

12355000 FLATHEAD RIVER AT FLATHEAD, BRITISH COLUMBIA

LOCATION.--Lat 49°00'05", long 114°28'34" (NAD 27), Hydrologic Unit 17010206, on left bank 200 ft north of international boundary at Flathead, British Columbia, 1.6 mi upstream from Sage Creek, 6.5 mi northwest of Trail Creek, MT, and at river mile 216.6.

DRAINAGE AREA.--427 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1929 to June 1995 (no winter records prior to 1952). Prior to 1934, published as Flathead River near Trail Creek, MT. October 1970 to September 1972, published as North Fork Flathead River at Flathead British Columbia. October 1999 to current year gage re-established and operated by USGS at site on left bank in British Columbia.

GAGE.--Water-stage recorder. Elevation of gage is 3,964.95 ft (NGVD 29). Prior to Sept. 1, 1949, nonrecording gage and Sept. 1, 1949 to Oct. 4, 1964, water-stage recorder at site 1,200 ft upstream at elevation 11.01 ft higher. Oct. 5, 1964, to Aug. 1, 1973, water-stage recorder at site on left bank 155 ft upstream at elevation 1.79 ft higher. Aug. 2, 1973 to June 28, 1995 operated by Water Survey Canada at site on right bank at elevation 3.21 ft. higher. October 1999 to current year at site 200 ft upstream from International Border in British Columbia on left bank.

REMARKS.--Water-discharge records good except those for estimated daily discharges, which are poor. 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	482	285	289	e340	781	349	363	1,340	2,370	1,400	379	231
2	460	321	286	e320	745	343	358	1,240	2,810	1,330	371	227
3	442	389	278	e330	707	340	346	1,250	3,290	1,300	359	223
4	428	348	282	e310	685	340	338	1,330	3,110	1,200	349	218
5	414	333	282	e270	685	344	334	1,510	2,860	1,110	338	214
6	398	327	279	e280	609	348	335	1,940	3,120	1,050	327	213
7	389	343	272	e320	546	358	380	2,360	3,490	1,010	318	210
8	379	349	276	e310	514	372	482	3,070	3,400	957	309	206
9	369	342	269	e300	511	385	525	3,010	3,440	914	307	206
10	366	337	279	e290	517	407	523	2,700	3,700	897	312	268
11	356	328	859	e300	501	423	529	2,450	4,360	858	335	344
12	343	304	1,180	e310	479	503	517	2,450	4,310	804	335	326
13	334	290	839	e300	498	513	498	2,670	3,650	761	327	335
14	324	291	756	e280	473	499	483	3,280	3,190	724	308	352
15	327	297	722	e250	417	478	471	3,920	2,890	690	294	417
16	346	305	643	e270	378	473	476	4,480	2,480	682	285	523
17	364	302	591	e330	408	465	568	4,850	2,570	729	287	537
18	361	297	543	e450	396	434	627	4,370	3,320	677	342	489
19	347	297	525	e700	400	402	602	3,870	2,880	622	322	447
20	337	283	514	e1,300	404	406	621	3,480	2,480	586	293	413
21	345	271	466	e1,600	376	392	663	2,910	2,250	558	277	385
22	355	272	e410	e1,500	380	374	786	2,500	2,110	543	268	358
23	364	272	e370	e1,400	374	366	1,070	2,300	2,030	526	273	336
24	347	276	e390	1,400	372	354	1,340	2,130	1,800	502	291	320
25	332	366	e410	1,380	377	343	1,800	1,980	1,670	485	286	306
26	314	374	e420	1,240	361	347	2,260	1,940	1,570	470	270	292
27	297	349	e400	1,110	353	373	2,320	2,000	1,480	452	258	281
28	294	322	e380	1,020	345	479	1,940	2,130	1,550	436	249	275
29	295	339	e350	937	---	442	1,650	2,260	1,660	418	243	283
30	302	347	e380	858	---	397	1,450	2,250	1,510	402	239	990
31	301	---	e370	819	---	367	---	2,200	---	389	236	---
TOTAL	11,112	9,556	14,310	20,824	13,592	12,416	24,655	80,170	81,350	23,482	9,387	10,225
MEAN	358	319	462	672	485	401	822	2,586	2,712	757	303	341
MAX	482	389	1,180	1,600	781	513	2,320	4,850	4,360	1,400	379	990
MIN	294	271	269	250	345	340	334	1,240	1,480	389	236	206
AC-FT	22,040	18,950	28,380	41,300	26,960	24,630	48,900	159,000	161,400	46,580	18,620	20,280
CFSM	0.84	0.75	1.08	1.57	1.14	0.94	1.92	6.06	6.35	1.77	0.71	0.80
IN.	0.97	0.83	1.25	1.81	1.18	1.08	2.15	6.98	7.09	2.05	0.82	0.89

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 2005, BY WATER YEAR (WY)*

MEAN	325	343	241	195	177	203	918	3,465	3,061	974	382	295
MAX	1,285	1,261	881	672	485	685	2,957	5,584	6,691	2,418	937	785
(WY)	(1948)	(2000)	(1976)	(2005)	(2005)	(1986)	(1934)	(1948)	(1974)	(1954)	(1976)	(1951)
MIN	127	124	97.0	87.3	83.3	97.7	189	1,540	824	279	188	132
(WY)	(2002)	(1937)	(2001)	(2001)	(2001)	(2001)	(1970)	(1977)	(1977)	(1977)	(1931)	(2001)

12355000 FLATHEAD RIVER AT FLATHEAD, BRITISH COLUMBIA—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1929 - 2005*	
ANNUAL TOTAL	268,488		311,079			
ANNUAL MEAN	734		852		897	
HIGHEST ANNUAL MEAN					1,376	1974
LOWEST ANNUAL MEAN					377	2001
HIGHEST DAILY MEAN	3,760	May 4	4,850	May 17	c16,800	Jun 7, 1995
LOWEST DAILY MEAN	90	Jan 6	206	Sep 8	62	Jan 2, 1977
ANNUAL SEVEN-DAY MINIMUM	120	Jan 2	213	Sep 3	71	Dec 31, 1976
MAXIMUM PEAK FLOW			a5,020	May 18	d16,300	Jun 8, 1964
MAXIMUM PEAK STAGE			b9.36	Jan 20	f10.00	May 31, 2002
INSTANTANEOUS LOW FLOW			200	Sep 8	g59	Feb 23, 2003
ANNUAL RUNOFF (AC-FT)	532,500		617,000		649,800	
ANNUAL RUNOFF (CFSM)	1.72		2.00		2.10	
ANNUAL RUNOFF (INCHES)	23.39		27.10		28.54	
10 PERCENT EXCEEDS	1,960		2,340		2,670	
50 PERCENT EXCEEDS	390		402		299	
90 PERCENT EXCEEDS	134		282		135	

*--During period of operation (no winter records prior to 1952)

a--Gage height, 8.44 ft.

b--Result of ice jam.

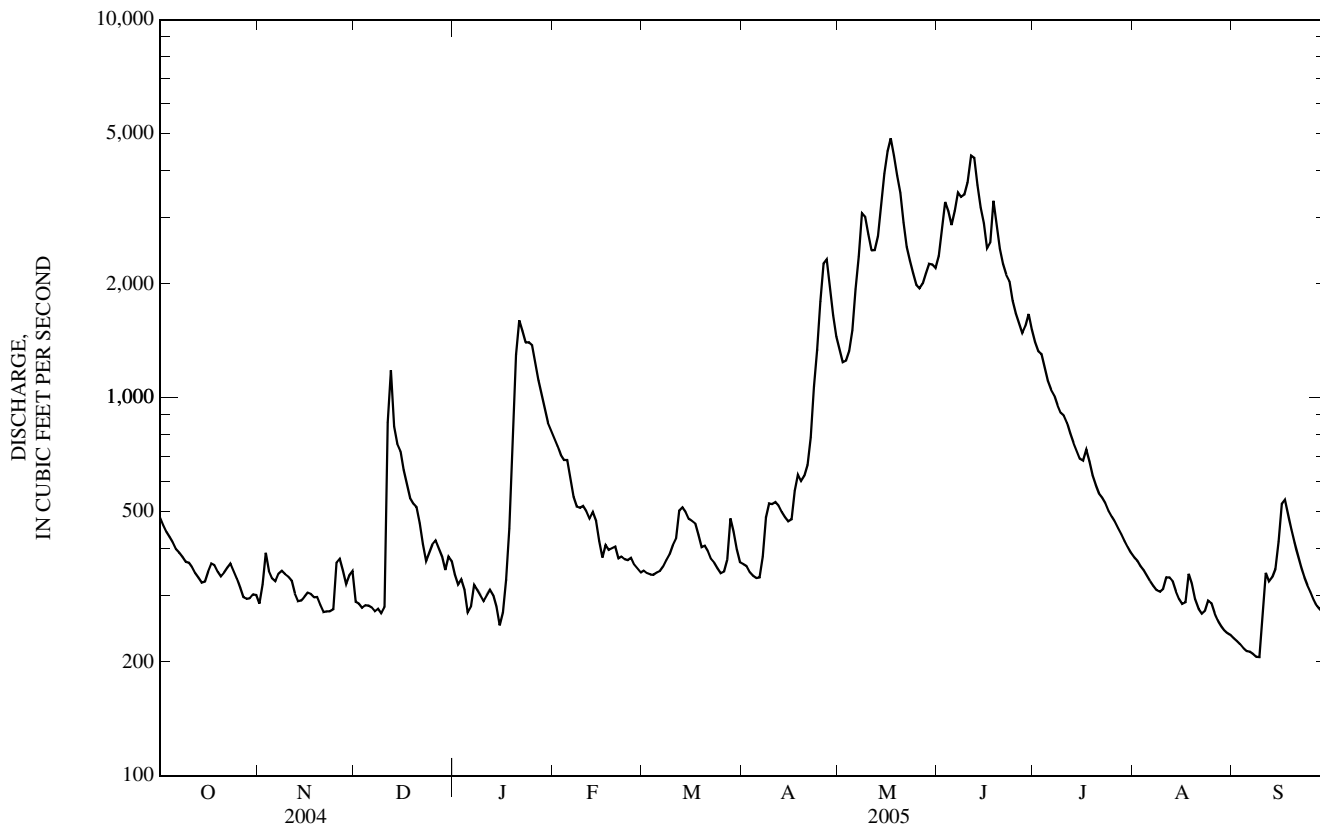
c--Instantaneous peak flow not determined.

d--Gage height, 8.00 ft, site and datum then in use. Peak flow was known to be higher in 1995.

e--Estimated.

f--At present site and datum. Flood of June 7, 1995 reached a stage of 9.66 ft (site and datum then in use), which is 12.86 ft at present site and datum.

g--Gage height, 3.95 ft.



12355000 FLATHEAD RIVER AT FLATHEAD, BRITISH COLUMBIA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1949-50, 1965, 1970, 1975-93 and August 1999 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: November 1974 to September 1981.

WATER TEMPERATURE: November 1974 to September 1991.

SUSPENDED-SEDIMENT DISCHARGE: April 1975 to October 1978, August 1985 to June 1991.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 309 microsiemens per centimeter ($\mu\text{S}/\text{cm}$) at 25.0°C, Jan. 12, 28, 1975, Jan. 20, 1980; minimum daily, 130 $\mu\text{S}/\text{cm}$ at 25.0°C, May 20, 1976.

WATER TEMPERATURE: Maximum 19.5°C, Aug 2, 1977; minimum 0.0°C on many days during winters.

SEDIMENT CONCENTRATION: Maximum daily mean, 1,310 mg/L, June 20, 1975; minimum daily mean, 1 mg/L on many days most years.

SEDIMENT LOAD: Maximum daily, 36,100 tons, June 20, 1975; minimum daily, 0.24 ton, Feb. 1, 23, 1988.

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

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity white light, det ang 90+/-30 correctd NTRU (63676)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Total nitrogen, wat unfltrd by analysis, mg/L (62855)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)
APR 28...	0900	2,000	18	7.8	204	1.5	2.0	<.010	.052	.004	.15	.009	.060
JUN 21...	1045	2,260	4.9	8.3	211	19.0	8.0	<.010	E.011	<.002	E.05	<.006	.018
JUL 27...	0845	464	<2.0	8.3	272	16.5	10.5	<.010	<.016	<.002	E.03	<.006	E.003
SEP 06...	0800	215	<2.0	8.2	279	.5	7.5	<.010	<.016	<.002	<.06	<.006	<.004

Date	Organic carbon, water, unfltrd mg/L (00680)	Arsenic water unfltrd ug/L (01002)	Cadmium water, unfltrd ug/L (01027)	Chromium, water, unfltrd recover-able, ug/L (01034)	Copper, water, unfltrd recover-able, ug/L (01042)	Lead, water, unfltrd recover-able, ug/L (01051)	Nickel, water, unfltrd recover-able, ug/L (01067)	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)
APR 28...	--	--	--	--	--	--	--	--	68	68	367
JUN 21...	2.1	<2	.06	<.8	4.8	3.16	.72	4	73	17	104
JUL 27...	--	--	--	--	--	--	--	--	48	5	6.3
SEP 06...	1.6	.31	<.04	.19	E.4	<.06	.78	<2	54	17	9.9

E--Estimated.

12355500 NORTH FORK FLATHEAD RIVER NEAR COLUMBIA FALLS, MT

LOCATION.--Lat 48°29'44", long 114°07'36" (NAD 27), in NE¹/₄SW¹/₄NW¹/₄ sec.35, T.32 N., R.20 W., Flathead County, Hydrologic Unit 17010206, on right bank 1.5 mi downstream from Canyon Creek, 3.8 mi upstream from Middle Fork, 8.8 mi northeast of Columbia Falls, and at river mile 162.1.

DRAINAGE AREA.--1,548 mi².

PERIOD OF RECORD.--September 1910 to September 1917 (no winter records in water years 1913, 1916, 1917), April 1929 to February 1935 (incomplete), June 1935 to current year. Monthly discharge only for some periods, published in WSP 1316. Published as Flathead River near Columbia Falls 1915-17, 1929-70.

REVISED RECORDS.--WSP 1216: Drainage area. WSP 1246: 1911, 1912(M), 1915-17(M), 1929 (M), 1938-39(M), 1946(M).

GAGE.--Water-stage recorder. Elevation of gage is 3,145.59 ft (NGVD 29). September 1910 to September 1917 and April to August 1929, nonrecording gages, and May 1, 1930, to Sept. 30, 1962, water-stage recorder, all at site 2.7 mi downstream at different elevations.

REMARKS.--Records good except those for estimated daily discharges, which are poor. A few small diversions from tributaries for irrigation of hay meadows upstream from station. Bureau of Reclamation 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	1,910	1,340	1,380	1,160	2,740	1,240	1,910	4,380	7,670	5,110	1,490	939
2	1,800	1,440	1,330	1,170	2,580	1,230	1,920	4,060	8,640	4,870	1,460	919
3	1,710	2,000	1,290	e1,200	2,460	1,220	1,890	3,900	10,200	4,680	1,420	901
4	1,640	1,870	1,270	e1,150	2,360	1,220	1,870	3,910	11,500	4,330	1,380	877
5	1,580	1,720	1,250	e1,070	2,360	1,230	1,870	4,120	11,500	3,990	1,350	859
6	1,520	1,640	1,230	e1,050	2,250	1,250	1,840	4,830	11,600	3,780	1,310	848
7	1,510	1,630	1,210	e1,120	2,010	1,290	2,030	6,130	12,400	3,680	1,270	839
8	1,470	1,640	1,210	e1,100	1,930	1,340	2,500	7,720	13,500	3,580	1,240	823
9	1,420	1,600	1,200	e1,080	1,910	1,390	2,720	8,350	12,200	3,500	1,210	815
10	1,410	1,560	1,210	e1,070	1,830	1,460	2,650	7,930	12,000	3,510	1,220	1,030
11	1,370	1,520	2,120	e1,120	1,790	1,510	2,590	7,440	12,200	3,320	1,300	1,370
12	1,330	1,470	3,700	e1,100	1,730	1,640	2,520	7,080	12,300	3,100	1,280	1,410
13	1,290	1,420	3,210	e1,000	1,780	1,700	2,440	7,240	11,600	2,920	1,260	1,420
14	1,260	1,400	3,130	e900	1,700	1,670	2,500	8,130	10,400	2,790	1,200	1,390
15	1,240	1,380	2,920	e800	1,540	1,640	2,460	9,520	9,540	2,660	1,160	1,430
16	1,290	1,370	2,650	e1,000	1,450	1,630	2,390	10,800	8,580	2,590	1,120	1,530
17	1,510	1,370	2,450	e1,200	1,420	1,660	2,580	11,800	8,440	2,670	1,110	1,640
18	1,510	1,350	2,290	e1,500	1,420	1,600	2,780	11,800	10,700	2,550	1,270	1,620
19	1,520	1,340	2,180	e2,200	1,440	1,490	2,750	10,600	10,300	2,380	1,270	1,550
20	1,520	1,320	2,140	e3,200	1,470	1,480	2,720	10,200	9,340	2,260	1,190	1,480
21	1,550	1,220	2,020	e4,700	1,390	1,480	2,750	9,130	8,590	2,160	1,130	1,410
22	1,680	1,230	1,860	e5,000	1,410	1,410	2,890	8,090	8,180	2,090	1,090	1,350
23	1,750	1,180	1,580	e4,700	1,380	1,380	3,300	7,350	8,090	2,030	1,090	1,300
24	1,700	1,230	1,630	e4,600	1,330	1,310	3,980	6,700	7,580	1,940	1,100	1,240
25	1,600	1,620	1,680	4,490	1,300	1,320	5,040	6,160	6,760	1,880	1,150	1,200
26	1,530	1,840	1,730	4,150	1,280	1,300	6,180	5,860	6,100	1,830	1,110	1,150
27	1,460	1,670	1,570	3,840	1,260	1,520	6,870	5,860	5,630	1,750	1,060	1,110
28	1,410	1,500	1,360	3,560	1,240	2,470	6,360	6,240	5,570	1,680	1,030	1,080
29	1,390	1,410	1,320	3,310	---	2,610	5,520	6,820	5,830	1,620	995	1,060
30	1,390	1,420	1,380	3,080	---	2,220	4,860	7,140	5,470	1,560	971	1,330
31	1,390	---	1,360	2,890	---	2,000	---	7,090	---	1,520	957	---
TOTAL	46,660	44,700	56,860	69,510	48,760	47,910	94,680	226,380	282,410	88,330	37,193	35,920
MEAN	1,505	1,490	1,834	2,242	1,741	1,545	3,156	7,303	9,414	2,849	1,200	1,197
MAX	1,910	2,000	3,700	5,000	2,740	2,610	6,870	11,800	13,500	5,110	1,490	1,640
MIN	1,240	1,180	1,200	800	1,240	1,220	1,840	3,900	5,470	1,520	957	815
AC-FT	92,550	88,660	112,800	137,900	96,720	95,030	187,800	449,000	560,200	175,200	73,770	71,250
CFSM	0.97	0.96	1.18	1.45	1.12	1.00	2.04	4.72	6.08	1.84	0.78	0.77
IN.	1.12	1.07	1.37	1.67	1.17	1.15	2.28	5.44	6.79	2.12	0.89	0.86

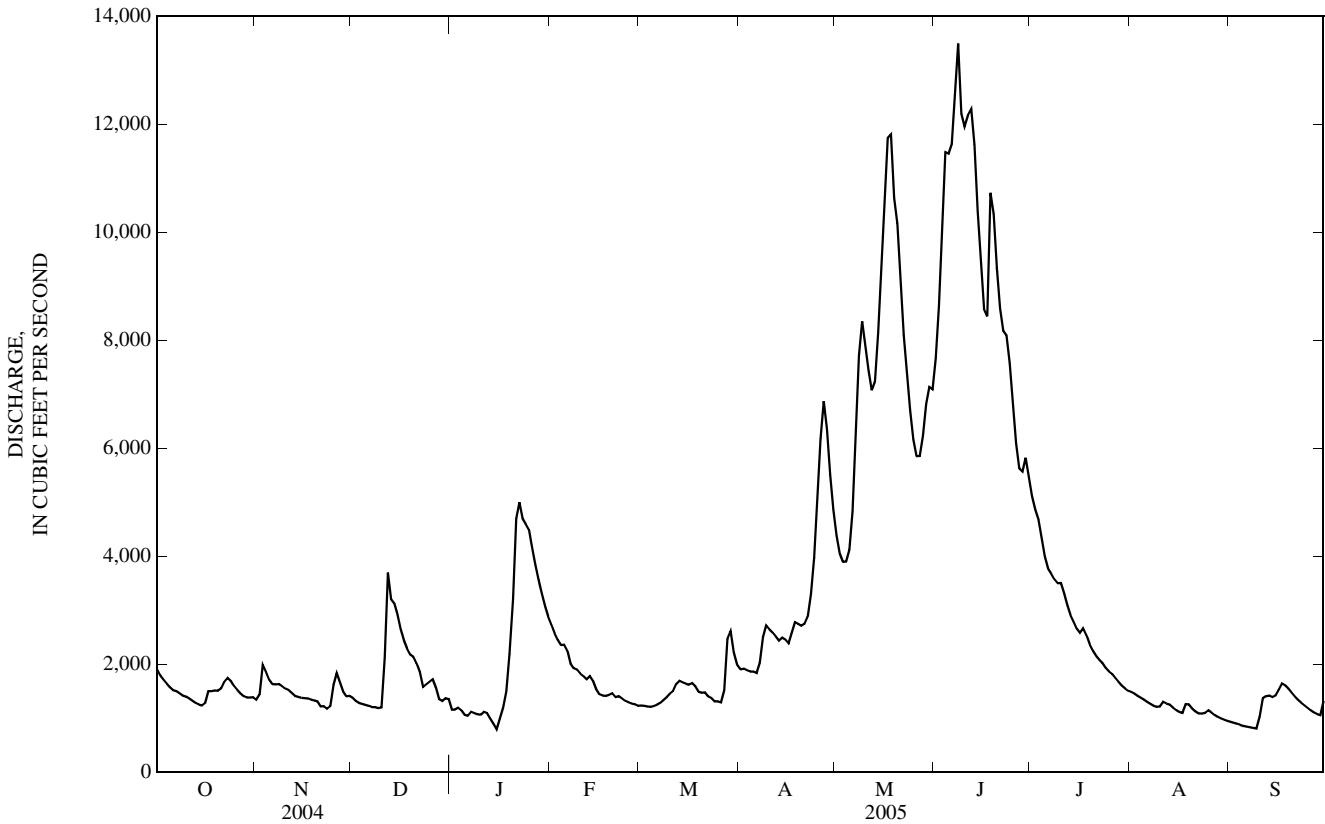
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2005, BY WATER YEAR (WY)

MEAN	1,175	1,193	948	781	751	896	3,305	9,798	10,000	4,050	1,638	1,179
MAX	3,650	3,733	3,388	2,242	2,017	2,597	6,877	15,160	20,780	9,262	3,232	2,653
(WY)	(1952)	(1990)	(1996)	(2005)	(1996)	(1986)	(1943)	(1954)	(1974)	(1954)	(1976)	(1959)
MIN	517	486	433	398	342	406	833	4,986	3,353	1,436	747	552
(WY)	(2002)	(1988)	(2001)	(1988)	(2001)	(1944)	(1975)	(1944)	(1941)	(1977)	(1941)	(2001)

12355500 NORTH FORK FLATHEAD RIVER NEAR COLUMBIA FALLS, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1940 - 2005	
ANNUAL TOTAL	1,002,149		1,079,313			
ANNUAL MEAN	2,738		2,957		2,983	
HIGHEST ANNUAL MEAN					4,721	
LOWEST ANNUAL MEAN					1,383	
HIGHEST DAILY MEAN	10,500	May 5	13,500	Jun 8	58,000	Jun 9, 1964
LOWEST DAILY MEAN	370	Jan 6	800	Jan 15	200	Nov 24, 1993
ANNUAL SEVEN-DAY MINIMUM	447	Jan 2	852	Sep 3	289	Nov 22, 1993
MAXIMUM PEAK FLOW			14,200	Jun 8	a69,100	Jun 9, 1964
MAXIMUM PEAK STAGE			8.00	Jun 8	b18.60	Jun 9, 1964
INSTANTANEOUS LOW FLOW					c187	Feb 8, 2001
ANNUAL RUNOFF (AC-FT)	1,988,000		2,141,000		2,161,000	
ANNUAL RUNOFF (CFSM)	1.77		1.91		1.93	
ANNUAL RUNOFF (INCHES)	24.08		25.94		26.18	
10 PERCENT EXCEEDS	6,350		7,500		8,450	
50 PERCENT EXCEEDS	1,720		1,640		1,220	
90 PERCENT EXCEEDS	537		1,130		560	

a--From rating curve extended above 30,000 ft³/s, on basis of slope-area measurement of peak flow.
 b--From floodmark.
 c--Gage height, 0.87 ft, result of freezeup.
 e--Estimated.



12358500 MIDDLE FORK FLATHEAD RIVER NEAR WEST GLACIER, MT

LOCATION.--Lat 48°29'43", long 114°00'33" (NAD 27), in S¹/₂ SW¹/₄ NE¹/₄ sec.34, T.32 N., R.19 W., Flathead County, Hydrologic Unit 17010207, on left bank 0.8 mi downstream from McDonald Creek, 1.3 mi west of West Glacier, and at river mile 3.8.

DRAINAGE AREA.--1,128 mi².

PERIOD OF RECORD.--October 1939 to current year. Prior to October 1947, published as "near Belton."

REVISED RECORDS.--WSP 1216: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 3,128.72 ft (NGVD 29). Prior to Nov. 22, 1950, nonrecording gage at present site and elevation.

REMARKS.--Records excellent except those for estimated daily discharges, which are poor. Bureau of Reclamation satellite at station. Several unpublished observations of water temperature and specific conductance were made during the year.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,470	1,470	1,170	1,050	2,290	897	1,440	3,500	6,570	4,400	1,210	626
2	1,380	1,470	1,140	1,030	2,170	901	1,480	3,250	7,560	4,240	1,190	618
3	1,300	1,920	1,110	1,050	2,040	894	1,440	3,170	9,000	3,910	1,150	609
4	1,230	1,980	1,090	983	1,970	886	1,420	3,250	12,100	3,550	1,100	600
5	1,160	1,900	1,070	886	1,960	887	1,440	3,580	11,100	3,320	1,050	584
6	1,110	1,810	1,040	876	1,850	906	1,430	4,450	11,600	3,240	1,010	574
7	1,100	1,770	1,020	945	1,690	932	1,560	5,800	11,200	3,220	991	562
8	1,080	1,720	1,020	912	1,630	956	2,170	7,190	11,100	3,120	975	549
9	1,040	1,680	996	885	1,600	990	2,690	7,030	9,740	3,010	961	541
10	1,030	1,640	1,020	878	1,550	1,040	2,610	6,650	9,320	2,870	938	630
11	994	1,620	2,000	905	1,480	1,060	2,500	6,390	9,100	2,670	935	768
12	955	1,580	4,400	893	1,430	1,150	2,420	5,900	8,890	2,530	950	774
13	922	1,510	3,620	780	1,400	1,250	2,360	5,850	8,730	2,490	944	761
14	897	1,460	3,090	e700	1,370	1,250	2,450	6,620	7,770	2,400	891	783
15	932	1,430	2,850	e600	1,290	1,230	2,330	7,780	7,230	2,270	839	840
16	1,080	1,400	2,560	e750	1,200	1,210	2,230	8,960	7,000	2,220	807	845
17	2,040	1,350	2,360	e850	1,140	1,220	2,400	11,200	7,330	2,240	795	832
18	2,200	1,300	2,180	e970	1,090	1,180	2,660	10,500	7,990	2,070	895	819
19	2,090	1,280	2,060	e1,500	1,070	1,110	2,700	8,760	7,100	1,980	869	800
20	1,970	1,250	2,030	e3,800	1,090	1,080	2,690	8,030	6,590	1,920	817	768
21	1,950	1,180	1,920	4,070	1,050	1,070	2,630	7,390	6,400	1,830	782	738
22	2,020	1,150	1,810	4,070	1,010	1,030	2,620	6,740	6,710	1,760	764	712
23	2,040	1,110	1,560	3,730	984	982	2,880	6,190	6,750	1,680	752	694
24	1,980	1,090	1,560	3,660	970	938	3,470	5,710	5,970	1,620	749	681
25	1,870	1,330	1,620	3,570	950	918	4,770	5,350	5,240	1,550	753	676
26	1,770	1,490	1,580	3,350	932	897	5,620	5,160	4,820	1,460	717	657
27	1,670	1,410	1,450	3,150	915	1,020	5,580	5,280	4,560	1,380	690	640
28	1,630	1,320	1,300	2,950	900	1,490	5,010	5,690	4,760	1,330	681	623
29	1,580	1,240	1,190	2,750	---	1,670	4,380	6,220	4,890	1,300	679	608
30	1,550	1,200	1,250	2,570	---	1,600	3,900	6,280	4,630	1,270	661	1,510
31	1,550	---	1,160	2,420	---	1,500	---	6,140	---	1,240	647	---
TOTAL	45,590	44,060	54,226	57,533	39,021	34,144	83,280	194,010	231,750	74,090	27,192	21,422
MEAN	1,471	1,469	1,749	1,856	1,394	1,101	2,776	6,258	7,725	2,390	877	714
MAX	2,200	1,980	4,400	4,070	2,290	1,670	5,620	11,200	12,100	4,400	1,210	1,510
MIN	897	1,090	996	600	900	886	1,420	3,170	4,560	1,240	647	541
MED	1,470	1,440	1,560	1,030	1,330	1,040	2,550	6,190	7,280	2,240	869	678
AC-FT	90,430	87,390	107,600	114,100	77,400	67,720	165,200	384,800	459,700	147,000	53,940	42,490
CFSM	1.30	1.30	1.55	1.65	1.24	0.98	2.46	5.55	6.85	2.12	0.78	0.63
IN.	1.50	1.45	1.79	1.90	1.29	1.13	2.75	6.40	7.64	2.44	0.90	0.71

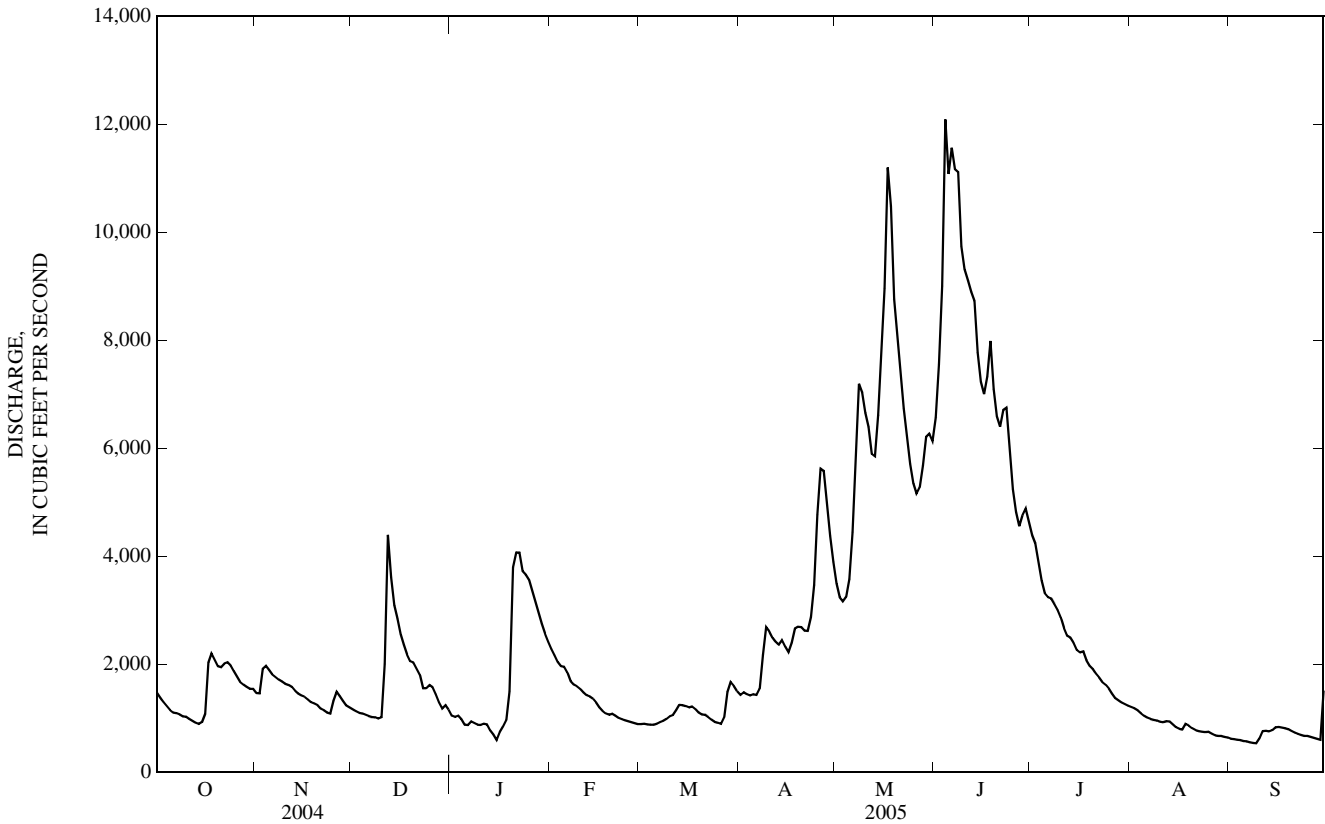
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2005, BY WATER YEAR (WY)

MEAN	1,042	1,159	915	714	715	865	3,224	9,471	9,964	3,911	1,350	953
MAX	3,004	5,598	3,750	2,420	2,686	2,779	7,093	14,670	19,870	8,162	2,364	2,510
(WY)	(1960)	(1990)	(1996)	(1974)	(1971)	(1986)	(1943)	(1957)	(1964)	(1954)	(1976)	(1968)
MIN	367	279	262	282	244	307	664	5,259	3,576	1,249	576	420
(WY)	(1940)	(1953)	(1953)	(2001)	(2001)	(1944)	(1975)	(1941)	(1941)	(1944)	(1941)	(1988)

12358500 MIDDLE FORK FLATHEAD RIVER NEAR WEST GLACIER, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1940 - 2005	
ANNUAL TOTAL	976,658		906,318			
ANNUAL MEAN	2,668		2,483		2,862	
HIGHEST ANNUAL MEAN					4,071	
LOWEST ANNUAL MEAN					1,437	
HIGHEST DAILY MEAN	10,900	May 5	12,100	Jun 4	92,700	Jun 9, 1964
LOWEST DAILY MEAN	228	Jan 28	541	Sep 9	189	Nov 27, 1952
ANNUAL SEVEN-DAY MINIMUM	346	Jan 23	574	Sep 3	205	Nov 26, 1952
MAXIMUM PEAK FLOW			12,800	Jun 4	a140,000	Jun 9, 1964
MAXIMUM PEAK STAGE			6.50	Jun 4	36.46	Jun 9, 1964
INSTANTANEOUS LOW FLOW			540	Sep 8	b173	Nov 27, 1952
ANNUAL RUNOFF (AC-FT)	1,937,000		1,798,000		2,074,000	
ANNUAL RUNOFF (CFSM)	2.37		2.20		2.54	
ANNUAL RUNOFF (INCHES)	32.21		29.89		34.48	
10 PERCENT EXCEEDS	6,280		6,320		8,320	
50 PERCENT EXCEEDS	1,680		1,480		1,100	
90 PERCENT EXCEEDS	420		778		436	

a--About 140,000 ft³/s, from rating extended above 31,000 ft³/s, on basis of a contracted opening measurement at gage height, 19.42 ft, and flood volume-hydrographic comparison.
 b--Stage below intakes.
 c--Estimated.



