

12374250 MILL CREEK ABOVE BASSOO CREEK, NEAR NIARADA, MT

LOCATION.--Lat 47°49'47", long 114°41'48" (NAD 27), in SE $\frac{1}{4}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.20, T.24 N., R.24 W., Sanders County, Hydrologic Unit 17010212, Flathead Indian Reservation, on right bank 0.3 mi upstream from Bassoo Creek, and 4.1 mi northwest of Niarada.

DRAINAGE AREA.--19.6 mi².

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

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 3,000 ft (NGVD 29). Prior to Sept. 23, 1987, at site 305 ft downstream at different elevation. Prior to July 23, 1991, at site 275 ft downstream at different elevation.

REMARKS.--Records good except those for estimated daily discharges, which are poor. No known regulation or diversion upstream from station. Several observations of water temperature and specific conductance were made during the year.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	e1.6	2.3	e2.0	e2.2	2.3	6.1	8.3	22	5.8	3.0	2.4
2	1.4	e1.7	2.3	e1.9	e2.1	2.4	5.8	8.4	21	5.5	2.9	2.5
3	1.3	e1.7	2.5	e1.7	e2.0	e2.3	5.5	8.5	20	5.3	2.9	2.5
4	1.3	e1.7	e2.6	e1.3	e2.0	2.3	5.6	8.9	18	5.6	3.0	2.6
5	1.3	e1.8	e2.3	e1.0	e2.0	2.3	6.2	9.5	17	5.6	2.8	2.3
6	1.3	e1.7	e2.2	e1.7	e2.1	2.3	6.5	11	17	5.2	2.7	2.3
7	1.3	e1.8	e2.2	e2.2	2.1	2.3	7.2	11	17	5.2	3.3	2.2
8	1.4	e2.0	e2.1	e2.4	2.0	3.1	8.1	12	16	5.1	3.1	2.2
9	1.7	e2.3	e2.0	e2.4	2.0	3.5	8.7	12	15	5.0	2.9	2.1
10	1.6	e2.6	e2.2	e2.5	2.0	3.9	8.3	11	15	4.9	2.8	2.1
11	1.6	e3.0	2.4	e2.5	2.0	3.4	8.0	15	14	4.7	2.6	2.2
12	1.8	e3.2	2.3	e2.5	e2.1	3.4	7.9	13	13	4.5	2.5	2.4
13	2.0	3.3	2.3	2.5	1.9	3.9	8.0	12	12	4.3	2.4	2.5
14	1.8	3.0	2.4	2.4	2.2	3.5	9.1	11	11	4.2	2.4	2.5
15	1.8	3.0	2.3	2.3	2.7	3.4	10	11	9.9	4.2	2.4	2.5
16	2.2	2.8	2.2	2.3	2.4	3.7	11	10	9.4	4.0	2.4	2.8
17	2.1	2.8	2.3	2.1	2.2	4.5	10	9.8	8.8	3.8	2.4	2.5
18	1.8	2.8	2.1	2.0	2.3	5.4	10	9.1	8.3	3.9	3.2	2.5
19	1.7	e2.7	2.0	2.1	2.7	6.9	9.5	8.9	8.0	4.2	3.7	2.5
20	1.6	e2.2	2.2	2.2	2.5	5.3	9.2	9.1	7.8	4.5	4.0	2.4
21	1.7	2.3	2.3	2.3	2.3	4.7	8.8	11	7.5	3.9	3.1	2.4
22	1.6	2.2	2.3	2.2	2.3	4.6	8.3	13	7.1	3.7	2.8	2.2
23	1.6	2.4	e2.2	2.2	2.2	5.0	7.7	18	6.9	3.6	3.1	2.1
24	1.7	2.3	e2.1	2.3	2.5	5.6	7.3	20	6.6	3.4	3.1	2.1
25	1.7	2.3	e2.0	2.2	2.4	5.7	7.1	21	6.4	3.4	3.3	2.1
26	1.7	2.3	e2.1	2.2	2.3	5.5	6.9	22	6.7	3.3	3.3	2.0
27	1.7	2.2	e2.2	2.2	2.3	5.2	6.9	24	6.3	3.3	3.1	1.9
28	2.1	2.2	2.2	2.3	2.3	5.2	7.9	23	6.2	3.3	3.0	1.9
29	e2.3	2.5	2.2	2.4	2.4	4.9	7.9	24	6.0	3.2	2.9	1.9
30	e2.0	2.7	e2.2	e2.6	---	5.0	8.1	24	5.9	3.2	2.6	1.9
31	e1.4	---	e2.1	e2.4	---	5.6	---	25	---	3.1	2.4	---
TOTAL	51.9	71.1	69.1	67.3	64.5	127.1	237.6	434.5	345.8	132.9	90.1	68.5
MEAN	1.67	2.37	2.23	2.17	2.22	4.10	7.92	14.0	11.5	4.29	2.91	2.28
MAX	2.3	3.3	2.6	2.6	2.7	6.9	11	25	22	5.8	4.0	2.8
MIN	1.3	1.6	2.0	1.0	1.9	2.3	5.5	8.3	5.9	3.1	2.4	1.9
AC-FT	103	141	137	133	128	252	471	862	686	264	179	136
CFSM	0.09	0.12	0.11	0.11	0.11	0.21	0.40	0.72	0.59	0.22	0.15	0.12
IN.	0.10	0.13	0.13	0.13	0.12	0.24	0.45	0.82	0.66	0.25	0.17	0.13

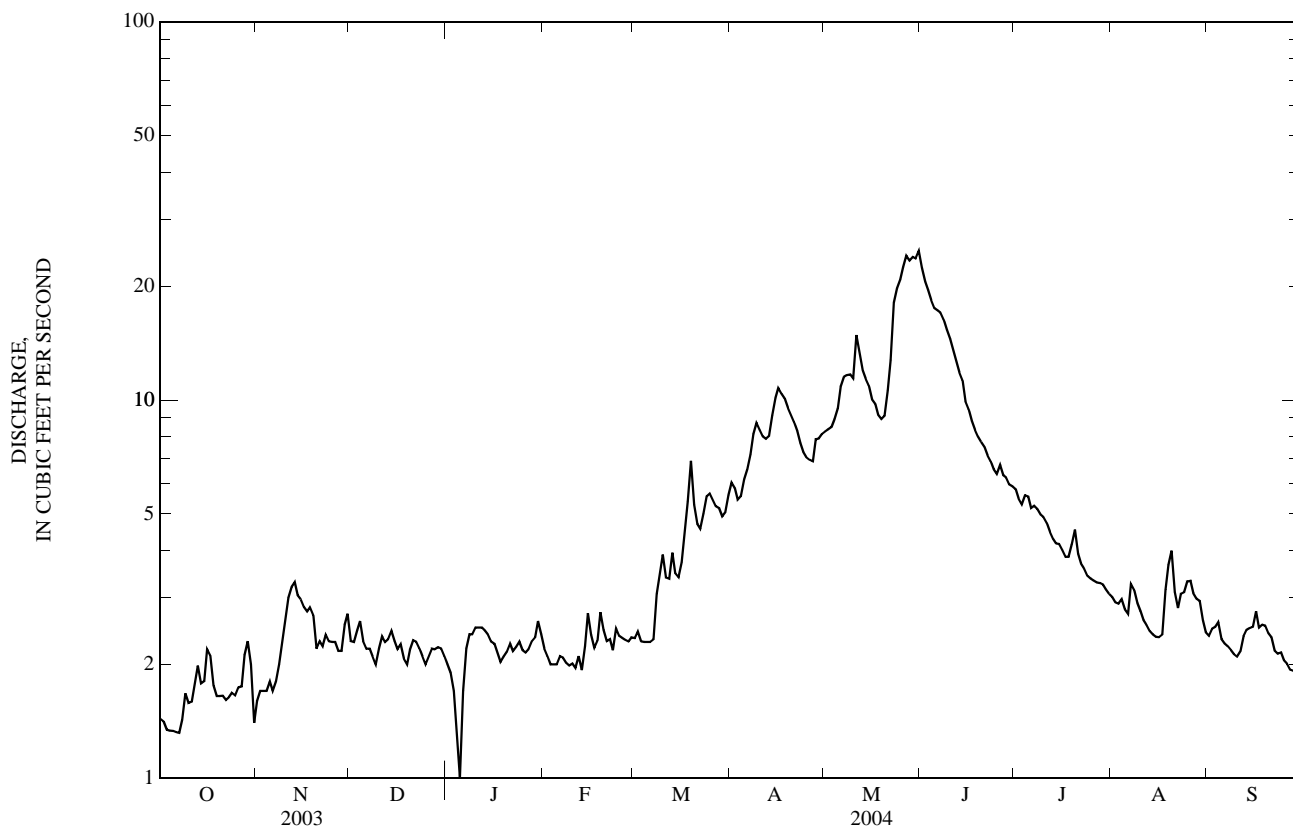
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 2004, BY WATER YEAR (WY)

MEAN	2.59	3.41	3.51	3.23	3.79	7.21	19.6	24.7	15.2	5.61	3.04	2.45
MAX	5.05	8.60	16.9	9.83	13.6	35.1	49.7	86.8	37.7	13.0	5.61	3.39
(WY)	(1986)	(1986)	(1996)	(1990)	(1996)	(1986)	(1996)	(1997)	(1997)	(1991)	(1997)	(1996)
MIN	1.67	2.00	2.12	1.94	1.71	2.55	5.03	11.4	4.89	2.50	1.88	1.53
(WY)	(2004)	(1988)	(1988)	(1985)	(1994)	(1985)	(1984)	(1992)	(1987)	(1994)	(2001)	(2001)

12374250 MILL CREEK ABOVE BASSOO CREEK, NEAR NIARADA, MT—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1983 - 2004	
ANNUAL TOTAL	1,743.5		1,760.4			
ANNUAL MEAN	4.78		4.81		7.86	
HIGHEST ANNUAL MEAN					18.8	1997
LOWEST ANNUAL MEAN					3.86	2001
HIGHEST DAILY MEAN	20	May 31	25	May 31	155	Apr 28, 1997
LOWEST DAILY MEAN	1.3	Oct 3	1.0	Jan 5	1.0	Jan 5, 2004
ANNUAL SEVEN-DAY MINIMUM	1.3	Oct 1	1.3	Oct 1	1.3	Sep 21, 2001
MAXIMUM PEAK FLOW			a26	May 31	c173	Apr 28, 1997
MAXIMUM PEAK STAGE			b2.21	Feb 3	d6.83	May 20, 1991
INSTANTANEOUS LOW FLOW					f0.85	Jan 6, 1988
ANNUAL RUNOFF (AC-FT)	3,460		3,490		5,700	
ANNUAL RUNOFF (CFSM)	0.244		0.245		0.401	
ANNUAL RUNOFF (INCHES)	3.31		3.34		5.45	
10 PERCENT EXCEEDS	13		10		19	
50 PERCENT EXCEEDS	2.6		2.6		3.3	
90 PERCENT EXCEEDS	1.7		1.9		2.0	

a--Gage height, 1.97 ft.
 b--Backwater from ice.
 c--Gage height, 2.60 ft.
 d--Site and datum then in use.
 e--Estimated.
 f--Gage height, 5.00 ft, site and datum then in use.



12375900 SOUTH CROW CREEK NEAR RONAN, MT—Continued

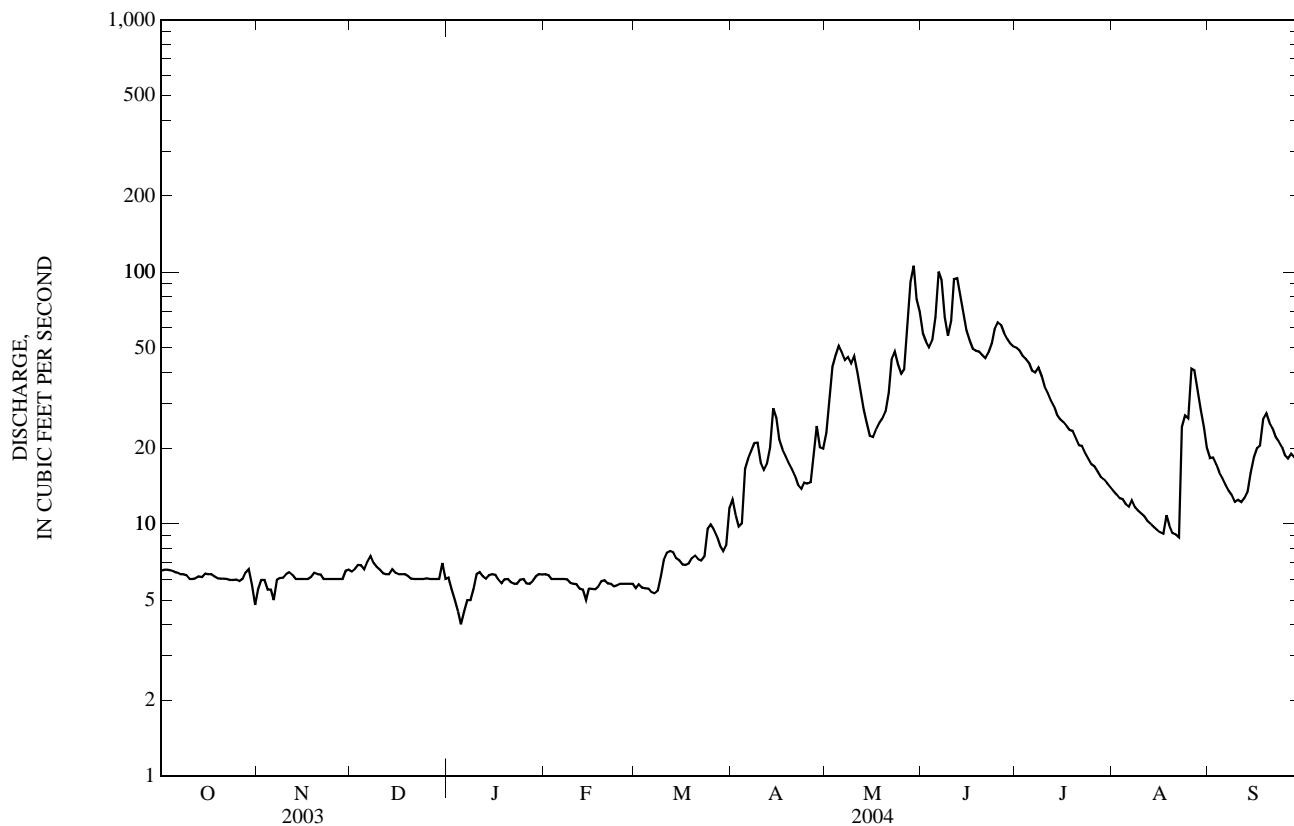
SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1982 - 2004	
ANNUAL TOTAL	6,033.1		6,799.1			
ANNUAL MEAN	16.5		18.6		19.6	
HIGHEST ANNUAL MEAN					27.2	1983
LOWEST ANNUAL MEAN					13.7	1992
HIGHEST DAILY MEAN	191	May 31	106	May 29	276	Jun 30, 1983
LOWEST DAILY MEAN	3.0	Feb 24	4.0	Jan 5	3.0	Feb 24, 2003
ANNUAL SEVEN-DAY MINIMUM	4.1	Feb 23	4.8	Jan 2	4.1	Feb 23, 2003
MAXIMUM PEAK FLOW			a115	May 28	c312	Jun 30, 1991
MAXIMUM PEAK STAGE			2.91	May 28	3.67	Jun 30, 1991
INSTANTANEOUS LOW FLOW			b2.6	Oct 31	b2.0	Oct 30, 2002
ANNUAL RUNOFF (AC-FT)	11,970		13,490		14,230	
ANNUAL RUNOFF (CFSM)	2.18		2.45		2.60	
ANNUAL RUNOFF (INCHES)	29.65		33.41		35.26	
10 PERCENT EXCEEDS	42		48		52	
50 PERCENT EXCEEDS	7.5		9.2		9.5	
90 PERCENT EXCEEDS	5.9		5.8		6.1	

a--Also occurred June 6.

b--Result of freezeup.

c--From rating curve extended above 185 ft³/s, on basis of step-backwater study.

e--Estimated.



12377150 MISSION CREEK ABOVE RESERVOIR, NEAR ST. IGNATIUS, MT

LOCATION.--Lat 47°19'23", long 113°58'43" (NAD 27), in NW¹/₄SW¹/₄NE¹/₄ sec.14, T.18 N., R.19 W., Lake County, Hydrologic Unit 17010212, Flathead Indian Reservation, on right bank, 0.2 mi southwest of upper BIA campground, 0.5 mi upstream from Mission Reservoir, and 5.3 mi east of St. Ignatius.

DRAINAGE AREA.--12.4 mi².

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

GAGE.--Water-stage recorder. Elevation of gage is 3,460 ft (NGVD 29).

REMARKS.--Records good except those for estimated discharges, which are poor. No known regulation or diversions upstream from station. Several observations of water temperature and specific conductance were made during the year.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	e28	14	e8.5	9.5	8.0	13	47	97	168	57	67
2	18	e26	15	e8.5	9.2	8.0	14	67	95	155	55	66
3	18	e25	15	e8.0	8.9	8.0	13	116	104	150	53	60
4	17	e24	13	e7.5	8.8	8.1	14	151	139	132	52	56
5	17	e23	13	e7.0	8.8	8.3	17	154	228	125	50	53
6	17	e22	14	e6.0	e8.8	8.0	20	135	307	110	50	50
7	16	e22	14	e7.0	8.8	8.0	24	119	209	114	52	48
8	16	e22	12	e7.5	8.8	8.5	28	138	141	116	48	45
9	16	e22	12	e8.0	8.8	9.1	30	122	125	98	43	43
10	16	22	11	e9.0	8.8	10	27	102	176	92	42	42
11	16	23	e11	e10	8.8	9.7	25	89	393	105	41	41
12	16	22	12	e10	e8.5	9.3	25	75	224	98	40	46
13	18	20	11	e9.0	e8.0	9.2	28	65	148	91	39	52
14	18	19	12	e10	e7.0	8.9	41	56	130	94	38	59
15	17	18	12	e10	7.7	8.8	48	49	113	100	37	64
16	16	17	12	e9.5	7.9	8.8	42	49	100	106	37	67
17	17	18	11	e9.0	8.0	8.7	35	53	99	100	37	68
18	17	18	10	e9.0	8.8	8.8	31	61	101	95	47	87
19	18	18	10	8.7	9.1	9.3	29	73	107	97	42	92
20	19	18	e10	9.0	8.8	8.9	28	85	105	122	37	80
21	20	e18	10	8.9	8.4	8.6	27	97	108	107	35	67
22	25	e17	10	8.8	8.1	8.8	25	113	139	91	34	59
23	26	e17	9.5	8.9	8.1	9.2	25	118	174	82	131	54
24	24	16	9.5	9.4	8.0	10	25	97	200	77	232	56
25	22	15	9.9	9.7	8.2	11	25	82	209	73	190	58
26	21	15	10	10	8.2	11	26	79	201	72	251	58
27	20	15	e10	10	8.3	11	32	115	183	70	169	58
28	24	14	e10	9.9	8.0	10	47	155	175	66	126	57
29	43	15	e10	9.8	7.8	10	46	155	166	61	103	54
30	e35	15	e9.5	10	---	10	43	124	163	59	87	50
31	e30	---	e9.0	9.7	---	11	---	108	---	59	76	---
TOTAL	632	584	351.4	276.3	244.9	285.0	853	3,049	4,859	3,085	2,331	1,757
MEAN	20.4	19.5	11.3	8.91	8.44	9.19	28.4	98.4	162	99.5	75.2	58.6
MAX	43	28	15	10	9.5	11	48	155	393	168	251	92
MIN	16	14	9.0	6.0	7.0	8.0	13	47	95	59	34	41
AC-FT	1,250	1,160	697	548	486	565	1,690	6,050	9,640	6,120	4,620	3,490
CFSM	1.64	1.57	0.91	0.72	0.68	0.74	2.29	7.93	13.1	8.03	6.06	4.72
IN.	1.90	1.75	1.05	0.83	0.73	0.85	2.56	9.15	14.58	9.26	6.99	5.27

