Water-Data Report 2012

05017500 ST. MARY RIVER NEAR BABB, MT

Saskatchewan Basin
St. Mary Subbasin

LOCATION.--Lat 48°49'59", long 113°25'11" referenced to North American Datum of 1983, in NW ¼ NW ¼ SE ¼ sec.34, T.36 N., R.14 W., Glacier County, MT, Hydrologic Unit 10010002, Blackfeet Indian Reservation, on right bank 0.7 mi upstream from outlet of Lower St. Mary Lake and 2.0 mi southeast of Babb.

DRAINAGE AREA.--276 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--July 1901 to October 1902, May 1910 to September 1925, October 1950 to current year. Monthly discharge only for some periods, published in Water Supply Paper (WSP) 1308. Published as "at Main" in 1901-02, and as "below Swiftcurrent Creek, at Babb" 1910-15. Records published as "near Babb" for April 1902 to September 1915, May 1929 to September 1950 at sites about 1.5 mi downstream not equivalent because flow of Swiftcurrent Creek is not included in 1902-15 record, and because diversion by St. Mary Canal is not included in 1929-50 record.

REVISED RECORDS.--WSP 1308: 1913-14, 1920, 1922-24. WSP 1508: 1902.

GAGE.--Water-stage recorder. Elevation of gage is 4,468.13 ft (NGVD 29). Prior to Oct. 1, 1915, water-stage recorder or nonrecording gages at several sites about 3.8 mi downstream at different elevations. Oct. 1, 1915, to Sept. 30, 1925, water-stage recorder or nonrecording gages at several sites within 1.5 mi downstream at different elevations.

REMARKS.--Records are good. Entire flow of Swiftcurrent Creek below Lake Sherburne is diverted into Lower St. Mary Lake upstream from station. Flow of Swiftcurrent Creek is regulated by Lake Sherburne (station number 05015500) since 1919. October 1950 to September 1976, monthly discharge and runoff figures adjusted for change in contents in Lake Sherburne. U.S. Geological Survey satellite telemeter is located at the station. Several observations of water temperature and specific conductance were made during the year.

Suggested citation: U.S. Geological Survey, 2012, Water-resources data for the United States, Water Year 2012: U.S. Geological Survey Water-Data Report WDR-US-2012, site 05017500, accessed at http://wdr.water.usgs.gov/wy2012/pdfs/05017500.2012.pdf

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	689	237	151	39	54	93	206	2,430	1,490	3,230	1,180	796
2	690	245	149	38	62	91	223	2,230	1,540	3,160	1,220	768
3	684	237	139	40	75	79	231	1,950	1,870	3,150	1,250	741
4	672	221	138	37	95	74	252	1,710	2,310	3,110	1,250	711
5	636	215	131	43	107	75	288	1,540	2,800	2,970	1,220	719
6	672	209	135	47	118	82	302	1,400	3,340	2,750	1,200	788
7	631	212	129	44	130	85	306	1,290	3,620	2,570	1,210	781
8	576	194	120	49	138	82	308	1,210	3,560	2,450	1,240	755
9	522	179	110	45	141	78	308	1,180	3,320	2,400	1,280	732
10	480	176	96	56	142	89	321	1,200	3,030	2,400	1,290	717
11	454	187	83	60	142	97	339	1,250	2,760	2,450	1,280	687
12	426	170	87	57	141	100	375	1,270	2,420	2,460	1,270	617
13	402	156	89	54	140	107	403	1,270	2,280	2,400	1,250	536
14	390	145	86	53	138	109	426	1,280	2,330	2,320	1,240	456
15	381	138	85	53	132	111	463	1,330	2,520	2,260	1,250	382
16	372	138	88	53	125	119	485	1,460	2,680	2,210	1,240	320
17	358	138	88	56	120	123	520	1,670	2,760	2,140	1,200	277
18	326	129	90	62	117	129	576	1,900	3,120	2,070	1,150	245
19	291	125	83	62	114	138	673	2,000	3,670	2,020	1,100	219
20	273	121	71	59	111	140	749	1,970	3,890	2,000	1,070	201
21	251	121	61	59	109	144	851	1,880	3,810	2,010	1,030	189
22	238	128	54	53	109	151	957	1,880	3,590	1,970	1,020	179
23	244	139	48	52	110	157	1,060	2,070	3,410	1,870	995	174
24	248	137	44	50	108	159	1,210	2,250	3,490	1,740	961	172
25	258	141	39	52	106	156	1,480	2,270	3,590	1,590	928	172
26	286	144	37	44	106	152	1,920	2,210	3,810	1,420	884	172
27	276	183	35	47	105	148	2,390	2,110	4,110	1,320	845	173
28	267	175	35	45	102	143	2,630	1,950	4,140	1,260	826	167
29	259	175	41	47	97	142	2,670	1,780	3,850	1,210	829	151
30	240	158	41	49	---	154	2,570	1,650	3,480	1,170	822	139
31	245	---	42	50	---	180	---	1,540	---	1,140	809	---
Total	12,737	5,073	2,625	1,555	3,294	3,687	25,492	53,130	92,590	67,220	34,339	13,136
Mean	411	169	84.7	50.2	114	119	850	1,714	3,086	2,168	1,108	438
Max	690	245	151	62	142	180	2,670	2,430	4,140	3,230	1,290	796
Min	238	121	35	37	54	74	206	1,180	1,490	1,140	809	139
Ac-ft	25,260	10,060	5,210	3,080	6,530	7,310	50,560	105,400	183,700	133,300	68,110	26,060

