Water-Data Report 2006

06077500 SMITH RIVER NEAR EDEN, MT

Upper Missouri Basin
Smith Subbasin

LOCATION.--Lat 47°11′21″, long 111°23′08″ referenced to North American Datum of 1927, in NE ¼ NW ¼ NW ¼ sec.32, T.17 N., R.3 E., Cascade County, MT, Hydrologic Unit 10030103, on left bank 0.5 mi upstream from Clark Creek, 2.6 mi upstream from Hound Creek. 7.7 mi southwest of Eden, and at river mile 27.0.

DRAINAGE AREA.--1,594 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--April 1951 to September 1969, March 2006 to October 2006.

GAGE.--Water-stage recorder. Elevation of gage is 3,500 ft, referenced to the National Geodetic Vertical Datum of 1929. April 1951 to September 1969, water-stage recorder at present site at datum approximately 2.0 ft lower.

REMARKS.--Records are good except those for estimated daily discharges, which are poor. Flow is slightly regulated by Smith River Reservoir (station number 06075000) and Newlan Creek Reservoir. Diversions for irrigation of about 24,500 acres occur upstream from station. U.S. Geological Survey satellite telemeter is located at the station. Several observations of water temperature and specific conductance were made during the year.

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DISCHARGE, CUBIC FEET PER SECOND
CALENDAR YEAR JANUARY TO DECEMBER 2006
DAILY MEAN VALUES
[e, estimated]

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1			e240	186	874	659	306	97	74	99		
2			e220	225	910	609	291	98	77	96		
3			e200	204	867	578	290	101	79	95		
4			e160	187	787	564	288	96	75	98		
5			e130	206	717	575	297	94	70	102		
6			e150	331	678	582	284	88	68	101		
7			168	728	693	559	283	83	67	124		
8			178	679	728	602	282	81	66	165		
9			160	668	719	687	262	80	63	181		
10			141	706	690	1,090	242	80	65	154		
11			96	647	651	1,750	234	76	61	141		
12			116	573	637	1,590	237	73	57	135		
13			94	566	669	1,360	253	72	63	131		
14			99	628	726	1,220	250	75	66	127		
15			111	693	797	1,140	229	78	83	124		
16			117	794	900	1,070	205	75	103	132		
17			119	897	989	981	189	77	103	143		
18			115	839	1,030	858	172	86	110	145		
19			114	723	1,100	775	157	96	109	137		
20			101	641	1,140	710	151	83	106	172		
21			111	602	1,130	636	155	75	101	206		
22			123	641	1,100	563	149	71	128	195		
23			114	793	1,020	508	141	67	151	171		
24			117	806	932	467	141	64	139	158		
25			120	750	857	430	134	66	122	155		
26			161	703	786	400	122	68	113	150		
27			184	668	820	364	113	62	111	142		
28			158	643	987	329	103	61	107	139		
29			166	650	935	315	99	55	103	137		
30			176	745	847	303	96	54	101	e130		
31			177	---	749	---	95	63	---	e85		
Total			4,436	18,122	26,465	22,274	6,250	2,395	2,741	4,270		
Mean			143	604	854	742	202	77.3	91.4	138		
Max			240	897	1,140	1,750	306	101	151	206		
Min			94	186	637	303	95	54	57	85		
Ac-ft			8,800	35,940	52,490	44,180	12,400	4,750	5,440	8,470		

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 – 1969 AND SEASON 2006*

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Mean	99.4	137	177	403	950	1,168	365	154	151	167	150	110
Max	211	350	372	1,157	2,089	3,119	833	344	537	501	370	260
(WY)	(1969)	(1963)	(1968)	(1969)	(1964)	(1953)	(1965)	(1968)	(1965)	(1966)	(1966)	(1969)
Min	42.8	48.8	63.3	137	289	279	36.3	15.7	29.6	52.3	57.4	31.0
(WY)	(1955)	(1955)	(1955)	(1961)	(1961)	(1961)	(1961)	(1961)	(1961)	(1962)	(1962)	(1962)

* During periods of operation (April 1951 to September 1969; March 2006 to October 2006, seasonal records only).