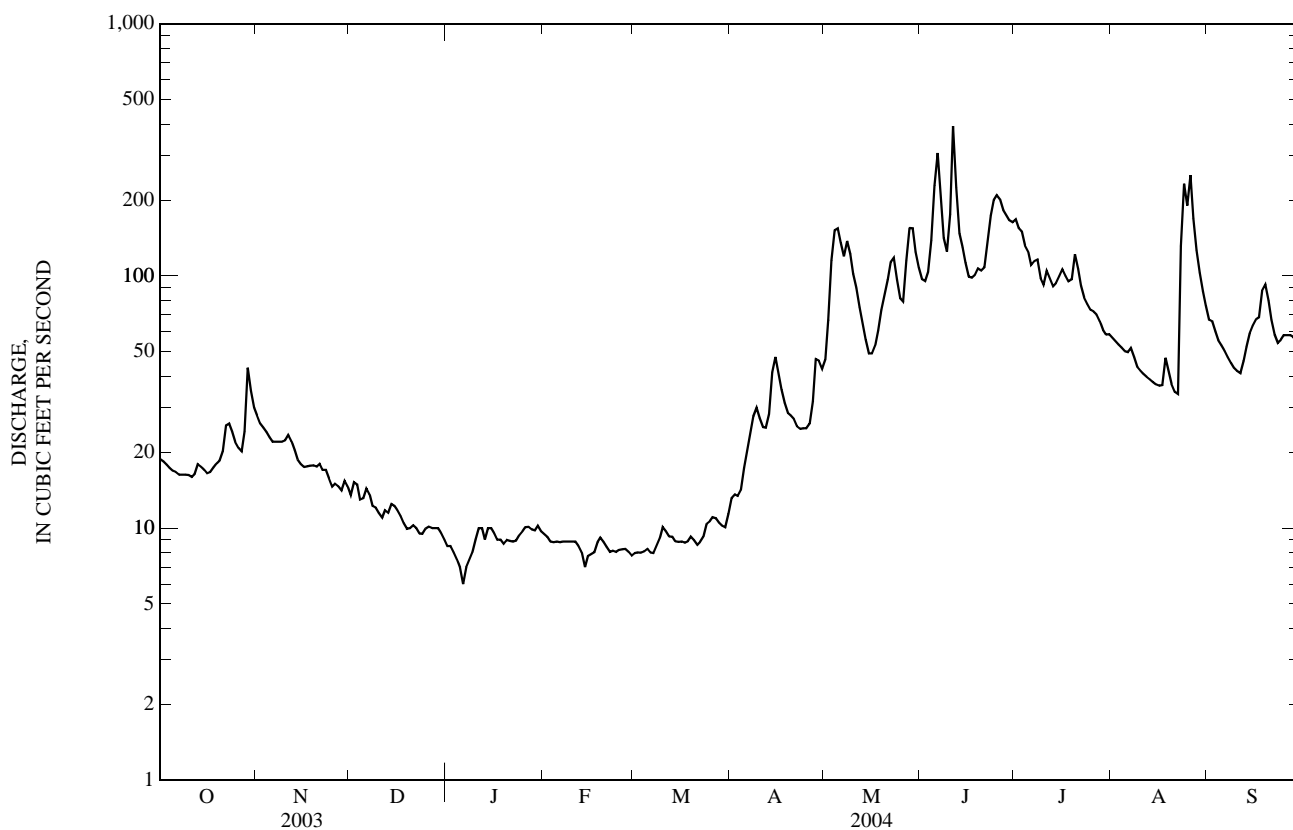
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 2004, BY WATER YEAR (WY)

MEAN	24.7	19.0	13.0	10.4	8.99	10.4	25.4	101	173	114	49.5	31.1
MAX	36.8	28.5	21.3	14.9	12.6	15.4	43.9	168	222	181	75.2	67.4
(WY)	(1983)	(1990)	(1990)	(1984)	(1986)	(1986)	(1990)	(1993)	(1997)	(1983)	(2004)	(1985)
MIN	14.1	11.7	9.58	8.20	6.71	7.23	10.6	54.0	104	53.4	25.2	15.8
(WY)	(2002)	(2003)	(2003)	(2000)	(1985)	(2002)	(2002)	(1984)	(1987)	(1988)	(1988)	(1988)

12377150 MISSION CREEK ABOVE RESERVOIR, NEAR ST. IGNATIUS, MT—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1982 - 2004	
ANNUAL TOTAL	15,900.2		18,307.6			
ANNUAL MEAN	43.6		50.0		48.5	
HIGHEST ANNUAL MEAN					61.0	1997
LOWEST ANNUAL MEAN					35.6	1988
HIGHEST DAILY MEAN	461	May 31	393	Jun 11	472	Jul 4, 1995
LOWEST DAILY MEAN	6.0	Feb 24	6.0	Jan 6	5.5	Feb 28, 2001
ANNUAL SEVEN-DAY MINIMUM	7.7	Feb 23	7.3	Jan 3	6.3	Feb 15, 1985
MAXIMUM PEAK FLOW			472	Jun 11	a892	Jun 30, 1991
MAXIMUM PEAK STAGE			4.12	Jun 11	b5.16	Jun 30, 1991
INSTANTANEOUS LOW FLOW					4.4	Dec 28, 2001
ANNUAL RUNOFF (AC-FT)	31,540		36,310		35,110	
ANNUAL RUNOFF (CFSM)	3.51		4.03		3.91	
ANNUAL RUNOFF (INCHES)	47.70		54.92		53.10	
10 PERCENT EXCEEDS	110		125		136	
50 PERCENT EXCEEDS	20		25		22	
90 PERCENT EXCEEDS	9.1		8.8		9.0	

a--Gage height, 4.72 ft.
 b--Backwater from debris dam.
 e--Estimated.



12381400 SOUTH FORK JOCKO RIVER NEAR ARLEE, MT

LOCATION.--Lat 47°11'44", long 113°50'59" (NAD 27), in NE $\frac{1}{4}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.35, T.17 N., R.18 W., Lake County, Hydrologic Unit 17010212, Flathead Indian Reservation, on right bank 600 ft upstream from confluence with Jocko River and Twin Campground and 12 mi northeast of Arlee, MT.

DRAINAGE AREA.--56.0 mi².

PERIOD OF RECORD.--October 1982 to current year. Records published as "near Jocko" 1912-16 and in WSP 1246, 1316 are not equivalent.

GAGE.--Water-stage recorder. Elevation of gage is 3,970 ft (NGVD 29).

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

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e19	e13	12	e6.5	e9.0	9.6	33	80	209	98	44	29
2	19	e14	12	e6.5	e8.5	9.8	30	89	202	95	43	34
3	18	e13	e11	e6.0	e8.5	9.6	29	112	197	91	43	31
4	18	e12	e9.0	e5.5	e8.5	9.9	32	139	199	90	43	29
5	17	e10	e11	e5.0	e9.0	9.8	40	157	209	90	41	28
6	17	e9.0	e12	e4.0	e8.5	9.6	48	158	226	85	40	27
7	17	e10	e11	e5.0	e9.0	10	58	153	205	86	40	26
8	17	e10	e10	e6.0	e9.0	12	60	157	189	82	40	25
9	16	e12	e10	e7.0	9.0	13	58	154	180	78	39	24
10	16	e13	e9.0	e8.0	8.9	15	54	144	190	74	38	24
11	17	e14	e9.0	e7.5	8.6	14	52	144	219	72	37	24
12	17	e13	e10	e7.0	7.4	14	55	128	205	70	36	30
13	17	e12	e10	e7.5	e7.0	15	62	117	196	67	35	33
14	17	e11	e10	e8.0	e7.5	14	80	111	186	64	34	34
15	17	e12	e10	e8.0	e9.0	14	82	106	177	62	33	38
16	17	e13	e10	e8.0	e9.0	14	69	106	167	61	32	36
17	17	e13	e9.0	e8.5	e9.5	15	62	113	159	59	32	33
18	16	13	e8.5	e8.0	e10	17	57	109	152	59	35	44
19	15	14	e8.0	e8.0	e10	23	55	125	154	59	33	44
20	14	e13	e8.0	e8.5	10	19	55	124	145	58	32	43
21	14	e12	e8.5	9.1	9.9	18	52	132	137	57	31	41
22	14	e12	e8.5	9.1	e8.5	20	49	158	133	55	30	38
23	14	e13	e8.0	9.3	e9.0	23	50	175	130	54	38	36
24	13	e13	e8.0	9.6	e9.0	28	56	164	125	52	39	35
25	13	e13	e8.5	9.4	10	29	56	153	125	51	41	34
26	13	e13	e8.0	9.3	10	29	59	156	120	50	43	32
27	13	e12	e8.0	9.4	9.7	26	71	171	116	49	38	31
28	17	e13	e8.0	9.3	9.4	24	94	176	111	48	36	30
29	26	e13	e7.5	9.4	9.4	23	85	186	108	46	33	29
30	e15	13	e8.5	10	---	26	79	189	105	45	31	29
31	e12	---	e7.0	9.4	---	33	---	210	---	45	29	---
TOTAL	502	371.0	288.0	241.8	260.8	546.3	1,722	4,396	4,976	2,052	1,139	971
MEAN	16.2	12.4	9.29	7.80	8.99	17.6	57.4	142	166	66.2	36.7	32.4
MAX	26	14	12	10	10	33	94	210	226	98	44	44
MIN	12	9.0	7.0	4.0	7.0	9.6	29	80	105	45	29	24
AC-FT	996	736	571	480	517	1,080	3,420	8,720	9,870	4,070	2,260	1,930
CFSM	0.29	0.22	0.17	0.14	0.16	0.31	1.02	2.53	2.96	1.18	0.66	0.58
IN.	0.33	0.25	0.19	0.16	0.17	0.36	1.14	2.92	3.31	1.36	0.76	0.65

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

MEAN	21.6	17.8	14.2	11.7	10.4	15.1	55.6	193	192	76.2	37.6	26.3
MAX	42.2	26.3	37.4	22.2	22.8	56.0	113	459	446	140	53.5	44.5
(WY)	(1986)	(1986)	(1996)	(1986)	(1986)	(1986)	(1990)	(1997)	(1997)	(1997)	(1997)	(1985)
MIN	13.0	11.1	9.29	3.66	4.45	7.68	24.8	119	70.2	37.0	21.6	15.8
(WY)	(1988)	(1988)	(2004)	(1985)	(1985)	(1985)	(1995)	(1995)	(1992)	(1992)	(1992)	(1987)

12381400 SOUTH FORK JOCKO RIVER NEAR ARLEE, MT—Continued

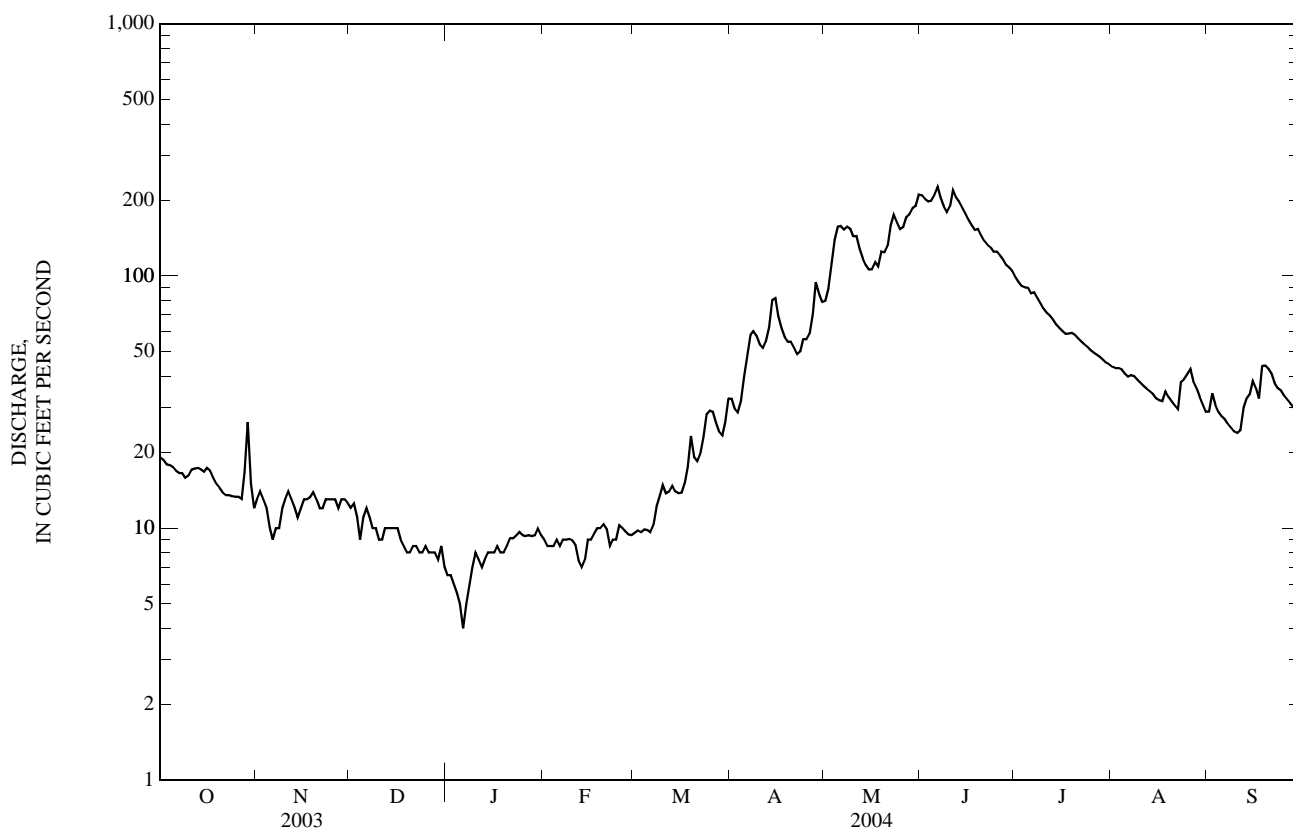
SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1983 - 2004	
ANNUAL TOTAL	18,941.0		17,465.9			
ANNUAL MEAN	51.9		47.7		56.1	
HIGHEST ANNUAL MEAN					108	1997
LOWEST ANNUAL MEAN					35.0	1992
HIGHEST DAILY MEAN	462	May 31	226	Jun 6	1,060	May 17, 1997
LOWEST DAILY MEAN	5.0	Feb 24	4.0	Jan 6	2.0	Feb 4, 1989
ANNUAL SEVEN-DAY MINIMUM	7.4	Feb 23	5.4	Jan 2	2.6	Feb 1, 1989
MAXIMUM PEAK FLOW			237	Jun 6	b1,220	May 17, 1997
MAXIMUM PEAK STAGE			a2.65	Jun 6	c4.98	Feb 15, 1989
ANNUAL RUNOFF (AC-FT)	37,570		34,640		40,640	
ANNUAL RUNOFF (CFSM)	0.927		0.852		1.00	
ANNUAL RUNOFF (INCHES)	12.58		11.60		13.61	
10 PERCENT EXCEEDS	123		144		153	
50 PERCENT EXCEEDS	19		26		23	
90 PERCENT EXCEEDS	10		8.5		9.4	

a--An undetermined higher gage height occurred as a result of backwater due to ice.

b--Gage height, 4.31 ft.

c--Backwater due to ice.

e--Estimated.



PEND OREILLE RIVER BASIN

12383500 BIG KNIFE CREEK NEAR ARLEE, MT

LOCATION.--Lat 47°08'51", long 113°58'24" (NAD 27), in NW $\frac{1}{4}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.14, T.16 N., R.19 W., Lake County, Hydrologic Unit 17010212, Flathead Indian Reservation, on left bank, 150 ft upstream from S Canal, 1 mi upstream from mouth, and 5.5 mi east of Arlee.

DRAINAGE AREA.--6.88 mi².

PERIOD OF RECORD.--August 1910 to September 1916 (no winter records), October 1982 to current year. Monthly discharge only for some periods, published in WSP 1316. Published as "near Jocko" 1910-16 and in WSP 916, and as "above Big Knife Canal, near Jocko" in WSP 1246, 1316.

REVISED RECORDS.--WSP 1246: 1916. WSP 1316: 1910-12, 1915-16.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 3,720 ft (NGVD 29). Prior to July 28, 1998, at site 38 ft upstream at different elevation.

REMARKS.--Records fair. No known regulation or diversion upstream from station. Several observations of water temperature and specific conductance were made during the year.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.0	5.5	5.0	4.1	3.9	3.5	4.0	5.5	19	16	12	9.8
2	6.0	5.5	5.0	4.1	3.9	3.6	3.9	5.6	19	16	12	10
3	6.0	5.5	5.0	4.0	3.9	3.5	3.9	6.4	18	16	13	9.6
4	6.0	5.5	4.9	3.8	3.8	3.5	3.9	7.7	19	16	13	9.4
5	6.0	5.4	4.9	3.4	3.8	3.4	3.7	9.2	23	15	12	9.4
6	6.1	5.2	5.0	3.6	3.7	3.4	3.8	9.8	31	15	12	9.3
7	5.9	5.1	5.0	3.7	3.8	3.5	3.9	9.5	27	15	13	9.2
8	6.0	5.0	4.8	3.5	3.7	3.8	4.4	10	20	15	12	9.0
9	6.0	5.0	4.7	3.5	3.7	3.8	4.5	9.8	18	14	12	9.0
10	6.0	5.1	4.7	3.6	3.7	3.8	4.3	9.7	20	14	12	9.0
11	6.0	5.5	4.7	3.6	3.7	3.7	4.3	10	31	14	12	8.8
12	6.0	5.2	4.7	3.5	3.7	3.6	4.2	8.6	30	14	12	9.8
13	6.0	5.2	4.7	3.5	3.6	3.6	4.2	8.1	25	14	11	10
14	6.0	5.2	4.8	3.5	3.5	3.5	4.7	7.5	22	13	11	10
15	6.0	5.1	4.7	3.6	3.5	3.6	4.9	7.2	21	13	11	11
16	6.0	5.2	4.6	3.7	3.5	3.6	4.8	7.7	19	13	11	10
17	6.0	5.2	4.5	3.7	3.6	3.7	4.9	7.9	19	13	11	10
18	6.0	5.2	4.5	3.7	3.9	3.8	4.7	8.2	18	13	12	12
19	6.0	5.2	4.5	3.7	3.8	4.0	4.6	8.8	19	14	11	13
20	6.0	5.0	4.5	3.7	3.7	3.9	4.9	9.4	18	14	11	13
21	5.8	5.0	4.5	3.7	3.6	3.8	4.6	11	17	13	11	12
22	5.9	5.0	4.5	3.7	3.5	3.9	4.4	13	18	13	11	12
23	5.7	5.0	4.3	3.8	3.5	3.9	4.2	16	19	13	13	11
24	5.7	5.0	4.3	3.9	3.5	3.9	4.1	14	19	13	12	11
25	5.7	5.0	4.3	3.8	3.6	3.9	4.3	13	21	13	12	11
26	5.7	5.0	4.3	3.8	3.7	4.0	4.3	13	21	13	13	10
27	5.7	5.0	4.3	3.8	3.6	3.8	4.6	13	19	13	12	10
28	5.9	5.0	4.3	3.9	3.5	3.6	5.5	16	18	13	11	10
29	5.9	5.0	4.1	3.9	3.5	3.5	5.6	19	18	13	10	10
30	5.7	5.0	4.1	4.1	---	3.6	5.6	18	17	13	10	10
31	5.5	---	4.1	3.9	---	3.6	---	18	---	12	9.7	---
TOTAL	183.2	154.8	142.3	115.8	106.4	114.3	133.7	330.6	623	429	360.7	308.3
MEAN	5.91	5.16	4.59	3.74	3.67	3.69	4.46	10.7	20.8	13.8	11.6	10.3
MAX	6.1	5.5	5.0	4.1	3.9	4.0	5.6	19	31	16	13	13
MIN	5.5	5.0	4.1	3.4	3.5	3.4	3.7	5.5	17	12	9.7	8.8
AC-FT	363	307	282	230	211	227	265	656	1,240	851	715	612
CFSM	0.86	0.75	0.67	0.54	0.53	0.54	0.65	1.55	3.02	2.01	1.69	1.49
IN.	0.99	0.84	0.77	0.63	0.58	0.62	0.72	1.79	3.37	2.32	1.95	1.67

