

RED RIVER OF THE NORTH BASIN--Continued

05050000 BOIS DE SIOUX RIVER NEAR WHITE ROCK, SD

LOCATION.--Lat 45°51'45", long 96°34'25", in SW¹/₄SW¹/₄ sec. 27, T.128 N., R.47 W., Roberts County, Hydrologic Unit 09020101, on Sisseton Indian Reservation, on left bank at Big Slough Outlet, 300 ft downstream from White Rock Dam, 4 mi south of White Rock and 5 mi northwest of Wheaton, MN.

DRAINAGE AREA.--1,160 mi² (approximately).

PERIOD OF RECORD.--October 1941 to current year.

GAGE.--Water-stage recorder. Datum of gage is 960.00 ft. above sea level, (adjustment of 1912, levels by U.S. Army Corps of Engineers). Prior to Jan. 14, 1943, nonrecording gage at same site at datum 0.11 ft lower. Jan. 15, 1943 to Sept. 30, 1963, water-stage recorder at same site at datum 0.11 ft lower.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow regulated by Lake Traverse-Boise de Sioux Flood Control and Water Conservation project.

DISCHARGE -TAILWATER, 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 | 5.0 | 7.3 | e14 | e6.9 | e4.4 | 148 | 156 | 183 | 31 | 7.2 | 217 | 23 |
| 2 | 5.0 | 6.8 | e15 | e6.5 | e4.3 | e250 | 64 | 203 | 10 | 5.3 | 238 | 12 |
| 3 | 5.0 | 6.6 | e21 | e6.2 | e4.2 | e250 | 139 | 235 | 4.4 | 2.4 | 228 | 12 |
| 4 | 4.8 | 6.3 | 167 | e6.0 | e4.2 | e250 | 106 | 185 | 4.8 | 3.5 | 185 | 21 |
| 5 | 4.7 | 6.2 | 354 | e5.8 | 4.2 | e340 | 77 | 205 | 7.0 | 2.0 | 124 | 20 |
| 6 | 4.7 | 6.3 | 344 | e5.6 | 4.3 | e440 | 118 | 160 | 29 | 1.1 | 90 | 9.2 |
| 7 | 4.6 | 12 | 338 | e5.5 | 4.4 | e440 | 64 | 149 | 7.4 | 6.0 | 91 | 28 |
| 8 | 4.9 | 19 | 348 | e5.6 | 4.9 | e500 | 51 | 167 | 7.7 | 43 | 66 | 43 |
| 9 | 5.2 | 22 | 342 | e6.3 | 5.9 | e540 | 104 | 235 | 54 | 21 | 27 | 8.8 |
| 10 | 22 | 20 | 328 | 8.0 | 5.7 | e540 | 92 | 233 | e30 | 8.5 | 2.2 | 8.5 |
| 11 | 40 | 22 | 319 | 9.9 | 5.4 | e540 | 107 | 227 | e17 | 9.8 | 1.9 | 7.5 |
| 12 | 27 | 20 | 313 | 10 | 5.9 | e540 | 128 | 257 | e9.5 | 98 | 66 | 3.6 |
| 13 | 18 | 19 | 259 | 9.5 | 6.0 | e540 | 139 | 264 | 4.7 | 283 | 128 | 2.9 |
| 14 | 15 | 18 | 111 | 8.1 | 6.0 | e460 | 107 | 287 | 3.5 | 418 | 213 | 2.3 |
| 15 | 13 | 17 | 25 | 7.7 | 6.2 | e460 | 80 | 283 | 2.8 | 494 | 236 | 2.0 |
| 16 | 11 | 19 | 20 | 7.4 | 6.5 | e460 | 110 | 268 | 2.6 | 548 | 250 | 2.1 |
| 17 | 8.6 | 22 | 21 | 7.0 | 6.8 | e440 | 112 | 303 | 4.9 | 552 | 243 | 2.2 |
| 18 | 8.0 | 12 | 22 | 6.6 | 7.8 | 381 | 34 | 302 | 3.8 | 554 | 220 | 3.8 |
| 19 | 7.4 | 14 | 21 | 6.3 | 10 | 264 | 20 | 301 | 4.5 | 502 | 198 | 2.0 |
| 20 | 7.2 | 15 | 18 | 6.2 | 11 | 228 | 55 | 307 | 3.1 | 442 | 175 | 1.9 |
| 21 | 6.9 | 14 | 14 | 5.8 | 9.7 | 146 | 71 | 327 | 18 | 387 | 90 | 1.8 |
| 22 | 6.7 | 12 | 14 | 5.7 | 9.7 | 137 | 114 | 321 | 34 | 334 | 58 | 1.4 |
| 23 | 6.7 | 13 | 12 | 5.8 | 11 | 84 | 124 | 268 | 11 | 300 | 52 | 0.77 |
| 24 | 7.3 | 7.1 | 12 | 5.4 | 11 | 82 | 47 | 267 | 6.4 | 276 | 45 | 0.63 |
| 25 | 7.0 | 17 | e10 | 5.4 | 8.4 | 35 | 116 | 254 | 4.2 | 243 | 31 | 0.77 |
| 26 | 6.9 | 14 | e9.5 | 5.7 | 9.4 | 144 | 172 | 233 | 2.4 | 225 | 23 | 0.77 |
| 27 | 6.9 | e18 | e9.2 | 5.6 | 12 | 292 | 110 | 208 | 4.4 | 222 | 14 | 0.77 |
| 28 | 7.7 | e16 | e8.6 | 5.3 | 17 | 316 | 177 | 192 | 5.8 | 211 | 14 | 1.3 |
| 29 | 7.6 | e15 | e8.1 | 5.0 | --- | 277 | 213 | 143 | 5.1 | 206 | 24 | 2.2 |
| 30 | 7.0 | e14 | e7.7 | 4.7 | --- | 244 | 198 | 123 | 4.1 | 211 | 29 | 1.9 |
| 31 | 7.0 | --- | e7.3 | 4.6 | --- | 186 | --- | 71 | --- | 222 | 45 | --- |
| TOTAL | 298.8 | 430.6 | 3512.4 | 200.1 | 206.3 | 9954 | 3205 | 7161 | 337.1 | 6837.8 | 3424.1 | 228.11 |
| MEAN | 9.639 | 14.35 | 113.3 | 6.455 | 7.368 | 321.1 | 106.8 | 231.0 | 11.24 | 220.6 | 110.5 | 7.604 |
| MAX | 40 | 22 | 354 | 10 | 17 | 540 | 213 | 327 | 54 | 554 | 250 | 43 |
| MIN | 4.6 | 6.2 | 7.3 | 4.6 | 4.2 | 35 | 20 | 71 | 2.4 | 1.1 | 1.9 | 0.63 |
| AC-FT | 593 | 854 | 6970 | 397 | 409 | 19740 | 6360 | 14200 | 669 | 13560 | 6790 | 452 |
| CFSM | 0.01 | 0.01 | 0.10 | 0.01 | 0.01 | 0.28 | 0.09 | 0.20 | 0.01 | 0.19 | 0.10 | 0.01 |
| IN. | 0.01 | 0.01 | 0.11 | 0.01 | 0.01 | 0.32 | 0.10 | 0.23 | 0.01 | 0.22 | 0.11 | 0.01 |