12359800 SOUTH FORK FLATHEAD RIVER ABOVE TWIN CREEK, NEAR HUNGRY HORSE, MT

LOCATION.--Lat 47°58'45", long 113°33'36" (NAD 27), in NE¹/₄NW¹/₄NE¹/₄ sec.36, T.26 N., R.16 W., Flathead County, Hydrologic Unit 17010209, Flathead National Forest, on left bank 0.1 mi downstream from Tin Creek, 0.4 mi upstream from Twin Creek, 36.3 mi southeast of Hungry Horse, and at river mile 42.2.

DRAINAGE AREA.--1,160 mi².

PERIOD OF RECORD.--October 1964 to September 1982, October 1984 to current year (no winter records).

GAGE.--Water-stage recorder. Elevation of gage is 3,575 ft (NGVD 29), from river-profile map.

REMARKS.--Seasonal records excellent except those for Apr. 1 to May 5, which are fair. No known regulation or diversions upstream from station. Bureau of Reclamation satellite telemeter at station. Several unpublished observations of water temperature and specific conductance were made during the year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 8, 1964, reached a stage of 20.87 ft, from high-water profile; discharge, 50,900 ft³/s, by slope-area measurement of peak flow.

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				1,090	2,790	6,310	2,970	695	368	1,260	645	
2				1,140	2,590	6,870	2,810	684	361	1,400	883	
3				1,120	2,530	8,130	2,610	663	352	1,090	858	
4				1,160	2,630	9,760	2,350	642	344	934	803	
5				1,170	2,900	8,550	2,180	617	336	829	752	
6				1,160	3,850	8,850	2,080	593	330	743	713	
7				1,350	5,560	7,690	2,020	573	324	699	670	
8				1,980	7,110	6,480	1,960	558	317	665	655	
9				2,120	6,670	5,490	1,870	543	314	629	613	
10				2,000	6,170	4,920	1,790	531	360	595	583	
11				1,910	5,650	4,660	1,660	519	390	568	598	
12				1,840	4,970	4,810	1,530	560	385	543	633	
13				1,810	4,930	4,910	1,460	626	373	535	621	
14				1,860	5,570	4,560	1,410	562	360	534	635	
15				1,720	6,610	4,670	1,350	530	346	511	587	
16				1,680	8,000	5,120	1,300	503	334	491	576	
17				1,910	10,200	5,430	1,330	487	342	477	568	
18				2,020	8,930	5,600	1,230	507	345	461	548	
19				1,970	7,430	4,870	1,150	502	333	453	534	
20				1,900	6,860	4,500	1,100	474	322	519	524	
21				1,840	6,370	4,590	1,050	454	314	626	507	
22				1,800	5,830	5,010	1,010	442	307	622	509	
23				2,000	5,550	4,940	963	432	304	601	489	
24				2,530	5,210	4,280	922	439	310	580	468	
25				3,610	4,860	3,730	893	443	308	557	455	
26				4,300	4,790	3,400	894	427	302	538	527	
27				4,360	5,040	3,230	843	413	297	542	518	
28				3,930	5,580	3,280	802	401	294	547	498	
29				3,440	6,180	3,280	770	390	294	547	433	
30				3,090	6,240	3,190	740	382	404	541	446	
31				---	6,020	---	714	376	---	534	---	
TOTAL				63,810	173,620	161,110	45,761	15,968	10,070	20,171	17,849	
MEAN				2,127	5,601	5,370	1,476	515	336	651	595	
MAX				4,360	10,200	9,760	2,970	695	404	1,400	883	
MIN				1,090	2,530	3,190	714	376	294	453	433	
AC-FT				126,600	344,400	319,600	90,770	31,670	19,970	40,010	35,400	
CFSM				1.83	4.83	4.63	1.27	0.44	0.29	0.56	0.51	
IN.				2.05	5.57	5.17	1.47	0.51	0.32	0.65	0.57	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 1982 AND FOR SEASONS 1985 - 2005*

MEAN	479	520	588	2,501	7,624	8,272	2,668	772	576	699	514	
MAX	1,197	2,285	1,342	4,490	12,580	15,910	5,904	1,331	1,853	1,878	3,098	1,323
(WY)	(1974)	(1971)	(1972)	(1990)	(1997)	(1974)	(1975)	(1972)	(1985)	(1986)	(1990)	(1976)
MIN	207	201	252	464	4,738	2,522	844	339	245	225	204	249
(WY)	(1980)	(1980)	(1980)	(1975)	(1977)	(1987)	(1977)	(1988)	(1988)	(1988)	(1988)	(1972)

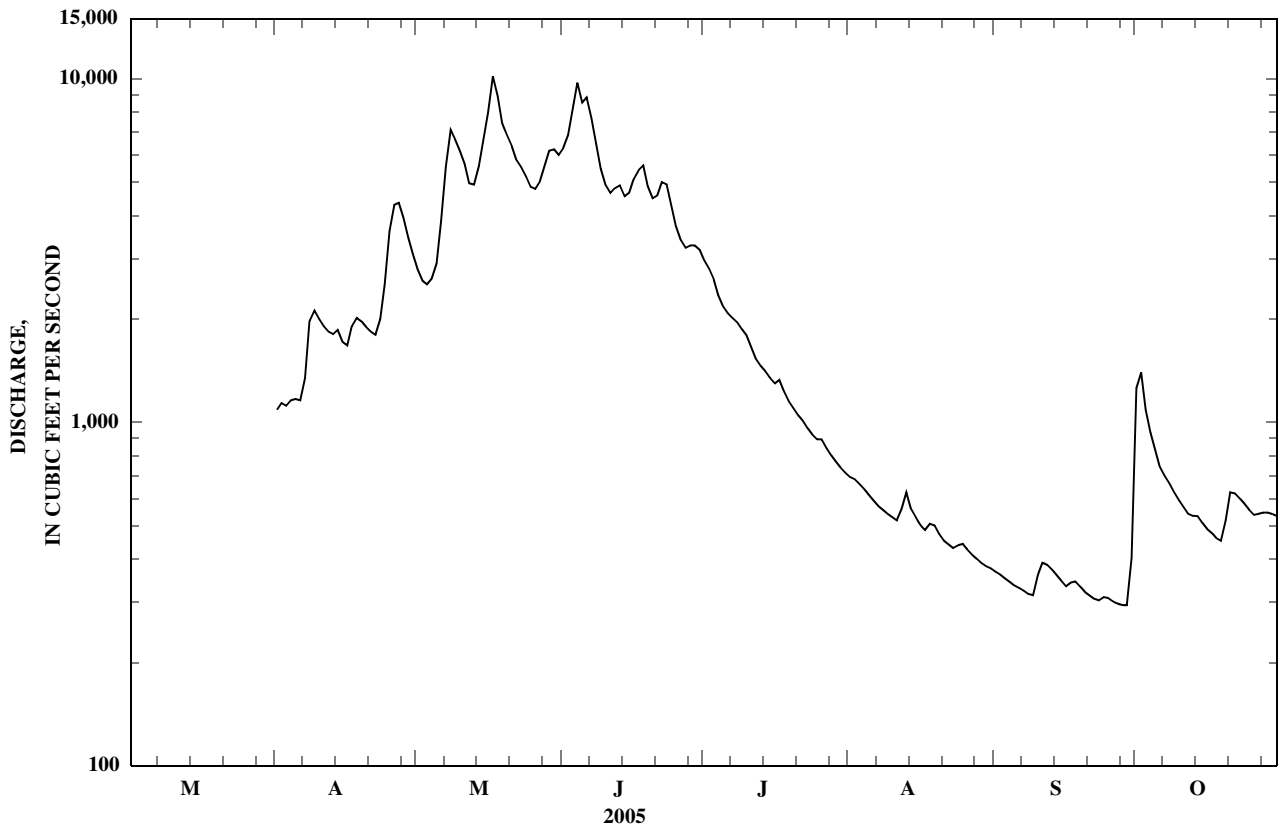
12359800 SOUTH FORK FLATHEAD RIVER ABOVE TWIN CREEK, NEAR HUNGRY HORSE, MT—Continued

SUMMARY STATISTICS	FOR 2005 SEASON		FOR 1985 - 2005 SEASONS		WATER YEARS 1965 - 1982*	
ANNUAL MEAN					2,310	
HIGHEST ANNUAL MEAN					2,988	1971
LOWEST ANNUAL MEAN					1,175	1977
HIGHEST DAILY MEAN	10,200	May 17	29,800	May 17, 1997	29,500	Jun 16, 1974
LOWEST DAILY MEAN	a294	Sep 28	176	Nov 30, 1987	135	Jan 29, 1980
ANNUAL SEVEN-DAY MINIMUM					155	Jan 26, 1980
MAXIMUM PEAK FLOW	10,800	May 17	29,100	May 17, 1997	30,200	Jun 16, 1974
MAXIMUM PEAK STAGE	10.67	May 17	15.01	May 17, 1997	15.20	Jun 16, 1974
INSTANTANEOUS LOW FLOW					b127	Nov 30, 1979
ANNUAL RUNOFF (AC-FT)					1,673,000	
ANNUAL RUNOFF (CFSM)					1.99	
ANNUAL RUNOFF (INCHES)					27.06	
10 PERCENT EXCEEDS					7,420	
50 PERCENT EXCEEDS					646	
90 PERCENT EXCEEDS					290	

*--During periods of operation. Seasonal records only from October 1984 to current year.

a--Also Sept. 29.

b--Gage height, 4.13 ft.



12362000 HUNGRY HORSE RESERVOIR NEAR HUNGRY HORSE, MT

LOCATION.--Lat 48°20'28", long 114°00'48" (NAD 27), in NE¹/₄ NE¹/₄ NW¹/₄ sec.27, T.30 N., R.19 W., Flathead County, Hydrologic Unit 17010209, in block 14 of Hungry Horse Dam on South Fork Flathead River, 3.8 mi southeast of Hungry Horse, and at river mile 5.3.

DRAINAGE AREA.--1,654 mi².

PERIOD OF RECORD.--September 1951 to current year.

GAGE.--Water-stage recorder equipped with remote indicator in power house. Elevation of gage is 3,196 ft (NGVD 29) (levels by U.S. Bureau of Reclamation). During construction and prior to May 1, 1953, various types of nonrecording gages were used.

REMARKS.--Reservoir and flow completely controlled by concrete arch-gravity dam; construction began in 1948; completed in 1952. Storage began Sept. 21, 1951. Usable capacity, 3,451,000 acre-ft, top of 1.0 ft flash-boards; 3,427,000 acre-ft between elevations 3,196 ft, lowest outlet, and 3,560 ft, controlled spillway elevation. Dead storage, 39,730 acre-ft below elevation 3,196 ft. Minimum operating level, 445,400 acre-ft, elevation, 3,336 ft for on-site power generation. All elevations are referenced to the National Geodetic Vertical Datum of 1929. Water is used for power production, flood control, irrigation and recreation. Controlled spillway is an adjustable ring gate with 1.0 ft flashboards. Figures given herein represent usable contents. Capacity table in use is dated August 1969.

COOPERATION.--Capacity table and daily elevations provided by U.S. Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 3,461,000 acre-ft, July 3, 4, 1955, Aug. 6, 1956; maximum elevation observed, 3,561.40 ft, July 3, 4, 1955; minimum contents observed since normal low operating level reached in May 1952, 607,700 acre-ft, Jan. 13, 1953, elevation, 3,362.50 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 3,424,000 acre-ft, June 30, elevation, 3,559.86 ft; minimum, 2,918,000 acre-ft, Sept. 28, elevation, 3,537.46 ft.

CAPACITY TABLE (ELEVATION, IN FEET, AND CONTENTS, IN ACRE-FT)

Elevation	Contents
2,500	2,185,000
3,530	2,761,000
3,560	3,427,000

ELEVATION ABOVE NGVD 1929, FEET, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY OBSERVATION AT 2359 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3,539.93	3,541.52	3,541.12	3,542.22	3,544.56	3,545.86	3,548.81	3,546.67	3,555.67	3,559.80	3,551.21	3,539.57
2	3,539.93	3,541.63	3,541.10	3,542.19	3,544.72	3,545.85	3,548.93	3,546.40	3,556.28	3,559.73	3,550.85	3,539.43
3	3,539.93	3,541.68	3,541.08	3,542.15	3,544.86	3,545.85	3,549.07	3,546.20	3,556.80	3,559.63	3,550.47	3,539.29
4	3,539.93	3,541.65	3,541.09	3,542.11	3,544.94	3,545.84	3,549.23	3,546.04	3,557.33	3,559.49	3,550.09	3,539.18
5	3,539.92	3,541.68	3,541.06	3,542.07	3,545.13	3,545.82	3,549.39	3,545.95	3,557.73	3,559.36	3,549.71	3,539.07
6	3,539.88	3,541.60	3,541.02	3,541.98	3,545.19	3,545.84	3,549.53	3,545.99	3,558.09	3,559.20	3,549.32	3,538.92
7	3,539.90	3,541.59	3,541.05	3,541.88	3,545.27	3,545.81	3,549.72	3,546.29	3,558.31	3,559.01	3,548.94	3,538.76
8	3,539.88	3,541.53	3,541.04	3,541.86	3,545.36	3,545.83	3,550.03	3,546.78	3,558.41	3,558.85	3,548.54	3,538.61
9	3,539.86	3,541.45	3,540.96	3,541.80	3,545.44	3,545.91	3,550.33	3,547.19	3,558.39	3,558.65	3,548.14	3,538.51
10	3,539.83	3,541.37	3,541.07	3,541.73	3,545.48	3,545.98	3,550.61	3,547.52	3,558.33	3,558.45	3,547.73	3,538.48
11	3,539.81	3,541.32	3,541.34	3,541.68	3,545.54	3,546.03	3,550.77	3,547.75	3,558.22	3,558.27	3,547.34	3,538.47
12	3,539.78	3,541.22	3,541.57	3,541.55	3,545.61	3,546.16	3,550.75	3,547.91	3,558.20	3,558.03	3,546.96	3,538.44
13	3,539.75	3,541.14	3,541.75	3,541.56	3,545.72	3,546.30	3,550.63	3,548.09	3,558.18	3,557.77	3,546.58	3,538.40
14	3,539.65	3,541.02	3,541.96	3,541.45	3,545.77	3,546.43	3,550.36	3,548.32	3,558.32	3,557.55	3,546.17	3,538.36
15	3,539.68	3,540.94	3,542.04	3,541.32	3,545.81	3,546.55	3,550.03	3,548.73	3,558.62	3,557.28	3,545.77	3,538.32
16	3,539.75	3,540.92	3,542.04	3,541.16	3,545.85	3,546.66	3,549.65	3,549.29	3,558.83	3,557.03	3,545.37	3,538.29
17	3,539.94	3,540.84	3,541.99	3,541.14	3,545.85	3,546.79	3,549.38	3,550.15	3,559.00	3,556.82	3,544.93	3,538.24
18	3,540.11	3,540.83	3,542.04	3,541.19	3,545.85	3,546.90	3,549.06	3,550.74	3,558.95	3,556.51	3,544.58	3,538.23
19	3,540.24	3,540.76	3,542.11	3,541.42	3,545.83	3,546.98	3,548.75	3,551.20	3,558.85	3,556.04	3,544.19	3,538.17
20	3,540.38	3,540.73	3,542.10	3,541.75	3,545.85	3,547.09	3,548.45	3,551.52	3,558.84	3,555.57	3,543.77	3,538.14
21	3,540.56	3,540.70	3,542.14	3,542.19	3,545.86	3,547.16	3,548.08	3,551.84	3,559.01	3,555.10	3,543.37	3,538.09
22	3,540.77	3,540.70	3,542.18	3,542.61	3,545.85	3,547.22	3,547.76	3,552.06	3,559.20	3,554.65	3,542.94	3,538.01
23	3,540.91	3,540.64	3,542.23	3,542.99	3,545.86	3,547.25	3,547.47	3,552.25	3,559.37	3,554.28	3,542.49	3,537.96
24	3,541.01	3,540.78	3,542.19	3,543.27	3,545.86	3,547.28	3,547.30	3,552.52	3,559.45	3,553.93	3,542.13	3,537.90
25	3,541.12	3,540.94	3,542.28	3,543.48	3,545.87	3,547.31	3,547.25	3,552.76	3,559.50	3,553.61	3,541.71	3,537.81
26	3,541.18	3,541.05	3,542.25	3,543.67	3,545.87	3,547.37	3,547.23	3,553.00	3,559.50	3,553.36	3,541.29	3,537.73
27	3,541.25	3,541.08	3,542.29	3,543.83	3,545.87	3,547.61	3,547.31	3,553.29	3,559.60	3,553.03	3,540.92	3,537.61
28	3,541.31	3,541.08	3,542.29	3,543.94	3,545.86	3,547.95	3,547.24	3,553.68	3,559.68	3,552.68	3,540.59	3,537.46
29	3,541.37	3,541.12	3,542.23	3,544.13	---	3,548.23	3,547.09	3,554.13	3,559.79	3,552.29	3,540.24	3,537.52
30	3,541.40	3,541.10	3,542.25	3,544.31	---	3,548.46	3,546.92	3,554.59	3,559.86	3,551.95	3,540.01	3,537.58
31	3,541.48	---	3,542.26	3,544.46	---	3,548.63	---	3,555.04	---	3,551.59	3,539.77	---
TOTAL	109750.44	106234.61	109794.12	109813.09	99275.53	109948.95	106467.13	110043.89	106756.31	110249.51	109906.12	106150.55
MEAN	3,540.34	3,541.15	3,541.75	3,542.36	3,545.55	3,546.74	3,548.91	3,549.80	3,558.54	3,556.44	3,545.36	3,538.35
MAX	3,541.48	3,541.68	3,542.29	3,544.46	3,545.87	3,548.63	3,550.77	3,555.04	3,559.86	3,559.80	3,551.21	3,539.57
MIN	3,539.65	3,540.64	3,540.96	3,541.14	3,544.56	3,545.81	3,546.92	3,545.95	3,555.67	3,551.59	3,539.77	3,537.46

CONTENTS, IN THOUSANDS OF ACRE-FEET, AT END OF MONTH

3,005	2,997	3,022	3,070	3,102	3,164	3,125	3,311	3,424	3,231	2,968	2,920
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CHANGE IN CONTENTS, IN ACRE-FEET

+33,000	-8,000	+25,000	+48,000	+32,000	+62,000	-39,000	+186,000	+113,000	-193,000	-263,000	-48,000
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CALENDAR YEAR 2004 +356,000
WATER YEAR 2005 -52,000

12362500 SOUTH FORK FLATHEAD RIVER NEAR COLUMBIA FALLS, MT

LOCATION.--Lat 48°21'24", long 114°02'12" (NAD 27), in SW¹/₄ SE¹/₄ SW¹/₄ sec.16, T.30 N., R.19 W., Flathead County, Hydrologic Unit 17010209, on right bank 1.7 mi downstream from Hungry Horse Dam, 6.8 mi east of Columbia Falls, and at river mile 3.5.

DRAINAGE AREA.--1,663 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1910 to January 1911 (discharge measurements only), February 1911 to September 1913 (no winter records), October 1913 to August 1916 (scattered daily discharge only), water years 1917-22 (annual maximum), April 1923 to November 1924 (no winter records), July to October 1925, May to November 1927, May 1928 to current year. Monthly discharge only for some periods, published in WSP 1316.

REVISED RECORDS.--WSP 1216: Drainage area. WSP 1316: 1923-24(M), 1926-27(M), 1932(M), 1935-36(M). WSP 1636: 1958 (adjusted runoff).

GAGE.--Water-stage recorder. Elevation of gage is 3,040 ft (NGVD 29) (levels by the U.S. Bureau of Reclamation). September 1910 to September 1916, nonrecording gage, Apr. 23, 1923, to Sept. 30, 1928, water-stage recorder at site 3 mi downstream at different elevation. Oct. 1, 1928, to Sept. 30, 1952, water-stage recorder at site 1.5 mi downstream at different elevation.

REMARKS.--Water-discharge records excellent. Flow regulated by Hungry Horse Reservoir since Sept. 21, 1951 (see preceding page). U.S. Bureau of Reclamation satellite telemeter at station.

AVERAGE DISCHARGE.--77 years (water years, 1929-2005), 3,491 ft³/s, 28.51 in/yr, 2,529,000 acre-ft/yr, adjusted for change in contents in Hungry Horse Reservoir since Oct. 1, 1951.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 46,200 ft³/s, June 19, 1916, gage height, 16.6 ft, site and elevation then in use, from rating curve extended above 20,000 ft³/s; minimum observed, 7.3 ft³/s, Sept. 24, 1951, gage height, 0.52 ft, dam closure, site and elevation then in use; minimum daily, 7.3 ft³/s, Sept. 24, 1951.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 11,200 ft³/s, June 8, gage height, 10.70 ft; minimum daily, 506 ft³/s, Mar. 13.

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

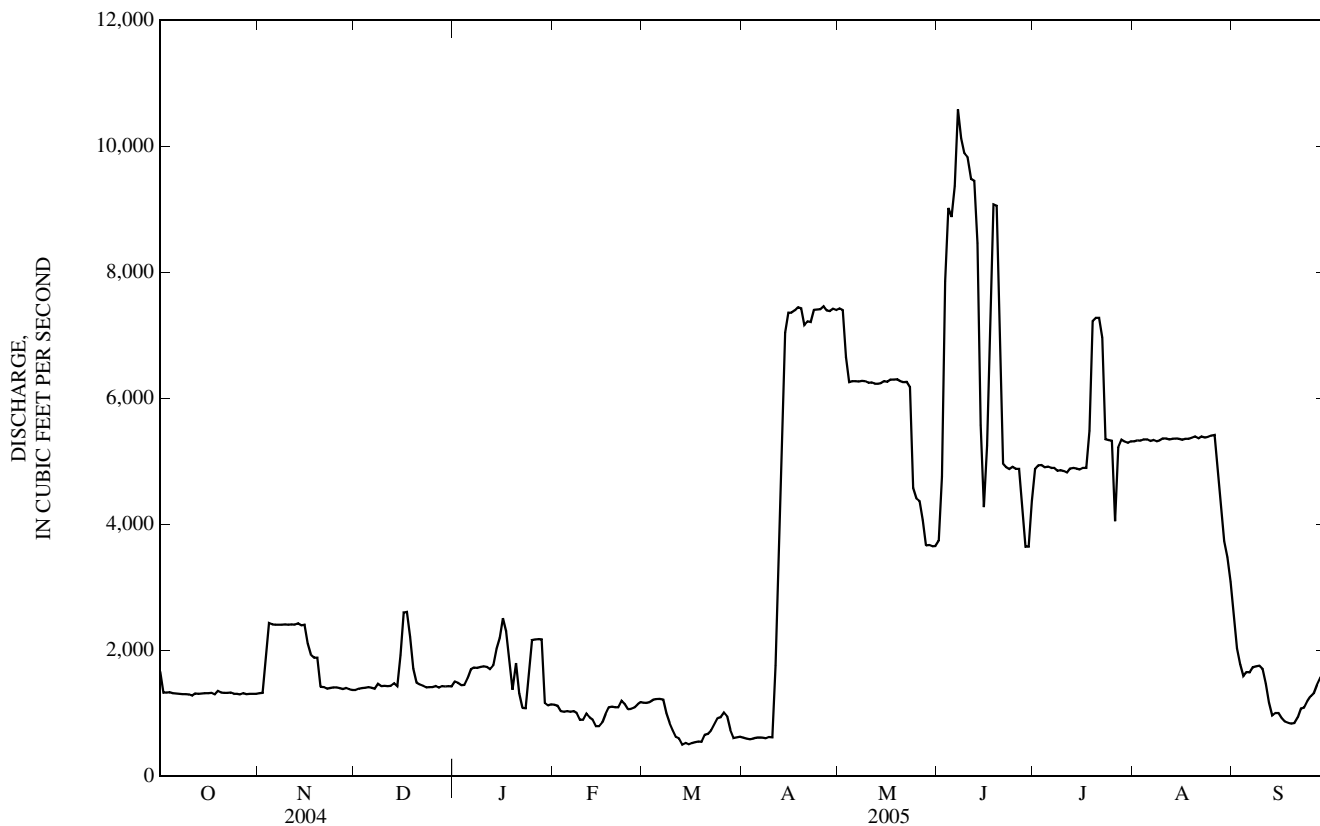
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,670	1,320	1,370	1,500	1,140	1,170	616	7,420	3,740	4,880	5,320	2,550
2	1,330	1,330	1,390	1,480	1,120	1,170	603	7,400	4,760	4,940	5,330	2,040
3	1,330	1,900	1,400	1,450	1,040	1,180	593	6,660	7,860	4,940	5,330	1,780
4	1,340	2,430	1,410	1,460	1,030	1,220	601	6,260	9,020	4,910	5,350	1,590
5	1,320	2,410	1,420	1,560	1,040	1,230	617	6,270	8,880	4,910	5,350	1,660
6	1,320	2,410	1,410	1,700	1,030	1,230	618	6,270	9,370	4,900	5,330	1,650
7	1,310	2,410	1,400	1,730	1,040	1,220	617	6,270	10,600	4,900	5,340	1,740
8	1,310	2,410	1,470	1,720	1,010	1,000	605	6,280	10,100	4,850	5,320	1,750
9	1,310	2,410	1,430	1,740	e900	850	626	6,270	9,890	4,860	5,330	1,760
10	1,300	2,410	1,440	1,750	e900	735	624	6,250	9,820	4,850	5,360	1,710
11	1,280	2,410	1,430	1,740	998	626	1,760	6,250	9,480	4,820	5,360	1,470
12	1,320	2,410	1,440	1,700	934	600	3,660	6,230	9,450	4,890	5,350	1,170
13	1,310	2,430	1,480	1,760	902	506	5,670	6,230	8,460	4,900	5,360	967
14	1,320	2,400	1,440	2,020	e800	529	7,050	6,240	5,570	4,890	5,360	1,010
15	1,320	2,410	1,930	2,190	e800	508	7,360	6,270	4,270	4,870	5,360	1,010
16	1,320	2,110	2,600	2,510	e860	531	7,360	6,260	5,250	4,900	5,340	928
17	1,330	1,930	2,610	2,300	e990	544	7,390	6,300	6,950	4,900	5,360	871
18	1,300	1,880	2,220	1,840	e1,100	557	7,450	6,300	9,070	5,490	5,360	849
19	1,360	1,880	1,710	1,380	e1,110	549	7,430	6,300	9,050	7,230	5,370	838
20	1,330	1,420	1,490	1,800	e1,100	660	e7,160	6,270	6,780	7,280	5,390	849
21	1,330	1,420	1,460	1,320	e1,100	675	e7,220	6,260	4,960	7,280	5,370	935
22	1,330	1,390	1,440	1,090	e1,200	734	e7,210	6,260	4,910	6,970	5,400	1,080
23	1,330	1,410	1,410	1,080	e1,150	829	7,410	6,180	4,880	5,350	5,380	1,100
24	1,310	1,410	1,420	1,620	1,070	926	7,410	4,580	4,910	5,340	5,390	1,200
25	1,310	1,410	1,420	2,170	1,070	939	7,420	4,410	4,880	5,330	5,410	1,270
26	1,300	1,400	1,430	2,170	1,090	1,010	7,460	4,370	4,880	4,050	5,420	1,320
27	1,320	1,390	1,410	2,180	1,150	953	7,400	4,070	4,300	5,220	4,840	1,450
28	1,310	1,400	1,430	2,170	1,180	736	7,380	3,670	3,650	5,340	4,260	1,560
29	1,310	1,380	1,430	1,170	---	613	7,420	3,670	3,650	5,310	3,730	1,520
30	1,310	1,370	1,430	1,130	---	620	7,400	3,650	4,370	5,290	3,480	1,420
31	1,310	---	1,430	1,150	---	629	---	3,660	---	5,320	3,090	---
TOTAL	41,200	56,700	48,200	52,580	28,854	25,279	142,140	178,780	203,760	163,910	158,740	41,047
MEAN	1,329	1,890	1,555	1,696	1,030	815	4,738	5,767	6,792	5,287	5,121	1,368
MAX	1,670	2,430	2,610	2,510	1,200	1,230	7,460	7,420	10,600	7,280	5,420	2,550
MIN	1,280	1,320	1,370	1,080	800	506	593	3,650	3,650	4,050	3,090	838
MED	1,320	1,890	1,430	1,720	1,040	735	7,180	6,260	6,180	4,910	5,350	1,370
AC-FT	81,720	112,500	95,600	104,300	57,230	50,140	281,900	354,600	404,200	325,100	314,900	81,420
CFSM	0.80	1.14	0.93	1.02	0.62	0.49	2.85	3.47	4.08	3.18	3.08	0.82
IN.	0.92	1.27	1.08	1.18	0.65	0.57	3.18	4.00	4.56	3.67	3.55	0.92

12362500 SOUTH FORK FLATHEAD RIVER NEAR COLUMBIA FALLS, MT—Continued

ADJUSTED FOR CHANGE IN CONTENTS IN HUNGRY HORSE RESERVOIR

MEAN	1,866	1,756	1,961	2,477	1,607	1,824	4,082	8,792	8,692	2,148	844	562
CFSM	1.12	1.06	1.18	1.49	0.97	1.10	2.45	5.29	5.23	1.29	0.51	0.34
IN.	1.29	1.18	1.36	1.72	1.01	1.26	2.74	6.10	5.83	1.49	0.59	0.38
AC-FT	114,720	104,500	120,600	152,300	89,230	112,140	242,900	540,600	517,200	132,100	51,900	33,420
OBSERVED												
CALENDAR YEAR 2004	TOTAL		1,046,065	MEAN	2,858	MAX	6,180	MIN	937	AC-FT	2,075,000	
WATER YEAR 2005	TOTAL		1,141,190	MEAN	3,127	MAX	10,600	MIN	506	AC-FT	2,264,000	
ADJUSTED												
CALENDAR YEAR 2004	TOTAL		1,225,581	MEAN	3,349	CFSM	2.01	IN	27.41	AC-FT	2,431,000	
WATER YEAR 2005	TOTAL		1,115,004	MEAN	3,055	CFSM	1.84	IN	24.94	AC-FT	2,212,000	

e--Estimated.



WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: October 1964 to September 1968, March 1979 to current year.

INSTRUMENTATION.--Temperature recorder since Mar. 30, 1979.

REMARKS.--Prior to March 1979, thermograph records furnished by Montana Department of Fish, Wildlife, and Parks. Daily temperature record is excellent for season.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 19.0°C Aug. 9-11, 1966, Aug. 2-6, 1968, Aug. 6, 2003; minimum, 2.0°C on many days during winter most years.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 17.5°C, Aug. 9; minimum, 3.5°C, many days during January through April.