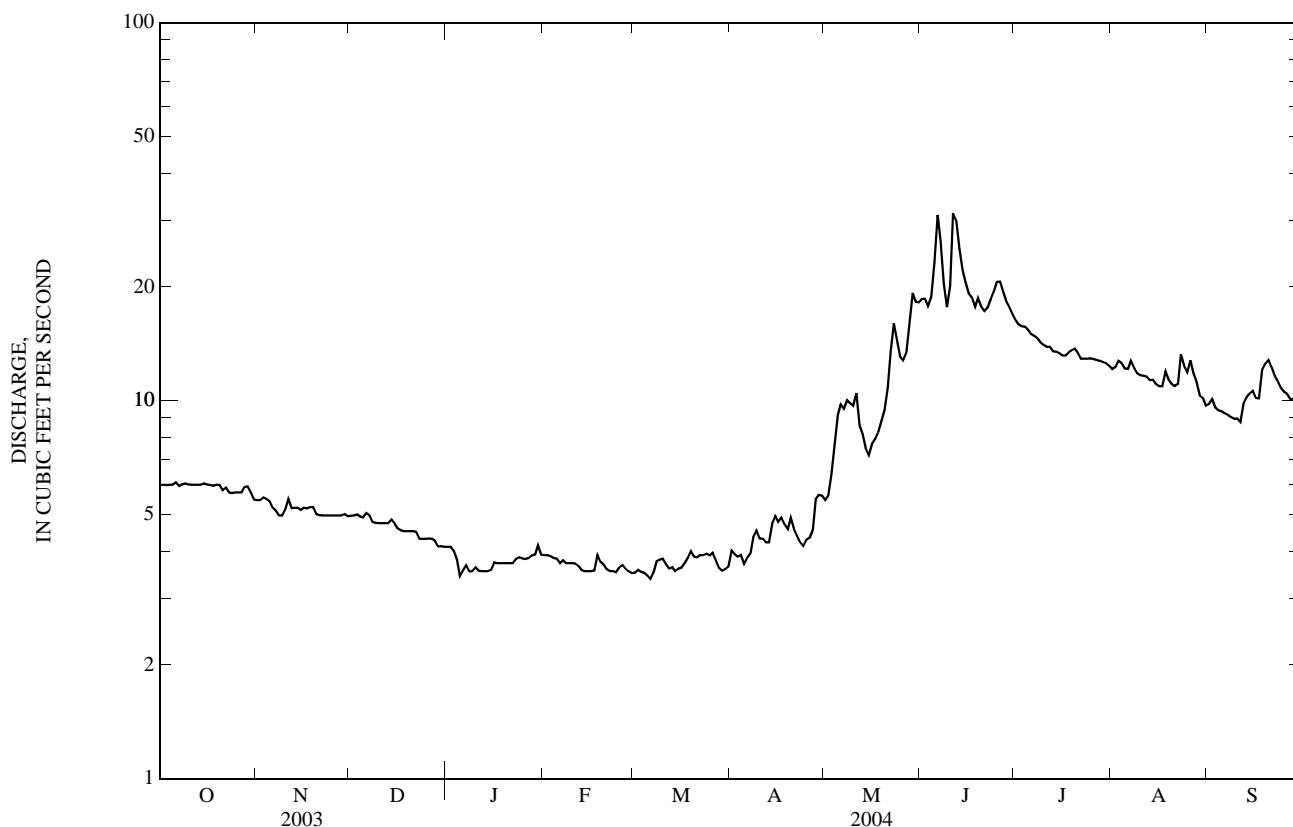
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 2004, BY WATER YEAR (WY)

	8.01	6.82	5.75	5.05	4.49	4.50	6.11	15.3	25.1	18.0	12.7	9.77
MEAN	8.01	6.82	5.75	5.05	4.49	4.50	6.11	15.3	25.1	18.0	12.7	9.77
MAX	10.3	8.95	7.38	6.33	6.49	7.07	8.93	28.0	48.4	29.2	16.9	12.0
(WY)	(1983)	(1986)	(1985)	(1985)	(1986)	(1986)	(1986)	(1997)	(1997)	(1984)	(1983)	(1984)
MIN	5.27	4.47	4.05	3.65	2.96	2.96	3.92	9.23	8.49	9.60	8.06	6.55
(WY)	(1993)	(1993)	(1993)	(1989)	(1989)	(1989)	(1991)	(1995)	(1992)	(1992)	(1992)	(1992)

12383500 BIG KNIFE CREEK NEAR ARLEE, MT—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1983 - 2004	
ANNUAL TOTAL	3,075.8		3,002.1			
ANNUAL MEAN	8.43		8.20		10.2	
HIGHEST ANNUAL MEAN					14.6 1997	
LOWEST ANNUAL MEAN					6.60 1992	
HIGHEST DAILY MEAN	55	May 30	31	Jun 6	65	May 30, 1986
LOWEST DAILY MEAN	3.3	Feb 24	3.4	Jan 5	1.7	Feb 4, 1989
ANNUAL SEVEN-DAY MINIMUM	4.1	Feb 24	3.5	Feb 29	2.0	Feb 1, 1989
MAXIMUM PEAK FLOW			36	Jun 6	b78	Jun 30, 1916
MAXIMUM PEAK STAGE			5.70	Jun 6	5.91	Jun 29, 2002
INSTANTANEOUS LOW FLOW			a3.4	Jan 5	c1.3	Feb 4, 1989
ANNUAL RUNOFF (AC-FT)	6,100		5,950		7,360	
ANNUAL RUNOFF (CFSM)	1.22		1.19		1.48	
ANNUAL RUNOFF (INCHES)	16.63		16.23		20.06	
10 PERCENT EXCEEDS	14		16		20	
50 PERCENT EXCEEDS	5.9		5.6		7.5	
90 PERCENT EXCEEDS	4.5		3.6		4.1	

a--Also occurred Mar. 7.
 b--Gage height, 3.65 ft; site and datum then in use.
 c--Result of freezeup.



PEND OREILLE RIVER BASIN

12387450 VALLEY CREEK NEAR ARLEE, MT

LOCATION.--Lat 47°10'13", long 114°13'47" (NAD 27), in NE¼SE¼SE¼ sec.3, T.16 N., R.21 W., Sanders County, Hydrologic Unit 17010212, Flathead Indian Reservation, on right bank, 1.4 mi upstream from East Fork, 6.7 mi west of Arlee, and 7.4 mi southwest of Ravalli.

DRAINAGE AREA.--15.3 mi².

PERIOD OF RECORD.--October 1982 to current season (seasonal records only).

GAGE.--Water-stage recorder. Elevation of gage is 3,450 ft (NGVD 29).

REMARKS.--Seasonal records good except those for estimated daily discharges, which are poor. No known regulation or diversion upstream from station. Several observations of water temperature and specific conductance were made during the year.

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

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1				7.3	e17	e27	14	10	9.2	8.8		
2				7.1	e20	e25	13	9.9	9.3	8.8		
3				7.0	e27	e27	13	9.9	9.2	8.7		
4				7.3	e28	e30	14	9.9	9.2	8.6		
5				8.1	e30	e33	14	9.8	9.2	8.4		
6				9.2	e28	e35	13	9.6	9.2	8.4		
7				9.6	e28	e30	13	9.8	9.0	8.6		
8				11	e30	e25	13	9.5	8.7	8.4		
9				11	e28	24	13	9.5	8.7	8.4		
10				e13	e27	24	13	9.4	8.6	8.4		
11				e12	e27	23	13	9.2	8.7	8.2		
12				e11	e23	22	13	9.2	9.1	8.0		
13				e14	e18	21	12	9.2	9.1	8.0		
14				e17	e17	20	12	9.1	9.2	8.0		
15				e16	e16	20	12	9.1	9.3	8.0		
16				e14	e18	19	12	9.1	9.2	8.4		
17				e13	e20	18	12	9.1	9.1	8.9		
18				e13	e22	18	11	11	12	8.9		
19				e12	e23	18	12	9.5	10	8.4		
20				e11	e25	17	13	9.6	10	8.4		
21				e11	e27	17	12	9.2	10	8.8		
22				e10	e33	17	11	9.2	9.6	8.7		
23				e9.0	e40	16	11	12	9.5	8.4		
24				e10	e34	16	11	9.9	9.2	8.6		
25				e10	e30	16	11	10	9.2	8.4		
26				e10	e30	16	11	12	9.2	8.4		
27				e15	e37	15	11	11	9.2	8.4		
28				e20	e43	15	11	10	9.2	8.4		
29				e18	e40	14	11	9.9	9.1	8.4		
30				e17	e33	14	10	9.5	9.0	8.4		
31				---	e30	---	10	9.2	---	8.4		
TOTAL				353.6	849	632	375	303.3	279.2	262.0		
MEAN				11.8	27.4	21.1	12.1	9.78	9.31	8.45		
MAX				20	43	35	14	12	12	8.9		
MIN				7.0	16	14	10	9.1	8.6	8.0		
AC-FT				701	1,680	1,250	744	602	554	520		
CFSM				0.77	1.79	1.38	0.79	0.64	0.61	0.55		
IN.				0.86	2.06	1.54	0.91	0.74	0.68	0.64		

STATISTICS OF MONTHLY MEAN DATA FOR SEASONS 1983 - 2004

MEAN	7.70	14.3	32.0	28.1	14.4	10.5	9.03	8.48	8.22
MAX	8.67	30.3	75.5	66.7	31.8	19.6	14.0	12.2	11.5
(WY)	(1998)	(1996)	(1997)	(1997)	(1997)	(1997)	(1997)	(1998)	(1998)
MIN	6.37	6.27	21.5	11.6	8.47	6.72	6.21	5.97	5.85
(WY)	(1984)	(2002)	(1988)	(1987)	(2001)	(2001)	(2001)	(1989)	(2002)

SUMMARY STATISTICS

HIGHEST DAILY MEAN
LOWEST DAILY MEAN
MAXIMUM PEAK FLOW
MAXIMUM PEAK STAGE

FOR 2004 SEASON

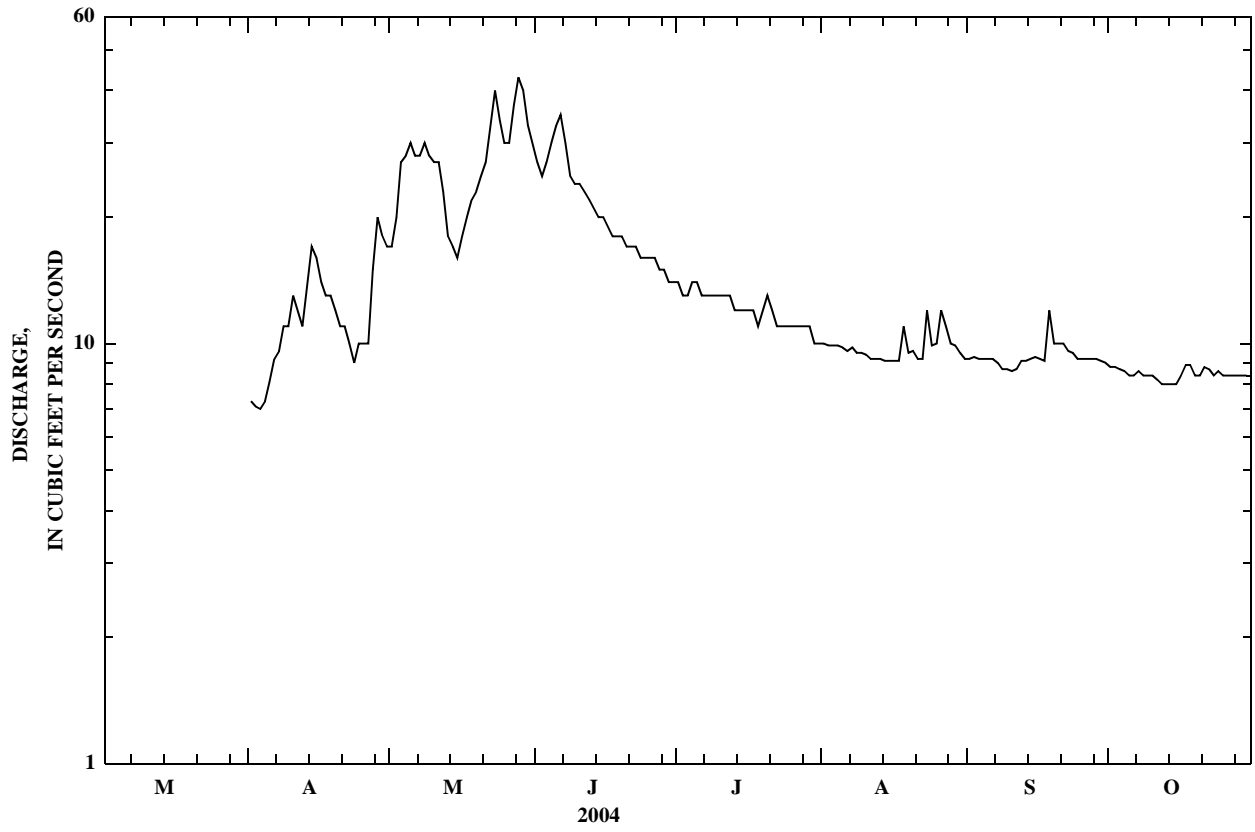
43 May 28
7.0 Apr 3
Unknown
Unknown

SEASONS 1983 - 2004

110 May 17, 1997
5.0 Nov 22, 1994
116 May 16, 1997
3.04 May 16, 1997

e--Estimated.

12387450 VALLEY CREEK NEAR ARLEE, MT—Continued



PEND OREILLE RIVER BASIN

12388200 JOCKO RIVER AT DIXON, MT

LOCATION.--Lat 47°18'43", long 114°17'48" (NAD 27), in NW¼NW¼NE¼ sec. 20, T.18 N., R.21 W., Sanders County, Hydrologic Unit 17010212, Flathead Indian Reservation, on right bank 38 ft downstream from State Highway 212 bridge, 0.8 mi east of Dixon, and at river mile 0.8.

DRAINAGE AREA.--380 mi².

PERIOD OF RECORD.--April 1990 to current year. Miscellaneous measurements made at this site 1977 and 1987 water years.

GAGE.--Water-stage recorder. Elevation of gage is 2,521.87 ft (NGVD 29).

REMARKS.--Records good. Some regulation and diversion upstream from gage for irrigation. Several observations of water temperature and specific conductance were made during the year.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	139	e125	146	115	118	106	153	150	486	224	155	184
2	140	e140	147	116	113	106	152	151	463	210	156	192
3	139	e150	148	115	111	106	147	164	444	203	159	198
4	137	e155	145	121	109	105	146	198	445	207	159	193
5	136	157	143	e110	109	105	150	228	472	212	156	190
6	135	147	148	e100	108	105	157	241	532	199	155	186
7	134	138	151	e90	109	105	174	232	511	197	160	181
8	135	134	145	e94	109	105	198	226	449	201	162	178
9	135	134	142	e100	107	107	208	226	419	181	159	175
10	137	142	138	e98	107	110	196	214	457	173	159	177
11	138	151	138	e100	105	112	188	253	591	177	156	177
12	139	148	137	e100	102	112	186	221	641	172	151	186
13	139	143	139	e105	96	114	191	196	591	169	149	206
14	140	142	144	105	97	114	214	185	578	167	150	216
15	143	141	140	108	100	114	233	174	525	150	149	264
16	143	142	136	106	101	113	206	170	482	144	149	294
17	140	142	137	105	103	114	191	180	451	142	149	293
18	146	142	133	105	115	115	180	182	414	148	174	331
19	146	144	127	107	123	125	171	198	400	161	169	358
20	144	154	125	107	115	131	163	205	387	172	161	336
21	141	153	127	105	110	126	157	214	363	161	158	332
22	140	144	127	105	107	125	146	274	329	155	161	311
23	139	141	124	106	106	128	138	405	323	155	203	295
24	138	143	121	108	107	138	136	400	339	154	283	289
25	138	144	128	109	108	145	137	362	366	156	271	279
26	137	146	128	106	107	147	134	346	383	157	274	273
27	137	144	126	105	108	149	134	364	354	154	228	264
28	138	143	118	106	107	145	157	398	308	154	209	257
29	e130	149	117	111	107	141	174	453	267	152	199	250
30	e128	151	119	131	---	140	161	469	245	150	190	244
31	e120	---	112	127	---	145	---	494	---	153	185	---
TOTAL	4,271	4,329	4,156	3,326	3,124	3,753	5,078	8,173	13,015	5,310	5,498	7,309
MEAN	138	144	134	107	108	121	169	264	434	171	177	244
MAX	146	157	151	131	123	149	233	494	641	224	283	358
MIN	120	125	112	90	96	105	134	150	245	142	149	175
AC-FT	8,470	8,590	8,240	6,600	6,200	7,440	10,070	16,210	25,820	10,530	10,910	14,500

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 2004, BY WATER YEAR (WY)

MEAN	181	172	156	131	129	146	210	409	522	254	167	181
MAX	227	227	265	188	208	246	390	1,303	1,537	512	222	244
(WY)	(1998)	(1996)	(1996)	(1996)	(1996)	(1997)	(1997)	(1997)	(1997)	(1997)	(1997)	(2004)
MIN	138	138	123	102	108	118	130	203	149	140	131	137
(WY)	(2004)	(1995)	(1993)	(1995)	(1993)	(1994)	(1995)	(1992)	(1992)	(1994)	(1994)	(2003)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

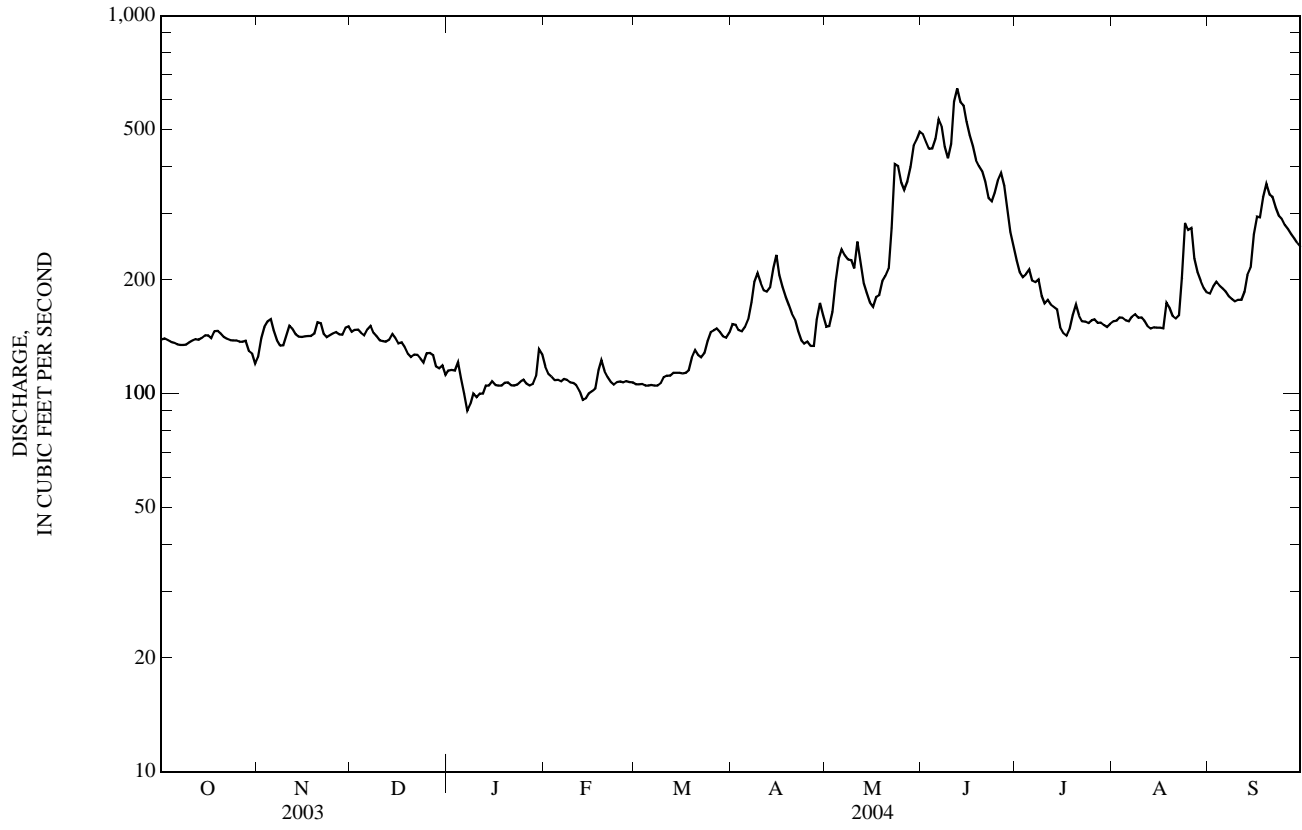
FOR 2004 WATER YEAR

WATER YEARS 1991 - 2004

ANNUAL TOTAL	64,551	67,342		
ANNUAL MEAN	177	184		
HIGHEST ANNUAL MEAN			222	
LOWEST ANNUAL MEAN			445	1997
HIGHEST DAILY MEAN	1,030	May 31	641	Jun 12
LOWEST DAILY MEAN	98	Feb 26	90	Jan 7
ANNUAL SEVEN-DAY MINIMUM	106	Feb 24	97	Jan 6
MAXIMUM PEAK FLOW			668	Jun 11
MAXIMUM PEAK STAGE			2.49	Jun 11
ANNUAL RUNOFF (AC-FT)	128,000		133,600	160,600
10 PERCENT EXCEEDS	252		333	354
50 PERCENT EXCEEDS	140		148	166
90 PERCENT EXCEEDS	122		107	120

e--Estimated.

12388200 JOCKO RIVER AT DIXON, MT—Continued



12388400 REVAIS CREEK BELOW WEST FORK, NEAR DIXON, MT

LOCATION.--Lat 47°15'59", long 114°24'21" (NAD 27), in SE $\frac{1}{4}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.4, T.17 N., R.22 W., Sanders County, Hydrologic Unit 17010212, Flathead Indian Reservation, on right bank, 0.3 mi downstream from West Fork, 7.3 mi southwest of Dixon, and at river mile 5.2.

