

## UPPER MISSISSIPPI RIVER MAIN STEM--Continued

05270700 MISSISSIPPI RIVER AT ST. CLOUD, MN

LOCATION.--Lat 45°32'50", long 94°08'44", in SE<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub> sec. 1, T. 35 N., R. 31 W., Sherburne County, Hydrologic Unit 07010203, on left bank about 250 ft below the left downstream end of the City of St. Cloud hydropower dam and at mile 926.3 upstream from Ohio River.

DRAINAGE AREA.--13,320 mi<sup>2</sup> (approximately).

PERIOD OF RECORD.--October 1988 to current year.

GAGE.--Water-stage recorder. Datum of gage is 958.49 ft above sea level.

REMARKS.--Records good except those for estimated daily discharge, which are fair. Flow partly regulated by power plants and reservoirs.

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	2490	8700	8300	e4800	e4200	4440	10000	9220	15700	7670	9940	10100
2	2090	8370	8770	e4700	e4200	4740	10000	8840	14700	8110	9380	10000
3	2310	8310	8570	e4650	e4150	4880	11200	8300	14700	8040	9000	9390
4	2420	7620	8470	e4600	e4150	4600	11200	8530	14200	7800	9110	9580
5	2780	7750	8940	e4550	e4150	5000	11900	8710	13800	7750	9080	9820
6	2450	7630	8760	e4500	e4150	5240	13400	8750	13600	7750	8640	10300
7	2970	7370	8860	e4450	e4150	4860	14800	9710	14400	7290	8280	10900
8	2530	7070	8630	e4400	e4150	4930	16100	10700	14700	7590	7700	10700
9	3180	7150	8380	e4400	e4100	5070	17100	11400	13600	7920	7680	10900
10	2880	7430	8150	e4350	e4100	4830	17900	13500	13100	7830	7670	11200
11	3310	7630	8080	e4300	e4100	5140	18600	16400	13000	8620	7400	10800
12	3410	7030	8310	e4250	e4100	4840	18200	19200	12200	8680	7950	11100
13	3050	7470	7780	e4200	e4100	4980	17800	22900	11700	8820	9250	11200
14	3330	6930	8190	e4200	e4100	4910	18200	25900	10800	9300	9030	11100
15	3500	6980	7990	e4200	e4100	5010	18300	29000	10400	9200	10200	11400
16	3410	7630	8120	e4150	e4100	5150	17400	31500	10200	9860	10800	11200
17	4880	7020	7360	e4150	e4150	5710	16200	32700	9330	10800	10800	10900
18	5640	e7100	6480	e4100	e4150	5990	16600	32400	8800	11600	11100	10300
19	6430	e7050	5040	e4100	e4150	6060	15600	31300	8710	12100	10600	10200
20	7120	e7140	4020	e4100	e4150	6340	15600	29800	8390	12200	10400	9150
21	9440	e7210	e3550	e4100	e4150	6540	15300	28000	7830	12400	11100	8920
22	9130	e7080	e4000	e4100	e4150	7080	14800	26100	7930	12400	11100	8880
23	9680	7400	e4350	e4100	e4150	7080	14100	24600	8160	12600	10700	8280
24	10300	7850	e4600	e4100	e4150	7390	13500	23300	8270	12100	11000	7850
25	10100	8550	e4800	e4100	e4200	7570	12900	22400	8150	11700	11200	7600
26	9730	8040	e4950	e4100	e4200	7430	12100	21700	8760	11700	10600	7460
27	9560	8050	e5000	e4100	e4250	7260	12000	20800	8470	11200	10800	8000
28	9390	8260	e5000	e4150	e4300	7960	10600	19300	8340	10500	10500	8290
29	9040	8230	e4950	e4150	---	8090	10400	18500	7910	10800	9550	8440
30	8980	8420	e4900	e4200	---	8780	9790	17200	8020	10200	9940	8930
31	8430	---	e4850	e4200	---	9200	---	16800	---	10900	9810	---
TOTAL	173960	228470	208150	132550	116250	187100	431590	607460	327870	305430	300310	292890
MEAN	5612	7616	6715	4276	4152	6035	14390	19600	10930	9853	9687	9763
MAX	10300	8700	8940	4800	4300	9200	18600	32700	15700	12600	11200	11400
MIN	2090	6930	3550	4100	4100	4440	9790	8300	7830	7290	7400	7460
AC-FT	345000	453200	412900	262900	230600	371100	856100	1205000	650300	605800	595700	580900
CFSM	.42	.57	.50	.32	.31	.45	1.08	1.47	.82	.74	.73	.73
IN.	.49	.64	.58	.37	.32	.52	1.21	1.70	.92	.85	.84	.82

e Estimated

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STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	5739	5736	4725	3978	3946	6637	13700	11800	7884	8467	5070	5006
MAX	15680	9675	7434	5616	5796	10600	29600	19600	12730	16830	9687	9763
(WY)	1996	1996	1997	1997	1997	1995	1997	1999	1993	1993	1999	1999
MIN	3106	2953	2310	1927	1815	3860	6576	5653	3743	3930	1535	2297
(WY)	1993	1989	1991	1991	1990	1989	1990	1998	1992	1989	1989	1990

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR	FOR 1999 WATER YEAR	WATER YEARS 1988 - 1999
ANNUAL TOTAL	2302180	3312030	
ANNUAL MEAN	6307	9074	6883
HIGHEST ANNUAL MEAN			9167 1997
LOWEST ANNUAL MEAN			4615 1990
HIGHEST DAILY MEAN	16200	Jun 29	32700 May 17 45100 Apr 9 1997
LOWEST DAILY MEAN	1840	Sep 9	2090 Oct 2 1010 Aug 24 1989
ANNUAL SEVEN-DAY MINIMUM	2110	Sep 8	2500 Oct 1 1250 Aug 13 1989
INSTANTANEOUS PEAK FLOW			33800 May 17 46900 Apr 8 1997
INSTANTANEOUS PEAK STAGE			9.38 May 17 11.44 Apr 8 1997
INSTANTANEOUS LOW FLOW			779 <sup>a</sup> Mar 17 484 <sup>a</sup> Oct 18 1992
ANNUAL RUNOFF (AC-FT)	4566000	6569000	4986000
ANNUAL RUNOFF (CFSM)	.47	.68	.52
ANNUAL RUNOFF (INCHES)	6.43	9.25	7.02
10 PERCENT EXCEEDS	10400	15000	12900
50 PERCENT EXCEEDS	5730	8290	5640
90 PERCENT EXCEEDS	2650	4100	2610

a Result of regulation.

