

06177000 MISSOURI RIVER NEAR WOLF POINT, MT

LOCATION.--Lat 48°04'00", long 105°31'55" (NAD 27), in SW¹/₄NW¹/₄ sec.28, T.27 N., R.48 E., McCone County, Hydrologic Unit 10060001, on right bank 500 ft downstream from bridge on State Highway 13, 5 mi southeast of Wolf Point, 7.8 mi downstream from Wolf Creek, and at river mile 1,701.4.

DRAINAGE AREA.--82,290 mi².

PERIOD OF RECORD.--September 1928 to current year.

REVISED RECORDS.--WSP 1146: 1931. WSP 1729: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 1,958.57 ft (NGVD 29). Prior to Apr. 13, 1930, nonrecording gages at Wolf Point ferry landing 5.5 mi upstream at different elevation.

REMARKS.-- Records good except those for estimated daily discharges, which are fair. Flow partly regulated by Fort Peck Lake and many other reservoirs upstream from station. Diversion for irrigation of about 1,010,400 acres upstream from station. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 14, 1908, reached a stage of about 20 ft (site and elevation then in use).

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	4,470	3,900	5,480	e5,900	e7,700	e5,400	5,150	5,530	5,160	5,770	6,340	6,240
2	4,390	3,980	5,730	e5,800	e7,000	e6,100	5,120	5,450	5,130	5,680	6,090	6,020
3	4,370	4,080	5,650	e5,700	e6,500	e5,500	4,970	5,500	5,270	6,180	6,360	6,040
4	4,340	4,020	5,760	e5,600	e6,800	e5,400	5,170	5,360	5,060	6,360	6,810	6,050
5	4,630	3,910	5,620	e5,800	e6,600	e5,400	5,480	5,280	5,170	6,040	6,430	5,740
6	4,460	3,910	5,620	e5,800	e6,100	5,230	5,250	5,390	5,200	5,850	5,960	5,990
7	4,300	3,790	5,700	e6,400	e5,700	5,210	5,370	5,550	5,570	5,550	6,630	5,990
8	4,180	3,920	5,650	e6,300	e5,800	5,240	5,160	5,720	6,470	5,360	6,530	5,640
9	4,100	3,900	5,650	e5,800	e5,500	4,980	5,500	5,690	7,310	5,390	6,220	6,000
10	4,110	4,130	5,700	e6,200	e6,100	4,830	5,550	5,600	7,460	5,880	5,870	6,070
11	4,060	4,040	5,720	e6,300	e5,600	4,870	5,450	5,580	8,340	7,010	6,110	6,090
12	4,080	4,100	5,590	e5,900	e5,600	4,900	5,340	5,600	9,310	7,180	6,020	6,010
13	4,040	4,220	5,560	e5,900	e5,700	4,900	5,310	4,690	9,340	6,750	6,160	5,980
14	4,020	4,060	5,660	e6,200	e5,700	4,860	5,540	4,850	8,500	6,950	6,050	6,060
15	4,010	4,020	5,750	e6,100	e5,700	4,900	5,660	5,290	7,690	6,460	6,140	6,120
16	3,820	4,270	5,700	e6,200	e5,800	4,910	5,770	5,580	7,290	6,510	6,320	6,370
17	3,970	4,440	5,680	e6,200	e5,800	4,990	5,760	5,420	6,660	6,530	7,060	6,810
18	3,950	4,600	5,670	e6,400	e5,700	4,960	5,790	5,410	6,470	6,590	6,670	5,610
19	3,970	4,710	5,660	e6,000	e5,800	4,880	5,640	5,150	5,960	6,500	6,710	4,460
20	3,920	4,270	5,880	e6,100	e5,600	4,780	5,560	5,140	6,040	6,340	6,620	4,320
21	4,060	4,470	e5,800	e5,800	e5,500	4,830	5,520	5,240	6,700	6,130	6,510	4,360
22	4,010	4,640	e5,800	e6,000	e5,200	5,070	5,530	5,310	7,170	5,940	6,370	4,450
23	3,970	4,920	e5,800	e5,900	e5,400	5,250	5,570	5,120	7,360	5,840	6,100	4,320
24	3,950	4,970	e5,800	e6,000	e5,400	5,440	5,660	5,010	7,680	5,850	6,330	4,240
25	3,940	5,090	e5,800	e5,900	e5,400	5,290	5,730	4,830	6,830	5,830	6,060	4,090
26	3,940	5,150	e5,800	e6,100	e5,400	5,620	5,560	5,000	6,290	5,700	6,030	3,920
27	3,880	5,300	e5,700	e6,200	e5,400	5,360	5,620	5,100	6,120	6,270	6,110	3,970
28	3,950	5,220	e5,800	e6,200	e5,600	5,290	5,450	5,120	6,000	6,820	6,220	3,990
29	3,960	5,190	e5,400	e6,800	---	5,180	5,450	5,010	6,050	6,840	6,240	3,830
30	3,860	5,260	e5,600	e8,000	---	5,200	5,520	4,960	6,010	7,120	6,270	3,570
31	3,920	---	e5,700	e7,100	---	5,250	---	5,100	---	6,500	5,930	---
TOTAL	126,630	132,480	176,430	190,600	164,100	160,020	164,150	163,580	199,610	193,720	195,270	158,350
MEAN	4,085	4,416	5,691	6,148	5,861	5,162	5,472	5,277	6,654	6,249	6,299	5,278
MAX	4,630	5,300	5,880	8,000	7,700	6,100	5,790	5,720	9,340	7,180	7,060	6,810
MIN	3,820	3,790	5,400	5,600	5,200	4,780	4,970	4,690	5,060	5,360	5,870	3,570
AC-FT	251,200	262,800	349,900	378,100	325,500	317,400	325,600	324,500	395,900	384,200	387,300	314,100

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 2005, BY WATER YEAR (WY)*

MEAN	11,200	9,019	8,968	9,646	9,845	8,839	9,440	9,233	9,349	10,160	11,840	11,560
MAX	29,130	22,210	13,420	14,270	15,820	16,750	27,180	21,800	26,040	36,270	27,110	27,150
(WY)	(1956)	(1998)	(1944)	(1971)	(1976)	(1976)	(1952)	(1979)	(1975)	(1975)	(1955)	(1955)
MIN	3,151	2,328	1,338	995	1,195	2,301	1,470	1,182	1,268	1,171	3,515	3,274
(WY)	(1993)	(1947)	(1943)	(1943)	(1943)	(1945)	(1945)	(1945)	(1945)	(1945)	(1963)	(1992)

SUMMARY STATISTICS

FOR 2004 CALENDAR YEAR

FOR 2005 WATER YEAR

WATER YEARS 1943 - 2005*

ANNUAL TOTAL	2,719,540						2,024,940					
ANNUAL MEAN	7,430						5,548			9,927		
HIGHEST ANNUAL MEAN										15,850		1955
LOWEST ANNUAL MEAN										5,548		2005
HIGHEST DAILY MEAN	15,300					May 28	9,340		Jun 13	45,100		Apr 19, 1952
LOWEST DAILY MEAN	3,790					Nov 7	3,570		Sep 30	680		Dec 5, 1942
ANNUAL SEVEN-DAY MINIMUM	3,920					Oct 26	3,920		Oct 26	906		Jan 12, 1943
MAXIMUM PEAK FLOW							a9,630		Jun 12	c46,800		Apr 19, 1952
MAXIMUM PEAK STAGE							b6.83		Jan 8	b15.64		Mar 27, 1960
INSTANTANEOUS LOW FLOW										d320		Dec 10, 1941
ANNUAL RUNOFF (AC-FT)	5,394,000						4,016,000			7,192,000		
10 PERCENT EXCEEDS	11,100						6,550			15,500		
50 PERCENT EXCEEDS	7,160						5,620			8,880		
90 PERCENT EXCEEDS	4,120						4,070			4,530		

06177000 MISSOURI RIVER NEAR WOLF POINT, MT—Continued

SUMMARY STATISTICS

WATER YEARS 1929 - 1939**

ANNUAL TOTAL		
ANNUAL MEAN	7,183	
HIGHEST ANNUAL MEAN	10,300	1939
LOWEST ANNUAL MEAN	4,891	1937
HIGHEST DAILY MEAN	56,700	Mar 25 1939
LOWEST DAILY MEAN	840	Nov 29 1937
ANNUAL SEVEN-DAY MINIMUM	910	Feb 10 1938
INSTANTANEOUS PEAK FLOW	f66,800	Mar 25 1939
INSTANTANEOUS PEAK STAGE	b14.40	Mar 25 1939
ANNUAL RUNOFF (AC-FT)	520,400	
10 PERCENT EXCEEDS	14,800	
50 PERCENT EXCEEDS	5,060	
90 PERCENT EXCEEDS	2,600	

*--After Fort Peck Lake reached operational level (1943 to current water year).

**--Prior to Fort Peck Lake reaching operational level (1929-1939).

a--Gage height, 3.72 ft.

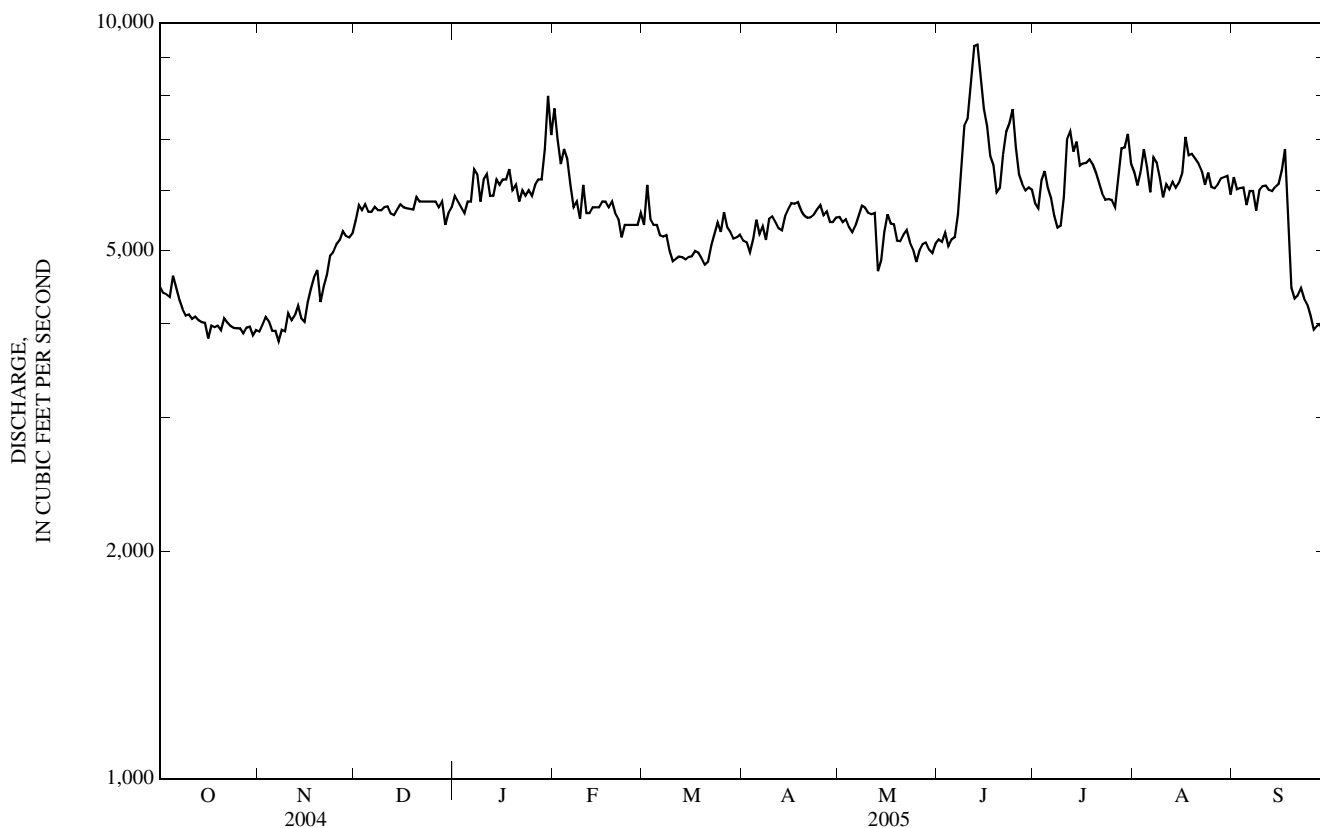
b--Backwater from ice.

c--Gage height, 9.98 ft.

d--Occurred outside of period of record, during filling of Fort Peck Lake.

e--Estimated.

f--From rating curve extended above 39,000 ft³/s.



POPLAR RIVER BASIN

06178000 POPLAR RIVER AT INTERNATIONAL BOUNDARY
(International gaging station)

LOCATION.--Lat 48°59'25", long 105°41'46" (NAD 27), in NE¹/₄NE¹/₄SE¹/₄ sec.6, T.37 N., R.46 E., Daniels County, Hydrologic Unit 10060003, on left bank 0.7 mi south of international boundary, 1.5 mi upstream from Coal Creek, 18.5 mi northwest of Scobey, and at river mile 135.7.

DRAINAGE AREA.--358 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1931 to current season (seasonal records only for most years). Published as Middle Fork Poplar River at international boundary, March 1931 to November 1975.

REVISED RECORDS.--WSP 1389: 1931, 1935-37(M), 1939-40, 1942(M), 1943, 1948(M), 1950(M). WSP 1729: Drainage area. W 1984: Drainage area.

GAGE.--Water-stage recorder and concrete control since September 1977. Elevation of gage is 2,460 ft (NGVD 29).

REMARKS.--Water-discharge records good except those for estimated daily discharges, which are poor. U.S. Geological Survey satellite telemeter at station. A few small diversions for irrigation upstream from station.

COOPERATION.--This is one of a number of stations which are maintained jointly by the United States and Canada.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,700 ft³/s, Apr. 6, 1954, gage height, 10.25 ft, from floodmark, from rating curve extended above 2,500 ft³/s, on basis of slope-area measurement of peak flow; no flow at times.

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			e4.5	48	8.7	7.5	20	0.50	0.08	2.0		
2			e4.5	21	8.5	7.5	14	0.64	0.08	2.1		
3			e4.5	21	8.5	7.0	10	0.63	0.08	2.2		
4			e4.5	21	8.3	6.8	7.7	0.65	0.10	2.4		
5			e10	21	8.0	8.6	6.3	0.60	0.15	2.5		
6			e30	20	7.8	9.6	5.4	0.56	0.18	2.5		
7			e25	18	7.5	13	4.5	0.60	0.24	2.5		
8			e20	17	7.5	22	3.7	0.43	0.26	2.9		
9			e25	17	7.6	24	3.2	0.36	0.30	3.0		
10			e25	19	7.7	29	3.6	0.31	0.37	3.1		
11			e30	17	7.5	28	3.4	0.34	0.44	3.2		
12			e25	16	7.5	21	3.1	0.29	0.34	3.2		
13			e20	16	7.7	16	2.8	0.25	0.55	3.2		
14			e15	15	7.7	14	3.0	0.22	0.80	3.2		
15			e15	13	7.5	12	2.8	0.26	1.5	3.2		
16			e15	12	7.5	11	2.7	0.35	1.4	3.3		
17			e10	11	8.5	10	5.1	0.34	1.6	3.5		
18			e10	11	29	13	3.3	0.54	1.8	4.1		
19			e10	11	20	14	2.8	0.65	2.0	4.4		
20			e10	10	14	14	2.5	0.57	1.8	4.7		
21			e9.5	10	14	14	2.1	0.49	1.8	5.0		
22			e10	9.7	9.9	11	1.9	0.34	1.7	4.7		
23			e10	9.5	9.6	12	1.6	0.29	1.7	4.7		
24			e10	9.3	9.7	8.0	1.3	0.30	1.8	4.7		
25			e9.5	8.9	8.0	7.3	0.93	0.28	1.9	4.7		
26			e10	8.7	7.5	7.2	0.83	0.22	2.0	4.7		
27			17	8.5	7.1	6.7	0.77	0.18	1.8	4.7		
28			22	8.9	6.4	7.2	0.72	0.20	1.8	4.7		
29			27	9.0	6.1	111	0.69	0.19	1.8	4.7		
30			27	8.9	6.1	41	0.65	0.13	1.8	4.7		
31			30	---	7.1	---	0.55	0.12	---	4.7		
TOTAL			495.0	446.4	288.5	513.4	121.94	11.83	32.17	113.2		
MEAN			16.0	14.9	9.31	17.1	3.93	0.38	1.07	3.65		
MAX			30	48	29	111	20	0.65	2.0	5.0		
MIN			4.5	8.5	6.1	6.7	0.55	0.12	0.08	2.0		
MED			15	12	7.7	12	2.8	0.34	1.5	3.3		
AC-FT			982	885	572	1,020	242	23	64	225		

STATISTICS OF MONTHLY MEAN DATA FOR SEASONS 1931 - 2005*

	0.00	20.2	68.1	79.9	17.7	14.9	8.56	1.53	1.45	2.73	4.90	0.00
MAX	0.00	61.3	418	699	86.2	191	120	19.4	15.3	11.8	9.35	0.00
(WY)	(1936)	(1981)	(1999)	(1952)	(1982)	(1963)	(1993)	(1940)	(1954)	(1955)	(1955)	(1936)
MIN	0.00	0.00	0.00	5.52	3.05	0.16	0.04	0.00	0.01	0.04	0.12	0.00
(WY)	(1936)	(1936)	(1950)	(1988)	(1992)	(1988)	(1988)	(1967)	(1988)	(1989)	(1937)	(1936)