DRAINAGE AREA.--23.4 mi².

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

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 3,420 ft (NGVD 29).

REMARKS.--Records good except those for estimated daily discharges, which are poor. No known regulation or diversion upstream from station. Several observations of water temperature and specific conductance were made during the year.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.8	e3.8	4.0	e3.8	3.6	3.6	8.9	27	69	19	9.0	7.9
2	3.7	4.0	4.2	e3.9	e3.7	3.6	8.1	33	66	18	8.8	8.0
3	3.7	4.2	e4.0	e3.7	e3.5	3.5	7.8	63	67	17	8.7	7.9
4	3.7	e3.9	e3.9	e3.6	e3.6	3.5	8.1	61	73	19	8.7	7.9
5	3.6	e3.8	4.0	e3.3	3.5	3.5	10	66	81	18	8.4	7.6
6	3.6	e3.6	e3.8	e2.7	3.6	3.5	13	63	86	16	8.3	7.5
7	3.6	e3.5	e3.8	e3.0	3.4	3.5	15	60	71	16	9.1	7.4
8	3.7	e3.1	e4.0	e3.2	3.4	4.0	17	63	62	15	8.3	7.2
9	3.7	e3.5	e3.9	e3.3	3.4	4.9	20	57	55	15	8.1	7.1
10	3.7	e3.9	e3.8	e3.4	3.4	5.7	18	52	54	14	7.9	7.0
11	3.7	e3.8	e4.0	e3.6	3.4	5.0	17	51	50	14	7.8	7.0
12	3.9	e4.0	e3.9	3.6	e3.5	4.9	17	40	46	14	7.7	7.4
13	3.8	4.0	e4.0	3.6	e3.4	5.3	21	35	42	13	7.4	7.5
14	3.9	4.0	4.2	3.6	e3.3	4.9	28	33	39	13	7.3	7.7
15	4.1	4.0	3.9	3.6	e3.1	4.7	27	32	36	12	7.1	7.8
16	4.3	4.1	3.8	3.6	3.4	5.0	23	36	33	12	7.0	7.9
17	4.1	4.2	3.8	3.6	3.5	5.4	20	44	31	12	7.0	7.6
18	3.9	4.4	3.9	3.6	e3.4	6.2	19	48	29	12	7.6	9.1
19	3.8	e4.2	e3.8	3.6	e3.4	9.3	17	50	27	13	7.6	8.2
20	3.8	e4.1	e3.6	3.6	e3.4	6.5	16	55	26	14	7.7	8.9
21	3.8	e4.0	e3.8	3.6	e3.6	5.7	16	59	25	12	7.3	8.9
22	3.8	e3.9	e3.8	3.6	3.7	5.7	15	76	25	12	7.0	8.3
23	3.8	e3.8	e3.7	3.6	e3.8	6.7	14	100	24	11	9.3	8.3
24	3.8	e3.7	e3.9	3.7	3.6	8.3	15	88	23	11	8.0	8.0
25	3.8	4.0	e4.0	3.6	3.6	7.6	15	76	23	11	8.2	8.0
26	3.8	4.1	e3.9	3.5	3.7	7.4	15	73	23	10	9.5	8.0
27	3.8	4.0	3.8	3.6	3.7	7.0	21	85	22	10	9.3	7.9
28	4.1	4.0	e3.8	3.6	3.6	6.5	35	106	21	9.9	8.6	7.9
29	e3.8	e4.0	e3.7	3.7	3.6	6.2	31	100	21	9.7	8.2	7.8
30	e3.5	e4.0	e3.8	e3.6	---	6.4	27	82	20	9.5	8.1	7.8
31	e3.3	---	e3.9	e3.5	---	8.4	---	76	---	9.2	7.9	---
TOTAL	117.4	117.6	120.4	109.5	101.8	172.4	534.9	1,890	1,270	411.3	250.9	235.5
MEAN	3.79	3.92	3.88	3.53	3.51	5.56	17.8	61.0	42.3	13.3	8.09	7.85
MAX	4.3	4.4	4.2	3.9	3.8	9.3	35	106	86	19	9.5	9.1
MIN	3.3	3.1	3.6	2.7	3.1	3.5	7.8	27	20	9.2	7.0	7.0
AC-FT	233	233	239	217	202	342	1,060	3,750	2,520	816	498	467
CFSM	0.16	0.17	0.17	0.15	0.15	0.24	0.76	2.61	1.81	0.57	0.35	0.34
IN.	0.19	0.19	0.19	0.17	0.16	0.27	0.85	3.00	2.02	0.65	0.40	0.37

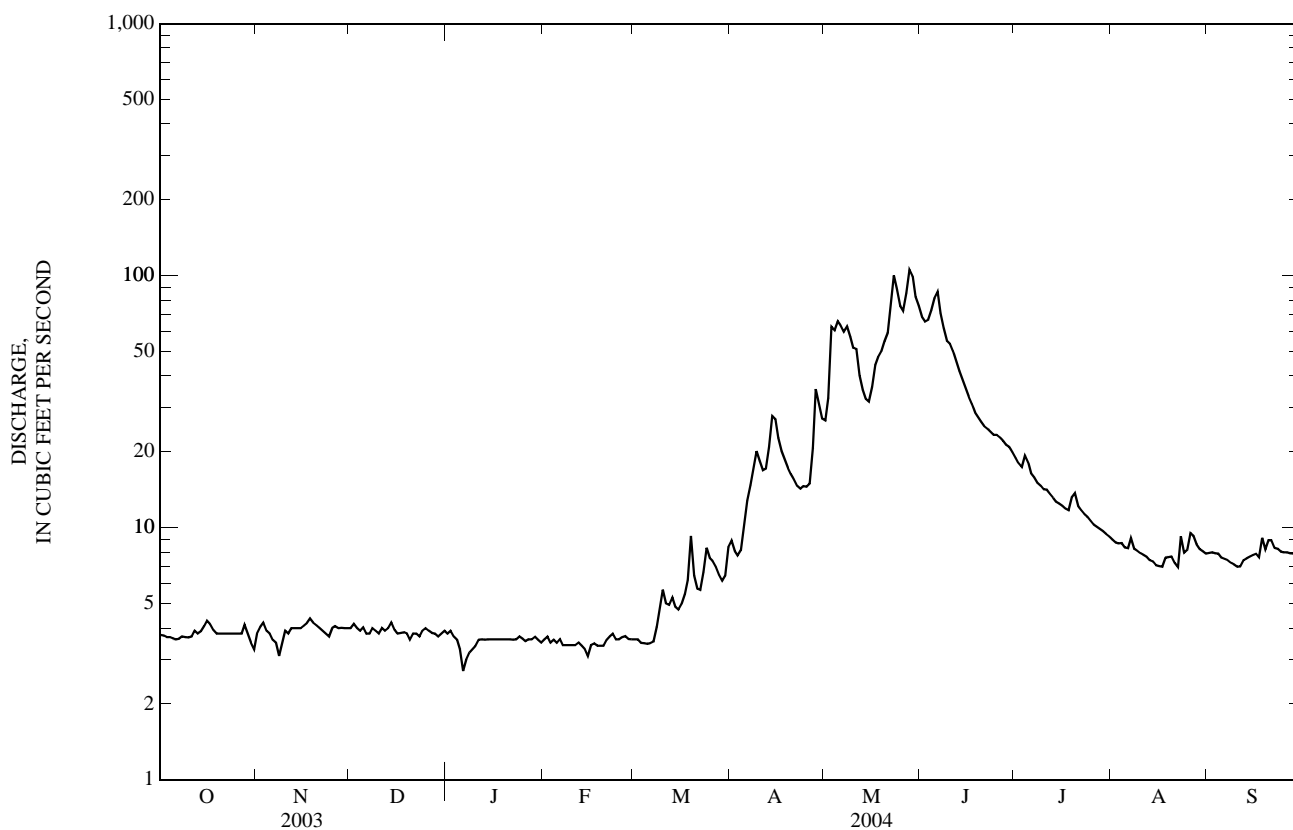
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 2004, BY WATER YEAR (WY)

MEAN	6.22	6.62	6.44	5.28	5.57	7.80	22.7	66.6	55.1	16.2	7.96	6.35
MAX	12.5	14.8	27.9	12.3	19.9	23.7	56.4	165	134	25.9	11.0	10.9
(WY)	(1986)	(1986)	(1996)	(1996)	(1996)	(1986)	(1996)	(1997)	(1997)	(1991)	(1997)	(1985)
MIN	3.79	3.92	3.82	3.53	3.49	3.97	9.07	44.9	18.6	10.2	5.47	4.19
(WY)	(2004)	(2004)	(2002)	(2004)	(1993)	(2001)	(2001)	(1992)	(1987)	(1986)	(1988)	(1988)

12388400 REVAIS CREEK BELOW WEST FORK, NEAR DIXON, MT—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1983 - 2004	
ANNUAL TOTAL	4,962.0		5,331.7			
ANNUAL MEAN	13.6		14.6		17.8	
HIGHEST ANNUAL MEAN					35.2 1997	
LOWEST ANNUAL MEAN					11.6 1992	
HIGHEST DAILY MEAN	157	May 29	106	May 28	316	Jun 1, 1997
LOWEST DAILY MEAN	3.0	Feb 25	2.7	Jan 6	2.5	Feb 4, 1989
ANNUAL SEVEN-DAY MINIMUM	3.3	Feb 23	3.2	Jan 4	2.7	Feb 2, 1989
MAXIMUM PEAK FLOW			111	May 28	a382	Jun 1, 1997
MAXIMUM PEAK STAGE			3.79	May 28	b6.93	Dec 5, 1984
ANNUAL RUNOFF (AC-FT)	9,840		10,580		12,880	
ANNUAL RUNOFF (CFSM)	0.581		0.623		0.760	
ANNUAL RUNOFF (INCHES)	7.89		8.48		10.32	
10 PERCENT EXCEEDS	31		43		47	
50 PERCENT EXCEEDS	4.7		7.1		7.3	
90 PERCENT EXCEEDS	3.7		3.6		4.0	

a--Gage height, 4.36 ft.
 b--Backwater from ice.
 c--Estimated.



12388700 FLATHEAD RIVER AT PERMA, MT

LOCATION.--Lat 47°22'03", long 114°35'03" (NAD 27), in SE $\frac{1}{4}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.36, T.19 N., R.24 W., Sanders County, Hydrologic Unit 17010212, Flathead Indian Reservation, on right bank 0.3 mi north of Perma, 0.4 mi downstream from Camas Creek, and at river mile 10.9.

DRAINAGE AREA.--8,795 mi².

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

GAGE.--Water-stage recorder. Elevation of gage is 2,469.31 ft (NGVD 29).

REMARKS.--Records excellent. Flow affected by regulation from Hungry Horse Reservoir (station no. 12362000) and by Flathead Lake (station no. 12371500). Diversions for irrigation of about 160,500 acres upstream from station. U.S. Geological Survey satellite telemeter at station. Several observations of water temperature and specific conductance were made during the year.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3,980	5,920	9,500	9,590	6,520	8,590	6,410	5,660	22,500	18,900	9,030	12,400
2	3,990	6,940	9,540	9,720	6,450	8,640	5,470	6,090	20,000	18,000	8,990	11,600
3	3,960	8,070	9,510	9,850	6,430	8,570	5,220	6,610	17,700	18,000	9,060	11,300
4	3,960	8,420	9,370	e9,000	6,420	8,600	5,260	7,460	15,500	17,700	9,090	9,800
5	3,920	9,120	9,370	e9,220	6,470	8,600	5,240	8,050	15,200	17,600	8,560	9,430
6	3,910	9,210	9,470	e9,480	6,520	8,620	5,180	8,610	15,300	17,500	8,170	9,320
7	3,900	9,190	9,600	e9,530	6,530	8,510	4,910	9,220	15,300	16,600	8,260	9,310
8	3,900	9,200	9,460	e9,530	6,580	8,500	4,370	9,690	15,000	16,200	8,230	8,580
9	3,910	9,190	9,540	e9,500	6,520	8,560	4,130	10,700	15,100	16,100	8,200	8,350
10	3,940	9,220	9,480	e9,320	6,500	8,560	4,030	11,500	15,200	16,100	8,310	7,630
11	3,950	9,450	9,560	e8,530	7,190	8,500	4,000	12,500	15,300	15,600	8,260	7,340
12	3,980	9,390	9,560	e7,730	8,160	8,540	4,000	14,100	15,300	15,100	8,230	7,360
13	3,990	9,320	9,550	e7,150	8,470	8,190	3,990	16,600	15,200	14,600	8,150	7,430
14	3,960	9,350	9,540	e6,040	8,490	8,050	4,090	18,600	15,200	14,100	8,050	7,460
15	3,970	9,390	9,570	e5,770	8,510	8,000	4,130	18,600	15,100	13,800	8,090	7,490
16	4,010	9,360	9,460	e5,850	8,460	8,030	4,090	18,700	17,000	13,100	8,280	7,590
17	3,960	9,530	9,570	e5,860	8,480	7,250	4,070	17,000	18,500	12,200	8,470	7,560
18	3,950	9,480	9,540	e5,840	8,540	7,230	4,190	15,000	18,900	12,100	8,260	8,310
19	3,950	9,580	9,540	e6,100	8,650	7,140	4,320	15,000	18,200	12,200	8,210	9,370
20	3,930	9,470	9,540	e6,270	8,630	6,870	4,350	15,000	16,000	11,600	8,200	11,900
21	3,930	9,410	9,550	e6,440	8,600	7,140	4,470	15,200	14,900	11,400	8,180	12,300
22	3,970	9,450	9,560	e6,440	8,590	7,210	4,610	16,900	14,900	10,400	8,230	12,300
23	4,080	9,440	9,390	e6,450	8,400	7,170	4,760	19,600	14,800	10,400	8,380	10,200
24	3,970	9,510	9,350	e6,410	8,430	7,080	4,840	21,100	14,800	10,200	8,520	10,400
25	3,990	9,510	9,430	6,430	8,620	6,940	4,960	21,300	14,900	10,200	8,540	11,600
26	4,000	9,390	9,460	6,340	8,770	6,950	5,090	21,300	17,100	10,200	8,550	11,600
27	4,020	9,340	9,460	6,350	8,660	6,980	5,250	21,200	19,500	10,000	9,170	11,600
28	4,020	9,320	9,380	6,470	8,640	7,100	5,380	21,300	19,800	9,940	14,800	11,600
29	4,380	9,450	9,390	6,430	8,650	7,170	5,450	21,600	19,400	9,320	15,400	11,700
30	4,790	9,480	9,300	6,530	---	7,300	5,470	21,500	19,100	9,230	15,300	11,700
31	5,130	---	9,350	6,590	---	7,140	---	21,500	---	9,130	13,200	---
TOTAL	125,300	273,100	293,890	230,760	225,880	241,730	141,730	467,190	500,700	417,520	286,370	294,530
MEAN	4,042	9,103	9,480	7,444	7,789	7,798	4,724	15,070	16,690	13,470	9,238	9,818
MAX	5,130	9,580	9,600	9,850	8,770	8,640	6,410	21,600	22,500	18,900	15,400	12,400
MIN	3,900	5,920	9,300	5,770	6,420	6,870	3,990	5,660	14,800	9,130	8,050	7,340
AC-FT	248,500	541,700	582,900	457,700	448,000	479,500	281,100	926,700	993,100	828,200	568,000	584,200

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

MEAN	8,447	10,500	10,990	10,290	9,658	9,210	10,140	15,480	22,600	13,170	8,124	8,038
MAX	12,070	13,150	17,260	15,200	18,340	23,420	23,370	36,930	45,490	22,780	12,690	13,090
(WY)	(1992)	(2000)	(1996)	(1996)	(1996)	(1996)	(1996)	(1997)	(1997)	(1991)	(1996)	(1989)
MIN	4,042	4,052	6,160	4,626	4,234	4,121	4,397	5,877	9,092	6,279	4,164	3,987
(WY)	(2004)	(2002)	(2002)	(2003)	(2001)	(2001)	(2001)	(1995)	(1987)	(1994)	(1994)	(2003)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

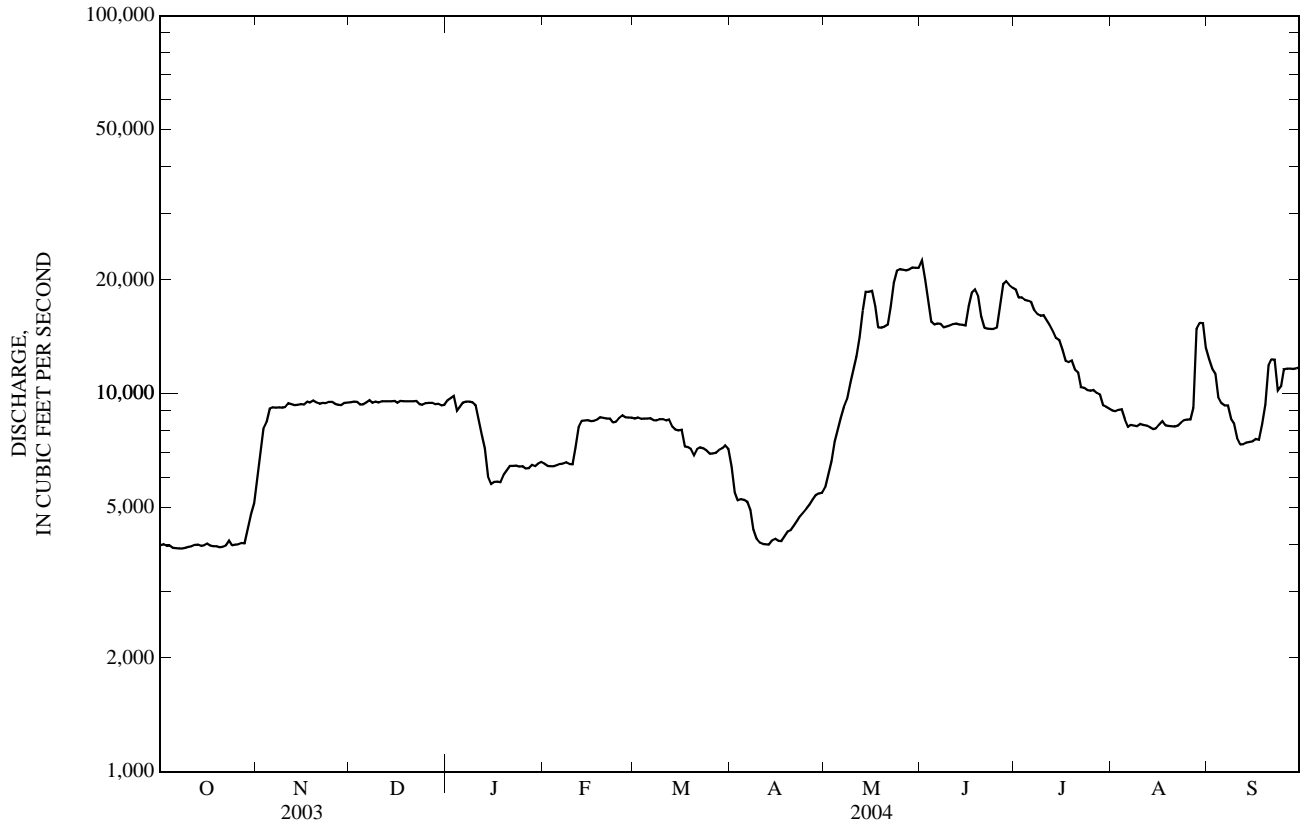
FOR 2004 WATER YEAR

WATER YEARS 1984 - 2004

ANNUAL TOTAL	3,245,440	3,498,700	
ANNUAL MEAN	8,892	9,559	11,380
HIGHEST ANNUAL MEAN			18,030
LOWEST ANNUAL MEAN			7,040
HIGHEST DAILY MEAN	27,000	Jun 5	22,500
LOWEST DAILY MEAN	3,860	Sep 6	3,900
ANNUAL SEVEN-DAY MINIMUM	3,910	Sep 5	3,920
MAXIMUM PEAK FLOW			22,800
MAXIMUM PEAK STAGE			14.05
ANNUAL RUNOFF (AC-FT)	6,437,000	6,940,000	8,247,000
10 PERCENT EXCEEDS	16,000	16,100	17,000
50 PERCENT EXCEEDS	7,600	8,660	10,200
90 PERCENT EXCEEDS	3,960	4,130	5,370

e--Estimated.

12388700 FLATHEAD RIVER AT PERMA, MT—Continued



PEND OREILLE RIVER BASIN

12389000 CLARK FORK NEAR PLAINS, MT

LOCATION.--Lat 47°25'47", long 114°51'18" (NAD 27), in E $\frac{1}{2}$ SW $\frac{1}{4}$ sec.1, T.19 N., R.26 W., Sanders County, Hydrologic Unit 17010213, on right bank 2.4 mi southeast of Plains, 6.0 mi downstream from Flathead River, and at river mile 239.0.

