	17.5	19	330	E.05	2.08	19.5	68	4.5	21	82	14	14
MAY													
17...	6.3	99.5	60	2,690	.33	16.6	23.7	314	4.5	104	74	148	583
JUN													
02...	9.3	74.7	48	2,110	.25	12.2	17.4	257	6.7	89	44	143	726
23...	9.1	62.7	21	940	.19	7.79	12.3	138	5.1	44	61	52	211
JUL													
26...	4.5	6.1	7	50	<.08	.18	10.0	20	1.8	3	72	2	1.3
AUG													
24...	5.0	7.6	E5	70	<.08	.33	7.7	32	2.3	5	74	4	2.4

E--Estimated.

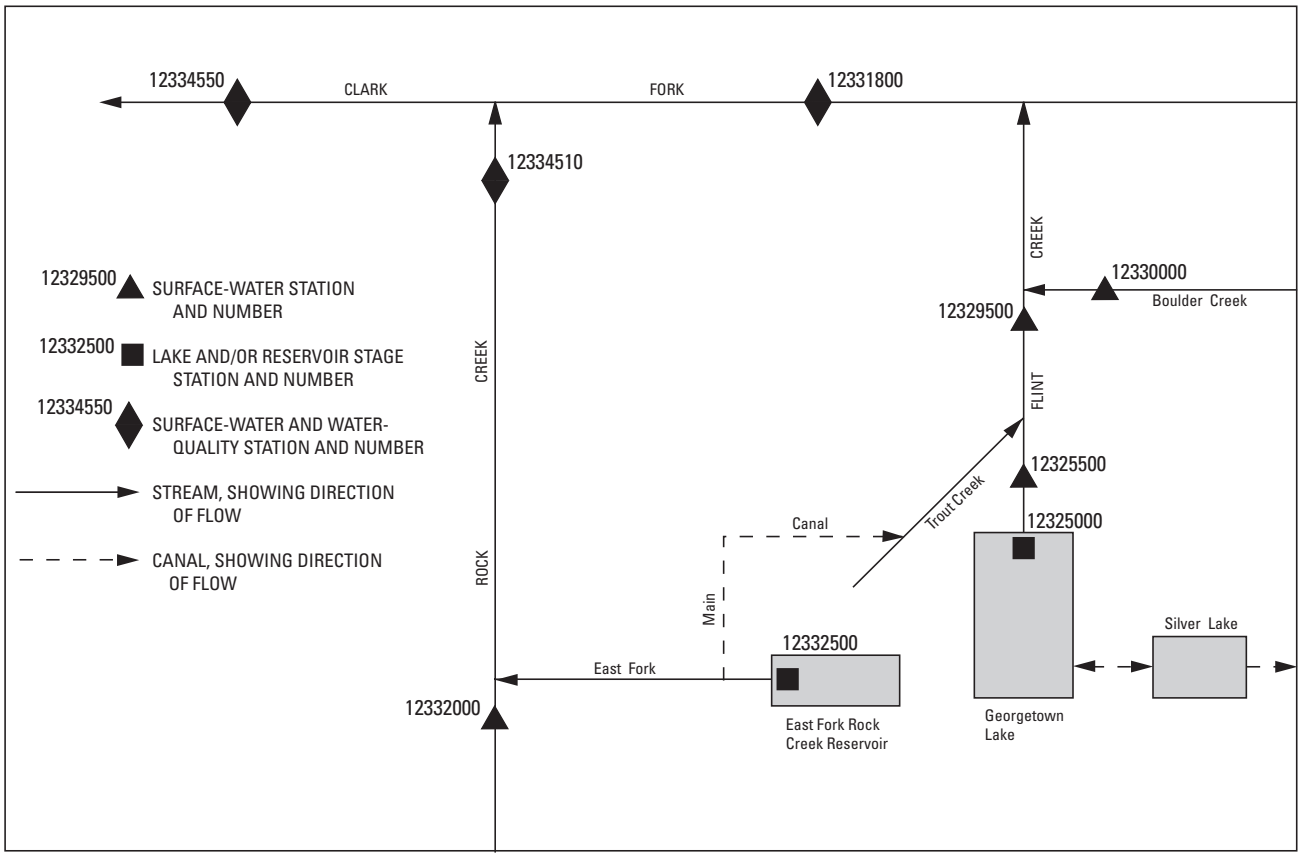


Figure 9. Schematic diagram showing diversions and storage in Flint and Rock Creek basins.

12325500 FLINT CREEK NEAR SOUTHERN CROSS, MT

LOCATION.--Lat 46°13'59", long 113°17'56" (NAD 27), in $SE^1/_4$ $NW^1/_4$ sec.36, T.6 N., R.14 W., Granite County, Hydrologic Unit 17010202, on right wing wall of weir, 0.5 mi downstream from power plant, 2.0 mi downstream from Georgetown Dam, 3.5 mi northwest of Southern Cross, 6.8 mi south of Philipsburg, and at river mile 36.8.

DRAINAGE AREA.--52.6 mi^2.

PERIOD OF RECORD.--October 1940 to September 1998, August 2000 to current year (seasonal records only).

REVISED RECORDS.--WSP 1216: 1942(M). WSP 1246: Drainage area.

GAGE.--Water-stage recorder and sharp-crested, contracted, rectangular weir. Elevation of gage is 5,630 ft (NGVD 29). Prior to June 3, 1982, nonrecording gage at same site and elevation. Prior to Nov. 27, 1973, gage at same site and elevation 0.20 ft higher.

REMARKS.--Seasonal records good. Flow regulated by Georgetown Lake (station number 12325000). Flow may be augmented by interbasin diversion from Silver Lake to Georgetown Lake or reduced by pumping from Georgetown Lake to Silver Lake. U.S. Geological Survey satellite telemeter at station. Several unpublished observations of water temperature and specific conductance were made during the water year.

DISCHARGE, CUBIC FEET PER SECOND, CALENDAR YEAR JANUARY TO DECEMBER 2005
DAILY MEAN VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1				7.9	8.1	33	114	33	30	31		
2				7.9	7.9	43	111	32	30	31		
3				7.9	7.9	55	109	32	30	31		
4				7.9	8.0	69	107	32	30	30		
5				7.9	8.0	91	105	32	30	30		
6				7.9	8.1	122	103	32	30	28		
7				7.9	8.1	130	98	32	30	22		
8				8.1	8.4	127	70	32	30	21		
9				7.9	8.2	124	34	32	30	21		
10				7.9	8.7	121	33	48	30	21		
11				7.9	8.8	120	33	56	30	21		
12				7.9	10	128	33	57	30	20		
13				7.9	15	129	33	56	30	18		
14				8.0	16	126	33	56	30	18		
15				7.9	16	124	33	56	30	15		
16				8.0	16	122	33	56	30	13		
17				8.2	16	121	33	55	31	14		
18				8.2	16	121	33	55	30	14		
19				8.2	17	119	33	55	30	14		
20				8.2	17	117	33	55	30	14		
21				8.1	18	116	33	55	30	14		
22				8.2	18	115	33	55	30	14		
23				8.2	19	112	32	55	30	14		
24				8.3	19	111	32	55	31	14		
25				8.2	19	110	32	41	31	14		
26				8.2	20	109	32	33	30	14		
27				8.2	20	108	32	32	30	14		
28				8.2	20	111	32	30	30	14		
29				8.2	21	117	32	30	30	14		
30				8.2	21	116	32	30	30	14		
31				---	22	---	32	30	---	14		
TOTAL				241.6	446.2	3,267	1,568	1,340	903	581		
MEAN				8.05	14.4	109	50.6	43.2	30.1	18.7		
MAX				8.3	22	130	114	57	31	31		
MIN				7.9	7.9	33	32	30	30	13		
AC-FT				479	885	6,480	3,110	2,660	1,790	1,150		

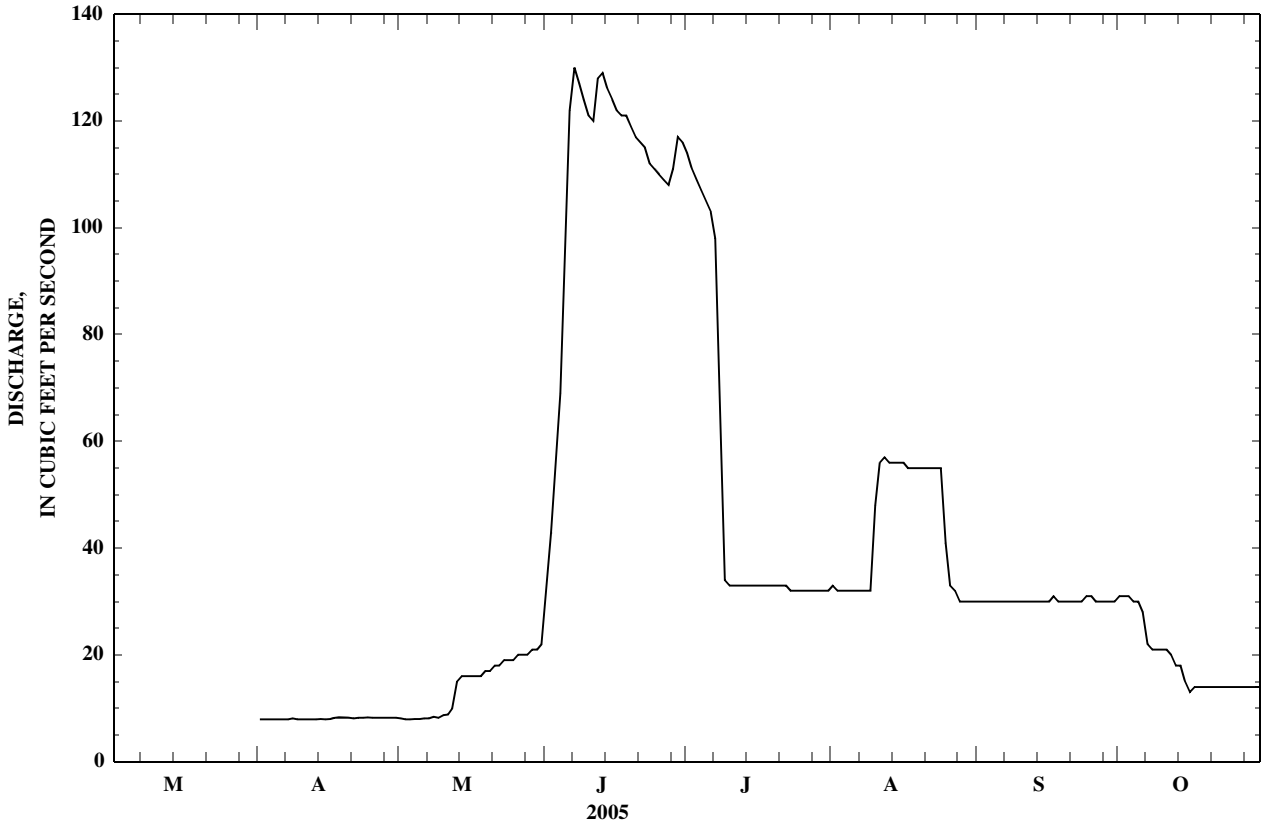
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 1998 AND SEASONS 2000 - 2005*

MEAN	18.5	19.9	22.1	25.0	32.1	57.1	46.0	33.3	31.0	25.0	21.5	19.8
MAX	37.5	53.8	80.4	121	106	142	131	78.5	74.3	59.2	62.2	50.0
(WY)	(1996)	(1968)	(1943)	(1948)	(1976)	(1948)	(1975)	(1975)	(1993)	(1984)	(1984)	(1976)
MIN	2.86	3.37	4.10	1.62	7.75	25.9	26.4	21.7	13.0	3.90	3.86	2.66
(WY)	(1975)	(1975)	(1975)	(1941)	(1962)	(1955)	(1988)	(1952)	(2000)	(1974)	(1974)	(1975)

12325500 FLINT CREEK NEAR SOUTHERN CROSS, MT—Continued

SUMMARY STATISTICS	FOR 2005 SEASON		WATER YEARS 1941 -1998		SEASONS 2000 - 2005*	
ANNUAL MEAN			29.5			
HIGHEST ANNUAL MEAN			57.9	1976		
LOWEST ANNUAL MEAN			13.2	1962		
HIGHEST DAILY MEAN	130	Jun 7	172	Jun 19, 1980	135	May 31, 2003
LOWEST DAILY MEAN	7.9	Many days	a0.00	Nov 30, 1966	4.9	Oct 20, 2003
ANNUAL SEVEN-DAY MINIMUM			1.4	Mar 8, 1941		
MAXIMUM PEAK FLOW	133	Jun 7	b174	Jun 13, 1942	139	May 31, 2003
MAXIMUM PEAK STAGE	2.17	Jun 7	c2.60	Jun 19, 1980	2.44	May 31, 2003
INSTANTANEOUS LOW FLOW			0.00	Nov 30, 1966		
ANNUAL RUNOFF (AC-FT)			21,370			
10 PERCENT EXCEEDS			50			
50 PERCENT EXCEEDS			28			
90 PERCENT EXCEEDS			6.8			

*--During periods of operation (1941 to current year; seasonal records beginning 2000).
a--Partial days of no flow in several years.
b--Gage height, 1.86 ft.
c--Maximum observed.