06178000 POPLAR RIVER AT INTERNATIONAL BOUNDARY—Continued

SUMMARY STATISTICS

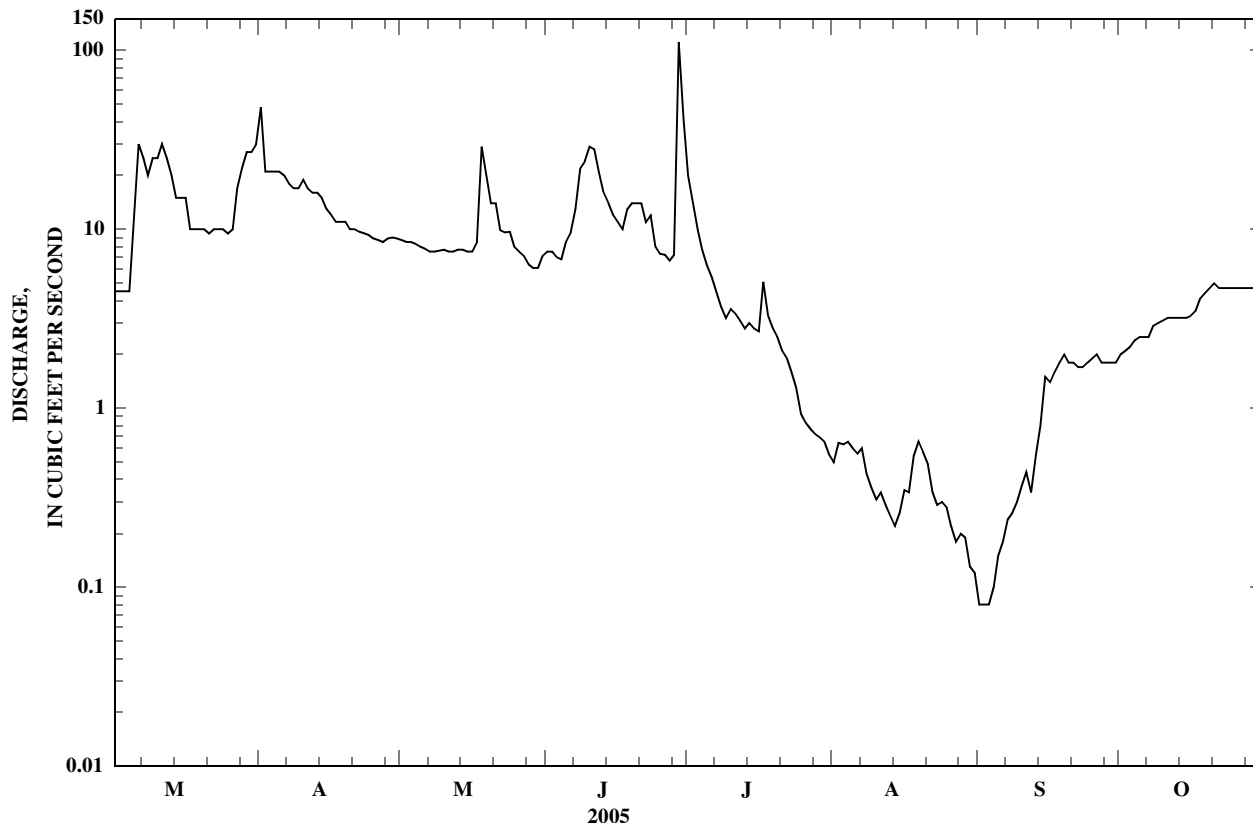
FOR 2004 CALENDAR YEAR

FOR 2005 SEASON

SEASONS 1931 - 2005*

HIGHEST DAILY MEAN	335	May 25	111	Jun 29	5,000	Apr 6, 1954
LOWEST DAILY MEAN	0.00	Mar 1	0.08	Sep 1	0.00	Jun 30, 1932
MAXIMUM PEAK FLOW			208	Jun 29	a12,700	Apr 6, 1954
MAXIMUM PEAK STAGE			3.86	Jun 29	10.25	Apr 6, 1954

*--Seasonal record most years.
 a--From rating curve extended above 2,500 ft³/s on basis of slope-area measurement of peak flow.
 e--Estimated.



WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964-65, 1976 to current year.

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

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

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	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)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
APR 06...	1045	20	712	10.2	95	8.4	1,060	11.0	9.5	340	55.4	48.6	7.12
MAY 18...	1215	30	697	4.4	48	9.1	1,410	18.0	15.0	280	31.8	47.7	8.29
JUN 21...	1215	14	711	10.5	135	8.6	1,270	29.0	24.0	370	38.9	65.3	8.93
AUG 02...	1200	.60	704	8.4	109	8.9	1,400	24.0	24.0	290	25.5	54.9	9.43

06178000 POPLAR RIVER AT INTERNATIONAL BOUNDARY—Continued

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

Date	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)
APR 06...	3	144	47	404	5.64	.4	10.6	195	710	.97	38.3	E.008	<.016
MAY 18...	7	257	66	443	6.75	.4	9.5	324	953	1.30	77.2	.013	.028
JUN 21...	4	172	50	495	5.26	.4	2.3	224	815	1.11	30.8	E.006	<.016
AUG 02...	6	216	61	474	8.59	.5	3.8	275	879	1.20	1.42	E.008	<.016

Date	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Total nitrogen, wat unfltrd by analysis, mg/L (62855)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Barium, water, fltrd, ug/L (01005)	Barium, water, unfltrd recover-able, ug/L (01007)	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)	Chromium, water, fltrd, ug/L (01030)	Chromium, water, unfltrd recover-able, ug/L (01034)
APR 06...	E.001	E.005	.050	.60	1.9	E2	46	46	727	<.04	<.04	<.8	<1.6
MAY 18...	.007	.091	.27	1.88	--	7	--	--	1,260	--	.10	--	--
JUN 21...	E.001	.021	.060	.96	--	5	--	--	1,110	--	<.04	--	--
AUG 02...	E.001	.017	.102	1.15	--	6	--	--	1,400	--	<.04	--	--

Date	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover-able, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover-able, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recover-able, ug/L (01051)	Manganese, water, fltrd, ug/L (01056)	Manganese, water, unfltrd recover-able, ug/L (01055)	Mercury water, fltrd, ug/L (71890)	Mercury water, unfltrd recover-able, ug/L (71900)	Nickel, water, fltrd, ug/L (01065)	Nickel, water, unfltrd recover-able, ug/L (01067)
APR 06...	1.2	2.2	46	390	<.08	.36	17.3	23	<.01	E.01	2.40	2.32
MAY 18...	--	--	--	--	--	2.22	--	--	--	--	--	--
JUN 21...	--	--	--	--	--	.09	--	--	--	--	--	--
AUG 02...	--	--	--	--	--	.28	--	--	--	--	--	--

Date	Selenium, water, fltrd, ug/L (01145)	Selenium, water, unfltrd ug/L (01147)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover-able, ug/L (01092)	Suspnd. sediment, percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
APR 06...	E.3	.5	1.2	4	56	58	3.1
MAY 18...	--	--	--	11	99	91	7.4
JUN 21...	--	--	--	E2	52	18	.68
AUG 02...	--	--	--	2	94	13	.02

E--Estimated.

06178500 EAST POPLAR RIVER AT INTERNATIONAL BOUNDARY
(International gaging station)

LOCATION.--Lat 49°00'00", long 105°24'32" (NAD 27), in SW¹/₄SW¹/₄ sec.3, T.1 N., R.26 W., second meridian, in Saskatchewan, Hydrologic Unit 10060003, on left bank 10 ft north of international boundary, 400 ft southwest of Canadian East Poplar Port of Entry, 14 mi north of Scobey, and at river mile 21.9.

DRAINAGE AREA.--541 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1931 to current year (seasonal records only in most seasons prior to October 1974). Prior to March 1962, published as East Fork Poplar River at international boundary.

REVISED RECORDS.--WSP 1389: 1932, 1939, 1942-43, 1947. W 1983: Drainage area.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 2,410.92 ft (International Boundary Commission Survey Datum). Prior to Oct. 5, 1953, water-stage recorder at site 80 ft upstream at same elevation.

REMARKS.--Water-discharge records good except those for estimated daily discharges, which are fair. U.S. Geological Survey satellite telemeter at station. Since September 1975 flow regulated by Morrison Dam at Cookson Reservoir 3.1 mi upstream.

COOPERATION.--This is one of a number of stations which are maintained jointly by Canada and the United States.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.5	2.4	2.3	2.1	2.4	2.2	e2.0	7.5	2.8	2.4	e1.0	e1.5
2	2.4	2.4	2.4	2.1	2.5	2.3	e2.5	8.7	2.4	2.3	e6.0	e8.0
3	2.5	2.6	2.4	2.1	2.5	2.6	e2.5	9.0	2.5	2.4	3.8	e4.0
4	2.4	2.4	2.5	2.1	2.5	2.9	e2.5	10	2.5	2.2	2.9	e0.50
5	2.4	2.5	2.4	2.1	2.5	3.3	e2.5	11	2.2	2.1	2.6	e1.0
6	2.4	2.6	2.4	2.1	2.3	4.2	e5.0	10	2.1	2.1	2.3	e2.1
7	2.5	2.4	2.4	2.1	2.2	3.8	3.4	12	2.6	2.1	2.4	e3.3
8	2.5	2.4	2.4	2.1	2.1	3.3	2.4	11	3.7	2.0	2.4	e0.50
9	2.0	2.5	2.4	2.1	2.1	3.3	3.3	11	3.5	2.2	e1.0	e5.0
10	2.1	2.5	2.4	2.0	2.2	3.6	3.1	11	3.0	2.1	e0.50	3.4
11	2.3	2.4	2.5	2.0	2.2	3.6	2.4	10	2.8	2.1	e1.5	2.6
12	2.7	2.4	2.5	2.0	2.2	3.9	2.4	11	2.6	2.1	e1.5	2.4
13	2.7	2.4	2.5	1.6	2.3	2.9	2.2	11	2.7	2.1	e1.5	e0.50
14	3.2	2.4	2.5	1.6	2.3	2.6	2.4	10	3.5	2.3	e1.5	e0.50
15	2.4	2.5	2.5	1.6	2.2	2.5	2.9	10	2.7	2.2	e1.5	e1.7
16	2.3	2.5	2.5	1.6	2.1	2.4	2.4	10	2.8	2.2	e2.3	3.4
17	2.6	2.5	2.4	1.9	2.1	2.4	2.4	11	3.1	2.6	3.1	e0.50
18	2.6	2.4	2.4	2.1	2.1	2.4	2.4	15	3.9	2.4	3.1	e1.0
19	2.8	2.5	2.3	2.2	2.1	2.4	2.2	10	2.9	2.3	2.7	e1.0
20	2.6	2.5	2.4	2.2	2.1	2.4	2.2	9.6	2.5	2.2	2.7	e2.0
21	2.7	2.4	2.3	2.2	2.0	2.4	2.4	11	2.3	2.2	2.5	3.0
22	2.6	2.5	2.2	2.1	2.1	2.5	2.2	7.6	2.2	2.2	2.4	2.7
23	2.6	2.4	2.1	2.2	2.1	2.6	2.4	10	2.3	2.4	e0.50	e2.3
24	2.6	2.4	2.0	2.3	2.1	2.5	2.4	9.6	2.1	2.2	e1.5	2.8
25	2.5	2.4	2.1	2.5	2.2	2.5	2.4	9.6	2.0	2.1	e1.5	e2.0
26	2.5	2.5	2.1	2.5	2.2	2.5	2.1	9.5	2.3	2.1	e1.5	e2.5
27	2.5	2.5	2.1	2.4	2.2	e2.2	2.2	10	2.3	e1.0	e1.5	e2.3
28	2.6	2.4	2.1	2.4	2.2	e2.0	2.1	9.7	2.2	e1.0	e1.5	e2.5
29	2.8	2.4	2.0	2.4	---	e2.5	2.1	10	2.5	e0.50	e1.5	2.7
30	2.6	2.3	2.1	2.4	---	e2.5	2.5	8.5	2.6	e1.0	e0.50	e2.4
31	2.6	---	1.9	2.4	---	e2.5	---	3.6	---	e1.0	e0.50	---
TOTAL	78.5	73.4	71.5	65.5	62.1	85.7	75.9	307.9	79.6	62.10	61.70	70.10
MEAN	2.53	2.45	2.31	2.11	2.22	2.76	2.53	9.93	2.65	2.00	1.99	2.34
MAX	3.2	2.6	2.5	2.5	2.5	4.2	5.0	15	3.9	2.6	6.0	8.0
MIN	2.0	2.3	1.9	1.6	2.0	2.0	2.0	3.6	2.0	0.50	0.50	0.50
AC-FT	156	146	142	130	123	170	151	611	158	123	122	139

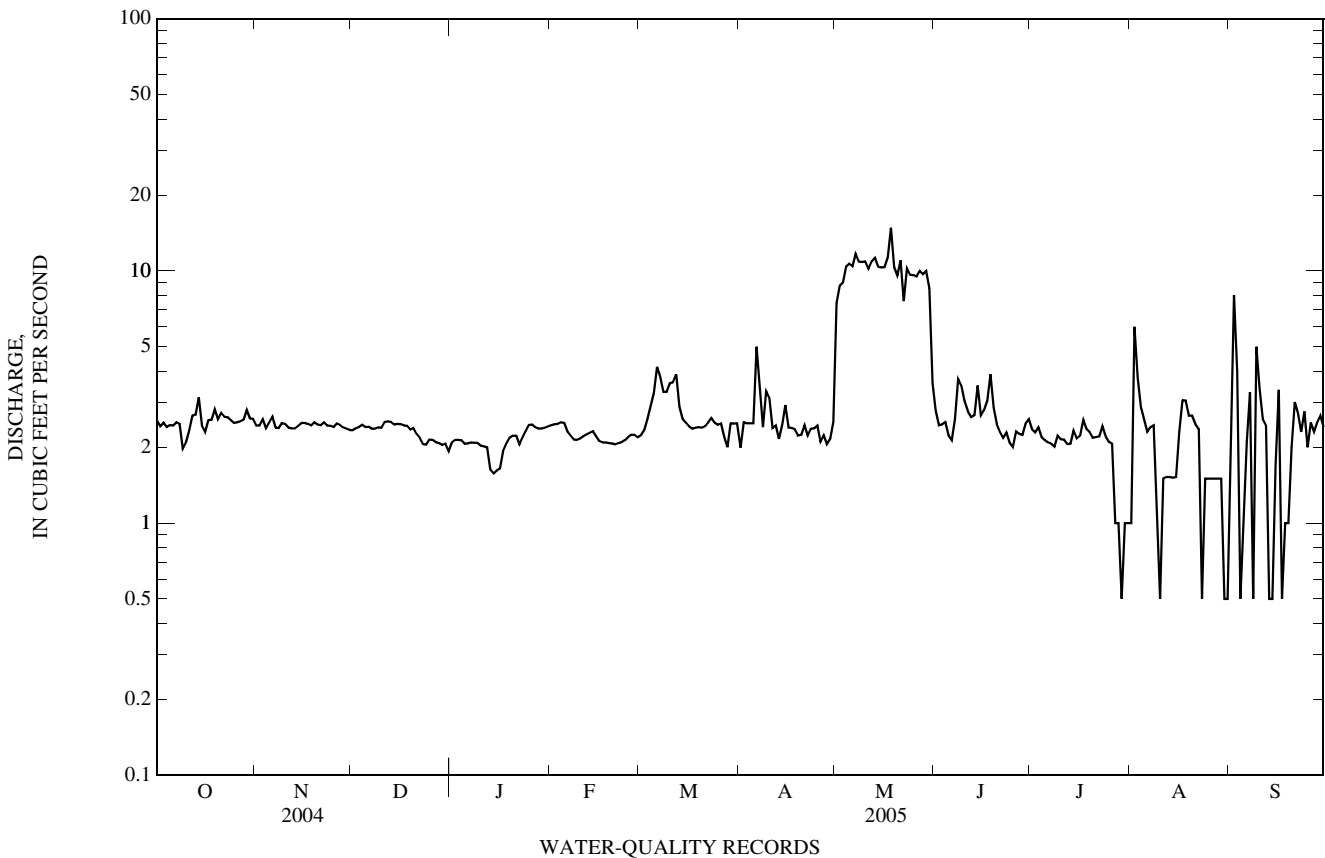
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 2005, BY WATER YEAR (WY)*

MEAN	2.58	2.45	2.26	2.19	2.55	20.3	21.4	11.3	5.17	2.79	2.37	2.50
MAX	4.65	4.42	4.37	4.40	7.95	280	306	40.7	23.2	6.84	3.31	4.10
(WY)	(1980)	(1980)	(1980)	(1980)	(1997)	(1999)	(1982)	(1979)	(1979)	(1999)	(1997)	(1979)
MIN	1.59	1.64	1.27	1.26	0.14	1.91	1.80	2.98	1.72	1.79	1.58	1.53
(WY)	(1993)	(1993)	(1993)	(1982)	(2004)	(1992)	(1992)	(1978)	(1992)	(1977)	(1992)	(1992)

06178500 EAST POPLAR RIVER AT INTERNATIONAL BOUNDARY—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1977 - 2005*	
ANNUAL TOTAL	1,241.00		1,094.00			
ANNUAL MEAN	3.39		3.00		6.50	
HIGHEST ANNUAL MEAN					32.3	1982
LOWEST ANNUAL MEAN					2.13	1992
HIGHEST DAILY MEAN	50	Mar 28	15	May 18	2,930	Apr 15, 1982
LOWEST DAILY MEAN	0.00	Feb 5	0.50	Jul 29	0.00	Feb 5, 2004
ANNUAL SEVEN-DAY MINIMUM	0.00	Feb 5	1.1	Jul 26	0.00	Feb 5, 2004
MAXIMUM PEAK FLOW			22	May 18	a4,020	Apr 23, 1975
MAXIMUM PEAK STAGE			6.15	May 18	b12.80	Mar 25, 1943
INSTANTANEOUS LOW FLOW					c0.70	Feb 28, 1998
ANNUAL RUNOFF (AC-FT)	2,460		2,170		4,710	
10 PERCENT EXCEEDS	7.9		3.9		6.7	
50 PERCENT EXCEEDS	2.5		2.4		2.5	
90 PERCENT EXCEEDS	0.00		1.8		1.7	

*--Since initial filling of Cookson Reservoir.
 a--Gage height, 12.01 ft.
 b--Backwater from ice.
 c--Backwater from beavers.
 e--Estimated.



