

MINNESOTA RIVER BASIN--Continued

05316500 REDWOOD RIVER NEAR REDWOOD FALLS, MN

LOCATION.--Lat 44°31'25', long 95°10'20", in SE<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub> sec. 9, T.112 N., R.36 W., Redwood County, Hydrologic Unit 07020006, on right bank 4 ft upstream from highway bridge, 3 mi west of town of Redwood Falls, and 8.5 mi upstream from mouth.

DRAINAGE AREA.--629 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1909 to September 1914 (no winter records except 1911-12). August 1930 to September 1935 (no winter records), October 1935 to current year.

REVISED RECORDS.--WDR MN-89-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 972.33 ft above sea level. July 1909 to September 1914, nonrecording gage at bridge 20 ft downstream at datum 0.22 ft lower. August 1930 to Oct. 25, 1949, nonrecording gage, at bridge 20 ft downstream at present datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair to poor. Natural discharge affected by unknown amount of interbasin flow between Yellow Medicine, Redwood, and Cottonwood River basins during extreme floods.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 400 ft<sup>3</sup>/s and maximum (\*):

| Date   | Time | Discharge (ft <sup>3</sup> /s) | Gage height (ft) | Date   | Time | Discharge (ft <sup>3</sup> /s) | Gage height (ft) |
|--------|------|--------------------------------|------------------|--------|------|--------------------------------|------------------|
| Nov 27 | 1400 | 460                            | 3.22             | May 8  | 1500 | 766                            | 3.83             |
| Mar 20 | 2400 | 479                            | 3.26             | Jun 13 | 1300 | 672                            | 3.63             |
| Apr 12 | 1500 | *1,100                         | 4.48             |        |      |                                |                  |

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999  
DAILY MEAN VALUES

| DAY   | OCT  | NOV   | DEC   | JAN  | FEB  | MAR   | APR   | MAY   | JUN   | JUL   | AUG  | SEP  |
|-------|------|-------|-------|------|------|-------|-------|-------|-------|-------|------|------|
| 1     | e25  | 106   | 404   | e94  | e48  | e138  | 227   | 422   | 256   | 273   | 66   | 84   |
| 2     | 22   | 105   | e390  | e89  | e49  | e139  | 223   | 392   | 257   | 267   | 61   | 57   |
| 3     | 22   | 98    | e365  | e80  | e51  | e140  | 218   | 377   | 247   | 260   | 58   | 45   |
| 4     | 25   | 92    | 337   | e73  | e54  | e141  | 219   | 360   | 238   | 249   | 55   | 42   |
| 5     | 36   | 88    | 325   | e68  | e57  | e142  | 216   | 383   | 227   | 294   | 52   | 40   |
| 6     | 90   | 85    | 314   | e63  | e62  | e142  | 243   | 479   | 220   | 337   | 49   | 46   |
| 7     | 65   | 84    | 303   | e58  | e66  | e142  | 305   | 689   | 209   | 292   | 47   | 37   |
| 8     | 54   | 84    | 292   | e54  | e71  | e143  | 365   | 757   | 197   | 247   | 43   | 34   |
| 9     | 48   | 84    | 277   | e53  | e78  | e144  | 640   | 741   | 210   | 221   | 51   | 30   |
| 10    | 41   | e90   | 261   | e52  | e87  | e144  | 854   | 706   | 237   | 201   | 44   | 27   |
| 11    | 38   | e100  | 247   | e51  | e93  | e147  | 1000  | 675   | 388   | 186   | 40   | 25   |
| 12    | 34   | e108  | 232   | e50  | e96  | e151  | 1100  | 646   | 610   | 169   | 36   | 25   |
| 13    | 31   | 118   | 216   | e51  | e96  | e158  | 1100  | 609   | 662   | 156   | 34   | 24   |
| 14    | 30   | 126   | 221   | e51  | e97  | e170  | 1100  | 562   | 639   | 146   | 31   | 23   |
| 15    | 31   | 118   | 213   | e50  | e99  | e181  | 1090  | 529   | 570   | 136   | 29   | 22   |
| 16    | 34   | 132   | 208   | e50  | e102 | e196  | 1020  | 511   | 495   | 131   | 28   | 22   |
| 17    | 47   | 149   | 201   | e49  | e106 | e220  | 925   | 493   | 450   | 126   | 27   | 20   |
| 18    | 70   | 176   | 199   | e48  | e111 | e295  | 839   | 470   | 415   | 119   | 26   | 19   |
| 19    | 59   | 228   | e184  | e48  | e113 | e360  | 772   | 439   | 399   | 117   | 25   | 22   |
| 20    | 66   | 268   | e170  | e48  | e112 | e360  | 716   | 417   | 390   | 118   | 25   | 22   |
| 21    | 79   | 296   | e157  | e47  | e111 | 352   | 667   | 436   | 378   | 120   | 25   | 30   |
| 22    | 74   | 347   | e148  | e47  | e110 | 321   | 622   | 464   | 369   | 120   | 24   | 26   |
| 23    | 66   | 342   | e142  | e47  | e110 | 297   | 581   | 457   | 348   | 121   | 30   | 24   |
| 24    | 60   | 349   | e136  | e47  | e112 | 276   | 538   | 425   | 345   | 114   | 24   | 22   |
| 25    | 56   | 400   | e128  | e47  | e116 | 252   | 502   | 392   | 388   | 109   | 23   | 20   |
| 26    | 55   | 434   | e122  | e47  | e122 | 233   | 473   | 361   | 385   | 100   | 21   | 19   |
| 27    | 65   | 455   | e120  | e47  | e130 | 225   | 453   | 334   | 333   | 92    | 21   | 18   |
| 28    | 67   | 454   | e118  | e47  | e138 | 230   | 447   | 319   | 289   | 87    | 21   | 18   |
| 29    | 69   | 439   | e113  | e47  | ---  | 237   | 461   | 301   | 292   | 81    | 19   | 17   |
| 30    | 78   | 414   | e105  | e47  | ---  | 241   | 457   | 282   | 283   | 76    | 28   | 17   |
| 31    | 86   | ---   | e96   | e47  | ---  | 237   | ---   | 267   | ---   | 71    | 50   | ---  |
| TOTAL | 1623 | 6369  | 6744  | 1697 | 2597 | 6554  | 18373 | 14695 | 10726 | 5136  | 1113 | 877  |
| MEAN  | 52.4 | 212   | 218   | 54.7 | 92.8 | 211   | 612   | 474   | 358   | 166   | 35.9 | 29.2 |
| MAX   | 90   | 455   | 404   | 94   | 138  | 360   | 1100  | 757   | 662   | 337   | 66   | 84   |
| MIN   | 22   | 84    | 96    | 47   | 48   | 138   | 216   | 267   | 197   | 71    | 19   | 17   |
| AC-FT | 3220 | 12630 | 13380 | 3370 | 5150 | 13000 | 36440 | 29150 | 21280 | 10190 | 2210 | 1740 |
| CFSM  | .08  | .34   | .35   | .09  | .15  | .34   | .97   | .75   | .57   | .26   | .06  | .05  |
| IN.   | .10  | .38   | .40   | .10  | .15  | .39   | 1.09  | .87   | .63   | .30   | .07  | .05  |

