

UPPER MISSISSIPPI RIVER MAIN STEM--Continued

05287890 ELM CREEK NEAR CHAMPLIN, MN

LOCATION.--Lat 45°09'48", long 93°26'11", in NE^{1/4}NW^{1/4} sec. 35, T.120 N., R.22 W., Hennepin County, Hydrologic Unit 07010206, on left bank, 33 ft downstream from bridge on Elm Creek Road, 2.5 mi southwest of Champlin.

DRAINAGE AREA.--86.0 mi².

PERIOD OF RECORD.--October 1978 to current year.

REVISED RECORD.--WDR-MN-02-1: Maximum discharge; 1982, 85, 86, 94, 96, 97, and 99.

GAGE.--Water-stage recorder. Datum of gage is 850.70 ft above sea level (NGVD of 1929). Prior to March 16, 1979, nonrecording gage at present site and datum.

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

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------|-------|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|---------|
| 1 | 19 | 115 | e15 | e4.0 | 1.6 | e7.5 | 86 | 35 | 33 | 57 | 5.4 | e4.1 |
| 2 | 20 | 115 | e13 | e3.9 | 1.7 | e6.0 | 80 | 32 | 29 | 54 | 5.1 | 3.9 |
| 3 | 17 | 113 | e13 | e3.9 | 1.7 | e7.0 | 76 | 29 | 25 | 53 | 5.0 | e3.7 |
| 4 | 15 | 110 | e12 | e3.9 | 1.6 | 8.4 | 69 | 25 | 23 | 51 | 5.1 | e5.7 |
| 5 | 12 | 105 | 12 | e3.9 | 2.2 | 7.0 | 63 | 22 | 26 | 48 | 4.4 | e7.4 |
| 6 | 9.6 | 99 | 11 | e3.6 | 3.8 | 11 | 59 | 22 | 25 | 45 | 4.2 | e9.2 |
| 7 | 7.6 | 93 | 11 | e3.2 | 3.6 | 28 | 54 | 20 | 24 | 42 | 3.9 | e10 |
| 8 | 7.2 | 88 | 11 | e3.1 | 2.5 | e31 | 50 | 19 | 33 | 39 | 4.0 | e11 |
| 9 | 6.7 | 84 | 10 | e3.0 | 2.9 | e25 | 46 | 21 | 42 | 36 | 4.2 | 10 |
| 10 | 6.2 | 80 | 11 | e2.6 | e2.8 | e28 | 44 | 24 | 54 | 32 | 4.3 | 9.9 |
| 11 | 6.2 | 76 | 11 | e2.2 | 2.6 | e32 | 44 | 24 | 65 | 29 | 3.9 | 8.8 |
| 12 | 5.8 | 72 | e10 | e2.2 | 2.2 | e29 | 48 | 22 | 69 | 26 | 3.8 | 8.8 |
| 13 | 5.7 | 68 | e9.4 | e1.5 | 3.0 | e26 | 48 | 27 | 73 | 23 | 3.4 | 15 |
| 14 | 5.5 | 65 | e8.1 | e1.3 | 8.8 | e22 | 45 | 33 | 80 | 20 | 3.3 | 27 |
| 15 | 6.0 | 62 | e7.8 | e1.4 | e17 | e15 | 42 | 36 | 80 | 18 | 3.1 | 29 |
| 16 | 6.2 | 57 | e7.4 | e1.5 | e19 | 12 | 44 | 35 | 76 | 16 | 3.4 | 25 |
| 17 | 6.0 | 48 | e7.1 | 1.6 | e17 | e11 | 58 | 36 | 70 | 14 | 4.6 | 22 |
| 18 | 5.7 | 40 | e7.4 | 1.9 | e15 | e8.1 | 66 | 45 | 64 | 12 | 4.1 | 18 |
| 19 | 5.6 | 35 | e6.5 | 1.7 | e14 | 7.9 | 75 | 64 | 58 | 11 | 4.1 | e16 |
| 20 | 5.5 | 35 | e6.3 | 1.6 | e13 | 6.4 | 82 | 74 | 62 | 12 | 3.8 | e15 |
| 21 | 5.2 | 32 | e6.6 | e3.0 | e12 | 7.4 | 83 | 83 | 81 | 11 | 3.4 | e15 |
| 22 | 5.3 | 30 | e5.3 | e2.2 | e12 | 8.7 | 79 | 89 | 74 | 8.6 | 3.1 | e50 |
| 23 | 6.9 | 29 | e4.0 | 1.6 | e11 | 11 | 72 | 87 | 66 | 9.0 | 3.0 | 85 |
| 24 | 7.2 | 26 | e3.6 | 1.5 | e10 | 13 | 65 | 78 | 62 | 9.6 | 2.9 | 86 |
| 25 | 7.2 | 23 | e4.5 | 1.5 | e9.3 | 15 | 58 | 70 | 59 | 8.7 | 4.6 | 89 |
| 26 | 27 | 22 | e3.9 | 1.6 | e8.6 | 15 | 54 | 64 | 57 | 9.0 | 7.4 | 91 |
| 27 | 37 | 21 | e3.9 | 1.7 | e7.9 | 18 | 50 | 59 | 55 | 8.4 | 6.9 | 89 |
| 28 | 58 | e17 | e3.9 | 1.8 | e7.2 | 25 | 45 | 53 | 56 | 7.7 | 6.4 | 87 |
| 29 | 103 | e16 | e3.9 | 1.7 | --- | 39 | 41 | 49 | 56 | 7.0 | 5.9 | 83 |
| 30 | 118 | e15 | e4.4 | 1.7 | --- | 66 | 37 | 43 | 58 | 6.1 | 6.1 | 75 |
| 31 | 117 | --- | e4.1 | 1.8 | --- | 90 | --- | 38 | --- | 5.6 | 5.0 | --- |
| TOTAL | 670.3 | 1,791 | 248.1 | 72.1 | 214.0 | 636.4 | 1,763 | 1,358 | 1,635 | 728.7 | 137.8 | 1,009.5 |
| MEAN | 21.6 | 59.7 | 8.00 | 2.33 | 7.64 | 20.5 | 58.8 | 43.8 | 54.5 | 23.5 | 4.45 | 33.6 |
| MAX | 118 | 115 | 15 | 4.0 | 19 | 90 | 86 | 89 | 81 | 57 | 7.4 | 91 |
| MIN | 5.2 | 15 | 3.6 | 1.3 | 1.6 | 6.0 | 37 | 19 | 23 | 5.6 | 2.9 | 3.7 |
| AC-FT | 1,330 | 3,550 | 492 | 143 | 424 | 1,260 | 3,500 | 2,690 | 3,240 | 1,450 | 273 | 2,000 |
| CFSM | 0.25 | 0.69 | 0.09 | 0.03 | 0.09 | 0.24 | 0.68 | 0.51 | 0.63 | 0.27 | 0.05 | 0.39 |
| IN. | 0.29 | 0.77 | 0.11 | 0.03 | 0.09 | 0.28 | 0.76 | 0.59 | 0.71 | 0.32 | 0.06 | 0.44 |