PERIOD OF RECORD.--Water years 1964-65, 1975 to current year.

PERIOD OF DAILY RECORD.--
 SPECIFIC CONDUCTANCE: February 1982 to current year.
 WATER TEMPERATURE: June 1975 to September 1983.

INSTRUMENTATION.--Specific conductance monitor installed April 1995.

REMARKS.--Daily specific conductance records are rated good to excellent except during periods of ice cover (December to March), which are rated fair to poor. Several unpublished observations of specific conductance and water temperature were made during the year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
 SPECIFIC CONDUCTANCE: Maximum daily mean, 2,040 microsiemens per centimeter ($\mu\text{S}/\text{cm}$) at 25.0°C, Feb. 10-12, 1997; minimum daily, 363 $\mu\text{S}/\text{cm}$ at 25.0°C, July 2, 1991.
 WATER TEMPERATURE: Maximum, 29.5°C, July 6, 1975, July 25, 26, 1978; minimum, 0.0°C on many days during winters most years.

EXTREMES FOR CURRENT YEAR.--
 SPECIFIC CONDUCTANCE: Maximum daily mean, 1,670 microsiemens per centimeter ($\mu\text{S}/\text{cm}$) at 25.0°C, Dec. 6 and 7; minimum daily mean, 1,040 $\mu\text{S}/\text{cm}$ at 25.0°C, Apr. 2.

06178500 EAST POPLAR RIVER AT INTERNATIONAL BOUNDARY—Continued

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

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfiltered, uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium, water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
APR 06...	1400	E5.0	712	5.5	53	8.2	1,150	21.0	10.5	310	56.7	40.2	6.40
MAY 18...	0915	15	698	8.1	87	8.5	1,480	16.0	14.5	400	45.9	68.9	18.5
JUN 21...	0945	2.4	712	7.0	87	8.3	1,500	29.0	22.5	350	55.6	51.4	8.59
AUG 02...	0945	E6.0	704	6.4	83	8.4	1,480	28.0	24.0	340	45.8	55.7	8.93

Date	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alkalinity, water fltrd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate, water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Ammonia, water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)
APR 06...	4	175	55	412	5.38	.3	8.4	228	770	1.05	E10.4	.105	.051
MAY 18...	4	206	51	474	7.81	.4	3.9	338	975	1.33	39.5	.167	.127
JUN 21...	5	236	59	501	6.51	.4	9.1	301	971	1.32	6.40	<.010	<.016
AUG 02...	5	212	57	474	6.51	.3	13.5	297	926	1.26	E15.0	<.010	<.016

Date	Nitrite water, fltrd, mg/L as N (00613)	Total nitrogen, water unfiltered, by analysis, mg/L (62855)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfiltered, mg/L (00665)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfiltered, ug/L (01002)	Barium, water, fltrd, ug/L (01005)	Barium, water, unfiltered, recoverable, ug/L (01007)	Boron, water, fltrd, ug/L (01020)	Cadmium, water, fltrd, ug/L (01025)	Cadmium, water, unfiltered, ug/L (01027)	Chromium, water, fltrd, ug/L (01030)	Chromium, water, unfiltered, recoverable, ug/L (01034)
APR 06...	.004	.65	<.006	.043	2.2	2	32	35	1,370	<.04	<.04	<.8	E.5
MAY 18...	.011	1.50	.006	.104	--	5	--	--	1,550	--	E.04	--	--
JUN 21...	<.002	.81	<.006	.078	--	7	--	--	1,890	--	<.04	--	--
AUG 02...	<.002	.98	<.006	.103	--	18	--	--	1,970	--	<.04	--	--

Date	Copper, water, fltrd, ug/L (01040)	Copper, water, unfiltered, recoverable, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfiltered, recoverable, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfiltered, recoverable, ug/L (01051)	Manganese, water, fltrd, ug/L (01056)	Manganese, water, unfiltered, recoverable, ug/L (01055)	Mercury, water, fltrd, ug/L (71890)	Mercury, water, unfiltered, recoverable, ug/L (71900)	Nickel, water, fltrd, ug/L (01065)	Nickel, water, unfiltered, recoverable, ug/L (01067)
APR 06...	1.0	2.8	15	680	<.08	.29	63.9	97	<.01	<.01	2.72	2.10
MAY 18...	--	--	--	--	--	.79	--	--	--	--	--	--
JUN 21...	--	--	--	--	--	.50	--	--	--	--	--	--
AUG 02...	--	--	--	--	--	.40	--	--	--	--	--	--

E--Estimated.

06178500 EAST POPLAR RIVER AT INTERNATIONAL BOUNDARY—Continued

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

Date	Selenium, water, fltrd, ug/L (01145)	Selenium, water, unfltrd ug/L (01147)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover- able, ug/L (01092)	Suspnd. sedi- ment, sieve diametr percent <.063mm (70331)	Sus- pended sedi- ment concen- tration mg/L (80154)	Sus- pended sedi- ment dis- charge, tons/d (80155)
APR 06...	.4	.9	.7	2	82	95	E1.3
MAY 18...	--	--	--	5	91	88	3.6
JUN 21...	--	--	--	4	88	82	.54
AUG 02...	--	--	--	5	59	58	E.94

E--Estimated.

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,390	1,530	1,590	1,500	1,430	1,400	1,110	1,510	1,510	1,460	1,540	1,470
2	1,430	1,570	1,590	1,490	1,430	1,410	1,040	1,480	1,520	1,450	1,510	1,460
3	1,450	1,550	1,610	1,490	1,430	1,400	1,050	1,480	1,530	1,420	1,440	1,430
4	1,440	1,570	1,640	1,500	1,430	1,380	1,060	1,480	1,540	1,430	1,440	1,460
5	1,460	1,570	1,660	1,500	1,430	1,330	1,110	1,490	1,550	1,440	1,460	1,460
6	1,470	1,550	1,670	1,500	1,430	1,300	1,150	1,480	1,530	1,460	1,450	1,440
7	1,480	1,530	1,670	1,500	1,490	1,220	1,150	1,500	1,510	1,470	1,460	1,440
8	1,500	1,520	1,650	1,500	1,530	1,230	1,260	1,490	1,480	1,480	1,470	1,450
9	1,520	1,540	1,620	1,500	1,540	1,430	1,360	1,490	1,530	1,470	1,490	1,450
10	1,520	1,530	1,580	1,490	1,520	1,290	1,380	1,490	1,540	1,460	1,510	1,470
11	1,520	1,580	1,570	1,500	1,480	1,320	1,390	1,490	1,530	1,460	1,510	1,480
12	1,520	1,620	1,550	1,500	1,450	1,210	1,470	1,490	1,530	1,460	1,490	1,480
13	1,520	1,620	1,540	1,530	1,430	1,220	1,420	1,490	1,540	1,470	1,490	1,470
14	1,540	1,620	1,550	1,550	1,420	1,320	1,450	1,490	1,530	1,470	1,490	1,470
15	1,540	1,620	1,550	1,570	1,420	1,370	1,460	1,500	1,530	1,500	1,490	1,470
16	1,540	1,600	1,540	1,600	1,430	1,380	1,500	1,510	1,550	1,490	1,490	1,460
17	1,530	1,590	1,530	1,600	1,450	1,430	1,550	1,510	1,530	1,440	1,460	1,470
18	1,520	1,570	1,520	1,570	1,470	1,510	1,490	1,540	1,480	1,440	1,450	1,480
19	1,520	1,550	1,530	1,520	1,470	1,570	1,510	1,620	1,480	1,430	1,440	1,490
20	1,520	1,550	1,550	1,460	1,470	1,600	1,550	1,590	1,510	1,430	1,450	1,480
21	1,520	1,610	1,560	1,430	1,490	1,570	1,570	1,530	1,520	1,430	1,460	1,450
22	1,520	1,630	1,580	1,460	1,480	1,600	1,580	1,580	1,530	1,440	1,470	1,450
23	1,520	1,560	1,600	1,490	1,470	1,460	1,550	1,530	1,530	1,450	1,480	1,470
24	1,520	1,590	1,590	1,490	1,460	1,370	1,530	1,520	1,520	1,470	1,480	1,470
25	1,530	1,620	1,580	1,470	1,450	1,380	1,520	1,520	1,510	1,460	1,470	1,480
26	1,530	1,640	1,570	1,440	1,430	1,490	1,500	1,510	1,500	1,450	1,480	1,490
27	1,530	1,640	1,530	1,420	1,420	1,380	1,520	1,510	1,480	1,460	1,490	1,490
28	1,530	1,620	1,510	1,420	1,410	1,350	1,540	1,510	1,480	1,470	1,490	1,480
29	1,530	1,620	1,500	1,430	---	1,240	1,560	1,510	1,460	1,490	1,500	1,460
30	1,540	1,600	1,500	1,430	---	1,150	1,550	1,510	1,450	1,500	1,470	1,470
31	1,530	---	1,500	1,430	---	1,060	---	1,490	---	1,530	1,460	---
MEAN	1,510	1,580	1,570	1,490	1,460	1,370	1,400	1,510	1,510	1,460	1,480	1,470
MAX	1,540	1,640	1,670	1,600	1,540	1,600	1,580	1,620	1,550	1,530	1,540	1,490
MIN	1,390	1,520	1,500	1,420	1,410	1,060	1,040	1,480	1,450	1,420	1,440	1,430

06181000 POPLAR RIVER NEAR POPLAR, MT

LOCATION.--Lat 48°10'15", long 105°10'42" (NAD 27), in NE¹/₄ NE¹/₄ sec.19, T.28 N., R.51 E., Roosevelt County, Hydrologic Unit 10060003, on right bank 4 mi north of Poplar, and at river mile 11.

DRAINAGE AREA.--3,174 mi².

PERIOD OF RECORD.--August 1908 to October 1924, August 1947 to September 1969, June 1975 to September 1979, October 1981 to current year. Monthly discharge only for some periods, published in WSP 1309.

WATER-DISCHARGE RECORDS

REVISED RECORDS.--WSP 1176. 1948. WSP 1389: 1911. WSP 1729: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 1,953.16 ft (NGVD 29). Prior to May 1, 1911, nonrecording gage at site 4.2 mi upstream at different elevation. May 1, 1911, to Oct. 4, 1913, nonrecording gage at site 14 mi upstream at different elevation. Oct. 5, 1913, to Oct. 31, 1924, nonrecording gage at site 2.2 mi upstream at different elevation. Aug. 10, 1947, to Sept. 30, 1969, water-stage recorder at present site and elevation.

REMARKS.--Water-discharge records good except those for estimated daily discharges, which are poor. Diversions for irrigation of about 5,500 acres upstream from station. Flow partially regulated by Coronach Dam, on the East Fork Poplar River, 2 mi north of international boundary. U.S. Geological Survey satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 10, 1946, reached a stage of 18.1 ft, from floodmark, discharge, 40,000 ft³/s, from slope-area measurement of peak flow made at site 20 mi upstream.

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	21	38	e25	e15	e4.0	e20	125	45	51	104	20	11
2	22	38	e25	e15	e4.0	e30	123	44	48	101	18	11
3	22	38	e30	e10	e4.0	e100	134	43	45	175	18	9.8
4	22	38	e30	e10	e4.0	e150	122	42	44	185	18	9.7
5	23	38	e25	e10	e4.0	e100	120	42	42	178	16	9.2
6	23	38	e25	e10	e4.0	e100	114	41	43	166	15	8.9
7	24	37	e25	e10	e4.0	e100	109	48	46	139	13	9.3
8	24	37	e25	e10	e4.0	e95	101	115	69	116	12	9.1
9	25	37	e25	e10	e4.0	e95	98	64	110	96	12	9.4
10	24	37	e25	e8.0	e4.0	e95	94	53	194	84	13	9.4
11	25	35	e30	e7.0	e4.0	105	91	48	195	75	16	9.1
12	25	34	e30	e6.0	e4.0	142	86	49	192	68	14	9.3
13	26	32	e30	e5.0	e4.0	e90	83	51	184	63	16	9.4
14	27	37	e35	e5.0	e4.0	e95	75	49	164	77	17	9.5
15	27	38	e35	e4.0	e4.0	e95	75	47	202	54	18	9.8
16	27	43	e35	e3.5	e4.0	e95	69	47	171	47	18	10
17	27	42	e35	e3.5	e4.0	e90	66	47	155	45	18	10
18	29	41	e35	e3.5	e4.0	e90	65	50	129	45	19	11
19	30	41	e35	e4.0	e4.0	e95	66	46	120	42	34	10
20	31	e30	e35	e4.0	e4.0	e100	64	43	118	39	24	10
21	32	e25	e30	e4.0	e4.0	e100	61	48	119	36	18	9.7
22	32	e30	e30	e4.0	e8.0	112	57	70	119	34	15	9.3
23	33	e30	e30	e4.0	e10	110	55	78	114	32	15	9.8
24	34	e25	e30	e4.0	e10	94	53	79	104	31	13	10
25	35	e30	e30	e4.0	e10	88	52	70	92	30	12	10
26	36	e30	e30	e4.0	e10	90	49	62	94	32	12	10
27	37	e25	e25	e4.0	e10	110	48	55	99	30	12	11
28	38	e25	e25	e4.0	e10	112	46	52	111	27	12	11
29	39	e25	e20	e4.0	---	119	45	50	123	25	12	11
30	39	e25	e20	e4.0	---	120	45	50	114	24	11	11
31	38	---	e20	e4.0	---	118	---	50	---	22	10	---
TOTAL	897	1,019	885	197.5	152.0	3,055	2,391	1,678	3,411	2,222	491	297.7
MEAN	28.9	34.0	28.5	6.37	5.43	98.5	79.7	54.1	114	71.7	15.8	9.92
MAX	39	43	35	15	10	150	134	115	202	185	34	11
MIN	21	25	20	3.5	4.0	20	45	41	42	22	10	8.9
AC-FT	1,780	2,020	1,760	392	301	6,060	4,740	3,330	6,770	4,410	974	590

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1908 - 2005, BY WATER YEAR (WY)*

MEAN	27.8	26.6	16.7	8.45	26.3	326	649	123	89.4	76.8	27.1	23.6
MAX	81.5	93.5	50.0	30.0	743	2,445	4,918	421	336	800	220	206
(WY)	(1925)	(1919)	(1915)	(1915)	(1996)	(1960)	(1952)	(1955)	(1953)	(1993)	(1993)	(1911)
MIN	2.19	4.25	1.28	0.01	0.10	0.18	37.3	17.4	2.77	0.68	0.04	0.15
(WY)	(1959)	(1959)	(1986)	(1950)	(1959)	(1965)	(1992)	(1992)	(1988)	(1984)	(1988)	(1988)

POPLAR RIVER BASIN

06181000 POPLAR RIVER NEAR POPLAR, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1908 - 2005*	
ANNUAL TOTAL	32,527.0		16,696.2			
ANNUAL MEAN	88.9		45.7		118**	
HIGHEST ANNUAL MEAN					435	1952
LOWEST ANNUAL MEAN					13.7	1988
HIGHEST DAILY MEAN	1,250	May 31	202	Jun 15	34,200	Apr 7, 1954
LOWEST DAILY MEAN	4.0	Jan 28	3.5	Jan 16	c0.00	Dec 16, 1917
ANNUAL SEVEN-DAY MINIMUM	5.0	Jan 25	3.8	Jan 15	0.00	Jan 4, 1950
MAXIMUM PEAK FLOW			a230	Jun 15	37,400	Apr 6, 1954
MAXIMUM PEAK STAGE			b3.47	Jan 20	d17.86	Apr 6, 1954
ANNUAL RUNOFF (AC-FT)	64,520		33,120		85,490	
10 PERCENT EXCEEDS	212		111		174	
50 PERCENT EXCEEDS	30		31		23	
90 PERCENT EXCEEDS	8.0		4.0		3.0	

*--During period of operation (1908-24, 1947-69, 1975-79, 1982 to current year).

**--Median of yearly mean discharge, 82.1 ft³/s.

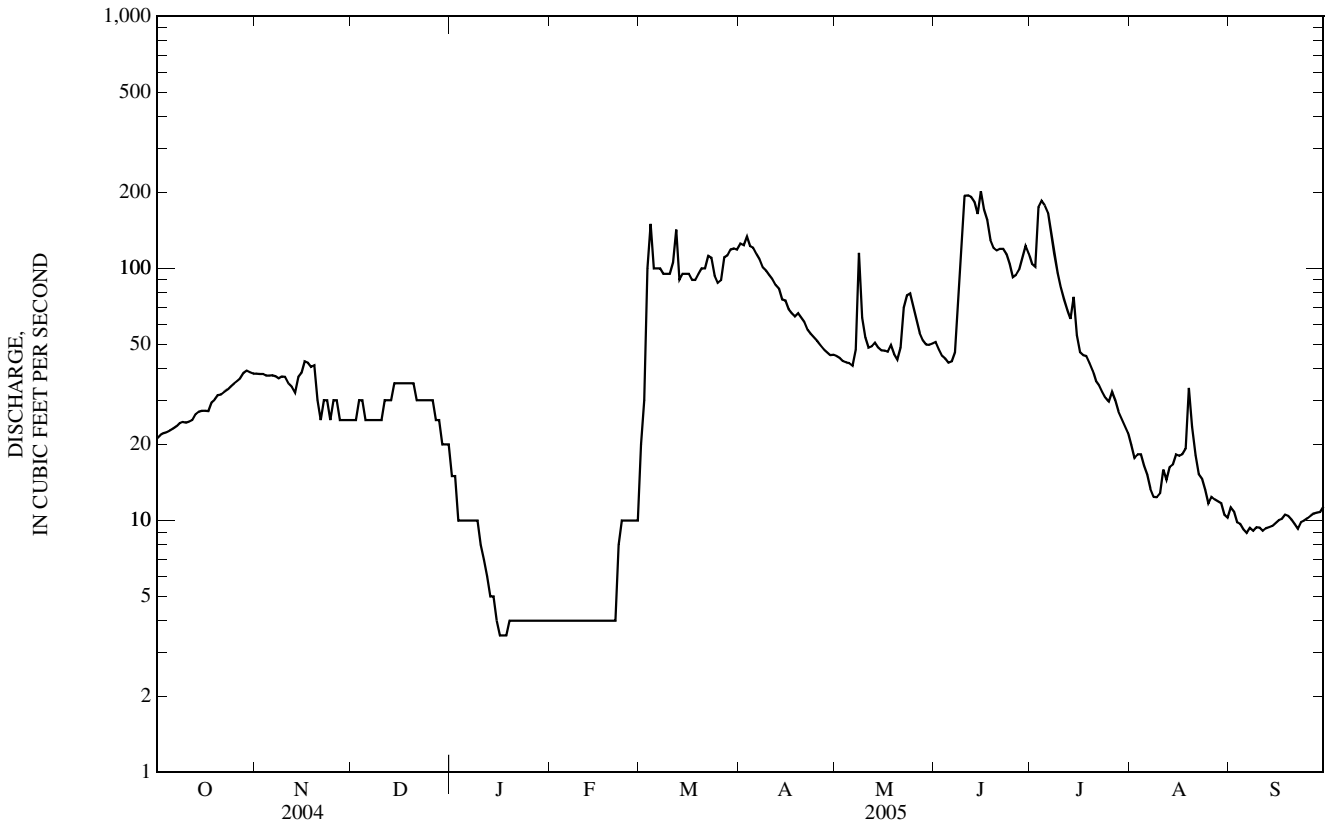
a--Gage height, 2.99 ft.

b--Result of backwater from ice, but may have been higher during period of no gage-height record, Dec. 21 to Jan. 19, Feb. 1 to Mar. 9.

c--No flow at times.

d--From floodmark, from slope-area measurement of peak flow.

e--Estimated.