12329500 FLINT CREEK AT MAXVILLE, MT

LOCATION.--Lat 46°27'50", long 113°14'20" (NAD 27), in $NE^1/_4SW^1/_4NW^1/_4$ sec.9, T.8 N., R.13 W., Granite County, Hydrologic Unit 17010202, on right bank 0.4 mi west of Maxville and 1.0 mi upstream from Boulder Creek.

DRAINAGE AREA.--208 mi^2.

PERIOD OF RECORD.--August 1941 to current year. April 1939 to September 1941 at site 0.5 mi upstream; records not equivalent owing to diversions.

REVISED RECORDS.--WSP 1216: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 4,828.38 ft (NGVD 29).

REMARKS.--Records good except those for estimated daily discharges, which are poor. Some regulation by Georgetown Lake. Diversions for irrigation of about 8,200 acres upstream from station. During irrigation season, flow is supplemented by water from East Fork Rock Creek which is diverted in sec.5, T.4 N., R.14 W., 500 ft below Rock Creek Dam, through a canal into Trout Creek, thence into Flint Creek. 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	66	53	e43	e27	45	44	42	53	150	203	126	100
2	65	55	e46	e26	45	43	43	50	145	192	123	92
3	64	56	e45	e27	44	42	44	45	162	181	120	91
4	63	52	e46	e27	45	42	44	46	203	169	109	91
5	62	52	e43	e23	44	42	43	50	194	163	105	90
6	60	52	e43	e25	40	43	42	56	232	158	101	87
7	60	52	e44	e28	42	43	44	60	223	151	102	86
8	59	51	44	e28	43	43	52	74	207	136	104	86
9	59	50	46	e28	e42	43	52	72	197	119	107	83
10	58	51	48	e29	e45	43	48	98	190	112	110	88
11	58	50	51	e29	e46	42	46	124	193	116	113	90
12	58	e46	e48	e30	45	44	46	99	248	105	102	88
13	57	e44	e46	e30	43	41	47	86	266	98	100	95
14	56	e41	e48	e29	e37	42	52	85	228	91	96	97
15	56	e41	46	e28	e34	41	49	93	251	79	94	89
16	55	e41	44	e30	e30	41	55	104	269	76	90	87
17	53	e44	44	34	e35	42	59	142	293	75	94	106
18	55	46	44	54	e35	38	58	120	303	73	103	103
19	54	49	45	88	e34	42	61	131	261	78	101	89
20	56	48	44	72	e33	45	60	146	240	87	94	78
21	57	e47	e39	59	e30	48	63	134	253	94	94	75
22	56	e47	e33	50	e30	44	65	118	252	94	96	75
23	56	49	e32	51	e33	42	63	116	234	98	104	77
24	55	49	e38	49	e35	40	65	94	206	97	109	85
25	54	51	e42	47	e34	44	68	77	170	100	109	91
26	54	e47	e42	46	e45	41	67	72	183	104	105	84
27	54	e42	e40	45	e42	43	70	70	212	106	102	91
28	54	e42	e42	46	e44	48	65	78	235	109	97	91
29	54	e41	e38	45	---	45	62	86	233	105	95	90
30	54	e40	e40	44	---	43	59	83	222	108	95	91
31	55	---	e32	43	---	40	---	85	---	116	99	---
TOTAL	1,777	1,429	1,326	1,217	1,100	1,324	1,634	2,747	6,655	3,593	3,199	2,666
MEAN	57.3	47.6	42.8	39.3	39.3	42.7	54.5	88.6	222	116	103	88.9
MAX	66	56	51	88	46	48	70	146	303	203	126	106
MIN	53	40	32	23	30	38	42	45	145	73	90	75
AC-FT	3,520	2,830	2,630	2,410	2,180	2,630	3,240	5,450	13,200	7,130	6,350	5,290

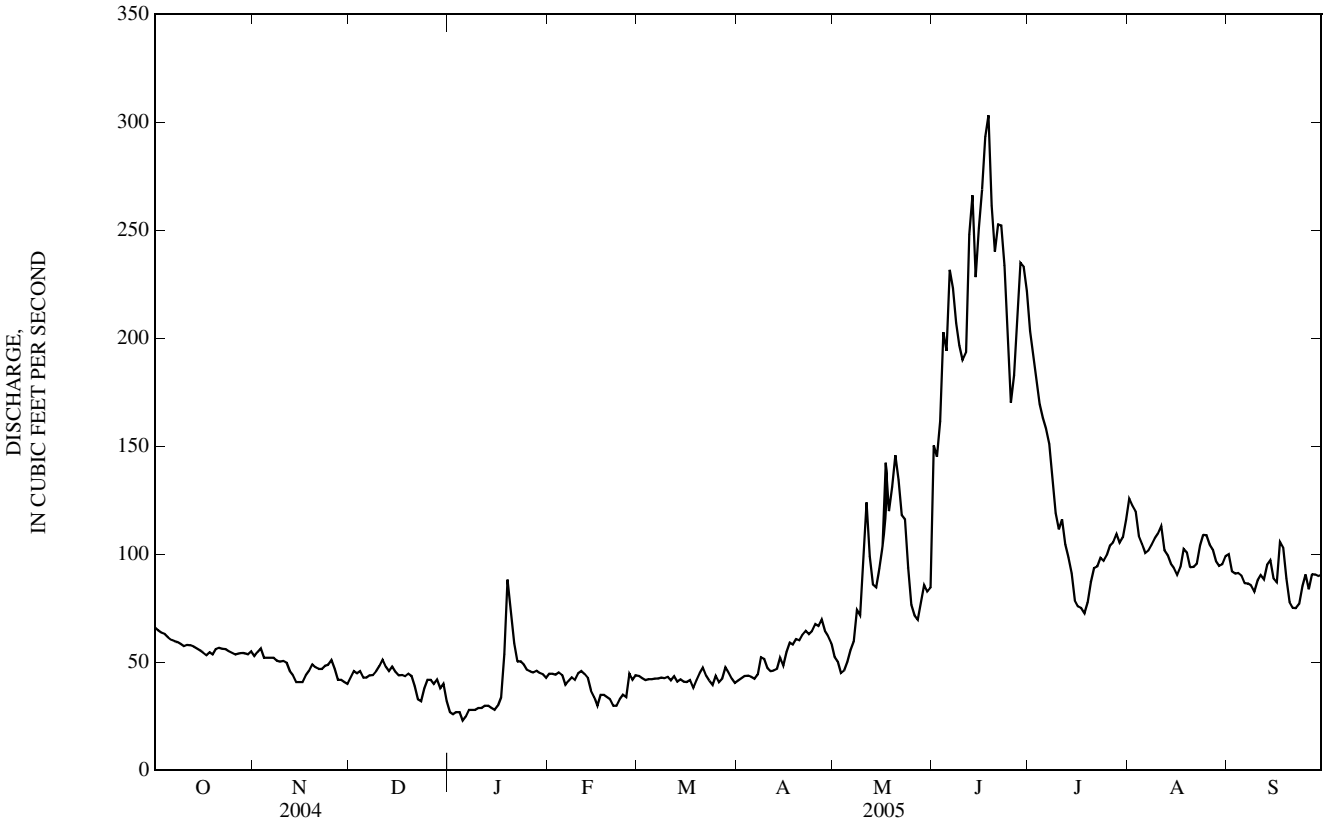
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 2005, BY WATER YEAR (WY)

MEAN	83.4	71.4	59.6	53.7	61.2	75.5	104	136	187	126	106	91.3
MAX	148	121	120	88.1	141	186	310	353	455	324	217	151
(WY)	(1976)	(1984)	(1976)	(1976)	(1996)	(1943)	(1948)	(1976)	(1948)	(1975)	(1975)	(1993)
MIN	50.2	41.3	27.7	26.6	27.3	33.5	48.6	50.9	70.7	48.1	30.1	33.6
(WY)	(1992)	(1993)	(1993)	(1993)	(1993)	(1955)	(1961)	(2002)	(1987)	(1973)	(1992)	(1992)

12329500 FLINT CREEK AT MAXVILLE, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1942 - 2005	
ANNUAL TOTAL	22,758		28,667			
ANNUAL MEAN	62.2		78.5		96.3	
HIGHEST ANNUAL MEAN					165	1976
LOWEST ANNUAL MEAN					53.2	1992
HIGHEST DAILY MEAN	216	Jun 11	303	Jun 18	933	Mar 29, 1943
LOWEST DAILY MEAN	24	Jan 5	23	Jan 5	15	Feb 25, 1962
ANNUAL SEVEN-DAY MINIMUM	25	Jan 2	26	Jan 1	19	Dec 31, 1957
MAXIMUM PEAK FLOW			318	Jun 18	a1,680	Mar 28, 1943
MAXIMUM PEAK STAGE			4.01	Jun 18	b8.08	Feb 4, 1963
INSTANTANEOUS LOW FLOW					15	Feb 25, 1962
ANNUAL RUNOFF (AC-FT)	45,140		56,860		69,780	
10 PERCENT EXCEEDS	91		148		166	
50 PERCENT EXCEEDS	57		56		79	
90 PERCENT EXCEEDS	40		40		43	

a--Gage height, 6.79 ft.
b--Backwater from ice.
e--Estimated.



12330000 BOULDER CREEK AT MAXVILLE, MT

LOCATION.--Lat 46°28'20", 1ong 113°13'59" (NAD 27), in $SE^1/_4$ $NE^1/_4$ $SW^1/_4$ sec.4, T.8 N., R.13 W., Granite County, Hydrologic Unit 17010202, on right bank 0.2 mi upstream from mouth and 0.7 mi north of Maxville.

DRAINAGE AREA.--71.3 mi^2.

PERIOD OF RECORD.--April 1939 to current year. Monthly discharge only for some periods, published in WSP 1316.

