

05242300 MISSISSIPPI RIVER AT BRAINERD, MN

LOCATION.--Lat 46°22'40", long 94°10'59", in SE¹/₄/SW¹/₄ sec. 18, T. 145 N., R.30 W., Crow Wing County, Hydrologic Unit 07010104, on left bank in hydropower plant of Potlach Corporation, Northwest Paper Division 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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,820	3,140	2,080	e2,300	e1,520	e1,250	1,820	2,360	2,820	3,730	2,050	734
2	1,840	3,020	e2,070	e2,300	e1,490	e1,240	2,090	2,270	2,650	3,580	2,100	735
3	1,860	2,900	e2,050	e2,290	e1,460	e1,240	1,870	1,940	2,530	4,730	2,270	734
4	2,260	2,860	e2,020	e2,290	e1,420	e1,230	1,660	2,000	2,410	4,830	2,170	733
5	2,100	2,930	e2,020	e2,280	e1,370	e1,230	1,800	1,960	2,340	4,410	2,080	687
6	2,510	2,920	e2,040	e2,280	e1,360	e1,220	2,080	1,800	2,160	4,350	2,110	739
7	2,790	2,860	e2,100	e2,280	e1,350	e1,210	1,840	1,980	1,970	4,200	2,080	669
8	3,100	2,820	e2,200	e2,280	e1,340	e1,200	1,860	1,980	2,090	4,090	1,880	633
9	3,180	2,820	e2,340	e2,290	e1,340	e1,200	1,890	2,170	1,790	3,980	1,810	618
10	3,340	2,880	2,420	e2,270	e1,340	e1,200	1,970	2,680	2,210	3,940	1,790	614
11	3,640	2,860	2,510	e2,250	e1,340	e1,200	2,020	3,030	2,070	4,350	1,760	756
12	3,860	2,810	2,420	e2,230	e1,340	e1,200	1,520	2,950	2,080	4,790	1,610	899
13	3,960	2,890	2,480	e2,200	e1,340	e1,210	1,590	3,360	2,220	5,150	1,640	860
14	4,000	2,870	2,610	e2,140	e1,340	e1,230	1,760	3,280	2,000	5,100	1,510	850
15	4,090	2,850	2,450	e2,060	e1,340	1,240	1,570	3,290	2,030	5,030	1,450	789
16	4,020	2,570	2,520	e1,820	e1,340	1,470	1,970	3,270	1,920	4,800	1,540	976
17	4,090	2,930	2,550	e1,780	e1,330	1,340	1,530	2,970	1,920	4,600	1,280	1,010
18	3,780	2,650	2,340	e1,750	e1,330	1,450	1,820	3,110	1,780	4,260	1,100	1,100
19	3,760	2,840	2,420	e1,710	e1,330	1,270	1,860	3,470	1,650	3,830	1,070	883
20	3,660	2,980	2,450	e1,700	e1,320	1,450	2,340	3,300	1,730	3,660	1,020	975
21	3,650	2,830	2,420	e1,680	e1,320	1,430	2,670	3,470	1,670	3,410	801	929
22	3,520	2,780	2,440	e1,670	e1,310	1,370	3,170	3,620	1,620	3,260	763	937
23	3,480	2,560	e2,440	e1,650	e1,310	1,610	3,200	3,830	2,220	3,050	931	941
24	3,310	2,600	e2,440	e1,640	e1,300	1,490	3,270	3,910	2,110	2,870	898	936
25	3,300	2,480	e2,410	e1,610	e1,280	1,630	3,150	3,870	2,510	2,780	794	932
26	3,110	2,330	e2,370	e1,580	e1,270	1,710	2,780	3,750	2,620	2,540	742	901
27	3,090	1,690	e2,330	e1,570	e1,270	1,610	2,760	3,570	3,130	2,460	830	874
28	3,180	1,870	e2,310	e1,570	e1,260	1,690	2,720	3,440	3,220	2,360	821	838
29	3,270	2,010	e2,300	e1,570	---	1,560	2,570	3,250	3,620	2,240	819	819
30	3,150	2,210	e2,300	e1,560	---	1,770	2,360	3,260	3,810	2,190	788	825
31	3,020	---	e2,300	e1,540	---	1,800	---	2,850	---	2,180	737	---
TOTAL	99,740	80,760	72,150	60,140	37,660	42,950	65,510	91,990	68,900	116,750	43,244	24,926
MEAN	3,217	2,692	2,327	1,940	1,345	1,385	2,184	2,967	2,297	3,766	1,395	831
MAX	4,090	3,140	2,610	2,300	1,520	1,800	3,270	3,910	3,810	5,150	2,270	1,100
MIN	1,820	1,690	2,020	1,540	1,260	1,200	1,520	1,800	1,620	2,180	737	614
AC-FT	197,800	160,200	143,100	119,300	74,700	85,190	129,900	182,500	136,700	231,600	85,770	49,440
CFSM	0.44	0.37	0.32	0.27	0.18	0.19	0.30	0.41	0.31	0.51	0.19	0.11
IN.	0.51	0.41	0.37	0.31	0.19	0.22	0.33	0.47	0.35	0.59	0.22	0.13

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 2003, BY WATER YEAR (WY)

MEAN	3,373	3,732	3,155	2,656	2,432	2,785	5,996	5,870	4,069	4,506	2,668	2,457
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	1,840	1,931	1,362	1,140	1,040	1,385	2,184	1,928	662	442	935	831
(WY)	(1992)	(1993)	(1991)	(1991)	(1991)	(2003)	(2003)	(1988)	(1988)	(1988)	(1990)	(2003)

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SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1987 - 2003	
ANNUAL TOTAL	1,170,490		804,720			
ANNUAL MEAN	3,207		2,205		3,683	
HIGHEST ANNUAL MEAN					5,707 2001	
LOWEST ANNUAL MEAN					1,950 1988	
HIGHEST DAILY MEAN	9,950	Jul 13	5,150	Jul 13	17,400	Apr 28, 2001
LOWEST DAILY MEAN	1,190	Jun 18	614	Sep 10	348	Jul 30, 1988
ANNUAL SEVEN-DAY MINIMUM	1,340	Jun 15	670	Sep 4	357	Jul 29, 1988
MAXIMUM PEAK FLOW			5,300	Jul 14	17,500	Apr 30, 2001
MAXIMUM PEAK STAGE			8.32	Jul 14	16.70	Apr 30, 2001
INSTANTANEOUS LOW FLOW			a462	Sep 18	273	Jul 12, 1988
ANNUAL RUNOFF (AC-FT)	2,322,000		1,596,000		2,668,000	
ANNUAL RUNOFF (CFSM)	0.44		0.30		0.50	
ANNUAL RUNOFF (INCHES)	5.95		4.09		6.84	
10 PERCENT EXCEEDS	5,590		3,620		6,810	
50 PERCENT EXCEEDS	2,670		2,090		3,100	
90 PERCENT EXCEEDS	1,800		939		1,460	

a Result of regulation.
 e Estimated.