e Estimated

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STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1909 - 1999, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 57.2 | 61.8 | 37.3 | 17.6 | 23.7 | 244  | 442  | 223  | 259  | 148  | 78.6 | 51.5 |
| MAX  | 509  | 541  | 245  | 104  | 167  | 1289 | 2880 | 1530 | 2724 | 1994 | 934  | 673  |
| (WY) | 1996 | 1980 | 1983 | 1994 | 1983 | 1983 | 1969 | 1993 | 1993 | 1993 | 1993 | 1986 |
| MIN  | .84  | .96  | .46  | .19  | .20  | 1.54 | 14.6 | 2.75 | 1.01 | .44  | .51  | .31  |
| (WY) | 1937 | 1936 | 1936 | 1940 | 1937 | 1965 | 1934 | 1934 | 1934 | 1934 | 1934 | 1976 |

| SUMMARY STATISTICS       | FOR 1998 CALENDAR YEAR | FOR 1999 WATER YEAR | WATER YEARS 1909 - 1999 |
|--------------------------|------------------------|---------------------|-------------------------|
| ANNUAL TOTAL             | 66694                  | 76504               |                         |
| ANNUAL MEAN              | 183                    | 210                 | 151 <sup>a</sup>        |
| HIGHEST ANNUAL MEAN      |                        |                     | 789                     |
| LOWEST ANNUAL MEAN       |                        |                     | 10.8                    |
| HIGHEST DAILY MEAN       | 1420                   | 1100 <sup>d</sup>   | 13200                   |
| LOWEST DAILY MEAN        | 13                     | 17                  | .00 <sup>b</sup>        |
| ANNUAL SEVEN-DAY MINIMUM | 14                     | 19                  | .01                     |
| INSTANTANEOUS PEAK FLOW  |                        | 1100                | 19700                   |
| INSTANTANEOUS PEAK STAGE |                        | 5.69 <sup>d</sup>   | 18.01 <sup>d</sup>      |
| INSTANTANEOUS LOW FLOW   |                        | 17                  | .00 <sup>b</sup>        |
| ANNUAL RUNOFF (AC-FT)    | 132300                 | 151700              | 109500                  |
| ANNUAL RUNOFF (CFSM)     | .29                    | .33                 | .24                     |
| ANNUAL RUNOFF (INCHES)   | 3.94                   | 4.52                | 3.27                    |
| 10 PERCENT EXCEEDS       | 402                    | 466                 | 328                     |
| 50 PERCENT EXCEEDS       | 92                     | 122                 | 29                      |
| 90 PERCENT EXCEEDS       | 28                     | 28                  | 2.2                     |

a Median of annual mean discharges is 100 ft<sup>3</sup>/s.  
 b Many days in 1940 and 1959.  
 c Gage height 4.48 ft.  
 d Backwater from ice.

