

UPPER MISSISSIPPI RIVER MAIN STEM--Continued

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 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 sea level.

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 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1020	5090	4920	e2700	e2580	e2100	2950	4710	9040	3670	7060	7390
2	1070	5170	4950	e2700	e2560	e2170	3330	4370	8590	3740	6810	7130
3	1130	5000	5030	e2700	e2530	e2260	3410	4190	8090	3730	6930	7070
4	1100	5010	5060	e2700	e2500	e2360	3800	4070	7670	3820	6750	e7200
5	1210	4990	5080	e2700	e2500	e2480	4310	4130	7940	3980	6430	e7300
6	1210	4820	5140	e2710	e2500	e2560	4890	4100	7470	3920	6040	e7400
7	1220	4860	5190	e2720	e2500	e2630	5600	4260	7490	4080	5950	7460
8	1340	4660	5300	e2720	e2510	e2700	6510	4590	7480	4250	5700	7460
9	1420	4680	5150	e2720	e2520	e2750	7410	5230	6990	4470	5690	7490
10	1670	4780	5090	e2720	e2530	e2800	7930	5910	6930	4770	5550	7660
11	1660	4520	4990	e2730	e2540	e2830	8150	6850	6400	5080	5560	7650
12	1640	4560	4940	e2740	e2570	e2860	8350	8570	6060	5360	5750	7660
13	1710	4290	5320	e2760	e2600	e2870	8730	10600	5770	5860	6080	7700
14	1720	4320	5150	e2770	e2610	e2900	8950	11700	5340	6280	7110	7970
15	1650	4340	5170	e2780	e2620	e2930	8970	11900	5280	6450	7320	7820
16	1880	4350	5060	e2790	e2640	e2970	8940	12500	5090	7490	7370	7760
17	2020	4380	4520	e2800	e2660	e3020	8940	12800	4820	7830	7340	7450
18	2440	4430	3970	e2810	e2650	3170	8900	12900	4610	8260	7300	7290
19	2980	4400	3710	e2820	e2640	3160	8760	12700	4570	8480	7290	6900
20	3730	4480	2960	e2830	e2600	3220	8620	12500	4260	8530	7560	6550
21	3960	4430	2560	e2830	e2550	3120	8420	12100	4200	8540	7570	6310
22	4440	4360	2640	e2840	e2480	3090	8110	11700	4160	8370	7480	6040
23	4560	4470	e2700	e2850	e2410	3030	7700	11700	4020	8380	7880	5730
24	4880	4730	e2700	e2860	e2320	2900	7320	11500	4030	8110	7900	5420
25	5080	4830	e2700	e2840	e2200	2810	6990	11500	4030	7770	7740	5250
26	5090	4880	e2700	e2800	e2130	2770	6590	11300	4030	7670	7710	5480
27	5330	4920	e2700	e2760	e2080	2740	6210	11000	4030	7440	7600	5730
28	5200	4910	e2700	e2740	e2080	2800	5880	10700	3860	7460	7440	6090
29	5270	4900	e2700	e2710	---	2870	5380	10300	3820	7390	7490	6580
30	5260	4910	e2700	e2660	---	2870	5050	9840	3750	7580	7560	6810
31	5230	---	e2700	e2620	---	2900	---	9420	---	7350	7490	---
TOTAL	88120	140470	126200	85430	69610	86640	205100	279640	169820	196110	215450	207750
MEAN	2843	4682	4071	2756	2486	2795	6837	9021	5661	6326	6950	6925
MAX	5330	5170	5320	2860	2660	3220	8970	12900	9040	8540	7900	7970
MIN	1020	4290	2560	2620	2080	2100	2950	4070	3750	3670	5550	5250
AC-FT	174800	278600	250300	169500	138100	171900	406800	554700	336800	389000	427300	412100
CFSM	.39	.64	.56	.38	.34	.38	.93	1.23	.77	.86	.95	.95
IN.	.45	.71	.64	.43	.35	.44	1.04	1.42	.86	1.00	1.09	1.06

e Estimated

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STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3236	3532	3091	2547	2399	2809	6180	5802	3933	4518	2729	2665
MAX	8002	5854	5926	4081	3973	3918	12890	10770	6193	10260	6950	6925
(WY)	1996	1997	1997	1997	1997	1995	1997	1996	1990	1993	1999	1999
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 1998 CALENDAR YEAR	FOR 1999 WATER YEAR	WATER YEARS 1987 - 1999
ANNUAL TOTAL	1203440	1870340	
ANNUAL MEAN	3297	5124	3674
HIGHEST ANNUAL MEAN			5438
LOWEST ANNUAL MEAN			1950
HIGHEST DAILY MEAN	8210	Jun 28	15200
LOWEST DAILY MEAN	834	Sep 7	348
ANNUAL SEVEN-DAY MINIMUM	924	Sep 10	357
INSTANTANEOUS PEAK FLOW			15400
INSTANTANEOUS PEAK STAGE			14.52
INSTANTANEOUS LOW FLOW			968
ANNUAL RUNOFF (AC-FT)	2387000	3710000	2662000
ANNUAL RUNOFF (CFSM)	.45	.70	.50
ANNUAL RUNOFF (INCHES)	6.12	9.51	6.82
10 PERCENT EXCEEDS	5300	8360	6940
50 PERCENT EXCEEDS	2850	4820	3050
90 PERCENT EXCEEDS	1160	2530	1370