GAGE.--Water-stage recorder. Elevation of gage is 4,750 ft (NGVD 29). Apr. 15, 1939, to July 7, 1941, nonrecording gage at site 75 ft upstream at different elevation. July 8-20, 1941, nonrecording gage at site 175 ft upstream at elevation 1.03 ft higher.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Diversions upstream for irrigation of about 240 acres near the 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	27	18	e17	e14	17	14	15	20	201	139	28	12
2	26	21	e17	e14	17	14	16	19	191	127	28	12
3	25	21	e18	e13	16	15	16	20	239	116	26	12
4	24	18	e17	e13	17	15	16	21	293	106	24	11
5	25	21	e16	e12	17	15	15	27	265	95	22	11
6	25	20	e17	e13	e15	15	15	41	294	87	20	11
7	25	20	18	e15	e13	15	15	50	230	83	18	10
8	25	20	18	e15	e13	15	13	75	193	78	20	10
9	24	20	18	e15	e14	16	11	82	168	73	22	9.8
10	24	20	18	e15	e12	16	9.3	136	154	72	18	12
11	24	20	19	e15	e12	16	8.3	131	150	72	17	12
12	23	19	e17	e15	e14	16	8.1	96	185	63	16	12
13	23	e19	e17	e15	e9.0	15	12	91	172	57	16	13
14	23	e17	e18	e14	e9.0	15	9.1	101	158	52	16	12
15	23	e17	e18	e14	e8.0	15	8.5	122	182	46	16	11
16	22	e17	e19	e14	e7.0	14	8.7	153	198	41	19	11
17	23	e17	18	e17	e9.0	15	11	197	232	39	24	16
18	24	e16	18	e20	e9.0	15	9.2	152	229	37	23	17
19	23	e16	18	19	e10	15	8.7	212	195	35	20	14
20	23	e16	18	19	e11	15	16	195	185	33	16	12
21	24	e16	e17	19	e9.0	15	19	197	198	32	15	11
22	24	e16	e16	18	e9.0	15	20	166	211	32	15	11
23	23	e18	e16	18	e10	15	22	166	192	31	16	12
24	22	e18	e16	18	e10	21	23	141	166	30	15	17
25	21	e19	e17	17	14	15	20	119	155	30	15	17
26	21	e17	e17	17	15	14	24	112	152	30	14	20
27	21	e16	e16	17	14	15	29	118	154	28	14	21
28	21	e15	e16	17	14	16	25	134	180	27	13	21
29	21	e15	e17	17	---	15	22	148	174	26	13	20
30	21	e15	e17	17	---	15	21	138	160	27	13	20
31	20	---	e15	17	---	15	---	132	---	26	13	---
TOTAL	720	538	534	493	344.0	472	465.9	3,512	5,856	1,770	565	410.8
MEAN	23.2	17.9	17.2	15.9	12.3	15.2	15.5	113	195	57.1	18.2	13.7
MAX	27	21	19	20	17	21	29	212	294	139	28	21
MIN	20	15	15	12	7.0	14	8.1	19	150	26	13	9.8
AC-FT	1,430	1,070	1,060	978	682	936	924	6,970	11,620	3,510	1,120	815

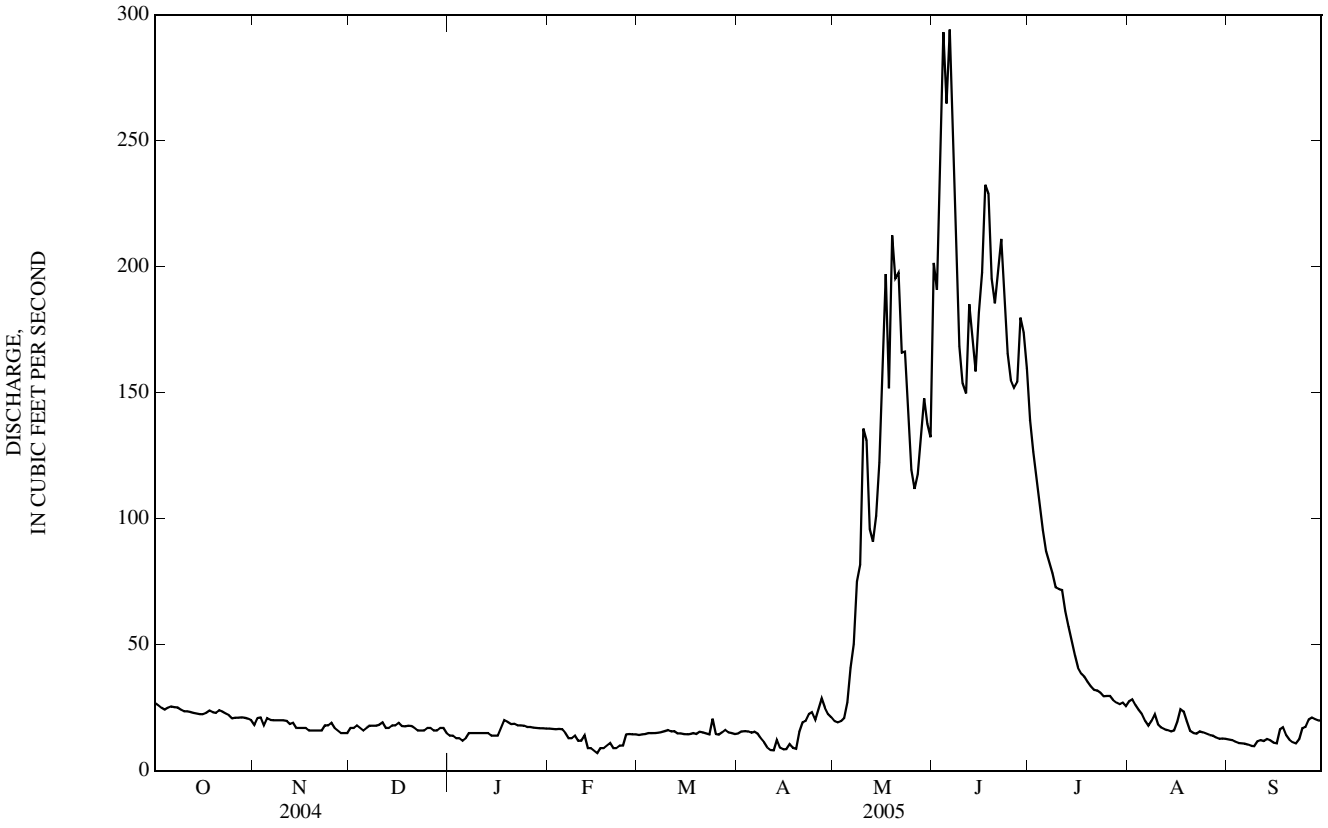
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2005, BY WATER YEAR (WY)

MEAN	22.6	23.1	20.5	18.4	18.2	18.4	28.4	114	174	58.3	20.6	17.8
MAX	51.1	44.8	39.0	32.4	30.5	28.6	56.3	261	376	244	68.4	54.1
(WY)	(1960)	(1976)	(1976)	(1976)	(1951)	(1976)	(1943)	(1976)	(1975)	(1975)	(1975)	(1965)
MIN	3.59	11.8	11.0	8.49	10.0	12.3	10.4	54.7	35.0	12.6	8.14	6.59
(WY)	(1988)	(1988)	(1988)	(1988)	(1941)	(1993)	(1991)	(1977)	(1992)	(1988)	(1988)	(1991)

12330000 BOULDER CREEK AT MAXVILLE, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1940 - 2005	
ANNUAL TOTAL	10,653.2		15,680.7			
ANNUAL MEAN	29.1		43.0		44.6	
HIGHEST ANNUAL MEAN					82.2	1976
LOWEST ANNUAL MEAN					20.4	1992
HIGHEST DAILY MEAN	148	Jun 10	294	Jun 6	1,140	Jun 19, 1975
LOWEST DAILY MEAN	6.8	Aug 15	7.0	Feb 16	2.8	Oct 13, 1991
ANNUAL SEVEN-DAY MINIMUM	7.7	Aug 10	8.7	Feb 13	3.4	Oct 8, 1987
MAXIMUM PEAK FLOW			a342	Jun 4	1,460	Jun 19, 1975
MAXIMUM PEAK STAGE			b3.14	Jan 6	4.55	Jun 19, 1975
INSTANTANEOUS LOW FLOW					c2.8	Oct 13, 1991
ANNUAL RUNOFF (AC-FT)	21,130		31,100		32,290	
10 PERCENT EXCEEDS	67		152		109	
50 PERCENT EXCEEDS	19		18		21	
90 PERCENT EXCEEDS	14		12		12	

a--Gage height, 3.10 ft.
b--Backwater from ice.
c--Result of upstream diversion.
e--Estimated.



12331800 CLARK FORK NEAR DRUMMOND, MT

LOCATION.--Lat 46°42'44", long 113°19'48" (NAD 27), in NE$^1/_4$ SW$^1/_4$ NW$^1/_4$ sec. 14, T.11 N., R.14 W., in Granite County, Hydrologic Unit 17010201, on right bank 50 ft upstream from country road bridge, 0.3 mi north of Bearmouth, 4.5 mi east of Bearmouth Chalet, 9.0 mi northwest of Drummond, and at river mile 403.9.

DRAINAGE AREA.--2,501 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1993 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 3,790 ft (NGVD 29).

REMARKS.--Water-discharge records good. Some regulation by settling ponds on Silver Bow Creek near Anaconda and Georgetown Lake (station number 12325000) on Flint Creek. Diversions for irrigation of about 88,000 acres upstream from station. U.S. Geological Survey satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 23, 1981 recorded a discharge of about 16,000 ft^3/s, from measurements made upstream at Clark Fork at Drummond (12331600) and at downstream site, Clark Fork at Clinton (12331900).

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	523	479	448	249	471	397	406	510	1,200	1,680	268	282
2	516	481	464	189	472	406	406	486	2,030	1,510	285	286
3	512	492	465	173	461	406	423	429	2,530	1,400	278	284
4	507	503	458	189	460	407	431	422	3,270	1,300	264	286
5	506	493	445	e180	462	407	423	430	3,350	1,190	256	280
6	504	495	452	e170	442	413	415	454	3,110	1,090	243	282
7	502	500	468	207	396	428	419	500	3,050	976	228	282
8	493	493	456	248	429	440	441	580	2,700	921	230	279
9	498	488	457	273	414	449	463	685	2,330	852	241	280
10	486	488	452	281	388	447	446	865	2,030	813	251	288
11	485	485	474	308	390	438	421	1,580	1,860	787	247	323
12	499	481	487	339	421	439	406	1,980	1,900	757	244	337
13	513	476	454	358	426	424	401	1,640	2,220	692	256	348
14	526	470	447	359	412	412	450	1,430	1,900	613	255	362
15	525	467	465	337	394	409	456	1,360	1,840	578	257	362
16	523	474	457	297	344	409	450	1,420	2,000	537	247	351
17	518	476	450	333	320	413	461	1,740	2,220	486	245	433
18	523	470	449	393	346	405	470	2,030	2,820	470	254	489
19	528	471	450	544	359	395	485	1,870	2,530	440	261	481
20	521	470	455	628	424	400	502	2,020	2,180	408	263	457
21	530	446	426	686	420	415	508	2,040	2,000	380	258	440
22	534	448	431	601	395	409	493	2,040	1,990	368	254	438
23	521	474	338	575	388	397	481	1,960	2,000	361	261	460
24	511	485	315	537	397	372	487	1,840	1,850	342	273	496
25	505	499	402	510	404	385	490	1,620	1,660	324	282	546
26	498	513	427	500	401	389	514	1,460	1,600	322	282	545
27	491	476	395	493	393	390	554	1,310	1,680	331	281	537
28	492	460	366	497	391	423	557	1,170	1,950	349	269	523
29	496	445	364	492	---	474	538	1,100	1,960	315	268	522
30	495	405	441	493	---	458	527	1,110	1,870	274	261	521
31	487	---	386	474	---	424	---	1,040	---	266	272	---
TOTAL	15,768	14,303	13,444	11,913	11,420	12,880	13,924	39,121	65,630	21,132	8,034	11,800
MEAN	509	477	434	384	408	415	464	1,262	2,188	682	259	393
MAX	534	513	487	686	472	474	557	2,040	3,350	1,680	285	546
MIN	485	405	315	170	320	372	401	422	1,200	266	228	279
AC-FT	31,280	28,370	26,670	23,630	22,650	25,550	27,620	77,600	130,200	41,920	15,940	23,410