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

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

12362500 SOUTH FORK FLATHEAD RIVER NEAR COLUMBIA FALLS, 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	4.0	4.0	4.0	4.0	4.0	4.0	4.5	4.0	4.0	4.5	4.0	4.0
2	4.0	4.0	4.0	4.0	4.0	4.0	4.5	4.0	4.0	4.5	4.0	4.0
3	4.0	4.0	4.0	4.0	4.0	4.0	4.5	4.0	4.0	4.0	4.0	4.0
4	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
5	4.0	3.5	4.0	4.0	4.0	4.0	4.5	4.0	4.0	4.0	4.0	4.0
6	4.0	3.5	4.0	4.0	4.0	4.0	4.5	4.0	4.0	4.0	4.0	4.0
7	4.0	3.5	4.0	4.0	4.0	4.0	4.5	4.0	4.0	4.0	4.0	4.0
8	4.0	3.5	4.0	4.0	4.0	4.0	4.5	4.0	4.0	4.0	4.0	4.0
9	4.0	4.0	4.0	4.0	4.0	4.0	4.5	4.0	4.0	4.0	4.0	4.0
10	4.0	3.5	4.0	4.0	4.0	4.0	4.5	4.0	4.0	4.0	4.0	4.0
11	4.0	4.0	4.0	4.5	4.0	4.0	4.0	4.0	4.0	4.5	4.0	4.0
12	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.5	4.0	4.5
13	4.0	4.0	4.0	4.5	4.0	4.0	4.0	4.0	4.0	4.5	4.0	4.5
14	4.0	4.0	4.0	4.5	4.0	4.0	4.0	4.0	4.0	4.5	4.0	4.0
15	4.0	4.0	4.0	4.5	4.0	4.0	4.0	3.5	4.0	4.5	4.0	4.0
16	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
17	4.0	3.5	4.0	4.0	3.5	4.0	4.0	4.0	4.0	4.0	4.0	4.0
18	4.0	3.5	4.0	4.0	3.5	4.0	4.0	4.0	4.0	4.0	4.0	4.0
19	4.0	4.0	4.0	4.0	4.0	4.0	4.0	3.5	4.0	4.0	4.0	4.0
20	4.0	4.0	4.0	4.0	4.0	4.0	4.0	3.5	4.0	4.5	4.0	4.0
21	4.0	3.5	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.5	4.0	4.0
22	4.0	3.5	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
23	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
24	4.0	3.5	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
25	4.0	3.5	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
26	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
27	4.0	3.5	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.5	4.0	4.0
28	4.0	3.5	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.5	4.0	4.0
29	---	---	---	4.0	4.0	4.0	4.5	4.0	4.0	4.5	4.0	4.0
30	---	---	---	4.0	4.0	4.0	4.0	4.0	4.0	4.5	4.0	4.5
31	---	---	---	4.5	4.0	4.0	---	---	---	4.5	4.0	4.0
MONTH	4.0	3.5	4.0	4.5	3.5	4.0	4.5	3.5	4.0	4.5	4.0	4.0
	JUNE			JULY			AUGUST			SEPTEMBER		
1	4.0	4.0	4.0	12.5	11.5	12.0	16.5	15.5	16.0	15.0	13.5	14.0
2	4.0	4.0	4.0	12.5	10.5	11.5	16.5	15.0	16.0	15.0	14.5	14.5
3	4.5	4.0	4.0	12.5	11.0	11.5	16.5	15.0	15.5	15.0	14.0	14.5
4	4.5	4.0	4.0	12.5	11.5	12.0	16.0	14.5	15.5	15.0	14.0	14.5
5	4.5	4.0	4.0	13.5	12.0	13.0	16.0	15.0	15.5	15.0	13.5	14.5
6	4.5	4.0	4.5	14.0	12.5	13.5	16.5	15.0	15.5	15.0	14.0	14.5
7	4.5	4.0	4.0	13.5	11.5	12.5	17.0	15.5	16.0	14.5	13.5	14.0
8	4.5	4.0	4.0	14.0	12.5	13.0	16.5	15.5	16.0	15.0	14.0	14.5
9	4.5	4.0	4.5	13.0	11.5	12.5	17.5	15.5	16.5	15.0	13.5	14.5
10	4.5	4.0	4.5	14.0	12.0	13.5	16.0	12.5	15.0	14.5	12.5	13.5
11	4.5	4.0	4.5	14.0	13.0	13.5	14.5	12.5	13.5	13.5	12.5	13.0
12	4.5	4.0	4.5	14.5	13.5	14.0	16.5	13.5	15.0	14.0	13.0	13.5
13	4.5	4.0	4.0	14.0	11.0	12.5	17.0	15.0	16.5	14.0	13.5	14.0
14	4.5	4.0	4.5	13.0	12.0	12.5	16.5	15.0	15.5	14.0	13.5	14.0
15	4.5	4.0	4.5	14.0	12.5	13.0	16.0	14.5	15.0	14.0	13.5	13.5
16	4.5	4.0	4.5	14.0	11.5	13.0	16.0	14.5	15.0	13.5	12.5	13.5
17	4.5	4.5	4.5	14.0	13.0	13.5	16.5	15.0	15.5	14.0	13.0	13.5
18	4.5	4.0	4.5	15.0	13.0	14.0	15.0	12.0	13.5	13.0	12.0	12.5
19	4.5	4.5	4.5	15.0	13.0	14.0	15.5	14.0	15.0	13.5	13.0	13.0
20	4.5	4.0	4.5	14.5	13.5	14.0	16.0	14.0	15.0	13.5	12.0	13.0
21	4.5	4.0	4.5	15.0	13.0	14.0	16.0	14.5	15.0	13.0	12.0	13.0
22	8.0	4.0	6.0	14.5	13.5	14.0	16.0	13.5	14.5	13.0	12.5	13.0
23	10.5	7.5	9.0	14.5	12.5	13.5	14.5	12.5	14.0	13.0	11.0	12.0
24	10.5	9.0	10.5	14.5	13.5	14.0	15.0	12.0	13.5	12.5	10.5	11.5
25	12.0	10.5	11.0	15.5	13.0	14.0	15.0	13.5	14.0	13.0	12.0	12.5
26	12.5	11.5	12.0	16.5	15.0	15.5	15.0	14.0	14.5	13.0	12.5	12.5
27	13.0	12.5	12.5	16.5	15.0	15.5	15.5	14.0	15.0	13.0	11.0	12.5
28	13.0	12.0	12.5	16.0	15.5	16.0	15.5	14.5	15.0	12.5	11.5	12.0
29	12.5	11.5	12.0	16.0	15.5	15.5	15.5	12.0	14.0	12.5	12.0	12.5
30	12.5	11.5	12.0	17.0	14.0	15.5	14.5	11.5	13.0	12.5	12.5	12.5
31	---	---	---	16.5	15.5	16.0	14.0	12.0	13.0	---	---	---
MONTH	13.0	4.0	6.5	17.0	10.5	13.5	17.5	11.5	15.0	15.0	10.5	13.5

12363000 FLATHEAD RIVER AT COLUMBIA FALLS, MT

LOCATION.--Lat 48°21'43", long 114°11'02" (NAD 27), in NW¹/₄NW¹/₄SE¹/₄ sec.17, T.30 N., R.20 W., Flathead County, Hydrologic Unit 17010208, on right bank 200 ft downstream from county road bridge at Columbia Falls, 5.7 mi downstream from South Fork, and at river mile 143.0.
DRAINAGE AREA.--4,464 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1922 to September 1923 (fragmentary), June 1928 to current year. Monthly discharge only for some periods, published in WSP 1316.

REVISED RECORDS.--WSP 1092: 1923. WSP 1216: Drainage area. WSP 1636: 1958 (adjusted runoff).

GAGE.--Water-stage recorder. Elevation of gage is 2,977.67 ft (NGVD 29) (levels by U.S. Army Corps of Engineers). Prior to Nov. 12, 1928, nonrecording gage on bridge 200 ft upstream at elevation 0.19 ft higher.

REMARKS.--Water-discharge records excellent. South Fork Flathead River, which contributes about one-third of flow, is completely regulated by Hungry Horse Reservoir 10.9 mi upstream since Sept. 21, 1951 (see station number 12362000). Bureau of Reclamation satellite telemeter at station.

AVERAGE DISCHARGE.--77 years, 9,578 ft³/s, 29.14 in/yr, 6,937,000 acre-ft/yr, adjusted for change in contents in Hungry Horse Reservoir since Oct. 1, 1951.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 176,000 ft³/s, June 9, 1964, gage height, 25.58 ft, from floodmarks, from rating curve extended above 95,000 ft³/s on basis of slope-area measurement of peak flow; minimum, 798 ft³/s, Dec. 8, 1929, gage height, -0.08 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in June 1894 reached a stage of 22.7 ft, from floodmarks, discharge, 142,000 ft³/s, from rating curve extended above 95,000 ft³/s on basis of slope-area measurement of peak flow in 1964.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 37,600 ft³/s, June 8, gage height, 11.96 ft; minimum daily, 3,190 ft³/s, Mar. 20, 22.

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	5,290	4,260	4,100	3,740	6,420	3,390	4,100	15,800	18,500	15,400	8,260	4,480
2	4,800	4,220	4,020	3,750	6,100	3,390	4,100	15,200	21,100	15,100	8,230	3,890
3	4,560	5,520	3,980	3,710	5,750	3,370	4,060	14,300	26,300	14,600	8,140	3,560
4	4,420	6,520	3,920	3,680	5,550	3,400	4,000	13,800	32,400	13,900	8,060	3,290
5	4,280	6,260	3,910	3,520	5,520	3,410	4,030	14,300	31,900	13,300	7,980	3,280
6	4,160	6,050	3,860	3,500	5,350	3,460	3,990	15,500	32,500	12,900	7,880	3,260
7	4,100	5,960	3,810	3,850	4,960	3,500	4,140	17,900	34,100	12,800	7,800	3,300
8	4,040	5,910	3,850	3,710	4,720	3,390	4,950	20,900	35,800	12,500	7,730	3,300
9	3,960	5,850	3,790	3,690	4,630	3,270	6,080	21,800	32,500	12,300	7,710	3,290
10	3,900	5,760	3,780	3,700	4,500	3,260	6,070	21,100	31,500	12,200	7,690	3,520
11	3,810	5,690	4,570	3,710	4,400	3,200	6,690	20,500	31,000	11,700	7,780	3,940
12	3,760	5,620	9,280	3,870	4,240	3,320	8,420	19,700	31,000	11,400	7,780	3,740
13	3,690	5,520	8,950	3,570	4,190	3,450	10,200	19,500	29,600	11,000	7,770	3,440
14	3,630	5,410	8,010	3,630	4,110	3,460	11,900	20,900	25,300	10,700	7,710	3,350
15	3,600	5,340	7,890	3,520	3,870	3,400	12,200	23,200	21,900	10,300	7,600	3,450
16	3,710	5,090	8,170	3,810	3,660	3,380	12,000	25,800	21,600	10,100	7,490	3,470
17	4,700	4,800	7,700	3,940	3,680	3,460	12,300	28,900	22,800	10,300	7,470	3,530
18	5,180	4,660	7,070	4,110	3,760	3,360	12,900	29,400	27,900	10,300	7,640	3,490
19	5,140	4,610	6,290	4,470	3,780	3,230	12,900	26,400	27,100	12,100	7,760	3,420
20	4,970	4,180	5,900	7,630	3,840	3,190	12,900	25,100	23,800	11,900	7,640	3,290
21	4,940	3,960	5,660	9,980	3,700	3,250	12,900	23,500	20,900	11,800	7,510	3,250
22	5,130	3,870	5,350	11,100	3,690	3,190	12,900	21,900	20,500	11,500	7,460	3,310
23	5,260	3,820	4,740	10,300	3,540	3,220	13,400	20,600	20,400	9,400	7,440	3,300
24	5,180	3,850	4,550	10,400	3,460	3,220	14,600	18,200	19,500	9,190	7,430	3,260
25	4,980	4,350	4,830	10,600	3,420	3,220	16,700	16,900	18,000	9,030	7,510	3,320
26	4,770	4,990	4,900	10,100	3,390	3,240	18,800	16,300	16,900	7,680	7,480	3,290
27	4,600	4,730	4,660	9,600	3,400	3,430	19,700	16,100	15,800	8,600	6,900	3,310
28	4,470	4,440	4,320	9,090	3,410	4,460	19,100	16,200	15,000	8,600	6,290	3,440
29	4,390	4,190	4,090	7,740	---	5,140	17,800	17,200	15,400	8,490	5,710	3,390
30	4,350	4,160	4,090	7,080	---	4,690	16,600	17,800	15,400	8,370	5,450	3,790
31	4,360	---	4,080	6,710	---	4,320	---	17,700	---	8,320	4,950	---
TOTAL	138,130	149,590	164,120	181,810	121,040	108,670	320,430	612,400	736,400	345,780	230,250	103,950
MEAN	4,456	4,986	5,294	5,865	4,323	3,505	10,680	19,750	24,550	11,150	7,427	3,465
MAX	5,290	6,520	9,280	11,100	6,420	5,140	19,700	29,400	35,800	15,400	8,260	4,480
MIN	3,600	3,820	3,780	3,500	3,390	3,190	3,990	13,800	15,000	7,680	4,950	3,250
AC-FT	274,000	296,700	325,500	360,600	240,100	215,500	635,600	1,215,000	1,461,000	685,900	456,700	206,200
CFSM	1.00	1.12	1.19	1.31	0.97	0.79	2.39	4.43	5.50	2.50	1.66	0.78
IN.	1.15	1.25	1.37	1.52	1.01	0.91	2.67	5.10	6.14	2.88	1.92	0.87

ADJUSTED FOR CHANGE IN CONTENTS IN HUNGRY HORSE RESERVOIR

MEAN	4,993	4,852	5,700	6,645	4,730	4,513	10,030	22,780	26,450	8,016	3,150	2,659
CFSM	1.12	1.09	1.28	1.49	1.06	1.01	2.25	5.10	5.93	1.80	0.71	0.60
IN.	1.29	1.21	1.47	1.72	1.14	1.17	2.51	5.88	6.61	2.07	0.81	0.66
AC-FT	307,000	288,700	350,500	408,600	272,100	277,500	596,600	1,401,000	1,574,000	492,900	193,700	158,200

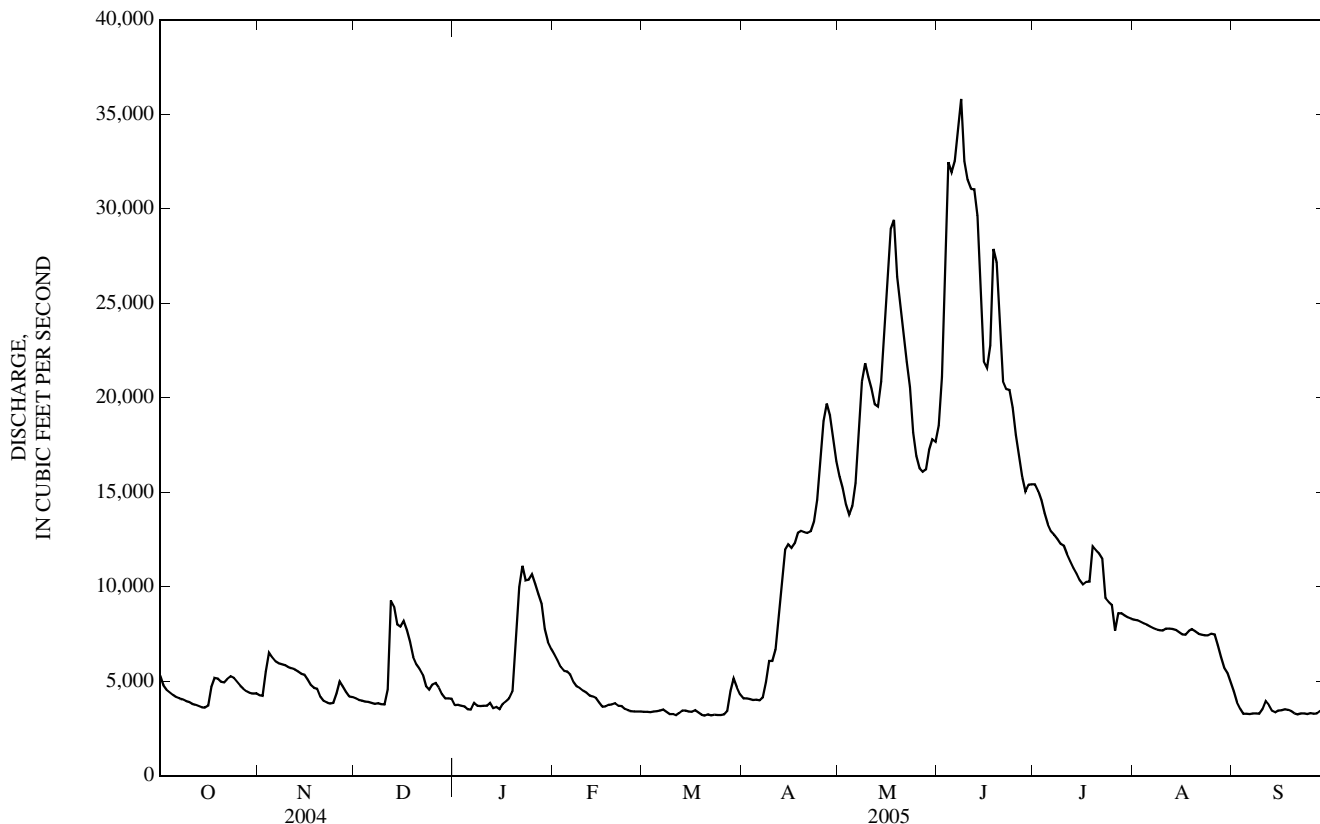
OBSERVED

CALENDAR YEAR 2004	TOTAL	3,080,800	MEAN	8,441	MAX	26,000	MIN	3,300	AC-FT	6,111,000
WATER YEAR 2005	TOTAL	3,212,570	MEAN	8,778	MAX	35,800	MIN	3,190	AC-FT	6,372,000

ADJUSTED

CALENDAR YEAR 2004	TOTAL	3,260,298	MEAN	8,932	CFSM	2.00	IN	27.16	AC-FT	6,467,000
WATER YEAR 2005	TOTAL	3,186,690	MEAN	8,707	CFSM	1.95	IN	26.55	AC-FT	6,320,000

12363000 FLATHEAD RIVER AT COLUMBIA FALLS, MT—Continued



WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1949-50, 1963-67, 1970, 1979 to September 1994. March 2002 to current year. Water years 1968-69 published as Flathead River near Kalispell (station 12363500) 15 mi downstream. No appreciable inflow or outflow occurs between the two points.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1964 to September 1967, March 1979 to September 1981.

WATER TEMPERATURE: January 1949 to September 1950, August 1963 to September 1969, March 1979 to current year.

SUSPENDED-SEDIMENT DISCHARGE: July 1965 to September 1969.

INSTRUMENTATION.--Temperature recorder since Mar. 27, 1979.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 290 microsiemens per centimeter ($\mu\text{S}/\text{cm}$) at 25.0°C, April 6, 1980; minimum daily, 121 $\mu\text{S}/\text{cm}$ at 25.0°C, May 28, 1979.

WATER TEMPERATURE: Maximum daily, 21.0°C, Aug. 23, 1963, Aug. 8, 1968; minimum, 0.0°C on many days during winter periods most years.

SEDIMENT CONCENTRATION: Maximum daily mean, 980 mg/L, May 21, 1967; Minimum daily mean, 1 mg/L on several days most years.

SEDIMENT LOAD: Maximum daily, 140,000 tons, May 23, 1967; minimum daily, 4 tons, Mar. 4-6, 1967.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 19.0°C, Aug. 9; minimum, 0.0°C, on many days December through March.

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

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Total nitrogen, wat unf by analysis, mg/L (62855)
APR										
25...	1230	16,800	8.2	163	20.5	6.5	<.010	.124	<.002	.26
JUN										
21...	1515	20,600	8.2	155	26.0	11.0	<.010	.076	E.001	.12
JUL										
27...	1300	8,560	8.2	158	26.0	16.0	<.010	.044	E.001	.10
SEP										
07...	0930	3,300	8.1	182	12.0	13.0	E.006	.031	<.002	.08

12363000 FLATHEAD RIVER AT COLUMBIA FALLS, MT—Continued

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

Date	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Suspnd. sedi-ment, percent <.063mm (70331)	Sus-pended sedi-ment concen-tration mg/L (80154)	Sus-pended sedi-ment dis-charge, tons/d (80155)
APR 25...	<.006	.031	94	39	1,770
JUN 21...	E.003	.010	80	11	612
JUL 27...	<.006	<.004	75	1	23
SEP 07...	<.006	<.004	64	1	8.9

E--Estimated.

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

12363000 FLATHEAD RIVER AT COLUMBIA FALLS, 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	3.5	2.5	3.0	4.0	2.5	3.5	4.5	3.5	4.0	6.5	5.0	5.5
2	3.5	3.0	3.0	4.5	2.5	3.5	5.0	3.5	4.0	6.5	5.0	6.0
3	3.5	2.5	3.0	5.0	2.5	3.5	5.0	3.5	4.0	7.0	5.5	6.0
4	3.0	2.5	2.5	5.0	2.5	3.5	5.0	4.0	4.5	7.0	6.0	6.5
5	3.0	2.0	2.5	5.0	3.0	4.0	6.0	4.0	5.0	7.5	6.0	6.5
6	2.5	1.5	2.0	6.0	3.0	4.5	7.0	4.0	5.5	7.5	7.0	7.5
7	1.5	0.5	1.0	5.5	4.0	4.5	7.5	5.5	6.5	7.0	6.5	7.0
8	1.5	1.0	1.0	5.5	4.0	4.5	7.0	6.0	6.5	7.0	6.0	6.5
9	2.5	1.5	2.0	5.0	4.0	4.5	6.0	5.0	5.5	7.0	6.0	6.5
10	2.5	1.0	1.5	6.0	3.5	4.5	6.5	4.5	5.5	6.5	6.0	6.0
11	2.5	1.0	1.5	6.5	3.5	5.0	6.0	4.5	5.0	7.0	5.5	6.5
12	2.5	1.0	2.0	6.0	4.5	5.0	4.5	4.0	4.0	8.0	6.0	7.0
13	3.0	2.0	2.5	5.5	3.5	4.5	4.5	3.5	4.0	8.0	7.0	7.5
14	2.0	1.5	1.5	5.0	3.5	4.0	4.5	4.0	4.0	8.0	7.0	7.5
15	2.0	0.5	1.0	6.0	3.5	4.5	5.0	3.5	4.5	8.0	6.5	7.5
16	1.5	0.0	1.0	4.5	4.0	4.0	6.0	4.5	5.0	8.0	7.0	7.5
17	2.5	0.0	1.0	4.0	2.0	3.0	6.0	5.0	5.5	7.5	6.5	7.0
18	2.5	0.0	1.0	4.0	1.0	3.0	5.5	4.5	5.0	7.0	6.0	6.5
19	1.5	0.5	1.0	1.5	0.5	1.0	6.0	4.5	5.5	7.5	6.5	7.0
20	2.5	0.5	1.0	2.5	0.0	1.5	5.5	5.0	5.0	7.5	6.5	6.5
21	2.5	1.0	1.5	4.5	2.0	3.0	6.0	5.0	5.5	7.5	6.0	6.5
22	3.0	0.5	1.5	3.5	2.0	3.0	6.5	5.0	5.5	7.5	6.5	6.5
23	3.0	0.5	1.5	3.0	1.5	2.0	7.0	5.5	6.0	7.5	6.0	7.0
24	3.0	0.5	2.0	4.0	1.5	2.5	7.5	6.0	6.5	7.5	6.5	7.0
25	3.5	1.0	2.0	4.0	2.5	3.0	7.5	6.5	7.0	8.0	7.0	7.5
26	3.5	1.0	2.5	4.5	2.5	3.5	7.0	6.0	6.5	9.0	7.0	8.0
27	4.0	1.5	2.5	4.0	3.5	4.0	6.5	5.5	6.0	10.0	8.0	9.0
28	4.0	1.5	2.5	4.0	3.5	3.5	5.5	4.0	5.0	10.5	9.0	9.5
29	---	---	---	4.0	3.0	3.5	5.5	4.0	4.5	10.5	9.0	10.0
30	---	---	---	3.5	3.0	3.5	6.0	4.0	5.0	10.0	9.0	9.5
31	---	---	---	5.5	3.0	4.0	---	---	---	10.0	9.0	9.5
MONTH	4.0	0.0	2.0	6.5	0.0	3.5	7.5	3.5	5.0	10.5	5.0	7.0
	JUNE			JULY			AUGUST			SEPTEMBER		
1	9.0	7.5	8.0	14.0	12.5	13.0	18.0	16.5	17.0	16.0	12.5	14.0
2	7.5	7.0	7.0	13.5	12.0	13.0	17.0	16.0	16.5	16.0	13.5	14.5
3	7.5	7.0	7.5	13.0	11.5	12.0	17.5	15.5	16.5	16.5	14.0	15.0
4	8.5	7.0	7.5	14.0	12.0	13.0	17.0	15.0	16.0	17.0	14.0	15.5
5	9.0	7.5	8.5	14.5	13.0	13.5	18.0	15.0	16.5	16.5	14.0	15.0
6	9.0	7.5	8.0	15.0	14.0	14.5	17.5	15.5	16.5	16.0	12.5	14.0
7	7.5	6.0	7.0	14.5	13.5	14.0	18.0	16.0	17.0	15.5	12.5	14.0
8	6.5	6.0	6.0	15.5	13.5	14.5	18.0	16.0	17.0	16.0	13.0	14.5
9	7.0	6.5	7.0	14.5	13.0	14.0	19.0	15.5	17.0	14.5	13.5	14.0
10	8.0	7.0	7.5	14.0	12.5	13.0	17.5	15.5	16.5	13.5	11.0	12.0
11	8.5	7.5	8.0	14.5	13.0	13.5	16.0	13.5	15.0	11.0	9.5	10.0
12	8.5	7.0	7.5	16.0	13.5	14.5	15.5	14.0	14.5	10.5	9.0	9.5
13	8.0	7.0	7.5	16.0	14.0	15.0	17.0	14.5	15.5	12.0	10.0	10.5
14	8.5	7.5	8.0	15.5	13.5	14.5	16.5	14.0	15.5	13.0	11.0	12.0
15	9.0	8.0	8.5	16.0	13.5	14.5	16.5	14.5	15.5	14.0	11.5	12.5
16	9.5	8.0	8.5	15.5	13.5	14.5	16.5	14.5	15.5	13.0	11.5	12.0
17	9.5	8.0	9.0	15.0	13.5	14.0	16.0	15.0	15.5	14.0	11.5	12.5
18	8.5	8.0	8.0	16.0	14.0	15.0	15.0	13.0	14.0	14.0	11.5	12.5
19	9.5	8.0	9.0	16.0	14.5	15.5	16.5	12.5	14.5	13.5	11.0	12.0
20	10.5	8.5	9.5	16.0	14.5	15.0	16.0	14.0	15.0	13.5	11.0	12.0
21	12.0	10.0	11.0	16.0	14.5	15.0	17.0	14.5	15.5	13.0	10.5	11.5
22	13.0	11.0	12.0	15.5	14.5	15.0	15.5	14.5	15.5	12.5	10.0	11.5
23	12.5	11.0	12.0	16.0	14.5	15.0	14.5	14.0	14.0	11.5	10.0	11.0
24	12.0	10.5	11.0	16.5	14.0	15.0	14.0	13.0	13.5	11.5	8.5	10.0
25	12.0	11.0	11.5	15.5	13.5	14.5	15.5	13.0	14.0	12.0	9.5	10.5
26	12.0	11.0	12.0	17.5	14.5	16.0	16.0	13.5	14.5	12.5	9.5	11.0
27	12.5	11.5	12.0	17.5	15.0	16.0	16.5	14.0	15.0	12.0	10.0	11.0
28	12.5	11.5	12.0	17.5	15.5	16.5	16.5	14.5	15.5	12.0	9.0	10.5
29	12.5	11.0	12.0	18.0	15.5	16.5	16.5	13.5	15.0	11.0	10.5	10.5
30	13.5	12.0	12.5	17.5	15.5	16.5	14.5	12.5	13.5	12.0	11.0	11.5
31	---	---	---	18.0	16.0	17.0	15.0	12.5	13.5	---	---	---
MONTH	13.5	6.0	9.0	18.0	11.5	14.5	19.0	12.5	15.5	17.0	8.5	12.0

PEND OREILLE RIVER BASIN

12365000 STILLWATER RIVER NEAR WHITEFISH, MT

LOCATION.--Lat 48°19'08", long 114°23'11" (NAD 27), in NE¹/₄SW¹/₄ sec.34, T.30 N., R.22 W., Flathead County, Hydrologic Unit 17010210, on right bank 600 ft downstream from road bridge, 6.2 mi southwest of Whitefish, 14.8 mi upstream from Whitefish River, and at river mile 16.2.

DRAINAGE AREA.--524 mi².

PERIOD OF RECORD.--October and November 1930 (monthly discharge only, published in WSP 1316), December 1930 to September 1950, October 1972 to September 1985, April 1986 to September 1999 (seasonal records only), October 1999 to current year.

REVISED RECORDS.--WSP 1736: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 2,953.26 ft (NGVD 29).

REMARKS.--Records good except those for estimated daily discharges, which are poor. U.S. Geological Survey satellite telemeter at station. Diversions for irrigation of about 200 acres 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	168	148	e130	e142	e190	e155	243	535	458	616	192	110
2	160	144	e128	e140	e185	e160	243	511	511	590	185	106
3	155	147	132	e140	e180	e155	244	488	597	558	179	103
4	150	154	131	e145	e170	e150	245	469	694	526	170	101
5	144	158	131	e145	e180	e150	245	455	767	499	164	98
6	140	159	130	e140	e180	e150	244	447	818	472	158	95
7	137	161	127	e140	e170	e155	245	459	854	449	153	92
8	135	160	129	e130	e180	155	255	494	894	425	149	91
9	134	160	130	e140	e180	160	279	544	971	403	146	90
10	132	158	131	e140	e180	168	314	583	1,050	391	144	99
11	130	156	e130	e145	e170	175	341	608	1,090	383	147	123
12	129	152	e135	e145	e160	184	361	613	1,080	371	146	152
13	126	147	e130	e145	e170	196	373	604	1,050	357	145	165
14	123	147	e125	149	e180	200	379	593	1,030	337	146	167
15	122	145	e135	136	e180	202	376	584	988	317	142	164
16	123	144	e140	147	e170	203	367	584	934	303	138	159
17	127	143	e145	e140	e160	207	360	599	884	298	137	157
18	140	143	e150	e142	e160	209	366	620	878	293	138	156
19	150	143	e150	e145	e170	208	383	647	885	285	141	150
20	154	140	e155	e140	e170	206	391	684	878	271	143	144
21	156	135	e155	e150	e170	208	395	691	853	257	140	137
22	156	128	e153	e150	e170	203	398	672	814	251	139	131
23	159	131	e150	e160	e170	194	402	643	769	243	136	126
24	165	130	e140	e170	e160	190	414	601	731	232	134	122
25	166	135	e150	e170	e165	183	436	562	694	222	133	118
26	163	140	e160	e175	e160	179	471	534	661	217	130	114
27	160	142	e155	e180	e160	183	506	506	632	212	128	111
28	155	136	e155	e170	e155	201	539	478	615	208	125	109
29	150	e135	e153	e180	---	222	556	456	624	205	121	106
30	147	e130	e150	e180	---	239	552	443	626	201	118	108
31	146	---	e145	e190	---	244	---	436	---	195	113	---
TOTAL	4,502	4,351	4,360	4,711	4,795	5,794	10,923	17,143	24,330	10,587	4,480	3,704
MEAN	145	145	141	152	171	187	364	553	811	342	145	123
MAX	168	161	160	190	190	244	556	691	1,090	616	192	167
MIN	122	128	125	130	155	150	243	436	458	195	113	90
AC-FT	8,930	8,630	8,650	9,340	9,510	11,490	21,670	34,000	48,260	21,000	8,890	7,350
CFSM	0.28	0.28	0.27	0.29	0.33	0.36	0.69	1.06	1.55	0.65	0.28	0.24
IN.	0.32	0.31	0.31	0.33	0.34	0.41	0.78	1.22	1.73	0.75	0.32	0.26

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 2005, BY WATER YEAR (WY)*

	113	126	119	113	116	160	652	1,153	853	372	174	125
MEAN	113	126	119	113	116	160	652	1,153	853	372	174	125
MAX	271	300	582	495	588	548	1,857	3,125	1,916	952	505	315
(WY)	(1948)	(1990)	(1996)	(1934)	(1996)	(1996)	(1996)	(1997)	(1974)	(1993)	(1993)	(1993)
MIN	46.5	53.9	50.7	59.2	60.1	76.7	138	265	235	94.5	55.5	43.1
(WY)	(2002)	(1945)	(1945)	(1940)	(1993)	(1977)	(1945)	(1944)	(1977)	(1977)	(1941)	(2001)

12365000 STILLWATER RIVER NEAR WHITEFISH, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1931 - 2005*	
ANNUAL TOTAL	84,799		99,680			
ANNUAL MEAN	232		273		335	
HIGHEST ANNUAL MEAN					747	1996
LOWEST ANNUAL MEAN					124	1944
HIGHEST DAILY MEAN	892	Apr 17	1,090	Jun 11	4,560	May 18, 1997
LOWEST DAILY MEAN	42	Jan 6	90	Sep 9	17	Aug 17, 1992
ANNUAL SEVEN-DAY MINIMUM	50	Jan 3	95	Sep 4	37	Sep 6, 1988
MAXIMUM PEAK FLOW			1,090	Jun 11	b4,570	May 18, 1997
MAXIMUM PEAK STAGE			8.68	Jun 11	c20.90	May 26, 1948
INSTANTANEOUS LOW FLOW			a89	Sep 9	d2.9	Aug 18, 1992
ANNUAL RUNOFF (AC-FT)	168,200		197,700		242,800	
ANNUAL RUNOFF (CFSM)	0.442		0.521		0.640	
ANNUAL RUNOFF (INCHES)	6.02		7.08		8.69	
10 PERCENT EXCEEDS	532		606		929	
50 PERCENT EXCEEDS	150		164		140	
90 PERCENT EXCEEDS	68		130		70	

*--During periods of operation; October and November 1930 (monthly discharge only, published in WSP 1316), December 1930 to September 1950, October 1972 to September 1985, April 1986 to September 1999 (seasonal record only), October 1999 to current year.

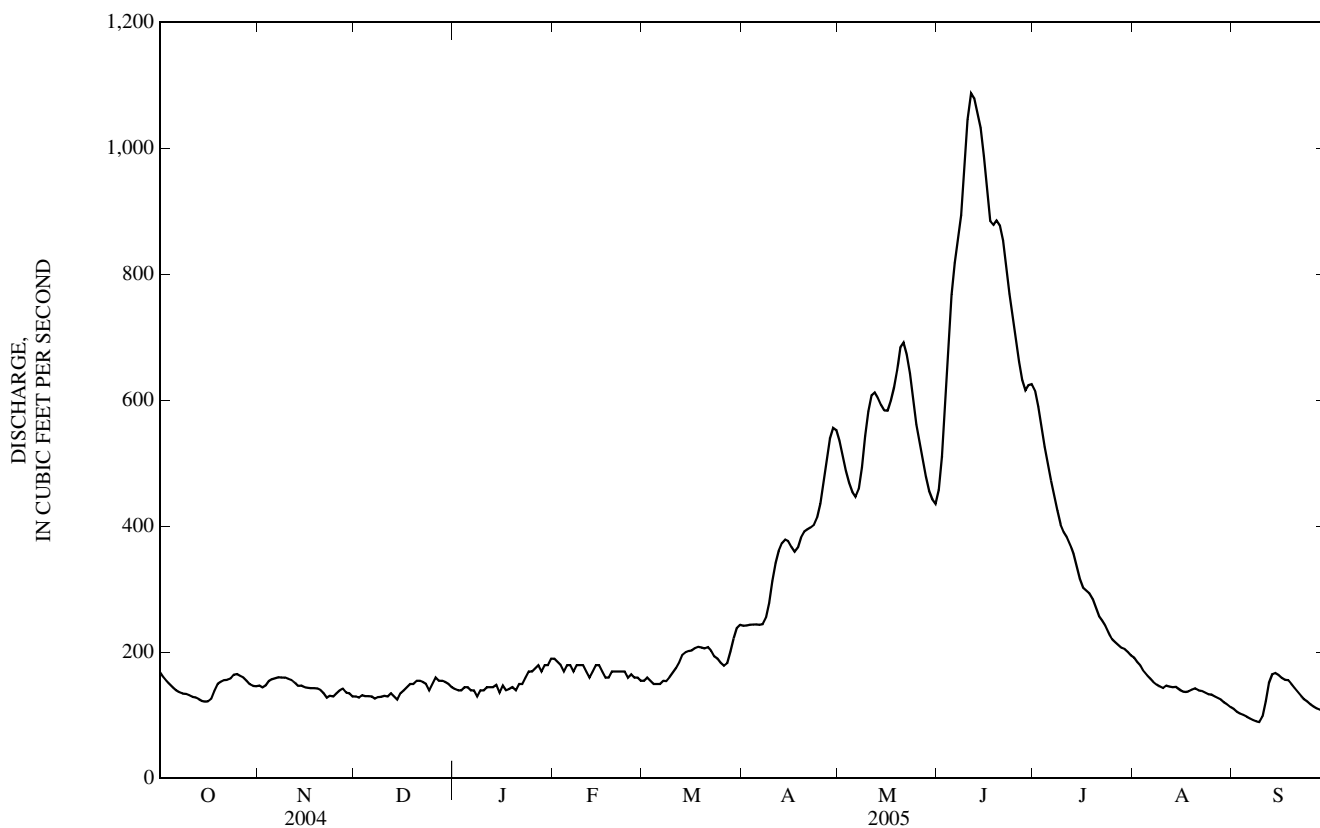
a--Gage height, 1.43 ft.

b--Gage height, 20.20 ft.

c--From floodmark.

d--Result of upstream mudslide.

e--Estimated.



PEND OREILLE RIVER BASIN

12366000 WHITEFISH RIVER NEAR KALISPELL, MT

LOCATION.--Lat 48°19'13", long 114°16'39" (NAD 27), in SW¹/₄SE¹/₄NW¹/₄ sec.34, T.30 N., R.21 W., Flathead County, Hydrologic Unit 17010210, on right bank 160 ft upstream from road bridge, 8.0 mi north of Kalispell, and at river mile 12.8.

