

UPPER MISSISSIPPI RIVER MAIN STEM

05242300 MISSISSIPPI RIVER AT BRAINERD, MN

LOCATION.--Lat 4622'40", long 9410'59", in SE 1 / 4 / SW 1 / 4 sec. 18, T. 145 N., R.30 W., Crow Wing County, Hydrologic Unit 07010104, on left bank in hydro-plant of Potlach Corporation, Northwest Paper Division in Brainerd, 12.7 mi upstream from Crow Wing River, and at mile 1003.7 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 mean sea level.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow regulated by Winnibigoshish Lake (sta. 05201000), Leech Lake (sta. 05206000), Pokegama Lake (sta. 05210500), Sandy Lake (sta. 05218500), Pine River Reservoir at Cross Lake (sta. 05230500), and by hydro-plant in Brainerd.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3030	4060	4350	2740	e2500	4870	2950	2540	2610	7490	2460	1020
2	3140	4020	4500	2880	e2500	5110	3240	2570	2740	7000	2270	1110
3	3240	4200	4440	2900	e2500	5420	3650	2320	2730	6510	2290	1050
4	3090	4170	4240	2850	e2500	5150	4010	2260	3290	6200	2090	896
5	3110	4180	4230	2750	e2500	5130	4100	2100	3490	5970	2020	1130
6	3110	4180	4180	2990	e2500	5050	4190	1950	3780	5690	2020	1060
7	3130	4200	4180	2950	e2500	4800	4410	1810	3670	5720	1920	834
8	3020	4400	4150	2940	e2550	4570	4750	1740	3350	5580	2020	954
9	2960	4430	4140	e2900	e2550	3680	5360	1780	3220	5340	1910	1140
10	3150	4420	4160	e2800	e2600	3150	5890	1580	2860	5100	1920	866
11	3010	4370	4150	e2700	e2600	2720	6170	1740	3280	4700	1910	893
12	3380	4290	4180	e2600	e2600	3000	6320	1740	3470	4400	1770	996
13	3400	4410	4370	e2500	e2650	2980	6570	1470	3850	4230	1720	1080

14	3750	4380	4260	e2400	e2650	2620	6410	1590	4200	4130	1680	884
15	4120	4120	4220	e2300	e2700	2860	6480	1770	4730	4080	1270	859
16	4250	3580	4130	e2300	e2750	2520	6180	2240	5030	4100	1430	890
17	4680	3370	4260	e2300	e2800	2530	5810	2680	5130	4150	1370	1400
18	4640	3520	4350	e2300	2880	2410	5750	2720	e5300	4130	1050	1420
19	4570	3500	4260	e2350	2960	2360	5430	2790	e6000	3900	1150	1430
20	4520	3760	4150	e2350	2970	2410	5140	2730	e6900	3660	1060	1300
21	4730	3820	4050	e2350	3090	2410	4970	2890	e7500	3630	1060	1180
22	4580	3320	3800	e2400	3270	2390	4670	2870	e7900	3560	1040	1190
23	4570	3670	3730	e2400	3390	2080	4440	3090	7940	3410	1310	1060
24	4510	3290	3380	e2400	3560	2040	4240	3150	7950	3400	1160	971
25	4270	3140	3450	e2450	3690	1970	3970	3120	8090	3060	1160	1040
26	4440	3770	3350	e2450	3930	1950	3710	2750	7990	2800	1240	1340
27	4320	4050	3250	e2500	4250	2000	3410	2630	8180	2920	1150	892
28	4320	4010	3210	e2500	4360	2000	3340	2550	8210	2890	1140	945
29	4220	4110	3160	e2500	---	2170	3020	2440	8150	2670	1140	1160
30	4140	4350	2990	e2500	---	2220	2850	2720	7970	2830	1140	1020
31	4100	---	2730	e2500	---	2630	---	2440	---	2490	1070	---
TOTAL	119500	119090	122000	79750	82300	97200	141430	72770	159510	135740	47940	32010
MEAN	3855	3970	3935	2573	2939	3135	4714	2347	5317	4379	1546	1067
MAX	4730	4430	4500	2990	4360	5420	6570	3150	8210	7490	2460	1430
MIN	2960	3140	2730	2300	2500	1950	2850	1470	2610	2490	1040	834
AC-FT	237000	236200	242000	158200	163200	192800	280500	144300	316400	269200	95090	63490
CFSM	.53	.54	.54	.35	.40	.43	.64	.32	.73	.60	.21	.15
IN.	.61	.61	.62	.41	.42	.49	.72	.37	.81	.69	.24	.16

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3271	3427	3002	2528	2392	2810	6125	5534	3789	4367	2378	2310
MAX	8002	5854	5926	4081	3973	3918	12890	10770	6193	10260	5071	3681
(WY)	1996	1997	1997	1997	1997	1995	1997	1996	1990	1993	1993	1993
MIN	1840	1931	1362	1140	1040	1435	3400	1928	662	442	935	1067
(WY)	1992	1993	1991	1991	1991	1991	1990	1988	1988	1988	1990	1998

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1987 - 1998		
ANNUAL TOTAL	1900960		1209240				
ANNUAL MEAN	5208		3313		3543		
HIGHEST ANNUAL MEAN					5438		1997
LOWEST ANNUAL MEAN					1950		1988
HIGHEST DAILY MEAN	15200	Apr 9	8210	Jun 28	15200	Apr 9	1997
LOWEST DAILY MEAN	350	Aug 29	834	Sep 7	348	Jul 30	1988
ANNUAL SEVEN-DAY MINIMUM	2690	Aug 29	924	Sep 10	357	Jul 29	1988
INSTANTANEOUS PEAK FLOW			8380	Jun 27	15400	Apr 10	1997
INSTANTANEOUS PEAK STAGE			10.73	Jun 27	16.03	Apr 10	1997
INSTANTANEOUS LOW FLOW			630	Sep 26	273	Jul 12	1988
ANNUAL RUNOFF (AC-FT)	3771000		2399000		2567000		
ANNUAL RUNOFF (CFSM)	.71		.45		.48		
ANNUAL RUNOFF (INCHES)	9.66		6.15		6.58		
10 PERCENT EXCEEDS	8950		5130		6400		
50 PERCENT EXCEEDS	4100		3090		3000		
90 PERCENT EXCEEDS	3060		1190		1340		