DRAINAGE AREA.--19,958 mi².

PERIOD OF RECORD.--October 1910 to current year. Monthly discharge only for some periods, published in WSP 1316.

REVISED RECORDS.--WSP 1246: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 2,449.11 ft (NGVD 29) (levels by U.S. Army Corps of Engineers). Prior to Nov. 28, 1911, nonrecording gage at site 50 ft upstream at same elevation.

REMARKS.--Records good. Flow partly regulated by Hungry Horse Reservoir (station number 12362000) and by Flathead Lake (station number 12371500). Diversions for irrigation of about 335,000 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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5,620	8,340	11,500	10,800	8,440	10,400	11,800	15,300	40,100	27,600	11,000	15,200
2	5,640	8,970	11,600	10,600	8,350	10,400	11,400	15,200	36,700	26,400	10,900	14,200
3	5,630	9,930	11,500	10,600	8,190	10,400	11,200	16,400	33,300	25,800	10,900	13,800
4	5,670	10,500	11,500	9,020	8,090	10,300	11,200	18,900	30,700	25,200	10,900	12,600
5	5,630	11,100	11,400	e8,500	8,050	10,300	11,300	21,600	30,700	24,700	10,700	11,900
6	5,630	11,200	11,500	e8,000	8,110	10,300	11,700	23,600	32,600	24,300	10,000	11,800
7	5,630	11,000	11,600	e8,200	8,130	10,300	12,600	25,000	34,100	23,100	10,000	11,700
8	5,600	10,900	11,600	e8,600	8,080	10,200	13,100	25,300	33,200	22,300	10,000	11,100
9	5,640	11,000	11,700	8,880	8,080	10,300	13,700	26,100	31,100	22,000	10,000	10,600
10	5,610	11,000	11,600	9,670	8,040	10,700	13,800	26,500	30,000	21,600	10,000	10,000
11	5,660	11,400	11,600	10,700	8,560	11,400	13,500	27,100	30,000	20,900	10,100	9,540
12	5,690	11,600	11,500	10,500	9,480	11,800	13,000	27,900	31,000	20,200	9,980	9,430
13	5,700	11,600	11,500	9,610	9,930	11,600	12,800	29,700	30,400	19,500	9,870	9,490
14	5,770	11,500	11,500	8,860	9,870	11,100	13,500	30,500	29,300	18,600	9,710	9,620
15	5,810	11,500	11,500	8,180	9,770	11,200	14,600	29,700	28,600	18,100	9,620	10,100
16	5,880	11,400	11,500	7,810	9,700	11,100	14,900	28,900	29,600	16,900	9,630	10,600
17	5,900	11,300	11,500	7,890	9,910	10,500	14,200	27,000	30,400	15,800	9,730	10,800
18	5,890	11,400	11,400	8,070	10,100	10,300	13,500	25,000	30,300	15,300	9,660	11,100
19	5,830	11,600	11,400	7,950	10,300	10,700	12,900	24,600	29,200	15,400	9,660	12,200
20	5,830	11,700	11,300	7,880	10,400	10,900	12,500	25,700	27,200	14,800	9,650	14,800
21	5,780	11,600	11,100	8,290	10,500	11,200	12,100	26,900	25,900	14,500	9,650	16,300
22	5,840	11,600	11,100	8,920	10,400	11,200	11,800	29,700	25,100	13,800	9,670	16,500
23	5,770	11,600	11,200	8,770	10,300	11,100	11,500	34,200	24,700	13,400	9,700	14,600
24	5,790	11,400	11,200	8,400	10,100	11,400	11,400	37,000	24,500	13,200	9,790	14,000
25	5,800	11,300	11,000	8,140	10,300	11,900	11,400	37,000	24,400	12,800	9,930	15,200
26	5,800	11,400	11,000	8,050	10,500	12,400	11,700	35,800	26,400	12,700	10,100	15,400
27	5,810	11,300	11,300	8,010	10,500	12,500	12,000	35,700	29,300	12,600	10,500	15,200
28	5,840	11,300	11,200	8,060	10,500	12,500	13,100	37,700	29,400	12,400	17,200	15,100
29	6,070	11,300	11,100	8,050	10,500	12,400	14,700	40,400	28,900	11,800	19,100	15,000
30	6,800	11,400	10,800	8,160	---	12,300	15,700	40,300	28,200	11,400	18,900	15,000
31	7,810	---	10,800	8,430	---	12,100	---	39,400	---	11,200	16,600	---
TOTAL	181,370	333,140	352,000	271,600	273,180	345,200	382,600	884,100	895,300	558,300	343,150	382,880
MEAN	5,851	11,100	11,350	8,761	9,420	11,140	12,750	28,520	29,840	18,010	11,070	12,760
MAX	7,810	11,700	11,700	10,800	10,500	12,500	15,700	40,400	40,100	27,600	19,100	16,500
MIN	5,600	8,340	10,800	7,810	8,040	10,200	11,200	15,200	24,400	11,200	9,620	9,430
AC-FT	359,700	660,800	698,200	538,700	541,900	684,700	758,900	1,754,000	1,776,000	1,107,000	680,600	759,400
CFSM	0.29	0.56	0.57	0.44	0.47	0.56	0.64	1.43	1.50	0.90	0.55	0.64
IN.	0.34	0.62	0.66	0.51	0.51	0.64	0.71	1.65	1.67	1.04	0.64	0.71

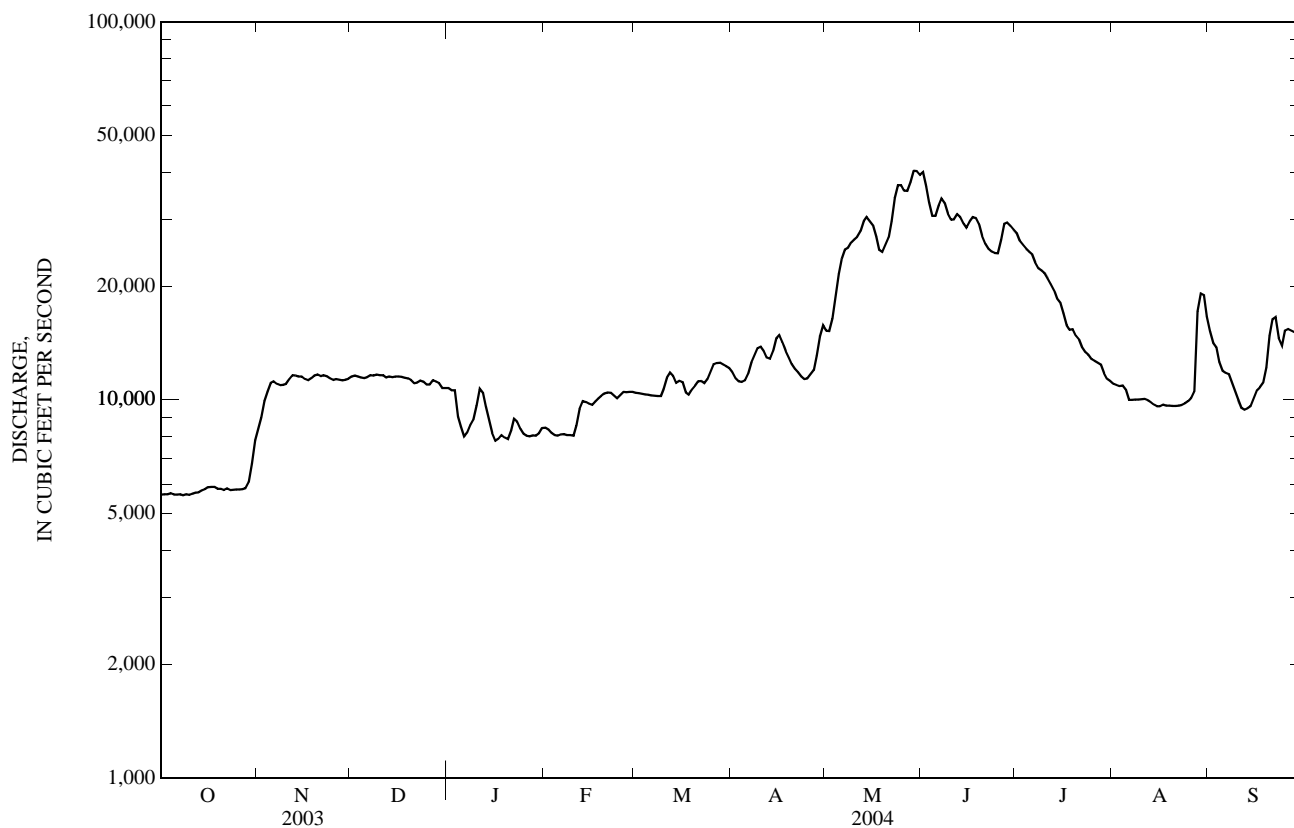
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1911 - 2004, BY WATER YEAR (WY)

MEAN	10,490	11,460	12,020	11,950	11,800	11,890	19,330	44,210	54,510	25,660	11,010	9,650
MAX	23,550	21,170	27,630	22,320	30,070	31,390	47,830	89,760	101,600	76,930	24,840	16,920
(WY)	(1960)	(1928)	(1996)	(1934)	(1996)	(1996)	(1934)	(1928)	(1948)	(1916)	(1916)	(1985)
MIN	4,760	4,588	4,075	3,344	3,940	4,636	6,112	13,010	13,560	7,843	5,656	4,768
(WY)	(1932)	(1937)	(1937)	(1937)	(1937)	(1937)	(1937)	(1941)	(1977)	(1940)	(1988)	(1931)

12389000 CLARK FORK NEAR PLAINS, MT—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1911 - 2004	
ANNUAL TOTAL	5,452,350		5,202,820			
ANNUAL MEAN	14,940		14,220		19,510	
HIGHEST ANNUAL MEAN					29,420	1996
LOWEST ANNUAL MEAN					8,845	1941
HIGHEST DAILY MEAN	65,600	Jun 1	40,400	May 29	133,000	May 31, 1948
LOWEST DAILY MEAN	5,500	Sep 7	5,600	Oct 8	b3,200	Feb 8, 1936
ANNUAL SEVEN-DAY MINIMUM	5,540	Sep 5	5,630	Oct 5	3,250	Jan 11, 1937
MAXIMUM PEAK FLOW			40,800	May 30	134,000	Jun 5, 1948
MAXIMUM PEAK STAGE			9.85	May 30	19.17	Jun 5, 1948
INSTANTANEOUS LOW FLOW			a5,570	Oct 8	c3,200	Dec 10, 1940
ANNUAL RUNOFF (AC-FT)	10,810,000		10,320,000		14,130,000	
ANNUAL RUNOFF (CFSM)	0.748		0.712		0.978	
ANNUAL RUNOFF (INCHES)	10.16		9.70		13.28	
10 PERCENT EXCEEDS	30,900		28,300		44,200	
50 PERCENT EXCEEDS	11,200		11,400		13,100	
90 PERCENT EXCEEDS	5,720		8,010		6,500	

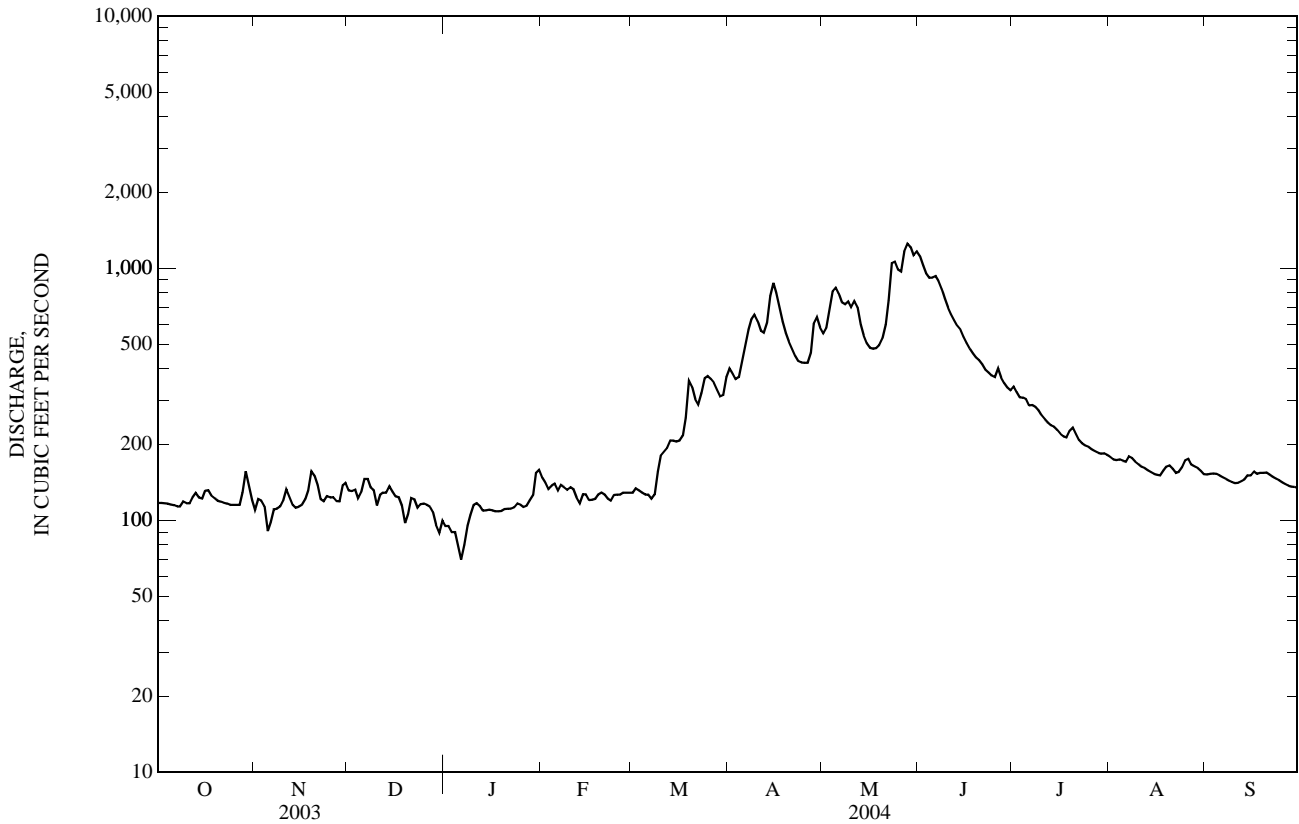
a--Gage height, 3.44 ft.
 b--Estimated during period of ice-affected gage-height record.
 c--Gage height, 2.85 ft.
 e--Estimated.



12389500 THOMPSON RIVER NEAR THOMPSON FALLS, MT—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1957 - 2004	
ANNUAL TOTAL	105,424		101,141			
ANNUAL MEAN	289		276		441	
HIGHEST ANNUAL MEAN					804	
LOWEST ANNUAL MEAN					176	
HIGHEST DAILY MEAN	1,270	May 26	1,250	May 28	5,360	Jun 9, 1964
LOWEST DAILY MEAN	89	Dec 30	70	Jan 6	67	Nov 24, 1993
ANNUAL SEVEN-DAY MINIMUM	105	Dec 25	86	Jan 1	73	Dec 31, 1994
MAXIMUM PEAK FLOW			1,260	May 28	6,080	Jun 9, 1964
MAXIMUM PEAK STAGE			4.26	May 28	8.53	Jun 9, 1964
INSTANTANEOUS LOW FLOW					a48	Dec 4, 1992
INSTANTANEOUS LOW STAGE					b1.01	Dec 17, 1964
ANNUAL RUNOFF (AC-FT)	209,100		200,600		319,300	
ANNUAL RUNOFF (CFSM)	0.450		0.430		0.687	
ANNUAL RUNOFF (INCHES)	6.11		5.86		9.33	
10 PERCENT EXCEEDS	694		644		1,070	
50 PERCENT EXCEEDS	164		153		235	
90 PERCENT EXCEEDS	117		113		132	

a--Gage height, 2.02 ft, result of freezeup.
 b--Result of freezeup.
 e--Estimated.



12390000 THOMPSON FALLS RESERVOIR AT THOMPSON FALLS

LOCATION--Lat 47°35'42", long 115°21'36" (NAD 27), in NE¹/₄ sec.7, T.21 N., R.29 W., Sanders County, Hydrologic Unit 17010213, at dam on Clark Fork at Thompson Falls, at river mile 208.0.

DRAINAGE AREA.--20,968 mi².

PERIOD OF RECORD.--October 1939 to current year.

REMARKS.--Reservoir is formed by two concrete dams, first generator installed July 1915. Usable capacity, 14,970 acre-ft between elevation 2,380.0 ft, spillway crest, and 2,396.0 ft, top of flashboards. Dead storage unknown. Elevation of gage is 2,380 ft (NGVD29). Figures given herein represent usable contents. Nonrecording gage is read several times daily but only midnight readings supplied. Water is used for power development and recreation. Records furnished by PPL EnergyPlus, LLC.

EXTREMES FOR PERIOD OF RECORD.--Maximum monthend contents observed, 16,420 acre-ft, May 12, 1997, elevation, 2,396.95 ft; no storage July 31, 1958.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 15,680 acre-ft, Sept. 19, 21, elevation, 2,396.47 ft; minimum observed, 3,680 acre-ft, Nov. 23, elevation, 2,385.82 ft.

MONTHEND ELEVATION AND CONTENTS AT 2400 HOURS, SEPTEMBER 2003 TO SEPTEMBER 2004

Date	Elevation (feet)	Contents (acre-feet)	Change in Contents (acre-feet)
September 30	2,395.76	14,620	--
October 31	2,395.97	14,930	+310
November 30	2,395.97	14,930	0
December 31	2,395.62	14,420	-510
Calendar Year 2003	--	--	-200
January 31	2,395.86	14,770	350
February 29	2,395.89	14,810	+40
March 31	2,395.88	14,800	-10
April 30	2,395.74	14,590	-210
May 31	2,395.96	14,910	+320
June 30	2,395.86	14,770	-140
July 31	2,395.74	14,590	-180
August 31	2,395.70	14,540	-50
September 30	2,396.31	15,440	+900
Water Year 2004	--	--	-820

12390700 PROSPECT CREEK AT THOMPSON FALLS, MT

LOCATION.--Lat 47°35'10", long 115°21'15" (NAD 27), in lot 12, SE¼SE¼SE¼ sec.7, T.21 N., R.29 W., Sanders County, Hydrologic Unit 17010213, on right bank 500 ft downstream from Dry Creek, 0.5 mi upstream from mouth, and 0.7 mi south of Thompson Falls.

DRAINAGE AREA.--182 mi².

PERIOD OF RECORD.--April 1956 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 2,382.40 ft (NGVD 29).