RED RIVER OF THE NORTH BASIN--Continued

05050000 BOIS DE SIOUX RIVER NEAR WHITE ROCK, SD--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 2002, BY WATER YEAR (WY)

| | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| MEAN | 28.62 | 16.29 | 10.37 | 3.437 | 7.552 | 73.20 | 331.5 | 316.7 | 253.7 | 175.4 | 72.18 | 35.23 |
| MAX | 535 | 307 | 207 | 42.4 | 148 | 628 | 3814 | 1445 | 1103 | 1035 | 1182 | 1062 |
| (WY) | 1994 | 1996 | 1999 | 1997 | 1997 | 1996 | 1997 | 1997 | 1986 | 1962 | 1993 | 1993 |
| MIN | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.23 | 0.010 | 0.000 | 0.000 | 0.000 |
| (WY) | 1942 | 1942 | 1942 | 1942 | 1942 | 1942 | 1942 | 1977 | 1977 | 1961 | 1970 | 1960 |

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1942 - 2002

| | | | |
|--------------------------|-------------|-------------|--------------------|
| ANNUAL TOTAL | 188883.71 | 35795.31 | |
| ANNUAL MEAN | 517.5 | 98.07 | 110.6a |
| HIGHEST ANNUAL MEAN | | | 536 1997 |
| LOWEST ANNUAL MEAN | | | 0.38 1977 |
| HIGHEST DAILY MEAN | 3780 Apr 13 | 554 Jul 18 | 7710 Apr 16 1997 |
| LOWEST DAILY MEAN | 0.95 Aug 24 | 0.63 Sep 24 | 0.00b Oct 1 1941 |
| ANNUAL SEVEN-DAY MINIMUM | 1.2 Aug 19 | 0.92 Sep 22 | 0.00 Oct 1 1941 |
| MAXIMUM PEAK FLOW | | 566c Jul 18 | 8750d Apr 20 1997 |
| MAXIMUM PEAK STAGE | | 9.46f Mar 9 | 16.90d Apr 20 1997 |
| ANNUAL RUNOFF (AC-FT) | 374700 | 71000 | 80110 |
| ANNUAL RUNOFF (CFSM) | 0.45 | 0.085 | 0.095 |
| ANNUAL RUNOFF (INCHES) | 6.06 | 1.15 | 1.30 |
| 10 PERCENT EXCEEDS | 1260 | 302 | 360 |
| 50 PERCENT EXCEEDS | 21 | 18 | 3.4 |
| 90 PERCENT EXCEEDS | 1.2 | 4.3 | 0.00 |

- a Median of annual mean discharges is 64 ft³/s.
- b Many days, several years; result of regulation.
- c Gage height 7.74 ft.
- d Estimated, from observed readings made under non-ideal conditions. Some evidence that peak occurred Apr. 16 at 7930 ft³/s.
- e Estimated.
- f Backwater from ice.



