Water-Data Report 2007

06026500 JEFFERSON RIVER NEAR TWIN BRIDGES, MT

Missouri Headwaters Basin
Jefferson Subbasin

LOCATION.--Lat 45°36′45″, long 112°19′47″ referenced to North American Datum of 1927, in SE ¼ SE ¼ SW ¼ sec.34, T.2 S., R.6 W., Madison County, MT, Hydrologic Unit 10020005, on left bank 0.4 mi upstream from Hells Canyon Creek, 4.8 mi north of Twin Bridges, and at river mile 2,399.7.

DRAINAGE AREA.--7,632 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--August 1940 to September 1943, October 1957 to September 1972, May 1994 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 4,560 ft, referenced to the National Geodetic Vertical Datum of 1929. August 1940 to September 1943, nonrecording gage at site 500 ft downstream at different elevation. October 1957 to June 3, 1972, water-stage recorder at site 250 ft downstream and June 4 to September 30, 1972, nonrecording gage 6.5 mi downstream at different elevations.

REMARKS.--Records are good except those for estimated daily discharges, which are poor. Some regulation occurs by Clark Canyon, Lima and Ruby River Reservoirs. Diversion for irrigation of about 310,000 acres occurs upstream from station. U.S. Geological Survey satellite telemeter is located at the station. Several unpublished observations of specific conductance and water temperature were made during the year.

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	693	903	e800	810	e650	845	1,350	2,020	2,020	689	303	255
2	692	855	e850	895	e650	806	1,340	2,440	1,840	641	286	253
3	693	929	e900	963	e700	802	1,330	2,980	1,810	622	295	250
4	728	1,030	1,050	914	e750	846	1,260	3,720	1,820	584	297	250
5	766	1,060	1,050	853	e800	857	1,200	3,730	2,010	551	298	268
6	783	1,060	1,090	804	e850	891	1,180	3,340	2,800	503	336	318
7	1,020	1,040	1,060	786	e900	969	1,200	2,890	3,980	473	366	330
8	1,150	1,150	1,020	910	e900	1,050	1,230	2,450	4,200	513	352	304
9	1,120	1,590	978	929	e880	1,050	1,270	2,240	4,510	500	327	283
10	1,110	1,540	955	912	896	1,020	1,330	2,250	3,840	470	317	289
11	1,090	1,400	964	e750	878	1,030	1,320	2,450	3,380	452	312	313
12	1,030	1,300	971	e600	871	1,060	1,260	2,710	3,720	434	306	335
13	1,010	1,210	992	e550	828	1,150	1,170	2,920	3,530	427	307	344
14	980	1,170	1,010	e600	836	1,420	1,120	3,220	2,990	419	287	353
15	983	1,190	1,020	e620	860	1,660	1,110	3,140	2,590	437	256	390
16	1,050	1,090	904	e650	879	1,710	1,130	2,880	2,270	479	254	385
17	1,150	1,160	803	e650	855	2,000	1,150	2,680	2,080	476	262	374
18	1,070	1,110	704	e650	872	2,170	1,210	2,630	1,940	505	277	392
19	1,060	1,090	655	e700	874	2,520	1,360	2,630	1,720	543	313	416
20	1,070	1,050	684	e700	884	2,910	1,380	2,630	1,490	464	323	452
21	1,090	1,080	713	e700	888	2,440	1,330	2,780	1,380	413	326	488
22	1,100	1,170	793	e750	879	1,890	1,330	3,210	1,310	397	343	492
23	1,110	1,160	819	e750	915	1,670	1,360	3,370	1,190	383	344	539
24	1,090	1,070	812	e750	843	1,550	1,390	3,470	1,100	378	340	662
25	1,080	996	868	e800	861	1,520	1,340	3,470	1,050	393	336	761
26	1,060	920	914	e800	855	1,580	1,310	3,160	960	378	307	757
27	1,050	967	947	e800	843	1,690	1,340	2,740	865	382	289	762
28	1,030	940	934	e750	822	1,800	1,340	2,610	815	359	271	730
29	1,010	684	909	e750	---	1,710	1,380	2,980	752	339	273	759
30	1,020	610	807	e750	---	1,480	1,620	2,690	723	328	260	808
31	992	---	759	e700	---	1,380	---	2,320	---	319	244	---
Total	30,880	32,524	27,735	23,546	23,519	45,476	38,640	88,750	64,685	14,251	9,407	13,312
Mean	996	1,084	895	760	840	1,467	1,288	2,863	2,156	460	303	444
Max	1,150	1,590	1,090	963	915	2,910	1,620	3,730	4,510	689	366	808
Min	692	610	655	550	650	802	1,110	2,020	723	319	244	250
Ac-ft	61,250	64,510	55,010	46,700	46,650	90,200	76,640	176,000	128,300	28,270	18,660	26,400

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2007, BY WATER YEAR (WY) *

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	1,264	1,394	1,182	1,012	1,076	1,257	2,209	3,623	5,258	1,842	774	934
Max	2,052	2,025	1,864	1,424	1,690	2,092	4,634	7,025	9,816	4,477	1,700	2,114
(WY)	(1966)	(1966)	(1996)	(1996)	(1971)	(1972)	(1943)	(1997)	(1997)	(1995)	(1995)	(1965)
Min	632	775	708	506	627	622	756	1,303	1,296	460	208	288
(WY)	(2004)	(2004)	(2002)	(2004)	(2002)	(2002)	(2005)	(2004)	(1994)	(2007)	(1961)	(1994)

* During periods of operation (August 1940 to September 1943, October 1957 to September 1972, May 1994 to current year).

