

Water-Data Report 2007

**06140500 MILK RIVER AT HAVRE, MT**

Milk Basin  
Middle Milk Subbasin

LOCATION.--Lat 48°33'50", long 109°41'42" referenced to North American Datum of 1927, in SE ¼ NE ¼ NE ¼ sec.6, T.32 N., R.16 E., Hill County, MT, Hydrologic Unit 10050004, on left bank, 1.25 mi upstream from Bullhook Creek and 7th Avenue East highway bridge in Havre, 8.2 mi downstream from Big Sandy Creek, 15.8 mi downstream from Fresno Dam, and at river mile 419.2.

DRAINAGE AREA.--5,785 mi<sup>2</sup>, of which 670 mi<sup>2</sup> is probably non-contributing.

**SURFACE-WATER RECORDS**

PERIOD OF RECORD.--May to November 1898, April 1899 to November 1922, March, April 1923, March, April 1952 [gage heights only, in Water Supply Paper (WSP) 1260-B], June 1953 (in WSP 1320-B), September 1954 to September 2006, seasonal records beginning March 2007. Monthly discharge only for some periods, published in WSP 1309.

REVISED RECORDS.-- WSP 1309: 1899-1900; 1902-4; 1907-8; 1909, maximum discharge (M); 1912; 1917 (M); 1920 (M). WSP 1729: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 2,465.24 ft, referenced to the National Geodetic Vertical Datum of 1929. Prior to Nov. 4, 1902, nonrecording gage at site 0.75 mi downstream at different elevation. Nov. 4, 1902, to Aug. 6, 1980, nonrecording gages 1.25 mi downstream on 7th Avenue East highway bridges, all at elevations then in use.

REMARKS.--Records are good except those for estimated daily discharges, which are poor. Diversions for irrigation of about 6,000 acres occur upstream from station. Since 1917, flow has increased during irrigation season by water from St. Mary Canal (station number 05018500). Since 1939, flow has been regulated by Fresno Reservoir (station number 06136500). A U.S. Geological Survey satellite telemeter is located at the station. Several unpublished observations of water temperature and specific conductance were made during the year.

## 06140500 MILK RIVER AT HAVRE, MT—Continued

**DISCHARGE, CUBIC FEET PER SECOND**  
**SEASON OCTOBER 2006 TO OCTOBER 2007**  
**DAILY MEAN VALUES**

[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
1	49					e50	447	666	787	607	785	669	47
2	52					e50	467	663	790	597	781	669	46
3	54					e60	477	675	795	608	781	670	46
4	56					e70	468	685	791	809	811	669	46
5	56					e90	470	654	779	828	836	674	47
6	57					e120	454	655	784	866	825	673	48
7	57					e200	429	649	797	860	776	643	46
8	53					e250	424	647	759	863	772	591	46
9	53					e230	421	639	737	857	754	556	44
10	53					e250	459	633	717	838	745	524	45
11	54					e300	446	616	699	826	740	434	48
12	53					285	260	597	674	847	748	312	46
13	53					193	452	600	666	906	746	172	46
14	52					147	485	603	649	901	745	88	46
15	52					126	484	619	651	901	741	82	45
16	52					123	477	621	637	890	709	81	46
17	52					124	508	708	670	883	703	79	47
18	51					115	524	728	699	915	687	78	45
19	50					102	565	811	648	916	673	81	45
20	54					98	580	812	647	915	673	80	44
21	51					90	554	809	655	925	673	80	44
22	50					129	603	765	657	926	668	78	45
23	50					222	621	753	662	919	630	94	44
24	50					245	613	693	637	930	642	87	44
25	50					246	614	693	654	913	645	72	44
26	50					247	634	626	678	894	643	67	44
27	49					369	653	628	622	889	643	66	44
28	47					455	657	660	609	840	647	64	44
29	44					448	672	707	616	827	667	57	44
30	43					450	673	745	622	825	672	48	44
31	36					448	---	765	---	816	673	---	42
<b>Total</b>	1,583					6,332	15,591	21,125	20,788	26,337	22,234	8,538	1,402
<b>Mean</b>	51.1					204	520	681	693	850	717	285	45.2
<b>Max</b>	57					455	673	812	797	930	836	674	48
<b>Min</b>	36					50	260	597	609	597	630	48	42
<b>Ac-ft</b>	3,140					12,560	30,920	41,900	41,230	52,240	44,100	16,940	2,780

**STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1898 – 2006 AND SEASON 2007\***

	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
<b>Mean</b>	75.0	53.0	56.8	89.1	307	508	803	811	778	576	322	141
<b>Max</b>	325	160	780	1,400	2,106	2,700	2,191	2,188	2,045	1,303	956	628
<b>(WY)</b>	(1976)	(1900)	(1918)	(1916)	(1918)	(1899)	(1967)	(1908)	(1902)	(1978)	(1993)	(1994)
<b>Min</b>	0.00	0.00	0.00	0.00	5.00	25.0	61.4	35.2	15.3	0.00	0.00	0.00
<b>(WY)</b>	(1906)	(1906)	(1906)	(1922)	(1919)	(1983)	(1905)	(1905)	(1910)	(1910)	(1905)	(1906)

\* During periods of operation (May 1898 to November 1898, April 1898 to November 1922, March 1923 to April 1923, September 1954 to September 2006, seasonal records beginning March 2007).

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## SUMMARY STATISTICS

	Season 2007		Water Years 1898 - 2007*	
Annual mean			378	
Highest annual mean			727	1965
Lowest annual mean			39.2	1905
Highest daily mean	930	Jul 24, 2007	<sup>a</sup> 16,000	Apr 12, 1899
Lowest daily mean	36	Oct 31, 2006	0.00	Jul 11, 1898 <sup>b</sup>
Annual seven-day minimum			0.00	Aug 15, 1905
Maximum peak flow	962	Jul 21, 2007	<sup>c</sup> 20,000	Apr 12, 1899
Maximum peak stage	4.24	Jul 21, 2007	<sup>d</sup> 19.30	Apr 12, 1899
Annual runoff (ac-ft)			273,800	
10 percent exceeds			1,040	
50 percent exceeds			130	
90 percent exceeds			28	

## SUMMARY STATISTICS

	Water Years 1900 - 1916**		Water Years 1917 - 2007***	
Annual mean	273.7		408	
Highest annual mean	571	1916	727	1965
Lowest annual mean	39.2	1905	160	1919
Highest daily mean	9,600	Jun 9, 1908	9,150	Mar 20, 1918
Lowest daily mean	<sup>a</sup> 0.00	Aug 16, 1904	0.00	Jan 1, 1922
Annual seven-day minimum	0.00	Aug 15, 1905	0.00	Jan 1, 1922
Maximum peak flow	11,000	Jun 9, 1908	<sup>e</sup> 11,400	Apr 3, 1952
Maximum peak stage	16.5	Jun 9, 1908	18.60	Apr 3, 1952
Annual runoff (ac-ft)	198,300		295,900	
10 percent exceeds	640		1,080	
50 percent exceeds	110		159	
90 percent exceeds	5.0		30	

\* During periods of operation (May 1898 to November 1898, April 1898 to November 1922, March 1923 to April 1923, September 1954 to September 2006, seasonal records beginning March 2007).

\*\* Prior to operation of St. Mary Canal.

\*\*\* Post operation of St. Mary Canal.

<sup>a</sup> Observed.

<sup>b</sup> Observed, no flow at times in several years.

<sup>c</sup> Observed, from rating curve extended above 5,200 ft<sup>3</sup>/s.

<sup>d</sup> Site and datum then in use, from floodmark.

<sup>e</sup> Observed, about.

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