DRAINAGE AREA.--170 mi².

PERIOD OF RECORD.--July to November 1928, April 1929 to September 1950, annual maximum 1964, October 1972 to September 1985, April 1986 to September 1995, October 1995 to September 1999 (seasonal record only), October 1999 to current year. Prior to 1964, published as Whitefish Creek near Kalispell.

GAGE.--Water-stage recorder. Elevation of gage is 2,969.83 ft (NGVD 29). Prior to Oct. 16, 1930, nonrecording gage at site 200 ft downstream at elevation 10.00 ft lower. Oct. 16, 1930, to Sept. 30, 1950, water-stage recorder on left bank at same elevation.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Some regulation by Whitefish Lake. Diversion for irrigation of about 650 acres upstream from station. U.S. Geological Survey satellite telemeter at station. Several unpublished observations of water temperature and specific conductance were made during the year.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	176	140	136	e140	160	126	198	283	463	419	128	61
2	174	139	135	e130	162	125	198	283	505	400	124	61
3	171	144	134	e120	163	125	196	283	540	383	121	61
4	168	147	133	e120	163	125	197	282	583	365	118	61
5	166	145	132	e110	164	125	198	282	586	352	115	60
6	163	144	131	e110	163	125	198	284	597	341	112	58
7	161	143	131	e120	161	123	200	298	613	324	109	58
8	158	142	127	e125	158	123	221	314	659	310	107	57
9	155	142	127	e120	156	126	245	326	666	300	100	57
10	152	142	129	e110	155	127	239	336	660	290	96	65
11	150	141	134	e120	154	128	234	349	652	279	95	82
12	147	137	142	e125	154	133	229	354	649	267	94	84
13	144	135	141	e110	153	138	228	363	645	255	91	84
14	142	134	142	e96	152	140	243	384	630	243	89	83
15	138	132	142	e100	e146	140	247	415	611	233	86	82
16	138	131	144	e110	e140	140	242	440	588	225	85	80
17	145	131	144	e120	e137	149	242	462	570	219	85	81
18	148	131	146	e130	e133	153	247	481	589	213	87	81
19	151	129	147	e130	e132	153	244	495	586	204	89	79
20	149	129	149	e140	134	154	241	503	572	196	86	78
21	147	127	149	e140	e132	156	237	508	556	186	87	76
22	149	127	149	e135	131	156	235	508	539	179	86	74
23	151	126	144	e140	e129	151	241	508	521	172	84	73
24	152	127	142	e140	129	148	248	501	503	165	82	72
25	150	135	144	e150	128	149	252	493	484	158	81	71
26	148	149	144	e140	127	148	259	482	467	152	80	70
27	147	147	144	e150	127	157	267	475	446	147	81	68
28	143	144	142	e150	126	192	278	466	444	143	78	67
29	141	141	142	e155	---	211	282	457	449	139	71	67
30	140	138	142	156	---	206	283	452	436	136	66	67
31	140	---	e140	156	---	200	---	447	---	132	63	---
TOTAL	4,704	4,119	4,328	3,998	4,069	4,552	7,069	12,514	16,809	7,527	2,876	2,118
MEAN	152	137	140	129	145	147	236	404	560	243	92.8	70.6
MAX	176	149	149	156	164	211	283	508	666	419	128	84
MIN	138	126	127	96	126	123	196	282	436	132	63	57
AC-FT	9,330	8,170	8,580	7,930	8,070	9,030	14,020	24,820	33,340	14,930	5,700	4,200
CFSM	0.89	0.81	0.82	0.76	0.85	0.86	1.39	2.37	3.30	1.43	0.55	0.42
IN.	1.03	0.90	0.95	0.87	0.89	1.00	1.55	2.74	3.68	1.65	0.63	0.46

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 2005, BY WATER YEAR (WY)*

MEAN	69.5	71.9	72.1	67.8	66.4	95.5	227	527	603	273	110	81.6
MAX	152	177	231	209	157	212	549	895	1,194	695	238	152
(WY)	(2005)	(1934)	(1934)	(1934)	(1934)	(1936)	(1934)	(1997)	(1974)	(1974)	(1993)	(2004)
MIN	9.98	20.1	23.0	13.9	15.5	48.2	83.4	214	211	88.5	29.5	23.9
(WY)	(1931)	(1937)	(1936)	(1938)	(1938)	(2001)	(2001)	(1944)	(1977)	(1941)	(1931)	(1931)

12366000 WHITEFISH RIVER NEAR KALISPELL, MT—Continued

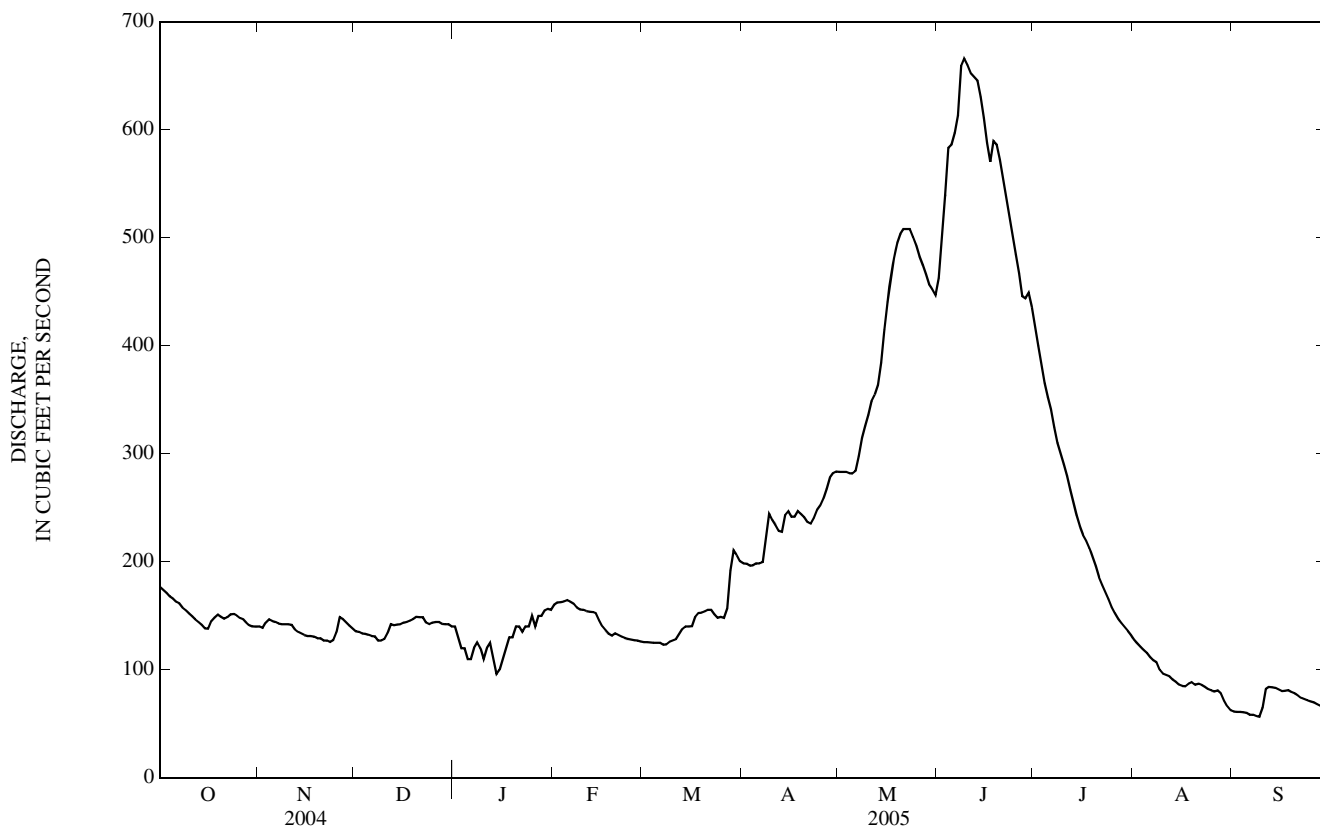
SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1930 - 2005*	
ANNUAL TOTAL	66,437		74,683			
ANNUAL MEAN	182		205		186	
HIGHEST ANNUAL MEAN					320 1974	
LOWEST ANNUAL MEAN					88.9 2001	
HIGHEST DAILY MEAN	482	May 11	666	Jun 9	1,580	Jun 23, 1974
LOWEST DAILY MEAN	32	Jan 7	57	Sep 8	5.0	Oct 17, 1934
ANNUAL SEVEN-DAY MINIMUM	38	Jan 3	59	Sep 3	5.3	Oct 15, 1934
MAXIMUM PEAK FLOW			a666	Jun 8	1,580	Jun 24, 1974
MAXIMUM PEAK STAGE			b3.49	Jan 6	4.91	Jun 24, 1974
INSTANTANEOUS LOW FLOW			55	Sep 9	4.5	Oct 18, 1934
ANNUAL RUNOFF (AC-FT)	131,800		148,100		134,700	
ANNUAL RUNOFF (CFSM)	1.07		1.20		1.09	
ANNUAL RUNOFF (INCHES)	14.54		16.34		14.86	
10 PERCENT EXCEEDS	426		464		501	
50 PERCENT EXCEEDS	141		146		93	
90 PERCENT EXCEEDS	47		84		43	

*--During periods of operation [July to November 1928, April 1929 to September 1950, annual maximum 1964, October 1972 to September 1985, April 1986 to September 1995, October 1995 to September 1999 (seasonal record only), October 1999 to current year.]

a--Gage height, 3.37 ft.

b--Backwater from ice.

c--Estimated.



PEND OREILLE RIVER BASIN

12370000 SWAN RIVER NEAR BIGFORK, MT

LOCATION.--Lat 48°01'28", long 113°58'44" (NAD 27), near center of S¹/₂SW¹/₄ sec.11, T.26 N., R.19 W., Lake County, Hydrologic Unit 17010211, on left bank 0.2 mi downstream from Johnson Creek, 0.4 mi downstream from Swan Lake, 5.1 mi southeast of Bigfork, and at river mile 14.0.

DRAINAGE AREA.--671 mi².

PERIOD OF RECORD.--October 1910 to May 1911 (gage heights only), April 1922 to current year. Monthly discharge only for some periods, published in WSP 1316.

REVISED RECORDS.--WSP 1216: Drainage area. WSP 1246: 1923-24(M), 1930. WSP 1316: 1923.

GAGE.--Water-stage recorder. Elevation of gage is 3,062.6 ft (NGVD 29) (from river-profile survey). Oct. 10, 1910, to May 22, 1911, nonrecording gage at site 10 mi upstream at different elevation. Apr. 28, 1922, to Oct. 14, 1930, nonrecording gage at site 800 ft upstream at elevation 1.9 ft higher.

REMARKS.--Records good. Diversions for irrigation of about 360 acres upstream from station. U.S. Geological Survey satellite telemeter at station. Several unpublished observations of water temperature and specific conductance were made during the year.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	739	715	642	561	956	498	1,350	1,650	2,290	2,150	669	400
2	703	706	621	526	925	501	1,290	1,540	2,650	2,060	656	393
3	673	716	602	509	885	498	1,260	1,450	3,200	1,990	636	381
4	651	728	587	491	852	501	1,230	1,380	3,910	1,890	633	377
5	628	719	578	473	826	501	1,210	1,340	4,680	1,780	609	369
6	609	699	559	446	806	501	1,180	1,360	4,700	1,680	597	365
7	588	684	555	429	779	512	1,140	1,470	4,470	1,580	581	363
8	586	674	560	427	742	520	1,150	1,720	4,100	1,520	559	362
9	561	650	543	442	729	546	1,210	2,040	3,630	1,460	552	356
10	551	637	559	448	710	579	1,250	2,240	e3,170	1,420	529	379
11	542	620	581	454	680	610	1,260	2,320	e2,860	1,370	521	427
12	523	614	629	461	660	638	1,240	2,280	e2,690	1,320	538	451
13	517	603	689	472	653	672	1,230	2,230	e2,500	1,240	543	459
14	507	598	712	462	645	693	1,280	2,160	2,360	1,200	538	453
15	503	584	730	438	634	704	1,310	2,150	2,250	1,150	525	446
16	527	577	746	417	622	706	1,300	2,240	2,190	1,110	510	423
17	573	566	744	417	592	717	1,280	2,470	2,220	1,110	502	413
18	671	563	740	449	567	728	1,300	2,810	2,330	1,100	501	411
19	753	558	720	503	551	714	1,300	2,940	2,380	1,050	510	409
20	e810	561	699	591	543	720	1,280	2,830	2,330	1,010	500	397
21	878	557	706	746	546	718	1,250	2,680	2,290	973	487	385
22	938	540	707	940	533	709	1,210	2,560	2,290	943	473	379
23	956	533	682	1,080	522	700	1,190	2,430	2,360	914	461	368
24	943	556	620	1,180	515	669	1,170	2,320	2,430	902	452	368
25	922	606	611	1,220	512	653	1,240	2,220	2,390	830	456	367
26	894	701	623	1,210	509	640	1,430	2,110	2,280	814	453	366
27	858	744	613	1,180	505	693	1,610	2,020	2,180	786	444	352
28	814	729	609	1,140	501	881	1,740	1,980	2,110	764	435	355
29	785	700	575	1,090	---	1,150	1,780	2,020	2,170	737	422	355
30	754	677	565	1,050	---	1,330	1,730	2,100	2,190	715	402	367
31	729	---	577	1,000	---	1,380	---	2,200	---	694	402	---
TOTAL	21,686	19,115	19,684	21,252	18,500	21,582	39,400	65,260	83,600	38,262	16,096	11,696
MEAN	700	637	635	686	661	696	1,313	2,105	2,787	1,234	519	390
MAX	956	744	746	1,220	956	1,380	1,780	2,940	4,700	2,150	669	459
MIN	503	533	543	417	501	498	1,140	1,340	2,110	694	402	352
AC-FT	43,010	37,910	39,040	42,150	36,690	42,810	78,150	129,400	165,800	75,890	31,930	23,200
CFSM	1.04	0.95	0.95	1.02	0.98	1.04	1.96	3.14	4.15	1.84	0.77	0.58
IN.	1.20	1.06	1.09	1.18	1.03	1.20	2.18	3.62	4.63	2.12	0.89	0.65

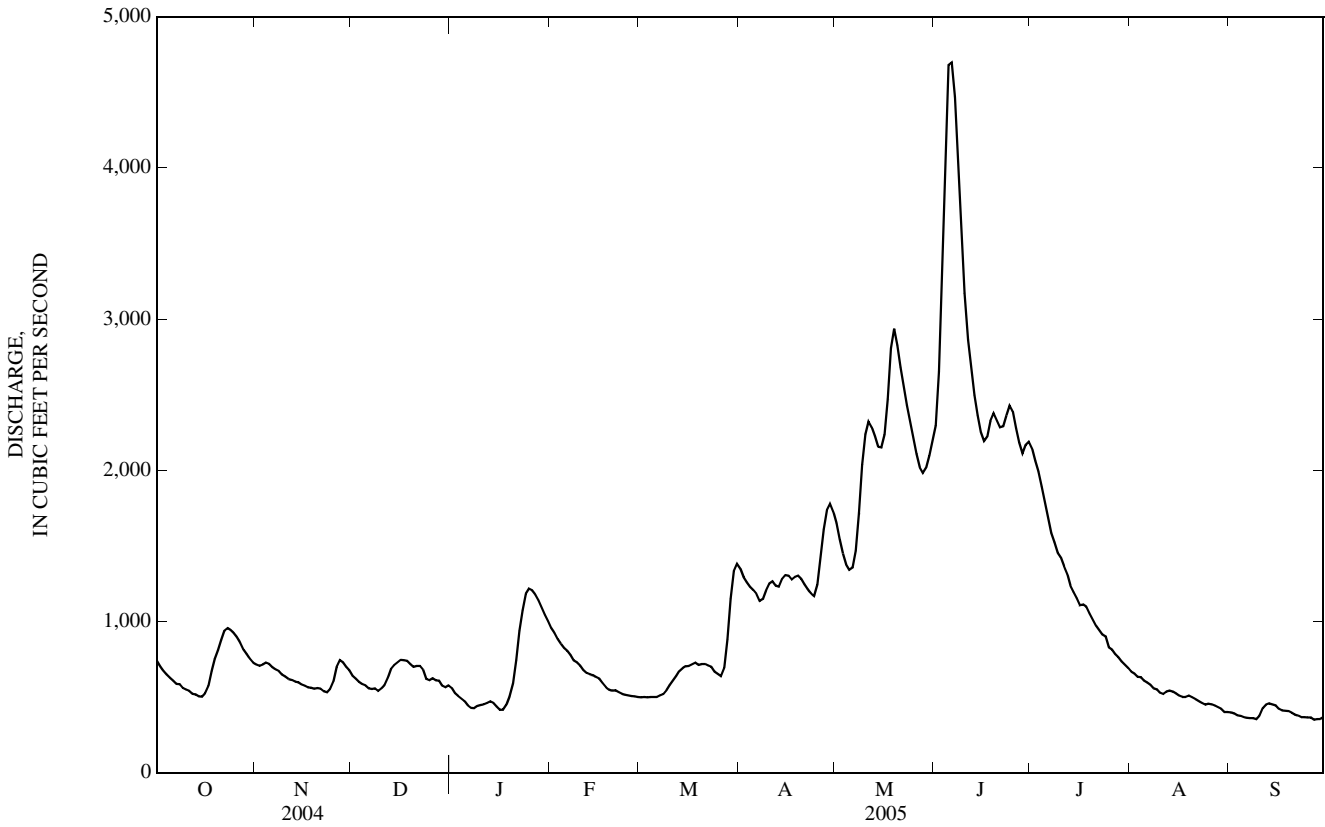
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 2005, BY WATER YEAR (WY)

MEAN	548	591	565	496	498	628	1,513	2,806	3,275	1,620	691	535
MAX	1,682	1,514	1,796	1,298	1,627	1,813	3,228	5,469	5,803	3,310	1,225	1,096
(WY)	(1960)	(1928)	(1934)	(1934)	(1971)	(1986)	(1925)	(1928)	(1974)	(1950)	(1950)	(1965)
MIN	308	290	307	271	236	244	675	1,670	1,433	609	322	285
(WY)	(1938)	(1937)	(1937)	(1930)	(1930)	(1930)	(1937)	(1941)	(1941)	(1941)	(1941)	(1988)

12370000 SWAN RIVER NEAR BIGFORK, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1922 - 2005	
ANNUAL TOTAL	352,666		376,133			
ANNUAL MEAN	964		1,031		1,148	
HIGHEST ANNUAL MEAN					1,860	1928
LOWEST ANNUAL MEAN					607	1941
HIGHEST DAILY MEAN	3,030	Jun 8	4,700	Jun 6	8,800	Jun 21, 1974
LOWEST DAILY MEAN	272	Jan 7	352	Sep 27	193	Jan 26, 1930
ANNUAL SEVEN-DAY MINIMUM	288	Jan 4	361	Sep 24	195	Jan 26, 1930
MAXIMUM PEAK FLOW			4,860	Jun 5	8,890	Jun 20, 1974
MAXIMUM PEAK STAGE			5.45	Jun 5	7.34	Jun 20, 1974
INSTANTANEOUS LOW FLOW			322	Sep 27	a193	Jan 26, 1930
ANNUAL RUNOFF (AC-FT)	699,500		746,100		832,000	
ANNUAL RUNOFF (CFSM)	1.44		1.54		1.71	
ANNUAL RUNOFF (INCHES)	19.55		20.85		23.25	
10 PERCENT EXCEEDS	1,940		2,230		2,820	
50 PERCENT EXCEEDS	710		704		631	
90 PERCENT EXCEEDS	334		443		362	

a--Jan. 26-29, 1930; site and datum then in use.
 e--Estimated.



12371550 FLATHEAD LAKE AT POLSON, MT

LOCATION.--Lat 47°41'49", long 114°09'41" (NAD 27), in SW¹/₄ SE¹/₄ NE¹/₄ sec.4, T.22 N., R.20 W., Lake County, Hydrologic Unit 17010208, at Polson.

DRAINAGE AREA.--7,086 mi².

PERIOD OF RECORD.--October 1, 1998 to current year. April to August 1900, daily lake elevations only, at site near Holt, 6 mi east of Somers (elevation unknown). August 1908 to November 1909 (fragmentary). January 1910 to Sept.30, 1998 published as "at Somers". Monthend contents only for some periods, published in WSP 1316. Prior to April 1923, published as "at Polson." Oct. 1, 1941 to Sept. 30, 1998, unpublished daily lake elevations at Polson are available in files of the USGS Water Science Center located in Helena, Montana.

GAGE.--Water-stage recorder. Elevation of gage is 2,800 ft above local (Somers) datum of 2,799 ft (NGVD 29). July 1 to Dec. 12, 1923, nonrecording gage at Somers site.

REMARKS--Natural storage in Flathead Lake increased by construction of Kerr Dam 4 mi downstream from natural lake outlet; storage began Apr. 11, 1938. Usable capacity, 1,791,000 acre-ft at controlled spillway elevation 2,893.00 ft. Dead storage unknown below 2,878 ft, elevation of natural outlet. Minimum operating level, 572,300 acre-ft, elevation 2,883.00 ft for on-site power generation. All elevations are referenced to the National Geodetic Vertical Datum of 1929. Water is used for power production, flood control, recreation, and irrigation. Figures given herein represent usable contents. U.S. Geological Survey satellite telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 2,208,000 acre-ft, June 19, 1933, elevation, 2,896.26 ft; minimum, 347,000 acre-ft, Dec. 5, 1936, elevation, 2,881.07 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 1,791,000 acre-ft, July 25, elevation, 2,893.00 ft; minimum, 1,069,000 acre-ft, Jan. 19, 20, elevation, 2,887.15 ft.

CAPACITY TABLE (ELEVATION, IN FEET AND CONTENTS, IN ACRE-FT)

Elevation	Contents
2,883	572,300
2,886	930,300
2,888	1,172,000
2,890	1,417,000
2,892	1,665,000
2,894	1,917,000

ELEVATION OF RESERVOIR WATER SURFACE ABOVE DATUM, FEET, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2,892.53	2,891.15	2,890.72	2,888.51	2,887.99	2,887.31	2,887.87	2,890.38	2,892.11	2,892.86	2,892.76	2,892.61
2	2,892.43	2,891.09	2,890.63	2,888.32	2,888.00	2,887.28	2,887.91	2,890.42	2,892.28	2,892.82	2,892.72	2,892.59
3	2,892.34	2,891.08	2,890.55	2,888.18	2,888.01	2,887.25	2,887.99	2,890.44	2,892.50	2,892.82	2,892.73	2,892.54
4	2,892.28	2,891.08	2,890.52	2,888.09	2,887.98	2,887.23	2,888.01	2,890.46	2,892.72	2,892.80	2,892.72	2,892.52
5	2,892.23	2,891.08	2,890.41	2,887.96	2,887.95	2,887.22	2,888.05	2,890.49	2,892.85	2,892.81	2,892.70	2,892.50
6	2,892.17	2,891.09	2,890.33	2,887.82	2,888.02	2,887.22	2,888.11	2,890.51	2,892.91	2,892.80	2,892.71	2,892.53
7	2,892.14	2,891.12	2,890.28	2,887.79	2,888.03	2,887.23	2,888.14	2,890.60	2,892.83	2,892.80	2,892.70	2,892.51
8	2,892.13	2,891.11	2,890.18	2,887.72	2,888.01	2,887.27	2,888.18	2,890.73	2,892.75	2,892.81	2,892.72	2,892.49
9	2,892.06	2,891.11	2,890.11	2,887.61	2,888.00	2,887.27	2,888.25	2,890.89	2,892.68	2,892.79	2,892.76	2,892.48
10	2,892.03	2,891.12	2,890.07	2,887.52	2,888.00	2,887.30	2,888.31	2,891.06	2,892.64	2,892.78	2,892.78	2,892.54
11	2,891.99	2,891.13	2,889.94	2,887.47	2,887.99	2,887.31	2,888.37	2,891.14	2,892.62	2,892.78	2,892.78	2,892.60
12	2,891.95	2,891.13	2,889.96	2,887.41	2,887.96	2,887.36	2,888.45	2,891.15	2,892.64	2,892.77	2,892.82	2,892.59
13	2,891.91	2,891.11	2,889.93	2,887.41	2,887.93	2,887.36	2,888.57	2,891.16	2,892.63	2,892.74	2,892.77	2,892.59
14	2,891.84	2,891.11	2,889.88	2,887.35	2,887.92	2,887.37	2,888.67	2,891.16	2,892.64	2,892.72	2,892.75	2,892.60
15	2,891.84	2,891.10	2,889.86	2,887.28	2,887.91	2,887.39	2,888.86	2,891.19	2,892.57	2,892.72	2,892.76	2,892.61
16	2,891.76	2,891.09	2,889.82	2,887.24	2,887.88	2,887.36	2,889.02	2,891.26	2,892.56	2,892.72	2,892.76	2,892.65
17	2,891.83	2,891.08	2,889.78	2,887.20	2,887.85	2,887.43	2,889.17	2,891.35	2,892.54	2,892.76	2,892.72	2,892.64
18	2,891.72	2,891.05	2,889.74	2,887.18	2,887.80	2,887.51	2,889.32	2,891.53	2,892.63	2,892.77	2,892.80	2,892.61
19	2,891.73	2,891.03	2,889.62	2,887.15	2,887.76	2,887.56	2,889.50	2,891.57	2,892.72	2,892.78	2,892.76	2,892.60
20	2,891.71	2,891.03	2,889.55	2,887.15	2,887.74	2,887.55	2,889.58	2,891.62	2,892.75	2,892.84	2,892.76	2,892.63
21	2,891.66	2,890.99	2,889.51	2,887.20	2,887.66	2,887.54	2,889.62	2,891.60	2,892.76	2,892.91	2,892.77	2,892.65
22	2,891.60	2,890.97	2,889.46	2,887.31	2,887.63	2,887.65	2,889.69	2,891.58	2,892.74	2,892.94	2,892.77	2,892.64
23	2,891.54	2,890.94	2,889.34	2,887.43	2,887.59	2,887.67	2,889.73	2,891.51	2,892.76	2,892.92	2,892.75	2,892.65
24	2,891.51	2,890.89	2,889.24	2,887.53	2,887.55	2,887.62	2,889.78	2,891.51	2,892.85	2,892.95	2,892.75	2,892.62
25	2,891.53	2,890.88	2,889.16	2,887.64	2,887.50	2,887.59	2,889.83	2,891.52	2,892.90	2,893.00	2,892.76	2,892.56
26	2,891.50	2,890.87	2,889.07	2,887.73	2,887.45	2,887.59	2,889.93	2,891.53	2,892.91	2,892.94	2,892.75	2,892.54
27	2,891.45	2,890.89	2,888.97	2,887.81	2,887.41	2,887.65	2,890.10	2,891.57	2,892.91	2,892.89	2,892.75	2,892.60
28	2,891.39	2,890.87	2,888.86	2,887.87	2,887.36	2,887.67	2,890.16	2,891.64	2,892.92	2,892.87	2,892.74	2,892.55
29	2,891.32	2,890.84	2,888.76	2,887.92	---	2,887.72	2,890.23	2,891.78	2,892.93	2,892.84	2,892.72	2,892.48
30	2,891.22	2,890.79	2,888.68	2,887.95	---	2,887.75	2,890.32	2,891.84	2,892.91	2,892.80	2,892.67	2,892.49
31	2,891.19	---	2,888.65	2,887.97	---	2,887.84	---	2,891.97	---	2,892.79	2,892.62	---
MAX	2,892.53	2,891.15	2,890.72	2,888.51	2,888.03	2,887.84	2,890.32	2,891.97	2,892.93	2,893.00	2,892.82	2,892.65
MIN	2,891.19	2,890.79	2,888.65	2,887.15	2,887.36	2,887.22	2,887.87	2,890.38	2,892.11	2,892.72	2,892.62	2,892.48

CONTENTS IN THOUSANDS OF ACRE-FEET, AT THE END OF MONTH
1,565 1,515 1,251 1,168 1,095 1,153 1,457 1,661 1,780 1,765 1,743 1,727

CHANGE IN CONTENTS, IN ACRE-FEET
-182,000 -50,000 -264,000 -83,000 -73,000 58,000 304,000 204,000 119,000 -15,000 -22,000 -16,000

CALENDAR YEAR 2004 +90,000
WATER YEAR 2005 -20,000

12372000 FLATHEAD RIVER NEAR POLSON, MT

LOCATION.--Lat 47°40'49", long 114°14'45" (NAD 27), in SW¹/₄ NE¹/₄ SE¹/₄ sec. 11, T.22 N., R.21 W., Lake County, Hydrologic Unit 17010212, on left bank 0.5 mi downstream from Kerr Dam, 4.0 mi west of Polson, 5.0 mi downstream from Flathead Lake, and at river mile 71.5.

DRAINAGE AREA.--7,096 mi².

PERIOD OF RECORD.--July 1907 to current year.

REVISED RECORDS.--WSP 652: 1926. WSP 752: 1932. WSP 1182: 1948. WSP 1216: Drainage area. WSP 1246: 1928(M). WSP 1636: 1958 (adjusted runoff).

GAGE.--Water-stage recorder. Elevation of gage is 2,692.70 ft (NGVD 29) (levels by The Montana Power Co.). Prior to Oct. 1, 1941, nonrecording gages or water-stage recorder at several sites near highway bridge at old site of Michell's ferry 6 mi downstream from present site, all at elevation 2,629.20 ft (from river-profile survey).

REMARKS.--Records excellent. Flow regulated by Flathead Lake (Kerr Dam) since April 1938 (station number 12371500) and Hungry Horse Reservoir (station number 12362000) since September 1951. Diversions upstream from station for irrigation of about 10,000 acres. Flathead project pumps can divert up to 12,000 acre-ft per month when required for irrigation of lands downstream from station. U.S.Geological Survey satellite telemeter at station. Two unpublished observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--98 years, 11,470 ft³/s, 21.95 in/yr, 8,310,000 acre-ft/yr, adjusted for change in contents in Hungry Horse Reservoir and Flathead Lake.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 82,800 ft³/s, May 29, 1928, gage height, 17.2 ft, site and elevation then in use; minimum probably less than 5.0 ft³/s, Apr. 13, 1938; minimum daily, 32 ft³/s, Apr. 12, 1938.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in June 1894 reached a stage of about 21 ft, present elevation; discharge, about 110,000 ft³/s, from lake elevation-discharge study.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 48,400 ft³/s, June 7, gage height, 15.40 ft; minimum daily, 3,530 ft³/s, Sept. 21, 22.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11,700	8,670	9,550	12,300	7,620	7,550	3,760	14,800	14,000	20,200	10,900	7,000
2	11,600	8,670	9,950	12,200	7,650	7,090	3,790	14,800	16,500	18,800	10,300	6,130
3	10,300	8,030	9,940	12,300	7,740	6,210	3,790	14,800	19,200	18,200	9,440	5,150
4	9,200	7,250	9,960	12,400	7,680	5,300	3,780	14,800	25,700	17,000	9,060	4,290
5	7,880	6,840	9,950	11,700	7,210	4,540	3,790	14,900	34,200	15,200	8,460	3,770
6	7,530	6,850	10,000	10,900	6,790	4,030	3,770	15,000	40,900	14,500	8,020	3,790
7	7,530	6,840	10,100	9,980	6,780	3,780	3,790	15,000	47,500	14,500	7,990	3,790
8	7,520	6,840	10,100	9,570	6,700	3,750	3,810	15,000	47,400	14,500	7,750	3,800
9	7,530	6,850	10,100	8,950	6,710	3,750	4,110	15,000	43,800	14,500	7,650	3,820
10	7,540	6,820	10,500	8,040	6,780	3,760	4,550	16,000	38,700	14,500	7,660	3,820
11	7,650	6,800	10,900	7,560	6,800	3,760	5,050	18,700	36,400	14,400	7,510	3,860
12	7,740	6,830	10,800	7,600	6,720	3,740	5,180	21,200	35,000	14,100	7,490	3,870
13	7,740	6,810	11,000	7,750	6,720	3,730	5,210	22,700	35,000	13,700	7,660	3,750
14	7,730	6,830	11,100	7,860	6,740	3,740	5,230	22,700	33,800	12,500	7,620	3,570
15	7,660	6,830	11,600	7,730	7,210	3,740	5,270	22,600	29,000	11,100	7,680	3,580
16	7,670	6,810	12,100	7,810	7,740	3,750	5,510	22,600	25,900	10,300	7,680	3,560
17	7,730	6,810	12,100	7,760	7,750	3,770	6,040	23,600	24,500	9,960	7,770	3,540
18	7,760	6,850	12,100	7,680	7,740	3,750	6,980	26,600	24,800	10,000	7,780	3,540
19	8,280	6,870	12,100	7,630	7,690	3,760	7,890	28,700	28,200	10,000	7,790	3,580
20	8,700	6,880	12,100	6,980	7,680	3,770	8,850	28,800	27,400	10,000	7,820	3,560
21	8,690	6,880	12,100	6,180	7,660	3,780	9,720	28,800	25,000	10,100	7,750	3,530
22	8,690	6,850	12,300	5,820	7,640	3,750	11,500	28,700	23,100	10,000	7,910	3,530
23	8,730	6,920	12,100	5,810	7,630	3,760	13,200	26,400	20,100	10,000	7,800	3,830
24	8,780	6,970	12,200	5,820	7,650	3,750	13,700	22,500	19,000	10,000	7,680	4,230
25	8,770	7,020	12,200	6,420	7,620	3,790	13,700	20,600	19,900	10,600	7,630	4,280
26	8,730	7,030	12,300	7,370	7,670	3,810	13,700	18,200	20,000	11,000	7,620	4,270
27	8,750	6,980	12,300	7,730	7,610	3,810	14,000	15,300	18,800	11,000	7,620	4,270
28	8,770	6,970	12,100	7,780	7,610	3,810	14,700	13,300	18,700	11,000	7,500	4,270
29	8,680	7,480	12,100	7,680	---	3,800	14,800	12,600	20,200	10,900	7,530	4,280
30	8,660	8,570	12,200	7,630	---	3,790	14,800	12,500	21,000	10,900	7,630	4,290
31	8,650	---	12,200	7,650	---	3,780	---	12,500	---	11,100	7,600	---
TOTAL	262,890	213,650	350,150	260,590	205,540	128,900	233,970	599,700	833,700	394,560	248,300	122,550
MEAN	8,480	7,122	11,300	8,406	7,341	4,158	7,799	19,350	27,790	12,730	8,010	4,085
MAX	11,700	8,670	12,300	12,400	7,750	7,550	14,800	28,800	47,500	20,200	10,900	7,000
MIN	7,520	6,800	9,550	5,810	6,700	3,730	3,760	12,500	14,000	9,960	7,490	3,530
AC-FT	521,400	423,800	694,500	516,900	407,700	255,700	464,100	1,190,000	1,654,000	782,600	492,500	243,100
CFSM	1.20	1.00	1.59	1.18	1.03	0.59	1.10	2.73	3.92	1.79	1.13	0.58
IN.	1.38	1.12	1.84	1.37	1.08	0.68	1.23	3.14	4.37	2.07	1.30	0.64
AC-FT†	-149,000	-58,000	-239,000	-35,000	-41,000	+120,000	+265,000	+390,000	+232,000	-208,000	-285,000	-64,000

ADJUSTED FOR CHANGE IN CONTENTS IN HUNGRY HORSE RESERVOIR AND FLATHEAD LAKE

MEAN	6,056	6,147	7,408	7,837	6,603	6,110	12,250	25,700	31,690	9,345	3,375	3,010
CFSM	0.86	0.87	1.05	1.11	0.93	0.86	1.73	3.64	4.48	1.32	0.48	0.43
IN.	0.99	0.97	1.21	1.28	0.97	1.00	1.93	4.19	5.00	1.52	0.55	0.48
AC-FT	372,400	365,800	455,500	481,900	366,700	375,700	729,100	1,580,000	1,886,000	574,600	207,500	179,100

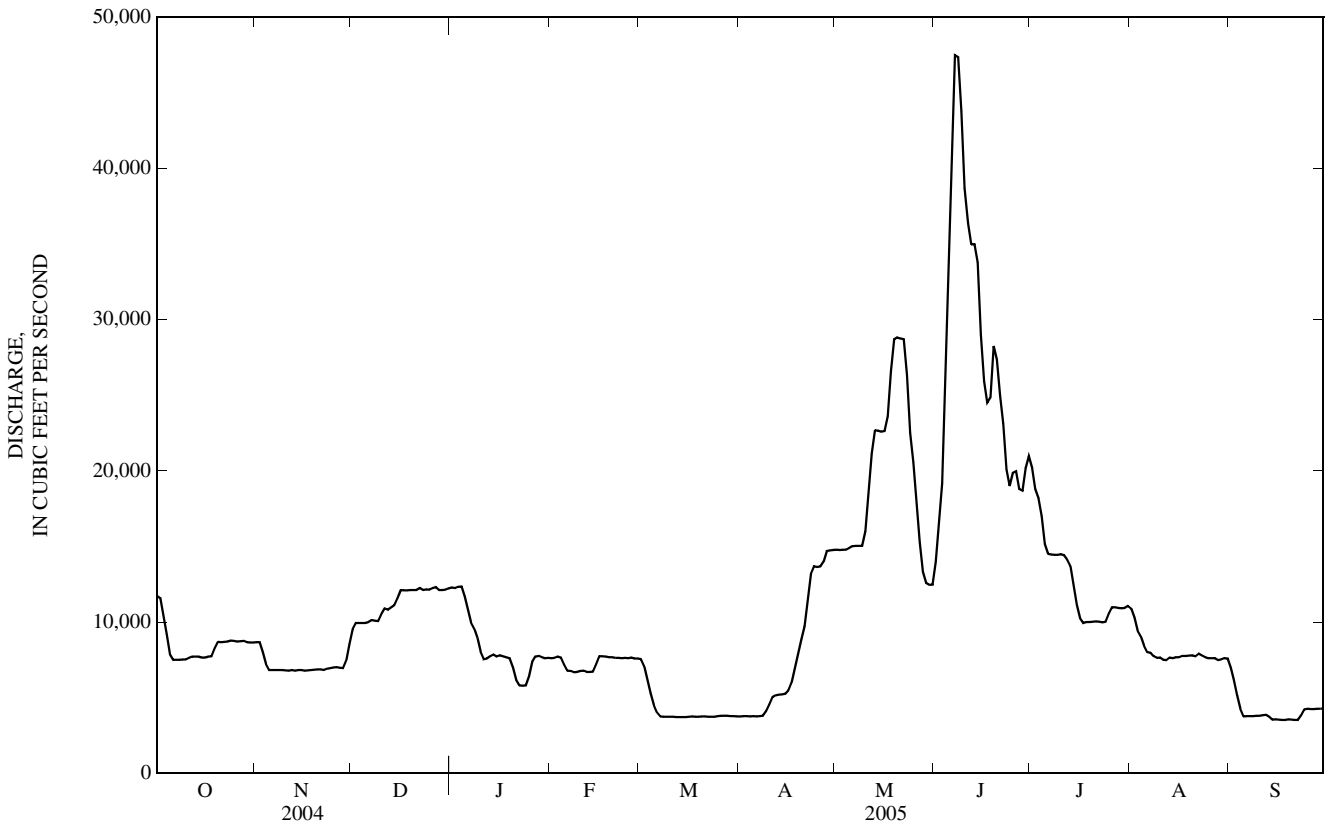
OBSERVED

CAL YR 2004	TOTAL	3,566,020	MEAN	9,743	MAX	22,100	MIN	3,320	AC-FT	7,073,000	† +446,000
WTR YR 2005	TOTAL	3,854,500	MEAN	10,560	MAX	47,500	MIN	3,530	AC-FT	7,645,000	† -72,000

ADJUSTED

CAL YR 2004	TOTAL	3,811,999	MEAN	10,420	CFSM	1.47	IN	19.49	AC-FT	7,519,000
WTR YR 2005	TOTAL	3,818,654	MEAN	10,460	CFSM	1.48	IN	20.09	AC-FT	7,573,000

† Change in contents in acre-feet, in Hungry Horse Reservoir and Flathead Lake.