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

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37	31	33	42	45	62	318	366	470	154	74	60
2	37	31	33	42	44	64	300	406	441	145	73	59
3	36	31	34	42	44	66	287	503	426	138	76	58
4	36	31	33	40	43	69	290	576	425	137	75	57
5	35	30	34	34	44	70	330	577	438	132	72	56
6	35	30	38	e25	44	70	383	531	466	126	71	55
7	35	30	37	e35	44	71	441	487	438	125	74	54
8	35	30	36	41	44	75	489	500	395	120	72	54
9	35	29	35	44	44	80	487	509	362	117	70	53
10	34	30	35	44	45	88	448	481	343	114	68	53
11	33	37	36	43	45	98	416	488	332	111	67	53
12	34	33	36	43	45	104	407	436	315	108	66	53
13	34	31	37	42	45	119	441	394	303	106	65	53
14	33	30	40	42	45	175	548	363	291	103	64	53
15	33	30	39	42	46	191	594	334	275	101	64	53
16	34	31	39	42	46	194	523	325	261	97	63	55
17	33	34	39	42	47	200	448	325	247	96	63	53
18	32	36	39	41	50	222	392	335	236	95	64	53
19	32	36	39	41	51	278	352	349	228	100	62	52
20	32	35	40	41	51	295	324	389	220	94	62	51
21	32	33	40	41	51	275	300	434	210	92	61	51
22	31	31	40	41	51	266	278	519	202	89	61	51
23	31	31	40	41	51	284	265	563	194	87	61	51
24	31	31	41	42	52	330	264	538	187	85	62	51
25	31	31	41	41	54	347	265	496	180	84	62	51
26	31	32	41	40	55	329	270	488	176	82	69	51
27	31	31	41	40	57	311	306	552	175	81	62	50
28	35	31	42	42	58	288	404	578	166	80	61	50
29	35	36	41	43	60	270	411	568	165	78	61	50
30	32	35	40	51	---	265	378	527	156	76	60	49
31	31	---	41	48	---	296	---	506	---	75	60	---
TOTAL	1,036	958	1,180	1,278	1,401	5,852	11,359	14,443	8,723	3,228	2,045	1,593
MEAN	33.4	31.9	38.1	41.2	48.3	189	379	466	291	104	66.0	53.1
MAX	37	37	42	51	60	347	594	578	470	154	76	60
MIN	31	29	33	25	43	62	264	325	156	75	60	49
AC-FT	2,050	1,900	2,340	2,530	2,780	11,610	22,530	28,650	17,300	6,400	4,060	3,160
CFSM	0.18	0.18	0.21	0.23	0.27	1.04	2.08	2.56	1.60	0.57	0.36	0.29
IN.	0.21	0.20	0.24	0.26	0.29	1.20	2.32	2.95	1.78	0.66	0.42	0.33

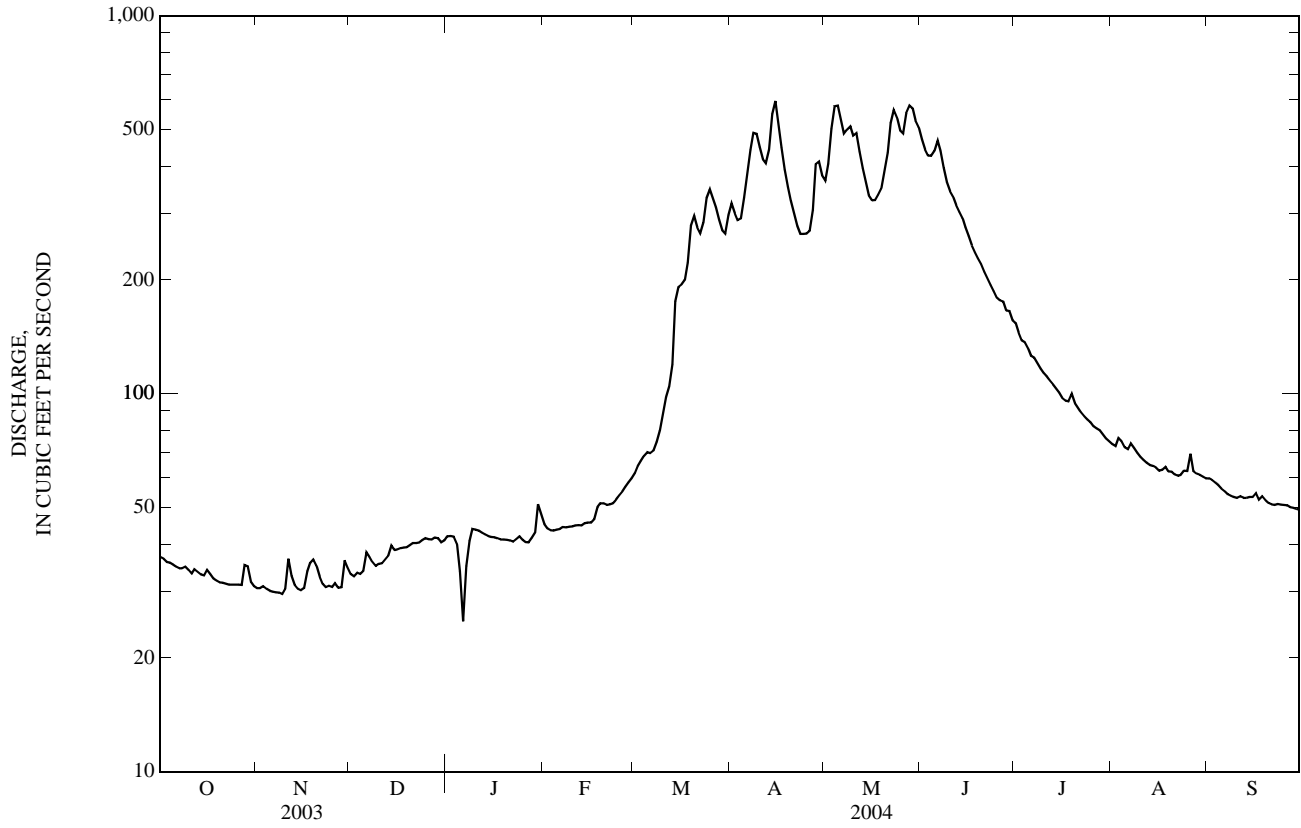
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 2004, BY WATER YEAR (WY)

	MEAN	54.2	79.6	112	115	159	220	477	782	533	160	83.2	61.4
MAX (WY)	168	469	701	735	875	828	877	1,425	1,468	317	109	79.9	
MIN (WY)	28.7	28.8	29.9	29.1	26.4	31.8	84.5	297	142	73.7	48.5	35.8	
	(1960)	(1996)	(1996)	(1974)	(1996)	(1972)	(1969)	(1997)	(1974)	(1997)	(1982)	(1959)	
	(2002)	(2002)	(1988)	(2001)	(2001)	(2001)	(2001)	(1977)	(1987)	(1977)	(1977)	(2001)	

SUMMARY STATISTICS

	FOR 2003 CALENDAR YEAR	FOR 2004 WATER YEAR	WATER YEARS 1957 - 2004
ANNUAL TOTAL	59,190	53,096	
ANNUAL MEAN	162	145	236
HIGHEST ANNUAL MEAN			441
LOWEST ANNUAL MEAN			85.8
HIGHEST DAILY MEAN	797	May 26	4,960
LOWEST DAILY MEAN	29	Nov 9	25
ANNUAL SEVEN-DAY MINIMUM	30	Nov 4	25
MAXIMUM PEAK FLOW			612
MAXIMUM PEAK STAGE		3.39	Apr 15
INSTANTANEOUS LOW FLOW			22
ANNUAL RUNOFF (AC-FT)	117,400	105,300	171,200
ANNUAL RUNOFF (CFSM)	0.891	0.797	1.30
ANNUAL RUNOFF (INCHES)	12.10	10.85	17.65
10 PERCENT EXCEEDS	446	425	644
50 PERCENT EXCEEDS	69	60	100
90 PERCENT EXCEEDS	33	33	43

e--Estimated.



12391300 NOXON RAPIDS RESERVOIR NEAR NOXON

LOCATION.--Lat 47°57'38", long 115°44'00" (NAD 27), in NE¹/₄SW¹/₄SW¹/₄ sec.33, T.26 N., R.32 W., Sanders County, Hydrologic Unit 17010213, at dam on Clark Fork, 3 mi southeast of Noxon, 7.2 mi upstream from Bull River, and at river mile 169.7.

DRAINAGE AREA.--21,833 mi².

PERIOD OF RECORD.--April 1959 to current year.

REMARKS.--Reservoir is formed by concrete and earthfill dam, construction began in 1955, completed in 1959. Storage began Apr. 3, 1959. Usable capacity, 334,600 acre-ft between elevation 2,270.00 ft, minimum operating level, and 2,331.00 ft. Prior to October 1962, published as "Noxon Reservoir." Record of daily elevation on file in Helena district office. Water-stage recorder, midnight readings. Elevation of gage is 2,270 ft (NGVD29). Figures given herein represent usable contents. Water is used for power production, flood control, and recreation. Records furnished by the Avista Corporation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 335,400 acre-ft, Apr. 7, 1960, elevation, 2,331.10 ft; minimum since first filling, 26,380 acre-ft, May 10, 1967, elevation, 2,277.15 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 30,600 acre-ft, Oct. 14, elevation, 2,330.49 ft; minimum, 286,600 acre-ft, Jan. 6, elevation, 2,324.70 ft.

MONTHEND ELEVATION AND CONTENTS AT 2400 HOURS, SEPTEMBER 2003 TO SEPTEMBER 2004

Date	Elevation (feet)	Contents (acre-feet)	Change in Contents (acre-feet)
September 30	2,330.30	329,100	--
October 31	2,330.31	329,100	0
November 30	2,329.52	323,000	-6,100
December 31	2,327.95	310,800	-12,200
Calendar Year 2003	--	--	-12,600
January 31	2,330.05	327,100	+16,300
February 29	2,329.99	326,600	-500
March 31	2,328.73	316,900	-9,700
April 30	2,327.56	307,900	-9,000
May 31	2,329.40	322,000	+14,100
June 30	2,329.02	319,100	-2,900
July 31	2,329.23	320,700	+1,600
August 31	2,329.83	325,400	+4,700
September 30	2,328.28	313,400	-12,000
Water Year 2004	--	--	-15,700

12391400 CLARK FORK BELOW NOXON RAPIDS DAM, NEAR NOXON, MT

LOCATION.--Lat 47°57'40", long 115°43'58" (NAD 27), in SW¼ sec.33, T.26 N., R. 32 W., Sanders County, Hydrologic Unit 17010213, at Noxon Rapids Dam, 1 mi upstream from Rock Creek, 3 mi southeast of Noxon, and at river mile 169.7.

DRAINAGE AREA.--21,833 mi².

PERIOD OF RECORD.--May 1960 to current year.

GAGE.--Plant generator rating or discharge through powerplant. Water-stage recorder on reservoir determines head on taintor gates. Elevation of gage is 2,320 ft (NGVD 29) (levels by The Washington Water Power Co.).

REMARKS.--Records good. Flow regulated by Hungry Horse Reservoir (station 12362000) and Flathead Lake (station 12371500). Diversions for irrigation of about 350,000 acres upstream from station. Some sub-surface flow indicated by comparison with records for adjacent gaging stations. Figures of discharge given herein are combined flows through turbines and spillway. Several observations of water temperature and specific conductance were made during the year.

COOPERATION.--Records collected by the Avista Corporation., under general supervision of the Geological Survey, in connection with a Federal Power Commission project.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6,970	8,920	16,300	8,980	8,340	13,300	16,300	13,700	40,900	33,200	11,200	18,000
2	5,430	9,600	11,700	9,820	10,200	12,300	15,600	14,700	42,700	30,300	12,200	17,700
3	6,150	10,700	10,700	8,890	10,200	12,100	6,190	22,800	39,800	21,900	13,700	16,600
4	5,010	11,600	14,500	17,000	8,490	12,300	9,580	22,100	35,400	24,000	13,400	10,500
5	5,500	14,800	13,000	15,500	10,500	12,800	15,200	24,300	30,800	27,800	11,700	9,750
6	6,560	12,400	8,690	13,100	7,950	7,400	15,300	25,800	33,000	28,200	7,460	12,200
7	5,720	10,900	10,400	7,500	7,140	9,250	14,600	27,800	39,000	24,000	8,180	13,300
8	5,730	9,380	13,600	6,760	8,490	12,800	14,400	25,400	39,100	26,500	10,700	16,000
9	7,210	11,000	14,100	7,300	9,130	14,700	17,900	28,700	34,900	24,000	9,850	14,100
10	5,090	13,800	12,500	5,240	9,690	12,800	17,300	30,100	32,400	22,700	12,400	9,140
11	5,180	12,000	11,600	6,550	9,430	12,800	16,000	30,900	33,700	14,900	12,300	6,360
12	5,580	13,200	14,300	8,140	10,400	12,300	20,500	33,800	31,400	23,000	10,100	6,950
13	6,390	16,400	8,360	10,700	13,900	8,370	17,300	33,900	29,300	24,300	11,100	11,000
14	5,620	16,600	12,000	8,230	10,700	10,100	18,800	34,300	31,900	25,200	7,760	11,100
15	6,890	6,910	14,700	9,580	8,200	13,000	19,100	31,500	32,000	18,300	11,100	12,000
16	5,910	8,520	14,900	7,080	12,000	13,200	19,000	30,100	31,000	19,000	12,500	13,200
17	6,900	15,800	12,700	8,570	9,670	12,500	12,500	31,800	33,200	13,900	13,300	12,300
18	6,130	11,700	11,600	9,360	11,300	11,400	13,900	28,400	33,900	12,200	10,200	11,200
19	5,960	10,700	12,600	7,380	11,800	17,100	18,900	25,400	31,800	19,800	10,400	13,000
20	6,750	14,100	8,380	8,500	10,400	9,680	19,000	28,400	29,700	16,100	12,900	17,900
21	5,990	14,800	10,400	11,100	8,840	10,700	17,300	27,700	31,000	16,200	5,840	11,100
22	6,400	11,900	12,500	9,310	10,300	12,900	16,000	26,400	29,500	14,300	7,420	20,400
23	6,840	14,200	17,700	6,930	11,700	14,400	13,900	39,100	25,000	13,400	9,390	20,700
24	8,990	14,500	12,500	9,860	13,300	18,000	9,980	41,600	25,200	14,000	12,200	18,100
25	5,160	17,800	7,910	8,000	15,800	17,400	10,800	41,100	26,400	12,000	12,300	9,810
26	6,150	14,400	9,970	8,980	9,400	17,700	17,200	39,600	22,100	14,800	13,500	11,800
27	5,560	7,650	13,400	10,200	9,840	8,080	16,100	39,200	26,900	14,100	14,100	18,500
28	4,200	7,980	11,600	10,300	8,980	10,900	17,000	38,400	32,300	14,600	14,900	18,400
29	7,670	9,620	15,000	10,500	10,900	16,900	19,600	38,100	32,500	18,200	18,900	16,300
30	6,310	9,180	16,700	8,590	---	14,900	18,400	48,800	30,500	12,400	19,200	16,800
31	7,810	---	11,500	7,490	---	16,000	---	41,500	---	6,160	17,500	---
TOTAL	191,760	361,060	385,810	285,440	296,990	398,080	473,650	965,400	967,300	599,460	367,700	414,210
MEAN	6,186	12,040	12,450	9,208	10,240	12,840	15,790	31,140	32,240	19,340	11,860	13,810
MAX	8,990	17,800	17,700	17,000	15,800	18,000	20,500	48,800	42,700	33,200	19,200	20,700
MIN	4,200	6,910	7,910	5,240	7,140	7,400	6,190	13,700	22,100	6,160	5,840	6,360
AC-FT	380,400	716,200	765,300	566,200	589,100	789,600	939,500	1,915,000	1,919,000	1,189,000	729,300	821,600

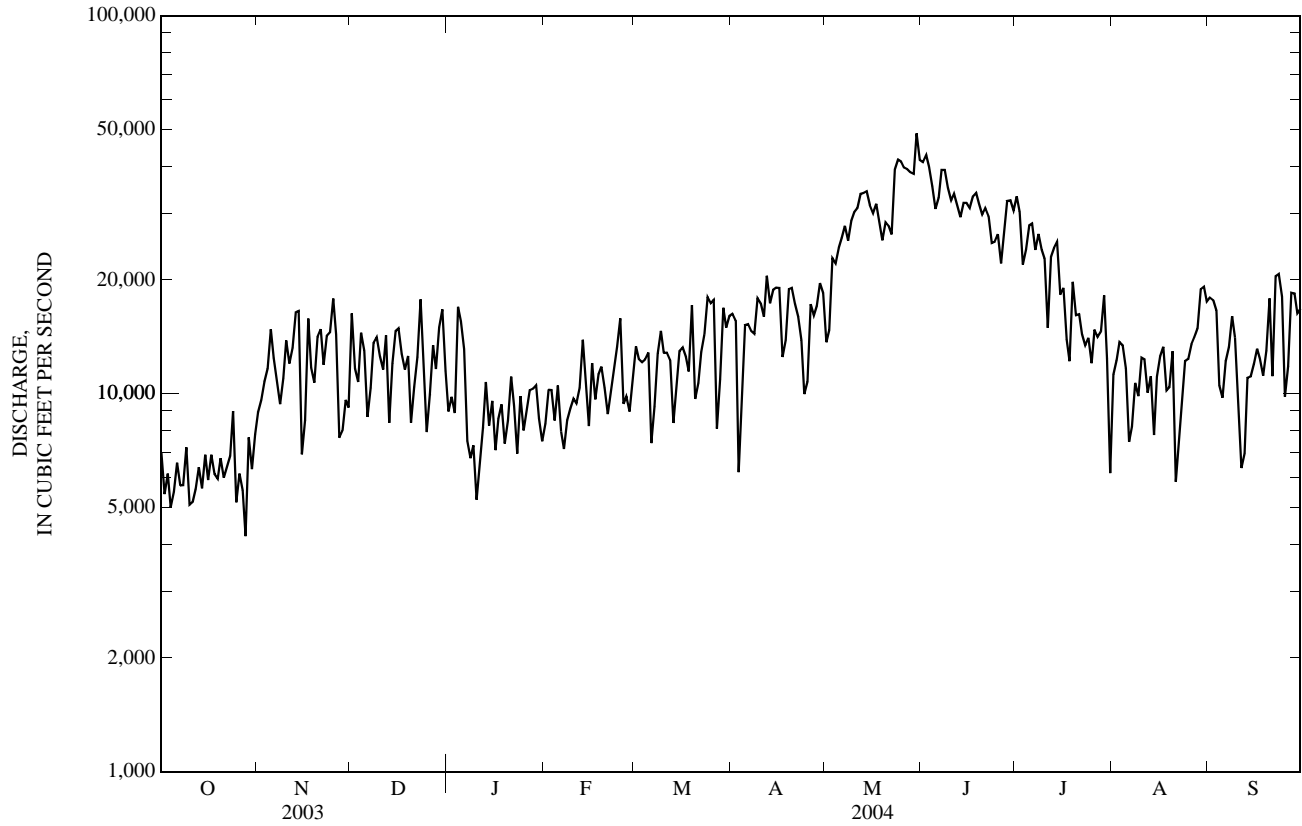
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 2004, BY WATER YEAR (WY)

MEAN	11,520	13,070	14,110	14,160	14,930	16,200	22,540	40,270	50,160	23,050	10,610	10,240
MAX	16,160	19,890	31,480	22,230	34,640	33,700	46,450	88,150	92,590	40,730	17,720	16,410
(WY)	(1976)	(1996)	(1996)	(1974)	(1996)	(1996)	(1996)	(1997)	(1974)	(1982)	(1997)	(1985)
MIN	6,172	6,830	8,606	7,141	6,185	6,925	4,873	14,460	13,400	8,330	5,350	4,838
(WY)	(1961)	(2002)	(2002)	(2003)	(2001)	(2001)	(1977)	(1973)	(1977)	(1977)	(1988)	(1973)

SUMMARY STATISTICS

	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1960 - 2004	
ANNUAL TOTAL	5,899,230		5,706,860			
ANNUAL MEAN	16,160		15,590		20,070	
HIGHEST ANNUAL MEAN					31,870	
LOWEST ANNUAL MEAN					11,170	
HIGHEST DAILY MEAN	70,200		48,800		125,000	
LOWEST DAILY MEAN	3,580		4,200		60	
ANNUAL SEVEN-DAY MINIMUM	5,330		5,730		2,250	
ANNUAL RUNOFF (AC-FT)	11,700,000		11,320,000		14,540,000	
10 PERCENT EXCEEDS	33,300		30,800		40,200	
50 PERCENT EXCEEDS	11,700		12,800		15,000	
90 PERCENT EXCEEDS	5,820		6,960		7,250	

12391400 CLARK FORK BELOW NOXON RAPIDS DAM, NEAR NOXON, MT—Continued



SMALLER RESERVOIRS IN PEND OREILLE RIVER BASIN IN MONTANA

All elevations listed for the following reservoirs are referenced to the National Geodetic Vertical Datum of 1929.

CAMAS RESERVOIRS.--A group of four reservoirs in the Little Bitterroot River basin operated for irrigation and recreation. Nonrecording gages are read on the last day of the month. Figures given herein represent usable contents. Records furnished by Bureau of Indian Affairs. May to July 1948 scattered daily contents for individual reservoirs, published in WSP 1080.

12372500 LITTLE BITTERROOT LAKE.

LOCATION.--Lat 48°05'34", long 114°41'51" (NAD 27), in SE¹/₄SE¹/₄SW¹/₄ sec.16, T.27 N., R.24 W., Flathead County, Hydrologic Unit 17010212, at dam on Little Bitterroot River, 2 mi southwest of Marion and at river mile 70.3.

DRAINAGE AREA.--31.8 mi².

PERIOD OF RECORD.--December 1939, April 1940, September 1940 to current year.

REMARKS.--Reservoir is formed by earthfill dam; storage began in 1918. Usable capacity, 26,400 acre-ft between elevation 3,897.98 ft and 3,906.48 ft. Dead storage is unknown; reservoir was a natural lake. Prior to 1960, usable capacity, 24,000 acre-ft.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 27,570 acre-ft, Apr. 30, 1997, elevation, 3,906.74 ft; no storage at times in 1939-46.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 5,600 acre-ft, Apr. 30, elevation, 3,900.37 ft; minimum observed, 3,500 acre-ft, Sept. 30, elevation, 3,899.58 ft.

12373500 HUBBART RESERVOIR

LOCATION.--Lat 47°55'43", long 114°43'53" (NAD 27), in SE¹/₄NE¹/₄ sec.18, T.25 N., R.24 W., Flathead County, Hydrologic Unit 17010212, at dam on Little Bitterroot River, 9 mi northwest of Niarada and at river mile 55.8.

DRAINAGE AREA.--114 mi².

