

05287890 ELM CREEK NEAR CHAMPLIN, MN

LOCATION.--Lat 45°09'48", long 93°26'11", in NE $\frac{1}{4}$ NW $\frac{1}{4}$ 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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------|------|------|------|-------|-------|-------|-------|---------|--------|-------|-------|-------|
| 1 | 1.4 | 1.7 | 2.0 | 2.2 | e0.68 | 2.9 | 57 | 25 | 270 | 37 | 11 | e1.5 |
| 2 | 1.4 | 1.7 | 1.9 | 2.3 | e0.80 | 6.2 | 52 | 22 | 325 | 32 | 10 | e1.5 |
| 3 | 1.6 | 1.7 | 1.9 | e2.3 | e0.72 | 6.2 | 43 | 19 | 346 | 29 | 9.4 | e1.5 |
| 4 | 1.6 | 1.9 | 2.0 | e2.1 | e0.66 | 6.5 | 36 | 17 | 333 | 40 | e8.8 | e1.5 |
| 5 | 1.4 | 2.1 | 2.0 | e1.6 | e0.80 | 4.3 | 30 | 14 | 320 | 50 | e8.2 | e2.0 |
| 6 | 1.3 | 1.9 | 2.0 | e0.70 | e0.84 | 3.5 | 26 | 13 | 299 | 52 | e7.4 | e3.0 |
| 7 | 1.4 | 1.7 | 2.1 | e0.72 | e0.80 | e4.2 | 22 | 11 | 267 | 61 | e7.4 | e4.0 |
| 8 | 1.5 | 1.7 | 2.2 | e0.72 | e0.76 | e5.0 | 20 | 9.2 | 234 | 69 | e6.6 | e4.8 |
| 9 | 1.7 | 1.7 | e2.2 | e0.73 | e0.82 | 6.9 | 18 | 9.2 | 225 | 71 | e6.0 | e5.6 |
| 10 | 2.2 | 1.9 | e2.2 | e0.74 | e0.76 | 11 | 16 | 11 | 220 | 70 | e5.6 | e6.2 |
| 11 | 4.2 | 2.2 | e2.1 | e0.76 | e0.80 | e9.0 | 14 | 11 | 212 | 82 | e5.0 | e7.0 |
| 12 | 4.3 | 2.2 | e2.1 | e0.72 | e0.76 | e9.4 | 12 | 11 | 251 | 105 | e4.7 | e7.4 |
| 13 | 3.7 | 2.0 | e2.0 | e0.70 | e0.80 | e10 | 10 | 13 | 271 | 113 | e4.5 | e7.8 |
| 14 | 3.0 | 1.8 | 2.0 | e0.70 | e0.74 | e12 | 9.7 | 12 | 276 | 115 | e4.0 | e8.0 |
| 15 | 2.5 | 1.9 | 2.2 | e0.68 | e0.70 | e14 | 8.9 | 11 | 268 | 116 | e3.7 | e10 |
| 16 | 2.8 | 1.9 | 2.3 | e0.68 | e0.94 | e13 | 7.8 | 12 | 252 | 112 | e3.7 | e14 |
| 17 | 3.4 | 1.9 | 2.4 | e0.74 | e1.3 | e12 | 6.6 | 22 | 233 | 101 | e3.6 | e15 |
| 18 | 2.9 | 1.7 | 2.1 | e0.62 | 1.7 | e13 | 7.3 | 31 | 198 | 88 | e3.2 | e15 |
| 19 | 2.4 | 1.7 | 2.1 | e0.64 | 1.7 | e17 | 18 | 34 | 173 | 77 | e2.6 | e14 |
| 20 | 2.2 | 1.7 | 2.1 | e0.80 | 1.8 | e21 | 20 | 38 | 149 | 67 | 2.5 | e14 |
| 21 | 2.2 | 1.7 | 2.1 | e1.2 | 1.6 | e24 | 30 | 37 | 128 | 57 | 2.4 | 15 |
| 22 | 2.2 | 1.9 | 2.1 | e0.66 | 1.8 | e25 | 37 | 36 | 110 | 49 | e2.4 | 24 |
| 23 | 2.1 | 2.1 | e2.0 | e0.68 | 1.8 | e28 | 39 | 42 | 95 | 41 | e2.3 | 36 |
| 24 | 2.0 | 2.1 | e2.1 | e0.72 | 1.8 | e31 | 38 | 70 | 83 | 33 | e2.2 | 39 |
| 25 | 2.0 | 2.1 | e2.0 | e0.76 | 1.9 | 34 | 42 | 81 | 74 | 27 | e2.1 | 38 |
| 26 | 2.0 | 2.1 | 2.0 | e0.80 | 1.9 | 35 | 44 | 88 | 67 | 23 | e2.0 | 37 |
| 27 | 1.6 | 2.1 | 2.3 | e0.70 | 1.9 | 35 | 40 | 102 | 60 | 20 | e1.9 | 33 |
| 28 | 1.6 | e1.9 | 2.6 | e0.60 | 2.0 | 52 | 37 | 107 | 54 | 18 | e1.8 | 27 |
| 29 | 1.7 | e1.8 | 2.5 | e0.50 | 2.0 | 61 | 33 | 116 | 48 | 16 | e1.8 | 24 |
| 30 | 1.9 | 1.9 | 2.4 | e0.50 | --- | 63 | 28 | 157 | 42 | 14 | e1.7 | 22 |
| 31 | 1.9 | --- | 2.5 | e0.56 | --- | 61 | --- | 218 | --- | 12 | e1.6 | --- |
| TOTAL | 68.1 | 56.7 | 66.5 | 28.83 | 35.58 | 636.1 | 802.3 | 1,399.4 | 5,883 | 1,797 | 140.1 | 438.8 |
| MEAN | 2.20 | 1.89 | 2.15 | 0.93 | 1.23 | 20.5 | 26.7 | 45.1 | 196 | 58.0 | 4.52 | 14.6 |
| MAX | 4.3 | 2.2 | 2.6 | 2.3 | 2.0 | 63 | 57 | 218 | 346 | 116 | 11 | 39 |
| MIN | 1.3 | 1.7 | 1.9 | 0.50 | 0.66 | 2.9 | 6.6 | 9.2 | 42 | 12 | 1.6 | 1.5 |
| AC-FT | 135 | 112 | 132 | 57 | 71 | 1,260 | 1,590 | 2,780 | 11,670 | 3,560 | 278 | 870 |
| CFSM | 0.03 | 0.02 | 0.02 | 0.01 | 0.01 | 0.24 | 0.31 | 0.52 | 2.28 | 0.67 | 0.05 | 0.17 |
| IN. | 0.03 | 0.02 | 0.03 | 0.01 | 0.02 | 0.28 | 0.35 | 0.61 | 2.54 | 0.78 | 0.06 | 0.19 |

