

ST. CROIX RIVER BASIN--Continued

05338500 SNAKE RIVER NEAR PINE CITY, MN

LOCATION.--Lat 45°50'30", long 92°56'00", in SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 26, T. 39 N., R. 21 W., Pine County, Hydrologic Unit 07030004, on left bank at site of former power plant and dam, 0.5 mi downstream from Cross Lake and 1.5 mi northeast of Pine City.

DRAINAGE AREA.--974 mi².

PERIOD OF RECORD.--June 1913 to September 1917, July 1951 to Sept. 1981, Oct. 1992 to current year.

GAGE.--Water-stage recorder. Datum of gage is 919.00 ft above sea level (NGVD of 1929). June 25, 1913 to Sept. 30, 1917, nonrecording gage at site 500 ft downstream at different datum. July 1 to Oct. 28, 1951, nonrecording gage at present site and datum.

REMARKS.--Records good except those for estimated discharge, which are fair.

DISCHARGE, in CFS, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|--------|-------|-------|-------|-------|-------|-------|--------|-------|-------|--------|-------|-------|
| 1 | 119 | 169 | 425 | 157 | e102 | 217 | 651 | 1570 | 416 | 914 | 1070 | 493 |
| 2 | 115 | 166 | 384 | 149 | e100 | 208 | 829 | 1570 | 355 | 745 | 903 | 604 |
| 3 | 118 | 145 | 376 | 136 | e100 | 180 | 923 | 1470 | 332 | 618 | 831 | 777 |
| 4 | 116 | 140 | 376 | 131 | e99 | 160 | 960 | 1400 | 319 | 507 | 962 | 1090 |
| 5 | 114 | 138 | 417 | 129 | 100 | 155 | 962 | 1280 | 302 | 426 | 1170 | 1300 |
| 6 | 101 | 141 | 428 | 128 | 97 | 145 | 926 | 1180 | 269 | 384 | 1360 | 1640 |
| 7 | 87 | 133 | 457 | 124 | 96 | 146 | 970 | 1080 | 266 | 428 | 1430 | 1690 |
| 8 | 90 | 150 | 491 | 122 | 96 | 154 | 1210 | 1080 | 271 | 706 | 1360 | 1720 |
| 9 | 106 | 132 | 447 | 122 | 101 | 178 | 1690 | 1310 | 254 | 1270 | 1220 | 1700 |
| 10 | 132 | 133 | 463 | 124 | 107 | 189 | 2270 | 1490 | 256 | 2440 | 1050 | 1750 |
| 11 | 124 | 129 | 457 | 124 | 101 | 139 | 3230 | 1840 | 278 | 3900 | 856 | 1700 |
| 12 | 121 | 129 | 447 | 129 | 108 | 136 | 4230 | 2270 | 253 | 4960 | 752 | 1640 |
| 13 | 134 | 139 | 423 | 129 | 109 | 137 | e5000 | 2550 | 249 | 5670 | 660 | 1520 |
| 14 | 151 | 142 | 360 | 133 | 108 | 144 | e5820 | 2700 | 228 | 5950 | 615 | 1360 |
| 15 | 154 | 150 | 327 | 137 | 109 | 171 | e6350 | 2760 | 217 | 5790 | 607 | 1160 |
| 16 | 148 | 144 | 353 | 135 | 110 | 154 | 6400 | 2710 | 204 | 5280 | 550 | 962 |
| 17 | 139 | 153 | 348 | 134 | 108 | 146 | 6130 | 2570 | 186 | 4600 | 572 | 807 |
| 18 | 151 | 161 | 354 | 132 | 111 | 146 | 5660 | 2400 | 169 | 3900 | 549 | 688 |
| 19 | 154 | 164 | 343 | 128 | 141 | 154 | 5090 | 2180 | 199 | 3290 | 655 | 610 |
| 20 | 149 | 143 | 282 | 123 | 173 | 154 | 4490 | 1940 | 288 | 2770 | 774 | 546 |
| 21 | 142 | 148 | 267 | 121 | 189 | e152 | 3940 | 1690 | 352 | 2400 | 939 | 525 |
| 22 | 133 | 143 | 280 | 118 | 199 | e152 | 3470 | 1450 | 470 | 2070 | 961 | 495 |
| 23 | 144 | 148 | 287 | 118 | 209 | 146 | 3000 | 1290 | 612 | 1820 | 1010 | 451 |
| 24 | 158 | 175 | 254 | 115 | 238 | 145 | 2650 | 1070 | 755 | 1740 | 1030 | 418 |
| 25 | 195 | 227 | 225 | 115 | 235 | e144 | 2310 | 901 | 928 | 1760 | 971 | 420 |
| 26 | 137 | 208 | 216 | 115 | 224 | 140 | 1970 | 799 | 1110 | 1750 | 873 | 429 |
| 27 | 110 | 288 | 210 | 115 | 222 | 138 | 1730 | 708 | 1240 | 1690 | 764 | 441 |
| 28 | 118 | 288 | 198 | 115 | 217 | 145 | 1650 | 632 | 1290 | 1620 | 671 | 459 |
| 29 | 119 | 347 | 189 | 115 | --- | 177 | 1600 | 570 | 1230 | 1510 | 596 | 471 |
| 30 | 125 | 406 | 179 | 109 | --- | 271 | 1570 | 525 | 1100 | 1370 | 531 | 481 |
| 31 | 147 | --- | 167 | 108 | --- | 445 | --- | 469 | --- | 1220 | 496 | --- |
| TOTAL | 4051 | 5279 | 10430 | 3890 | 3909 | 5268 | 87681 | 47454 | 14398 | 73498 | 26788 | 28347 |
| MEAN | 130.7 | 176.0 | 336.5 | 125.5 | 139.6 | 169.9 | 2923 | 1531 | 479.9 | 2371 | 864.1 | 944.9 |
| MAX | 195 | 406 | 491 | 157 | 238 | 445 | 6400 | 2760 | 1290 | 5950 | 1430 | 1750 |
| MIN | 87 | 129 | 167 | 108 | 96 | 136 | 651 | 469 | 169 | 384 | 496 | 418 |
| AC--FT | 8040 | 10470 | 20690 | 7720 | 7750 | 10450 | 173900 | 94130 | 28560 | 145800 | 53130 | 56230 |
| CFSM | 0.14 | 0.18 | 0.35 | 0.13 | 0.15 | 0.18 | 3.05 | 1.60 | 0.50 | 2.47 | 0.90 | 0.99 |
| IN. | 0.16 | 0.20 | 0.41 | 0.15 | 0.15 | 0.20 | 3.40 | 1.84 | 0.56 | 2.85 | 1.04 | 1.10 |