12374250 MILL CREEK ABOVE BASSOO CREEK, NEAR NIARADA, MT

LOCATION.--Lat 47°49'47", long 114°41'48" (NAD 27), in SE¹/₄NW¹/₄NE¹/₄ 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 fair except those for estimated daily discharges, which are poor. No known regulation or diversion 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	1.9	e2.0	e1.8	1.8	2.4	e2.3	2.9	8.9	7.0	5.1	2.8	2.0
2	1.9	e2.1	1.9	1.9	2.3	e2.3	3.4	8.8	8.0	4.8	2.8	2.0
3	1.9	e2.2	1.9	1.9	e2.5	e2.3	3.2	8.4	8.4	5.1	2.6	2.0
4	1.9	e2.1	1.9	2.0	e2.6	e2.3	3.3	8.4	8.0	4.9	2.5	2.0
5	1.9	e2.1	e1.8	1.8	e2.5	e2.3	3.2	7.7	7.3	4.7	2.4	2.0
6	1.9	e2.1	1.9	e1.9	e2.4	e2.3	3.1	7.7	8.0	4.4	2.4	2.0
7	1.9	e2.1	1.9	e2.0	e2.3	e2.3	3.3	7.7	8.4	4.0	2.4	1.9
8	1.9	e2.1	1.9	e2.2	e2.2	e2.4	3.9	8.7	8.4	3.8	2.3	2.0
9	1.8	e2.1	2.0	e2.1	e2.0	e2.4	3.9	8.4	8.4	3.7	2.3	1.9
10	1.8	e2.1	2.5	e1.9	e1.9	e2.5	3.7	8.4	8.1	4.1	2.3	2.8
11	1.8	e2.1	3.8	e2.0	e1.7	2.8	3.7	8.8	7.7	4.2	2.3	3.3
12	1.8	e2.1	4.8	e2.1	e1.8	2.9	4.0	9.6	7.7	4.0	2.4	3.2
13	1.7	e2.1	11	e2.0	e2.1	2.6	4.3	9.8	7.7	3.8	2.7	3.1
14	1.7	e2.1	8.5	1.8	e2.1	2.5	4.6	9.6	7.3	3.7	2.8	3.0
15	1.7	e2.0	2.2	e1.7	e2.0	2.5	4.2	9.6	7.3	3.6	2.5	2.6
16	1.8	e2.0	3.3	1.8	e1.9	2.6	4.2	10	6.4	3.5	2.4	2.5
17	2.2	e2.0	2.5	1.9	e1.9	2.6	4.4	11	7.2	3.9	2.3	2.6
18	2.5	e1.9	2.4	2.1	e1.9	2.5	4.5	11	6.7	4.0	2.6	2.6
19	e1.9	1.8	2.0	6.2	e2.1	2.7	4.6	11	6.6	3.6	2.8	2.5
20	e1.9	1.7	2.0	10	e2.1	2.5	4.6	11	6.1	3.5	2.5	2.4
21	e2.0	e1.7	2.0	4.6	e2.1	2.5	4.6	11	6.0	3.4	2.3	2.3
22	e2.0	1.8	e1.7	4.6	e2.1	e2.4	4.5	10	5.8	3.3	2.2	2.3
23	e2.0	1.9	e1.6	3.5	e2.1	e2.2	4.6	10	5.5	3.2	2.1	2.3
24	e2.0	1.9	e1.9	3.5	e2.1	e2.1	6.1	9.6	5.5	3.0	2.1	2.3
25	e2.0	2.0	e2.1	3.0	e2.1	2.3	5.9	9.6	5.5	3.0	2.6	2.4
26	e2.0	1.9	e2.0	2.8	e2.2	2.3	6.7	9.2	5.5	3.0	2.5	2.4
27	e2.0	e1.7	2.0	2.8	e2.2	3.0	7.8	8.8	5.7	3.0	2.3	2.4
28	e2.0	e1.7	1.9	2.7	e2.2	4.2	8.3	8.4	6.0	2.8	2.2	2.4
29	e2.0	e1.6	1.9	2.6	---	3.6	8.7	8.0	6.0	2.9	2.1	2.4
30	e2.0	e1.7	1.9	2.5	---	3.2	8.9	7.7	5.5	2.8	2.0	2.4
31	e2.0	---	1.9	2.4	---	3.0	---	7.3	---	2.8	2.0	---
TOTAL	59.8	58.7	82.9	86.1	59.8	80.4	143.1	284.1	207.7	115.6	74.5	72.0
MEAN	1.93	1.96	2.67	2.78	2.14	2.59	4.77	9.16	6.92	3.73	2.40	2.40
MAX	2.5	2.2	11	10	2.6	4.2	8.9	11	8.4	5.1	2.8	3.3
MIN	1.7	1.6	1.6	1.7	1.7	2.1	2.9	7.3	5.5	2.8	2.0	1.9
AC-FT	119	116	164	171	119	159	284	564	412	229	148	143
CFSM	0.10	0.10	0.14	0.14	0.11	0.13	0.24	0.47	0.35	0.19	0.12	0.12
IN.	0.11	0.11	0.16	0.16	0.11	0.15	0.27	0.54	0.39	0.22	0.14	0.14

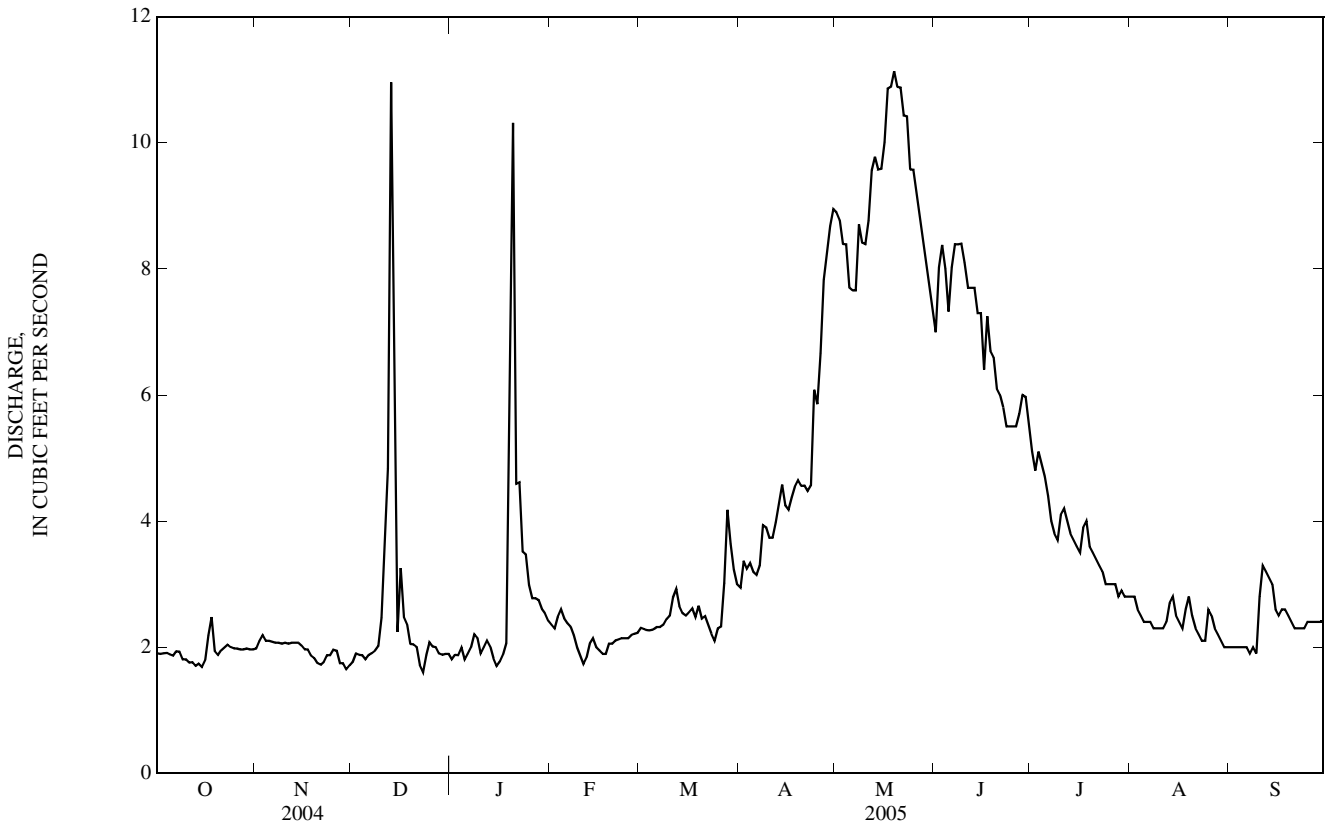
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 2005, BY WATER YEAR (WY)

MEAN	2.56	3.34	3.48	3.21	3.72	7.00	19.0	24.0	14.9	5.53	3.01	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	1.96	2.12	1.94	1.71	2.55	4.77	9.16	4.89	2.50	1.88	1.53
(WY)	(2004)	(2005)	(1988)	(1985)	(1994)	(1985)	(2005)	(2005)	(1987)	(1994)	(2001)	(2001)

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

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1983 - 2005	
ANNUAL TOTAL	1,769.7		1,324.7			
ANNUAL MEAN	4.84		3.63		7.68	
HIGHEST ANNUAL MEAN					18.8	1997
LOWEST ANNUAL MEAN					3.63	2005
HIGHEST DAILY MEAN	25	May 31	11	Dec 13	155	Apr 28, 1997
LOWEST DAILY MEAN	1.0	Jan 5	1.6	Nov 29	1.0	Jan 5, 2004
ANNUAL SEVEN-DAY MINIMUM	1.7	Jan 1	1.8	Oct 9	1.3	Sep 21, 2001
MAXIMUM PEAK FLOW			a14	Jan 20	c173	Apr 28, 1997
MAXIMUM PEAK STAGE			b2.15	Feb 25	d6.83	May 20, 1991
INSTANTANEOUS LOW FLOW					f0.85	Jan 6, 1988
ANNUAL RUNOFF (AC-FT)	3,510		2,630		5,560	
ANNUAL RUNOFF (CFSM)	0.247		0.185		0.392	
ANNUAL RUNOFF (INCHES)	3.36		2.51		5.32	
10 PERCENT EXCEEDS	11		8.0		18	
50 PERCENT EXCEEDS	2.5		2.5		3.2	
90 PERCENT EXCEEDS	1.9		1.9		2.0	

a--Gage height, 1.81 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

LOCATION.--Lat 47°29'30", long 114°01'33" (NAD 27), in NW¹/₄NE¹/₄SW¹/₄ sec.16, T.20 N., R.19 W., Lake County, Hydrologic Unit 17010212, Flathead Indian Reservation, on right bank 200 ft upstream from Pablo Feeder Canal, 2.2 mi northeast of Kicking Horse Reservoir, 4.5 mi southeast of Ronan, and at river mile 2.6.

DRAINAGE AREA.--7.57 mi².

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

GAGE.--Water-stage recorder. Elevation of gage is 3,320 ft (NGVD 29).

REMARKS.--Records good except those for estimated daily discharges, which are fair. No known regulation or diversion 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

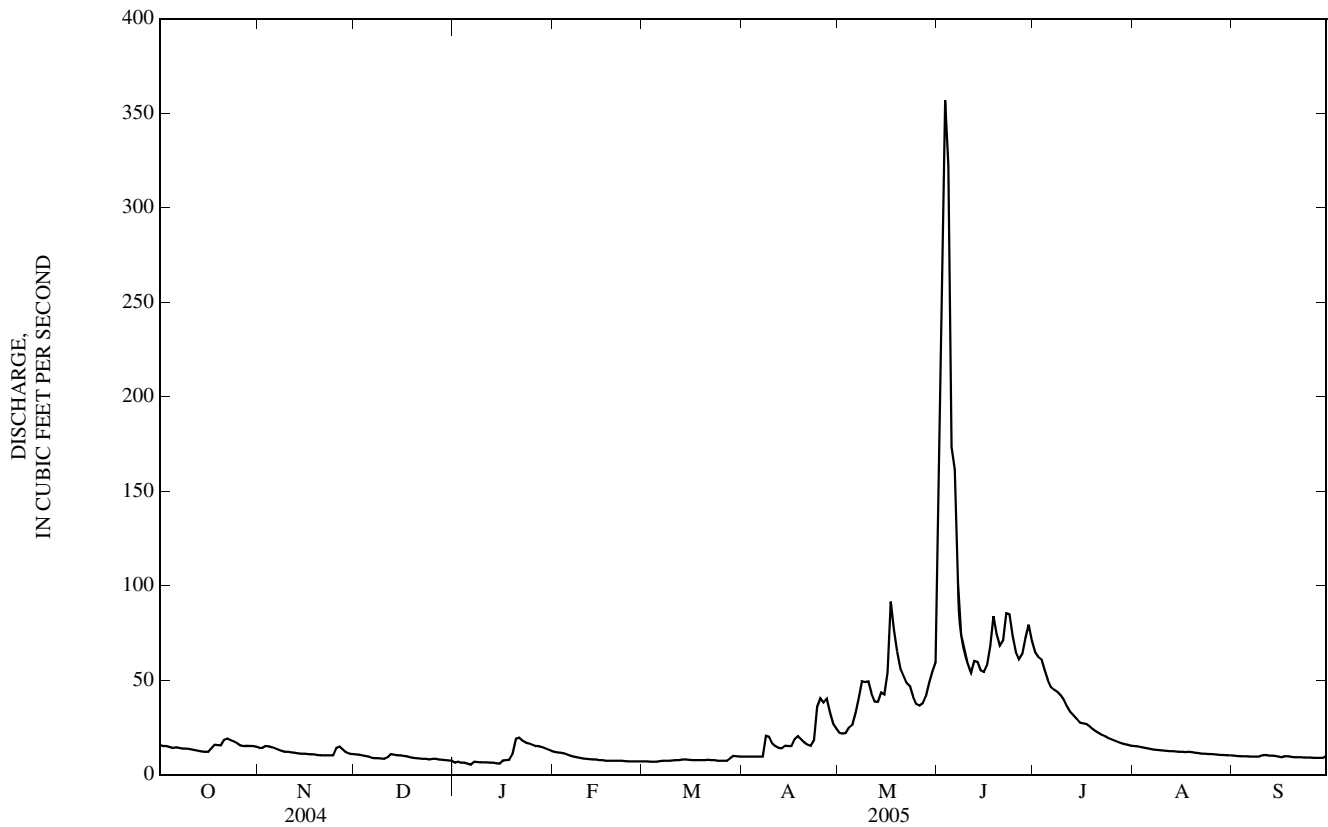
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	14	11	e6.5	12	7.2	9.6	22	121	65	15	10
2	15	14	11	e7.0	12	7.2	9.6	22	193	62	15	10
3	15	15	10	e6.5	12	7.0	9.6	22	357	61	15	9.9
4	15	15	10	e6.5	11	6.9	9.6	25	322	55	14	9.9
5	14	15	9.7	e6.0	11	7.0	9.6	26	173	50	14	9.8
6	14	14	9.0	e5.5	10	7.3	9.6	33	162	46	14	9.7
7	14	13	8.8	6.9	9.6	7.5	9.6	41	102	45	13	9.6
8	14	13	8.8	6.9	9.4	7.5	21	49	74	44	13	9.6
9	14	12	8.6	6.6	9.0	7.5	20	49	67	42	13	9.6
10	14	12	8.5	6.6	8.7	7.7	17	49	59	40	13	10
11	13	12	9.3	6.5	8.5	7.8	15	43	54	36	13	10
12	13	12	11	6.4	8.3	7.9	14	39	60	33	13	10
13	13	11	11	6.4	8.2	8.1	14	39	60	32	13	10
14	12	11	10	6.0	8.1	8.1	15	43	55	30	12	9.9
15	12	11	10	6.0	7.9	7.9	15	42	54	28	12	9.6
16	12	11	10	7.6	7.8	7.8	15	54	58	27	12	9.4
17	14	11	9.8	7.8	7.5	7.7	19	92	68	27	12	9.8
18	16	11	9.3	7.9	7.5	7.8	20	77	84	26	12	9.8
19	16	10	9.1	11	7.5	7.8	19	65	74	24	12	9.5
20	16	10	8.8	19	7.5	7.8	17	56	68	23	12	9.3
21	18	10	8.6	20	7.5	8.0	16	52	71	22	12	9.3
22	19	10	8.5	18	7.5	7.8	15	49	85	21	11	9.2
23	18	10	8.4	17	7.3	7.8	18	47	85	20	11	9.1
24	18	10	8.2	17	7.2	7.5	36	41	74	19	11	9.2
25	17	14	8.5	16	7.2	7.5	40	37	65	19	11	9.2
26	16	15	8.4	15	7.2	7.5	38	37	61	18	11	9.0
27	15	13	8.1	15	7.2	7.5	40	38	64	17	11	9.0
28	15	12	8.0	15	7.2	8.8	33	42	72	17	11	8.9
29	15	11	7.8	14	---	10	27	49	79	16	10	9.0
30	15	11	7.7	13	---	9.9	24	54	71	16	10	9.9
31	15	---	7.5	13	---	9.6	---	59	---	15	10	---
TOTAL	463	363	283.4	322.6	241.8	243.4	575.2	1,393	2,992	996	381	287.2
MEAN	14.9	12.1	9.14	10.4	8.64	7.85	19.2	44.9	99.7	32.1	12.3	9.57
MAX	19	15	11	20	12	10	40	92	357	65	15	10
MIN	12	10	7.5	5.5	7.2	6.9	9.6	22	54	15	10	8.9
AC-FT	918	720	562	640	480	483	1,140	2,760	5,930	1,980	756	570
CFSM	1.97	1.60	1.21	1.37	1.14	1.04	2.53	5.94	13.2	4.24	1.62	1.26
IN.	2.28	1.78	1.39	1.59	1.19	1.20	2.83	6.85	14.70	4.89	1.87	1.41

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

MEAN	9.19	9.40	7.80	7.20	6.74	7.80	16.1	44.7	69.6	35.6	13.5	9.87
MAX	14.9	19.2	15.2	11.0	9.97	12.9	25.2	68.6	104	73.6	21.6	19.6
(WY)	(2005)	(1990)	(1990)	(1984)	(1986)	(1986)	(1990)	(1993)	(1984)	(1983)	(1983)	(1985)
MIN	6.06	5.75	5.20	5.45	5.03	4.86	8.80	25.3	35.9	15.5	7.87	6.88
(WY)	(2002)	(2003)	(2003)	(2000)	(1993)	(2002)	(1995)	(1999)	(1987)	(1988)	(1988)	(1988)

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1982 - 2005	
ANNUAL TOTAL	7,334.8		8,541.6			
ANNUAL MEAN	20.0		23.4		19.8	
HIGHEST ANNUAL MEAN					27.2 1983	
LOWEST ANNUAL MEAN					13.7 1992	
HIGHEST DAILY MEAN	106	May 29	357	Jun 3	357	Jun 3, 2005
LOWEST DAILY MEAN	4.0	Jan 5	5.5	Jan 6	3.0	Feb 24, 2003
ANNUAL SEVEN-DAY MINIMUM	4.8	Jan 2	6.4	Jan 9	4.1	Feb 23, 2003
MAXIMUM PEAK FLOW			608	Jun 3	608	Jun 3, 2005
MAXIMUM PEAK STAGE			4.96	Jun 3	4.96	Jun 3, 2005
INSTANTANEOUS LOW FLOW					a2.0	Oct 30, 2002
ANNUAL RUNOFF (AC-FT)	14,550		16,940		14,350	
ANNUAL RUNOFF (CFSM)	2.65		3.09		2.62	
ANNUAL RUNOFF (INCHES)	36.04		41.97		35.56	
10 PERCENT EXCEEDS	48		55		52	
50 PERCENT EXCEEDS	14		12		9.6	
90 PERCENT EXCEEDS	5.8		7.5		6.1	

a--Result of freezeup.
 e--Estimated.



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

LOCATION.--Lat 47°19'23", long 113°58'43" (NAD 27), in NW¹/₄ SW¹/₄ NE¹/₄ 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 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

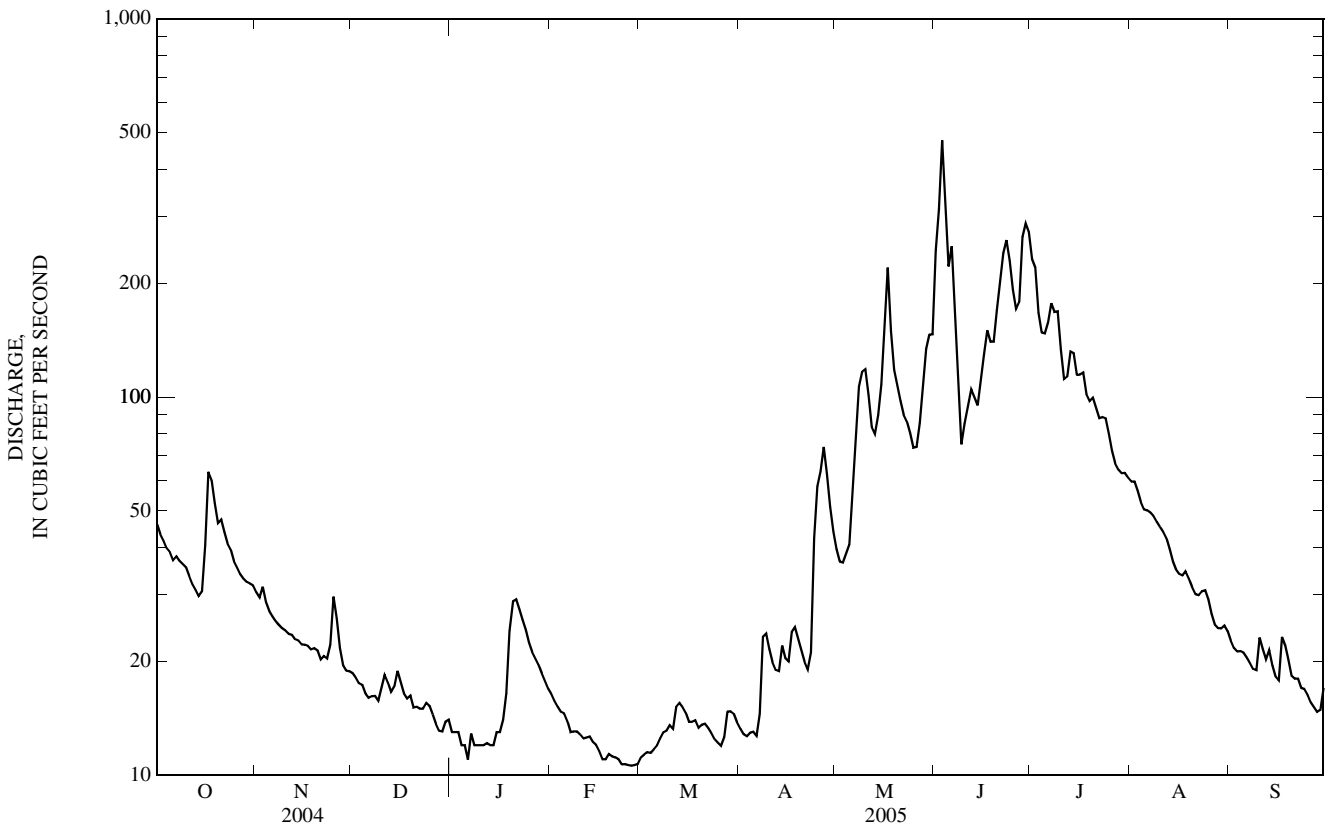
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	46	30	19	e13	16	11	13	40	244	232	60	23
2	43	30	18	e13	16	11	13	37	315	220	60	22
3	42	31	17	e13	15	11	13	37	477	167	57	21
4	40	29	17	e12	15	11	13	39	327	148	53	21
5	39	27	16	e12	15	12	13	41	221	147	50	21
6	37	26	16	e11	14	12	13	56	250	158	50	20
7	38	26	16	13	e13	12	15	80	e165	177	49	20
8	37	25	16	e12	13	13	23	107	e108	168	48	19
9	36	24	16	e12	13	13	24	117	e75	168	47	19
10	35	24	17	e12	13	14	22	118	e85	133	45	23
11	34	24	18	e12	13	13	20	101	e95	111	44	22
12	32	24	18	12	13	15	19	83	e105	113	42	20
13	31	23	17	e12	13	16	19	80	e100	132	40	21
14	30	23	17	e12	12	15	22	89	e95	131	37	19
15	31	22	19	e13	12	15	20	108	e110	114	35	18
16	40	22	18	e13	e12	14	20	150	e130	115	34	18
17	63	22	16	e14	e11	14	24	220	e150	116	34	23
18	60	21	16	16	e11	14	25	150	e140	102	35	22
19	52	22	16	24	11	13	23	118	e140	98	33	20
20	46	21	15	29	11	14	21	107	e170	100	32	18
21	47	20	15	29	11	14	20	98	e200	94	30	e18
22	44	21	e15	27	e11	13	19	90	e240	88	30	e18
23	41	20	e15	26	11	13	21	86	e260	89	31	e17
24	39	22	16	24	11	12	42	80	e230	88	31	17
25	37	30	15	22	11	12	58	74	192	80	29	16
26	35	26	14	21	11	12	64	74	171	72	27	16
27	34	22	14	20	11	13	74	85	178	67	25	15
28	33	20	13	20	11	15	62	106	265	64	24	15
29	32	19	13	19	---	15	51	134	287	63	24	15
30	32	19	14	18	---	15	44	146	273	63	25	17
31	32	---	e14	17	---	14	---	147	---	61	24	---
TOTAL	1,218	715	496	523	350	411	830	2,998	5,798	3,679	1,185	574
MEAN	39.3	23.8	16.0	16.9	12.5	13.3	27.7	96.7	193	119	38.2	19.1
MAX	63	31	19	29	16	16	74	220	477	232	60	23
MIN	30	19	13	11	11	11	13	37	75	61	24	15
AC-FT	2,420	1,420	984	1,040	694	815	1,650	5,950	11,500	7,300	2,350	1,140
CFSM	3.17	1.92	1.29	1.36	1.01	1.07	2.23	7.80	15.6	9.57	3.08	1.54
IN.	3.65	2.15	1.49	1.57	1.05	1.23	2.49	8.99	17.39	11.04	3.56	1.72

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

MEAN	25.3	19.2	13.2	10.7	9.14	10.6	25.5	101	174	114	49.0	30.6
MAX	39.3	28.5	21.3	16.9	12.6	15.4	43.9	168	222	181	75.2	67.4
(WY)	(2005)	(1990)	(1990)	(2005)	(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)

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1982 - 2005	
ANNUAL TOTAL	19,169.2		18,777			
ANNUAL MEAN	52.4		51.4		48.6	
HIGHEST ANNUAL MEAN					61.0	
LOWEST ANNUAL MEAN					35.6	
HIGHEST DAILY MEAN	393	Jun 11	477	Jun 3	477	Jun 3, 2005
LOWEST DAILY MEAN	6.0	Jan 6	11	Jan 6	5.5	Feb 28, 2001
ANNUAL SEVEN-DAY MINIMUM	7.3	Jan 3	11	Feb 17	6.3	Feb 15, 1985
MAXIMUM PEAK FLOW			572	Jun 3	a892	Jun 30, 1991
MAXIMUM PEAK STAGE			4.38	Jun 3	b5.16	Jun 30, 1991
INSTANTANEOUS LOW FLOW					4.4	Dec 28, 2001
ANNUAL RUNOFF (AC-FT)	38,020		37,240		35,200	
ANNUAL RUNOFF (CFSM)	4.22		4.15		3.92	
ANNUAL RUNOFF (INCHES)	57.51		56.33		53.24	
10 PERCENT EXCEEDS	125		133		136	
50 PERCENT EXCEEDS	34		24		22	
90 PERCENT EXCEEDS	8.8		13		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 NE¹/₄NW¹/₄NE¹/₄ 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 unpublished 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 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	24	e19	e17	35	23	38	141	353	142	53	30
2	28	24	e19	e16	34	22	39	137	465	134	52	30
3	27	26	e20	e14	33	22	39	137	564	131	51	29
4	27	25	20	e16	33	22	41	142	571	124	50	28
5	26	24	e18	e16	33	22	39	145	471	118	48	28
6	26	23	19	e16	31	23	40	172	435	112	47	27
7	26	23	20	e16	27	24	45	222	372	108	46	27
8	26	23	19	e16	e24	26	58	257	326	104	45	26
9	25	23	19	e15	e22	29	60	266	294	100	44	26
10	25	22	20	e15	e24	35	60	290	274	99	44	32
11	25	22	25	e15	e26	34	60	289	262	96	43	31
12	24	22	26	e15	e25	40	60	270	276	92	43	29
13	24	21	25	e15	e24	39	59	266	268	88	44	30
14	23	21	25	e14	e24	36	60	278	248	85	43	29
15	24	21	24	e13	e23	35	58	305	236	82	41	27
16	28	21	21	e14	e22	34	57	326	227	81	39	26
17	35	21	21	e16	e21	34	64	398	235	84	39	30
18	31	21	20	e21	e20	33	66	353	229	78	40	30
19	29	21	21	e22	e22	33	66	324	208	74	39	27
20	27	21	20	e23	e25	33	66	316	197	71	37	25
21	27	24	e19	e22	e22	32	65	334	193	69	36	25
22	26	21	e18	e24	e21	31	65	313	188	67	35	24
23	26	20	e18	e31	e21	31	76	306	182	64	35	24
24	28	22	e18	e33	e22	32	144	282	174	63	36	26
25	27	e22	e19	40	e22	31	168	268	168	61	36	26
26	26	e21	e20	40	e22	30	180	262	162	60	34	24
27	25	e21	18	41	e20	31	194	259	161	58	33	23
28	25	e19	22	40	e21	47	177	264	161	57	32	23
29	25	e17	e20	39	---	43	164	269	160	56	31	23
30	24	e18	e19	38	---	41	151	267	152	55	31	23
31	24	---	e17	36	---	39	---	272	---	54	31	---
TOTAL	818	654	629	709	699	987	2,459	8,130	8,212	2,667	1,258	808
MEAN	26.4	21.8	20.3	22.9	25.0	31.8	82.0	262	274	86.0	40.6	26.9
MAX	35	26	26	41	35	47	194	398	571	142	53	32
MIN	23	17	17	13	20	22	38	137	152	54	31	23
AC-FT	1,620	1,300	1,250	1,410	1,390	1,960	4,880	16,130	16,290	5,290	2,500	1,600
CFSM	0.47	0.39	0.36	0.41	0.45	0.57	1.46	4.68	4.89	1.54	0.72	0.48
IN.	0.54	0.43	0.42	0.47	0.46	0.66	1.63	5.40	5.46	1.77	0.84	0.54

