

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

LOCATION.--Lat 44°44'48", long 92°51'08", SE¹/₄SE¹/₄ 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 mi².

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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10,200	15,900	9,560	8,170	5,210	5,000	13,000	23,600	21,900	38,600	11,900	4,160
2	10,200	15,400	9,340	7,540	5,220	5,340	12,700	21,600	21,500	39,500	11,700	4,090
3	10,300	15,200	8,530	7,700	5,100	4,740	12,700	20,000	20,200	38,900	11,200	4,130
4	9,810	14,800	9,340	7,500	5,100	4,500	12,400	19,200	18,800	39,100	10,700	3,780
5	9,500	15,000	8,450	7,710	4,890	4,390	11,900	18,500	17,900	38,100	10,500	3,670
6	10,400	14,300	8,070	7,520	4,700	4,330	11,900	17,900	16,900	37,500	10,100	3,820
7	12,100	14,300	7,400	8,100	4,600	4,190	11,500	17,000	16,200	35,800	9,900	3,620
8	13,500	14,000	7,930	7,530	4,680	4,240	10,300	17,000	16,000	33,300	9,730	3,710
9	15,900	14,000	8,510	7,300	4,790	4,290	10,000	17,400	15,700	32,200	9,530	3,450
10	19,900	13,900	8,190	7,590	4,890	4,360	10,100	17,400	15,400	30,400	9,210	3,530
11	23,000	13,600	7,440	7,650	4,980	4,240	9,710	19,600	15,900	29,000	8,960	4,020
12	24,400	13,500	8,150	7,030	4,970	4,660	9,330	25,800	17,200	28,000	8,710	3,550
13	23,700	13,400	8,660	6,110	4,990	4,920	9,340	29,100	18,400	28,400	8,290	3,660
14	23,800	13,300	9,060	6,090	4,990	4,450	9,040	31,400	19,700	28,600	8,070	5,190
15	24,800	13,400	8,820	6,090	4,890	4,430	8,960	34,000	19,700	28,300	7,340	4,870
16	23,300	12,900	9,030	6,070	4,910	4,610	8,630	34,800	19,900	28,500	7,340	4,930
17	22,400	12,800	9,260	6,090	4,930	4,780	9,240	35,200	19,300	28,000	7,240	4,720
18	22,200	12,500	8,560	5,960	4,960	5,550	10,400	35,500	18,000	26,800	6,790	4,570
19	20,900	12,200	8,520	5,990	4,960	6,440	13,500	35,600	17,000	25,000	6,600	4,460
20	20,500	11,700	9,290	5,890	5,090	7,920	17,200	36,100	16,400	23,600	6,430	4,250
21	19,500	12,000	9,340	5,780	5,080	10,200	18,900	36,500	15,300	22,300	5,920	4,690
22	18,500	12,000	9,230	5,780	5,060	12,300	23,700	36,200	14,000	21,200	5,830	4,760
23	18,600	12,200	8,380	5,680	5,160	13,400	26,900	35,900	13,000	20,100	5,480	4,310
24	18,600	12,200	8,370	5,470	5,160	12,900	28,800	35,800	12,100	18,900	5,350	4,240
25	17,500	11,900	7,550	5,250	5,040	13,000	30,700	34,800	12,300	17,900	5,060	4,580
26	17,100	11,800	7,470	5,150	4,490	13,900	31,100	33,500	15,800	16,800	4,740	4,390
27	16,500	10,900	7,860	5,350	4,290	14,300	30,700	31,600	26,400	15,700	4,580	4,220
28	16,200	10,100	8,010	5,450	4,390	14,100	29,300	29,600	31,000	14,900	4,670	4,150
29	15,600	9,680	7,870	5,340	---	14,100	27,500	26,800	33,700	14,400	4,540	3,950
30	15,600	9,420	7,870	5,330	---	13,900	25,500	25,400	36,300	13,600	4,480	4,060
31	15,500	---	8,090	5,310	---	13,300	---	23,900	---	13,000	4,310	---
TOTAL	540,010	388,300	262,150	199,520	137,520	242,780	494,950	856,700	571,900	826,400	235,200	125,530
MEAN	17,420	12,940	8,456	6,436	4,911	7,832	16,500	27,640	19,060	26,660	7,587	4,184
MAX	24,800	15,900	9,560	8,170	5,220	14,300	31,100	36,500	36,300	39,500	11,900	5,190
MIN	9,500	9,420	7,400	5,150	4,290	4,190	8,630	17,000	12,100	13,000	4,310	3,450
AC-FT	1,071,000	770,200	520,000	395,700	272,800	481,600	981,700	1,699,000	1,134,000	1,639,000	466,500	249,000
CFSM	0.47	0.35	0.23	0.17	0.13	0.21	0.44	0.74	0.51	0.72	0.20	0.11
IN.	0.54	0.39	0.26	0.20	0.14	0.24	0.50	0.86	0.57	0.83	0.24	0.13

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2003, BY WATER YEAR (WY)

MEAN	11,360	13,230	10,090	7,615	7,439	13,150	45,250	35,340	26,650	24,040	12,660	8,391
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	4,661	7,207	6,912	6,022	4,911	6,436	10,400	14,070	16,100	15,970	6,460	4,184
(WY)	(2001)	(2002)	(2000)	(2000)	(2003)	(2001)	(2000)	(2000)	(1997)	(2000)	(2000)	(2003)

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SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1996 - 2003	
ANNUAL TOTAL	5,954,710		4,880,960			
ANNUAL MEAN	16,310		13,370		17,950	
HIGHEST ANNUAL MEAN					25,040 2001	
LOWEST ANNUAL MEAN					10,310 2000	
HIGHEST DAILY MEAN	44,900	Jul 1	39,500	Jul 2	147,000	Apr 19, 2001
LOWEST DAILY MEAN	5,970	Feb 16	3,450	Sep 9	3,450	Sep 9, 2003
ANNUAL SEVEN-DAY MINIMUM	5,980	Feb 13	3,650	Sep 7	3,650	Sep 7, 2003
ANNUAL RUNOFF (AC-FT)	11,810,000		9,681,000		13,010,000	
ANNUAL RUNOFF (CFSM)	0.44		0.36		0.48	
ANNUAL RUNOFF (INCHES)	5.97		4.89		6.58	
10 PERCENT EXCEEDS	28,400		28,500		36,700	
50 PERCENT EXCEEDS	15,500		10,200		11,600	
90 PERCENT EXCEEDS	6,680		4,500		5,640	

