

## 05325000 MINNESOTA RIVER AT MANKATO, MN

LOCATION(REVISED)--Lat 44°10'08", long 94°00'11", in SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 7, T. 108 N., R. 26 W., Blue Earth County, Hydrologic Unit 07020007, on right bank 300 ft downstream from Memorial bridge in Mankato, 2.0 mi downstream from Blue Earth River and at mile 106.2 upstream from Mississippi River.

DRAINAGE AREA--14,900 mi<sup>2</sup> (approximately).

PERIOD OF RECORD--May 1903 to current year (no winter records 1904, 1906-10, 1918-29). Monthly discharge only for some periods, published in WSP 1308. Published as "near Mankato": 1903-21.

REVISED RECORDS--WSP 875: 1917. WSP 955: Drainage area. WSP 1085: 1929. WSP 1238: 1903, 1908, 1919. WSP 1508: 1916(M), 1918(M), 1926(M), 1928, 1930, 1932(M), 1938(M). WDR-MN-76-1: 1881(M).

GAGE--Water-stage recorder. Datum of gage is 747.92 ft above sea level (NGVD of 1929). Prior to Oct. 19, 1921, nonrecording gage, at site 1.8 mi upstream at datum 6.4 ft higher. Mar. 15, 1922 to Nov. 30, 1924, nonrecording gage, and Dec. 1, 1924 to May 24, 1971, recorder at site 0.2 mi upstream at present datum. May 25, 1971 to Aug. 14, 1977, recorder at site 0.5 mi upstream at present datum. Aug. 14, 1977 to July 27, 1978, nonrecording gage; and from July 28, 1978 to Sept. 30, 1993, recording gage at site 0.7 mi upstream of present site.

REMARKS--Records good except those for estimated daily discharges, which are fair to poor.

EXTREMES OUTSIDE PERIOD OF RECORD--Maximum stage, 29.9 ft, Apr. 26, 1881, near present site and datum, from floodmark (estimated discharge, 110,000 ft<sup>3</sup>/s).

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	313	341	e306	e368	e193	e317	2,710	1,290	18,600	4,780	3,060	1,970
2	304	391	e308	e370	e194	e371	2,520	1,270	20,200	4,460	3,020	1,820
3	315	467	e309	e373	e196	e488	2,340	1,210	21,100	4,510	3,180	1,650
4	298	470	e309	e365	e197	e626	2,080	1,180	20,600	5,150	3,600	1,470
5	279	393	e309	e335	e199	e803	1,830	1,130	19,100	4,920	3,960	1,430
6	267	e382	e309	e340	e200	e990	1,690	1,090	17,100	5,560	4,630	1,450
7	264	e390	e309	e339	e201	e1,170	1,550	1,040	15,300	6,820	4,770	1,530
8	245	e368	e310	e343	e202	e1,400	1,490	996	13,500	7,460	4,650	1,540
9	234	e368	e305	e350	e215	e1,680	1,410	959	18,400	7,220	4,250	1,450
10	223	e388	e297	e346	e220	e2,060	1,370	971	21,200	6,670	3,850	1,340
11	292	405	e290	e330	e221	e2,360	1,300	887	21,500	7,990	3,620	1,270
12	288	451	e283	e317	e221	e2,560	1,260	855	21,500	10,800	3,270	1,190
13	278	468	e288	e306	e220	e2,660	1,230	896	22,300	11,100	2,930	1,060
14	278	448	e290	e302	e221	e3,030	1,200	884	23,300	11,300	2,690	1,250
15	271	449	e290	e295	e224	e3,000	1,170	847	23,400	10,500	2,410	3,490
16	270	456	e288	e275	e235	2,890	1,160	878	22,600	9,030	2,670	9,430
17	306	439	e288	e265	e265	2,850	1,120	1,090	20,800	7,950	2,640	14,000
18	395	450	e288	e240	e283	2,780	1,080	1,250	19,000	6,990	2,950	17,400
19	391	459	e288	e235	e276	2,550	1,150	1,510	16,800	6,140	3,080	20,500
20	368	454	e288	e228	e259	2,720	1,200	1,670	15,200	5,410	2,900	21,600
21	351	433	e288	e221	e224	2,590	1,230	1,790	13,500	4,980	2,710	20,000
22	375	e429	e290	e217	e214	2,330	1,210	2,300	12,200	4,870	2,520	17,500
23	394	e416	e291	e215	e212	2,190	1,220	3,240	11,200	5,510	2,380	16,100
24	400	e351	e292	e215	e215	2,130	1,220	4,890	10,200	5,530	2,380	15,100
25	403	e311	e300	e215	e221	2,070	1,260	7,410	9,200	4,920	2,500	14,000
26	393	e304	e315	e214	e228	2,150	1,300	8,860	7,850	4,280	2,310	12,800
27	386	e302	e330	e210	e239	2,220	1,310	9,150	6,820	3,810	2,220	11,600
28	395	e301	e360	e205	e258	2,480	1,330	8,630	5,980	3,490	2,140	10,600
29	372	e301	e370	e197	e285	2,740	1,400	8,250	5,290	3,130	2,120	9,750
30	349	e303	e367	e192	---	2,870	1,350	11,800	4,920	2,920	2,310	8,860
31	349	---	e365	e190	---	2,880	---	16,700	---	2,840	2,190	---
TOTAL	10,046	11,888	9,520	8,613	6,538	63,955	43,690	104,923	478,660	191,040	93,910	243,150
MEAN	324	396	307	278	225	2,063	1,456	3,385	15,960	6,163	3,029	8,105
MAX	403	470	370	373	285	3,030	2,710	16,700	23,400	11,300	4,770	21,600
MIN	223	301	283	190	193	317	1,080	847	4,920	2,840	2,120	1,060
AC-FT	19,930	23,580	18,880	17,080	12,970	126,900	86,660	208,100	949,400	378,900	186,300	482,300
CFSM	0.02	0.03	0.02	0.02	0.02	0.14	0.10	0.23	1.07	0.41	0.20	0.54
IN.	0.03	0.03	0.02	0.02	0.02	0.16	0.11	0.26	1.20	0.48	0.23	0.61