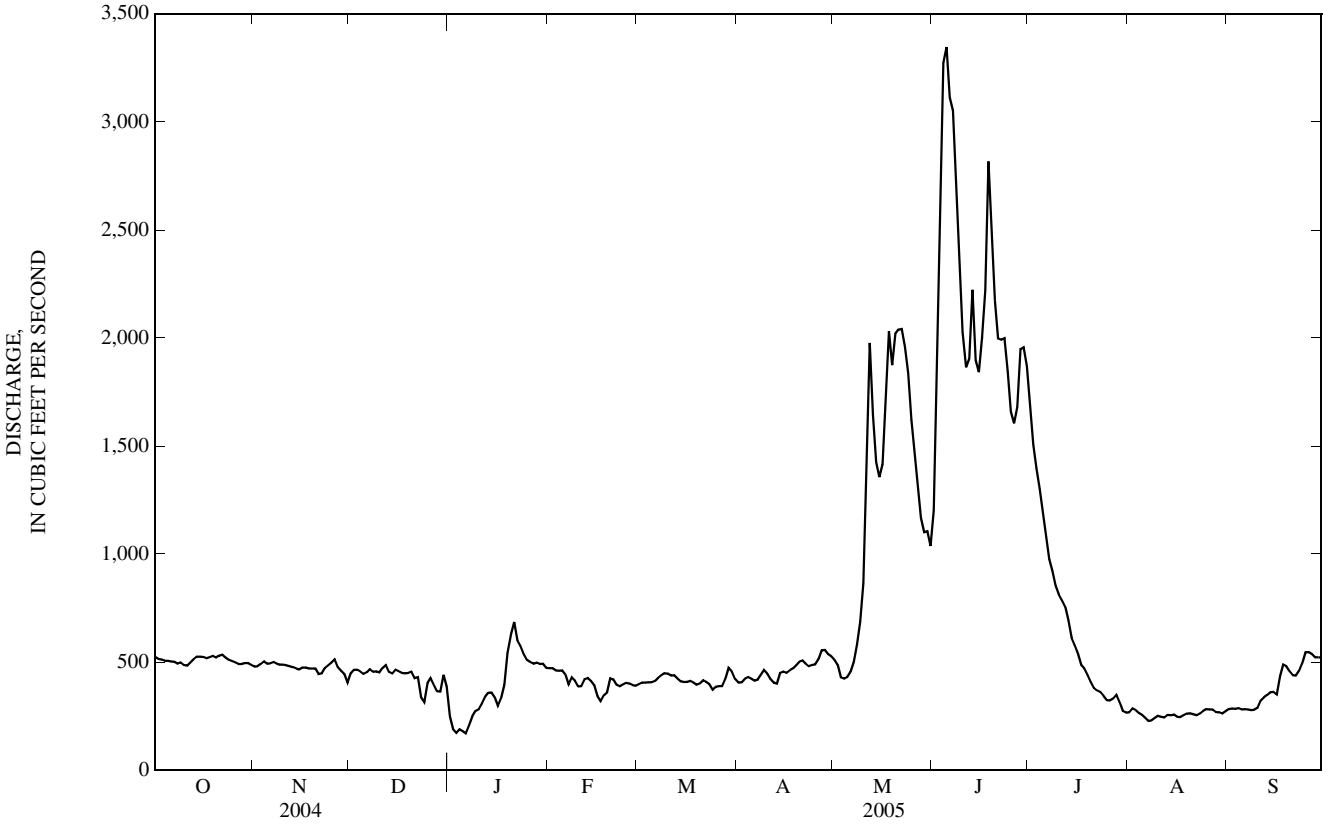
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 2005, BY WATER YEAR (WY)

MEAN	574	577	500	495	592	686	766	1,126	1,480	692	355	432
MAX	859	810	640	754	1,377	1,048	1,356	2,557	3,560	1,731	895	1,007
(WY)	(1998)	(1998)	(1998)	(1997)	(1996)	(1997)	(1996)	(1997)	(1997)	(1998)	(1993)	(1993)
MIN	411	448	366	377	375	415	464	298	297	160	112	201
(WY)	(2003)	(2001)	(2001)	(2001)	(2001)	(2005)	(2005)	(2000)	(2000)	(2000)	(2000)	(1994)

12331800 CLARK FORK NEAR DRUMMOND, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1993 - 2005	
ANNUAL TOTAL	164,188		239,369			
ANNUAL MEAN	449		656		682	
HIGHEST ANNUAL MEAN					1,192	1997
LOWEST ANNUAL MEAN					400	2000
HIGHEST DAILY MEAN	1,370	Mar 9	3,350	Jun 5	8,430	Feb 9, 1996
LOWEST DAILY MEAN	132	Aug 17	170	Jan 6	77	Jul 31, 2000
ANNUAL SEVEN-DAY MINIMUM	143	Aug 12	194	Jan 2	83	Jul 29, 2000
MAXIMUM PEAK FLOW			3,550	Jun 4	9,800	Feb 9, 1996
MAXIMUM PEAK STAGE			6.77	Jun 4	10.03	Feb 9, 1996
INSTANTANEOUS LOW FLOW			a151	Jan 3	b75	Jul 30, 2000
ANNUAL RUNOFF (AC-FT)	325,700		474,800		493,800	
10 PERCENT EXCEEDS	605		1,680		1,200	
50 PERCENT EXCEEDS	456		458		531	
90 PERCENT EXCEEDS	262		274		272	

a--Gage height, 2.31 ft.
b--Gage height, 2.03 ft.
e--Estimated.



12331800 CLARK FORK NEAR DRUMMOND, MT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--March 1993 to current year.

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

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

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf 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)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)
DEC													
20...	0930	451	8.5	487	1.5	3.0	220	63.4	15.7	7.5	8	.30	.10
MAR													
09...	1515	447	8.6	473	20.0	10.0	230	65.5	15.6	8.6	10	.05	.17
APR													
18...	1020	469	8.4	477	7.0	7.5	230	66.2	16.2	9.3	11	E.03	.17
MAY													
17...	1515	1,810	8.2	289	16.0	11.0	120	34.7	8.44	9.5	24	E.03	.55
JUN													
02...	1630	2,210	8.2	312	11.0	9.5	140	39.6	10.1	12.2	30	.07	.82
23...	1150	2,030	8.2	289	20.0	16.0	130	39.7	8.16	12.9	18	.07	.28
JUL													
26...	1340	323	8.5	495	25.0	18.5	240	67.5	16.7	11.5	12.7	E.04	.04
AUG													
24...	1210	270	8.4	536	19.5	15.5	260	72.8	18.1	11.6	11.7	E.03	E.04

Date	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recoverable, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recoverable, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recoverable, ug/L (01051)	Manganese, water, fltrd, ug/L (01056)	Manganese, water, unfltrd recoverable, ug/L (01055)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recoverable, ug/L (01092)	Suspnd. sediment, percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
DEC													
20...	2.6	12.3	12	220	E.05	1.78	11.5	53	5.0	17	74	14	17
MAR													
09...	4.9	24.5	E5	470	E.07	3.45	20.1	78	3.7	31	78	27	33
APR													
18...	3.8	24.7	E6	510	E.07	4.11	17.8	98	4.0	35	85	26	33
MAY													
17...	6.4	77.7	51	2,280	.40	17.8	23.7	295	4.9	104	80	132	645
JUN													
02...	12.8	146	37	3,320	.29	23.0	18.1	403	9.0	201	61	222	1,320
23...	8.6	48.3	14	880	.18	7.48	14.0	137	5.4	45	69	49	269
JUL													
26...	4.3	6.1	<6	40	E.04	.30	11.7	21	2.9	5	77	5	4.4
AUG													
24...	4.2	6.3	7	50	<.08	.45	7.3	30	2.6	6	72	8	5.8

E--Estimated.

12332000 MIDDLE FORK ROCK CREEK NEAR PHILIPSBURG, MT

LOCATION.--Lat 46°11'05", long 113°30'06" (NAD 27), in $SW^1/_4$ $NW^1/_4$ $SE^1/_4$ sec.17, T.5 N., R.15 W., Granite County, Hydrologic Unit 17010202, on left bank 40 ft downstream from bridge on county highway, 1.2 mi upstream from East Fork, 3.4 mi upstream from West Fork, and 15 mi southwest of Philipsburg.

DRAINAGE AREA.--123 mi^2.

PERIOD OF RECORD.--September 1937 to current year. Monthly discharges only January to March 1938, published in WSP 1316.

GAGE.--Water-stage recorder. Elevation of gage is 5,444.08 ft (NGVD 29). Prior to Oct. 25, 1990, gage located at several sites 0.8 to 1.0 mi downstream. See WSP 1736 or 1933 for history of changes prior to Oct. 1, 1955.

REMARKS.--Records good except those for estimated daily discharges, which are poor. U.S. Geological Survey satellite telemeter at station. A few small diversions for irrigation upstream from 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	61	43	e33	e30	e30	e23	30	60	386	210	75	37
2	59	46	e34	e30	e32	e23	30	59	336	200	74	36
3	58	47	e34	e29	e30	e22	31	60	311	186	68	35
4	57	42	e33	e29	e33	e22	30	63	283	172	63	35
5	56	47	e32	e27	e25	e23	29	70	278	161	59	35
6	55	44	e33	e28	e20	e27	30	84	328	154	57	34
7	54	43	e34	e30	e17	e30	34	102	295	148	55	34
8	54	42	e34	e30	e17	e30	42	129	264	142	54	34
9	53	42	e35	e30	e15	e44	39	160	246	135	57	33
10	52	e41	e37	e31	e14	e43	36	216	226	132	56	38
11	52	e41	e36	e31	e15	e44	35	226	217	128	54	41
12	51	e38	e32	e32	e16	e37	35	190	308	120	53	39
13	51	e38	e32	e32	e14	e33	36	175	282	114	51	38
14	50	e37	e33	e29	e11	e32	38	181	257	110	50	38
15	49	e37	e34	e29	e9.5	e34	34	207	287	104	49	36
16	49	e36	e34	e32	e9.0	e35	38	269	305	99	48	35
17	48	e36	e36	e37	e9.5	e31	42	376	358	95	47	44
18	49	e35	e36	e41	e10	e29	42	333	360	92	49	50
19	50	e35	e38	e44	e11	e33	43	457	310	87	47	43
20	49	e34	e36	e40	e10	e37	40	469	285	83	44	39
21	51	e34	e34	e40	e11	e36	39	445	301	80	43	37
22	50	e36	e31	e37	e12	e31	41	403	328	79	41	38
23	49	e36	e29	e40	e12	e29	45	420	315	79	43	38
24	49	e36	e31	e36	e14	e30	51	372	281	75	42	41
25	45	e37	e34	e36	e16	e29	56	325	261	75	42	42
26	47	e34	e32	e32	e15	e35	62	296	264	72	40	39
27	46	e33	e32	e29	e15	e39	69	293	271	69	39	37
28	46	e33	e31	e31	e17	e38	62	306	266	67	38	36
29	46	e33	e31	e29	---	33	61	323	248	65	37	35
30	45	e32	e33	e27	---	30	63	316	228	64	37	34
31	45	---	e31	e27	---	28	---	308	---	64	38	---
TOTAL	1,576	1,148	1,035	1,005	460.0	990	1,263	7,693	8,685	3,461	1,550	1,131
MEAN	50.8	38.3	33.4	32.4	16.4	31.9	42.1	248	290	112	50.0	37.7
MAX	61	47	38	44	33	44	69	469	386	210	75	50
MIN	45	32	29	27	9.0	22	29	59	217	64	37	33
AC-FT	3,130	2,280	2,050	1,990	912	1,960	2,510	15,260	17,230	6,860	3,070	2,240
CFSM	0.41	0.31	0.27	0.26	0.13	0.26	0.34	2.02	2.35	0.91	0.41	0.31
IN.	0.48	0.35	0.31	0.30	0.14	0.30	0.38	2.33	2.63	1.05	0.47	0.34