06181000 POPLAR RIVER NEAR POPLAR, MT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1975-81, 1987-94, May 1999 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: April 2000 to September 2003 (seasonal records).

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE (seasonal records): Maximum, 33.0°C, Aug. 12, 18, 19, 2003; minimum, 0.0°C on many days during winter periods.

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

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	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)	Hardness, water, mg/L as CaCO3 (00900)	Calcium, water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
APR 07...	1000	110	716	10.1	98	8.6	1,150	11.0	11.0	230	35.4	34.1	5.46
MAY 19...	0915	47	714	6.7	72	8.7	1,570	16.0	16.0	260	29.1	44.6	6.47
JUN 22...	0915	120	715	6.8	91	8.7	1,440	29.0	26.5	250	30.4	43.2	7.52
AUG 03...	0900	20	723	7.2	86	8.6	1,790	19.5	21.0	250	27.3	45.0	7.94

Date	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alkalinity, wat fltrd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate, water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Ammonia, water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)
APR 07...	6	200	65	381	26.0	.4	3.9	213	748	1.02	222	E.005	<.016
MAY 19...	8	292	71	473	52.4	.5	4.6	291	1,010	1.37	128	E.005	.038
JUN 22...	7	248	67	492	23.7	.5	8.4	267	924	1.26	299	E.005	<.016
AUG 03...	8	302	71	490	115	.5	7.9	270	1,070	1.46	57.8	<.010	<.016

Date	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Total nitrogen, wat unfltrd by analysis, mg/L (62855)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Barium, water, fltrd, ug/L (01005)	Barium, water, unfltrd recover-able, ug/L (01007)	Boron, water, fltrd, ug/L (01020)	Cadmium, water, fltrd, ug/L (01025)	Cadmium, water, unfltrd ug/L (01027)	Chromium, water, fltrd, ug/L (01030)	Chromium, water, unfltrd recover-able, ug/L (01034)
APR 07...	<.002	<.006	.036	.50	1.4	E1	46	50	637	<.04	.05	<.8	E.6
MAY 19...	<.002	<.006	.047	.61	--	2	--	--	897	--	E.03	--	--
JUN 22...	E.001	<.006	.150	1.32	--	5	--	--	955	--	.08	--	--
AUG 03...	<.002	<.006	.070	.85	--	5	--	--	1,030	--	E.03	--	--

E--Estimated.

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

Date	Copper, water, filtrd, ug/L (01040)	Copper, water, unfiltrd recover- able, ug/L (01042)	Iron, water, filtrd, ug/L (01046)	Iron, water, unfiltrd recover- able, ug/L (01045)	Lead, water, filtrd, ug/L (01049)	Lead, water, unfiltrd recover- able, ug/L (01051)	Mangan- ese, water, filtrd, ug/L (01056)	Mangan- ese, water, unfiltrd recover- able, ug/L (01055)	Mercury water, filtrd, ug/L (71890)	Mercury water, unfiltrd recover- able, ug/L (71900)	Nickel, water, filtrd, ug/L (01065)	Nickel, water, unfiltrd recover- able, ug/L (01067)	Selen- ium, water, filtrd, ug/L (01145)
APR 07...	1.3	3.5	7	650	<.08	.48	5.3	58	<.01	<.01	2.54	2.73	.7
MAY 19...	--	--	--	--	--	.73	--	--	--	--	--	--	--
JUN 22...	--	--	--	--	--	3.00	--	--	--	--	--	--	--
AUG 03...	--	--	--	--	--	.95	--	--	--	--	--	--	--

Date	Selen- ium, water, unfiltrd ug/L (01147)	Zinc, water, filtrd, ug/L (01090)	Zinc, water, unfiltrd recover- able, ug/L (01092)	Suspnd. sedi- ment, percent <.063mm (70331)	Sus- pended sedi- ment concen- tration mg/L (80154)	Sus- pended sedi- ment dis- charge, tons/d (80155)
APR 07...	.7	E.6	3	94	58	17
MAY 19...	--	--	4	98	91	12
JUN 22...	--	--	13	98	183	59
AUG 03...	--	--	5	98	77	4.2

E--Estimated.

06183450 BIG MUDDY CREEK NEAR ANTELOPE, MT

LOCATION.--Lat 48°40'22", long 104°30'42" (NAD 27), in SW¹/₄ SW¹/₄ NW¹/₄ sec.27, T.34 N., R.55 E., Sheridan County, Hydrologic Unit 10060006, on right bank, 3 mi southwest of Antelope, and 7 mi south of Plentywood, .

DRAINAGE AREA.--967 mi². Prior to 1981, drainage area published as 1,171 mi².

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

REVISED RECORDS.--WDR -81-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 2,000 ft (NGVD 29).

REMARKS.--Records good except those for estimated daily discharges, which are poor. Several known diversions for irrigation upstream from station. U.S. Geological Survey satellite telemeter at station. Several unpublished observations of instantaneous 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	3.6	7.1	e6.0	e3.0	e1.5	e6.5	85	8.9	11	89	3.8	4.1
2	3.4	6.8	e6.0	e3.0	e1.5	e10	126	8.6	9.6	65	3.4	3.1
3	3.6	6.7	e6.0	e3.0	e1.5	e20	136	8.6	9.5	67	3.4	2.4
4	3.7	6.4	e6.0	e3.0	e1.5	e30	104	8.6	8.7	51	3.2	2.0
5	3.6	e6.0	e5.5	e3.0	e1.0	e60	79	8.6	8.1	46	3.0	1.8
6	3.7	e5.5	e5.0	e3.0	e1.0	e50	66	8.3	7.8	40	2.8	1.4
7	4.4	e6.0	e5.5	e3.0	e1.5	e40	58	8.4	8.5	38	2.8	1.3
8	4.5	e6.0	e5.5	e3.0	e1.5	e30	51	15	15	33	2.6	1.2
9	3.8	e6.0	e5.5	e2.5	e1.5	e30	45	12	23	26	2.5	0.90
10	3.8	e6.0	e6.0	e2.0	e1.5	e30	41	16	32	20	2.6	0.68
11	4.6	e6.0	e6.5	e2.0	e1.5	e35	36	19	34	16	3.6	0.49
12	4.7	e6.0	e7.0	e2.0	e1.5	e35	33	28	51	13	2.6	0.52
13	4.9	e6.0	7.3	e2.0	e1.5	e30	31	27	46	9.5	2.0	0.46
14	4.8	6.2	7.1	e1.5	e1.5	e35	28	24	42	8.5	1.8	0.43
15	5.1	6.1	7.3	e1.5	e1.5	e35	27	22	40	7.7	1.7	0.44
16	4.6	6.1	7.5	e1.5	e1.5	e35	23	19	34	6.9	1.5	0.87
17	5.1	e5.5	7.3	e2.0	e1.5	e35	21	16	27	6.7	1.3	0.46
18	6.4	e6.0	7.7	e2.0	e1.5	e30	19	18	23	6.4	1.9	0.24
19	7.1	e6.0	e6.5	e2.0	e1.5	e30	17	20	21	6.0	1.8	0.25
20	6.5	e5.5	e6.0	e2.0	e1.5	e35	16	19	19	5.7	6.2	0.16
21	6.2	e6.0	e5.5	e1.5	e1.5	32	15	18	16	5.6	12	0.12
22	6.4	e6.0	e6.0	e1.0	e2.0	28	14	17	13	5.4	7.7	0.10
23	6.6	e6.0	e6.0	e1.5	e3.0	23	13	16	15	5.3	9.5	0.11
24	7.4	e6.0	e6.0	e1.5	e5.0	21	13	21	14	5.1	7.8	0.13
25	7.9	e6.0	e6.0	e1.5	e7.0	19	11	19	12	5.4	6.9	0.13
26	8.3	e6.0	e6.0	e1.5	e7.0	19	9.7	16	17	5.2	6.1	0.12
27	8.5	e6.0	e5.5	e1.5	e6.5	22	9.2	16	23	5.3	6.7	0.17
28	8.3	e6.0	e5.0	e1.5	e6.5	31	8.8	15	25	5.5	6.0	0.10
29	8.2	e6.0	e4.5	e1.5	---	42	9.1	13	163	5.3	5.6	0.13
30	7.5	e6.0	e4.0	e1.5	---	52	9.1	12	162	5.0	4.8	0.13
31	7.1	---	e3.5	e1.5	---	62	---	11	---	4.6	4.1	---
TOTAL	174.3	181.9	185.2	63.0	67.5	992.5	1,153.9	489.0	930.2	619.1	131.7	24.44
MEAN	5.62	6.06	5.97	2.03	2.41	32.0	38.5	15.8	31.0	20.0	4.25	0.81
MAX	8.5	7.1	7.7	3.0	7.0	62	136	28	163	89	12	4.1
MIN	3.4	5.5	3.5	1.0	1.0	6.5	8.8	8.3	7.8	4.6	1.3	0.10
AC-FT	346	361	367	125	134	1,970	2,290	970	1,850	1,230	261	48

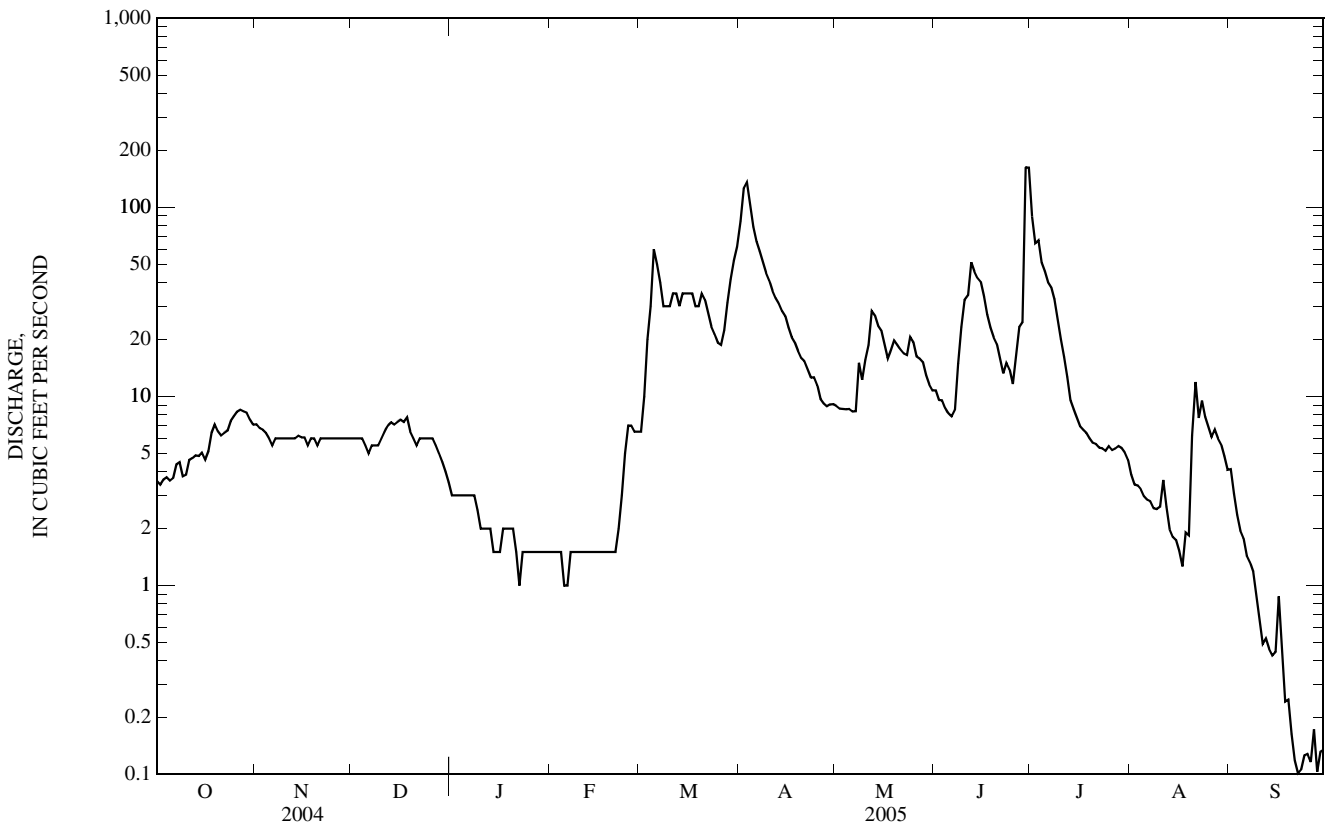
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 2005, BY WATER YEAR (WY)

MEAN	5.26	5.82	3.64	1.88	22.4	133	109	26.3	18.6	24.3	8.47	4.16
MAX	25.0	11.8	6.86	6.38	290	851	826	120	76.2	226	92.5	35.7
(WY)	(1987)	(1999)	(1982)	(1983)	(1996)	(1999)	(1982)	(1979)	(2004)	(1993)	(1987)	(1997)
MIN	0.14	0.88	0.45	0.00	0.00	2.65	5.04	5.29	0.23	0.03	0.00	0.00
(WY)	(1989)	(1989)	(1986)	(1989)	(1989)	(2002)	(1988)	(1992)	(1988)	(1985)	(1984)	(1984)

06183450 BIG MUDDY CREEK NEAR ANTELOPE, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1979 - 2005	
ANNUAL TOTAL	7,595.0		5,012.74			
ANNUAL MEAN	20.8		13.7		30.2*	
HIGHEST ANNUAL MEAN					93.2 1979	
LOWEST ANNUAL MEAN					4.73 1992	
HIGHEST DAILY MEAN	274	Jun 2	163	Jun 29	3,160	Mar 23, 1999
LOWEST DAILY MEAN	1.5	Jan 26	0.10	Sep 22	a0.00	Aug 2, 1981
ANNUAL SEVEN-DAY MINIMUM	1.5	Jan 26	0.12	Sep 22	0.00	Jul 23, 1984
MAXIMUM PEAK FLOW			211	Jun 29	3,190	Mar 22, 1999
MAXIMUM PEAK STAGE			4.88	Jun 29	17.37	Apr 14, 1982
INSTANTANEOUS LOW FLOW			0.10	Sep 22	0.00	Aug 2, 1981
ANNUAL RUNOFF (AC-FT)	15,060		9,940		21,860	
10 PERCENT EXCEEDS	59		35		38	
50 PERCENT EXCEEDS	6.0		6.0		4.6	
90 PERCENT EXCEEDS	2.0		1.5		0.25	

*--Median of yearly mean discharge, 20.2 ft³/s, 14,630 ac-ft/yr.
 a--No flow many days most years.
 e--Estimated.



06183700 BIG MUDDY CREEK DIVERSION CANAL NEAR MEDICINE LAKE, MT

LOCATION.--Lat 48°30'34", long 104°32'55" (NAD 27), in SE¹/₄NW¹/₄SE¹/₄ sec.22, T.32 N., R.55 E., Sheridan County, Hydrologic Unit 10060006, on right bank, on dike road about 2 ft upstream from canal headgate and 2.2 miles northwest of Medicine Lake.

PERIOD OF RECORD.--August 1985 to September 1991, October 1991 to current year (seasonal records).

GAGE.--Water-stage recorder. Elevation of gage is 1,940 ft (NGVD 29).