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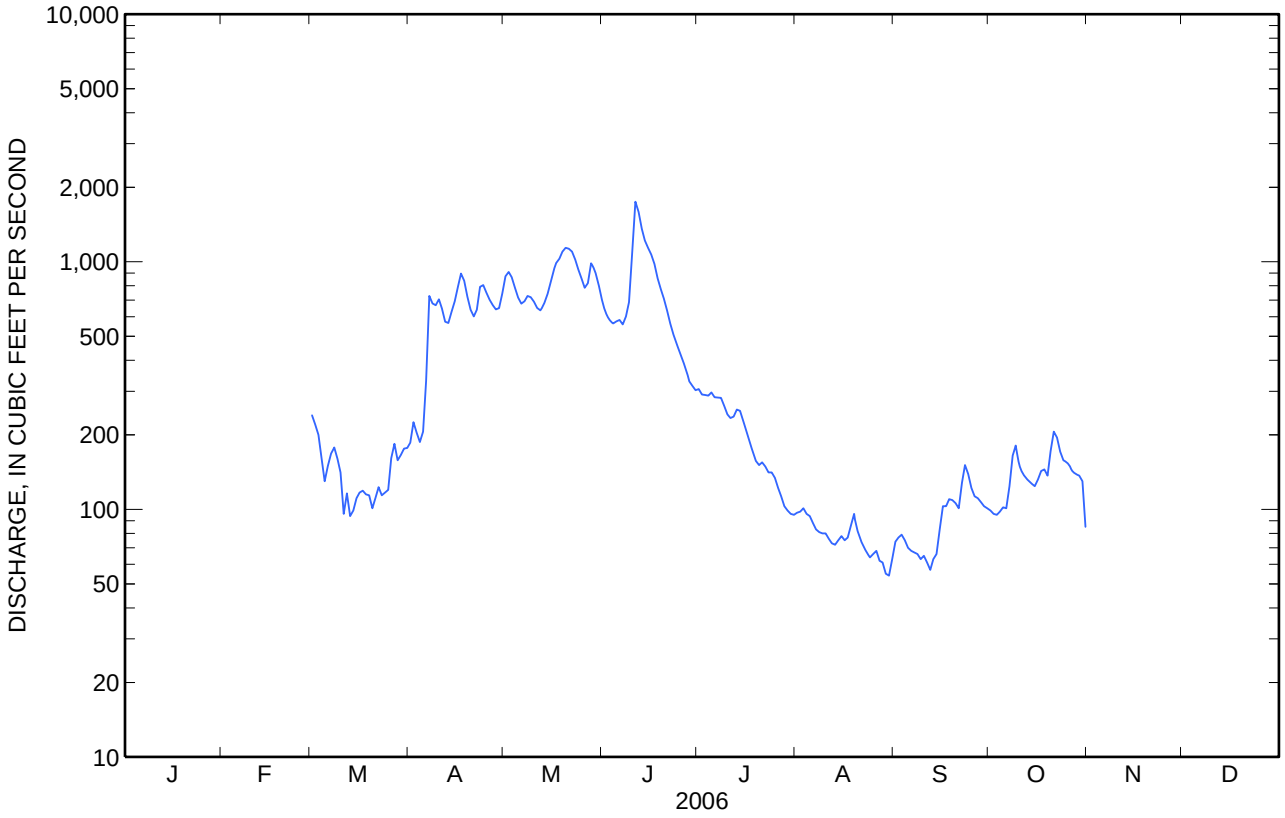
SUMMARY STATISTICS

	Season 2006		Water Years 1951 – 1969*	
Annual mean			338	
Highest annual mean			614	1965
Lowest annual mean			107	1961
Highest daily mean	1,750	Jun 11	10,500	Jun 4, 1953
Lowest daily mean	54	Aug 30	3.1	Sep 1, 1961
Annual seven-day minimum			4.2	Aug 26, 1961
Maximum peak flow	1,830	Jun 11	[b]12,300	Jun 4, 1953
Maximum peak stage	5.79	Jun 11	[c]12.50	Feb 4, 1963
Instantaneous low flow	[a]50	Mar 13	[d]3.1	Sep 1, 1961
Annual runoff (ac-ft)			245,100	
10 percent exceeds			796	
50 percent exceeds			157	
90 percent exceeds			60	

* During periods of operation (April 1951 to September 1969; March 2006 to October 2006, seasonal records only).

[a] Gage height, 2.63 ft.

[b] Gage height, 10.64 ft, from rating curve extended above 3,800 ft³/s on basis of slope-area measurement of peak flow.

[c] Backwater from ice.

[d] Observed, gage height, -0.17 ft, datum then in use, result of discharge measurement.