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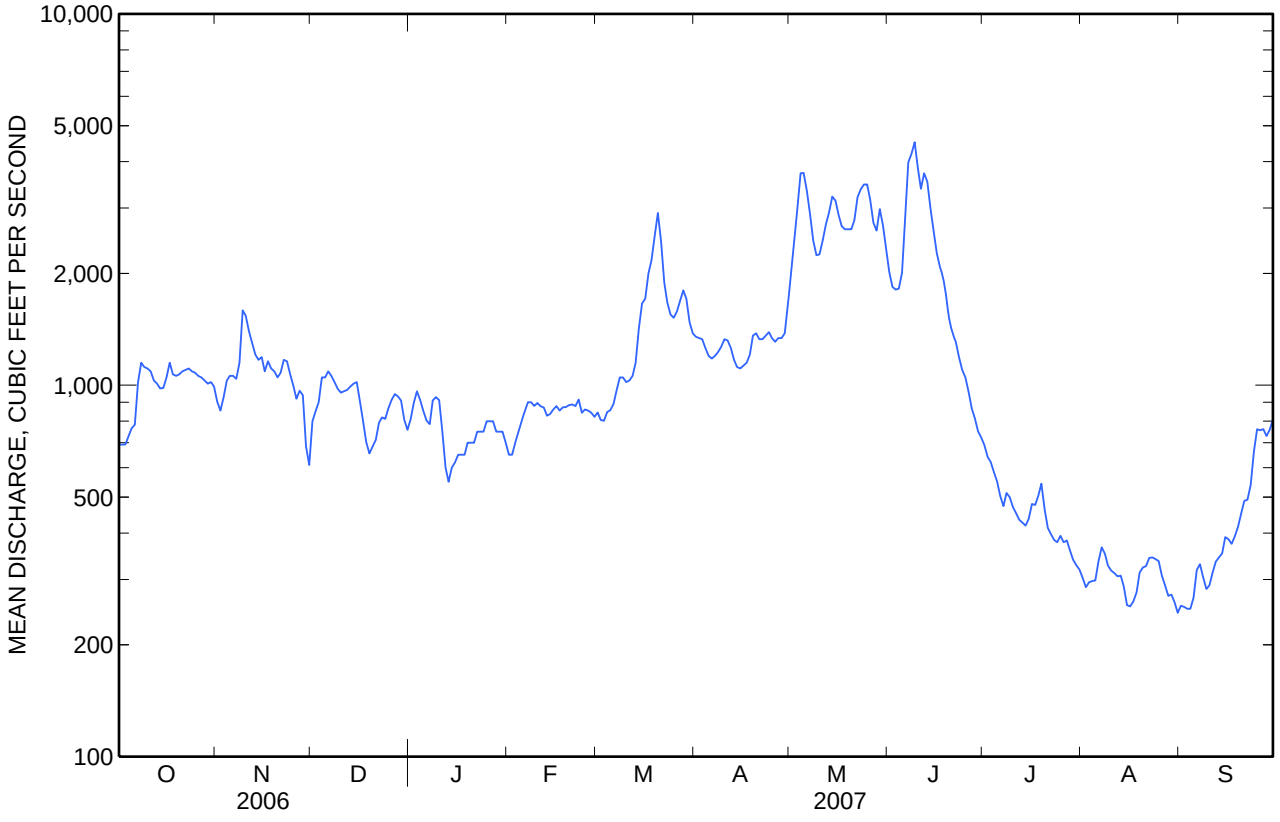
SUMMARY STATISTICS

	Calendar Year 2006		Water Year 2007		Water Years 1940 - 2007*	
Annual total	496,192		412,725			
Annual mean	1,359		1,131		1,841	
Highest annual mean					2,824	1997
Lowest annual mean					845	2004
Highest daily mean	7,940	Jun 11	4,510	Jun 9	14,900	Jun 9, 1997
Lowest daily mean	271	Aug 12	244	Aug 31	165	Aug 19, 1961
Annual seven-day minimum	290	Aug 10	254	Aug 30	176	Aug 16, 1961
Maximum peak flow			[a]4,610	Jun 9	[d]16,500	Jun 10, 1964
Maximum peak stage			[b]9.34	Jan 15	12.60	Jun 8, 1995
Instantaneous low flow			[c]240	Aug 31	[e]82	Aug 17, 1966
Annual runoff (ac-ft)	984,200		818,600		1,334,000	
10 percent exceeds	3,110		2,480		3,890	
50 percent exceeds	909		912		1,250	
90 percent exceeds	332		329		646	

* During periods of operation (August 1940 to September 1943, October 1957 to September 1972, May 1994 to current year).
[a] Gage height, 7.47 ft.
[b] Backwater from ice.
[c] Gage height, 2.96 ft.
[d] Gage height, 9.04 ft, site and datum then in use.
[e] Gage height, 1.61 ft, site and datum then in use.