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Canal diverts water into Medicine Lake at the Medicine Lake National Wildlife Refuge. 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			e4.5	86	2.0	e3.0	90	0.83	0.32	0.00		
2			e10	92	1.9	e3.0	62	0.70	0.01	0.00		
3			e10	134	1.5	e3.0	45	0.51	0.00	0.00		
4			e10	126	1.4	e3.0	41	0.14	0.00	0.00		
5			e10	88	1.5	e3.5	35	0.00	0.00	0.00		
6			e10	55	1.4	e4.0	30	0.00	0.00	0.00		
7			e10	47	1.3	e4.5	26	0.00	0.00	0.00		
8			e10	34	3.8	e5.0	23	0.00	0.00	0.00		
9			e10	24	3.9	e10	21	0.00	0.00	0.00		
10			e9.0	17	3.7	e15	17	0.00	0.00	0.00		
11			e9.0	13	3.2	e15	13	0.00	0.00	0.00		
12			e8.0	8.9	3.4	e20	9.7	0.00	0.00	0.00		
13			e8.0	6.9	4.6	23	7.2	0.00	0.00	0.00		
14			e9.5	5.6	5.3	22	5.9	0.00	0.00	0.00		
15			e10	6.1	4.7	18	5.2	0.00	0.00	0.00		
16			e15	5.9	4.4	17	4.7	0.00	0.00	0.00		
17			e20	5.1	4.2	15	4.1	0.00	0.00	0.00		
18			e25	4.8	4.1	11	3.9	0.00	0.00	0.00		
19			e25	e4.5	4.0	8.2	3.4	0.00	0.00	0.00		
20			e30	e4.0	3.9	6.1	3.0	0.00	0.00	0.00		
21			e30	3.7	4.2	5.6	3.2	0.00	0.00	0.00		
22			e25	3.5	e3.5	5.1	2.7	0.00	0.00	0.00		
23			e25	3.1	e4.5	5.0	2.7	0.00	0.00	0.00		
24			e20	3.0	e6.0	4.8	2.1	0.77	0.00	0.00		
25			e20	3.1	e6.0	4.6	1.9	1.4	0.00	0.00		
26			e20	2.9	e4.5	40	1.8	1.5	0.00	0.00		
27			e20	2.5	e4.0	25	1.6	1.5	0.00	0.00		
28			e30	2.1	e3.5	15	1.3	1.1	0.00	0.00		
29			e35	1.7	e3.0	15	1.2	0.80	0.00	0.00		
30			e45	1.8	e3.0	65	0.92	0.72	0.00	0.00		
31			e50	---	e3.0	---	0.83	0.46	---	0.00		
TOTAL			573.0	795.2	109.4	394.4	470.35	10.43	0.33	0.00		
MEAN			18.5	26.5	3.53	13.1	15.2	0.34	0.01	0.00		
MAX			50	134	6.0	65	90	1.5	0.32	0.00		
MIN			4.5	1.7	1.3	3.0	0.83	0.00	0.00	0.00		
AC-FT			1,140	1,580	217	782	933	21	0.7	0.00		

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1985 - 1991 AND SEASONS 1992 - 2005*

MEAN	0.28	5.11	93.3	50.4	15.6	12.7	22.4	5.61	3.51	3.34	1.66	0.58
MAX	1.10	23.4	434	260	46.5	77.6	144	31.3	37.3	10.5	4.97	2.80
(WY)	(1990)	(1986)	(1999)	(1997)	(1999)	(2004)	(1993)	(1987)	(1997)	(2004)	(1990)	(1990)
MIN	0.000	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000
(WY)	(1988)	(1988)	(2002)	(1988)	(1987)	(1987)	(1987)	(1988)	(1987)	(1988)	(1988)	(1988)

SUMMARY STATISTICS

	FOR 2005 SEASON	WATER YEARS 1985 - 1991*	SEASONS 1992 - 2005*
ANNUAL MEAN		14.5	
HIGHEST ANNUAL MEAN		31.6	1989
LOWEST ANNUAL MEAN		0.17	1988
HIGHEST DAILY MEAN	134	1,300	Mar 2, 1986
LOWEST DAILY MEAN	0.00	b0.00	Feb 11, 1986
ANNUAL SEVEN-DAY MINIMUM		0.00	Feb 11, 1986
MAXIMUM PEAK FLOW	178	1,300	Mar 2, 1986
MAXIMUM PEAK STAGE	a7.59		c1,360
ANNUAL RUNOFF (AC-FT)		10,540	d12.18
10 PERCENT EXCEEDS		29	
50 PERCENT EXCEEDS		2.6	
90 PERCENT EXCEEDS		0.00	

*--During periods of operation 1985-91, 1992 to current year. Seasonal records beginning water year 1992.

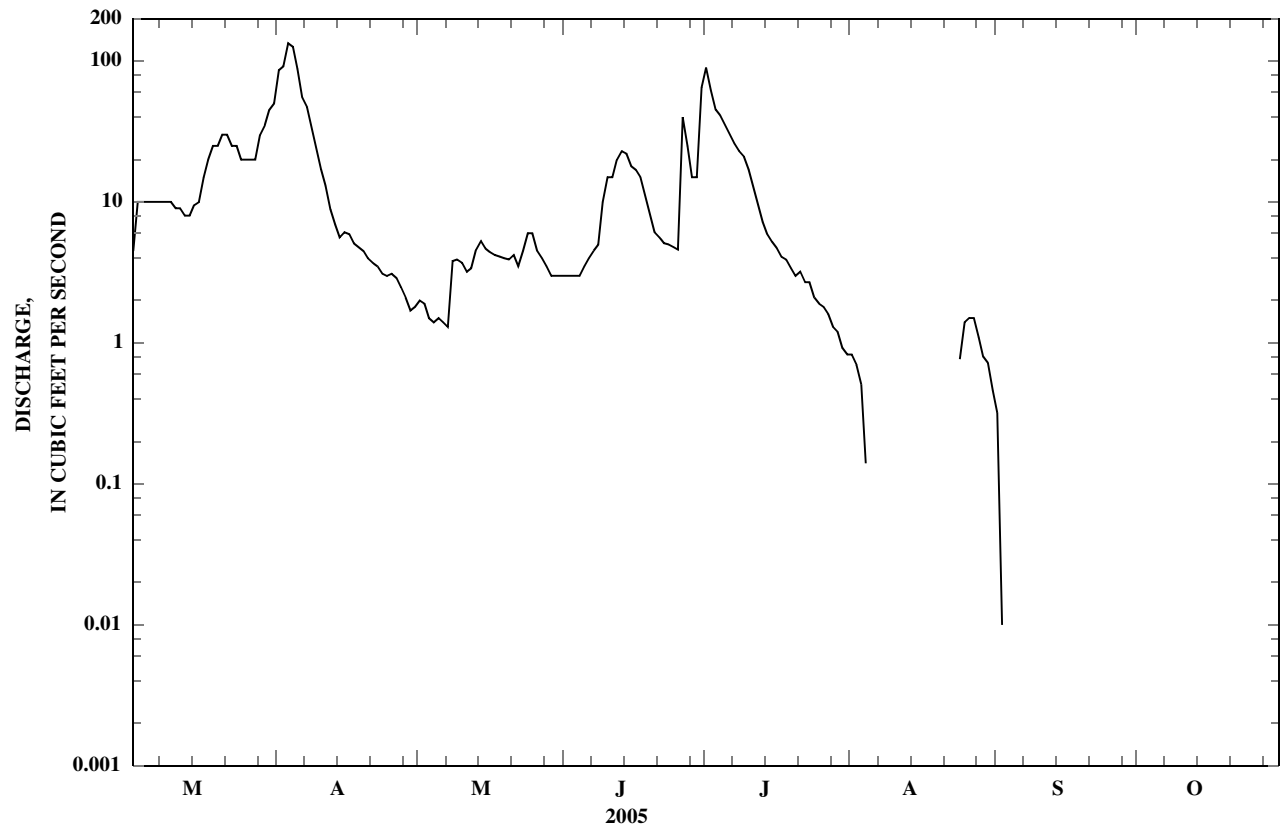
a--May have been higher during period of no gage-height record.

b--No flow at times most years.

c--Gage height, 10.99 ft.

d--Site and datum then in use.

e--Estimated.



06183750 LAKE CREEK NEAR DAGMAR, MT

LOCATION.--Lat 48°33'51", long 104°10'38" (NAD 27), in SE¹/₄ SE¹/₄ SW¹/₄ sec.31, T.33 N., R.58 E., Sheridan County, Hydrologic Unit 10060006, on left bank, at downstream end of dike, just north of Medicine Lake National Wildlife Refuge and 1.7 mi southeast of Dagmar.

DRAINAGE AREA.--101 mi².

PERIOD OF RECORD.--September 1985 to October 1989, March 1995 to current year (seasonal records only since 1986).

GAGE.--Water-stage recorder. Elevation of gage is 1,979 ft (NGVD 29).

REMARKS.--Records fair. Numerous diversions upstream for irrigation. Several 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			e0.00	0.00	0.00	0.27	0.38	0.00	0.00	0.10		
2			e0.00	0.00	0.00	0.28	e0.30	0.00	0.00	0.01		
3			e0.00	0.00	0.00	0.28	e0.25	0.00	0.00	0.04		
4			e0.00	0.00	0.00	0.27	e0.20	0.00	0.00	0.06		
5			e0.00	0.00	0.03	0.22	e0.15	0.00	0.00	0.05		
6			e0.00	0.00	0.00	0.25	e0.10	0.00	0.00	0.03		
7			e0.00	0.00	0.05	0.27	e0.05	0.00	0.00	0.02		
8			e0.00	0.00	0.40	0.36	e0.00	0.00	0.00	0.01		
9			e0.00	0.00	0.49	0.48	0.00	0.00	0.01	0.06		
10			e0.00	0.00	0.46	0.53	0.00	0.00	0.01	0.09		
11			e0.00	0.00	0.41	2.1	0.00	0.00	0.03	0.08		
12			e0.00	0.00	0.38	0.67	0.00	0.00	0.02	0.07		
13			e0.00	0.03	0.40	0.44	0.00	0.00	0.02	0.07		
14			e0.00	0.06	0.34	0.31	0.00	0.00	0.03	0.09		
15			e0.00	0.00	0.26	0.24	0.00	0.00	0.04	0.09		
16			e0.00	0.00	0.22	0.22	0.00	0.00	0.04	0.09		
17			e0.00	0.00	0.23	0.19	0.00	0.00	0.03	0.08		
18			e0.00	0.01	0.28	0.17	0.00	0.00	0.02	0.10		
19			e0.00	0.00	0.32	0.15	0.00	0.00	0.02	0.10		
20			e0.50	0.00	0.30	0.12	0.00	0.00	0.00	0.09		
21			0.25	0.00	0.25	0.05	0.00	0.00	0.00	0.06		
22			0.24	0.00	0.24	0.03	0.00	0.00	0.01	0.01		
23			0.28	0.00	0.22	0.01	0.00	0.00	0.06	0.00		
24			e0.27	0.00	0.25	0.00	0.00	0.00	0.06	0.00		
25			e0.23	0.00	0.21	0.02	0.00	0.00	0.08	0.00		
26			0.22	0.00	0.18	0.64	0.00	0.00	0.12	0.00		
27			0.31	0.00	0.19	4.2	0.00	0.00	0.13	0.00		
28			0.39	0.00	0.19	12	0.00	0.00	0.10	0.00		
29			0.41	0.00	0.21	4.6	0.00	0.00	0.08	0.00		
30			0.39	0.00	0.24	1.2	0.00	0.00	0.09	0.00		
31			0.17	---	0.26	---	0.00	0.00	---	0.00		
TOTAL			3.66	0.10	7.01	30.57	1.43	0.00	1.00	1.40		
MEAN			0.12	0.00	0.23	1.02	0.05	0.00	0.03	0.05		
MAX			0.50	0.06	0.49	12	0.38	0.00	0.13	0.10		
MIN			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
AC-FT			7.3	0.2	14	61	2.8	0.00	2.0	2.8		

STATISTICS OF MONTHLY MEAN DATA FOR SEASONS 1986 - 2005*

MEAN	10.9	9.35	0.88	0.46	0.35	0.03	0.00	0.00
MAX	83.4	45.1	3.35	2.81	1.40	0.26	0.03	0.05
(WY)	(2003)	(1997)	(1986)	(2000)	(1999)	(1999)	(2005)	(2006)
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(WY)	(1988)	(1988)	(1998)	(1997)	(1986)	(1986)	(1986)	(1986)

SUMMARY STATISTICS

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

FOR 2005 SEASON

12 Jun 28
0.00 Mar 1
14 Jun 28
6.31 Jun 28

SEASONS 1986 - 2005*

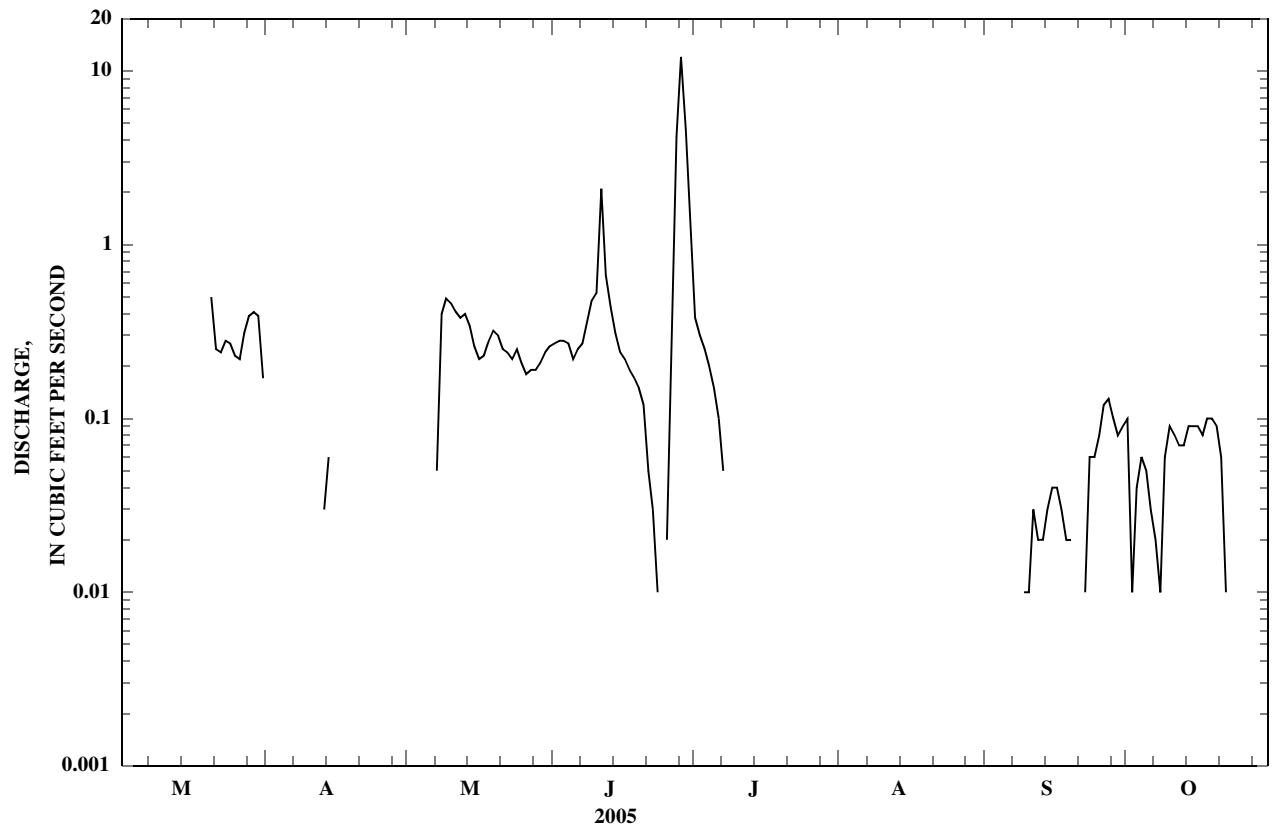
950 Mar 20, 2003
a0.00 Oct 1, 1985
950 Mar 20, 2003
10.05 Mar 20, 2003

*--During periods of operation (September 1985 to October 1989, March 1995 to current year).

a--No flow many days most years.

e--Estimated.

BIG MUDDY CREEK BASIN
06183750 LAKE CREEK NEAR DAGMAR, MT—Continued



06183800 COTTONWOOD CREEK NEAR DAGMAR, MT

LOCATION.--Lat 48°30'35", long 104°10'23" (NAD 27), in SE¹/₄NE¹/₄SE¹/₄ sec.21, T.32 N., R.58 E., Sheridan County, Hydrologic Unit 10060006, on right bank, at bridge on county road 1.2 mi southeast of Medicine Lake National Wildlife Refuge, and 5.3 mi south of Dagmar.

DRAINAGE AREA.--126 mi².

PERIOD OF RECORD.--August 1985 to September 1989, March 1995 to current year, seasonal records only.

GAGE.--Water-stage recorder. Elevation of gage is 1,975 ft (NGVD 29).

