#### MINNESOTA RIVER BASIN--Continued

### 05325000 MINNESOTA RIVER AT MANKATO, MN--Continued

PERIOD OF RECORD.-- Water years 1963-66, 1968 to current year.

PERIOD OF DAILY RECORD:

WATER TEMPERATURES.-- October 1967 to September 30, 1981, October 1982 to current year (fragmentary records).

SUSPENDED-SEDIMENT DISCHARGE .-- October 1967 to current year.

REMARKS.--Sediment samples were collected two to three times per week by an observer from Apr. 11 to Sept. 30. In general, daily concentrations and loads for the open-water period are considered fair to poor. During the winter period, and for periods of no observer samples, daily sediment concentrations and loads are based primarily on concentrations of sediment in samples that were collected monthly, and on daily water-discharge records. Sediment records for the winter period are considered poor. Water temperatures were obtained by the observer at the time of sediment sampling, and monthly by U.S. Geological Survey personnel.

EXTREMES FOR PERIOD OF DAILY RECORD:

WATER TEMPERATURES. -- Maximum observed, 31.5 C, Aug. 6, 2001; minimum observed, 0.0 C on many days most winters.

SEDIMENT CONCENTRATIONS.-- Maximum daily mean, 2850 mg/L, Aug. 7, 1968; minimum daily mean, 9 mg/L, Jan. 15-19, 1991.

SEDIMENT LOADS .-- Maximum daily, 414,000 tons, June 21, 1993; minimum daily, 5.2 tons, Nov. 6, 1976.

EXTREMES FOR CURRENT YEAR:

WATER TEMPERATURES.-- Maximum observed, 31.5 C, Aug. 6; minimum observed, 2.0 C, Jan. 4 (assumed to be 0.0 C, many days during winter).

SEDIMENT CONCENTRATIONS.-- Maximum daily mean, 1250 mg/L, April 2; minimum daily mean, 55 mg/L, Mar. 21-23.

SEDIMENT LOADS .-- Maximum daily, 87,800 tons, April 12; minimum daily, 61 tons, Oct. 18.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001 DAILY INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1												
2									16.0	21.5		
3												22.5
4				2.0					17.0		27.5	24.5
5	12.0											
6										24.0	31.5	
7								15.5	17.5		31.0	23.0
8									19.5			
9		4.0								27.0		
10								16.0		27.0	26.0	22.0
11							7.0					22.0
12							8.0					22.5
13									23.0		25.5	
14								21.0	21.0			17.0
15											22.0	
16							7.0		20.0			
17								21.0			22.0	17.0
18							8.5	21.5	22.0			
19							8.0		27.5	27.0		17.5
20						2.5	13.0				22.5	
21								21.5				
22												
23										27.0		
24							11.0				25.0	13.0
25								13.0	25.0	25.0		
26												
27										24.0	26.0	10.0
28									26.0		23.5	
29											26.5	
30							17.0	17.0		28.0		
31										29.5	24.5	

DATE	TIME	SAMPLE TYPE	GAGE HEIGHT (FEET) (00065)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)
ОСТ 13	0830	ENVIRONMENTAL	1.17	297	1030	8.2	16.0	12.6	742	9.6	93	5.0
NOV						••-						
16	1035	ENVIRONMENTAL	2.92		871							
16	1040	ENVIRONMENTAL	2.92		851							
APR												
04	1245	ENVIRONMENTAL	18.23	36900	272	7.4	12.0	1.1	751	13.0	92	
JUL	1 5 0 0		10.01	11500	050	0.1				<i>c</i> 0		
02	1520	ENVIRONMENTAL	10.01	11700	850	8.1	24.0	23.0	743	6.2	75	

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## MINNESOTA RIVER BASIN--Continued

