

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

LOCATION.--Lat 44°44'48", long 92°51'08", SE $\frac{1}{4}$ SE $\frac{1}{4}$  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 fair to poor. Water-discharge computed on the basis of routed discharge for Mississippi River at St. Paul (station 05331000) adjusted for inflow (including metropolitan wastewater treatment plant) and travel time.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3,930	4,010	4,300	4,500	3,070	3,820	16,300	11,300	30,000	18,100	8,410	5,460
2	3,950	4,300	4,540	4,250	3,150	4,020	16,900	10,900	33,200	16,400	8,350	5,350
3	3,590	4,570	4,860	3,880	3,350	4,200	16,900	10,300	34,700	15,200	7,790	5,570
4	3,790	4,580	4,910	4,090	3,290	4,440	16,900	9,970	36,000	14,300	7,420	5,390
5	3,620	4,300	4,860	4,190	3,060	4,520	17,000	9,520	37,500	14,100	7,960	4,860
6	3,690	4,670	4,920	3,880	3,230	4,750	16,000	9,300	39,100	13,600	7,760	4,740
7	3,600	4,640	4,750	3,580	3,430	4,910	15,200	8,920	41,200	14,400	7,820	5,240
8	3,430	4,870	5,120	3,310	3,530	4,980	15,300	8,660	41,900	14,500	8,200	5,760
9	3,490	4,450	4,890	3,450	3,510	5,230	14,600	8,620	41,200	16,000	9,040	7,260
10	3,540	3,860	4,790	3,870	3,410	4,790	13,400	7,990	42,600	16,600	9,470	7,330
11	3,530	3,690	4,980	3,970	3,450	5,370	13,100	7,710	41,900	17,000	9,080	6,520
12	3,640	3,790	4,490	4,100	3,520	5,280	13,200	7,350	42,200	16,300	8,600	7,240
13	3,570	3,660	2,750	4,330	3,530	5,460	12,800	7,660	43,900	17,100	8,270	7,770
14	3,810	4,240	2,680	4,250	3,560	5,380	12,400	7,010	45,500	19,400	7,830	7,890
15	3,660	4,800	3,090	3,900	3,570	7,070	12,300	7,390	46,700	21,500	7,550	7,330
16	3,830	4,860	4,120	3,810	3,580	8,230	11,700	6,920	47,900	22,400	7,570	7,780
17	3,730	4,740	4,850	3,750	3,400	8,230	11,600	6,530	48,800	22,300	7,110	8,380
18	3,200	4,450	4,810	3,830	3,430	8,540	11,100	6,620	48,700	22,200	6,670	8,100
19	3,070	4,730	4,080	3,880	3,450	8,660	10,500	8,440	48,100	20,300	6,340	11,200
20	3,920	5,070	4,280	3,420	3,510	7,710	10,400	9,070	47,500	18,300	6,290	19,700
21	3,950	5,090	4,340	2,950	3,680	9,070	10,700	9,400	45,400	16,400	6,410	22,300
22	4,390	5,150	4,470	3,110	3,600	9,530	10,000	9,690	43,300	14,900	6,370	24,600
23	4,420	5,190	4,650	3,200	3,430	9,840	10,800	10,900	40,200	13,500	6,500	26,400
24	4,050	4,990	4,720	3,320	3,430	10,100	11,800	11,300	37,300	12,400	6,050	28,200
25	3,750	4,910	4,700	3,440	3,610	10,300	12,300	12,200	33,400	11,900	5,770	29,500
26	3,810	4,580	4,500	3,510	3,580	10,300	12,500	14,900	28,700	11,500	5,830	30,500
27	3,540	3,910	4,370	3,660	3,550	11,000	12,800	17,600	25,400	11,500	5,460	30,000
28	3,880	3,430	4,520	3,630	3,610	11,100	12,600	18,800	23,900	10,700	5,870	29,200
29	3,930	3,620	4,720	3,780	3,640	12,000	12,100	23,200	21,800	10,100	6,330	27,700
30	3,930	3,520	4,950	3,570	---	13,400	11,600	24,700	19,900	9,710	5,960	25,200
31	4,150	---	4,920	3,160	---	15,100	---	26,500	---	9,100	5,540	---
TOTAL	116,390	132,670	138,930	115,570	100,160	237,330	394,800	349,370	1,157,900	481,710	223,620	422,470
MEAN	3,755	4,422	4,482	3,728	3,454	7,656	13,160	11,270	38,600	15,540	7,214	14,080
MAX	4,420	5,190	5,120	4,500	3,680	15,100	17,000	26,500	48,800	22,400	9,470	30,500
MIN	3,070	3,430	2,680	2,950	3,060	3,820	10,000	6,530	19,900	9,100	5,460	4,740
AC-FT	230,900	263,200	275,600	229,200	198,700	470,700	783,100	693,000	2,297,000	955,500	443,600	838,000
CFSM	0.10	0.12	0.12	0.10	0.09	0.21	0.35	0.30	1.04	0.42	0.19	0.38
IN.	0.12	0.13	0.14	0.12	0.10	0.24	0.40	0.35	1.16	0.48	0.22	0.42

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2004, BY WATER YEAR (WY)

MEAN	10,520	12,250	9,464	7,184	6,985	12,540	41,680	32,670	27,970	23,100	12,060	9,023
MAX	25,600	24,960	13,290	9,657	10,040	20,360	95,650	76,140	52,600	36,910	23,560	16,620
(WY)	(1996)	(1996)	(1997)	(1996)	(1998)	(1998)	(2001)	(2001)	(2001)	(1997)	(1997)	(2002)
MIN	3,755	4,422	4,482	3,728	3,454	6,436	10,400	11,270	16,100	15,540	6,460	4,184
(WY)	(2004)	(2004)	(2004)	(2004)	(2004)	(2001)	(2000)	(2004)	(1997)	(2004)	(2000)	(2003)

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SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1996 - 2004	
ANNUAL TOTAL	4,078,490		3,870,920			
ANNUAL MEAN	11,170		10,580		17,130	
HIGHEST ANNUAL MEAN					25,040 2001	
LOWEST ANNUAL MEAN					10,310 2000	
HIGHEST DAILY MEAN	39,500	Jul 2	48,800	Jun 17	147,000	Apr 19, 2001
LOWEST DAILY MEAN	2,680	Dec 14	2,680	Dec 14	2,680	Dec 14, 2003
ANNUAL SEVEN-DAY MINIMUM	3,540	Oct 7	3,190	Jan 31	3,190	Jan 31, 2004
ANNUAL RUNOFF (AC-FT)	8,090,000		7,678,000		12,410,000	
ANNUAL RUNOFF (CFSM)	0.301		0.285		0.462	
ANNUAL RUNOFF (INCHES)	4.09		3.88		6.27	
10 PERCENT EXCEEDS	28,500		24,800		36,100	
50 PERCENT EXCEEDS	5,470		6,340		11,100	
90 PERCENT EXCEEDS	3,820		3,530		5,060	