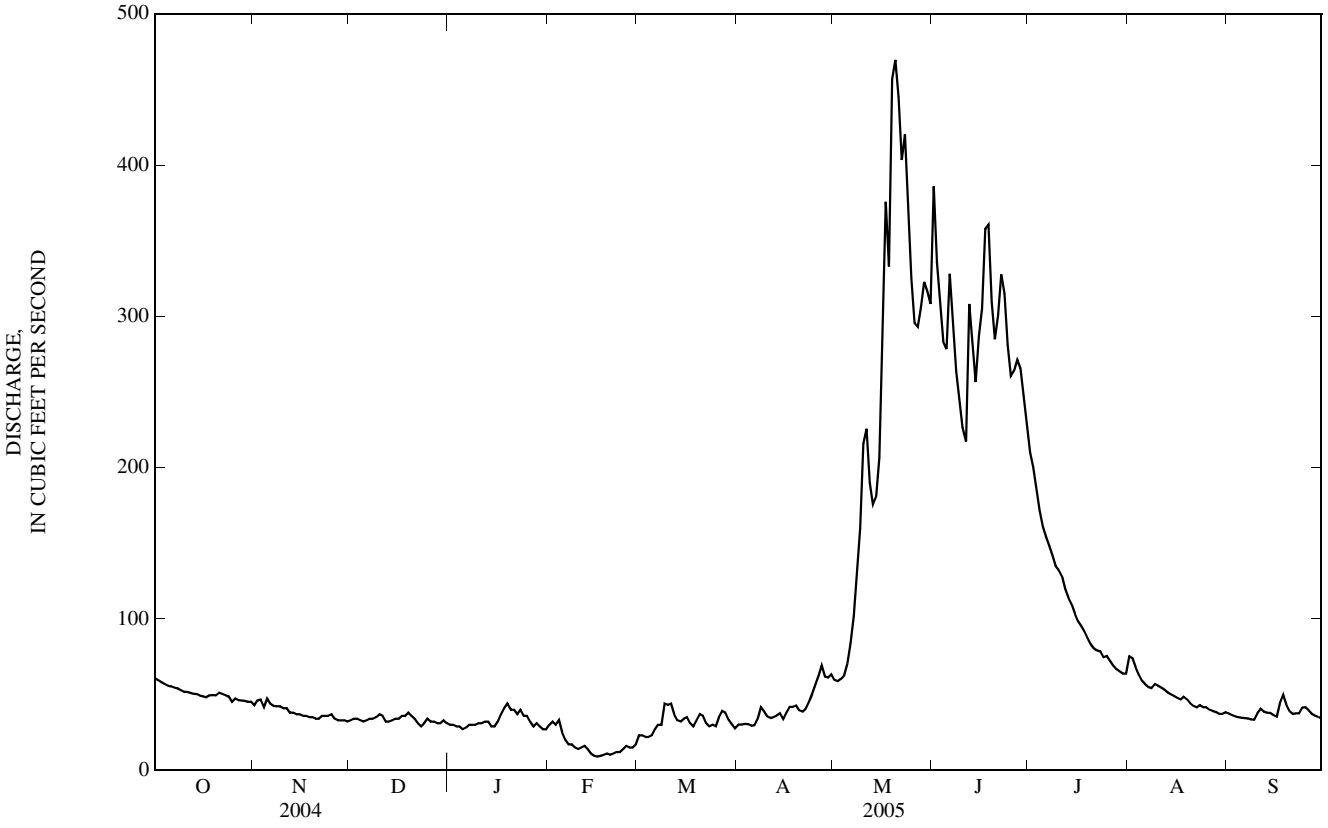
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 2005, BY WATER YEAR (WY)

MEAN	49.2	42.6	36.2	32.1	32.6	36.2	74.2	332	475	176	69.7	51.6
MAX	201	104	64.1	60.9	60.3	71.2	190	650	914	496	141	98.5
(WY)	(1947)	(1947)	(1947)	(1976)	(1996)	(1986)	(1943)	(1947)	(1972)	(1975)	(1975)	(1946)
MIN	26.9	25.7	23.6	22.0	16.4	22.7	28.1	137	141	48.7	25.8	30.4
(WY)	(1988)	(1980)	(1946)	(1977)	(2005)	(1955)	(1975)	(1953)	(1992)	(1940)	(1940)	(1987)

12332000 MIDDLE FORK ROCK CREEK NEAR PHILIPSBURG, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1938 - 2005	
ANNUAL TOTAL	31,491		29,997.0			
ANNUAL MEAN	86.0		82.2		117	
HIGHEST ANNUAL MEAN					183	1997
LOWEST ANNUAL MEAN					62.3	1940
HIGHEST DAILY MEAN	450	Jun 10	469	May 20	1,480	Jun 16, 1974
LOWEST DAILY MEAN	25	Jan 5	9.0	Feb 16	5.3	Feb 9, 1953
ANNUAL SEVEN-DAY MINIMUM	28	Jan 1	10	Feb 14	10	Feb 14, 2005
MAXIMUM PEAK FLOW			535	May 19	1,680	Jun 16, 1974
MAXIMUM PEAK STAGE			a3.01	May 19	b5.58	Jun 16, 1974
INSTANTANEOUS LOW FLOW					5.3	Feb 9, 1953
ANNUAL RUNOFF (AC-FT)	62,460		59,500		85,060	
ANNUAL RUNOFF (CFSM)	0.700		0.668		0.955	
ANNUAL RUNOFF (INCHES)	9.52		9.07		12.97	
10 PERCENT EXCEEDS	228		267		319	
50 PERCENT EXCEEDS	50		41		47	
90 PERCENT EXCEEDS	31		29		28	

a--Recorded, may have been higher during period of no gage-height record, Nov. 16 to Feb. 28.
b--Site and datum in use.
e--Estimated.



12334510 ROCK CREEK NEAR CLINTON, MT

LOCATION.--Lat 46°43'21", long 113°40'56" (NAD 27), in $NW^1/_4NE^1/_4SW^1/_4$ sec.12, T.11 N., R.17 W., Missoula County, Hydrologic Unit 17010202, on left bank 100 ft downstream from private road bridge, 0.2 mi upstream from mouth, and 3.7 mi southeast of Clinton.

DRAINAGE AREA.--885 mi^2.

PERIOD OF RECORD.--October 1972 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 3,519.46 ft (NGVD 29).

REMARKS.--Records good except those for estimated daily discharges, which are poor. Some regulation by East Fork Rock Creek Reservoir (station number 12332500). During irrigation season water is diverted from East Fork Rock Creek in sec.5, T.4 N., R.14 W., 500 ft below Rock Creek Dam, through a canal into Trout Creek, thence into Flint Creek. Diversions for irrigation of about 16,100 acres. U.S. Geological Survey satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in June 1972 reached a stage of 8.52 ft, from floodmark, discharge, 6,500 ft^3/s; local residents report flood of 1927 reached a stage of about 9.5 ft.

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	290	216	144	148	186	166	177	458	1,400	817	307	181
2	284	208	178	e120	182	171	184	432	1,550	767	331	179
3	278	226	184	e100	175	168	191	426	1,610	722	319	178
4	263	223	183	e70	176	171	193	449	1,560	675	300	174
5	260	198	176	e40	181	171	186	483	1,460	642	277	171
6	264	214	177	e60	169	175	178	550	1,500	611	267	166
7	262	217	190	e80	147	181	183	649	1,420	589	260	164
8	261	214	188	e130	163	188	230	731	1,300	562	259	163
9	259	212	196	e120	161	198	260	824	1,200	544	265	164
10	252	213	195	e110	141	207	249	1,080	1,130	540	257	187
11	248	212	203	e100	143	197	237	1,340	1,070	547	250	195
12	246	207	207	e110	152	201	229	1,260	1,220	519	245	193
13	243	197	190	e130	171	193	226	1,130	1,340	490	247	194
14	241	193	179	e150	167	182	250	1,100	1,160	477	249	194
15	238	193	204	e120	155	182	235	1,150	1,130	460	248	191
16	239	205	193	e80	138	177	228	1,270	1,140	453	237	192
17	239	206	182	e90	124	182	254	1,660	1,200	442	226	257
18	249	199	181	e130	132	174	276	1,700	1,300	439	229	302
19	246	195	187	e200	144	165	294	1,760	1,190	424	228	290
20	244	197	190	e220	157	179	287	2,150	1,090	406	220	261
21	243	173	177	e200	167	182	282	1,990	1,040	391	209	240
22	245	151	169	e210	156	177	282	1,860	1,010	385	204	229
23	240	192	121	e200	146	175	306	1,840	987	374	211	229
24	237	209	102	216	150	160	353	1,710	940	361	208	247
25	232	213	158	205	155	162	434	1,550	894	352	196	264
26	221	213	185	202	157	165	501	1,420	879	354	191	256
27	226	185	165	200	157	165	573	1,320	909	340	186	240
28	224	151	141	203	159	198	560	1,270	941	321	183	225
29	224	156	138	200	---	213	516	1,260	960	310	181	218
30	223	127	169	197	---	198	490	1,230	889	299	180	212
31	223	---	172	189	---	185	---	1,200	---	297	181	---
TOTAL	7,644	5,915	5,424	4,530	4,411	5,608	8,844	37,252	35,419	14,910	7,351	6,356
MEAN	247	197	175	146	158	181	295	1,202	1,181	481	237	212
MAX	290	226	207	220	186	213	573	2,150	1,610	817	331	302
MIN	221	127	102	40	124	160	177	426	879	297	180	163
AC-FT	15,160	11,730	10,760	8,990	8,750	11,120	17,540	73,890	70,250	29,570	14,580	12,610
CFSM	0.28	0.22	0.20	0.17	0.18	0.20	0.33	1.36	1.33	0.54	0.27	0.24