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 2005, BY WATER YEAR (WY)

| | | | | | | | | | | | | |
|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| MEAN | 30.2 | 22.6 | 11.0 | 5.07 | 9.30 | 60.4 | 103 | 70.9 | 54.6 | 41.9 | 30.9 | 29.0 |
| (WY) | (1986) | (1994) | (1992) | (1992) | (1984) | (1985) | (2001) | (2002) | (2004) | (1993) | (2002) | (1991) |
| MAX | 240 | 67.4 | 41.3 | 22.0 | 99.1 | 185 | 414 | 203 | 196 | 157 | 151 | 170 |
| (WY) | (1990) | (1990) | (1990) | (1991) | (1990) | (2001) | (1987) | (2000) | (1988) | (1988) | (1989) | (1988) |
| MIN | 1.13 | 1.03 | 0.92 | 0.74 | 0.91 | 3.86 | 5.31 | 3.54 | 1.34 | 0.76 | 1.44 | 1.08 |
| (WY) | (1990) | (1990) | (1990) | (1991) | (1990) | (2001) | (1987) | (2000) | (1988) | (1988) | (1989) | (1988) |

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| SUMMARY STATISTICS | FOR 2004 CALENDAR YEAR | FOR 2005 WATER YEAR | WATER YEARS 1979 - 2005 |
|--------------------------|------------------------|---------------------|-------------------------|
| ANNUAL TOTAL | 13,870.51 | 10,263.9 | 39.1 |
| ANNUAL MEAN | 37.9 | 28.1 | 82.2 |
| HIGHEST ANNUAL MEAN | | | 2002 |
| LOWEST ANNUAL MEAN | | | 4.54 |
| HIGHEST DAILY MEAN | 346 | Jun 3 | 815 |
| LOWEST DAILY MEAN | 0.50 | Jan 29 | Apr 25, 2001 |
| ANNUAL SEVEN-DAY MINIMUM | 0.62 | Jan 26 | Jun 30, 1988 |
| MAXIMUM PEAK FLOW | | 118 | 0.31 |
| MAXIMUM PEAK STAGE | | Oct 30 | 0.35 |
| INSTANTANEOUS LOW FLOW | | 1.6 | Jun 26, 1988 |
| ANNUAL RUNOFF (AC-FT) | 27,510 | 6.46 | 875 |
| ANNUAL RUNOFF (CFSM) | 0.441 | Oct 30 | Apr 25, 2001 |
| ANNUAL RUNOFF (INCHES) | 6.00 | a1.3 | 10.02 |
| 10 PERCENT EXCEEDS | 106 | Jan 14 | Apr 25, 2001 |
| 50 PERCENT EXCEEDS | 12 | | 0.29 |
| 90 PERCENT EXCEEDS | 0.80 | | Jul 9, 1989 |
| | | | 28,350 |
| | | | 0.455 |
| | | | 6.18 |
| | | | 108 |
| | | | 12 |
| | | | 1.9 |

a Estimated, minimum daily, backwater from ice.

e Estimated.