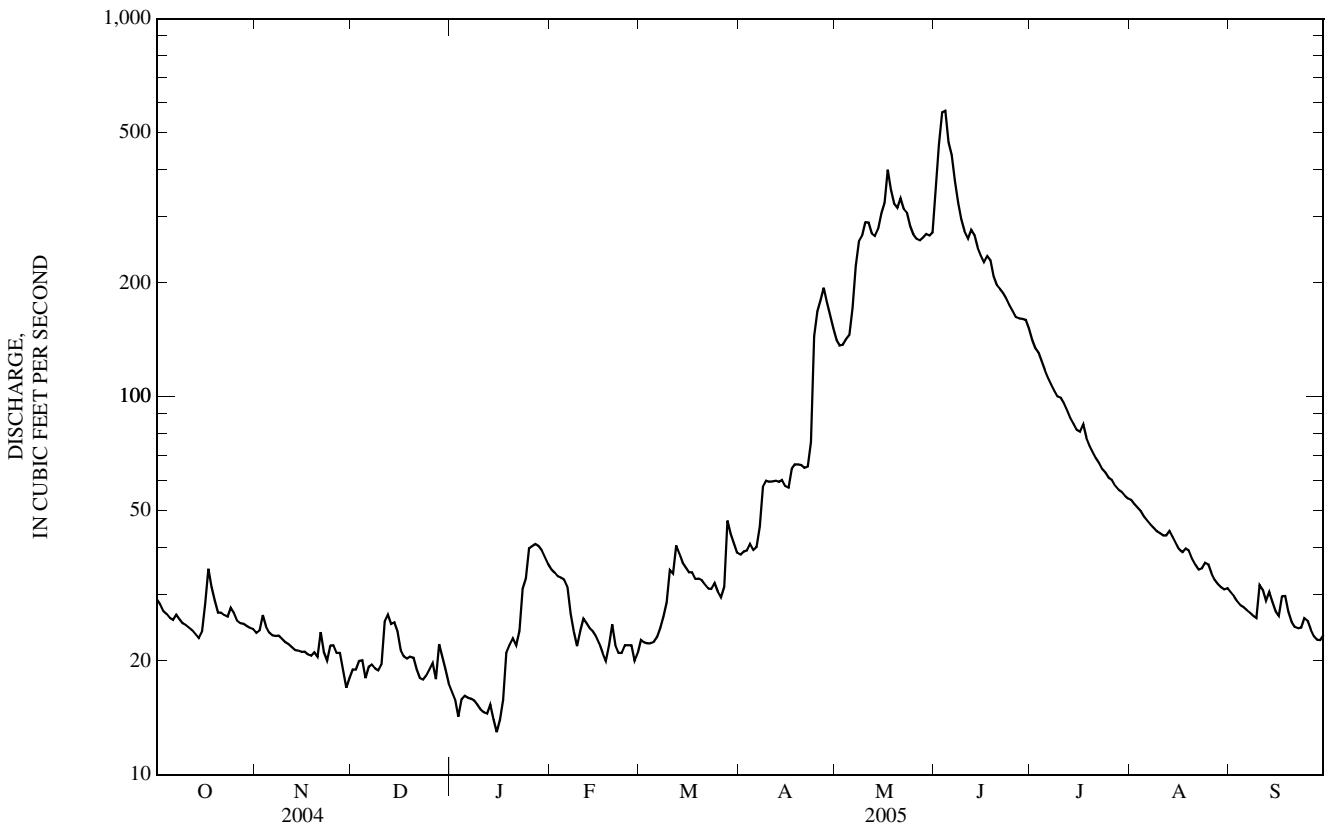
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 2005, BY WATER YEAR (WY)

MEAN	21.8	18.0	14.5	12.2	11.1	15.9	56.8	196	195	76.6	37.8	26.4
MAX	42.2	26.3	37.4	22.9	25.0	56.0	113	459	446	140	53.5	44.5
(WY)	(1986)	(1986)	(1996)	(2005)	(2005)	(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 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1983 - 2005	
ANNUAL TOTAL	18,405.9		28,030			
ANNUAL MEAN	50.3		76.8		57.0	
HIGHEST ANNUAL MEAN					108	1997
LOWEST ANNUAL MEAN					35.0	1992
HIGHEST DAILY MEAN	226	Jun 6	571	Jun 4	1,060	May 17, 1997
LOWEST DAILY MEAN	4.0	Jan 6	13	Jan 15	2.0	Feb 4, 1989
ANNUAL SEVEN-DAY MINIMUM	5.4	Jan 2	14	Jan 10	2.6	Feb 1, 1989
MAXIMUM PEAK FLOW			718	Jun 4	a1,220	May 17, 1997
MAXIMUM PEAK STAGE			3.68	Jun 4	b4.98	Feb 15, 1989
ANNUAL RUNOFF (AC-FT)	36,510		55,600		41,290	
ANNUAL RUNOFF (CFSM)	0.898		1.37		1.02	
ANNUAL RUNOFF (INCHES)	12.23		18.62		13.83	
10 PERCENT EXCEEDS	144		258		156	
50 PERCENT EXCEEDS	28		31		23	
90 PERCENT EXCEEDS	9.0		20		9.5	

a--Gage height, 4.31 ft.
 b--Backwater from ice.
 c--Estimated.



12383500 BIG KNIFE CREEK NEAR ARLEE, MT

LOCATION.--Lat 47°08'51", long 113°58'24" (NAD 27), in NW¹/₄SW¹/₄NW¹/₄ 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 good. No known regulation or diversion 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	9.7	7.8	6.7	6.0	6.0	4.8	5.2	12	44	41	17	11
2	9.7	7.8	6.6	6.0	6.0	4.8	5.3	11	53	40	17	11
3	9.4	7.9	6.6	5.8	6.0	4.7	5.3	11	61	39	16	11
4	9.3	7.8	6.6	5.7	6.0	4.7	5.5	11	67	37	16	11
5	9.3	7.7	6.6	5.6	6.0	4.7	5.3	11	60	35	16	11
6	9.0	7.5	6.6	5.5	5.8	4.7	5.2	12	55	33	16	11
7	9.3	7.5	6.6	5.4	5.7	4.9	5.5	18	51	32	15	11
8	9.0	7.5	6.6	5.4	5.7	4.8	6.4	23	47	31	15	10
9	8.9	7.5	6.6	5.3	5.7	5.0	6.3	23	44	30	15	10
10	8.9	7.5	6.6	5.2	5.7	5.0	6.3	26	43	29	15	12
11	8.7	7.5	6.6	5.2	5.7	5.0	6.2	26	42	28	15	11
12	8.7	7.4	6.6	5.1	5.7	5.6	6.4	23	45	27	15	11
13	8.6	7.3	6.5	5.3	5.8	5.3	6.6	21	44	26	15	11
14	8.6	7.2	6.5	5.0	5.6	5.3	6.8	21	43	25	14	10
15	8.6	7.2	6.7	5.0	5.5	5.2	6.4	24	43	24	14	9.9
16	8.6	7.2	6.6	5.0	5.5	5.0	6.4	29	43	24	14	9.8
17	8.7	7.2	6.6	4.9	5.5	5.2	7.4	42	46	24	14	12
18	9.0	7.2	6.5	5.3	5.4	5.1	7.0	40	46	23	14	11
19	8.5	7.2	6.5	5.7	5.4	5.1	7.2	35	44	22	14	9.9
20	8.3	7.2	6.4	5.7	5.3	5.2	6.8	31	43	22	13	9.5
21	8.4	7.0	6.4	6.2	5.2	5.2	6.8	35	44	21	13	9.3
22	8.2	7.1	6.3	6.1	5.2	5.1	6.8	38	46	21	13	9.3
23	8.2	7.0	6.3	6.3	5.1	5.0	7.4	33	46	21	13	9.4
24	8.6	7.2	6.3	6.3	5.0	5.0	10	29	45	20	13	9.5
25	8.3	7.3	6.3	6.3	5.0	5.0	12	26	43	20	13	9.3
26	8.2	7.1	6.3	6.2	4.9	5.0	13	25	42	19	12	9.0
27	8.2	6.9	6.3	6.3	4.8	5.1	16	26	42	19	12	8.9
28	8.0	6.9	6.2	6.2	4.8	6.1	15	28	42	18	12	8.8
29	8.0	6.8	6.2	6.1	---	5.6	13	31	42	18	12	8.7
30	8.1	6.8	6.3	6.0	---	5.4	13	33	42	18	12	8.7
31	7.9	---	6.2	6.0	---	5.2	---	35	---	17	12	---
TOTAL	268.9	219.2	200.7	176.1	154.0	157.8	236.5	789	1,398	804	437	305.0
MEAN	8.67	7.31	6.47	5.68	5.50	5.09	7.88	25.5	46.6	25.9	14.1	10.2
MAX	9.7	7.9	6.7	6.3	6.0	6.1	16	42	67	41	17	12
MIN	7.9	6.8	6.2	4.9	4.8	4.7	5.2	11	42	17	12	8.7
AC-FT	533	435	398	349	305	313	469	1,560	2,770	1,590	867	605
CFSM	1.26	1.06	0.94	0.83	0.80	0.74	1.15	3.70	6.77	3.77	2.05	1.48
IN.	1.45	1.19	1.09	0.95	0.83	0.85	1.28	4.27	7.56	4.35	2.36	1.65

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 2005, BY WATER YEAR (WY)

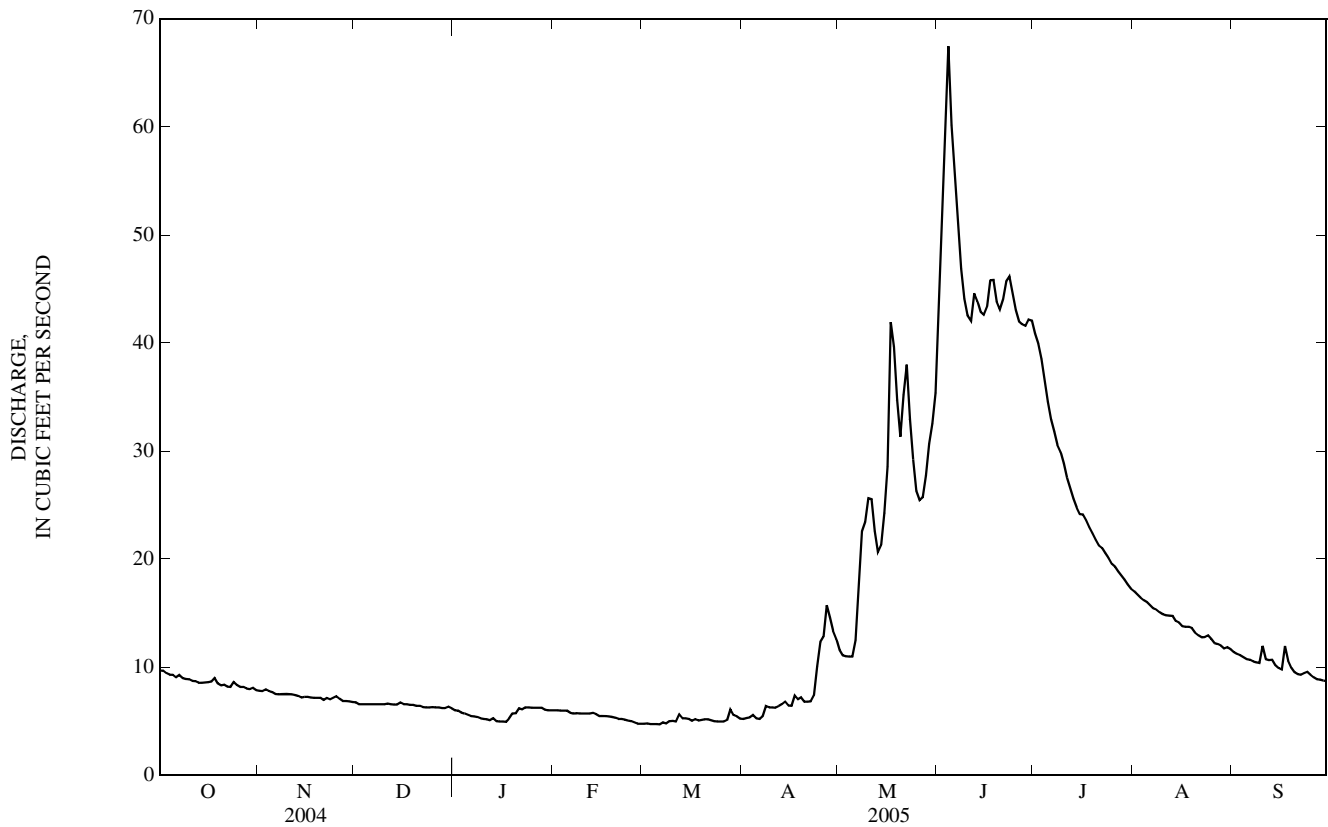
	1983	1986	1985	1985	1986	1986	1986	1997	1997	1984	1983	1984
MEAN	8.04	6.84	5.78	5.08	4.54	4.53	6.19	15.7	26.1	18.3	12.8	9.79
MAX	10.3	8.95	7.38	6.33	6.49	7.07	8.93	28.0	48.4	29.2	16.9	12.0
(WY)	(1983)	(1986)	(1985)	(1985)	(1986)	(1986)	(1986)	(1997)	(1997)	(1984)	(1983)	(1984)
MIN	5.27	4.47	4.05	3.65	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)

PEND OREILLE RIVER BASIN

12383500 BIG KNIFE CREEK NEAR ARLEE, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1983 - 2005	
ANNUAL TOTAL	3,210.6		5,146.2		10.3	
ANNUAL MEAN	8.77		14.1		6.60	
HIGHEST ANNUAL MEAN					14.6	
LOWEST ANNUAL MEAN					1992	
HIGHEST DAILY MEAN	31	Jun 6	67	Jun 4	67	Jun 4, 2005
LOWEST DAILY MEAN	3.4	Jan 5	4.7	Mar 3	1.7	Feb 4, 1989
ANNUAL SEVEN-DAY MINIMUM	3.5	Feb 29	4.7	Feb 28	2.0	Feb 1, 1989
MAXIMUM PEAK FLOW			70	Jun 4	b78	Jun 30, 1916
MAXIMUM PEAK STAGE			6.45	Jun 4	5.91	Jun 29, 2002
INSTANTANEOUS LOW FLOW			a4.5	Mar 5	c1.3	Feb 4, 1989
ANNUAL RUNOFF (AC-FT)	6,370		10,210		7,480	
ANNUAL RUNOFF (CFSM)	1.28		2.05		1.50	
ANNUAL RUNOFF (INCHES)	17.36		27.83		20.40	
10 PERCENT EXCEEDS	16		37		20	
50 PERCENT EXCEEDS	7.7		8.3		7.5	
90 PERCENT EXCEEDS	3.6		5.2		4.1	

a--Also occurred on Mar. 6 and 7; gage height, 5.17 ft.
 b--Gage height, 3.65 ft; site and datum then in use.
 c--Result of freezeup.



12387450 VALLEY CREEK NEAR ARLEE, MT

LOCATION.--Lat 47°10'13", long 114°13'47" (NAD 27), in NE¹/₄SE¹/₄SE¹/₄ 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 unpublished observations of water temperature and specific conductance were made during the 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				e7.5	23	29	20	12	9.2	9.7		
2				e7.5	22	35	20	12	9.1	9.1		
3				e7.5	21	53	19	12	9.1	8.7		
4				e7.5	21	51	19	12	9.0	9.7		
5				e7.5	22	50	19	11	8.9	8.6		
6				7.3	27	51	18	11	8.8	8.4		
7				8.2	38	44	18	11	8.7	8.4		
8				9.7	46	39	18	11	8.6	8.3		
9				9.5	44	35	17	11	8.6	8.0		
10				9.2	44	31	17	11	9.9	8.0		
11				9.2	39	30	17	11	9.2	7.9		
12				9.4	36	29	17	11	9.1	7.9		
13				9.8	34	28	16	11	9.2	7.9		
14				10	34	27	15	11	8.8	7.9		
15				9.6	38	26	15	11	8.7	7.6		
16				9.7	40	26	15	11	8.6	7.6		
17				12	45	26	14	11	9.2	7.6		
18				12	40	26	14	11	8.8	7.6		
19				12	38	26	14	11	8.6	7.7		
20				12	35	25	14	10	8.4	8.0		
21				12	33	24	13	10	8.4	7.9		
22				12	31	24	13	9.9	8.3	7.7		
23				12	31	23	13	9.8	8.4	7.7		
24				15	29	23	13	9.9	8.6	7.6		
25				18	28	22	13	9.8	8.5	7.6		
26				22	27	22	13	9.5	8.3	7.6		
27				29	27	22	13	9.5	8.0	8.0		
28				28	27	22	13	9.4	8.0	7.8		
29				26	29	22	13	9.3	8.0	7.8		
30				24	29	21	12	9.2	8.4	7.6		
31				---	28	---	12	9.2	---	8.4		
TOTAL				385.1	1,006	912	477	328.5	261.4	250.3		
MEAN				12.8	32.5	30.4	15.4	10.6	8.71	8.07		
MAX				29	46	53	20	12	9.9	9.7		
MIN				7.3	21	21	12	9.2	8.0	7.6		
AC-FT				764	2,000	1,810	946	652	518	496		
CFSM				0.84	2.12	1.99	1.01	0.69	0.57	0.53		
IN.				0.94	2.45	2.22	1.16	0.80	0.64	0.61		

STATISTICS OF MONTHLY MEAN DATA FOR SEASONS 1983 - 2005

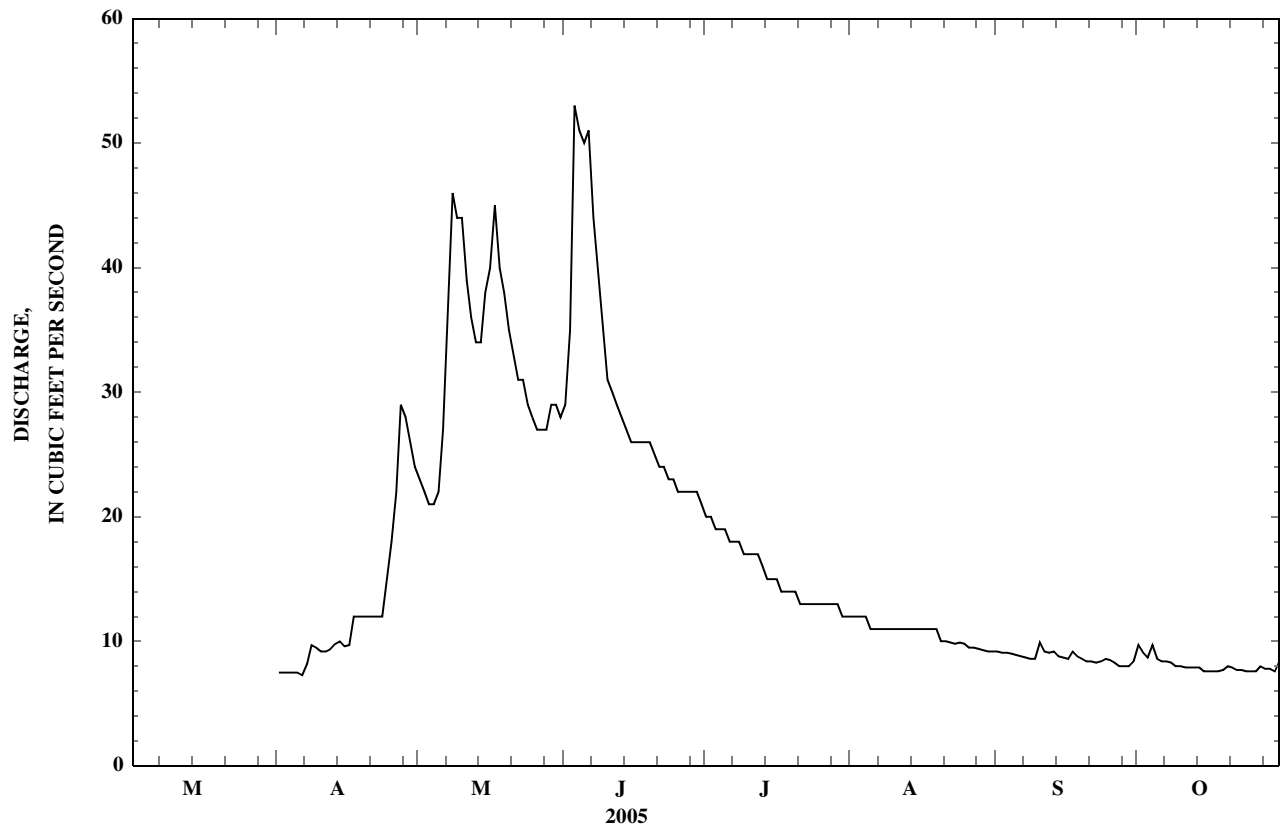
MEAN		7.70	14.2	32.0	28.2	14.5	10.5	9.02	8.46	8.22		
MAX		8.67	30.3	75.5	66.7	31.8	19.6	14.0	12.2	11.5		
(WY)		(1998)	(1996)	(1997)	(1997)	(1997)	(1997)	(1997)	(1998)	(1998)		
MIN		6.37	6.27	21.5	11.6	8.47	6.72	6.21	5.97	5.85		
(WY)		(1984)	(2002)	(1988)	(1987)	(2001)	(2001)	(2001)	(1989)	(2002)		

SUMMARY STATISTICS

	FOR 2005 SEASON		SEASONS 1983 - 2005	
HIGHEST DAILY MEAN	53	Jun 3	110	May 17, 1997
LOWEST DAILY MEAN	7.3	Apr 6	5.0	Nov 22, 1994
MAXIMUM PEAK FLOW	63	Jun 5	116	May 16, 1997
MAXIMUM PEAK STAGE	2.45	Jun 4	3.04	May 16, 1997

e--Estimated.

PEND OREILLE RIVER BASIN
12387450 VALLEY CREEK NEAR ARLEE, MT—Continued



12388200 JOCKO RIVER AT DIXON, MT

LOCATION.--Lat 47°18'43", long 114°17'48" (NAD 27), in NW¹/₄NW¹/₄NE¹/₄ 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 except those for estimated daily discharges, which are poor. Some regulation and diversion upstream from gage for irrigation. 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	237	220	e194	163	252	164	199	380	675	627	173	162
2	233	216	e191	149	246	163	200	357	931	594	170	160
3	231	216	e189	140	239	163	200	348	1,420	559	167	165
4	227	216	e189	e138	236	163	207	353	1,890	530	165	167
5	222	214	e189	e136	235	163	207	346	1,720	505	164	163
6	218	211	e189	e132	229	164	202	370	1,680	467	164	162
7	216	207	e187	e127	214	167	206	471	1,460	445	164	161
8	214	206	e187	116	218	170	230	543	1,300	424	163	160
9	212	205	e186	119	217	173	243	575	1,150	411	161	162
10	209	204	e185	e120	206	185	239	605	1,040	397	159	191
11	207	201	e187	120	202	185	237	618	1,020	376	162	192
12	204	200	e187	127	205	207	237	590	1,070	343	167	183
13	201	197	e187	e134	205	214	246	563	1,040	318	173	189
14	200	197	e186	e140	198	204	261	564	965	296	168	188
15	201	194	e191	e144	188	200	255	593	900	278	163	186
16	205	194	e194	e147	177	196	238	636	833	267	162	187
17	341	190	e195	e149	165	196	255	789	872	274	166	210
18	301	188	193	151	166	193	269	805	900	261	173	214
19	274	190	193	222	167	194	261	728	887	251	177	201
20	258	187	191	272	178	192	257	681	843	239	170	193
21	254	183	193	264	170	192	250	697	834	226	165	190
22	252	186	191	260	164	189	245	676	840	218	164	190
23	246	195	175	257	159	190	246	664	792	213	168	192
24	249	196	174	266	163	184	311	634	739	204	170	201
25	246	e196	e175	268	165	185	403	604	685	200	173	202
26	238	e192	e175	267	163	180	405	578	652	189	166	195
27	233	e186	e173	278	163	180	486	563	650	177	166	191
28	228	e194	e175	280	162	199	466	565	709	169	164	189
29	227	e195	173	272	---	211	434	583	699	176	163	188
30	223	e194	e171	265	---	206	405	587	677	176	165	188
31	221	---	e168	258	---	201	---	583	---	171	163	---
TOTAL	7,228	5,970	5,733	5,881	5,452	5,773	8,300	17,649	29,873	9,981	5,158	5,522
MEAN	233	199	185	190	195	186	277	569	996	322	166	184
MAX	341	220	195	280	252	214	486	805	1,890	627	177	214
MIN	200	183	168	116	159	163	199	346	650	169	159	160
AC-FT	14,340	11,840	11,370	11,660	10,810	11,450	16,460	35,010	59,250	19,800	10,230	10,950

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 2005, BY WATER YEAR (WY)

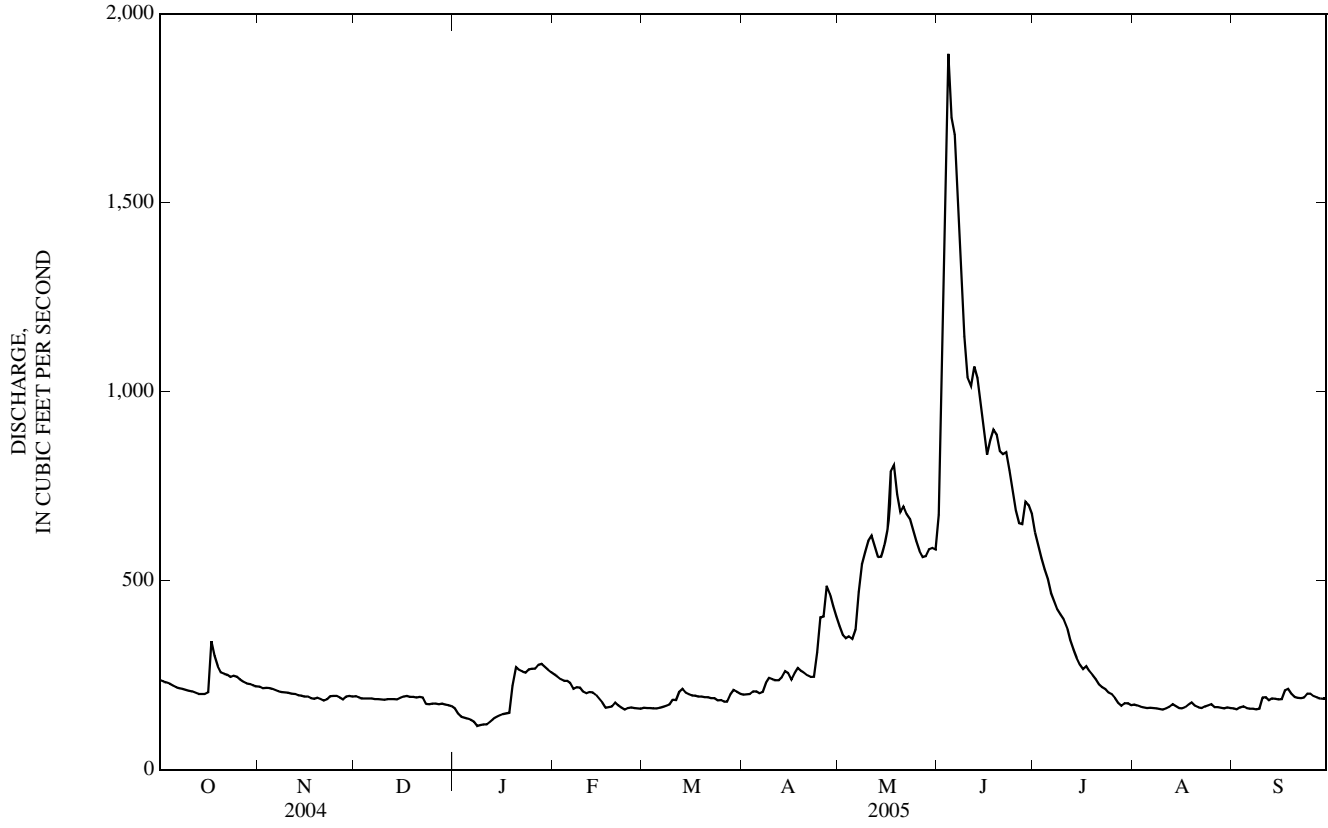
MEAN	185	174	158	135	134	149	214	419	554	258	167	181
MAX	233	227	265	190	208	246	390	1,303	1,537	512	222	244
(WY)	(2005)	(1996)	(1996)	(2005)	(1996)	(1997)	(1997)	(1997)	(1997)	(1997)	(1997)	(2004)
MIN	138	138	123	102	108	118	130	203	149	140	131	137
(WY)	(2004)	(1995)	(1993)	(1995)	(1993)	(1994)	(1995)	(1992)	(1992)	(1994)	(1994)	(2003)

SUMMARY STATISTICS

	FOR 2004 CALENDAR YEAR	FOR 2005 WATER YEAR	WATER YEARS 1991 - 2005	
ANNUAL TOTAL	73,517	112,520		
ANNUAL MEAN	201	308	227	
HIGHEST ANNUAL MEAN			445	1997
LOWEST ANNUAL MEAN			157	1992
HIGHEST DAILY MEAN	641	Jun 12	1,890	Jun 4
LOWEST DAILY MEAN	90	Jan 7	116	Jan 8
ANNUAL SEVEN-DAY MINIMUM	97	Jan 6	123	Jan 6
MAXIMUM PEAK FLOW			1,990	Jun 4
MAXIMUM PEAK STAGE			4.01	Jun 4
ANNUAL RUNOFF (AC-FT)	145,800	223,200	164,800	
10 PERCENT EXCEEDS	337	651	372	
50 PERCENT EXCEEDS	186	202	169	
90 PERCENT EXCEEDS	107	163	121	

e--Estimated.