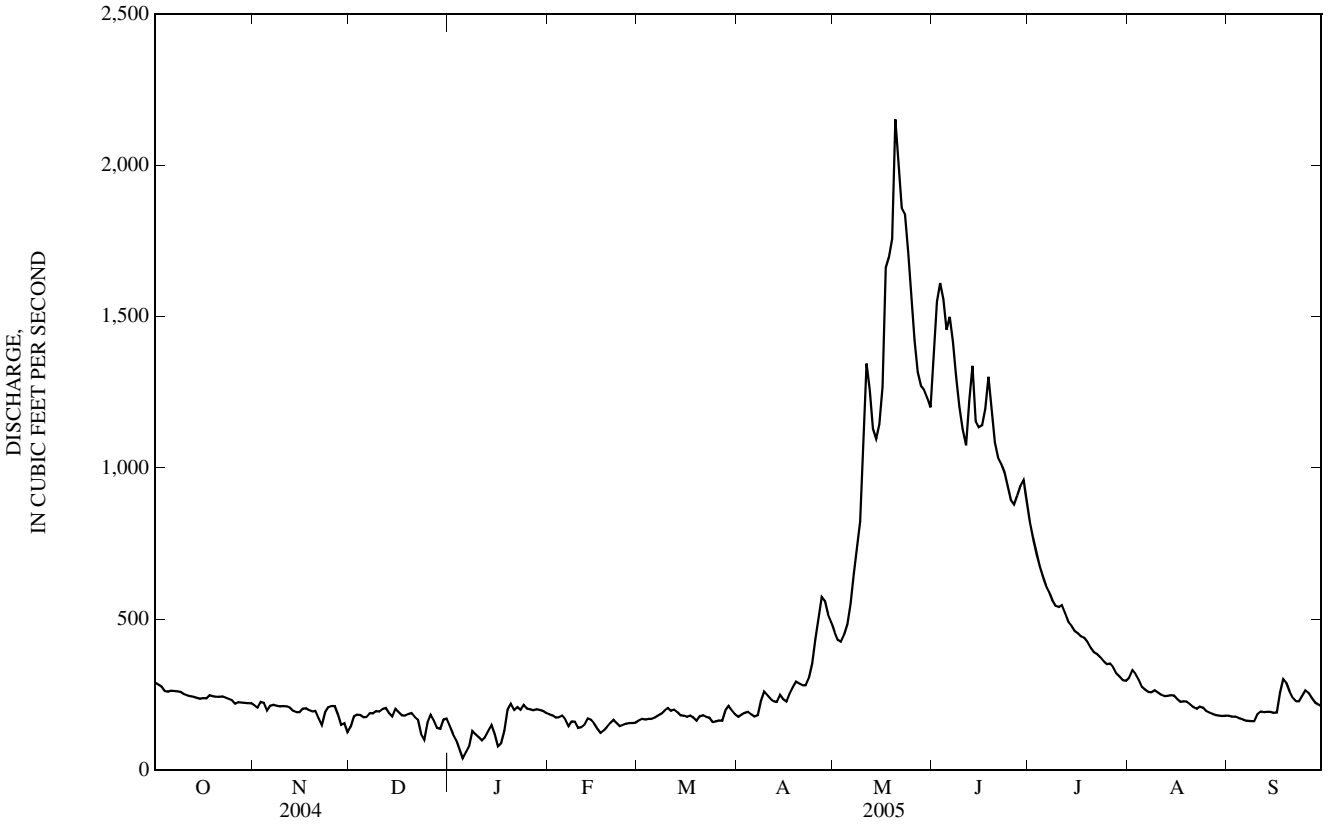
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 2005, BY WATER YEAR (WY)

MEAN	250	224	195	182	190	243	499	1,444	1,675	662	306	260
MAX	474	430	460	329	426	428	1,022	3,676	3,755	1,908	635	389
(WY)	(1976)	(1976)	(1976)	(1976)	(1996)	(1986)	(1996)	(1976)	(1975)	(1975)	(1975)	(1975)
MIN	157	149	119	106	109	158	236	544	407	267	156	148
(WY)	(1988)	(1988)	(1989)	(1988)	(1993)	(2002)	(1975)	(1977)	(1992)	(1985)	(1988)	(1992)

12334510 ROCK CREEK NEAR CLINTON, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1973 - 2005	
ANNUAL TOTAL	135,064		143,664			
ANNUAL MEAN	369		394		512	
HIGHEST ANNUAL MEAN					966	1976
LOWEST ANNUAL MEAN					258	1992
HIGHEST DAILY MEAN	1,260	Jun 11	2,150	May 20	5,480	May 18, 1997
LOWEST DAILY MEAN	65	Jan 6	40	Jan 5	38	Dec 22, 1998
ANNUAL SEVEN-DAY MINIMUM	86	Jan 3	86	Jan 2	65	Jan 3, 1974
MAXIMUM PEAK FLOW			a2,230	May 20	c5,530	May 18, 1997
MAXIMUM PEAK STAGE			b6.28	Jan 2	8.05	Jun 9, 1997
INSTANTANEOUS LOW FLOW					d37	Dec 23, 1998
ANNUAL RUNOFF (AC-FT)	267,900		285,000		370,600	
ANNUAL RUNOFF (CFSM)	0.417		0.445		0.578	
10 PERCENT EXCEEDS	870		1,130		1,210	
50 PERCENT EXCEEDS	260		217		261	
90 PERCENT EXCEEDS	151		154		151	

a--Gage height, 5.91 ft.
b--Backwater from ice.
c--Gage height, 7.81 ft.
c--Gage height, 2.56 ft, may have been less during period of ice effect.
e--Estimated.



12334510 ROCK CREEK NEAR CLINTON, MT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1979-83, 1985 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: September 1979 to September 1983, April 1995 to September 2002, October 2004 to September 2005.

REMARKS.--Water temperature record is rated excellent. Missing data for Sept. 29 due to equipment error. Several unpublished observations of water temperature and specific conductance were made during the year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE : Maximum, 23.0°C, Aug. 1, 2000; minimum, 0.0°C, on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE : Maximum, 22.0°C, Aug. 7; minimum, 0.0°C, on many days during winter period.

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	12.5	9.0	10.5	4.0	2.5	3.0	0.5	0.0	0.5	0.0	0.0	0.0
2	12.5	8.5	10.0	5.5	3.0	4.0	1.5	0.5	1.0	0.0	0.0	0.0
3	12.0	8.0	10.0	6.0	4.5	5.0	1.5	0.5	1.0	0.0	0.0	0.0
4	12.0	8.0	10.0	4.5	2.5	3.5	1.5	0.5	1.0	0.0	0.0	0.0
5	11.5	8.0	9.5	4.0	2.0	3.0	1.5	0.5	1.0	0.0	0.0	0.0
6	11.0	7.5	9.0	4.5	2.0	3.0	1.5	0.5	1.0	0.0	0.0	0.0
7	12.5	9.5	10.5	5.5	3.0	4.0	2.0	1.0	1.5	0.0	0.0	0.0
8	11.5	8.0	9.5	5.0	3.0	4.0	2.0	0.5	1.0	0.5	0.0	0.0
9	10.5	8.0	9.0	4.0	2.5	3.5	2.0	1.0	1.5	0.5	0.0	0.0
10	8.5	6.5	7.5	5.5	3.5	4.5	3.0	1.5	2.0	0.0	0.0	0.0
11	9.0	5.5	7.0	4.5	3.0	3.5	3.5	2.0	3.0	0.5	0.0	0.0
12	9.0	6.5	7.5	3.5	1.5	2.5	3.0	1.0	2.0	0.5	0.0	0.0
13	9.5	6.0	7.5	3.0	1.5	2.0	1.0	0.5	0.5	0.5	0.0	0.0
14	10.5	7.0	8.5	3.0	2.0	2.5	1.5	0.5	1.0	0.0	0.0	0.0
15	11.0	9.0	10.0	2.5	1.5	2.0	2.5	1.5	2.0	0.0	0.0	0.0
16	10.0	9.5	9.5	3.5	2.0	2.5	2.0	1.0	1.5	0.5	0.0	0.0
17	9.5	8.0	9.0	5.0	3.0	3.5	2.5	1.0	1.5	0.5	0.0	0.5
18	9.5	7.5	8.0	3.0	1.5	2.5	2.0	1.0	1.5	0.5	0.5	0.5
19	8.5	6.0	7.0	2.5	2.0	2.5	3.0	1.5	2.0	1.0	0.5	0.5
20	8.5	6.5	7.5	3.0	1.5	2.0	2.5	1.0	2.0	1.0	0.5	0.5
21	8.0	7.0	7.5	1.5	0.5	1.0	1.5	1.0	1.0	1.0	0.5	0.5
22	7.5	6.0	7.0	2.0	1.0	1.5	1.0	0.0	0.5	1.0	0.5	0.5
23	7.0	6.0	6.5	2.5	2.0	2.0	0.5	0.0	0.5	2.0	0.5	1.0
24	6.0	4.5	5.0	3.0	2.0	2.5	0.5	0.5	0.5	2.0	0.0	0.5
25	6.0	4.0	5.0	4.0	3.0	3.5	0.5	0.5	0.5	2.0	0.0	0.5
26	6.0	3.5	4.5	4.0	1.5	3.0	0.5	0.5	0.5	2.0	0.5	1.0
27	6.0	3.5	4.5	1.5	0.5	1.0	0.5	0.0	0.0	2.5	0.5	1.0
28	6.0	3.5	5.0	1.0	0.5	0.5	0.5	0.0	0.0	2.5	0.5	1.5
29	5.5	4.5	5.0	0.5	0.5	0.5	0.5	0.0	0.5	2.0	0.5	1.0
30	6.0	5.0	5.5	0.5	0.0	0.5	0.5	0.0	0.5	1.5	0.5	1.0
31	5.5	3.5	4.5	---	---	---	0.5	0.0	0.0	2.0	0.5	1.0
MONTH	12.5	3.5	7.5	6.0	0.0	2.5	3.5	0.0	1.0	2.5	0.0	0.5