05338500 SNAKE RIVER NEAR PINE CITY, MN--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 2002, BY WATER YEAR (WY)

| | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|------|-------|-------|-------|-------|-------|-------|------|------|-------|-------|-------|-------|
| MEAN | 307.9 | 395.7 | 225.7 | 145.2 | 156.9 | 579.4 | 2359 | 1122 | 617.2 | 602.4 | 342.7 | 313.8 |
| MAX | 1189 | 866 | 402 | 266 | 277 | 1611 | 5905 | 2726 | 2149 | 2371 | 1080 | 1030 |
| (WY) | 1982 | 1996 | 1992 | 1992 | 1998 | 1992 | 2001 | 1979 | 2001 | 2002 | 1995 | 1995 |
| MIN | 76.3 | 164 | 88.0 | 58.4 | 99.2 | 130 | 666 | 203 | 167 | 104 | 76.8 | 59.3 |
| (WY) | 2001 | 1979 | 1981 | 1981 | 1993 | 2001 | 2000 | 1998 | 1997 | 1980 | 1998 | 1998 |

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1979 - 2002

| | | | |
|--------------------------|--------|--------|-------------------------------|
| ANNUAL TOTAL | 355332 | 310993 | |
| ANNUAL MEAN | 973.5 | 852.0 | 591.9 598a |
| HIGHEST ANNUAL MEAN | | | 980 1223 2001 1972 |
| LOWEST ANNUAL MEAN | | | 305 177 1998 1959 |
| HIGHEST DAILY MEAN | 10900 | Apr 27 | 6400 Apr 16 10900 Apr 27 2001 |
| LOWEST DAILY MEAN | 87 | Oct 7 | 87 Oct 7 37 Sep 22 1998 |
| ANNUAL SEVEN-DAY MINIMUM | 105 | Oct 3 | 98 Feb 2 42 Sep 18 1998 |
| MAXIMUM PEAK FLOW | | | 6460 Apr 15 14300 Jul 27 1972 |
| MAXIMUM PEAK STAGE | | | 7.50 Apr 15 10.38 Jul 27 1972 |
| INSTANTANEOUS LOW FLOW | | | 80b Oct 8 5.5c Oct 1 1964 |
| ANNUAL RUNOFF (AC-FT) | 704800 | 616900 | 428800 432900 |
| ANNUAL RUNOFF (CFMS) | 1.02 | 0.89 | 0.62 0.62 |
| ANNUAL RUNOFF (INCHES) | 13.80 | 12.08 | 8.40 8.47 |
| 10 PERCENT EXCEEDS | 2930 | 2110 | 1460 1450 |
| 50 PERCENT EXCEEDS | 167 | 352 | 241 220 |
| 90 PERCENT EXCEEDS | 114 | 118 | 106 77 |

- a Median of annual mean discharges is 530 ft³/s.
- b Also occurred Feb. 11.
- c Result of dam rehabilitation.
- e Estimated.

2003 revisions in italics