PEND OREILLE RIVER BASIN
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 SE¹/₄NE¹/₄NW¹/₄ 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 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	7.7	6.8	6.7	e5.9	e7.4	7.3	9.7	45	61	24	9.0	5.5
2	7.6	6.9	6.7	e5.8	e7.2	7.0	10	41	68	23	8.8	5.5
3	7.5	7.1	6.7	e5.8	e7.0	7.0	10	40	82	22	8.4	5.4
4	7.4	6.8	6.4	e5.6	e7.2	6.9	11	43	77	20	8.1	5.4
5	7.3	6.7	6.4	e5.4	e7.0	6.9	10	46	73	19	7.9	5.3
6	7.3	6.7	6.4	e5.2	e6.8	6.9	10	62	74	19	7.7	5.2
7	7.4	6.8	6.4	e5.0	e7.2	7.2	11	79	70	18	7.6	5.2
8	7.3	7.0	6.4	e5.4	e7.0	7.3	15	85	66	17	7.4	5.1
9	7.3	7.0	6.3	e5.6	e6.8	7.7	16	80	61	17	7.3	5.1
10	7.2	6.8	e6.5	5.7	e7.2	8.6	15	97	56	17	7.1	6.8
11	7.1	6.7	e6.6	5.9	e7.0	7.8	15	93	53	16	7.1	6.1
12	7.0	6.7	e6.7	6.0	e7.2	9.3	15	79	50	15	7.3	5.7
13	7.0	6.7	7.0	5.8	e6.8	8.8	16	74	45	15	7.7	6.0
14	6.9	6.7	7.0	e5.6	e7.2	8.7	16	74	42	14	7.2	5.5
15	7.0	6.7	7.0	e5.6	e6.8	8.7	15	81	39	14	7.0	5.3
16	7.2	6.7	7.0	e5.6	e6.6	8.7	15	92	37	14	6.8	5.3
17	7.5	6.7	7.0	e5.6	e6.6	8.6	20	107	38	14	6.8	6.3
18	7.5	6.7	7.0	e5.6	e6.4	8.3	22	87	38	13	7.0	5.8
19	7.3	6.7	6.4	e6.0	e6.8	8.4	22	75	36	13	6.8	5.5
20	7.2	6.7	6.3	e6.4	e6.9	8.4	21	70	34	12	6.5	5.3
21	7.7	6.5	6.2	e6.6	e7.2	8.3	20	68	32	11	6.3	5.2
22	7.5	6.7	6.2	e6.8	e7.2	8.1	20	66	31	11	6.2	5.2
23	7.2	6.7	e6.4	e7.0	e7.2	8.1	21	65	29	11	6.2	5.3
24	7.4	6.7	e6.7	e7.0	e7.2	9.4	26	63	28	11	6.4	5.6
25	7.3	7.0	6.4	e7.2	e7.1	7.7	36	58	27	11	6.3	5.5
26	7.1	7.0	6.2	e7.3	7.3	7.7	45	54	27	10	6.0	5.3
27	7.0	6.7	6.1	e7.4	7.1	9.0	67	53	27	9.9	5.9	5.1
28	7.0	6.7	5.9	e7.6	7.1	11	63	55	28	9.8	5.8	5.0
29	7.0	6.7	5.9	e7.4	---	11	55	60	27	9.5	5.7	5.0
30	7.1	e6.7	5.9	e7.4	---	10	49	62	25	9.1	5.7	5.9
31	7.1	---	6.1	e7.6	---	9.6	---	60	---	9.1	5.7	---
TOTAL	225.1	203.0	200.9	192.8	196.5	258.4	696.7	2,114	1,381	448.4	215.7	164.4
MEAN	7.26	6.77	6.48	6.22	7.02	8.34	23.2	68.2	46.0	14.5	6.96	5.48
MAX	7.7	7.1	7.0	7.6	7.4	11	67	107	82	24	9.0	6.8
MIN	6.9	6.5	5.9	5.0	6.4	6.9	9.7	40	25	9.1	5.7	5.0
AC-FT	446	403	398	382	390	513	1,380	4,190	2,740	889	428	326
CFSM	0.31	0.29	0.28	0.27	0.30	0.36	0.99	2.91	1.97	0.62	0.30	0.23
IN.	0.36	0.32	0.32	0.31	0.31	0.41	1.11	3.36	2.20	0.71	0.34	0.26

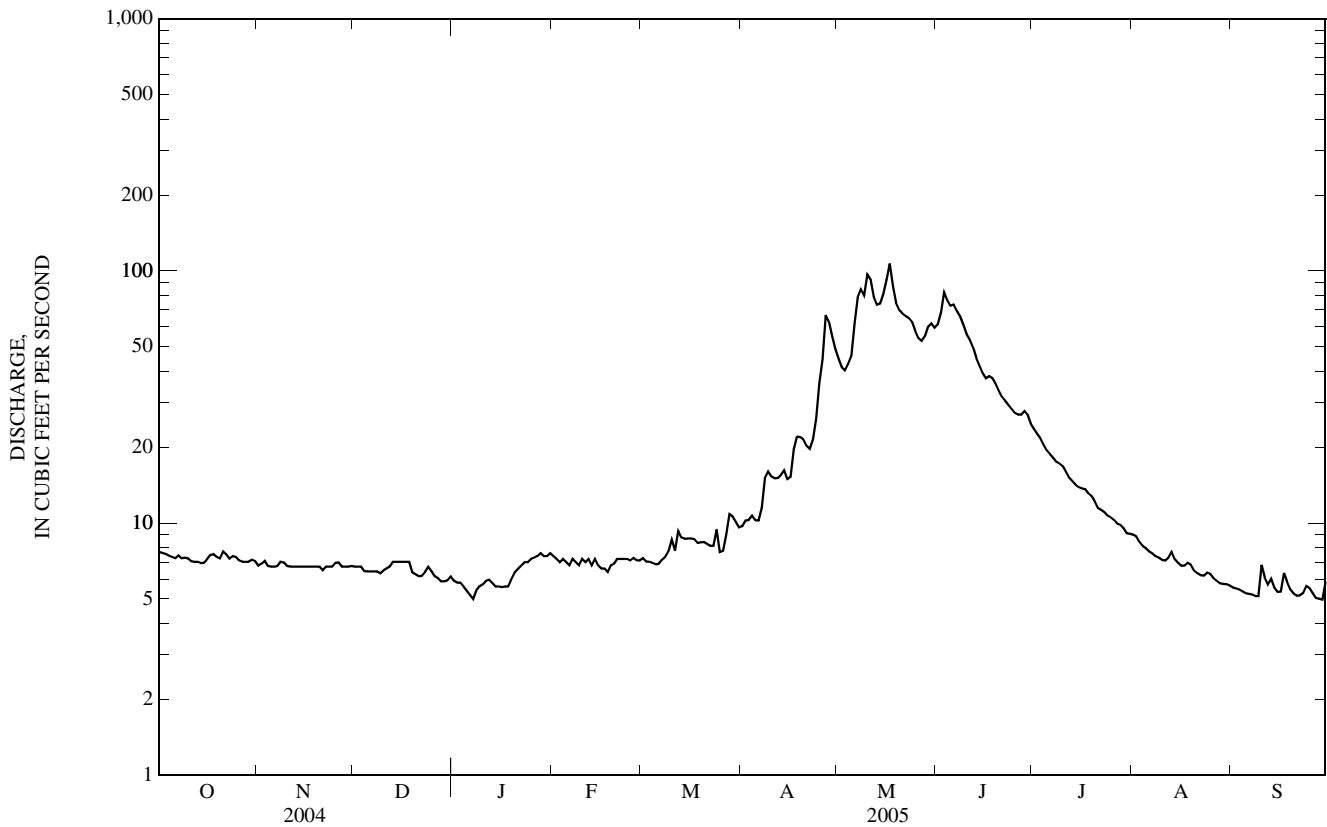
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 2005, BY WATER YEAR (WY)

MEAN	6.27	6.63	6.44	5.32	5.63	7.82	22.7	66.7	54.7	16.2	7.92	6.31
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 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1983 - 2005	
ANNUAL TOTAL	5,605.3		6,296.9			
ANNUAL MEAN	15.3		17.3		17.8	
HIGHEST ANNUAL MEAN					35.2	
LOWEST ANNUAL MEAN					11.6	
HIGHEST DAILY MEAN	106	May 28	107	May 17	316	Jun 1, 1997
LOWEST DAILY MEAN	2.7	Jan 6	5.0	Jan 7	2.5	Feb 4, 1989
ANNUAL SEVEN-DAY MINIMUM	3.2	Jan 4	5.2	Sep 3	2.7	Feb 2, 1989
MAXIMUM PEAK FLOW			a116	May 17	c382	Jun 1, 1997
MAXIMUM PEAK STAGE			b4.26	Jan 5	6.93	Dec 5, 1984
ANNUAL RUNOFF (AC-FT)	11,120		12,490		12,860	
ANNUAL RUNOFF (CFSM)	0.654		0.737		0.759	
ANNUAL RUNOFF (INCHES)	8.91		10.01		10.31	
10 PERCENT EXCEEDS	43		55		47	
50 PERCENT EXCEEDS	7.4		7.2		7.3	
90 PERCENT EXCEEDS	3.6		5.7		4.0	

a--Gage height, 3.75 ft.
 b--Backwater from ice.
 c--Gage height, 4.36 ft.
 e--Estimated.



12388700 FLATHEAD RIVER AT PERMA, MT

LOCATION.--Lat 47°22'03", long 114°35'03" (NAD 27), in SE¹/₄NE¹/₄NE¹/₄ 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.

WATER-DISCHARGE RECORDS

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

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

REMARKS.--Water-discharge records excellent except those for estimated discharges, which are fair. 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.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11,800	8,910	8,860	12,100	7,790	7,550	4,170	14,700	13,300	21,300	11,100	7,760
2	11,800	8,920	9,820	12,100	7,740	7,590	4,170	14,600	16,000	19,700	11,000	6,940
3	11,600	8,940	9,840	12,100	7,810	6,890	4,180	14,700	19,100	18,500	10,000	6,220
4	9,880	8,120	9,870	12,300	7,840	6,080	4,220	14,700	23,800	18,100	9,250	5,330
5	9,070	7,340	9,850	e12,000	7,830	5,310	4,190	14,700	33,300	16,200	9,120	4,600
6	7,950	7,170	9,960	e11,200	7,120	4,740	4,170	15,000	38,800	14,800	8,280	4,270
7	7,890	7,160	10,100	e10,200	6,880	4,260	4,180	15,200	45,900	14,500	8,110	4,230
8	7,840	7,140	10,100	e9,880	6,890	4,120	4,260	15,300	47,600	14,400	8,060	4,200
9	7,770	7,130	10,100	e9,090	6,800	4,090	4,310	15,300	46,700	14,400	7,720	4,170
10	7,710	7,130	10,000	e8,230	6,820	4,090	4,590	15,500	41,100	14,400	7,710	4,310
11	7,770	7,100	10,800	e7,730	6,860	4,100	4,990	17,400	37,900	14,400	7,610	4,400
12	7,900	7,130	10,800	e7,730	6,870	4,120	5,430	19,900	35,400	14,200	7,550	4,370
13	7,910	7,140	10,600	e7,970	6,850	4,130	5,570	22,100	35,200	13,700	7,710	4,390
14	7,950	7,100	10,900	e8,040	6,850	4,100	5,800	22,500	35,000	13,400	7,720	4,220
15	7,860	7,150	11,100	e7,920	6,800	4,120	5,830	22,500	32,600	11,900	7,750	4,030
16	7,860	7,070	11,800	e7,920	7,500	4,110	5,780	22,600	27,000	11,000	7,840	3,980
17	7,950	7,020	12,000	e7,810	7,730	4,180	5,960	23,000	26,000	10,300	7,840	4,020
18	8,100	7,120	11,900	e7,800	7,710	4,130	6,640	25,100	23,900	10,100	7,900	4,030
19	8,030	7,090	12,000	e7,660	7,700	4,110	7,410	28,200	26,400	10,100	7,940	3,960
20	8,810	7,070	12,100	e7,020	7,670	4,120	8,400	28,800	29,400	10,000	7,910	3,990
21	8,980	7,020	12,000	e6,490	7,660	4,160	9,380	29,100	25,700	10,100	7,940	3,950
22	8,970	7,050	12,100	6,420	7,630	4,140	10,300	29,100	24,900	10,100	7,940	3,900
23	9,010	7,010	12,000	6,180	7,610	4,140	12,300	28,800	22,200	10,100	8,060	3,910
24	9,060	7,060	12,000	6,140	7,620	4,120	13,500	24,500	19,700	10,000	7,920	4,240
25	9,070	7,140	12,000	6,120	7,610	4,130	13,600	21,900	19,500	10,000	7,790	4,530
26	9,000	7,240	12,000	6,860	7,620	4,170	13,700	20,000	20,500	10,800	7,820	4,560
27	8,970	7,150	12,200	e7,640	7,530	4,190	13,900	17,300	19,500	11,000	7,800	4,550
28	8,990	7,090	12,000	7,870	7,620	4,240	14,500	14,900	18,500	11,000	7,740	4,520
29	8,990	7,050	12,000	7,940	---	4,210	14,700	13,500	19,700	11,000	7,700	4,550
30	8,960	7,810	12,000	7,850	---	4,240	14,700	13,200	20,600	10,900	7,740	4,610
31	8,970	---	12,000	7,820	---	4,190	---	13,100	---	11,100	7,790	---
TOTAL	272,420	220,570	344,800	264,130	206,960	141,870	234,830	607,200	845,200	401,500	254,360	136,740
MEAN	8,788	7,352	11,120	8,520	7,391	4,576	7,828	19,590	28,170	12,950	8,205	4,558
MAX	11,800	8,940	12,200	12,300	7,840	7,590	14,700	29,100	47,600	21,300	11,100	7,760
MIN	7,710	7,010	8,860	6,120	6,800	4,090	4,170	13,100	13,300	10,000	7,550	3,900
AC-FT	540,300	437,500	683,900	523,900	410,500	281,400	465,800	1,204,000	1,676,000	796,400	504,500	271,200

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

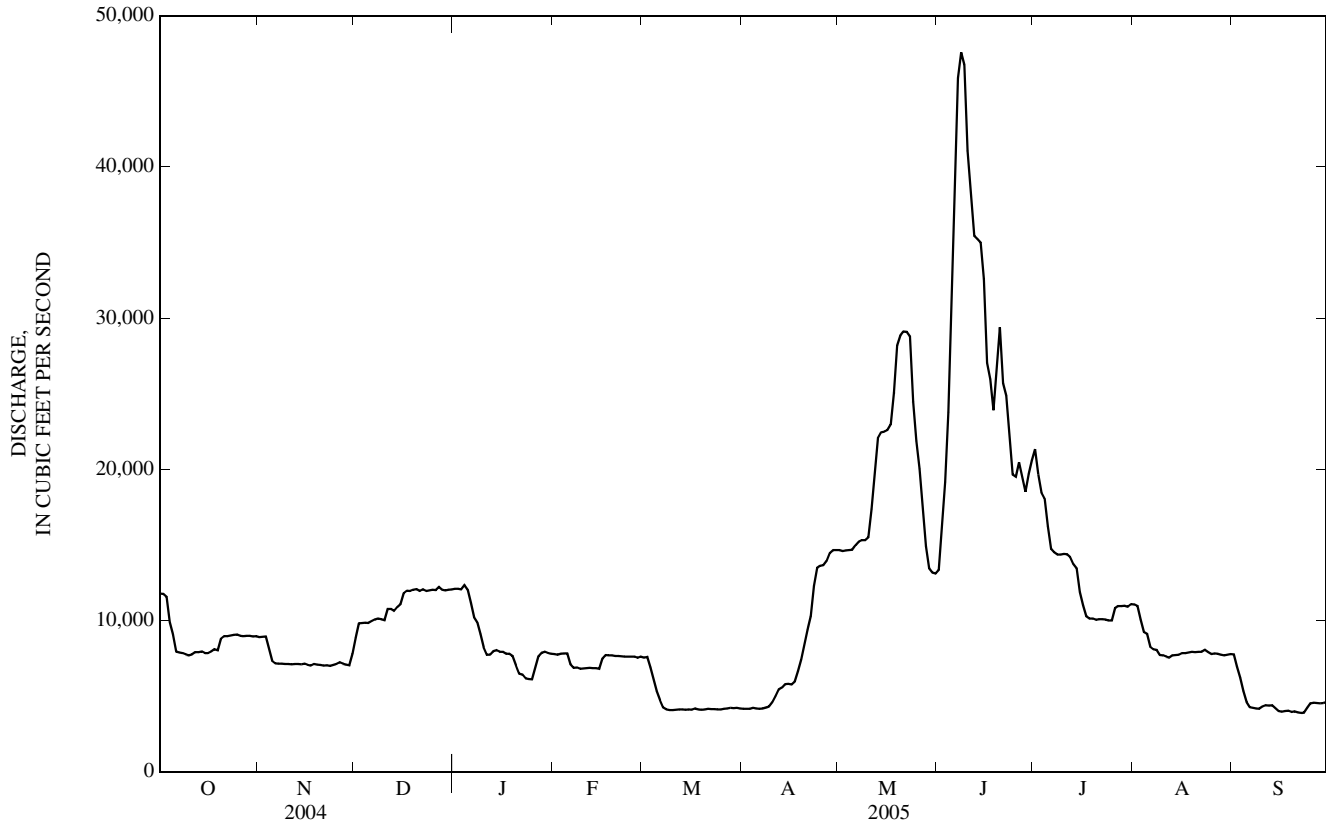
	MEAN	10,360	11,000	10,210	9,556	9,000	10,030	15,660	22,850	13,160	8,128	7,880
MAX (WY)	12,070 (1992)	13,150 (2000)	17,260 (1996)	15,200 (1996)	18,340 (1996)	23,420 (1996)	23,370 (1996)	36,930 (1997)	45,490 (1997)	22,780 (1991)	12,690 (1996)	13,090 (1989)
MIN (WY)	4,042 (2004)	4,052 (2002)	6,160 (2002)	4,626 (2003)	4,234 (2001)	4,121 (2001)	4,397 (2001)	5,877 (1995)	9,092 (1987)	6,279 (1994)	4,164 (1994)	3,987 (2003)

SUMMARY STATISTICS

	FOR 2004 CALENDAR YEAR	FOR 2005 WATER YEAR	WATER YEARS 1984 - 2005
ANNUAL TOTAL	3,644,200	3,930,580	
ANNUAL MEAN	9,957	10,770	11,360
HIGHEST ANNUAL MEAN			18,030 1996
LOWEST ANNUAL MEAN			7,040 2001
HIGHEST DAILY MEAN	22,500	Jun 1 47,600	Jun 8 53,400 Jun 6, 1997
LOWEST DAILY MEAN	3,990	Apr 13 3,900	Sep 22 2,670 May 29, 1984
ANNUAL SEVEN-DAY MINIMUM	4,050	Apr 10 3,970	Sep 17 3,110 Jun 25, 1984
MAXIMUM PEAK FLOW		48,000	Jun 7 54,700 Jun 7, 1997
MAXIMUM PEAK STAGE		20.17	Jun 7 21.65 Jun 7, 1997
ANNUAL RUNOFF (AC-FT)	7,228,000	7,796,000	8,227,000
10 PERCENT EXCEEDS	16,100	20,200	17,200
50 PERCENT EXCEEDS	8,620	7,940	10,100
90 PERCENT EXCEEDS	6,100	4,190	5,300

e--Estimated.

PEND OREILLE RIVER BASIN
12388700 FLATHEAD RIVER AT PERMA, MT—Continued



WATER-QUALITY RECORDS

PERIOD OF RECORD--Water years 1971-73, 1997 to 2003.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Seasonal records, April 2001 to September 2003, April 2005 to September 2005.

INSTRUMENTATION.--Temperature recorder since Mar. 30, 1979.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE (seasonal records): Maximum, 30.0°C, Sept. 5-7, 2003; minimum, 2.5°C, Apr. 2, 2002.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE (seasonal records): Maximum, 26.0°C, Aug. 9; minimum, 4.5°C, Apr. 5.

12388700 FLATHEAD RIVER AT PERMA, MT—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
SEASON APRIL 2005 TO SEPTEMBER 2005

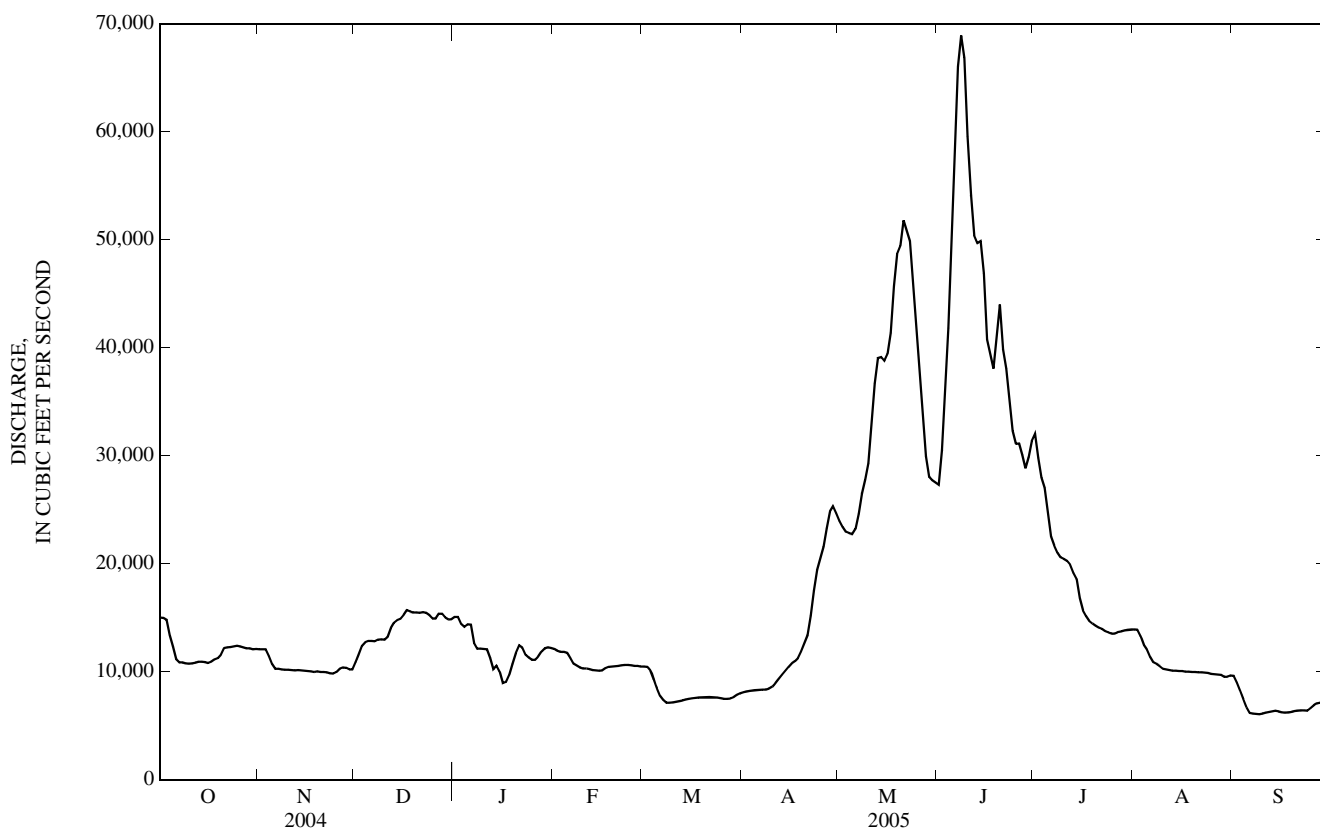
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	APRIL			MAY			JUNE			JULY		
1	8.0	5.0	6.5	11.0	8.5	9.5	14.0	13.5	14.0	19.0	17.5	18.5
2	9.0	5.0	7.0	11.5	9.0	10.0	14.0	13.0	13.5	18.5	17.5	18.0
3	9.0	5.5	7.0	11.0	10.0	10.5	13.0	13.0	13.0	19.0	17.0	18.0
4	7.5	6.0	6.5	10.5	9.5	10.0	14.5	12.5	13.5	19.0	17.5	18.5
5	8.5	4.5	6.5	11.5	9.5	10.5	14.0	12.5	13.0	20.0	18.0	19.0
6	12.5	5.5	8.0	11.5	10.5	10.5	13.0	11.5	12.5	20.5	18.5	19.5
7	10.5	7.0	8.5	11.0	10.0	10.5	12.5	10.5	11.0	21.0	19.0	20.0
8	11.5	7.0	9.0	12.0	10.5	11.0	11.0	10.0	10.5	21.5	19.0	20.0
9	9.5	6.0	8.0	12.0	11.0	11.5	11.5	10.5	11.0	20.0	18.0	19.0
10	10.5	6.5	8.0	11.5	11.0	11.0	12.0	10.5	11.5	19.5	18.0	18.5
11	9.5	7.5	8.5	12.5	10.5	11.5	13.0	11.5	12.0	20.5	18.5	19.5
12	8.0	7.0	7.5	12.5	11.0	11.5	13.0	12.0	12.5	21.5	19.0	20.0
13	7.5	7.0	7.5	12.5	11.5	12.0	13.0	12.0	12.5	22.0	20.0	20.5
14	9.0	6.0	7.5	12.0	11.5	12.0	13.5	12.0	13.0	22.0	19.5	20.5
15	10.5	6.5	8.5	12.0	11.0	11.5	14.5	12.5	13.5	23.0	20.0	21.5
16	11.5	8.0	9.5	12.0	11.5	11.5	14.0	13.0	13.5	22.0	20.0	21.0
17	10.5	9.0	10.0	12.0	10.5	11.5	14.0	13.0	13.5	23.0	19.0	20.5
18	10.5	8.0	9.0	12.0	10.5	11.0	14.0	13.0	13.5	23.5	20.0	22.0
19	10.5	8.0	9.0	12.0	10.5	11.0	15.5	13.0	14.0	23.5	20.5	22.0
20	10.0	8.5	9.5	11.5	10.0	10.5	16.0	14.0	15.0	23.5	20.0	22.0
21	10.5	8.0	9.5	11.5	10.0	10.5	16.5	15.0	16.0	24.0	20.5	22.0
22	12.0	8.5	10.0	11.0	10.0	10.5	17.5	16.0	16.5	22.5	21.0	21.5
23	11.5	9.5	10.5	11.0	9.5	10.5	17.5	16.0	16.5	23.5	20.0	22.0
24	12.5	9.5	11.0	11.0	9.5	10.5	17.5	16.0	17.0	23.5	20.5	22.0
25	12.5	10.0	11.5	12.0	10.0	11.0	17.0	16.5	17.0	23.0	20.5	21.5
26	13.0	10.5	11.5	12.5	10.5	11.5	17.0	16.5	17.0	23.5	20.0	22.0
27	11.5	10.0	11.0	13.5	11.5	12.5	17.0	16.5	16.5	24.0	20.5	22.0
28	11.5	9.0	10.0	14.5	12.0	13.0	17.5	16.5	17.0	23.5	21.0	22.5
29	10.0	8.5	9.5	16.0	13.0	14.0	17.5	16.5	17.0	24.0	21.0	22.5
30	10.5	8.5	9.5	16.5	13.5	15.0	19.0	16.5	17.5	24.5	21.0	22.5
31	---	---	---	15.5	14.0	15.0	---	---	---	24.5	21.5	23.0
MONTH	13.0	4.5	9.0	16.5	8.5	11.5	19.0	10.0	14.0	24.5	17.0	20.5
	AUGUST			SEPTEMBER								
1	24.0	21.5	23.0	20.5	17.5	19.0						
2	24.0	22.0	23.0	20.5	17.5	19.0						
3	24.5	21.0	22.5	20.5	18.0	19.5						
4	25.0	21.0	23.0	20.5	18.0	19.0						
5	25.0	21.5	23.0	21.0	17.5	19.0						
6	25.0	21.5	23.5	22.0	16.5	19.0						
7	25.0	21.5	23.5	22.5	17.0	19.0						
8	25.0	21.5	23.5	22.0	16.5	19.0						
9	26.0	22.0	23.5	19.0	16.5	17.5						
10	25.0	22.0	23.5	16.5	15.5	16.0						
11	25.0	21.5	23.0	17.5	15.0	16.0						
12	23.0	20.5	22.0	15.5	14.0	15.0						
13	23.0	19.0	21.0	18.0	15.0	16.0						
14	23.0	19.5	21.5	18.5	15.5	16.5						
15	23.0	19.5	21.0	19.5	13.5	16.0						
16	23.0	19.5	21.0	20.0	13.0	16.0						
17	21.5	19.5	20.5	17.5	14.0	15.0						
18	21.5	18.5	20.0	18.0	13.0	15.0						
19	22.5	19.0	20.5	21.0	11.0	15.0						
20	22.5	19.0	21.0	20.0	11.5	14.5						
21	23.0	19.0	21.0	21.0	10.0	14.5						
22	21.5	20.0	21.0	23.5	10.0	14.0						
23	21.0	19.0	20.0	14.0	9.5	11.5						
24	19.0	18.0	18.5	13.0	9.5	12.0						
25	21.5	17.0	19.0	15.5	11.5	13.0						
26	21.5	18.0	20.0	16.5	13.0	14.5						
27	22.0	18.5	20.0	16.0	13.5	14.5						
28	22.0	18.5	20.5	17.0	12.5	14.5						
29	20.5	18.5	19.5	14.5	13.5	14.0						
30	19.0	17.5	18.0	15.0	14.0	14.5						
31	20.0	17.0	18.0	---	---	---						
MONTH	26.0	17.0	21.5	23.5	9.5	16.0						

12389000 CLARK FORK NEAR PLAINS, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1911 - 2005	
ANNUAL TOTAL	5,458,810		5,900,820			
ANNUAL MEAN	14,910		16,170		19,480	
HIGHEST ANNUAL MEAN					29,420	1996
LOWEST ANNUAL MEAN					8,845	1941
HIGHEST DAILY MEAN	40,400	May 29	68,900	Jun 8	133,000	May 31, 1948
LOWEST DAILY MEAN	7,810	Jan 16	6,070	Sep 9	a3,200	Feb 8, 1936
ANNUAL SEVEN-DAY MINIMUM	8,010	Jan 15	6,160	Sep 6	3,250	Jan 11, 1937
MAXIMUM PEAK FLOW			69,800	Jun 7	134,000	Jun 5, 1948
MAXIMUM PEAK STAGE			13.08	Jun 7	19.17	Jun 5, 1948
INSTANTANEOUS LOW FLOW			6,070	Sep 8	b3,200	Dec 10, 1940
ANNUAL RUNOFF (AC-FT)	10,830,000		11,700,000		14,110,000	
ANNUAL RUNOFF (CFSM)	0.747		0.810		0.976	
ANNUAL RUNOFF (INCHES)	10.17		11.00		13.26	
10 PERCENT EXCEEDS	28,300		34,100		44,100	
50 PERCENT EXCEEDS	11,900		11,600		13,100	
90 PERCENT EXCEEDS	9,460		7,490		6,500	

a--Estimated during period of ice-affected gage-height record.

b--Gage height, 2.85 ft.

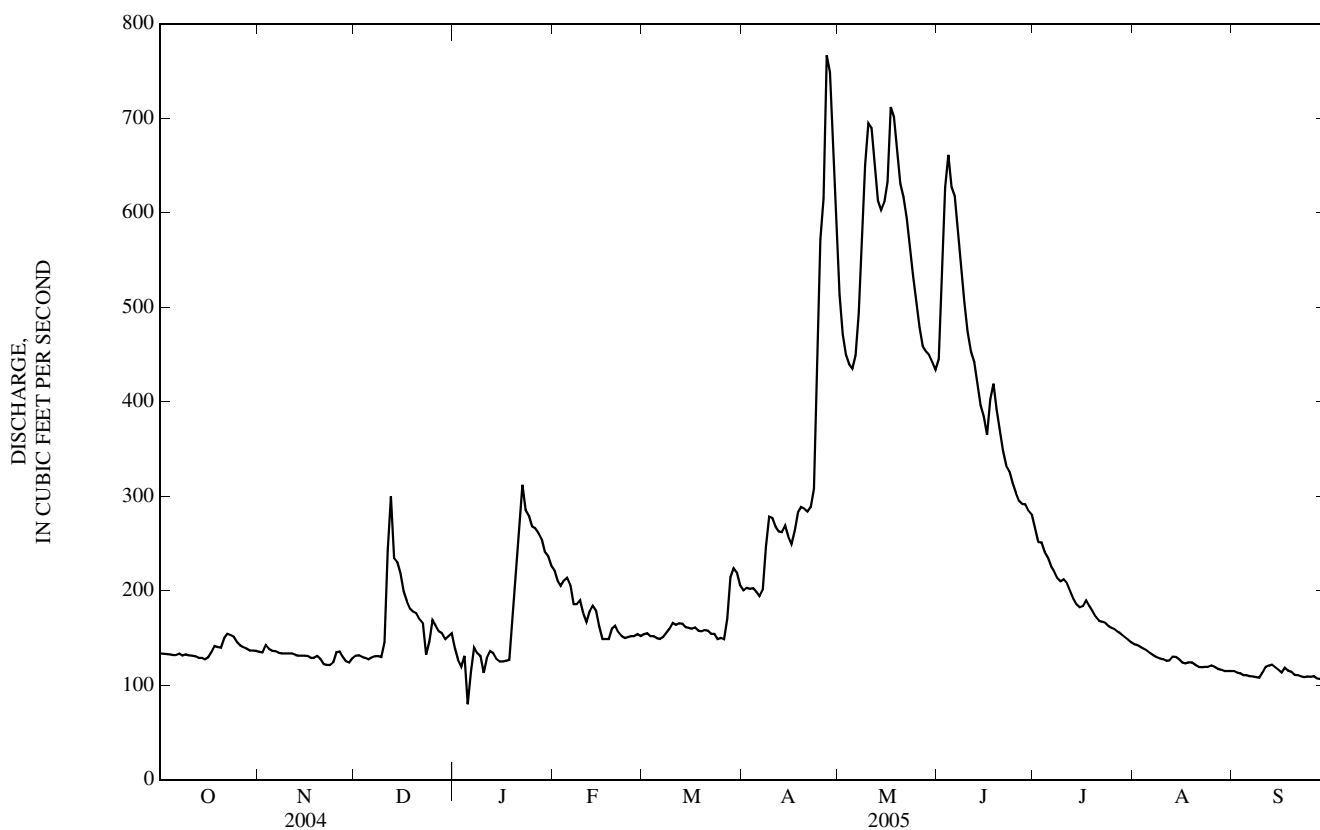


12389500 THOMPSON RIVER NEAR THOMPSON FALLS, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1957 - 2005	
ANNUAL TOTAL	103,343		82,132			
ANNUAL MEAN	282		225		436	
HIGHEST ANNUAL MEAN					804	
LOWEST ANNUAL MEAN					176	
HIGHEST DAILY MEAN	1,250	May 28	767	Apr 27	5,360	Jun 9, 1964
LOWEST DAILY MEAN	70	Jan 6	80	Jan 5	67	Nov 24, 1993
ANNUAL SEVEN-DAY MINIMUM	86	Jan 1	108	Sep 23	73	Dec 31, 1994
MAXIMUM PEAK FLOW			798	Apr 27	6,080	Jun 9, 1964
MAXIMUM PEAK STAGE			3.68	Apr 27	8.53	Jun 9, 1964
INSTANTANEOUS LOW FLOW					a48	Dec 4, 1992
ANNUAL RUNOFF (AC-FT)	205,000		162,900		316,200	
ANNUAL RUNOFF (CFSM)	0.440		0.350		0.680	
ANNUAL RUNOFF (INCHES)	5.99		4.76		9.24	
10 PERCENT EXCEEDS	644		472		1,060	
50 PERCENT EXCEEDS	157		155		234	
90 PERCENT EXCEEDS	122		120		131	

a--Gage height, 2.02 ft, result of freezeup.

e--Estimated.



12390000 THOMPSON FALLS RESERVOIR AT THOMPSON FALLS, MT

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, 15,610 acre-ft, June 7, elevation, 2,396.42 ft; minimum observed, 13,990 acre-ft, June 2, elevation, 2,395.32 ft.