REMARKS.--Records fair except those for estimated daily discharges, which are poor. 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			e0.00	e15	e0.30	e1.0	1.2	0.39	0.61	0.00		
2			e0.00	e15	e0.25	e1.0	0.97	0.36	0.59	0.00		
3			e0.00	e14	e0.35	e1.0	0.63	0.35	0.59	0.00		
4			e0.00	e8.0	e0.40	e1.0	0.44	0.34	0.49	0.00		
5			e0.00	e5.5	e0.30	e1.0	0.39	0.33	0.46	0.00		
6			e0.00	e4.5	e0.30	e0.90	0.38	0.32	0.41	0.00		
7			e0.00	e3.5	e0.50	e1.0	0.39	0.31	0.37	0.00		
8			e0.00	e2.5	e1.0	e1.5	0.43	0.30	0.34	0.00		
9			e0.00	e2.0	e5.0	e2.5	0.43	0.28	0.29	0.00		
10			e0.00	e1.5	e8.0	e4.0	0.38	0.27	0.21	0.00		
11			e0.00	e1.5	e4.0	e6.0	0.38	0.31	0.18	0.00		
12			e0.00	e1.0	e2.5	e4.5	0.35	0.30	0.14	0.00		
13			e0.00	e1.0	e2.0	e2.5	0.34	0.31	0.10	0.00		
14			e0.00	e1.0	e1.5	e2.0	0.36	0.29	0.07	0.00		
15			e0.00	e0.70	e1.5	e1.5	0.33	0.29	0.04	0.00		
16			e0.00	e0.40	e1.0	e1.0	0.34	0.28	0.02	0.00		
17			e0.00	e0.40	e1.0	e1.0	0.36	0.28	0.01	0.00		
18			e0.00	e0.40	e1.0	e0.95	0.35	0.46	0.01	0.00		
19			e0.00	e0.50	e1.5	e0.90	0.33	0.45	0.00	0.00		
20			e0.00	e0.65	e1.5	e0.70	0.32	0.45	0.00	0.00		
21			e0.50	e0.60	e2.0	e0.70	0.65	0.49	0.00	0.01		
22			e0.65	e0.60	e3.5	e0.50	0.93	0.54	0.00	0.03		
23			e1.0	e0.50	e4.5	0.34	1.1	0.56	0.00	0.05		
24			e2.5	e0.50	e4.0	0.32	0.64	0.52	0.00	0.06		
25			e5.0	e0.40	e2.5	0.33	0.57	0.48	0.00	0.06		
26			e12	e0.35	e1.5	0.41	0.48	0.48	0.00	0.05		
27			e10	e0.30	e1.0	0.41	0.44	0.44	0.00	0.07		
28			e12	e0.25	e1.0	0.82	0.44	0.46	0.00	0.07		
29			e16	e0.30	e0.90	1.6	0.45	0.53	0.00	0.11		
30			e18	e0.35	e1.0	1.3	0.44	0.67	0.00	0.10		
31			e15	---	e1.0	---	0.42	0.70	---	0.10		
TOTAL			92.65	83.20	56.80	42.68	15.66	12.54	4.93	0.71		
MEAN			2.99	2.77	1.83	1.42	0.51	0.40	0.16	0.02		
MAX			18	15	8.0	6.0	1.2	0.70	0.61	0.11		
MIN			0.00	0.25	0.25	0.32	0.32	0.27	0.00	0.00		
AC-FT			184	165	113	85	31	25	9.8	1.4		

STATISTICS OF MONTHLY MEAN DATA FOR SEASONS 1986 - 2005*

MEAN	31.3	8.24	1.56	1.58	5.08	0.16	0.05	0.01
MAX	140	32.6	6.95	13.7	27.4	0.71	0.33	0.10
(WY)	(2003)	(1987)	(1999)	(2000)	(1997)	(1999)	(1997)	(2001)
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(WY)	(1988)	(1988)	(1988)	(1987)	(1986)	(1986)	(1986)	(1986)

SUMMARY STATISTICS

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

FOR 2005 SEASON

18 Mar 30
0.00 Mar 1
a18 Mar 30
b1.61 Mar 30

SEASONS 1986 - 2005*

1,810 Mar 18, 2003
c0.00 Oct 1, 1985
d3,380 Mar 18, 2003
8.76 Mar 22, 1997

*--During periods of operation (1985-89, 1995 to current year; seasonal records only).

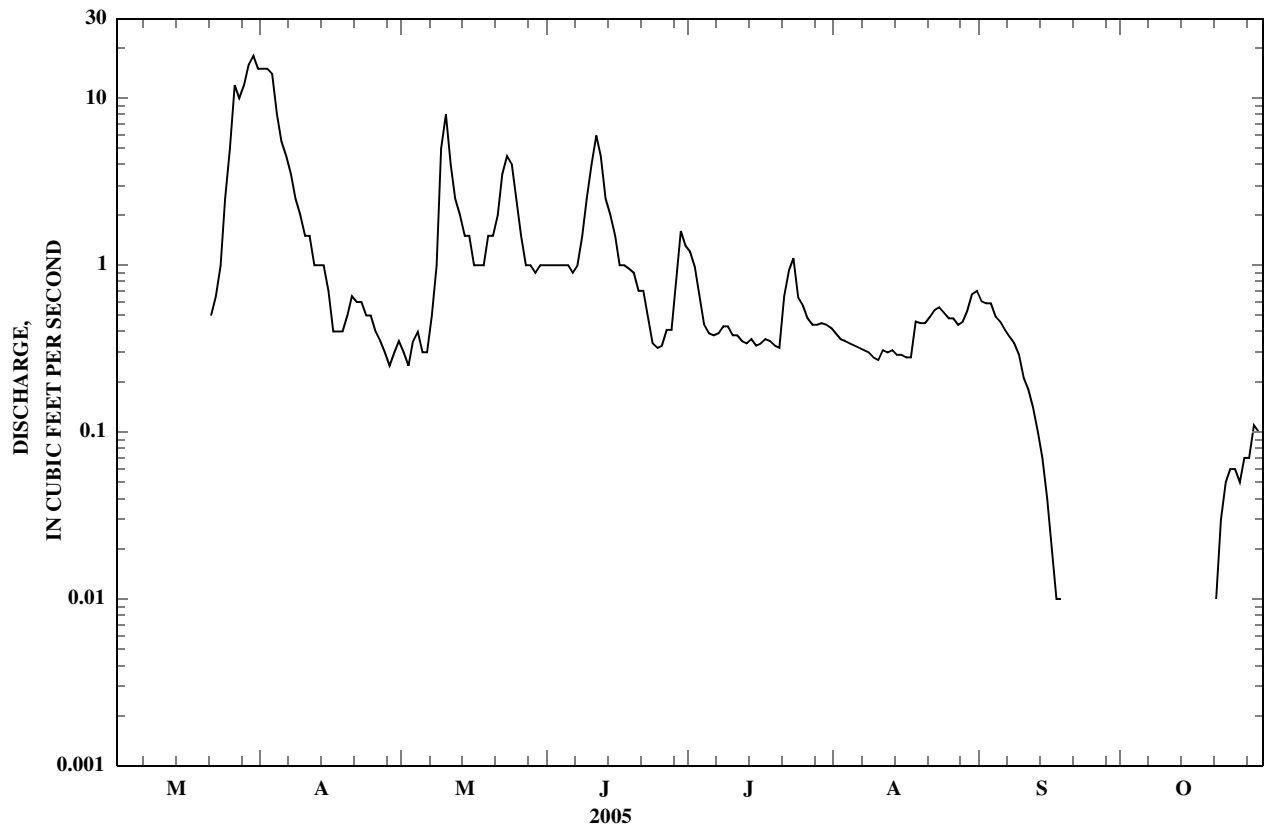
a--Backwater from ice.

b--From floodmark, may have been higher during period of no gage-height record, Mar. 21 to June 22.

c--No flow most years.

d--Gage height, 8.43 ft, from floodmark.

e--Estimated.



06183850 SAND CREEK NEAR DAGMAR, MT

LOCATION.--Lat 48°29'38", long 104°16'23" (NAD 27), in SE¹/₄ NW¹/₄ NW¹/₄ sec.26, T.32 N., R.57 E., Sheridan County, Hydrologic Unit 10060006, at Medicine Lake National Wildlife Refuge boundary, on right bank at downstream end of culvert on county road, 1.0 mi upstream from mouth, and 7 mi southwest of Dagmar.

DRAINAGE AREA.--122 mi².

PERIOD OF RECORD.--August 1985 to September 1989, March 1995 to current year (seasonal records).

GAGE.--Water-stage recorder. Elevation of gage is 1,945 ft (NGVD 29).

REMARKS.--Records good except those for estimated daily discharges, which are poor. No known diversions for irrigation upstream from station. Several 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			e0.00	6.9	0.30	1.2	3.0	0.00	0.00	0.00		
2			e0.00	7.2	0.24	1.2	2.7	0.00	0.00	0.00		
3			e0.00	4.5	0.35	1.2	2.8	0.00	0.00	0.00		
4			e0.00	2.8	0.39	1.1	2.5	0.00	0.00	0.00		
5			e0.00	2.3	0.29	0.98	1.8	0.00	0.00	0.00		
6			e0.00	1.6	0.32	0.90	1.3	0.00	0.00	0.00		
7			e0.00	1.9	0.48	1.1	0.98	0.00	0.00	0.00		
8			e0.00	2.0	1.1	1.7	0.86	0.00	0.00	0.00		
9			e0.00	1.6	5.4	2.5	0.64	0.00	0.00	0.00		
10			e0.00	1.2	8.1	5.4	0.41	0.00	0.00	0.00		
11			e0.00	1.1	4.1	7.4	0.14	0.00	0.00	0.00		
12			e0.00	1.1	2.6	5.1	0.00	0.00	0.00	0.00		
13			e0.00	1.2	2.1	4.0	0.00	0.00	0.00	0.00		
14			e0.00	1.0	1.8	3.1	0.00	0.00	0.00	0.00		
15			e0.00	1.0	1.5	2.3	0.00	0.00	0.00	0.00		
16			e0.00	0.90	1.2	1.6	0.00	0.00	0.00	0.00		
17			e0.00	0.78	1.2	1.3	0.00	0.00	0.00	0.00		
18			e0.00	0.75	1.3	1.0	0.00	0.00	0.00	0.00		
19			e0.00	0.72	1.4	0.87	0.00	0.00	0.00	0.00		
20			e5.0	0.66	1.6	0.70	0.00	0.00	0.00	0.00		
21			e2.0	0.63	1.8	0.70	0.04	0.00	0.00	0.00		
22			e1.5	0.58	3.3	0.50	0.07	0.00	0.00	0.00		
23			e0.50	0.53	4.4	0.26	0.00	0.00	0.00	0.00		
24			e0.50	0.50	3.8	0.00	0.00	0.00	0.00	0.00		
25			e0.50	0.42	2.3	0.27	0.00	0.00	0.00	0.00		
26			e0.25	0.34	1.7	1.0	0.00	0.00	0.00	0.00		
27			e0.00	0.29	1.1	1.1	0.00	0.00	0.00	0.00		
28			e2.0	0.27	0.96	1.5	0.00	0.00	0.00	0.00		
29			e9.5	0.29	0.89	2.0	0.00	0.00	0.00	0.00		
30			e23	0.34	1.0	3.0	0.00	0.00	0.00	0.00		
31			11	---	1.1	---	0.00	0.00	---	0.00		
TOTAL			55.75	45.40	58.12	54.98	17.24	0.00	0.00	0.00		
MEAN			1.80	1.51	1.87	1.83	0.56	0.00	0.00	0.00		
MAX			23	7.2	8.1	7.4	3.0	0.00	0.00	0.00		
MIN			0.00	0.27	0.24	0.00	0.00	0.00	0.00	0.00		
AC-FT			111	90	115	109	34	0.00	0.00	0.00		

STATISTICS OF MONTHLY MEAN DATA FOR SEASONS 1986 - 2005*

MEAN	9.84	5.97	1.87	2.10	3.29	0.31	0.05	0.01
MAX	33.1	16.7	6.80	9.06	21.6	3.34	0.80	0.14
(WY)	(1999)	(1987)	(1999)	(2000)	(1997)	(1997)	(1997)	(2005)
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(WY)	(1988)	(1988)	(1988)	(1988)	(1986)	(1986)	(1986)	(1986)

SUMMARY STATISTICS

	FOR 2005 SEASON		SEASONS 1986 - 2005*	
HIGHEST DAILY MEAN	23	Mar 30	200	Mar 18, 2003
LOWEST DAILY MEAN	0.00	Oct 1	c0.00	Oct 1, 1985
MAXIMUM PEAK FLOW	a40	Mar 30	d284	Mar 18, 2003
MAXIMUM PEAK STAGE	b2.71	Mar 30	b5.80	Mar 26, 1997

*--During periods of operation (1985-89, 1995 to current year; seasonal records only).

a--About, backwater from ice.

b--From floodmark, probable date, backwater from ice.

c--No flow most years.

d--Result of culvert computation of peak flow.

e--Estimated.

06185500 MISSOURI RIVER NEAR CULBERTSON, MT
(National Stream Quality Accounting Network Station)

LOCATION.--Lat 48°07'30", long 104°28'20" (NAD 27), in SE¹/₄NW¹/₄ sec.3, T.27 N., R.56 E., Richland County, Hydrologic Unit 10060005, on right bank at upstream side of bridge on State Highway 16, 2.5 mi southeast of Culbertson, 10 mi downstream from Big Muddy Creek, and at river mile 1,620.76.

DRAINAGE AREA.--91,557 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1941 to December 1951, April 1958 to current year.

REVISED RECORDS.--WSP 1729: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 1,883.4 ft (NGVD 29) (U.S. Army Corps of Engineers bench mark). July 1 to Nov. 6, 1941, water-stage recorder at site 400 ft upstream at elevation 0.11 ft higher. Nov. 7, 1941, to Aug. 17, 1950, water-stage recorder at site 580 ft downstream at present elevation. Aug. 18, 1950, to Dec. 31, 1951, nonrecording gage on bridge at present elevation. Apr. 1, 1958, to Nov. 1, 1967, water-stage recorder at site 580 ft downstream at present elevation.

REMARKS.--Water-discharge records good except those for estimated daily discharges, which are poor. Flow partly regulated by Fort Peck Lake (station number 06131500) and many other reservoirs upstream from station. Diversions for irrigation of about 1,030,400 acres upstream from station. U.S. Army Corps of Engineers 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	4,870	4,270	5,850	e5,900	e8,100	e5,600	5,420	5,640	5,360	6,970	6,790	5,940
2	4,790	4,310	6,080	e6,000	e7,400	e5,800	5,370	5,670	5,580	6,720	6,200	5,870
3	4,710	4,330	5,970	e6,100	e7,900	e5,600	5,340	5,650	5,500	6,270	6,100	5,930
4	4,690	4,430	e6,000	e6,000	e7,300	e6,300	5,240	5,600	5,480	6,260	6,040	5,840
5	4,560	4,480	6,060	e5,800	e6,800	e5,800	5,210	5,510	5,520	6,690	6,330	5,840
6	4,760	4,370	5,940	e5,800	e6,900	e5,700	5,410	5,320	5,370	6,560	6,450	5,770
7	4,830	4,290	5,950	e5,900	e6,700	e5,600	5,570	5,300	5,500	6,280	6,060	5,710
8	4,640	4,240	6,200	e6,000	e6,300	e5,400	5,410	5,690	5,730	6,020	5,990	5,850
9	4,530	4,210	e5,800	e6,600	e5,900	e5,300	5,410	6,030	6,520	5,810	6,360	5,750
10	4,380	4,290	e5,800	e6,400	e5,900	e5,400	5,320	5,990	7,490	5,710	6,140	5,690
11	4,350	4,400	e5,900	e6,000	e5,700	e5,000	5,600	5,950	8,430	5,770	6,010	5,840
12	4,340	4,520	6,140	e6,300	e6,300	e4,800	5,590	5,890	8,440	6,480	5,900	5,890
13	4,340	4,470	6,030	e6,400	e5,800	5,310	5,480	6,040	9,180	7,140	5,960	5,920
14	4,310	4,530	6,170	e6,100	e5,800	5,220	5,430	5,550	9,930	7,210	5,980	5,900
15	4,290	4,540	6,350	e6,100	e5,800	5,150	5,390	5,190	9,480	7,060	5,980	5,870
16	4,310	4,380	6,300	e6,300	e5,800	5,160	5,590	5,210	8,530	6,860	5,970	5,920
17	4,280	4,410	6,240	e6,200	e5,800	5,130	5,680	5,680	7,870	6,560	6,060	5,930
18	4,270	4,690	e5,900	e6,300	e5,900	4,960	5,730	5,810	7,440	6,640	6,370	6,290
19	4,350	4,870	6,160	e6,300	e5,900	6,170	5,700	5,750	6,880	6,560	6,780	6,420
20	4,350	5,020	5,890	e6,600	e5,900	5,770	5,780	5,600	6,550	6,530	6,500	5,070
21	4,330	4,940	e5,900	e6,200	e5,900	5,130	5,640	5,500	6,430	6,400	6,510	4,520
22	4,340	4,720	e6,100	e6,300	e5,800	4,940	5,590	5,470	6,610	6,160	6,320	4,420
23	4,410	4,910	e6,000	e6,000	e5,700	5,030	5,530	5,520	7,090	6,070	6,210	4,540
24	4,350	5,060	e6,000	e6,100	e5,400	5,270	5,550	5,540	7,240	5,940	6,050	4,470
25	4,310	5,260	e6,000	e6,000	e5,600	5,400	5,610	5,380	7,530	5,920	5,930	4,360
26	4,300	5,420	e6,000	e6,100	e5,500	5,470	5,690	5,190	7,510	5,910	6,010	4,260
27	4,310	5,510	e6,000	e6,100	e5,500	5,590	5,710	5,100	6,780	5,870	5,910	4,040
28	4,280	5,580	e6,000	e6,200	e5,500	5,710	5,700	5,330	6,620	5,890	5,910	3,980
29	4,260	5,670	e5,900	e6,300	---	5,540	5,680	5,390	6,780	6,390	5,940	4,010
30	4,350	5,760	e6,000	e6,400	---	5,420	5,590	5,380	6,820	6,640	5,960	3,990
31	4,280	---	e5,700	e7,200	---	5,360	---	5,280	---	6,770	5,960	---
TOTAL	137,470	141,880	186,330	192,000	172,800	168,030	165,990	172,150	210,190	198,060	190,680	159,830
MEAN	4,435	4,729	6,011	6,194	6,171	5,420	5,533	5,553	7,006	6,389	6,151	5,328
MAX	4,870	5,760	6,350	7,200	8,100	6,300	5,780	6,040	9,930	7,210	6,790	6,420
MIN	4,260	4,210	5,700	5,800	5,400	4,800	5,210	5,100	5,360	5,710	5,900	3,980
AC-FT	272,700	281,400	369,600	380,800	342,700	333,300	329,200	341,500	416,900	392,900	378,200	317,000

