

05242300 MISSISSIPPI RIVER AT BRAINERD, MN

LOCATION.--Lat 46°22'40", long 94°10'59", in SE¹/₄/SW¹/₄ sec. 18, T.45 N., R.30 W., Crow Wing County, Hydrologic Unit 07010104, on left bank in hydropower plant of Wausau Paper Corporation in Brainerd, 12.7 mi upstream from Crow Wing River, and at mile 1,003.7 upstream from Ohio River.

DRAINAGE AREA.--7,320 mi² (approximately).

PERIOD OF RECORD.--October 1987 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,146.96 ft above sea level (NGVD of 1929).

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow regulated by Winnibigoshish Lake, Leech Lake, Pokegama Lake, Sandy Lake, Pine River Reservoir at Cross Lake, and by hydropower plant in Brainerd.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	818	976	1,830	e1,710	e1,300	e1,370	3,630	3,290	3,370	1,780	927	634
2	781	958	1,830	e1,680	e1,310	e1,380	3,980	3,200	3,850	1,520	929	629
3	751	961	1,840	e1,640	e1,310	e1,370	4,470	2,930	4,340	1,430	935	627
4	811	1,070	1,830	e1,560	e1,300	e1,340	4,990	2,920	4,710	1,520	916	613
5	804	957	1,820	e1,450	e1,280	1,280	5,740	2,640	4,990	1,560	850	1,160
6	798	971	1,750	e1,500	e1,270	1,400	5,160	2,860	4,940	1,630	798	1,070
7	798	976	1,780	e1,570	e1,260	1,400	5,060	2,210	5,010	1,380	796	1,360
8	798	867	1,760	e1,580	e1,250	1,320	5,370	2,310	5,160	1,510	818	1,740
9	800	826	1,750	1,600	e1,240	1,290	5,340	1,980	4,840	1,470	798	2,070
10	791	1,020	1,680	1,540	e1,230	e1,290	5,330	1,960	4,680	1,380	793	2,360
11	799	1,230	1,590	1,510	e1,220	e1,280	5,330	1,790	4,470	1,840	842	2,310
12	799	1,390	e1,530	1,510	e1,210	e1,290	5,160	1,690	4,120	1,660	842	2,300
13	792	1,130	e1,500	1,520	e1,200	e1,320	5,170	1,690	3,990	1,840	842	2,300
14	795	1,190	1,470	1,510	e1,190	e1,360	4,920	1,720	3,850	2,250	854	2,470
15	814	1,530	1,540	1,410	e1,170	1,380	4,450	1,810	3,700	2,440	905	2,630
16	914	1,400	1,520	1,350	e1,170	1,320	4,450	2,040	3,450	2,460	856	2,640
17	1,100	1,410	1,550	1,350	e1,180	1,430	4,030	2,130	3,190	2,330	840	2,680
18	870	1,360	1,750	e1,370	e1,200	1,340	3,930	1,980	3,220	2,240	808	3,190
19	838	1,440	1,670	e1,390	e1,220	1,390	3,600	2,290	2,920	2,220	714	3,280
20	845	1,510	1,730	e1,400	e1,240	1,410	3,770	2,510	2,830	2,080	679	3,490
21	852	1,410	1,740	e1,390	e1,250	1,420	3,980	2,830	2,790	1,920	693	3,560
22	884	1,700	1,670	e1,380	e1,260	1,410	3,930	2,750	2,390	1,840	790	3,490
23	947	1,580	1,740	e1,380	e1,270	1,440	4,050	2,860	2,320	1,610	802	3,420
24	887	888	1,670	e1,370	e1,290	1,450	4,000	2,660	2,320	1,470	734	3,780
25	902	807	e1,690	e1,370	e1,300	1,670	3,890	2,840	2,040	1,560	629	3,870
26	872	1,270	1,700	e1,370	e1,330	1,670	3,870	2,600	1,900	1,300	614	4,030
27	900	1,470	1,750	e1,360	e1,350	1,800	3,770	2,790	1,830	1,020	621	4,240
28	932	1,730	1,780	e1,360	e1,360	2,230	3,510	2,690	1,750	1,330	626	4,120
29	957	1,660	1,770	e1,350	e1,370	2,720	3,570	2,920	1,540	1,030	630	4,110
30	956	1,750	1,730	e1,300	---	2,930	3,340	3,010	1,650	1,190	632	4,110
31	987	---	e1,720	e1,290	---	3,280	---	2,950	---	1,030	638	---
TOTAL	26,592	37,437	52,680	45,070	36,530	48,980	131,790	76,850	102,160	51,840	24,151	78,283
MEAN	858	1,248	1,699	1,454	1,260	1,580	4,393	2,479	3,405	1,672	779	2,609
MAX	1,100	1,750	1,840	1,710	1,370	3,280	5,740	3,290	5,160	2,460	935	4,240
MIN	751	807	1,470	1,290	1,170	1,280	3,340	1,690	1,540	1,020	614	613
AC-FT	52,750	74,260	104,500	89,400	72,460	97,150	261,400	152,400	202,600	102,800	47,900	155,300
CFSM	0.12	0.17	0.23	0.20	0.17	0.22	0.60	0.34	0.47	0.23	0.11	0.36
IN.	0.14	0.19	0.27	0.23	0.19	0.25	0.67	0.39	0.52	0.26	0.12	0.40

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 2004, BY WATER YEAR (WY)

MEAN	3,225	3,586	3,070	2,586	2,361	2,714	5,902	5,682	4,032	4,348	2,563	2,465
MAX	8,002	6,655	5,926	4,081	3,973	4,306	12,890	12,890	10,100	10,260	6,950	6,925
(WY)	(1996)	(2001)	(1997)	(1997)	(1997)	(2000)	(1997)	(2001)	(2001)	(1993)	(1999)	(1999)
MIN	858	1,248	1,362	1,140	1,040	1,385	2,184	1,928	662	442	779	831
(WY)	(2004)	(2004)	(1991)	(1991)	(1991)	(2003)	(2003)	(1988)	(1988)	(1988)	(2004)	(2003)

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SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1987 - 2004	
ANNUAL TOTAL	668,779		712,363			
ANNUAL MEAN	1,832		1,946		3,581	
HIGHEST ANNUAL MEAN					5,707	2001
LOWEST ANNUAL MEAN					1,946	2004
HIGHEST DAILY MEAN	5,150	Jul 13	5,740	Apr 5	17,400	Apr 28, 2001
LOWEST DAILY MEAN	614	Sep 10	613	Sep 4	348	Jul 30, 1988
ANNUAL SEVEN-DAY MINIMUM	670	Sep 4	627	Aug 25	357	Jul 29, 1988
MAXIMUM PEAK FLOW			6,020	Apr 5	17,500	Apr 30, 2001
MAXIMUM PEAK STAGE			8.88	Apr 5	16.70	Apr 30, 2001
INSTANTANEOUS LOW FLOW			a490	Aug 19	a273	Jul 12, 1988
ANNUAL RUNOFF (AC-FT)	1,327,000		1,413,000		2,594,000	
ANNUAL RUNOFF (CFSM)	0.250		0.266		0.489	
ANNUAL RUNOFF (INCHES)	3.40		3.62		6.65	
10 PERCENT EXCEEDS	3,270		3,930		6,570	
50 PERCENT EXCEEDS	1,650		1,520		3,030	
90 PERCENT EXCEEDS	820		813		1,350	

a Result of regulation.
e Estimated.

