

Water-Data Report 2006

**06085800 SUN RIVER AT SIMMS, MT**

Upper Missouri Basin  
Sun Subbasin

LOCATION.--Lat 47°30'09", long 111°55'54" referenced to North American Datum of 1927, in NW ¼ NW ¼ SE ¼ sec.12, T.20 N., R.3 W., Cascade County, MT, Hydrologic Unit 10030104, on left bank on downstream side of Montana Secondary Highway 565 bridge, 0.7 mi downstream from Simms Creek, 0.7 mi north of Simms, and at river mile 45.0.

DRAINAGE AREA.--1,320 mi<sup>2</sup>.

**SURFACE-WATER RECORDS**

PERIOD OF RECORD.--May to June 1953 in Water Supply Paper (WSP) 1320-B and May to June 1964 in WSP 1840-B. April 1966 to September 1979, April 1997 to October 2004; April 2005 to current year, seasonal records only.

REVISED RECORDS. --Water Data Report MT-75-1: 1964, maximum discharge.

GAGE.--Water-stage recorder. Elevation of gage is 3,570 ft, referenced to the National Geodetic Vertical Datum of 1929. May 1941 to October 1965, nonrecording gage at different elevation. April 1966 to September 1979, water-stage recorder at site about 500 ft downstream at different elevation.

REMARKS.--Seasonal records are good. Flow is regulated by Gibson, Pishkun, Willow Creek, and Nilan Reservoirs. Diversions for irrigation of about 105,000 acres occur upstream from station. 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 Several unpublished observations of water temperature and specific conductance were made during the year.

## 06085800 SUN RIVER AT SIMMS, MT—Continued

**DISCHARGE, CUBIC FEET PER SECOND**  
**CALENDAR YEAR JANUARY TO DECEMBER 2006**  
**DAILY MEAN VALUES**

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1				160	149	448	86	112	88	131		
2				212	151	890	79	123	89	131		
3				209	140	1,500	78	105	86	133		
4				183	103	2,540	93	99	79	136		
5				185	86	2,170	84	108	71	131		
6				361	70	1,690	107	119	66	137		
7				744	55	1,590	119	117	70	136		
8				522	46	1,030	109	111	67	135		
9				428	27	1,070	100	104	70	127		
10				354	32	2,230	96	86	69	123		
11				315	48	3,020	96	85	67	119		
12				282	71	3,040	80	104	57	119		
13				263	60	2,280	71	128	41	120		
14				250	56	2,180	57	95	42	122		
15				216	43	2,470	60	83	99	140		
16				202	51	2,400	64	66	151	175		
17				195	166	2,160	69	64	158	193		
18				186	2,240	1,950	66	70	158	192		
19				120	3,370	1,170	69	57	159	185		
20				107	3,180	669	76	51	124	189		
21				90	2,480	630	76	50	120	195		
22				90	2,500	715	67	50	131	193		
23				103	989	476	70	51	139	186		
24				102	1,520	263	69	55	137	179		
25				94	2,550	257	77	78	133	177		
26				94	2,070	186	80	117	125	174		
27				93	2,550	106	89	114	136	171		
28				111	2,240	74	87	102	143	169		
29				146	1,190	71	87	94	133	167		
30				138	833	91	93	103	135	155		
31				---	524	---	92	99	---	139		
<b>Total</b>				6,555	29,590	39,366	2,546	2,800	3,143	4,779		
<b>Mean</b>				218	955	1,312	82.1	90.3	105	154		
<b>Max</b>				744	3,370	3,040	119	128	159	195		
<b>Min</b>				90	27	71	57	50	41	119		
<b>Ac-ft</b>				13,000	58,690	78,080	5,050	5,550	6,230	9,480		

**STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 2004 AND SEASONS 2005 - 2006\***

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>Mean</b>	191	188	216	300	1,109	2,068	359	154	143	196	217	192
<b>Max</b>	314	291	473	1,125	4,123	8,558	2,165	383	422	519	596	456
<b>(WY)</b>	(1976)	(1976)	(1969)	(1969)	(1976)	(1975)	(1975)	(1972)	(1972)	(1972)	(1976)	(1976)
<b>Min</b>	119	96.3	104	77.6	72.1	109	44.3	48.8	49.3	89.0	120	99.8
<b>(WY)</b>	(2004)	(1977)	(1977)	(2004)	(2001)	(1977)	(2003)	(2000)	(1977)	(1978)	(1978)	(2004)

\* During periods of operation (April 1966 to September 1979, April 1997 to October 2004; April 2005 to current year, seasonal records only).

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SUMMARY STATISTICS

	2006 Season		Water Years 1966 – 2004*		Seasons 2005 – 2006*	
<b>Annual mean</b>			449			
<b>Highest annual mean</b>			1,177	1975		
<b>Lowest annual mean</b>			123	2001		
<b>Highest daily mean</b>	3,370	May 19	35,000	Jun 20, 1975	3,520	May 18, 2005
<b>Lowest daily mean</b>	27	May 9	19	Sep 29, 1977	27	May 9, 2006
<b>Annual seven-day minimum</b>			26	Sep 19, 1977		
<b>Maximum peak flow</b>	4,290	Jun 12	50,000	Jun 9, 1964	4,290	Jun 12, 2006
<b>Maximum peak stage</b>	5.97	Jun 12	<sup>b</sup> 13.70	Jun 9, 1964	5.97	Jun 12, 2006
<b>Instantaneous low flow</b>	<sup>a</sup> 23	May 10			<sup>a</sup> 23	May 10, 2006
<b>Annual runoff (ac-ft)</b>			325,400			
<b>10 percent exceeds</b>			811			
<b>50 percent exceeds</b>			179			
<b>90 percent exceeds</b>			80			

\* During periods of operation (April 1966 to September 1979, April 1997 to October 2004; April 2005 to current year, seasonal records only).

<sup>a</sup> Gage height, 0.67 ft.

<sup>b</sup> About, from floodmark.