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 2004, BY WATER YEAR (WY)

| | MEAN | MAX | MIN | (WY) | (WY) | (WY) | (WY) | (WY) | (WY) | (WY) | (WY) | (WY) |
|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| MEAN | 30.5 | 21.2 | 11.2 | 5.18 | 9.36 | 61.9 | 104 | 71.9 | 54.6 | 42.6 | 31.9 | 28.8 |
| MAX | 240 | 67.4 | 41.3 | 22.0 | 99.1 | 185 | 414 | 203 | 196 | 157 | 151 | 170 |
| (WY) | (1986) | (1994) | (1992) | (1992) | (1984) | (1985) | (2001) | (2002) | (2004) | (1993) | (2002) | (1991) |
| 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 2003 CALENDAR YEAR | | FOR 2004 WATER YEAR | | WATER YEARS 1979 - 2004 | |
|--------------------------|------------------------|--------|---------------------|-----------|-------------------------|--------------|
| ANNUAL TOTAL | 16,468.32 | | 11,352.41 | | | |
| ANNUAL MEAN | 45.1 | | 31.0 | | 39.6 | |
| HIGHEST ANNUAL MEAN | | | | | 82.2 | 2002 |
| LOWEST ANNUAL MEAN | | | | | 4.54 | 1988 |
| HIGHEST DAILY MEAN | 651 | Jun 29 | 346 | Jun 3 | 815 | Apr 25, 2001 |
| LOWEST DAILY MEAN | 0.74 | Mar 9 | a0.50 | Jan 29,30 | 0.31 | Jun 30, 1988 |
| ANNUAL SEVEN-DAY MINIMUM | 0.78 | Mar 6 | 0.62 | Jan 26 | 0.35 | Jun 26, 1988 |
| MAXIMUM PEAK FLOW | | | 350 | Jun 3 | 875 | Apr 25, 2001 |
| MAXIMUM PEAK STAGE | | | 8.85 | Jun 3 | 10.02 | Apr 25, 2001 |
| INSTANTANEOUS LOW FLOW | | | b0.50 | Jan 29 | 0.29 | Jul 9, 1989 |
| ANNUAL RUNOFF (AC-FT) | 32,660 | | 22,520 | | 28,650 | |
| ANNUAL RUNOFF (CFSM) | 0.525 | | 0.361 | | 0.460 | |
| ANNUAL RUNOFF (INCHES) | 7.12 | | 4.91 | | 6.25 | |
| 10 PERCENT EXCEEDS | 155 | | 84 | | 110 | |
| 50 PERCENT EXCEEDS | 3.0 | | 4.8 | | 12 | |
| 90 PERCENT EXCEEDS | 1.4 | | 0.80 | | 1.8 | |

- a Backwater from ice.
- b Daily-mean discharge, backwater from ice.
- e Estimated.