# 05325000 MINNESOTA RIVER AT MANKATO, MN--Continued

# SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS/ DAY)
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1 2 3 4 5	76 77 95 103 102	66 67 82 87 83	80 80 80 82	88 93 97 100 109	80 80 80 80 80	161 159 154 152 148	78 78 78 77 76	91 90 93 95 95	62 62 61 61	78 76 76 77 81	58 58 57 57	67 70 78 80 80
6 7 8 9 10	99 96 93 91 89	81 78 73 70 68	95 102 98 85 82	180 270 280 264 270	80 80 80 80 80	145 138 132 127 122	76 75 74 73 72	97 97 97 96 95	61 60 60 60	84 88 92 94 93	57 57 57 57 57 57	82 86 89 92 93
11 12 13 14 15	87 85 83 82 81	67 70 67 65	81 81 80 80	278 300 311 300 294	80 80 80 80 79	116 111 107 104 100	71 70 69 68	94 93 92 92 89	60 60 59 59	91 87 87 86 83	56 56 56 56	92 94 98 102 106
16 17 18 19 20	80 79 78 78 78	63 62 61 63 74	80 80 80 80 80	313 292 257 251 189	79 79 79 79 79	98 96 94 92 90	67 66 66 65	88 86 85 83 81	59 59 59 59 59	81 79 78 78 76	56 56 56 56	108 112 116 122 135
21 22 23 24 25	78 78 81 82 82	68 66 72 79 80	80 80 80 80 80	159 150 150 153 156	79 79 79 79 79	87 85 84 84 84	65 65 64 64 64	81 82 81 81 79	59 59 58 58 58	76 76 72 66 64	55 55 56 56	136 140 142 146 146
26 27 28 29 30 31	81 81 81 80 80	75 75 74 75 80 84	80 80 80 80 80	159 162 164 166 165	78 78 78 78 78 78 78	86 88 90 92 93 93	63 63 63 62 62	78 78 79 79 79	58 58  	64 64 64 	56 56 57 66 112 350	145 152 199 344 940 4380
TOTA	L	2242		6120		3412		2704		2211		8772
DAY	MEAN CONCEN- TRATION (MG/L) APR	LOAD (TONS/ DAY) IL	MEAN CONCEN- TRATION (MG/L) MAY	LOAD (TONS/ DAY)	MEAN CONCEN- TRATION (MG/L) JUNE	LOAD (TONS/ DAY)	MEAN CONCEN- TRATION (MG/L) JULY	LOAD (TONS/ DAY)	MEAN CONCEN- TRATION (MG/L) AUGUS'	LOAD (TONS/ DAY) F	MEAN CONCEN- TRATION (MG/L) SEPTEMI	LOAD (TONS/ DAY) BER

	(,,	,	(	,	(	,	(	,	(,,	,	(	,	
	APRIL		PRIL MAY		JUNE	JUNE		JULY		AUGUST		SEPTEMBER	
1	1180	25200	75	9400	185	8290	162	4810	185	1880	105	238	
2	1250	45600	70	8070	155	6360	164	4560	188	1790	103	207	
3	1120	71400	75	7980	127	4800	171	4580	197	1690	102	247	
4	940	81200	80	7930	94	3320	175	4530	198	1560	100	224	
5	810	86400	120	11400	100	3400	178	4390	192	1470	98	184	
6	690	83800	200	18700	115	3760	182	4280	175	1240	99	188	
7	600	78100	230	21400	180	5830	186	4100	160	1060	122	255	
8	520	71300	170	15400	142	4560	189	3930	148	931	115	243	
9	450	62800	150	12900	116	3660	194	3660	138	823	98	223	
10	330	46000	110	8880	105	3200	198	3520	132	731	87	197	
11	600	87500	115	8510	98	2880	205	3430	128	646	97	200	
12	560	87800	115	7890	85	2410	212	3290	122	557	103	212	
13	460	75600	110	7010	658	22200	220	3250	116	479	107	215	
14	390	67400	110	6590	650	31800	226	3230	112	438	106	205	
15	320	60000	105	5950	630	37300	232	3120	108	408	104	199	
16	260	51400	100	5370	565	42100	238	3140	105	391	100	184	
17	200	39000	95	4850	485	43900	244	3070	102	364	98	176	
18	145	26900	90	4350	415	38500	250	3040	98	357	96	174	
19	110	18900	85	3880	360	30200	254	2860	96	347	95	173	
20	110	17300	85	3740	325	23500	265	2950	93	326	97	181	
21	150	21600	110	5410	275	17500	275	3130	90	301	99	190	
22	90	12100	375	20800	240	13700	290	3590	88	285	103	217	
23	95	13100	280	16000	210	10900	290	4220	88	278	106	246	
24	200	30200	200	11500	185	8890	250	4720	88	271	108	269	
25	420	71800	140	7940	165	7350	225	4330	87	263	118	310	
26 27 28 29 30 31	282 200 160 125 95	53100 36900 27100 19100 13100	238 380 365 320 280 245	13600 22000 20600 17500 14700 12000	160 155 152 155 160	6570 5940 5420 5230 5010	200 187 185 183 184 185	3720 3110 2790 2500 2200 2040	87 88 92 105 113 107	249 257 234 246 286 268	113 110 102 95 92	247 231 211 189 177	
TOTAI	1	L481700		342250		408480		110090		20426		6412	