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1903 - 2004, BY WATER YEAR (WY)

MEAN	1,622	1,565	1,042	650	794	4,441	9,681	6,048	6,418	4,623	2,368	1,682
MAX	14,600	8,569	4,770	3,009	4,505	18,230	52,910	25,740	34,230	33,130	23,520	11,070
(WY)	(1969)	(1996)	(1983)	(1992)	(1983)	(1983)	(2001)	(2001)	(1993)	(1993)	(1993)	(1993)
MIN	66.1	83.5	80.9	61.5	58.4	132	609	101	194	58.3	37.4	56.6
(WY)	(1934)	(1934)	(1934)	(1940)	(1940)	(1934)	(1931)	(1934)	(1934)	(1934)	(1934)	(1934)

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SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1903 - 2004	
ANNUAL TOTAL	939,241		1,265,933		a3,571	
ANNUAL MEAN	2,573		3,459		14,890	
HIGHEST ANNUAL MEAN					136	
LOWEST ANNUAL MEAN					1934	
HIGHEST DAILY MEAN	14,800	May 15	23,400	Jun 15	92,700	Apr 10, 1965
LOWEST DAILY MEAN	223	Oct 10	190	Jan 31	31	Aug 3, 1934
ANNUAL SEVEN-DAY MINIMUM	258	Oct 5	194	Jan 29	33	Jul 29, 1934
MAXIMUM PEAK FLOW			23,700	Jun 15	94,100	Apr 10, 1965
MAXIMUM PEAK STAGE			15.47	Jun 15	30.11	Jun 21, 1993
INSTANTANEOUS LOW FLOW			b190	Jan 31	c26	Aug 4, 1934
ANNUAL RUNOFF (AC-FT)	1,863,000		2,511,000		2,587,000	
ANNUAL RUNOFF (CFSM)	0.173		0.232		0.240	
ANNUAL RUNOFF (INCHES)	2.34		3.16		3.26	
10 PERCENT EXCEEDS	7,010		11,200		9,610	
50 PERCENT EXCEEDS	680		1,210		1,290	
90 PERCENT EXCEEDS	306		235		183	

- a Median of annual mean discharges is 2900 ft<sup>3</sup>/s.
- b Estimated, minimum daily. Result of freezeup.
- c Minimum observed.
- e Estimated.