12334510 ROCK CREEK NEAR CLINTON, 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	3.0	0.5	1.5	3.5	1.5	2.0	8.5	3.5	5.5	10.5	4.0	7.0
2	2.0	0.5	1.0	5.0	0.5	2.0	9.5	5.5	7.0	11.5	5.5	8.5
3	3.0	0.0	1.0	5.0	0.5	2.5	8.0	5.5	6.5	10.5	7.0	9.0
4	2.0	0.5	1.0	5.0	0.5	2.5	7.5	5.0	6.0	9.0	7.0	8.5
5	2.5	0.5	1.0	5.0	0.5	2.5	8.5	4.0	6.0	11.5	7.0	9.0
6	2.5	0.5	1.0	5.0	0.5	2.5	11.0	4.5	7.0	12.0	8.5	10.5
7	2.0	0.0	0.5	5.0	1.5	3.0	10.0	6.5	8.0	11.0	8.5	9.5
8	2.0	0.5	1.0	5.5	1.5	3.5	9.0	7.0	8.0	10.5	9.0	9.5
9	2.5	0.0	1.0	6.5	1.0	3.5	8.5	6.0	7.0	9.5	8.0	9.0
10	2.5	0.0	1.0	6.5	2.5	4.0	9.0	5.5	7.0	8.5	7.0	8.0
11	2.5	0.0	1.0	6.5	1.0	3.5	7.5	4.5	6.0	7.0	6.0	6.5
12	2.5	0.5	1.0	4.5	2.5	3.5	9.0	5.0	7.0	10.0	6.0	7.5
13	2.5	0.5	1.5	5.0	1.5	3.0	7.0	5.5	6.5	11.0	7.0	9.0
14	1.5	0.0	0.5	5.0	2.0	3.5	6.5	4.0	5.0	11.5	7.5	9.5
15	2.0	0.0	1.0	6.0	2.5	4.0	10.0	3.5	6.5	10.0	8.5	9.0
16	1.5	0.0	0.5	4.5	2.5	3.5	11.5	5.0	8.0	9.5	8.5	9.0
17	1.5	0.0	0.5	5.0	2.0	3.5	9.5	7.0	8.0	9.5	7.5	8.5
18	0.5	0.0	0.5	4.0	1.0	2.5	8.5	5.5	7.0	9.0	7.5	8.0
19	1.0	0.0	0.5	6.5	2.0	4.0	7.0	5.5	6.0	10.0	8.0	9.0
20	1.5	0.5	0.5	6.5	4.0	5.0	6.5	5.0	5.5	10.0	8.0	9.0
21	3.0	0.0	1.5	5.5	3.0	4.5	8.0	4.5	6.0	10.5	7.5	9.0
22	2.5	0.0	0.5	4.5	2.5	4.0	12.0	5.5	8.5	10.0	9.0	9.5
23	2.5	0.0	1.0	3.5	1.0	2.0	11.0	7.0	9.0	10.5	7.5	9.0
24	3.5	0.0	1.0	3.0	0.5	1.5	12.5	8.0	9.5	10.5	7.5	9.0
25	3.5	0.0	1.0	4.0	1.5	2.5	13.5	7.5	10.0	10.5	7.0	9.0
26	3.5	0.0	1.0	5.5	1.5	3.5	13.0	8.0	10.0	12.0	7.5	10.0
27	4.0	0.0	1.5	7.5	3.5	5.5	10.5	5.5	8.0	13.0	8.5	10.5
28	4.0	0.0	1.5	7.5	5.5	6.0	7.5	3.5	5.5	14.0	9.5	11.5
29	---	---	---	6.0	4.0	5.0	8.5	3.0	6.0	13.5	10.0	11.5
30	---	---	---	7.0	3.5	5.0	9.0	4.5	6.5	13.5	9.0	11.0
31	---	---	---	8.0	2.5	5.0	---	---	---	11.5	9.0	10.0
MONTH	4.0	0.0	1.0	8.0	0.5	3.5	13.5	3.0	7.0	14.0	4.0	9.0
	JUNE			JULY			AUGUST			SEPTEMBER		
1	9.5	8.5	9.0	17.5	12.5	15.0	20.0	15.0	17.5	16.5	10.5	13.0
2	8.5	8.0	8.5	17.0	13.0	15.0	19.0	16.0	17.5	16.0	11.0	13.5
3	8.0	7.5	8.0	17.0	11.5	14.0	20.5	14.5	17.5	16.5	12.0	14.0
4	11.5	7.0	9.0	17.5	12.0	14.5	21.0	14.0	17.0	16.5	11.5	14.0
5	11.0	8.5	10.0	19.0	12.5	15.5	21.5	15.0	18.0	16.5	11.0	13.5
6	10.5	8.5	9.5	19.0	13.5	16.0	21.5	15.0	18.0	16.5	11.0	13.5
7	9.0	7.5	8.5	19.5	14.0	16.5	22.0	16.0	18.5	16.5	11.0	13.5
8	8.5	7.0	8.0	20.5	14.0	17.0	19.5	17.0	18.0	16.5	11.0	13.5
9	10.0	7.5	8.5	18.0	13.5	15.5	21.0	15.5	18.0	14.0	11.5	12.5
10	10.5	8.0	9.0	16.0	12.0	14.0	19.5	15.0	17.5	12.5	10.5	11.0
11	11.5	9.0	10.0	19.0	13.0	15.5	20.0	14.5	17.0	13.0	8.0	10.5
12	11.0	9.0	10.0	20.5	13.5	17.0	18.0	14.0	15.5	11.0	8.5	10.0
13	11.5	7.5	9.5	21.0	15.5	18.0	18.5	12.5	15.0	12.0	9.5	10.5
14	12.5	9.0	10.5	20.0	14.0	17.0	18.5	12.0	15.0	13.0	8.5	10.5
15	14.5	10.5	12.5	20.5	14.0	17.0	19.0	12.5	15.5	14.0	9.0	11.0
16	13.0	11.0	11.5	20.5	15.5	17.5	19.0	13.5	16.0	12.5	9.0	11.0
17	11.0	10.0	10.5	18.0	13.5	15.5	16.5	13.5	15.0	11.0	10.0	10.5
18	11.5	9.0	10.0	20.0	13.5	16.5	16.0	12.5	14.0	12.0	9.5	10.5
19	14.5	9.5	11.5	20.5	14.0	17.0	18.0	11.5	14.5	13.5	8.5	10.5
20	16.0	10.5	13.0	20.5	14.0	17.0	19.0	12.0	15.0	14.0	9.0	11.0
21	16.0	12.5	14.0	21.0	14.5	17.5	19.5	13.0	16.0	13.5	9.5	11.0
22	17.5	13.0	15.0	20.0	15.5	17.5	18.5	13.5	16.0	12.5	8.0	10.0
23	17.0	13.0	15.0	21.0	15.0	18.0	18.5	14.5	16.0	10.5	9.0	10.0
24	16.0	12.0	14.5	20.5	14.5	17.5	15.5	13.0	14.0	9.0	8.0	8.5
25	14.5	12.5	13.5	18.5	15.0	16.5	17.0	10.5	13.5	11.5	7.0	9.0
26	13.0	11.5	12.5	19.5	13.0	16.0	17.5	11.0	14.0	12.0	7.0	9.5
27	14.0	11.5	12.5	20.0	13.5	16.5	18.5	12.0	15.0	12.5	8.0	10.0
28	13.0	12.0	12.5	19.5	13.5	16.5	19.0	12.5	15.5	11.5	7.5	9.5
29	13.0	11.5	12.0	20.0	14.5	17.0	18.0	13.0	15.0	10.5	7.5	---
30	16.0	11.0	13.0	21.0	14.5	17.5	15.5	12.5	14.0	13.0	10.0	11.0
31	---	---	---	19.5	15.5	17.0	16.5	10.0	12.5	---	---	---
MONTH	17.5	7.0	11.0	21.0	11.5	16.5	22.0	10.0	16.0	16.5	7.0	11.5

12334550 CLARK FORK AT TURAH BRIDGE, NEAR BONNER, MT

LOCATION.--Lat 46°49'34", long 113°48'48" (NAD 27), in $SW^1/_4NW^1/_4SW^1/_4$ sec. 1, T.12 N., R.18 W., Missoula County, Hydrologic Unit 17010201, on left bank 0.8 mi southeast of Turah, 4 mi southeast of Bonner, and at river mile 370.2.

DRAINAGE AREA.--3,641 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1985 to current year. Water-discharge records for the period March 1985 to September 1985 are available in files at the USGS Water Science Center located in Helena, Montana.

GAGE.--Water-stage recorder. Elevation of gage is 3,320 ft (NGVD 29), from topographic map. Prior to May 9, 1986, non-recording gage at same site at elevation 2.00 ft higher.

REMARKS.--Water-discharge records good except those for estimated daily discharges, which are fair. Some regulation by settling ponds on Silver Bow Creek near Anaconda and by Georgetown Lake (station number 12325000) on Flint Creek. Diversions for irrigation of about 100,000 acres 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	863	771	628	591	707	607	666	1,080	2,740	2,690	631	517
2	851	753	683	e400	705	625	667	1,020	3,690	2,410	664	519
3	841	777	701	e320	689	629	682	968	4,340	2,220	660	515
4	827	790	690	e270	690	634	702	951	4,710	2,080	630	513
5	820	762	681	e220	696	636	691	970	4,970	1,950	599	512
6	828	766	684	e230	674	648	675	1,030	4,810	1,830	574	507
7	826	775	698	e280	619	669	676	1,140	4,690	1,700	544	506
8	822	770	703	e400	634	690	737	1,260	4,450	1,600	536	501
9	823	761	713	e420	639	708	797	1,430	4,100	1,530	547	499
10	813	756	699	e420	588	719	793	1,800	3,830	1,490	549	538
11	799	756	717	e440	587	708	762	2,630	3,490	1,450	545	564
12	807	747	740	e480	607	707	734	3,160	3,560	1,410	537	584
13	815	732	717	e540	646	707	720	2,760	3,970	1,330	542	597
14	831	723	668	e560	637	666	782	2,480	3,660	1,240	542	612
15	840	716	725	e500	609	660	783	2,400	3,340	1,170	543	621
16	852	725	707	e400	572	655	760	2,540	3,460	1,120	534	610
17	845	737	687	e460	528	666	797	3,100	3,660	1,050	519	712
18	850	730	684	e550	527	656	836	3,760	4,290	1,010	533	837
19	855	719	686	e750	552	629	871	3,810	4,180	960	537	835
20	842	724	697	926	593	641	888	4,600	3,700	902	533	796
21	851	690	672	968	635	658	896	4,540	3,410	855	517	757
22	858	654	665	892	602	658	883	4,520	3,290	819	505	736
23	845	698	e600	850	584	650	892	4,400	3,260	801	518	758
24	831	746	e500	819	590	618	948	4,060	3,090	778	519	788
25	818	772	e570	778	601	604	1,010	3,710	2,790	750	523	856
26	798	779	652	759	609	622	1,090	3,350	2,680	739	526	859
27	793	744	633	746	604	615	1,200	3,020	2,710	727	514	839
28	789	664	e560	746	600	663	1,230	2,790	3,000	720	506	820
29	787	674	e500	744	---	735	1,160	2,670	3,090	698	500	801
30	788	606	e700	740	---	741	1,110	2,620	2,920	646	498	794
31	781	---	670	722	---	700	---	2,530	---	625	506	---
TOTAL	25,589	22,017	20,630	17,921	17,324	20,524	25,438	81,099	109,880	39,300	16,931	19,903
MEAN	825	734	665	578	619	662	848	2,616	3,663	1,268	546	663
MAX	863	790	740	968	707	741	1,230	4,600	4,970	2,690	664	859
MIN	781	606	500	220	527	604	666	951	2,680	625	498	499
AC-FT	50,760	43,670	40,920	35,550	34,360	40,710	50,460	160,900	217,900	77,950	33,580	39,480

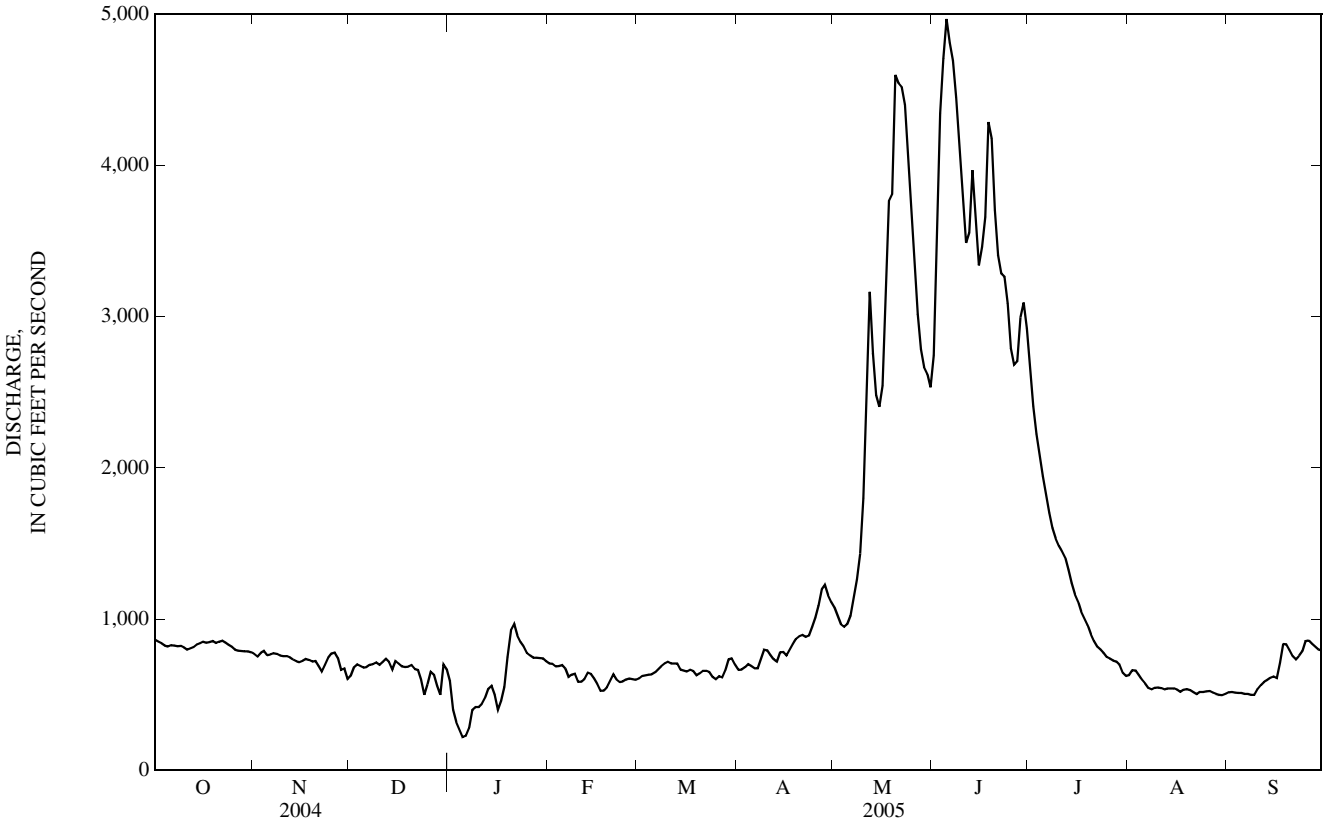
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 2005, BY WATER YEAR (WY)

