

MINNESOTA RIVER BASIN--Continued

05325000 MINNESOTA RIVER AT MANKATO, MN

LOCATION(REVISED).--Lat 44°10'08", long 94°00'11", in SE¹/₄SW¹/₄ 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 mi² (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 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 ft³/s).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------|-------|-------|-------|-------|-------|--------|-------|--------|--------|--------|-------|-------|
| 1 | 1030 | 938 | 807 | e540 | e420 | 2930 | 1790 | 1410 | 10900 | 4400 | 2630 | 740 |
| 2 | 973 | 870 | 839 | e540 | e420 | 2620 | 1870 | 1330 | 14200 | 4530 | 2490 | 743 |
| 3 | 937 | 796 | 844 | e540 | e420 | 2440 | 1890 | 1330 | 14700 | 4540 | 2350 | 738 |
| 4 | 917 | 749 | 836 | e540 | e430 | 2510 | 1800 | 1350 | 16400 | 4510 | 2190 | 727 |
| 5 | 1000 | 735 | 825 | e550 | e440 | 2720 | 1760 | 1320 | 16600 | 4730 | 1980 | 682 |
| 6 | 1210 | 719 | 793 | e550 | e440 | 2660 | 1740 | 1280 | 14900 | 5400 | 1800 | 569 |
| 7 | 1300 | 730 | 776 | e550 | e440 | 2430 | 1680 | 1250 | 14100 | 6130 | 1690 | 579 |
| 8 | 1260 | 741 | 789 | e540 | e450 | 2370 | 1590 | 1420 | 13600 | 5890 | 2000 | 570 |
| 9 | 1080 | 739 | 806 | e540 | e450 | 2500 | 1490 | 1320 | 11400 | 5810 | 2000 | 502 |
| 10 | 990 | 747 | 812 | e530 | e460 | 2540 | 1370 | 1320 | 9740 | 6350 | 2050 | 507 |
| 11 | 939 | 763 | 808 | e520 | e460 | 2550 | 1320 | 1840 | 8520 | 9270 | 2380 | 492 |
| 12 | 878 | 791 | 763 | e520 | e460 | 2500 | 1230 | 2250 | 7430 | 12100 | 2300 | 455 |
| 13 | 842 | 796 | 756 | e510 | e470 | 2490 | 1190 | 2100 | 6870 | 13900 | 2100 | 436 |
| 14 | 836 | 791 | 772 | e510 | e470 | 2450 | 1200 | 1890 | 6560 | 14600 | 1900 | 425 |
| 15 | 843 | 796 | 807 | e500 | e480 | 2370 | 1190 | 1850 | 6760 | 13500 | 1770 | 412 |
| 16 | 850 | 810 | 725 | e500 | e490 | 2290 | 1190 | 1980 | 7660 | 11700 | 1490 | 370 |
| 17 | 829 | 804 | e670 | e500 | e500 | 2190 | 1210 | 2090 | 7950 | 9780 | 1470 | 366 |
| 18 | 844 | 808 | e660 | e500 | e510 | 2150 | 1260 | 4560 | 7770 | 8410 | 1410 | 353 |
| 19 | 909 | 829 | e680 | e490 | e510 | 2120 | 1340 | 9750 | 7620 | 7390 | 1290 | 390 |
| 20 | 947 | 814 | e700 | e480 | e510 | 2070 | 1420 | 12900 | 7730 | 6550 | 1290 | 395 |
| 21 | 974 | 814 | e670 | e460 | e520 | 2020 | 1470 | 13900 | 7320 | 5830 | 1210 | 374 |
| 22 | 999 | 827 | e650 | e440 | e520 | 1990 | 1560 | 14100 | 6560 | 5060 | 1130 | 370 |
| 23 | 960 | 870 | e580 | e430 | e560 | 1970 | 1560 | 12700 | 6780 | 4560 | 1100 | 372 |
| 24 | 942 | 854 | e530 | e430 | e590 | 1980 | 1520 | 10400 | 6630 | 4150 | 1090 | 356 |
| 25 | 949 | 842 | e520 | e430 | e780 | 1910 | 1480 | 8640 | 6500 | 3910 | 1040 | 358 |
| 26 | 919 | 846 | e520 | e430 | e1200 | 1840 | 1450 | 7190 | 6010 | 3680 | 1010 | 352 |
| 27 | 886 | 843 | e520 | e420 | e2000 | 1840 | 1460 | 6490 | 5280 | 3490 | 973 | 346 |
| 28 | 885 | 832 | e520 | e420 | e2500 | 1810 | 1420 | 5920 | 5840 | 3240 | 877 | 343 |
| 29 | 899 | 828 | e520 | e420 | 3420 | 1700 | 1390 | 5990 | 5430 | 2850 | 823 | 327 |
| 30 | 937 | 802 | e520 | e420 | --- | 1660 | 1380 | 6590 | 4780 | 2720 | 789 | 329 |
| 31 | 937 | --- | e530 | e420 | --- | 1680 | --- | 6840 | --- | 2630 | 774 | --- |
| TOTAL | 29701 | 24124 | 21548 | 15170 | 21320 | 69300 | 44220 | 153300 | 272540 | 201610 | 49396 | 13978 |
| MEAN | 958 | 804 | 695 | 489 | 735 | 2235 | 1474 | 4945 | 9085 | 6504 | 1593 | 466 |
| MAX | 1300 | 938 | 844 | 550 | 3420 | 2930 | 1890 | 14100 | 16600 | 14600 | 2630 | 743 |
| MIN | 829 | 719 | 520 | 420 | 420 | 1660 | 1190 | 1250 | 4780 | 2630 | 774 | 327 |
| AC-FT | 58910 | 47850 | 42740 | 30090 | 42290 | 137500 | 87710 | 304100 | 540600 | 399900 | 97980 | 27730 |
| CFSM | .06 | .05 | .05 | .03 | .05 | .15 | .10 | .33 | .61 | .44 | .11 | .03 |
| IN. | .07 | .06 | .05 | .04 | .05 | .17 | .11 | .38 | .68 | .50 | .12 | .03 |