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 2012, BY WATER YEAR (WY)*

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	364	266	146	111	104	168	510	1,619	2,434	1,610	1,011	687
Max	1,323	1,281	722	302	249	733	977	2,573	4,807	2,791	1,413	1,291
(WY)	(1952)	(2000)	(1996)	(1981)	(1996)	(2007)	(1988)	(1957)	(1975)	(2011)	(1976)	(1959)
Min	67.4	45.0	33.5	37.2	33.8	38.6	85.0	670	1,289	687	320	119
(WY)	(2002)	(1988)	(1953)	(2001)	(2001)	(2001)	(1975)	(1955)	(1992)	(1977)	(1988)	(1988)

*During periods of operation (October 1950 to current year).

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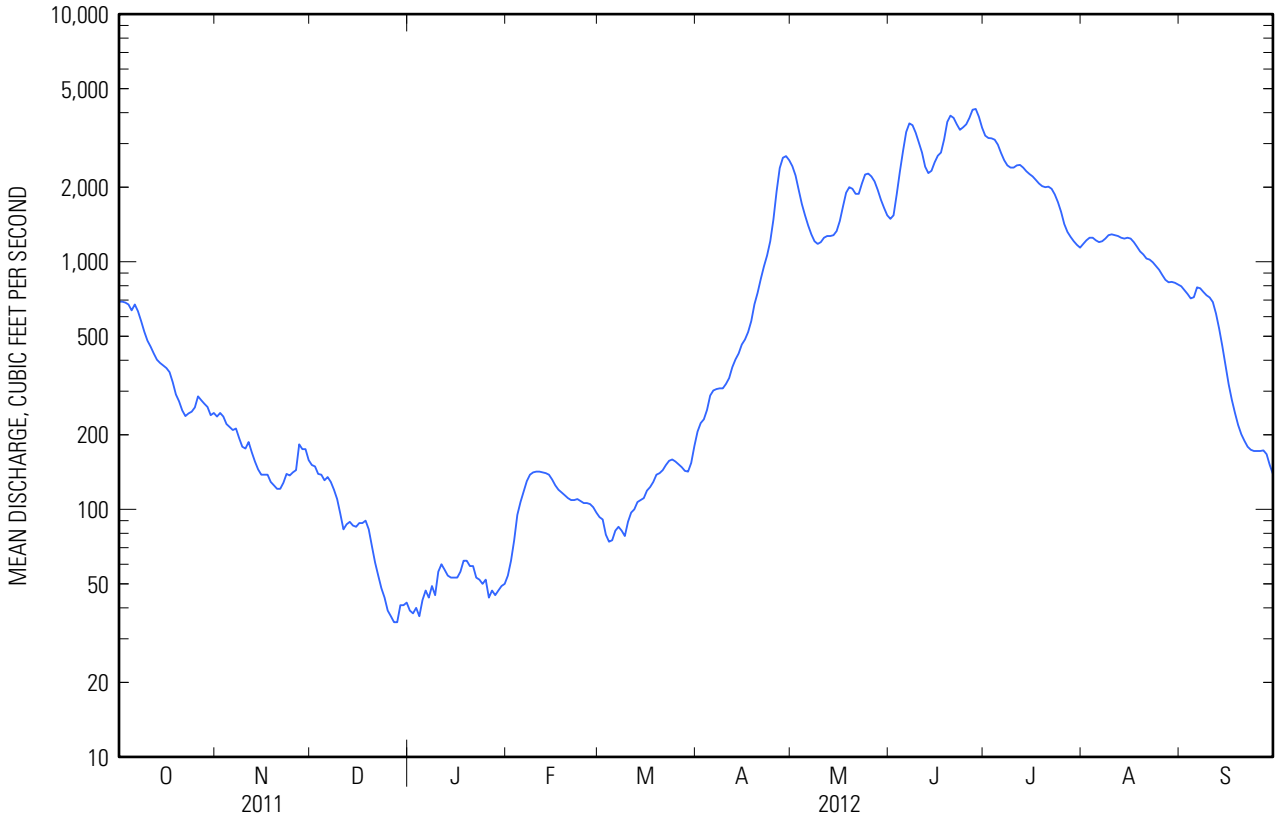
SUMMARY STATISTICS

	Calendar Year 2011		Water Year 2012		Water Years 1951– 2012*	
Annual total	358,083		314,878			
Annual mean	981		860		755	
Highest annual mean					1,073	1951
Lowest annual mean					442	2001
Highest daily mean	3,880	Jun 25	4,140	Jun 28	15,600	Jun 9, 1964
Lowest daily mean	35	Dec 27	35	Dec 27	27	Jan 3, 1953
Annual seven-day minimum	39	Dec 25	39	Dec 25	28	Dec 30, 1952
Maximum peak flow			4,210	Jun 28	[a]16,500	Jun 9, 1964
Maximum peak stage			5.99	Jun 28	[b]12.96	Jun 9, 1964
Annual runoff (ac-ft)	710,300		624,600		547,000	
10 percent exceeds	3,060		2,440		1,880	
50 percent exceeds	502		290		363	
90 percent exceeds	111		57		74	

*During periods of operation (October 1950 to current year).
[a]From rating curve extended above 6,000 ft³/s on basis of slope-area measurement of peak flow.
[b]From highwater mark in well.