PERIOD OF RECORD.--December 1939, April 1940, September 1940 to current year.

REMARKS.--Reservoir is formed by concrete variable-radius dam; storage began in 1924. Usable capacity, 12,120 acre-ft between elevation 3,140.0 ft and 3,210.0 ft. No dead storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 13,050 acre-ft, May 31, 1959, elevation, 3,220.92 ft; no storage September to December 1959, Sept. 30, Oct. 1, 1973, October through November 1987.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 3,540 acre-ft, May 31, elevation, 3,193.82 ft; minimum observed, 199 acre-ft, Sept. 30, elevation, 3,160.80 ft.

12375000 UPPER DRY FORK RESERVOIR

LOCATION.--Lat 47°44'55", long 114°40'53" (NAD 27), in SE¹/₄SE¹/₄SW¹/₄ sec. 16, T.23 N., R.24 W., Sanders County, Hydrologic Unit 17010212, at dam on Dry Fork Creek, 4 mi northwest of Lonepine.

DRAINAGE AREA.--8.53 mi².

PERIOD OF RECORD. --April 1940, September 1940 to current year.

REMARKS.--Reservoir is formed by earthfill dam; storage began in 1940. Usable capacity, 2,810 acre-ft between elevation 2,900.0 ft and 2,928.5 ft. No dead storage. Prior to 1960, usable capacity, 2,700 acre-ft. Natural flow of Alder Creek in Thompson River basin is diverted in SW¹/₄ sec 16, T.23 N., R.25 W., and carried by transbasin canal to upper Dry Fork Creek for storage in this reservoir.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 3,140 acre-ft, May 31, 1980, elevation, 2,929.5 ft; no storage at times in 1940, 1942, 1943.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 2,430 acre-ft, July 31, elevation, 2,927.20 ft; minimum, 437 acre-ft, Sept. 30, elevation, 2,915.30 ft.

12375500 LOWER DRY FORK RESERVOIR

LOCATION.--Lat 47°42'00", long 114°40'02" (NAD 27), in SW¹/₄NW¹/₄NW¹/₄ sec.3, T.22 N., R.24 W., Sanders County, Hydrologic Unit 17010212, at dam on Dry Fork Creek, 1 mi west of Lonepine.

DRAINAGE AREA.--17.8 mi².

PERIOD OF RECORD.--December 1939, April 1940, September 1940 to current year. Records published in WSP 1316 were listed in error and should not be used.

REMARKS.--Reservoir is formed by earthfill dam; storage began in 1921. Usable capacity, 3,890 acre-ft, between elevation 2,830.5 ft and 2,856.3 ft. Prior to 1960, usable capacity, 4,000 acre-ft. Water also supplied by transbasin diversion from Little Bitterroot River and Mill Creek. No dead storage. Reservoir is also known as Lonepine Reservoir.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 4,270 acre-ft, May 31, 1980, elevation, 2,857.4 ft; no storage Aug. 31, 1944, Aug. 31, Sept. 30, 1946, Oct. 31, 1951.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 2,380 acre-ft, June 30, elevation, 2,851.50 ft; minimum observed, 604 acre-ft, Sept. 30, elevation, 2,841.70 ft.

SMALLER RESERVOIRS IN PEND OREILLE RIVER BASIN IN MONTANA—Continued

CAMAS RESERVOIRS MONTHEND CONTENTS, IN ACRE-FEET
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Little Bitterroot	Hubbert	Upper Dry Fork	Dry Fork	Total of 4
Oct. 31	4,800	723	557	729	6,810
Nov. 30*	4,000	849	576	729	6,150
Dec. 30	4,000	1,050	649	729	6,430
Jan. 31	4,100	1,270	671	752	6,790
Feb. 29	4,600	e1,670	671	752	e7,690
Mar. 31	5,300	2,160	864	1,160	9,480
Apr. 30	5,600	3,410	1,180	1,570	11,760
May 31*	5,300	3,540	1,830	1,840	12,510
June 30	4,500	3,380	2,320	2,380	12,580
July 31	4,200	1,050	2,430	1,320	9,000
Aug. 31	4,200	323	912	712	6,150
Sept. 30	3,500	199	437	604	4,740

*--Measured 1-2 days after the end of the month.
e--Estimated.

MISSION VALLEY RESERVOIRS.--A group of eight reservoirs, in an area east of and tributary to Flathead River and between Flathead Lake and Jocko River, Lake County, Hydrologic Unit 17010212, is operated for irrigation. Nonrecording gages are read on the last day of the month. Figures given herein represent usable contents. Records furnished by Bureau of Indian Affairs. April to July 1948 monthend contents and daily maximum for individual reservoirs, published in WSP 1080.

12371000 TURTLE LAKE

LOCATION.--Lat 47°40'19", long 114°04'32" (NAD 27), in SW¹/₄NW¹/₄NE¹/₄ sec.18, T.22 N., R.19 W., at outlet works 4 mi southeast of Polson.

DRAINAGE AREA.--Undetermined.

PERIOD OF RECORD.--December 1939, April 1940, September 1940 to current year.

REMARKS.--Reservoir is formed by earthfill dam; storage began in 1932. Prior to October 1968, published as "Twin Reservoir." Usable capacity, 899 acre-ft between elevation 3,061.0 ft and 3,090.5 ft. Dead storage is unknown; reservoir was a natural lake. Reservoir has a natural watershed and fed by Hell Roaring Creek and Bisson Creek.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 1,000 acre-ft, June 30, 1996, elevation, 3,092.02 ft; no storage at times in July 1941, August and September 1944, October 1957, July, August and September 1977, July through October 1992, March 1994, October through December 1994, August 2001, August 2003, and July through August 2004.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 268 acre-ft, Nov. 30, elevation, 3,076.20 ft; no storage, July 31 and Aug. 31.

12376700 LOWER CROW RESERVOIR

LOCATION.--Lat 47°30'09", long 114°13'35" (NAD 27), in SW¹/₄SE¹/₄SE¹/₄ sec.11, T.20 N., R.21 W., at outlet works on Crow Creek, 5.2 mi northwest of Charlo, at river mile 3.44.

DRAINAGE AREA.--Undetermined.

PERIOD OF RECORD.--December 1939, April 1940, September 1940 to current year.

REMARKS.--Reservoir is formed by earthfill dam; storage began in 1933. Usable capacity 10,350 acre-ft between elevation 2,800 ft and 2,877.0 ft. No dead storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 10,770 acre-ft, May 21, 22, 1948, elevation, 2,878.2 ft; no storage Sept. 30, 1963, Oct. 31, Nov. 30, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 9,480 acre-ft, Sept. 30, elevation, 2,874.40 ft; minimum observed, 2,560 acre-ft, Oct. 31, elevation 2,843.00 ft.

12377200 MISSION RESERVOIR

LOCATION.--Lat 47°18'54", long 114°01'15" (NAD 27), in NW¹/₄SW¹/₄SE¹/₄ sec.15, T.18 N., R.19 W., at outlet works on Mission Creek, 4 mi east of St. Ignatius and at river mile 16.7.

DRAINAGE AREA.--Undetermined.

PERIOD OF RECORD.--December 1939, April 1940, September 1940 to current year.

REMARKS.--Reservoir is formed by earthfill dam; storage began in 1935. Usable capacity 8,130 acre-ft between elevation 3,340.7 ft and 3,406.0 ft. Prior to 1993, usable capacity, 7,250 acre-ft. No dead storage.

SMALLER RESERVOIRS IN PEND OREILLE RIVER BASIN IN MONTANA—Continued

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 8,400 acre-ft, June 30, 2002, elevation, 3,409.86 ft; no storage at times during September 1949, February, March, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 8,220 acre-ft, June 30, elevation, 3,410.25 ft; minimum observed, 918 acre-ft, Feb. 29, elevation, 3,378.33 ft.

12377300 ST. MARYS LAKE

LOCATION.--Lat 47°15'58", long 113°56'08" (NAD 27), in SW¹/₄NE¹/₄NE¹/₄ sec.6, T.17 N., R.18 W., at outlet works on Dry Creek, 8 mi southwest of St. Ignatius.

DRAINAGE AREA.--Undetermined.

PERIOD OF RECORD.--December 1939, April 1940, September 1940 to current year.

REMARKS.--Reservoir is formed by earthfill dam; storage began in 1919. Prior to October 1968, published as "Tabor Reservoir." Usable capacity, 23,500 acre-ft between elevation 3,911.5 ft and 4,025.0 ft, not including contents of natural lake., Prior to 1993, usable capacity, 23,300 acre-ft. Reservoir is fed by Dry Creek and also by a transbasin diversion from Jocko River.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 23,510 acre-ft, June 30, 1976, June 30, 1978, elevation, 4,025.7 ft; no storage Sept. 30, 1969, Feb. 28, 1995, and December 2001 through March, 2002.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 23,060 acre-ft, June 30, elevation, 4,024.10 ft; minimum observed, 150 acre-ft, Jan. 31, elevation, 3,912.50 ft, estimated.

12377900 PABLO RESERVOIR

LOCATION.--Lat 47°38'25", long 114°08'33" (NAD 27), in SW¹/₄SW¹/₄NE¹/₄ sec.27, T.22 N., R.20 W., at outlet works 3 mi south of Polson, 3 mi northwest of Pablo.

DRAINAGE AREA.--Off-channel storage reservoir.

PERIOD OF RECORD.--December 1939, April 1940, September 1940 to current year.

REMARKS.--Reservoir is formed by earthfill dam; storage began in 1914. Usable capacity, 28,400 acre-ft between elevation 3,179 ft, gate sill, and 3,210.2 ft. Prior to 1994 water year, published as usable capacity, 27,100 acre-ft. No dead storage. Reservoir is fed entirely by Pablo feeder canal, some water supplied by Flathead pumping plant.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 28,760 acre-ft, June 30, 1998, elevation, 3,211.07 ft; no storage at times in several years.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 14,110 acre-ft, May 31, elevation, 3,202.60 ft; no contents, Sept. 30, reservoir under repair.

12378200 McDONALD RESERVOIR

LOCATION.--Lat 47°25'31", long 113°59'27" (NAD 27), in SE¹/₄NE¹/₄NE¹/₄ sec.10, T.19 N., R.19 W., at outlet works on Post Creek, 9 mi east of Charlo, and at river mile 12.4.

DRAINAGE AREA.--Undetermined.

PERIOD OF RECORD.--December 1939, April 1940, September 1940 to current year.

REMARKS.--Reservoir is formed by earthfill dam; storage began in 1919. Usable capacity, 8,220 acre-ft (revised), not including contents of natural lake. Prior to 1993, usable capacity, 8,220 acre-ft and 7,2000 ac-ft from 1993 to 2002. Dead storage unknown.

EXTREMES FOR PERIOD OF RECORD: Maximum contents observed, 8,330 acre-ft, June 30, 1983, elevation, 3,598.5 ft; no storage Aug. 31, 1961, Aug. 30, 1966, Oct. 31, 1971, Apr. 30, 1972, October 1994 through April 1995, August 1999 to Apr. 30, 2000, December 2001 through February 2002.

EXTREMES FOR CURRENT YEAR: Maximum contents observed, 8,020 acre-ft, June 30, elevation, 3,597.00 ft; minimum observed, 200 acre-ft, Jan. 31, elevation, 3,547.20 ft., estimated.

12378300 KICKING HORSE RESERVOIR

LOCATION.--Lat 47°27'25", long 114°04'35" (NAD 27), in SE¹/₄NE¹/₄NE¹/₄ sec.36, T.20 N., R.20 W., at outlet works 4 mi northeast of Charlo.

DRAINAGE AREA.--Off channel storage reservoir.

PERIOD OF RECORD.--December 1939, April 1940, September 1940 to current year.

REMARKS.--Reservoir is formed by earthfill dam; storage began in 1930. Usable capacity, 9,200 acre-ft between elevation 3,042.00 ft and 3,061.94 ft. Prior to 1993, usable capacity, 8,350 acre-ft. Dead storage, 70 acre-ft below elevation 3,042.0 ft. Reservoir is fed entirely by canals leading from South Crow Creek and Post Creek. Formerly published as 12379700 Kicking Horse Reservoir prior to 1988 water year.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 10,320 acre-ft, June 30, 1976, May 31, 1980, elevation, 3,064.4 ft; no storage Aug. 31, 1961.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 8,560 acre-ft, June 30, elevation, 3,062.20 ft; minimum observed, 1,640 acre-ft, Oct. 31, elevation, 3,050.39 ft.

SMALLER RESERVOIRS IN PEND OREILLE RIVER BASIN IN MONTANA—Continued

12378400 NINEPIPE RESERVOIR

LOCATION.--Lat 47°27'20", long 114°08'08" (NAD 27), in NE¹/₄NW¹/₄NW¹/₄ sec.34, T.20 N., R.20 W., at outlet works 2 mi northeast of Charlo.

DRAINAGE AREA.--Off channel storage reservoir.

PERIOD OF RECORD.--December 1939, April 1940, September 1940 to current year.

REMARKS.--Reservoir is formed by earthfill dam; storage began in 1911. Usable capacity 15,000 acre-ft between elevation 2,895.4 ft and 3,010.0 ft. Prior to 1993, usable capacity, 14,870 acre-ft. No dead storage. Reservoir is fed entirely from Kicking Horse Reservoir and water can be pumped from Crow Creek by the Crow pump. Formerly published as 12380000 Ninepipe Reservoir prior to 1988 water year.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 16,950 acre-ft, June 30, 1974, elevation, 3,012.3 ft; no storage Aug. 31, 1961.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 14,080 acre-ft, June 30, elevation, 3,009.50 ft; minimum observed, 1,220 acre-ft, Oct. 31, elevation, 2,996.33 ft.

MISSION VALLEY RESERVOIRS MONTHEND CONTENTS, IN ACRE-FEET,
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Turtle	Lower Crow	Mission	St. Mary's	Pablo	McDonald	Kicking Horse	Ninepipe	Total of 8
Oct. 31	147	2,560	1,080	2,550	12,730	345	1,640	1,220	22,270
Nov. 30*	268	3,320	1,080	192	12,800	314	2,610	1,810	22,390
Dec. 30	137	4,390	1,040	183	12,820	285	2,120	2,450	23,430
Jan. 31	140	5,640	e1,000	e150	12,850	e200	1,860	2,460	e24,300
Feb. 29	110	6,780	918	e250	12,400	335	2,110	2,630	e25,530
Mar. 31	86	7,950	967	610	12,920	406	2,060	2,660	27,660
Apr. 30	76	9,260	1,690	5,340	11,400	898	2,590	3,440	34,690
May 31*	118	9,130	5,640	18,680	14,110	4,980	3,820	3,670	60,150
June 30	194	8,700	8,220	23,060	13,200	8,020	8,560	14,080	84,030
July 31	0	7,370	6,620	16,660	3,440	6,840	5,980	9,620	56,530
Aug. 31	0	7,340	4,050	8,140	1,670	4,280	2,710	4,160	32,350
Sept. 30	135	9,480	5,760	5,260	*0	5,780	4,550	4,200	35,160

*--Measured 1-2 days after the end of the month.

e--Estimated.

*--Under repair.

12380000 UPPER JOCKO LAKE

LOCATION.--Lat 47°11'34", long 113°42'44" (NAD 27), in NE¹/₄NW¹/₄ sec. 36, T. 17 N., R. 17 W., Missoula County, Hydrologic Unit 17010212, at dam on Jocko River, 17.3 mi southeast of Arlee, and at river mile 41.8.

DRAINAGE AREA.--2.99 mi².

PERIOD OF RECORD.--April 1968 to current year. Nonrecording gage read at end of month. U.S. Geological Survey began publishing data October 1988.

REMARKS.--Reservoir is formed by earthfill dam; storage began in 1967. Was previously known as "Black Lake" prior to dam construction. Usable capacity, 5,200 acre-ft, between elevation 4,390.0 ft, outlet sill, and 4,440.0 ft, spillway elevation. Prior to 1993, usable capacity, 4,440 acre-ft. Dead storage, 763 acre-ft. Transbasin diversion takes water from Placid Creek in Clearwater River basin in SW¹/₄ sec. 29, T. 17 N., R. 16 W., to Upper Jocko Lake, thence to Lower Jocko Lake. The emergency spillway returns water to the Clear Water River Basin over the basin divide. Figures given herein represent usable contents. Water is used for irrigation and recreation. Records furnished by Bureau of Indian Affairs.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 4,290 acre-ft, May 31, 1971, elevation, 4,439.1 ft; no storage at times each year.

EXTREMES FOR CURRENT YEAR.-- Maximum contents observed, 1,690 acre-ft, May 31, elevation, 4,416.35 ft; no storage most of year.

12380500 LOWER JOCKO LAKE

LOCATION.--Lat 47°12'10", long 113°45'35" (NAD 27), in NW¹/₄SW¹/₄NW¹/₄ sec.27, T.17 N., R.17 W., Missoula County, Hydrologic Unit 17010212, at dam on Jocko River, 15 mi east of Arlee, and at river mile 39.3.

DRAINAGE AREA.--7.39 mi².

PERIOD OF RECORD.--December 1939, April 1940, September, 1940, to current year (no winter records most years since 1947). Records for November 1957, published only in WSP 1736. May to July 1948 scattered daily contents, published in WSP 1080. Nonrecording gage read at end of month.

REMARKS.--Reservoir is formed by earthfill dam; storage began in 1937. Usable capacity, 6,380 acre-ft between elevation 4,267.0 ft and 4,340.0 ft. Prior to 1960, usable capacity, 7,600 acre-ft at elevation 4,350 ft and 1960-1992, usable capacity, 5,380 acre-ft. Dead storage unknown below elevation 4,267 ft, sill of outlet conduit. Some water may then be diverted to St. Mary's Lake for use in the Mission Valley. Figures given herein represent usable contents. Water is used for irrigation and recreation. Records furnished by Bureau of Indian Affairs.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 6,700 acre-ft, June 9, 1948, elevation, 4,342.7 ft; no storage at times each year.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 3,740 acre-ft, June 30, elevation, 4,315.00 ft; no storage most of year.

PEND OREILLE RIVER BASIN

SMALLER RESERVOIRS IN PEND OREILLE RIVER BASIN IN MONTANA—Continued

UPPER AND LOWER JOCKO RESERVOIR MONTHEND CONTENTS, IN ACRE-FEET,
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Upper Jocko Lake	Lower Jocko Lake
Oct. 31	0	0
Nov. 30	0	0
Dec. 30	0	0
Jan. 31	0	0
Feb. 29	0	0
Mar. 31	0	0
Apr. 30.	1,610	1,360
May 31	1,690	3,740
June 30	1,390	3,500
July 31	e0	2,550
Aug. 31	0	446
Sept. 30	0	0

e--Estimated.

12391950 CLARK FORK BELOW CABINET GORGE DAM, NEAR CABINET, ID

LOCATION.--Lat 48°05'17", long 116°04'22", revised, (NAD 83), in SW¹/₄SW¹/₄NW¹/₄ sec.27, T.55 N., R.3 E., Cabinet Quad., Bonner County, Hydrologic Unit 17010213, on right bank 0.7 mi downstream from Cabinet Gorge Dam at cableway, 2.1 mi downstream from Blue Creek, 6.1 mi southeast of Clark Fork, and at mile 149.2.

DRAINAGE AREA.--22,067 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1995 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 2,060.00 ft (NGVD 29) (levels by Washington Water Power Co). See WSP 1933 for history of changes made prior to Sept. 30, 1952. Water-stage recorder at site 0.4 mi upstream at elevation 60.00 ft lower Oct. 1, 1952, to Sept. 30, 1964, and at present elevation Oct. 1, 1964, to May 21, 1973.

REMARKS.--Records good. Flow regulated by Hungry Horse Reservoir, Flathead Lake, and Noxon Rapids Reservoir. Extreme diurnal fluctuation caused by powerplant at Cabinet Gorge Dam. Diversions above station for irrigation of about 354,000 acres.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 134,000 ft³/s, May 18, 1997, gage height, 29.14 ft; minimum daily, 3,330 ft³/s, Feb. 8, 1998.