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2005, BY WATER YEAR (WY)*

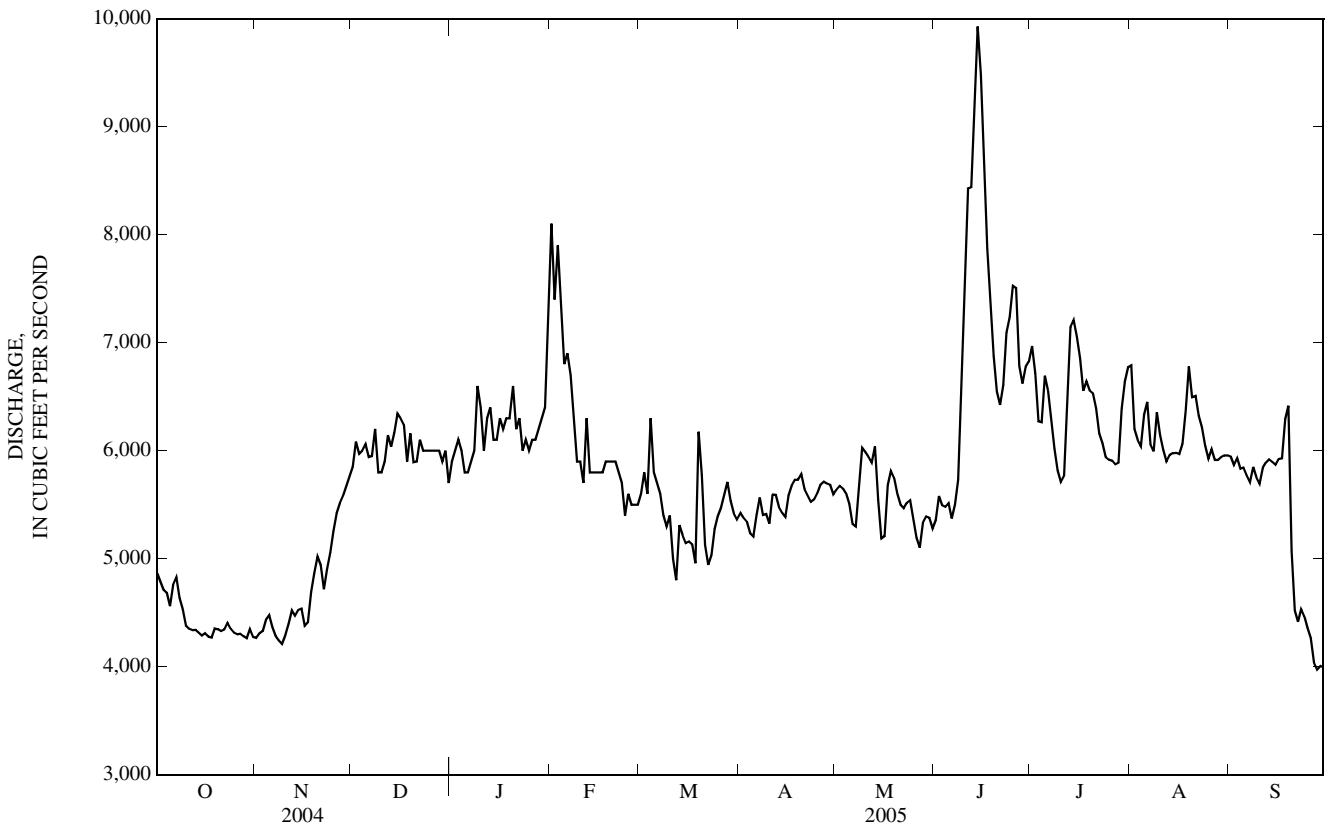
MEAN	10,390	9,051	9,095	9,837	10,420	10,200	10,370	9,530	9,651	10,090	11,140	10,850
MAX	28,570	22,440	13,280	14,400	17,450	20,690	32,840	26,220	26,650	37,050	25,300	26,590
(WY)	(1949)	(1952)	(1944)	(1986)	(1976)	(1976)	(1979)	(1979)	(1975)	(1975)	(1948)	(1948)
MIN	1,237	1,126	1,061	1,010	1,167	2,674	1,965	1,353	1,366	1,273	3,823	3,771
(WY)	(1942)	(1942)	(1942)	(1943)	(1942)	(1950)	(1945)	(1945)	(1945)	(1945)	(1963)	(1992)

06185500 MISSOURI RIVER NEAR CULBERTSON, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1941 - 2005*	
ANNUAL TOTAL	2,784,890		2,095,410			
ANNUAL MEAN	7,609		5,741		10,050	
HIGHEST ANNUAL MEAN					19,910	
LOWEST ANNUAL MEAN					4,083	
HIGHEST DAILY MEAN	15,700	May 29	9,930	Jun 14	69,200	Mar 27, 1943
LOWEST DAILY MEAN	3,500	Nov 6	3,980	Sep 28	575	Nov 22, 1941
ANNUAL SEVEN-DAY MINIMUM	4,290	Oct 26	4,160	Sep 24	709	Nov 19, 1941
MAXIMUM PEAK FLOW			a10,000	Jun 14	c78,200	Mar 26, 1943
MAXIMUM PEAK STAGE			b7.19	Dec 28	b19.66	Apr 14, 1979
INSTANTANEOUS LOW FLOW					575	Nov 22, 1941
ANNUAL RUNOFF (AC-FT)	5,524,000		4,156,000		7,282,000	
10 PERCENT EXCEEDS	11,100		6,640		15,700	
50 PERCENT EXCEEDS	7,140		5,800		9,220	
90 PERCENT EXCEEDS	4,510		4,390		4,500	

SUMMARY STATISTICS	WATER YEARS 1941 - 1951**		WATER YEARS 1958 - 2005***	
ANNUAL MEAN	9,245		10,180	
HIGHEST ANNUAL MEAN	14,520	1948	16,580	1975
LOWEST ANNUAL MEAN	4,083	1942	5,741	2005
HIGHEST DAILY MEAN	69,200	Mar 27, 1943	52,000	Apr 18, 1979
LOWEST DAILY MEAN	575	Nov 22, 1941	2,000	Nov 20, 1964
ANNUAL SEVEN-DAY MINIMUM	709	Nov 19, 1941	2,130	Nov 19, 1964
MAXIMUM PEAK FLOW	c78,200	Mar 26, 1943	d55,000	Mar 23, 1960
MAXIMUM PEAK STAGE	b15.12	Mar 26, 1943	b19.66	Apr 14, 1979
ANNUAL RUNOFF (AC-FT)	6,698,000		7,375,000	
10 PERCENT EXCEEDS	21,000		15,000	
50 PERCENT EXCEEDS	6,190		9,420	
90 PERCENT EXCEEDS	1,400		5,600	

*--During period of operation (1941-52, 1958 to current year).
 **--Before operational level at Fort Peck Lake was reached.
 ***--After operational level at Fort Peck Lake was reached.
 a--Gage height, 5.79 ft.
 b--Backwater from ice.
 c--Gage height, 14.80 ft, from rating curve extended above 30,000 ft³/s.
 d--Gage height, 19.14 ft.
 e--Estimated.



06185500 MISSOURI RIVER NEAR CULBERTSON, MT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1946, 1965 to 1986, 1991 to 1994, October 1996 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: July 1965 to September 1981.

WATER TEMPERATURE: July 1965 to September 1979, seasonal records starting July 18, 2002 to September 2004.

SUSPENDED-SEDIMENT DISCHARGE: October 1971 to September 1976.

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, 941 microsiemens per centimeter (µS/cm) at 25°C, Jan. 19, 1980; minimum daily, 338 µS/cm at 25°C, Mar. 30, 1967.

WATER TEMPERATURE: Maximum, 26.0°C, Aug. 14, 2003; minimum, 0.0°C, on many days during winter period.

SEDIMENT CONCENTRATION: Maximum daily mean, 2,940 mg/L, Aug. 15, 1974; minimum daily mean, 30 mg/L, Jan. 13, 1975.

SEDIMENT LOAD: Maximum daily, 147,000 tons, June 5, 1975; minimum daily, 421 tons, Jan. 13, 1975.

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)	UV absorbance, 254 nm, wat flt units /cm (50624)	UV absorbance, 280 nm, wat flt units /cm (61726)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	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)	Hardness, water, mg/L as CaCO3 (00900)	
Date		Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Bicarbonate, wat flt incrm. titr., field, mg/L (00453)	Carbonate, wat flt incrm. titr., field, mg/L (00452)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)
OCT	26...	1130	4,300	11	.050	.035	721	11.5	99	8.4	630	6.0	6.5	240
MAR	21...	1145	5,110	28	.053	.036	720	12.9	96	8.0	631	1.0	1.0	230
APR	11...	1215	5,610	34	.049	.032	723	12.0	108	8.2	610	16.0	8.5	220
MAY	10...	1130	5,980	130	.058	.040	723	10.2	102	8.4	636	19.0	13.0	220
JUN	06...	1100	5,350	28	.051	.035	714	8.8	103	8.4	619	21.0	19.5	230
	27...	1115	6,780	E710	.093	.069	722	7.0	84	8.2	552	24.5	21.5	170
AUG	08...	1115	5,970	39	.049	.034	720	7.8	95	8.3	591	24.0	22.0	210
OCT	26...	57.4	22.4	4.20	1	51.1	174	165	201	.0	10.6	.9	6.85	140
MAR	21...	56.1	22.7	3.97	2	54.3	176	171	209	.0	10.2	.9	6.69	144
APR	11...	53.4	21.6	3.72	1	47.0	163	165	194	3	9.67	1.0	6.54	133
MAY	10...	53.4	21.8	4.27	2	53.0	164	174	183	14	10.3	.9	6.38	139
JUN	06...	53.1	23.0	4.35	1	47.8	168	171	204	2	9.89	.9	6.59	137
	27...	41.0	17.3	4.60	2	52.6	130	124	152	.0	7.48	.8	7.38	136
AUG	08...	52.4	19.5	3.63	1	41.3	162	165	182	9	9.82	.9	6.13	127

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

Date	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	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)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)
OCT 26...	393	.55	4,730	407	.18	.22	<.010	<.016	E.001	.006	.009	.089
MAR 21...	403	.55	5,550	402	.18	.32	<.010	E.009	E.001	<.006	.006	.142
APR 11...	375	.53	5,930	391	.14	E.30	E.005	<.016	<.002	<.006	E.009	.127
MAY 10...	394	.55	6,480	401	.20	.44	<.010	.035	E.001	E.005	.012	.163
JUN 06...	385	.54	5,790	401	.17	.27	<.010	<.016	<.002	E.004	.009	.196
JUN 27...	343	.49	6,540	357	.24	2.5	E.005	.155	E.001	.025	.034	.34
AUG 08...	360	.49	5,860	364	.15	.29	<.010	<.016	<.002	.008	.014	.27

Date	Total carbon, suspndt total, mg/L (00694)	Inorganic carbon, suspndt total, mg/L (00688)	Organic carbon, suspndt total, mg/L (00689)	Organic carbon, fltrd, mg/L (00681)	Pheophytin a, phytoplankton, ug/L (62360)	Chlorophyll a phytoplankton, fluoro, ug/L (70953)	Arsenic water, fltrd, ug/L (01000)	Boron, water, fltrd, ug/L (01020)	Iron, water, fltrd, ug/L (01046)	Lithium, water, fltrd, ug/L (01130)	Selenium, water, fltrd, ug/L (01145)	Strontium, water, fltrd, ug/L (01080)	Vanadium, water, fltrd, ug/L (01085)
OCT 26...	1.2	<.1	1.1	2.5	1.7	3.3	2.4	123	<6	64.2	.6	487	.7
MAR 21...	1.3	.2	1.1	2.4	.7	2.9	2.7	126	<6	68.6	.7	482	1.0
APR 11...	1.0	.2	.8	2.4	.2	3.5	2.4	120	<6	58.9	.8	528	1.2
MAY 10...	2.6	.2	2.4	2.5	1.9	2.9	2.4	117	<6	52.1	.8	501	1.4
JUN 06...	3.4	.2	3.2	2.4	.4	2.0	2.4	121	<6	70.4	.7	502	.9
JUN 27...	17.3	1.6	15.8	3.0	4.1	1.4	2.1	124	<6	64.4	.9	388	1.2
AUG 08...	4.5	<.1	4.4	2.3	.7	4.5	2.5	118	<6	69.0	.7	491	1.2

Date	2,6-Diethyl-aniline water fltrd 0.7u GF ug/L (82660)	CIAT, water, fltrd, ug/L (04040)	Aceto-chlor, water, fltrd, ug/L (49260)	Ala-chlor, water, fltrd, ug/L (46342)	alpha-HCH, water, fltrd, ug/L (34253)	alpha-HCH-d6, surrog, wat flt 0.7u GF percent recovry (91065)	Atra-zine, water, fltrd, ug/L (39632)	Azin-phos-methyl, water, fltrd 0.7u GF ug/L (82686)	Ben-flur-alin, water, fltrd 0.7u GF ug/L (82673)	Butyl-ate, water, fltrd, ug/L (04028)	Car-baryl, water, fltrd 0.7u GF ug/L (82680)	Carbo-furan, water, fltrd 0.7u GF ug/L (82674)
OCT 26...	<.006	<.006	<.006	<.005	<.005	99.1	<.007	<.050	<.010	<.004	<.041	<.020
MAR 21...	<.006	<.006	<.006	<.005	<.005	90.4	<.007	<.050	<.010	<.004	<.041	<.020
APR 11...	<.006	<.006	<.006	<.005	<.005	92.0	<.007	<.050	<.010	<.004	<.041	<.020
MAY 10...	<.006	<.006	<.006	<.005	<.005	91.1	E.003	<.050	<.010	<.004	<.041	<.020
JUN 06...	<.006	<.006	<.006	<.005	<.005	98.9	<.007	<.050	<.010	<.004	<.041	<.020
JUN 27...	<.006	<.006	<.006	<.005	<.005	104	E.005	<.050	<.010	<.004	<.041	<.020
AUG 08...	<.006	<.006	<.006	<.005	<.005	89.2	<.007	<.050	<.010	<.004	<.041	<.020

E--Estimated.

06185500 MISSOURI RIVER NEAR CULBERTSON, MT—Continued

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

Date	Chlorpyrifos water, fltrd, ug/L (38933)	cis-Permethrin water fltrd, 0.7u GF ug/L (82687)	Cyanazine, water, fltrd, ug/L (04041)	DCPA, water fltrd, 0.7u GF ug/L (82682)	Desulf-inyl fipronil, water, fltrd, ug/L (62170)	Diazinon, water, fltrd, ug/L (39572)	Dieldrin, water, fltrd, ug/L (39381)	Disulfoton, water, fltrd, 0.7u GF ug/L (82677)	EPTC, water, fltrd, 0.7u GF ug/L (82668)	Ethalfluralin, water, fltrd, 0.7u GF ug/L (82663)	Ethoprop, water, fltrd, 0.7u GF ug/L (82672)	Desulf-inyl-fipronil amide, wat flt ug/L (62169)
OCT 26...	<.005	<.006	<.018	<.003	<.012	<.005	<.009	<.02	<.010	<.009	<.005	<.029
MAR 21...	<.005	<.006	<.018	<.003	<.012	<.005	<.009	<.02	<.004	<.009	<.005	<.029
APR 11...	<.005	<.006	<.018	<.003	<.012	<.005	<.009	<.02	<.004	<.009	<.005	<.029
MAY 10...	<.005	<.006	<.018	<.003	<.012	<.005	<.009	<.02	<.004	<.009	<.005	<.029
JUN 06...	<.005	<.006	<.018	<.003	<.012	<.005	<.009	<.02	<.009	<.009	<.005	<.029
JUN 27...	<.005	<.006	<.018	<.003	<.012	<.005	<.009	<.02	<.004	<.009	<.005	<.029
AUG 08...	<.005	<.006	<.018	<.003	<.012	<.005	<.009	<.02	<.006	<.009	<.005	<.029

Date	Fipronil sulfide water, fltrd, ug/L (62167)	Fipronil sulfone water, fltrd, ug/L (62168)	Fipronil, water, fltrd, ug/L (62166)	Fonofos water, fltrd, ug/L (04095)	Lindane water, fltrd, ug/L (39341)	Linuron water fltrd, 0.7u GF ug/L (82666)	Malathion, water, fltrd, ug/L (39532)	Methyl parathion, water, fltrd, 0.7u GF ug/L (82667)	Metolachlor, water, fltrd, ug/L (39415)	Metribuzin, water, fltrd, ug/L (82630)	Molinate, water, fltrd, 0.7u GF ug/L (82671)	Napropamide, water, fltrd, 0.7u GF ug/L (82684)
OCT 26...	<.013	<.024	<.016	<.003	<.004	<.035	<.027	<.015	<.006	<.006	<.003	<.007
MAR 21...	<.013	<.024	<.016	<.003	<.004	<.035	<.027	<.015	<.006	<.006	<.003	<.007
APR 11...	<.013	<.024	<.016	<.003	<.004	<.035	<.027	<.015	<.006	<.006	<.003	<.007
MAY 10...	<.013	<.024	<.016	<.003	<.004	<.035	<.027	<.015	<.006	<.006	<.003	<.007
JUN 06...	<.013	<.024	<.016	<.003	<.004	<.035	<.027	<.015	<.006	<.006	<.003	<.007
JUN 27...	<.013	<.024	<.016	<.003	<.004	<.035	<.027	<.015	<.006	<.006	<.003	<.007
AUG 08...	<.013	<.024	<.016	<.003	<.004	<.035	<.027	<.015	<.006	<.006	<.003	<.007

Date	p,p'-DDE, water, fltrd, ug/L (34653)	Parathion, water, fltrd, ug/L (39542)	Pebulate, water, fltrd, 0.7u GF ug/L (82669)	Pendimethalin, water, fltrd, 0.7u GF ug/L (82683)	Phorate water fltrd, 0.7u GF ug/L (82664)	Prometon, water, fltrd, ug/L (04037)	Propyzamide, water, fltrd, 0.7u GF ug/L (82676)	Propachlor, water, fltrd, ug/L (04024)	Propanil, water, fltrd, 0.7u GF ug/L (82679)	Propargite, water, fltrd, 0.7u GF ug/L (82685)	Simazine, water, fltrd, ug/L (04035)
OCT 26...	<.003	<.010	<.004	<.022	<.011	<.01	<.004	<.025	<.011	<.02	<.005
MAR 21...	<.003	<.010	<.004	<.022	<.011	<.01	<.004	<.025	<.011	<.02	<.005
APR 11...	<.003	<.010	<.004	<.022	<.011	<.01	<.004	<.025	<.011	<.02	<.005
MAY 10...	<.003	<.010	<.004	<.022	<.011	<.01	<.004	<.025	<.011	<.02	<.005
JUN 06...	<.003	<.010	<.004	<.022	<.011	<.01	<.004	<.025	<.011	<.02	<.005
JUN 27...	<.003	<.010	<.004	<.022	<.011	<.01	<.004	<.025	<.011	<.02	<.005
AUG 08...	<.003	<.010	<.004	<.022	<.011	<.01	<.004	<.025	<.011	<.02	<.005

E--Estimated.