MEAN	835	825	719	699	831	1,027	1,449	2,486	2,831	1,225	621	681
MAX	1,287	1,173	1,233	1,149	2,124	1,664	3,072	6,345	7,090	2,920	1,423	1,423
(WY)	(1998)	(1998)	(1996)	(1997)	(1996)	(1986)	(1996)	(1997)	(1997)	(1998)	(1993)	(1993)
MIN	592	616	492	474	472	662	828	915	639	485	271	357
(WY)	(1993)	(1993)	(1993)	(1993)	(1989)	(2005)	(1991)	(1992)	(1992)	(2000)	(2000)	(1988)

12334550 CLARK FORK AT TURAH BRIDGE, NEAR BONNER, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1986 - 2005	
ANNUAL TOTAL	323,912		416,556			
ANNUAL MEAN	885		1,141		1,186	
HIGHEST ANNUAL MEAN					2,219	1997
LOWEST ANNUAL MEAN					686	1992
HIGHEST DAILY MEAN	2,450	Jun 12	4,970	Jun 5	9,530	Jun 2, 1997
LOWEST DAILY MEAN	230	Jan 6	220	Jan 5	a200	Dec 21, 1998
ANNUAL SEVEN-DAY MINIMUM	346	Jan 3	303	Jan 2	224	Aug 15, 1992
MAXIMUM PEAK FLOW			5,180	Jun 5	b12,400	Feb 9, 1996
MAXIMUM PEAK STAGE			6.72	Jun 5	c10.24	Dec 10, 1995
ANNUAL RUNOFF (AC-FT)	642,500		826,200		858,900	
10 PERCENT EXCEEDS	1,410		3,010		2,340	
50 PERCENT EXCEEDS	768		736		828	
90 PERCENT EXCEEDS	530		525		502	

a--Also Dec. 27, 2001.
b--Gage height, 9.05 ft.
c--Backwater from ice.
e--Estimated.



12334550 CLARK FORK AT TURAH BRIDGE, NEAR BONNER, MT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1985 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: October 1991 to September 1998.
SUSPENDED-SEDIMENT DISCHARGE: March 1985 to March 2003, August 2003 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Maximum, 25.0°C, Aug. 17, 1992; minimum, 0.0°C, on many days during winter.
SEDIMENT CONCENTRATION: Maximum daily mean, 1,140 mg/L, Feb. 25, 1986; minimum daily mean, 1 mg/L, Sep. 12, 1987.
SEDIMENT LOAD: Maximum daily, 24,400 tons, Feb. 25, 1986; minimum daily 1.1 tons, Sep. 12, 1987.

EXTREMES FOR CURRENT YEAR.--
SEDIMENT CONCENTRATION: Maximum daily mean, 193 mg/L, June 4; minimum daily mean, 2 mg/L, July 20-27.
SEDIMENT LOAD: Maximum daily, 2,450 tons, June 4; minimum daily, 2.4 tons, Jan. 5.

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

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf 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)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)
DEC													
20...	1055	702	8.6	390	3.0	2.0	170	48.6	12.7	5.0	5	.10	.06
MAR													
09...	1630	702	8.7	383	15.0	8.5	180	50.2	12.9	5.8	6	E.03	.10
APR													
20...	1530	900	8.5	343	9.0	7.0	160	43.9	11.8	5.2	6	<.04	.10
MAY													
17...	1710	3,340	8.1	186	14.0	11.5	77	21.4	5.63	4.7	10	E.02	.42
JUN													
03...	1045	4,310	8.1	214	10.5	9.0	95	27.3	6.57	7.4	16	E.04	.40
29...	1020	3,130	8.3	263	17.0	13.0	120	35.7	8.01	8.7	11	.05	.16
JUL													
26...	1505	746	8.8	312	27.0	18.5	150	40.1	11.0	5.9	6.1	<.04	E.03
AUG													
24...	1320	520	8.6	360	20.5	14.5	170	48.4	12.9	5.9	6.0	<.04	E.03

Date	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recoverable, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recoverable, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recoverable, ug/L (01051)	Manganese, water, fltrd, ug/L (01056)	Manganese, water, unfltrd recoverable, ug/L (01055)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recoverable, ug/L (01092)	Suspnd. sediment, percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
DEC													
20...	2.0	6.6	<6	120	<.08	.86	3.0	24	3.1	10	88	7	13
MAR													
09...	3.6	14.6	E3	280	E.04	2.07	7.3	51	2.3	21	82	17	32
APR													
20...	2.4	12.2	6	290	E.05	2.10	5.4	49	2.2	20	81	15	36
MAY													
17...	3.6	48.1	47	1,700	.23	10.3	12.1	221	3.6	81	65	123	1,110
JUN													
03...	6.9	62.8	46	1,700	.24	10.9	7.5	221	5.9	93	68	110	1,280
29...	5.7	25.9	22	550	.12	4.01	8.2	79	4.6	30	66	35	296
JUL													
26...	2.4	3.7	E4	30	<.08	.18	4.4	11	1.3	3	82	2	4.0
AUG													
24...	2.5	4.6	<6	70	<.08	.35	3.9	19	1.6	5	75	5	7.0

E--Estimated.

12334550 CLARK FORK AT TURAH BRIDGE, NEAR BONNER, MT—Continued

SUSPENDED-SEDIMENT
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Day	Mean concentration (mg/l)	Load (tons/day)	Mean concentration (mg/l)	Load (tons/day)	Mean concentration (mg/l)	Load (tons/day)	Mean concentration (mg/l)	Load (tons/day)	Mean concentration (mg/l)	Load (tons/day)	Mean concentration (mg/l)	Load (tons/day)
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	8	19	6	12	5	8.5	14	22	10	19	9	15
2	7	16	5	10	5	9.2	10	11	9	17	12	20
3	6	14	4	8.4	6	11	6	5.2	10	19	10	17
4	6	13	3	6.4	6	11	4	2.9	12	22	13	22
5	6	13	3	6.2	6	11	4	2.4	13	24	14	24
6	6	13	3	6.2	6	11	4	2.5	13	24	14	24
7	6	13	4	8.4	6	11	4	3.0	13	22	16	29
8	6	13	4	8.3	6	11	4	4.3	12	21	18	34
9	6	13	4	8.2	6	12	4	4.5	12	21	19	36
10	6	13	4	8.2	6	11	4	4.5	12	19	20	39
11	6	13	4	8.2	5	9.7	4	4.8	12	19	21	40
12	5	11	4	8.1	5	10	4	5.2	11	18	22	42
13	5	11	4	7.9	5	9.7	4	5.8	11	19	19	36
14	6	13	4	7.8	5	9.0	5	7.6	10	17	17	31
15	8	18	4	7.7	5	9.8	5	6.8	10	16	14	25
16	9	21	4	7.8	4	7.6	5	5.4	10	15	14	25
17	8	18	4	8.0	4	7.4	6	7.5	10	14	14	25
18	8	18	4	7.9	4	7.4	13	19	9	13	12	21
19	8	18	4	7.8	5	9.3	30	61	8	12	12	20
20	7	16	4	7.8	7	13	35	88	8	13	15	26
21	7	16	4	7.5	7	13	42	110	8	14	16	28
22	6	14	4	7.1	6	11	21	51	7	11	16	28
23	6	14	4	7.5	6	9.7	13	30	7	11	12	21
24	5	11	5	10	5	6.8	10	22	7	11	9	15
25	5	11	6	13	5	7.7	9	19	6	9.7	9	15
26	4	8.6	7	15	5	8.8	8	16	6	9.9	11	18
27	5	11	6	12	5	8.5	8	16	6	9.8	14	23
28	6	13	6	11	5	7.6	8	16	7	11	18	32
29	6	13	5	9.1	7	9.4	10	20	---	---	23	46
30	6	13	5	8.2	11	21	10	20	---	---	21	42
31	5	11	---	---	14	25	10	19	---	---	14	26
TOTAL	---	432.6	---	261.7	---	328.1	---	612.4	---	451.4	---	845

12334550 CLARK FORK AT TURAH BRIDGE, NEAR BONNER, MT—Continued

SUSPENDED-SEDIMENT--CONTINUED
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Day	Mean concentration (mg/l)	Load (tons/day)	Mean concentration (mg/l)	Load (tons/day)	Mean concentration (mg/l)	Load (tons/day)	Mean concentration (mg/l)	Load (tons/day)	Mean concentration (mg/l)	Load (tons/day)	Mean concentration (mg/l)	Load (tons/day)
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	13	23	17	50	34	252	18	131	4	6.8	4	5.6
2	15	27	16	44	86	857	15	98	8	14	4	5.6
3	16	29	13	34	139	1,630	14	84	9	16	4	5.6
4	16	30	13	33	193	2,450	12	67	8	14	3	4.2
5	13	24	12	31	165	2,210	11	58	8	13	3	4.1
6	13	24	12	33	112	1,450	8	40	7	11	3	4.1
7	15	27	16	49	91	1,150	7	32	7	10	3	4.1
8	20	40	22	75	69	829	7	30	7	10	3	4.1
9	24	52	32	124	51	565	7	29	7	10	3	4.0
10	19	41	57	277	39	403	6	24	7	10	3	4.4
11	16	33	131	930	36	339	6	23	7	10	3	4.6
12	16	32	165	1,410	35	336	5	19	6	8.7	4	6.3
13	16	31	70	522	51	547	4	14	6	8.8	4	6.4
14	16	34	48	321	39	385	4	13	6	8.8	4	6.6
15	15	32	38	246	30	271	4	13	6	8.8	4	6.7
16	16	33	47	322	36	336	3	9.1	5	7.2	4	6.6
17	23	49	95	795	42	415	3	8.5	5	7.0	10	19
18	24	54	125	1,270	84	973	3	8.2	5	7.2	20	45
19	22	52	108	1,110	65	734	3	7.8	5	7.2	16	36
20	18	43	136	1,690	42	420	2	4.9	5	7.2	12	26
21	17	41	98	1,200	36	331	2	4.6	5	7.0	9	18
22	18	43	101	1,230	30	266	2	4.4	5	6.8	9	18
23	20	48	67	796	30	264	2	4.3	5	7.0	9	18
24	26	67	55	603	26	217	2	4.2	5	7.0	10	21
25	28	76	45	451	25	188	2	4.0	5	7.1	12	28
26	33	97	40	362	23	166	2	4.0	5	7.1	11	26
27	42	136	32	261	21	154	2	3.9	5	6.9	8	18
28	29	96	29	218	25	202	3	5.8	4	5.5	7	15
29	22	69	27	195	32	267	3	5.7	4	5.4	7	15
30	20	60	27	191	25	197	3	5.2	4	5.4	7	15
31	---	---	23	157	---	---	4	6.8	4	5.5	---	---
TOTAL	---	1,443	---	15,030	---	18,804	---	766.4	---	266.4	---	401.0

TOTAL LOAD FOR YEAR: 39,642.0 tons