EXTREMES FOR CURRENT PERIOD.--Maximum discharge, 61,100 ft³/s, May 27, gage height, 19.04 ft; minimum daily, 5,180 ft³/s, Sept. 11.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7,530	9,030	16,300	8,460	8,640	13,200	18,400	15,800	44,700	34,200	11,100	16,400
2	5,470	9,020	11,500	9,760	10,400	14,000	16,100	16,800	46,800	31,800	12,600	18,500
3	6,230	11,400	11,300	9,050	10,200	12,000	7,370	25,700	42,000	23,900	12,900	17,700
4	5,470	10,700	14,300	17,200	9,260	12,600	10,800	24,500	39,100	26,500	14,100	10,800
5	5,450	15,100	13,400	17,300	10,800	13,300	17,100	28,400	35,100	28,800	10,700	9,500
6	5,500	13,000	8,700	12,700	7,850	7,790	16,600	28,400	36,500	28,700	8,120	12,000
7	5,660	11,900	9,550	6,700	6,640	9,540	16,400	29,500	42,400	26,700	7,390	13,700
8	5,940	8,180	14,500	6,600	9,700	13,600	15,300	27,800	41,500	26,900	10,800	17,200
9	6,970	11,700	13,900	6,750	8,030	14,900	20,100	31,600	39,100	26,000	10,000	13,400
10	5,590	14,400	12,900	5,540	10,200	13,500	19,600	33,500	34,800	24,800	13,300	9,430
11	5,490	13,400	11,400	7,140	10,800	12,400	18,400	33,500	36,500	14,400	12,100	5,180
12	5,450	13,300	14,000	7,650	9,900	13,300	22,100	36,100	35,000	24,400	9,760	7,420
13	5,870	15,800	8,850	10,600	13,000	9,070	19,900	36,300	32,000	25,400	10,900	11,600
14	6,480	15,400	12,300	7,610	11,400	10,800	21,800	36,300	34,100	26,600	6,870	11,100
15	6,040	7,820	14,700	11,300	8,870	14,100	21,500	34,900	34,300	20,500	11,600	11,500
16	6,490	8,110	14,500	5,850	12,800	13,500	22,000	31,800	33,700	18,900	11,800	13,400
17	6,890	16,300	13,400	9,250	10,700	13,000	13,600	33,200	35,500	15,000	14,200	13,600
18	6,150	11,500	11,500	8,610	10,500	12,200	15,800	31,400	36,300	12,400	10,100	11,100
19	6,090	11,300	11,700	7,530	12,200	18,600	20,900	28,800	36,200	20,900	10,400	13,300
20	6,400	13,800	9,820	9,160	11,300	10,100	20,200	30,600	30,500	15,800	12,900	21,900
21	6,680	14,600	9,360	11,000	8,880	11,600	18,400	30,600	34,100	16,800	6,400	8,110
22	6,390	11,800	12,400	8,460	10,300	13,600	17,600	27,700	31,500	14,600	6,430	21,900
23	6,740	14,300	17,900	7,040	11,700	15,100	14,000	41,100	28,000	14,600	9,610	21,000
24	9,690	15,400	13,000	10,100	14,300	19,000	11,800	46,200	27,000	14,000	12,100	18,800
25	5,700	18,600	7,370	7,740	17,200	18,700	11,100	42,700	28,700	12,500	12,500	10,800
26	5,390	13,500	10,900	9,160	9,090	22,500	18,700	43,000	23,700	15,500	14,200	12,700
27	5,410	7,940	13,000	10,800	9,060	7,250	18,400	42,700	29,000	14,500	15,100	17,900
28	5,590	8,700	11,400	9,840	9,590	11,300	18,500	42,400	33,200	13,800	15,000	18,800
29	6,300	9,010	16,300	10,700	11,700	18,000	21,400	40,300	36,100	18,000	19,200	16,900
30	7,200	11,100	17,100	8,480	---	16,000	20,000	52,400	32,800	12,100	20,700	17,600
31	7,630	---	11,200	8,160	---	17,200	---	45,000	---	6,630	18,000	---
TOTAL	193,880	366,110	388,450	286,240	305,010	421,750	523,870	1,049,000	1,050,200	625,630	370,880	423,240
MEAN	6,254	12,200	12,530	9,234	10,520	13,600	17,460	33,840	35,010	20,180	11,960	14,110
MAX	9,690	18,600	17,900	17,300	17,200	22,500	22,100	52,400	46,800	34,200	20,700	21,900
MIN	5,390	7,820	7,370	5,540	6,640	7,250	7,370	15,800	23,700	6,630	6,400	5,180
AC-FT	384,600	726,200	770,500	567,800	605,000	836,500	1,039,000	2,081,000	2,083,000	1,241,000	735,600	839,500
CAL YR 2003	TOTAL	6,196,040	MEAN	16,980	MAX	73,400	MIN	5,390	AC-FT	1,229,0000		
WTR YR 2004	TOTAL	6,004,260	MEAN	16,410	MAX	52,400	MIN	5,180	AC-FT	1,191,0000		

12391950 CLARK FORK BELOW CABINET GORGE DAM, NEAR CABINET, ID—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--May 1984 to October 2002, July to September 2003, April to September 2004.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: May to July 1998, April to September 2000, November 2001 to October 2002, July to September 2003, April to September 2004 (discontinued).

INSTRUMENTATION.--Temperature recording data logger.

REMARKS.--Water-quality data previously published as Clark Fork at Whitehorse Rapids near Cabinet, ID (sta 12392000).

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 25.4 °C Aug. 14, 2004; minimum, 1.4°C Feb. 15, Mar. 22, 2002.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 25.4 °C Aug. 14; minimum, 4.7°C Apr. 30.

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

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, water, unfltrd uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Turbidity, wat unfl lab, Hach 2100AN NTU (99872)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	Fecal coliform, M-FC 0.7u col/100 mL (31625)	Ammonia water, fltrd, mg/L as N (00608)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Nitrite + nitrate water fltrd, mg/L as N (00631)
APR													
26...	1100	28,000	143	8.0	17.0	10.2	<2.0	10.3	98	S1	<.010	.12	.024
MAY													
13...	1045	36,400	133	8.0	10.5	12.2	<2.0	9.3	93	S2	E.006	.14	.025
JUN													
15...	1025	36,400	133	8.0	14.0	9.5	<2.0	13.1	123	<1	<.010	E.08	.025
JUL													
21...	1145	16,900	170	8.1	24.0	19.6	<2.0	8.3	99	S1	E.005	.31	E.011
AUG													
23...	1205	5,770	183	8.2	14.5	21.3	<2.0	7.9	98	<1	E.009	.10	.027
SEP													
20...	1150	29,000	174	8.2	14.0	16.0	<2.0	8.2	90	<1	E.005	.13	.020

Date	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
APR				
26...	<.006	.007	1	76
MAY				
13...	<.006	.012	3	295
JUN				
15...	<.006	.012	4	393
JUL				
21...	<.006	.039	9	411
AUG				
23...	.006	.014	1	16
SEP				
20...	<.006	.010	18	1,410

Date	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Potassium, water, fltrd, mg/L (00935)	Bicarbonate, wat unfl fixed end pt, mg/L (00440)	Carbonate, wat unfl fixed end pt, mg/L (00445)	ANC, wat unfl fixed end pt, mg/L as CaCO3 (00410)	Sulfate water, fltrd, mg/L (00945)	Chloride, water, fltrd, mg/L (00940)	Fluoride water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)
SEP													
20...	88	24.5	6.64	2.48	6	.64	105	.0	86	4.5	.90	<.2	7.0

E--Estimated.

S--Most probable value.

12391950 CLARK FORK BELOW CABINET GORGE DAM, NEAR CABINET, ID—Continued

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	APRIL			MAY			JUNE			JULY		
1	---	---	---	10.9	5.5	9.0	12.1	11.7	11.9	17.5	16.8	17.2
2	---	---	---	11.1	5.6	9.0	12.1	11.2	12.0	17.8	16.7	17.3
3	---	---	---	11.2	6.3	9.9	12.1	12.0	12.1	17.8	14.9	17.0
4	---	---	---	11.4	6.1	9.9	12.1	10.9	11.9	18.4	15.1	17.0
5	---	---	---	11.2	6.0	10.3	12.3	11.8	12.1	18.1	15.4	17.4
6	---	---	---	11.5	6.3	10.5	12.1	11.7	11.9	18.8	16.0	17.8
7	---	---	---	12.0	9.0	11.1	12.3	11.7	12.0	18.6	12.5	17.6
8	---	---	---	12.0	7.2	10.9	12.6	12.1	12.5	18.6	12.6	17.5
9	---	---	---	12.1	9.5	11.5	13.1	12.6	12.9	18.4	15.4	17.5
10	---	---	---	12.1	10.3	11.9	13.2	12.8	13.1	18.8	16.2	17.6
11	---	---	---	12.3	11.4	12.0	13.4	13.1	13.2	19.1	12.5	16.7
12	---	---	---	12.3	12.0	12.1	13.2	12.9	13.1	18.8	15.6	17.8
13	---	---	---	12.3	12.0	12.1	13.4	11.4	13.0	18.4	12.9	17.2
14	---	---	---	12.3	11.8	12.1	13.2	12.1	13.0	18.8	13.2	17.5
15	---	---	---	12.3	12.0	12.2	13.4	10.9	12.9	19.1	12.8	17.5
16	---	---	---	12.1	11.2	11.8	13.4	11.8	13.1	19.4	12.3	17.6
17	---	---	---	11.8	11.4	11.6	13.5	12.8	13.3	19.4	13.7	17.5
18	---	---	---	11.7	10.8	11.4	13.5	13.1	13.3	19.2	13.5	17.1
19	---	---	---	11.5	9.4	10.9	13.7	13.2	13.5	19.4	14.8	17.7
20	---	---	---	11.5	9.5	11.0	14.0	12.1	13.4	19.2	13.4	17.4
21	---	---	---	11.5	10.6	11.2	14.2	12.8	13.8	19.7	13.2	17.6
22	---	---	---	11.5	7.0	10.5	14.6	13.2	14.1	20.1	13.2	17.5
23	---	---	---	11.8	10.8	11.5	14.9	12.8	14.3	20.2	12.8	17.9
24	---	---	---	12.0	11.7	11.9	14.9	8.9	14.0	20.5	13.8	17.9
25	---	---	---	12.5	11.8	12.2	15.1	10.0	14.2	21.7	13.8	18.1
26	---	---	---	12.3	12.0	12.1	15.3	9.8	14.0	20.7	14.0	17.9
27	10.3	5.8	9.2	12.1	11.8	12.0	15.4	13.4	14.7	21.0	14.8	18.6
28	10.3	5.2	8.9	12.1	11.8	12.0	16.0	13.8	15.4	21.0	15.9	18.9
29	10.1	5.0	8.9	11.8	11.7	11.8	16.7	15.9	16.3	21.0	14.6	19.2
30	10.3	4.7	8.5	11.8	11.7	11.7	17.1	15.7	16.6	21.2	12.9	18.3
31	---	---	---	11.8	11.7	11.8	---	---	---	21.2	15.9	18.3
MONTH	---	---	---	12.5	5.5	11.3	17.1	8.9	13.4	21.7	12.3	17.7
	AUGUST			SEPTEMBER								
1	22.0	16.6	19.3	20.2	14.8	18.2						
2	21.7	15.1	18.8	19.4	14.2	18.1						
3	21.4	14.5	19.4	18.8	14.9	17.4						
4	21.2	14.6	19.0	18.4	13.8	15.9						
5	20.5	15.7	18.2	17.6	13.2	15.1						
6	20.5	15.9	18.6	18.3	14.0	16.2						
7	19.6	16.0	18.3	18.1	14.0	16.4						
8	21.4	12.0	17.5	18.0	14.0	16.6						
9	22.7	14.3	18.7	17.8	13.7	16.0						
10	21.0	15.9	18.9	18.0	14.0	15.7						
11	21.4	14.6	18.7	15.4	13.2	14.1						
12	21.7	15.6	19.2	17.1	13.4	14.4						
13	23.7	13.1	18.4	17.1	13.8	16.1						
14	25.4	13.2	19.8	17.0	13.5	15.6						
15	22.4	14.0	18.8	16.7	14.2	15.5						
16	21.9	15.4	18.9	16.4	13.8	15.3						
17	21.7	17.8	19.5	15.9	14.0	15.3						
18	21.7	15.6	19.1	15.9	13.7	14.9						
19	21.4	16.5	18.4	15.9	13.7	15.2						
20	21.5	17.1	19.4	15.9	13.8	15.4						
21	22.4	14.0	18.0	15.6	13.2	14.4						
22	21.0	15.1	17.4	15.7	14.0	15.3						
23	21.0	17.1	18.3	15.6	14.3	15.2						
24	20.7	13.2	17.5	15.6	14.5	15.1						
25	19.9	13.8	17.1	15.7	14.3	14.9						
26	19.7	14.3	17.3	15.6	14.5	14.9						
27	20.1	14.0	17.4	15.6	14.2	15.0						
28	20.1	13.5	17.6	14.9	14.1	14.6						
29	20.1	15.3	18.3	14.6	13.7	14.3						
30	20.4	15.3	19.2	14.3	13.7	14.1						
31	20.5	14.9	18.5	---	---	---						
MONTH	25.4	12.0	18.5	20.2	13.2	15.5						

12392000 CLARK FORK AT WHITEHORSE RAPIDS, NEAR CABINET, ID

LOCATION.--Lat 48°05'30", long 116°07'00" (NAD 27), in NW¼ sec.30, T.55 N., R.3 E., Cabinet Quad., Bonner County, Hydrologic Unit 17010213, on right bank 3.0 mi downstream from Cabinet Gorge Dam, 4.5 mi southeast of Clark Fork, and at mile 146.9.

DRAINAGE AREA.--22,073 mi².

PERIOD OF RECORD.--September 1928 to current year. Prior to October 1952, published as "near Heron, Mont."

REVISED RECORDS.--WSP 1182: 1936. WSP 1736: 1931, 1936(m), 1937. WRD-ID-1973-1: 1972(M). WDR-ID-1973-1: 1972(M).

REMARKS.--Flow regulated by Hungry Horse Reservoir, Flathead Lake, and Noxon Rapids Reservoir. Extreme diurnal fluctuation caused by powerplant at Cabinet Gorge Dam. Diversions above station for irrigation of about 354,000 acres. Discharge measurements made at Whitehorse Rapids indicate about 600 ft³/s ground-water inflow between the measuring cableway for Clark Fork River below Cabinet Gorge Dam (12391950) and Whitehorse Rapids. Records given herein represent flow at Whitehorse Rapids, computed by adding this 600 ft³/s to observed flows at 12391950, and are considered comparable to records at former site near Heron, except for minor surface inflow from additional drainage area.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 153,000 ft³/s, May 29 to June 1, 1948; maximum gage height, 50.97 ft, May 31, 1948, site and elevation then in use; minimum observed, 270 ft³/s, Aug. 12, 1952 (discharge measurement), at sites in use since October 1952, during filling of Cabinet Gorge Reservoir; minimum daily since reservoir filled, 762 ft³/s, Sept. 2, 1962.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in June 1894 reached a discharge of 195,000 ft³/s from floodmark, elevation of 2,137.1 ft, at site about 4 mi upstream and 0.1 mi below "near Heron" site.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 53,000 ft³/s, May 30; minimum daily, 5,780 ft³/s, Sept. 11.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8,130	9,630	16,900	9,060	9,240	13,800	19,000	16,400	45,300	34,800	11,700	17,000
2	6,070	9,620	12,100	10,400	11,000	14,600	16,700	17,400	47,400	32,400	13,200	19,100
3	6,830	12,000	11,900	9,650	10,800	12,600	7,970	26,300	42,600	24,500	13,500	18,300
4	6,070	11,300	14,900	17,800	9,860	13,200	11,400	25,100	39,700	27,100	14,700	11,400
5	6,050	15,700	14,000	17,900	11,400	13,900	17,700	29,000	35,700	29,400	11,300	10,100
6	6,100	13,600	9,300	13,300	8,450	8,390	17,200	29,000	37,100	29,300	8,720	12,600
7	6,260	12,500	10,200	7,300	7,240	10,100	17,000	30,100	43,000	27,300	7,990	14,300
8	6,540	8,780	15,100	7,200	10,300	14,200	15,900	28,400	42,100	27,500	11,400	17,800
9	7,570	12,300	14,500	7,350	8,630	15,500	20,700	32,200	39,700	26,600	10,600	14,000
10	6,190	15,000	13,500	6,140	10,800	14,100	20,200	34,100	35,400	25,400	13,900	10,000
11	6,090	14,000	12,000	7,740	11,400	13,000	19,000	34,100	37,100	15,000	12,700	5,780
12	6,050	13,900	14,600	8,250	10,500	13,900	22,700	36,700	35,600	25,000	10,400	8,020
13	6,470	16,400	9,450	11,200	13,600	9,670	20,500	36,900	32,600	26,000	11,500	12,200
14	7,080	16,000	12,900	8,210	12,000	11,400	22,400	36,900	34,700	27,200	7,470	11,700
15	6,640	8,420	15,300	11,900	9,470	14,700	22,100	35,500	34,900	21,100	12,200	12,100
16	7,090	8,710	15,100	6,450	13,400	14,100	22,600	32,400	34,300	19,500	12,400	14,000
17	7,490	16,900	14,000	9,850	11,300	13,600	14,200	33,800	36,100	15,600	14,800	14,200
18	6,750	12,100	12,100	9,210	11,100	12,800	16,400	32,000	36,900	13,000	10,700	11,700
19	6,690	11,900	12,300	8,130	12,800	19,200	21,500	29,400	36,800	21,500	11,000	13,900
20	7,000	14,400	10,400	9,760	11,900	10,700	20,800	31,200	31,100	16,400	13,500	22,500
21	7,280	15,200	9,960	11,600	9,480	12,200	19,000	31,200	34,700	17,400	7,000	8,710
22	6,990	12,400	13,000	9,060	10,900	14,200	18,200	28,300	32,100	15,200	7,030	22,500
23	7,340	14,900	18,500	7,640	12,300	15,700	14,600	41,700	28,600	15,200	10,200	21,600
24	10,300	16,000	13,600	10,700	14,900	19,600	12,400	46,800	27,600	14,600	12,700	19,400
25	6,300	19,200	7,970	8,340	17,800	19,300	11,700	43,300	29,300	13,100	13,100	11,400
26	5,990	14,100	11,500	9,760	9,690	23,100	19,300	43,600	24,300	16,100	14,800	13,300
27	6,010	8,540	13,600	11,400	9,660	7,850	19,000	43,300	29,600	15,100	15,700	18,500
28	6,190	9,300	12,000	10,400	10,200	11,900	19,100	43,000	33,800	14,400	15,600	19,400
29	6,900	9,610	16,900	11,300	12,300	18,600	22,000	40,900	36,700	18,600	19,800	17,500
30	7,800	11,700	17,700	9,080	---	16,600	20,600	53,000	33,400	12,700	21,300	18,200
31	8,230	---	11,800	8,760	---	17,800	---	45,600	---	7,230	18,600	---
TOTAL	212,490	384,110	407,080	304,840	322,420	440,310	541,870	1,067,600	1,068,200	644,230	389,510	441,210
MEAN	6,855	12,800	13,130	9,834	11,120	14,200	18,060	34,440	35,610	20,780	12,560	14,710
MAX	10,300	19,200	18,500	17,900	17,800	23,100	22,700	53,000	47,400	34,800	21,300	22,500
MIN	5,990	8,420	7,970	6,140	7,240	7,850	7,970	16,400	24,300	7,230	7,000	5,780
AC-FT	421,500	761,900	807,400	604,700	639,500	873,400	1,075,000	2,118,000	2,119,000	1,278,000	772,600	875,100

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 2004, BY WATER YEAR (WY)

	11,820	13,190	14,370	14,270	14,770	15,770	24,730	48,810	56,820	26,290	11,680	10,580
MEAN	11,820	13,190	14,370	14,270	14,770	15,770	24,730	48,810	56,820	26,290	11,680	10,580
MAX	25,670	21,970	34,850	28,020	38,150	36,480	59,140	93,830	115,800	57,650	19,680	18,300
(WY)	(1960)	(1996)	(1996)	(1934)	(1996)	(1996)	(1934)	(1997)	(1948)	(1950)	(1997)	(1985)
MIN	5,466	5,008	4,732	3,527	4,217	5,122	6,165	16,450	15,480	9,214	6,320	5,448
(WY)	(1937)	(1937)	(1937)	(1937)	(1936)	(1937)	(1977)	(1941)	(1977)	(1940)	(1994)	(1994)

12392000 CLARK FORK AT WHITEHORSE RAPIDS, NEAR CABINET, ID—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1929 - 2004	
ANNUAL TOTAL	6,415,220		6,223,870			
ANNUAL MEAN	17,580		17,010		21,930	
HIGHEST ANNUAL MEAN					34,250	1996
LOWEST ANNUAL MEAN					10,180	1941
HIGHEST DAILY MEAN	74,000	Jun 2	53,000	May 30	153,000	May 30, 1948
LOWEST DAILY MEAN	5,990	Oct 26	5,780	Sep 11	762	Sep 2, 1962
ANNUAL SEVEN-DAY MINIMUM	6,150	Sep 8	6,270	Oct 2	2,710	Feb 10, 1936
ANNUAL RUNOFF (AC-FT)	12,720,000		12,350,000		15,890,000	
10 PERCENT EXCEEDS	36,600		33,900		47,800	
50 PERCENT EXCEEDS	12,600		13,900		15,600	
90 PERCENT EXCEEDS	6,310		7,480		7,180	