MONTHEND ELEVATION AND CONTENTS AT 2400 HOURS, SEPTEMBER 2004 TO SEPTEMBER 2005

Date	Elevation (feet)	Contents (acre-feet)	Change in Contents (acre-feet)
September 30	2,396.31	15,440	--
October 31	2,395.80	14,680	-760
November 30	2,395.94	14,880	+200
December 31	2,395.80	14,680	-200
Calendar Year 2004	--	--	+260
January 31	2,395.61	14,400	-280
February 28	2,395.81	14,690	+290
March 31	2,395.85	14,770	+80
April 30	2,395.36	14,040	-730
May 31	2,396.25	13,880	-160
June 30	2,396.19	15,260	+1,380
July 31	2,395.85	14,750	-510
August 31	2,395.86	14,770	+20
September 30	2,395.91	14,840	+70
Water Year 2005	--	--	-600

12390700 PROSPECT CREEK AT THOMPSON FALLS, MT

LOCATION.--Lat 47°35'10", long 115°21'15" (NAD 27), in lot 12, SE¹/₄SE¹/₄SE¹/₄ 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 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	49	50	60	104	271	e109	195	374	272	101	62	46
2	49	50	64	100	253	107	205	345	280	99	61	46
3	49	51	68	97	240	106	210	331	277	99	61	45
4	49	50	71	95	232	104	215	325	261	96	60	44
5	48	50	72	90	236	104	213	325	250	94	59	44
6	48	49	73	88	220	103	210	351	239	92	59	44
7	49	49	74	89	208	103	215	406	226	91	58	43
8	49	49	75	90	197	104	251	437	214	89	57	43
9	49	49	76	87	188	105	307	440	202	90	57	42
10	49	49	83	85	179	107	309	469	190	89	56	43
11	49	49	120	83	172	108	299	468	180	87	56	43
12	48	49	314	83	166	113	295	447	172	84	57	43
13	48	49	292	81	167	117	283	426	165	82	57	43
14	48	49	253	76	160	121	278	427	158	81	56	41
15	48	49	228	68	152	124	261	432	151	79	55	40
16	48	50	203	73	144	126	249	451	144	79	54	40
17	50	49	186	73	138	130	257	498	155	79	54	40
18	51	50	174	91	134	128	264	482	148	77	54	40
19	50	50	167	141	132	126	269	450	138	75	52	39
20	49	50	163	352	129	126	268	423	131	73	52	38
21	51	50	154	425	127	124	266	401	126	72	51	38
22	51	50	146	455	123	122	268	382	121	72	51	38
23	51	51	137	432	121	119	286	366	118	71	51	37
24	51	53	133	404	118	116	342	346	116	69	51	37
25	51	57	130	385	116	113	433	328	114	68	50	37
26	51	56	126	372	113	111	487	310	111	67	49	36
27	51	56	121	357	e112	121	546	298	111	66	48	36
28	50	58	117	338	e110	146	530	292	109	65	48	36
29	50	59	113	319	---	177	472	289	109	64	47	36
30	51	59	110	299	---	200	417	284	105	63	47	45
31	51	---	108	285	---	196	---	276	---	63	47	---
TOTAL	1,536	1,539	4,211	6,117	4,658	3,816	9,100	11,879	5,093	2,476	1,677	1,223
MEAN	49.5	51.3	136	197	166	123	303	383	170	79.9	54.1	40.8
MAX	51	59	314	455	271	200	546	498	280	101	62	46
MIN	48	49	60	68	110	103	195	276	105	63	47	36
AC-FT	3,050	3,050	8,350	12,130	9,240	7,570	18,050	23,560	10,100	4,910	3,330	2,430
CFSM	0.27	0.28	0.75	1.08	0.91	0.68	1.67	2.11	0.93	0.44	0.30	0.22
IN.	0.31	0.31	0.86	1.25	0.95	0.78	1.86	2.43	1.04	0.51	0.34	0.25

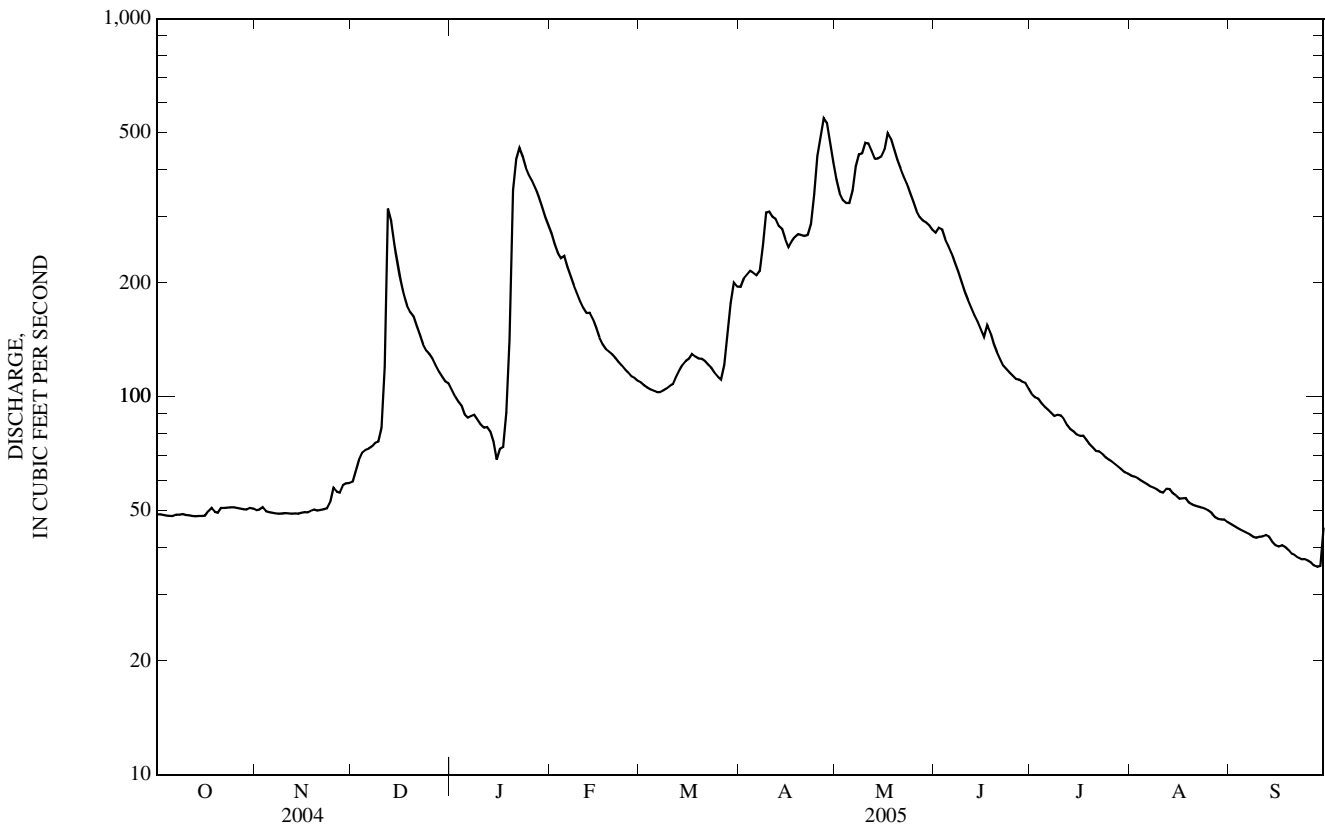
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 2005, BY WATER YEAR (WY)

MEAN	54.1	79.0	112	117	159	218	473	774	526	159	82.6	61.0
MAX	168	469	701	735	875	828	877	1,425	1,468	317	109	79.9
(WY)	(1960)	(1996)	(1996)	(1974)	(1996)	(1972)	(1969)	(1997)	(1974)	(1997)	(1982)	(1959)
MIN	28.7	28.8	29.9	29.1	26.4	31.8	84.5	297	142	73.7	48.5	35.8
(WY)	(2002)	(2002)	(1988)	(2001)	(2001)	(2001)	(2001)	(1977)	(1987)	(1977)	(1977)	(2001)

12390700 PROSPECT CREEK AT THOMPSON FALLS, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1957 - 2005	
ANNUAL TOTAL	57,208		53,325			
ANNUAL MEAN	156		146		235	
HIGHEST ANNUAL MEAN					441	
LOWEST ANNUAL MEAN					85.8	
HIGHEST DAILY MEAN	594	Apr 15	546	Apr 27	4,960	Jan 16, 1974
LOWEST DAILY MEAN	25	Jan 6	36	Sep 26	25	Feb 19, 2001
ANNUAL SEVEN-DAY MINIMUM	37	Jan 2	36	Sep 23	25	Feb 27, 2001
MAXIMUM PEAK FLOW			563		5,490	
MAXIMUM PEAK STAGE			3.25		9.86	
INSTANTANEOUS LOW FLOW			a35		22	
ANNUAL RUNOFF (AC-FT)	113,500		105,800		169,900	
ANNUAL RUNOFF (CFSM)	0.859		0.803		1.29	
ANNUAL RUNOFF (INCHES)	11.69		10.90		17.51	
10 PERCENT EXCEEDS	425		340		634	
50 PERCENT EXCEEDS	70		104		100	
90 PERCENT EXCEEDS	44		48		43	

a--Also occurred on September 27-29.
 e--Estimated.



12391300 NOXON RAPIDS RESERVOIR NEAR NOXON, MT

LOCATION.--Lat 47°57'38", long 115°44'00" (NAD 27), in NE¹/₄ SW¹/₄ SW¹/₄ 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." Records of daily elevations are on file at the USGS Montana Water Science Center located in Helena, Montana. 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.

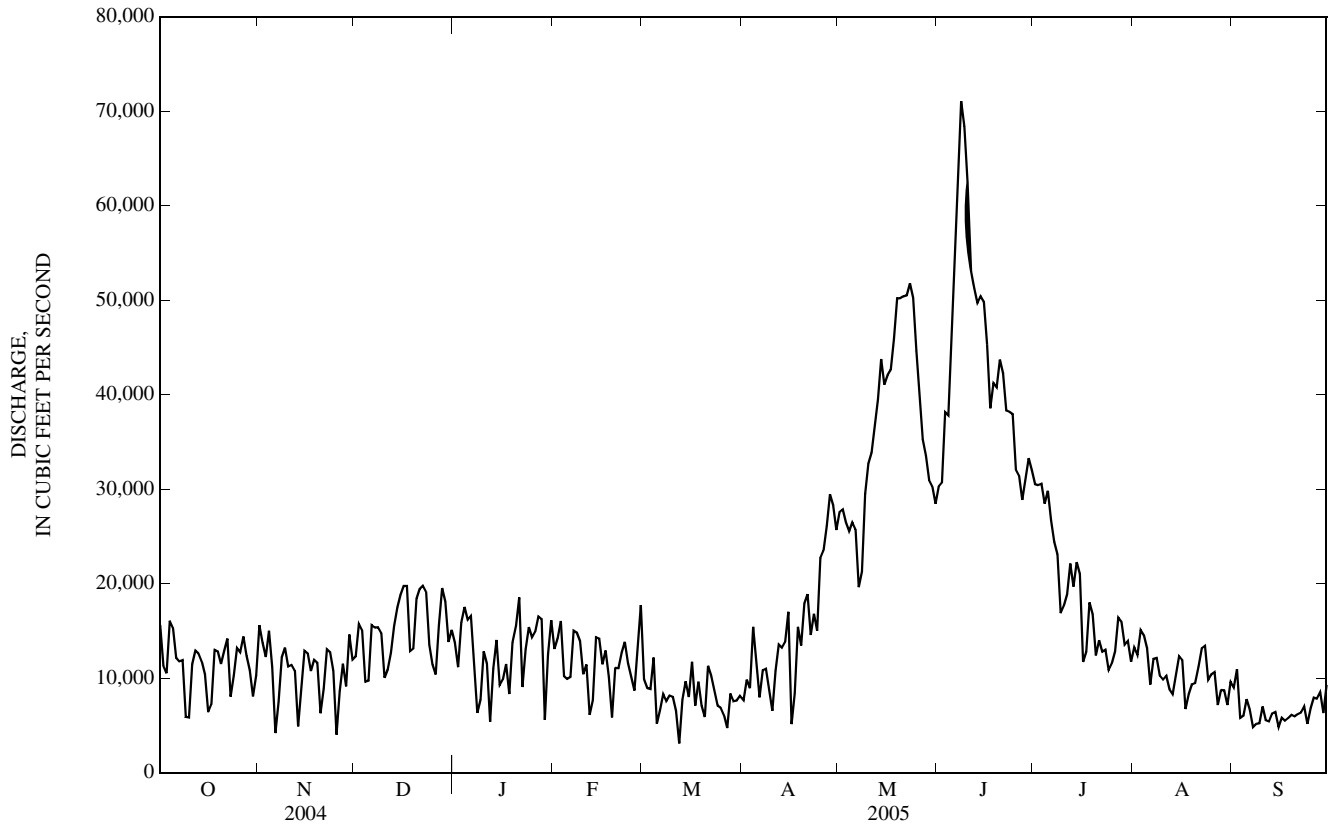
EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 335,400 acre-ft, Apr. 7, 1960, elevation, 2,331.10 ft; minimum since first filling, 26,380 acre-ft, May 10, 1967, elevation, 2,277.15 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 331,500 acre-ft, June 5, elevation, 2,330.61 ft; minimum, 301,600 acre-ft, Apr. 15, elevation, 2,326.73 ft.

MONTHEND ELEVATION AND CONTENTS AT 2400 HOURS, SEPTEMBER 2004 TO SEPTEMBER 2005

Date	Elevation (feet)	Contents (acre-feet)	Change in Contents (acre-feet)
September 30	2,328.28	313,400	--
October 31	2,329.90	325,900	+12,500
November 30	2,328.53	315,300	-10,600
December 31	2,328.70	316,600	+1,300
Calendar Year 2004	--	--	+5,800
January 31	2,329.12	319,900	+3,300
February 28	2,329.69	324,300	+4,400
March 31	2,329.99	326,600	+2,300
April 30	2,329.18	320,300	-6,300
May 31	2,328.94	318,500	-1,800
June 30	2,329.00	318,900	+400
July 31	2,329.53	323,000	+4,100
August 31	2,329.36	321,700	-1,300
September 30	2,329.74	324,700	+3,000
Water Year 2005	--	--	+11,300

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 SE¹/₄ SE¹/₄ SW¹/₄ 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, 5,000 acre-ft, July 31, elevation, 3,900.18 ft; minimum observed, 2,800 acre-ft, Oct 31, Nov. 30, and Dec. 31, elevation, 3,899.28 ft.

12373500 HUBBART RESERVOIR

LOCATION.--Lat 47°55'43", long 114°43'53" (NAD 27), in SE¹/₄ NE¹/₄ 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, October 2004.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 2,670 acre-ft, May 31, elevation, 3,189.58 ft; minimum observed, no storage, Oct. 31.

12375000 UPPER DRY FORK RESERVOIR

LOCATION.--Lat 47°44'55", long 114°40'53" (NAD 27), in SE¹/₄ SE¹/₄ SW¹/₄ 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, 1,610 acre-ft, June 30, elevation, 2,923.80 ft; minimum, 477 acre-ft, Oct. 31, elevation, 2,915.80 ft.

12375500 LOWER DRY FORK RESERVOIR

LOCATION.--Lat 47°42'00", long 114°40'02" (NAD 27), in SW¹/₄ NW¹/₄ NW¹/₄ 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, 1,790 acre-ft, June 30, elevation, 2,849.10 ft; minimum observed, 625 acre-ft, Aug. 31, elevation, 2,841.90 ft.

SMALLER RESERVOIRS IN PEND OREILLE RIVER BASIN IN MONTANA—Continued

CAMAS RESERVOIRS MONTHEND CONTENTS, IN ACRE-FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Little Bitterroot	Hubbert	Upper Dry Fork	Dry Fork	Total of 4
Oct. 31	2,800	0	477	740	4,020
Nov. 30	2,800	169	502	752	4,220
Dec. 31	2,800	169	502	752	4,220
Jan. 31	3,000	586	628	816	5,030
Feb. 28	3,000	804	671	842	5,320
Mar. 31	3,500	1,130	704	867	6,200
Apr. 30	4,100	1,670	799	880	7,450
May 31	4,200	2,670	1,300	1,340	9,510
June 30	4,000	2,620	1,610	1,790	10,020
July 31	5,000	962	1,320	790	8,070
Aug. 31	4,000	444	740	625	5,810
Sept. 30	3,750	755	511	636	5,650

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 SW¹/₄ NW¹/₄ NE¹/₄ 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, 900 acre-ft, June 30, elevation, 3,090.55 ft; minimum observed, 122 acre-ft, Mar. 31, elevation 3,069.50.

12376700 LOWER CROW RESERVOIR

LOCATION.--Lat 47°30'09", long 114°13'35" (NAD 27), in SW¹/₄ SE¹/₄ SE¹/₄ 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, 10,320 acre-ft, June 30, elevation, 2,876.91 ft; minimum observed, 5,980 acre-ft, Sept. 30, elevation 2,861.40 ft.

12377200 MISSION RESERVOIR

LOCATION.--Lat 47°18'54", long 114°01'15" (NAD 27), in NW¹/₄ SW¹/₄ SE¹/₄ 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, 8,140 acre-ft, June 30, elevation, 3,409.00 ft; minimum observed, 584 acre-ft, Sept. 30, elevation, 3,375.10 ft.

12377300 ST. MARYS LAKE

LOCATION.--Lat 47°15'58", long 113°56'08" (NAD 27), in SW¹/₄ NE¹/₄ NE¹/₄ 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, 23,140 acre-ft, June 30, elevation, 4,024.40 ft; minimum observed, 2,370 acre-ft, Sept. 30, elevation, 3,926.70 ft, estimated.

12377900 PABLO RESERVOIR

LOCATION.--Lat 47°38'25", long 114°08'33" (NAD 27), in SW¹/₄ SW¹/₄ NE¹/₄ 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. Reservoir was under repair and emptied from September 2004 through March 2005.

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, 28,700 acre-ft, June 30, elevation, 3,211.43 ft; no contents, October through March (reservoir under repair).

12378200 McDONALD RESERVOIR

LOCATION.--Lat 47°25'31", long 113°59'27" (NAD 27), in SE¹/₄ NE¹/₄ NE¹/₄ 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, 8,220 acre-ft, June 30, elevation, 3,597.97 ft; minimum observed, 720 acre-ft, Sept. 30, elevation, 3,552.00 ft.

12378300 KICKING HORSE RESERVOIR

LOCATION.--Lat 47°27'25", long 114°04'35" (NAD 27), in SE¹/₄ NE¹/₄ NE¹/₄ 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, 9,160 acre-ft, June 30, elevation, 3,062.95 ft; minimum observed, 1,540 acre-ft, Sept. 30, elevation, 3,050.07 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 NE¹/₄ NW¹/₄ NW¹/₄ 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, 14,870 acre-ft, June 30, elevation, 3,010.00 ft; minimum observed, 1,350 acre-ft, Sept. 30, elevation, 2,996.69 ft.

MISSION VALLEY RESERVOIRS MONTHEND CONTENTS, IN ACRE-FEET,
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Turtle	Lower Crow	Mission	St. Mary's	Pablo	McDonald	Kicking Horse	Ninepipe	Total of 8
Oct. 31	173	9,660	5,840	5,390	0	5,690	7,400	4,590	38,740
Nov. 30	130	9,100	3,760	5,080	0	4,660	8,080	7,870	38,680
Dec. 31	130	9,160	3,470	4,900	0	4,700	8,880	7,870	39,110
Jan. 31	159	9,610	3,610	4,900	0	5,080	8,520	8,480	40,360
Feb. 28	159	9,520	3,640	4,320	0	5,010	8,320	8,910	39,880
Mar. 31	122	9,810	3,840	4,230	0	4,840	3,660	12,990	39,490
Apr. 30	256	10,160	4,050	6,220	11,220	1,440	4,550	13,390	51,290
May 31	791	9,420	4,340	20,720	22,980	7,100	8,920	14,080	88,350
June 30	900	10,320	8,140	23,140	28,700	8,220	9,160	14,870	103,450
July 31	666	8,460	7,250	15,040	16,300	6,610	7,350	10,400	72,080
Aug. 31	401	6,490	1,450	4,060	2,020	1,680	3,220	3,900	23,220
Sept. 30	460	5,980	584	2,370	6,500	720	1,540	1,350	19,500

12380000 UPPER JOCKO LAKE

LOCATION.--Lat 47°11'34", long 113°42'44" (NAD 27), in NE¹/₄ NW¹/₄ 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, 1,760 acre-ft, May 31, elevation, 4,422.80 ft; no storage most of year.

12380500 LOWER JOCKO LAKE

LOCATION.--Lat 47°12'10", long 113°45'35" (NAD 27), in NW¹/₄ SW¹/₄ NW¹/₄ 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, 3,760 acre-ft, June 30, elevation, 4,315.20 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 2004 TO SEPTEMBER 2005

Date	Upper Jocko Lake	Lower Jocko Lake
Oct. 31	0	0
Nov. 30	0	0
Dec. 31	0	0
Jan. 31	0	0
Feb. 28	0	0
Mar. 31	0	0
Apr. 30	567	1,380
May 31	1,760	3,030
June 30	1,500	3,760
July 31	0	3,270
Aug. 31	0	361
Sept. 30	0	0

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

LOCATION.--Lat 48°05'18", long 116°04'16" (NAD 27), 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.--No estimated daily discharges. 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, 79,300 ft³/s, June 7, gage height, 21.78 ft; minimum daily, 5,070 ft³/s, Sept. 16.

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	15,900	15,400	12,700	13,900	14,100	10,700	7,890	29,500	32,900	33,900	14,300	8,420
2	11,600	14,300	17,200	12,100	14,400	9,530	10,600	30,000	32,400	31,200	11,800	10,400
3	11,800	12,400	15,600	16,200	17,100	9,160	11,300	27,600	39,300	32,200	14,700	5,650
4	16,600	15,800	9,560	18,000	10,300	12,200	14,800	26,800	41,300	31,400	14,300	5,970
5	17,500	12,000	11,400	16,800	10,700	5,170	12,000	28,300	46,500	29,900	14,600	8,860
6	11,800	5,430	14,400	17,900	10,900	6,200	8,050	27,800	59,200	29,000	11,200	7,370
7	12,800	5,710	14,900	10,400	15,900	8,000	11,600	20,600	66,500	25,900	10,500	5,420
8	12,100	12,000	16,000	7,830	15,400	8,330	10,900	22,600	72,100	23,100	12,400	5,440
9	6,120	13,500	15,000	7,480	15,000	7,870	9,420	31,600	68,300	18,200	10,900	5,240
10	6,110	11,600	11,400	11,900	10,500	7,820	6,940	34,600	63,300	18,300	10,500	5,540
11	13,400	11,700	12,700	11,700	12,400	7,540	11,000	36,200	55,500	21,600	9,870	5,120
12	13,100	11,300	14,000	5,740	6,660	5,150	14,700	37,800	53,800	21,500	9,170	5,180
13	13,100	5,210	16,600	11,900	9,100	5,710	13,700	41,800	52,000	19,500	7,930	5,220
14	11,800	8,970	19,300	13,100	13,200	10,000	14,900	46,600	52,500	23,900	9,620	6,290
15	12,100	13,000	20,900	9,340	14,400	8,510	16,200	44,400	52,100	23,400	14,400	5,140
16	5,780	12,200	21,700	10,300	12,200	11,200	7,740	44,700	48,800	12,200	11,100	5,070
17	7,610	11,300	21,100	12,300	14,000	6,080	8,080	45,500	40,400	11,900	6,220	5,430
18	14,000	11,600	13,600	9,510	9,770	12,000	15,300	48,600	43,500	17,400	8,050	5,680
19	13,100	12,000	13,900	13,200	6,470	6,480	14,100	53,200	43,400	18,300	10,400	5,680
20	12,800	5,680	19,300	16,400	11,200	6,680	18,900	53,100	46,600	12,100	9,030	5,720
21	14,100	9,600	19,800	20,400	12,100	9,290	19,200	53,200	45,800	16,100	11,000	5,970
22	14,900	14,000	21,500	10,700	12,400	11,200	15,300	53,300	39,200	12,000	13,900	5,920
23	8,640	12,800	18,800	14,900	13,700	8,660	18,000	54,500	40,400	13,500	12,500	7,060
24	11,000	10,900	15,600	15,900	11,900	7,300	16,000	52,800	40,900	11,800	10,100	5,430
25	17,100	6,330	11,400	15,200	10,500	7,140	24,000	48,100	34,800	11,200	11,200	6,710
26	11,700	7,650	12,500	16,300	9,720	6,260	25,800	42,700	33,200	13,400	10,600	7,030
27	14,300	12,100	14,900	18,300	13,500	5,650	27,400	39,100	33,600	15,600	6,330	7,630
28	12,900	10,700	19,800	17,500	17,400	6,880	31,900	36,200	30,500	17,400	10,200	8,180
29	12,000	13,900	17,800	5,550	---	9,180	30,800	33,400	33,700	12,900	6,860	7,070
30	7,890	12,400	15,200	13,900	---	7,690	28,800	31,900	33,800	14,700	7,550	9,460
31	11,600	---	15,500	16,900	---	7,940	---	31,600	---	12,500	9,930	---
TOTAL	375,250	331,480	494,060	411,550	344,920	251,520	475,320	1,208,100	1,376,300	606,000	331,160	193,300
MEAN	12,100	11,050	15,940	13,280	12,320	8,114	15,840	38,970	45,880	19,550	10,680	6,443
MAX	17,500	15,800	21,700	20,400	17,400	12,200	31,900	54,500	72,100	33,900	14,700	10,400
MIN	5,780	5,210	9,560	5,550	6,470	5,150	6,940	20,600	30,500	11,200	6,220	5,070
AC-FT	744,300	657,500	980,000	816,300	684,100	498,900	942,800	2,396,000	2,730,000	1,202,000	656,900	383,400
CAL YR 2004	TOTAL	6,256,610	MEAN	17,090	MAX	52,400	MIN	5,180	AC-FT	12,410,000		
WTR YR 2005	TOTAL	6,398,960	MEAN	17,530	MAX	72,100	MIN	5,070	AC-FT	12,690,000		

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, April to September 2005.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: May to July 1998, April to September 2000, November 2001 to October 2002, July to September 2003, April 2004 to March 2005.

INSTRUMENTATION.--Temperature recording data logger.

REMARKS.--Water-quality data previously published as Clark Fork at Whitehorse Rapids near Cabinet, ID (sta 12392000). Daily temperature data for Oct. 1-25 missing due to lost equipment.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 25.4°C, Aug. 14, 2004; minimum, 0.5°C, Jan. 17, 2005.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 12.9°C, Oct. 27; minimum, 0.5°C, Jan. 17.

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

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Turbidity white light, det ang 90+/-30 correctd NTRU (63676)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	E coli, modif. m-TEC, water, col/100 ml (90902)	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 13...	1530	6560	1,570	8.1	10.0	6.3	<2.0	11.6	102	<1	<.010	.32	E.015
MAY 09...	1600	35700	160	7.8	17.0	10.6	<2.0	10.0	98	S2	E.009	.11	.020
JUN 06...	1540	62200	151	8.0	15.0	13.6	<2.0	11.0	115	S1	E.006	E.09	.031
JUL 11.	1530	27300	172	8.1	23.5	17.9	<2.0	8.3	95	S2	<.010	E.09	E.010
AUG 02...	1030	5720	185	8.2	21.0	20.6	<2.0	8.0	96	S1	<.010	.12	E.015
SEP 13...	0950	5090	188	8.3	12.0	16.5	2.9	8.5	94	S1	E.009	.21	.033

Date	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	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 unfltrd fixed end pt, field, mg/L (00440)	Carbonate, wat unfltrd fixed end pt, field, mg/L (00445)	ANC, wat unfltrd fixed end pt, field, mg/L as CaCO3 (00410)	Sulfate water, fltrd, mg/L (00945)
APR 13...	<.006	.009	--	--	--	--	--	--	--	--	--	--
MAY 09...	<.006	.011	--	--	--	--	--	--	--	--	--	--
JUN 06...	E.003	.014	--	--	--	--	--	--	--	--	--	--
JUL 11.	<.006	.011	--	--	--	--	--	--	--	--	--	--
AUG 02...	<.006	.012	--	--	--	--	--	--	--	--	--	--
SEP 13...	.006	.039	93	26.6	6.42	2.60	6	.75	111	.0	91	5.4

E--Estimated.

S--Most probable value.

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

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

Date	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Suspended sediment concentration mg/L (80154)
APR 13...	--	--	--	1
MAY 09...	--	--	--	6
JUN 06...	--	--	--	3
JUL 11.	--	--	--	2
AUG 02...	--	--	--	1
SEP 13...	1.00	E.1	7.6	2

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

DAY	MAX MIN		MAX MIN		MAX MIN		MAX MIN		MAX MIN		MAX MIN	
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	12.4	10.6	8.7	5.3	7.2	2.6	6.7	1.5	8.1	2.9
2	---	---	11.8	10.3	8.6	5.3	7.3	2.6	7.0	1.3	8.2	2.8
3	---	---	11.5	9.8	8.4	5.3	6.8	2.1	6.5	1.2	8.2	2.8
4	---	---	11.7	9.5	8.7	5.3	6.5	1.5	6.5	1.3	7.9	2.8
5	---	---	11.7	9.3	8.9	5.0	6.8	1.3	6.5	1.2	9.3	6.7
6	---	---	11.0	10.1	8.6	4.8	7.8	1.3	6.4	1.2	9.2	3.4
7	---	---	10.9	9.9	8.6	4.7	7.0	1.5	5.9	1.2	8.1	3.2
8	---	---	11.5	8.9	8.4	4.5	7.5	2.0	6.4	1.3	9.5	3.6
9	---	---	10.6	8.7	8.7	4.8	7.8	1.5	6.5	1.3	9.5	3.6
10	---	---	11.2	8.4	7.9	4.3	7.5	1.2	6.5	1.5	9.2	3.7
11	---	---	10.6	8.1	8.4	4.2	7.0	1.3	6.4	1.6	7.8	3.6
12	---	---	10.9	7.8	7.8	4.6	7.2	1.8	6.4	2.1	10.9	5.7
13	---	---	9.5	8.7	7.5	4.0	7.3	1.5	6.8	2.0	10.4	3.8
14	---	---	10.6	7.3	7.2	3.1	6.5	1.2	6.5	2.1	7.3	3.7
15	---	---	10.1	7.5	7.0	3.1	6.8	1.2	6.4	2.3	7.3	3.7
16	---	---	9.8	7.3	6.8	3.1	7.5	0.8	6.7	2.4	7.0	3.9
17	---	---	9.8	7.3	7.6	3.4	6.7	0.5	6.5	2.3	7.3	3.9
18	---	---	9.9	7.3	7.2	3.2	6.8	0.7	6.8	2.3	6.1	3.6
19	---	---	10.3	7.2	7.3	3.2	7.0	0.7	7.2	2.8	6.8	3.7
20	---	---	9.5	8.2	7.2	3.1	7.2	0.8	6.8	2.4	8.1	3.6
21	---	---	9.5	6.7	6.5	3.2	7.0	1.5	6.7	2.4	7.2	3.6
22	---	---	9.6	6.7	7.5	3.1	7.0	1.5	6.4	2.4	6.8	3.6
23	---	---	9.6	7.0	6.5	3.1	6.5	1.5	6.4	2.6	6.5	3.7
24	---	---	10.4	6.4	7.5	2.9	7.2	1.3	6.4	2.4	6.5	4.0
25	---	---	9.3	6.7	6.8	3.1	7.2	1.5	6.5	2.6	7.3	4.0
26	12.7	11.5	9.3	6.2	7.5	2.8	7.0	1.3	6.5	2.8	6.7	4.7
27	12.9	11.2	9.0	6.1	6.5	3.1	7.0	1.2	8.6	2.8	6.8	5.0
28	12.4	11.0	8.9	5.8	6.4	2.8	6.8	1.3	7.9	2.9	8.4	5.1
29	12.7	11.0	9.3	6.1	7.3	2.8	6.8	4.3	---	---	6.5	5.1
30	12.7	10.9	9.6	5.4	6.7	2.8	6.8	1.3	---	---	6.5	5.1
31	12.1	10.9	---	---	7.0	2.8	6.7	1.5	---	---	7.2	5.3
MONTH	---	---	12.4	5.4	8.9	2.8	7.8	0.5	8.6	1.2	10.9	2.8

12392000 CLARK FORK AT WHITEHORSE RAPIDS, NEAR CABINET, ID

LOCATION.--Lat 48°05'30", long 116°07'00" (NAD 27), in NW¹/₄ 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, 72,700 ft³/s, June 8; minimum daily, 5,670 ft³/s, Sept. 16.

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	16,500	16,000	13,300	14,500	14,700	11,300	8,490	30,100	33,500	34,500	14,900	9,020
2	12,200	14,900	17,800	12,700	15,000	10,100	11,200	30,600	33,000	31,800	12,400	11,000
3	12,400	13,000	16,200	16,800	17,700	9,760	11,900	28,200	39,900	32,800	15,300	6,250
4	17,200	16,400	10,200	18,600	10,900	12,800	15,400	27,400	41,900	32,000	14,900	6,570
5	18,100	12,600	12,000	17,400	11,300	5,770	12,600	28,900	47,100	30,500	15,200	9,460
6	12,400	6,030	15,000	18,500	11,500	6,800	8,650	28,400	59,800	29,600	11,800	7,970
7	13,400	6,310	15,500	11,000	16,500	8,600	12,200	21,200	67,100	26,500	11,100	6,020
8	12,700	12,600	16,600	8,430	16,000	8,930	11,500	23,200	72,700	23,700	13,000	6,040
9	6,720	14,100	15,600	8,080	15,600	8,470	10,000	32,200	68,900	18,800	11,500	5,840
10	6,710	12,200	12,000	12,500	11,100	8,420	7,540	35,200	63,900	18,900	11,100	6,140
11	14,000	12,300	13,300	12,300	13,000	8,140	11,600	36,800	56,100	22,200	10,500	5,720
12	13,700	11,900	14,600	6,340	7,260	5,750	15,300	38,400	54,400	22,100	9,770	5,780
13	13,700	5,810	17,200	12,500	9,700	6,310	14,300	42,400	52,600	20,100	8,530	5,820
14	12,400	9,570	19,900	13,700	13,800	10,600	15,500	47,200	53,100	24,500	10,200	6,890
15	12,700	13,600	21,500	9,940	15,000	9,110	16,800	45,000	52,700	24,000	15,000	5,740
16	6,380	12,800	22,300	10,900	12,800	11,800	8,340	45,300	49,400	12,800	11,700	5,670
17	8,210	11,900	21,700	12,900	14,600	6,680	8,680	46,100	41,000	12,500	6,820	6,030
18	14,600	12,200	14,200	10,100	10,400	12,600	15,900	49,200	44,100	18,000	8,650	6,280
19	13,700	12,600	14,500	13,800	7,070	7,080	14,700	53,800	44,000	18,900	11,000	6,280
20	13,400	6,280	19,900	17,000	11,800	7,280	19,500	53,700	47,200	12,700	9,630	6,320
21	14,700	10,200	20,400	21,000	12,700	9,890	19,800	53,800	46,400	16,700	11,600	6,570
22	15,500	14,600	22,100	11,300	13,000	11,800	15,900	53,900	39,800	12,600	14,500	6,520
23	9,240	13,400	19,400	15,500	14,300	9,260	18,600	55,100	41,000	14,100	13,100	7,660
24	11,600	11,500	16,200	16,500	12,500	7,900	16,600	53,400	41,500	12,400	10,700	6,030
25	17,700	6,930	12,000	15,800	11,100	7,740	24,600	48,700	35,400	11,800	11,800	7,310
26	12,300	8,250	13,100	16,900	10,300	6,860	26,400	43,300	33,800	14,000	11,200	7,630
27	14,900	12,700	15,500	18,900	14,100	6,250	28,000	39,700	34,200	16,200	6,930	8,230
28	13,500	11,300	20,400	18,100	18,000	7,480	32,500	36,800	31,100	18,000	10,800	8,780
29	12,600	14,500	18,400	6,150	---	9,780	31,400	34,000	34,300	13,500	7,460	7,670
30	8,490	13,000	15,800	14,500	---	8,290	29,400	32,500	34,400	15,300	8,150	10,100
31	12,200	---	16,100	17,500	---	8,540	---	32,200	---	13,100	10,500	---
TOTAL	393,850	349,480	512,700	430,140	361,730	270,090	493,300	1,226,700	1,394,300	624,600	349,740	211,340
MEAN	12,700	11,650	16,540	13,880	12,920	8,713	16,440	39,570	46,480	20,150	11,280	7,045
MAX	18,100	16,400	22,300	21,000	18,000	12,800	32,500	55,100	72,700	34,500	15,300	11,000
MIN	6,380	5,810	10,200	6,150	7,070	5,750	7,540	21,200	31,100	11,800	6,820	5,670
AC-FT	781,200	693,200	1,017,000	853,200	717,500	535,700	978,500	2,433,000	2,766,000	1,239,000	693,700	419,200

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 2005, BY WATER YEAR (WY)

MEAN	11,840	13,170	14,400	14,270	14,740	15,680	24,620	48,690	56,690	26,210	11,680	10,530
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 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1929 - 2005	
ANNUAL TOTAL	6,476,220		6,617,970			
ANNUAL MEAN	17,690		18,130		21,880	
HIGHEST ANNUAL MEAN					34,250	
LOWEST ANNUAL MEAN					10,180	
HIGHEST DAILY MEAN	53,000	May 30	72,700	Jun 8	153,000	May 30, 1948
LOWEST DAILY MEAN	5,780	Sep 11	5,670	Sep 16	762	Sep 2, 1962
ANNUAL SEVEN-DAY MINIMUM	7,880	Jan 7	5,910	Sep 7	2,710	Feb 10, 1936
ANNUAL RUNOFF (AC-FT)	12,850,000		13,130,000		15,850,000	
10 PERCENT EXCEEDS	33,900		39,700		47,600	
50 PERCENT EXCEEDS	14,400		13,400		15,500	
90 PERCENT EXCEEDS	8,720		6,910		7,180	