05325000 MINNESOTA RIVER AT MANKATO, MN--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1903 - 2000, BY WATER YEAR (WY)

| | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|------|-------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|
| MEAN | 1641 | 1583 | 1044 | 649 | 802 | 4569 | 9399 | 5837 | 6187 | 4598 | 2364 | 1643 |
| MAX | 14600 | 8569 | 4770 | 3009 | 4505 | 18230 | 46150 | 22540 | 34230 | 33130 | 23520 | 11070 |
| (WY) | 1969 | 1996 | 1983 | 1992 | 1983 | 1983 | 1997 | 1993 | 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 |

| SUMMARY STATISTICS | FOR 1999 CALENDAR YEAR | FOR 2000 WATER YEAR | WATER YEARS 1903 - 2000 |
|--------------------------|------------------------|---------------------|-------------------------|
| ANNUAL TOTAL | 1985513 | 916207 | |
| ANNUAL MEAN | 5440 | 2503 | 3514 ^a |
| HIGHEST ANNUAL MEAN | | | 14890 |
| LOWEST ANNUAL MEAN | | | 136 |
| HIGHEST DAILY MEAN | 23700 | Apr 13 | 92700 |
| LOWEST DAILY MEAN | 520 | Dec 25 | 31 |
| ANNUAL SEVEN-DAY MINIMUM | 521 | Dec 24 | 33 |
| INSTANTANEOUS PEAK FLOW | | | 16900 |
| INSTANTANEOUS PEAK STAGE | | | 13.05 |
| INSTANTANEOUS LOW FLOW | | | 318 |
| ANNUAL RUNOFF (AC-FT) | 3938000 | 1817000 | 2545000 |
| ANNUAL RUNOFF (CFSM) | .37 | .17 | .24 |
| ANNUAL RUNOFF (INCHES) | 4.96 | 2.29 | 3.20 |
| 10 PERCENT EXCEEDS | 14500 | 6850 | 9210 |
| 50 PERCENT EXCEEDS | 3000 | 1100 | 1280 |
| 90 PERCENT EXCEEDS | 803 | 450 | 190 |

^a Median of annual mean discharges is 2900 ft³/s.
^b Minimum observed.
^e Estimated.

