

# UPPER MISSISSIPPI RIVER MAIN STEM

## 05331580 MISSISSIPPI RIVER BELOW LOCK AND DAM 2, AT HASTINGS, MN

LOCATION.--Lat 4444'48", long 9251'08", SE 1 / 4 SE 1 / 4 sec. 21, T.115 N., R.17 W., Dakota County, Hydrologic Unit 07010206, near bridge on U.S. Highway 61 in Hastings, 1.2 mi downstream from Lock and Dam 2, 2.5 mi upstream from St. Croix River, and at mile 813.8 upstream from Ohio River.

DRAINAGE AREA.--37,050 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1996 to current year.

REMARKS.-- Records considered fair. Water-discharge computed on the basis of routed discharge for Mississippi River at St. Paul (station 05331000) adjusted for inflow and travel time.

### 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
1	9000	10800	11000	9060	7470	26900	30200	25600	18200	41500	11600
2	9520	11100	10800	7500	7590	27900	34300	24800	18700	41600	11700
3	9090	10500	10900	7310	7470	28000	37200	23600	18200	41200	11300
4	8930	10500	11000	7420	7470	28000	40800	22600	17500	40400	10800
5	8940	11800	11300	8030	7250	28500	45600	21600	17700	38600	10700
6	8630	11100	11000	7030	7370	28800	50300	20600	17300	36300	11200
7	8490	11100	10500	7640	7420	27700	53400	19300	16900	34000	9640
8	8330	11000	10100	7520	7260	27200	55200	18100	17000	31300	7970
9	8500	10800	10200	7340	7320	27200	56000	16900	16300	29100	9250
10	7910	10900	10300	7880	7380	25400	56100	17900	15900	27900	9380
11	8770	11300	10200	8030	7360	24200	55400	17700	15500	25900	8770
12	8010	11300	10300	7440	7410	20800	54500	17000	14400	24400	8560
13	7740	11300	10500	6260	7240	18900	53500	16500	13900	23200	8210

14	8160	11300	9830	6860	7100	17600	51700	16600	13800	21700	8140	5
15	8840	11300	9710	6940	7340	16200	50000	16400	15100	20100	7590	4
16	9760	10900	10000	7080	7020	16000	47800	16200	15700	19100	7420	4
17	10300	10900	10400	7420	7200	17000	45900	15600	16100	19700	7010	4
18	11100	9870	10300	7630	7590	17400	44400	17400	16900	19500	6790	4
19	11700	9150	10200	7700	7870	17200	42800	19500	18000	19100	6520	4
20	12000	9360	10000	7630	8350	16400	41400	21600	17500	18600	6240	4
21	12200	8980	10100	7500	9230	16100	40200	23700	18900	18800	6190	4
22	13300	9340	10100	7570	10100	15300	38700	23600	21200	18700	6090	5
23	11600	9860	9090	7680	13000	14700	37600	22700	23700	18200	6570	4
24	11700	10200	9270	7680	15000	14300	36800	20800	25600	17800	6930	4
25	12400	9560	9570	7580	17500	14700	34800	20200	28500	17300	6520	4
26	12100	9030	9470	7530	20200	14200	33400	18900	30000	16200	6900	4
27	11800	9140	8480	7540	22600	13800	31700	18700	31000	15700	7010	4
28	11900	9260	8610	7540	25100	14000	30200	18500	37500	14900	6970	4
29	11500	10200	8380	7530	---	14500	28700	19000	39000	14100	6570	4
30	11300	10200	8270	7410	---	18100	27200	19100	40700	13400	6620	4
31	9500	---	8180	7490	---	24100	---	18900	---	12600	6590	-
TOTAL	313020	312050	308060	232770	281210	631100	1285800	609600	626700	750900	251750	1
MEAN	10100	10400	9937	7509	10040	20360	42860	19660	20890	24220	8121	5
MAX	13300	11800	11300	9060	25100	28800	56100	25600	40700	41600	11700	6
MIN	7740	8980	8180	6260	7020	13800	27200	15600	13800	12600	6090	4
AC-FT	620900	619000	611000	461700	557800	1252000	2550000	1209000	1243000	1489000	499300	3
CFSM	.27	.28	.27	.20	.27	.55	1.16	.53	.56	.65	.22	.
IN.	.31	.31	.31	.23	.28	.63	1.29	.61	.63	.75	.25	.

**STATISTICS OF MONTHLY MEAN DATA FOR  
WATER YEARS 1996 - 1998, BY WATER YEAR  
(WY)**

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
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MEAN	14160	16520	11850	8808	9134	18660	60040	32650	23080	25870	13710	7439
MAX	25600	24960	13290	9657	10040	20360	93250	40160	32250	36910	23560	11110
(WY)	1996	1996	1997	1996	1998	1998	1997	1996	1996	1997	1997	1997
MIN	6771	10400	9937	7509	8476	15360	42860	19660	16100	16490	8121	5247
(WY)	1997	1998	1998	1998	1996	1996	1998	1998	1997	1996	1998	1998

<b>SUMMARY STATISTICS</b>	<b>FOR 1997 CALENDAR YEAR</b>		<b>FOR 1998 WATER YEAR</b>		<b>WATER YEARS 1996 - 1998</b>		
ANNUAL TOTAL	8767510		5760380				
ANNUAL MEAN	24020		15780		20170		
HIGHEST ANNUAL MEAN					24330		1997
LOWEST ANNUAL MEAN					15780		1998
HIGHEST DAILY MEAN	138000	Apr 13	56100	Apr 10	138000	Apr 13	1997
LOWEST DAILY MEAN	7220	Jan 14	4210	Sep 29	4210	Sep 29	1998
ANNUAL SEVEN-DAY MINIMUM	7950	Jan 11	4520	Sep 23	4520	Sep 23	1998
ANNUAL RUNOFF (AC-FT)	17390000		11430000		14610000		
ANNUAL RUNOFF (CFSM)	.65		.43		.54		
ANNUAL RUNOFF (INCHES)	8.79		5.78		7.39		
10 PERCENT EXCEEDS	48700		31500		40700		
50 PERCENT EXCEEDS	11800		11100		13800		
90 PERCENT EXCEEDS	8840		6570		7340		