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

Date	Tebu- thiuron water fltrd 0.7u GF ug/L (82670)	Terba- cil, water, fltrd 0.7u GF ug/L (82665)	Terbu- fos, water, fltrd 0.7u GF ug/L (82675)	Thio- bencarb water fltrd 0.7u GF ug/L (82681)	Tri- allate, water, fltrd 0.7u GF ug/L (82678)	Tri- flur- alin, water, fltrd 0.7u GF ug/L (82661)	Suspnd. sedi- ment, percent <.063mm (70331)	Sus- pended sedi- ment concen- tration mg/L (80154)	Sus- pended sedi- ment dis- charge, tons/d (80155)
OCT 26...	<.02	<.034	<.02	<.010	<.006	<.009	25	110	1,280
MAR 21...	<.02	<.034	<.02	<.010	<.006	<.009	36	186	2,570
APR 11...	<.02	<.034	<.02	<.010	<.006	<.009	44	183	2,770
MAY 10...	<.02	<.034	<.02	<.010	<.006	<.009	72	304	4,910
JUN 06...	<.02	<.034	<.02	<.010	<.006	<.009	40	184	2,660
JUN 27...	<.02	<.034	<.02	<.010	<.006	<.009	94	1,890	34,700
AUG 08...	<.02	<.034	<.02	<.010	<.006	<.009	44	196	3,160

SMALLER RESERVOIRS IN MISSOURI RIVER BASIN IN MONTANA

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

06012000 LIMA RESERVOIR

LOCATION--Lat 44°39'16", long 112°21'54" (NAD 27), in SW¹/₄ sec.32, T.13 S., R.6 W., Beaverhead County, Hydrologic Unit 10020001, at Lima Dam on Red Rock River, 7 mi northwest of Monida, and at river mile 2,542.2.

DRAINAGE AREA--570 mi².

PERIOD OF RECORD--April 1940 to current year. Records prior to October 1950, published only in WSP 1309, and those for April 1955, published only in WSP 1729. Records of daily elevations are in files of the USGS Water Science Center located in Helena, Montana.

REMARKS--Elevation of gage is at sea level (levels by Montana Department of Natural Resources and Conservation) Reservoir is formed by earthfill dam with concrete spillway completed in 1902. Usable capacity, 84,050 acre-ft between elevation 6,537.30 ft, bottom of tunnel, and 6,582.7 ft, spillway crest. No dead storage. Figures given herein represent usable contents. Water is used for irrigation, flood control, and recreation. Records furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD--Maximum contents observed, 85,870 acre-ft, May 27, 28, June 14, 15, 1984, elevation, 6,582.98 ft; no usable storage Sept. 20-26, 1979, Sept. 13-30, 1987, Oct. 1987, July 18 to Sept. 30, 1992.

EXTREMES FOR CURRENT YEAR--Maximum contents, 74,540 acre-ft, May 20-27, elevation 6,581.17 ft; minimum contents, 27,410 acre-ft, Oct. 1, elevation, 6,569.00 ft.

06038000 HEBGEN LAKE

LOCATION--Lat 44°51'51", long 111°20'09" (NAD 27), in SW¹/₄ NW¹/₄ sec.23, T.11 S., R.3 E., Gallatin County, Hydrologic Unit 10020007, at Hebgen Dam on Madison River, 18 mi northwest of West Yellowstone, and at river mile 103.

DRAINAGE AREA--904 mi².

PERIOD OF RECORD--January 1936 to current year. Records prior to October 1939, published only in WSP 1309. Figures of contents published in WSP 1629, 1709, and 1729 have been found to be in error and should not be used. Prior to Oct. 1, 1949, published as Hebgen Reservoir near West Yellowstone. Records of daily elevations since October 1955 are in files of the USGS Water Science Center located in Helena, Montana.

REMARKS--Elevation of gage is at sea level (levels by The Montana Power Co.). Prior to earthquake of Aug. 17, 1959, elevation of gage was 9.74 ft higher, also at sea level. Reservoir is formed by earthfill dam with concrete core and spillway completed in 1915, repaired in 1960 following severe earthquake of Aug. 17, 1959, which lowered dam 9.74 ft and deformed reservoir area. Subsequent usable capacity, 378,800 acre-ft, between elevation 6,473.00 ft, bottom of outlet tower, and 6,534.87 ft, spillway crest. Dead storage, 7,340 acre-ft below elevation 6,473.00 ft. Prior to Aug. 17, 1959, usable capacity, 344,700 acre-ft between 6,483.11 ft, bottom of outlet tower, and 6,544.61 ft, spillway crest. Observations of reservoir level prior and subsequent to earthquake indicate smaller increases in capacity than indicated by new capacity table. Figures given herein represent usable contents. Water is used for power and recreation. Records furnished by The Montana Power Co. REVISED RECORDS, WSP 1916: 1959-60.

EXTREMES FOR PERIOD OF RECORD--Maximum contents observed, 380,500 acre-ft, July 21, 1987, elevation, 6,535.0 ft; minimum monthend, 670 acre-ft, Dec. 31, 1936, by capacity table used prior to August 1959.

EXTREMES FOR CURRENT YEAR--Maximum contents observed, 376,500 acre-ft, June 14, elevation, 6,534.69 ft; minimum observed, 289,100 acre-ft, Apr. 4-15, elevation, 6,527.37 ft.

06040500 ENNIS LAKE

LOCATION--Lat 45°28'12", long 111°38'15" (NAD 27), in NW¹/₄ SW¹/₄ sec.20, T.4 S., R.1 E., Madison County, Hydrologic Unit 10020007, at Madison Dam on Madison River, 5 mi northeast of McAllister, and at river mile 40.3.

DRAINAGE AREA--2,181 mi².

PERIOD OF RECORD--January 1936 to September 1975 (total contents), October 1975 to current year (usable contents). Records prior to October 1939, published only in WSP 1309. Prior to 1949, published as Madison Reservoir near McAllister. Records of daily elevations since October 1955 are in files of the USGS Water Science Center located in Helena, Montana.

REMARKS--Elevation of gage is at sea level (levels by The Montana Power Co.). Reservoir is formed by timber crib dam completed in 1900. Usable capacity, 41,020 acre-ft between elevation 4,826.5 ft, bottom of penstock, and 4,841.5 ft, top of flashboard. Dead storage, 1,040 acre-ft below elevation 4,826.5 ft. Not normally drawn below 4,831.0 ft, 6,810 acre-ft. Figures given herein represent usable contents. Water is used for power and recreation. Records furnished by PPL EnergyPlus, LLC.

EXTREMES FOR PERIOD OF RECORD--Maximum contents observed, 40,830 acre-ft, June 20, 1968, elevation, 4,841.45 ft; minimum observed, 2,600 acre-ft, Mar. 31, 1937, elevation, 4,828.8 ft.

EXTREMES FOR CURRENT YEAR--Maximum contents observed, 37,320 acre-ft, July 11, 12, elevation, 4,840.80 ft; minimum observed, 28,520 acre-ft, Dec. 25, 26, elevation, 4,838.40 ft.

06064500 LAKE HELENA

LOCATION--Lat 46°45'58", long 111°53'10" (NAD 27), in SE¹/₄ SW¹/₄ sec.29, T.12 N., R.2 W., Lewis and Clark County, Hydrologic Unit 10030101, at Hauser Dam on Missouri River, 13 mi northeast of Helena, and at river mile 2,239.1.

DRAINAGE AREA--610 mi² above dam and control works on Prickly Pear Creek. PERIOD OF RECORD, May 1945 to current year. April to July 1953 scattered daily elevation and contents, published in WSP 1320-B. May to June 1964 daily elevations and contents, published in WSP 1840-B. Records of daily elevations since October 1955 are in files of the USGS Water Science Center located in Helena, Montana. Nonrecording gage at Hauser Dam read hourly.

REMARKS--Elevation of gage is at sea level (levels by The Montana Power Co.). Gage heights collected at Hauser Dam are effective on Lake Helena at control dam. Prior to April 1945, contents of Lake Helena included with records of Hauser Lake. Since that date, a dam and control works has separated the two lakes to allow independent regulation of Lake Helena, if needed. Usable capacity, 12,710 acre-ft, between elevation 3,624.00 ft, bottom of control works, and 3,635.00 ft, top of flashboards. No dead storage. Figures given herein represent usable contents. Water is used for recreation, wildlife, and power production through Hauser Dam. Records furnished by PPL EnergyPlus, LLC.

SMALLER RESERVOIRS IN MISSOURI RIVER BASIN IN MONTANA—Continued

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 12,040 acre-ft, Mar. 14, 2003, elevation, 3,635.70 ft; no storage Mar. 29 to Apr. 7, 1958, Feb. 12, 20, 1962, May 4-10, 1979.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 11,360 acre-ft, Oct. 21 and Jan. 3, elevation, 3,635.40 ft; minimum observed, 6,700 acre-ft, Sept. 17-19 and 25-27, elevation, 3,633.00 ft.

06065000 HAUSER LAKE

LOCATION.--Lat 46°45'58", long 111°53'10" (NAD 27), in SE¹/₄ SW¹/₄ sec.29, T.12 N., R.2 W., Lewis and Clark County, Hydrologic Unit 10030101, at Hauser Dam on Missouri River, 1.6 mi downstream from Prickly Pear Creek, 13 mi northeast of Helena, and at river mile 2,226.4.

DRAINAGE AREA.--16,876 mi².

PERIOD OF RECORD.--January 1936 to current year. Records prior to October 1939, published only in WSP 1309. April to July 1953 scattered daily elevations and contents, published in WSP 1320-B. May to June 1964 daily elevations and contents, published in WSP 1840-B. Monthend contents prior to May 1945 include contents of Lake Helena, excluded thereafter. Records of daily elevations since October 1955 are in files of the USGS Water Science Center located in Helena, Montana. Nonrecording gage read hourly.

REMARKS.--Elevation of gage is at sea level (levels by The Montana Power Co.). Reservoir is formed by concrete dam completed in 1907; separated from Lake Helena in April 1945. Usable contents, 61,870 acre-ft, between elevation 3,617.00 ft, bottom of tunnel, and 3,635.00 ft top of flashboards. Dead storage, 46,810 acre-ft below elevation 3,617.00 ft. Prior to Nov. 28, 1949, usable capacity, 52,090 acre-ft at elevation 3,635.00 ft, decrease caused by construction of Canyon Ferry Dam in backwater of Hauser Dam. Not normally drawn below 3,621.00 ft, 8,870 acre-ft. Capacity above elevation 3,625.0 ft updated in 1990. Figures given herein represent usable contents. Water is used for power and recreation. Records furnished by PPL EnergyPlus, LLC. REVISED RECORDS, WSP 1729: 1949-57.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 66,040 acre-ft, Mar. 14, 2003, elevation, 3,635.70 ft; no storage Jan. 31, Feb. 29, 1936.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 64,250 acre-ft, Oct. 21 and Jan. 3, elevation, 3,635.40 ft; minimum observed, 59,930 acre-ft, Sept. 17-19 and 25-27, elevation, 3,633.00 ft.

06066000 HOLTER LAKE

LOCATION.--Lat 46°59'28", long 112°00'17" (NAD 27), on line between SE¹/₄ sec.5 and NE¹/₄ sec.8, T.14 N., R.3 W., Lewis and Clark County, Hydrologic Unit 10030101, at Holter Dam on Missouri River, 3.3 mi east of Wolf Creek, and at river mile 2,211.1.

DRAINAGE AREA.--17,149 mi².

PERIOD OF RECORD, January 1936 to current year. Records prior to October 1939, published only in WSP 1309. April to July 1953 scattered daily elevations and contents, published in WSP 1320-B. May to June 1964 daily elevations and contents, published in WSP 1840-B. Records of daily elevations since October 1955 are in files of the USGS Water Science Center located in Helena, Montana. Prior to 1950, published as Holter Reservoir near Wolf Creek. Nonrecording gage read three times daily.

REMARKS.--Elevation of gage is at sea level (levels by The Montana Power Co.). Reservoir is formed by concrete dam completed in 1918. Usable capacity, 81,920 acre-ft between elevation 3,543.00 ft, bottom of tunnel, and 3,564.00 ft, top of flashboards. Dead storage, 158,500 acre-ft below elevation 3,543.00 ft. Not normally drawn below 3,548.00 ft, 16,660 acre-ft. Figures given herein represent usable contents. Water is used for power and recreation. Records furnished by PPL EnergyPlus, LLC.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 85,250 acre-ft, June 19, 1970, elevation, 3,564.70 ft; no storage Feb. 29, Dec. 31, 1936.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 81,860 acre-ft, June 27, elevation, 3,563.99 ft; minimum observed, 74,810 acre-ft, Sept. 21, elevation, 3,562.48 ft.

06079500 GIBSON RESERVOIR

LOCATION.--Lat 47°36'09", long 112°45'39" (NAD 27), in NE¹/₄ NW¹/₄ SE¹/₄ sec.4, T.21 N., R.9 W., Teton County, Hydrologic Unit 10030104, at Gibson Dam on Sun River, 19 mi northwest of Augusta, and at river mile 100.8.

DRAINAGE AREA.--575 mi².

PERIOD OF RECORD.--January 1930 to current year. Records prior to October 1940, published only in WSP 1309. April to July 1953 scattered daily elevations and contents, published in WSP 1320-B. May to June 1964 daily elevations and contents, published in WSP 1840-B. Nonrecording gage read daily. Records of daily elevations are in files of the USGS Water Science Center located in Helena, Montana.

REMARKS.--Elevation of gage is at sea level (levels by Bureau of Reclamation). Reservoir is formed by concrete dam with glory-hole spillway completed in 1929. usable capacity, 96,480 acre-ft, between elevation 4,557.5 ft, bottom of outlet, and 4,724.0 ft, top of glory-hole, by capacity table effective Oct. 1, 1997; see previous reports for superseded figures. Water is used for irrigation and recreation. Records furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 116,300 acre-ft, June 8, 1964, elevation 4,732.23 ft, from floodmark, of which 11,600 acre-ft was uncontrolled storage, by capacity table used Oct. 1, 1965 to July 30, 1975; minimum observed, 11 acre-ft, Oct. 13, 1936, elevation, 4,560.9 ft by capacity table used prior to 1939.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 96,530 acre-ft, June 15, elevation, 4,724.04 ft; minimum, 5,080 acre-ft, Sept. 30, elevation, 4,609.22 ft.

SMALLER RESERVOIRS IN MISSOURI RIVER BASIN IN MONTANA—Continued

06136500 FRESNO RESERVOIR

LOCATION.--Lat 48°36'30", long 109°56'45" (NAD 27), in SE¹/₄ sec, 19, T. 33 N., R. 14E, Hill County, Hydrologic Unit 10050002, at dam on Milk River, 13. mi west of Havre and at river mile 437.3.

DRAINAGE AREA.--3,766 mi² of which 670 mi² is probably noncontributing.

PERIOD OF RECORD.--January 1, 1940 to current year. Records prior to September 1940, published only in WSP 1309. March to May 1952 daily elevations and contents published in WSP 1260-B. April to July 1953 scattered daily elevations and contents published in WSP 1320-B. Records of daily contents are in files of the USGS Water Science Center located in Helena, Montana. Nonrecording gage read daily.

REMARKS.--Elevation of gage is at sea level (levels by Bureau of Reclamation). Reservoir is formed by earthfill dam with concrete spillway completed in 1939. Usable capacity, 103,000 acre-ft, between elevation 2,530.00 ft, invert of tunnel inlet, and 2,575.00 ft, spillway crest, from capacity table effective Feb. 1, 1983. Elevation of maximum water surface is 2,592.93 ft, 224,700 acre-ft. Crest of dam is 2,596.10 ft. There are no gates in the spillway. Dead storage, 448 acre-ft, below elevation 2,530.00 ft. Figures given herein represent usable contents. Water is used for irrigation and recreation. Records furnished by Bureau of Reclamation. REVISED RECORDS, WSP 1729: Drainage area.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 154,000 acre-ft, Apr. 3, 1952, elevation, 2,579.3 ft, of which 26,800 acre-ft was uncontrolled storage, capacity table then in use; no storage Feb. 18 to Mar. 6, 1950.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 95,250 acre-ft, July 7, elevation, 2,575.57 ft; minimum observed, 36,150 acre-ft, Jan. 28, 29, elevation, 2,557.95 ft.

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

Date	Lima Reservoir	Hebgen Lake	Ennis Lake	Lake Helena	Hauser Lake
Oct. 31	30,060	333,300	35,070	10,680	62,460
Nov. 30	34,040	325,100	29,230	10,680	62,460
Dec. 30	36,740	315,500	30,660	10,900	63,060
Jan. 31	37,960	307,900	29,230	10,680	62,460
Feb. 28	39,680	298,600	29,590	10,900	63,060
Mar. 31	42,390	289,800	31,020	10,680	62,460
Apr. 30	65,150	292,900	32,850	11,130	63,660
May 31	74,310	359,800	35,440	10,450	61,870
June 30	70,640	369,200	36,200	10,680	62,460
July 31	55,720	367,200	35,070	10,900	63,060
Aug. 31	38,400	349,900	36,200	10,680	62,460
Sept. 30	27,910	336,700	35,820	7,400	54,240

Date	Holter Lake	Gibson Reservoir	Fresno Reservoir
Oct. 31	81,290	26,540	41,400
Nov. 30	80,540	27,140	40,180
Dec. 30	81,340	32,640	38,320
Jan. 31	81,250	40,910	36,600
Feb. 28	81,010	46,940	37,200
Mar. 31	80,630	55,970	39,400
Apr. 30	81,060	73,560	54,450
May 31	81,340	96,010	49,070
June 30	81,290	90,210	89,350
July 31	81,340	33,220	70,810
Aug. 31	81,430	5,600	45,040
Sept. 30	75,950	5,080	45,800

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